

# RECLAMATION

*Managing Water in the West*

## FINDING OF NO SIGNIFICANT IMPACT

### 2017 American River Division Interim Water Service Contract Renewal for the Sacramento Municipal Utility District

FONSI-16-05-CCAO

Recommended by:



Date: FEB 24 2017

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## **FINDINGS**

The Bureau of Reclamation (Reclamation) has determined that authorizing the implementation of a 24-month interim renewal Central Valley Project (CVP) water service contract with the Sacramento Municipal Utility District (SMUD) will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is not required and will not be prepared for this project, based on the fact that there will be no short-term adverse impacts on the human environment resulting from the Proposed Action.

This decision is based on a thorough review of the 2016 American River Interim Water Service Contract Renewal for the SMUD Environmental Assessment (EA dated December 2016). This decision is in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508) and the Department of the Interior (DOI) regulations for implementation of NEPA (43 CFR Part 46).

A finding of no significant impact is based on the following:

**Indian Trust Assets (ITAs)** - Indian Trust Assets (ITAs) are legal interests in property or rights held in trust by the United States for Indian Tribes or individual Indians. Indian reservations, Rancherias, and Public Domain Allotments are common ITAs in California. There are no known ITAs present within the Action Area; therefore, the Proposed Action does not have a potential to affect ITA's.

**Indian Sacred Sites** – Executive Order 13007 (May 24, 1996) requires that federal agencies accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and avoids adversely affecting the physical integrity of such sacred sites. Indian sacred sites do not occur at the point of delivery on Folsom Reservoir or at Freeport. The SMUDs service area is not located on federal lands and therefore would not affect access to or use of Indian sacred sites.

**Environmental Justice** - Communities in SMUDs Rancho Seco service area and area near the points of delivery do not constitute low-income or minority communities. The IRC is a continuation of existing conditions and would not adversely change conditions at or near community gathering places, institutions, workplaces, or housing within the place of use or near the point of delivery. Therefore the action would have no disproportionate effect on low-income or minority communities.

**Cultural Resources** - By implementing the Proposed Action Alternative, all water will be delivered within existing water service area boundaries utilizing existing water conveyance. The Proposed Action has no potential to cause effects

to cultural resources eligible for inclusion in the National Register of Historic Properties pursuant to 36 CFR §800.3(a)(1).

**Global Climate Change** – The Proposed Action will not emit greenhouse gases that would exceed the 25,000 metric ton/year threshold. Trends in climate change will not be affected, nor will climate change have an impact on implementation of the Proposed Action.

**Water Supply & Hydrology** - The 2016 Final EIS for the Long-term Operations (LTO) of the CVP and State Water Project (SWP) included an analysis to evaluate potential impacts to Folsom Reservoir operations and Reclamation's management of the cold water pool with implementation of SCWA's CVP supply. This analysis indicates that the Proposed Action would not have any changes to cold water pool volume and therefore, would not have any additional effect on Reclamation's ability to meet downstream fisheries requirements. Because the implementation of these water service contracts was found not to affect Folsom Reservoir operations, it is reasonable to conclude that implementation of the Proposed Action would not result in any new affects to Reclamation's operation of Folsom Reservoir or management of the cold water pool, as this is a renewal for ongoing operations within the CVP.

The Proposed Action does not require the construction of any new facilities, the installation of any new structures, or the modification of existing facilities. With implementation of the Proposed Action, CVP reservoir storage and operations, surface water elevations, and release patterns would not change. The Proposed Action would not result in impacts to water resources.

**Biological and Aquatic Resources** - Biological and aquatic resources under the Proposed Action will be identical to conditions under the No Action Alternative. The interim contract will provide for the continued delivery of the same quantities of CVP water to the same lands for the same M&I uses that are provided for under existing contract. These contract quantities are included in Chapter 9 of the LTO EIS, which was conducted upon the adoption of the 2008/2009 BOs from the USFWS and the NMFS, respectively. Reclamation will continue to comply with commitments made or requirements imposed in the 2008/2009 BOs and their Reasonable and Prudent Alternatives. The Proposed Action will have no adverse effect on species either currently federally listed or proposed for listing as candidate, endangered, or threatened species, and have no adverse effect on designated critical habitat for these species.

**Facility Operations** - The Proposed Action would not result in changes to Folsom Reservoir operations or Folsom Reservoir's cold water pool volume and therefore, would not have any additional effect on Reclamation's ability to meet downstream fisheries requirements.

The 2016 Final EIS for the LTO of the CVP and SWP included analysis to evaluate potential impacts to Folsom Reservoir operations and Reclamation's

management of the cold water pool with implementation of SMUDs CVP supply. This analysis indicates that the Proposed Action would not have any changes to cold water pool volume and therefore, would not have any additional effect on Reclamation's ability to meet downstream fisheries requirements. Because the implementation of these water service contracts was found not to affect Folsom Reservoir operations, it is reasonable to conclude that implementation of the Proposed Action would not result in any new affects to Reclamation's operation of Folsom Reservoir or management of the cold water pool, as this is a renewal for ongoing operations within the CVP.

## **SUMMARY OF ENVIRONMENTAL IMPACTS**

The expected environmental effects of the Proposed Action are described in Chapter 3 of the attached EA. The environmental analysis indicated that the Proposed Action meets the purpose and need described in the EA with negligible effects on the human environment.

## **ENVIRONMENTAL COMMITMENTS**

Reclamation is obligated to ensure fulfillment of any environmental commitments prescribed to mitigate or eliminate impacts resulting from implementation of the Proposed Action.

The following commitments are assumed under the Proposed Action:

- A 24-month interim renewal period is considered in the analysis;
- The contract would be renewed for a second time with existing contract quantities;
- Reclamation would continue to comply with commitments made or requirements imposed by applicable environmental documents, such as existing biological opinions (BOs) including any obligations imposed on Reclamation resulting from re-consultations;
- Reclamation would implement its obligations resulting from Court Orders issued in actions challenging applicable BOs that take effect during the interim renewal period.

# RECLAMATION

*Managing Water in the West*

Environmental Assessment (EA)

## **2017 American River Division Interim Water Service Contract Renewal for the Sacramento Municipal Utility District**

Central California Area Office Folsom, CA



U.S. Department of the Interior  
Bureau of Reclamation  
Mid Pacific Region  
Central California Area Office  
Folsom, California

February 2017

## **Mission Statements**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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# List of Acronyms and Abbreviations

AF	Acre Feet
AFY	Acre-Feet Per Year
BO	Biological Opinion
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FSC	Folsom South Canal
FWS	United States Fish and Wildlife Service
IRC	Interim Renewal Contract
ITA	Indian Trust Assets
LTO	Coordinated Long-term Operations of the Central Valley Project and State Water Project
M&I	Municipal and Industrial
MFP	Middle Fork Project (owned and operated by PCWA)
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
Non-Project	Not Part of the Central Valley Project
PEIS	Programmatic Environmental Impact Statement
ROD	Record of Decision
RPAs	Reasonable and Prudent Alternatives
Reclamation	Bureau of Reclamation
SCWA	Sacramento County Water Agency
SMUD	Sacramento Municipal Utility District
SWP	State Water Project
WA	Warren Act
WFA	Sacramento Water Forum Agreement



# Section 1 Introduction

In conformance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Bureau of Reclamation (Reclamation) has prepared this Environmental Assessment (EA) to evaluate and disclose any potential environmental impacts associated with the implementation of a 24-month interim renewal Central Valley Project (CVP) water service contract with the Sacramento Municipal Utility District (SMUD).

## 1.1 Background

On October 30, 1992, the President signed into law the Reclamation Projects Authorization and Adjustment Act of 1992 (Public Law 102-575) that included Title 34, the Central Valley Project Improvement Act (CVPIA). In accordance with Section 3404(c) of the CVPIA, Reclamation proposes to execute an interim water service contract. Interim renewal contracts (IRC) are issued under the authority of the CVPIA to provide a bridge between the expiration of the original long-term water service contracts and the execution of the next long-term water service contracts. The water service contract proposed for interim renewal is for SMUD. SMUD has two IRCs previously executed following the expiration of the previous long-term water service contract. SMUD is one of seven contractors within the American River Division of the CVP.

Section 3409 of the CVPIA required that Reclamation prepare a programmatic environmental impact statement (PEIS) before renewing long-term CVP water service contracts. The PEIS, completed in October 1999 and hereby incorporated by reference, analyzed the implementation of all aspects of the CVPIA, contract renewal being one of many programs addressed by this Act. CVPIA Section 3404(c) mandated that upon request all existing CVP contracts be renewed. Implementation of other sections of the CVPIA mandated actions and programs that require modification of previous contract articles or new contract articles to be inserted into renewed contracts. These programs include water measurement requirements (Section 3405(b)), water pricing actions (Section 3405(d)), and water conservation (Section 3405(e)). The PEIS evaluated CVP-wide impacts of long-term contract renewal at a programmatic level. Upon completion of contract renewal negotiations, the local effects of long-term contract renewals at the division level were evaluated in environmental documents that tiered from the PEIS.

Environmental documentation covering long-term renewal of American River Division water service contractors was completed in June 2005 (Reclamation 2005) and is hereby incorporated by reference. This documentation evaluated the

effects of renewing long-term contracts for Roseville, Placer County Water Agency, Sacramento County Water Agency, San Juan Water District (SJWD), Sacramento Municipal Utility District, El Dorado Irrigation District, and East Bay Municipal Utility District. The Record of Decision (ROD) for the American River Division long-term renewals was signed on February 28, 2006 (one day prior to the beginning of a new contract year). Three of the seven American River Division contractors, SJWD, El Dorado Irrigation District, and East Bay Municipal Utility District were able to execute the long-term contracts prior to the beginning of the new contract year. The remaining Division contractors all had existing contracts in place that allowed for the continued delivery of water in the 2006 water year.

### **1.1.1 Sacramento Municipal Utility District**

SMUD entered into a contract with Reclamation on November 20, 1970, which expired on December 31, 2012, for the delivery of up to 60,000 acre-feet per year (AFY) of CVP water for Municipal and Industrial (M&I) uses. This contract also contained the authorization for delivery of up to 15,000 AFY of water rights water made available to SMUD by the City of Sacramento. This water was made available as a result of a previous assignment of water to SMUD from the City of Sacramento. The 60,000 AFY of CVP water under the contract was to be used by SMUD in its power generation operations, and was used for more than 15 years for the Rancho Seco nuclear power plant operations. In the 1980s, the nuclear power plant operations ceased. Since that time, water has been used for continued operation of the site including temperature controls for the nuclear fuels stored at the site.

In 2006 SMUD began operating two gas-powered generators at the Rancho Seco site known as the Cosumnes Power Plant (CPP). The CPP consists of a nominal 1000-megawatt combined-cycle natural gas fired plant. The plant was constructed in two phases, each consisting of 500 megawatts. SMUD has a yearly need of 2,650 AF of water for the exclusive use of the CPP.

On July 12, 2006, SMUD assigned to Sacramento County Water Agency (SCWA) the right, title, and interest in a portion of their CVP contract consisting of 30,000 AFY of CVP water. The assignment afforded SCWA any rights to renew the contract, thus reducing SMUD's CVP water to 30,000 AFY.

The delivery of the water rights water made available to SMUD by the City of Sacramento was separated from the 1970 contract, and is now recognized under a Warren Act (WA) contract between Reclamation and SMUD executed December 28, 2012.

SMUDs surface water entitlements from the American River now total 45,000 AFY for diversion at Nimbus Dam. SMUD diverts their CVP and WA contract water from the American River at Nimbus Dam for delivery to their Rancho Seco service area through the Folsom South Canal (FSC) (see Appendix A).

## 1.2 Action Description

Reclamation proposes to enter into a 24-month IRC with SMUD, an American River contractor, to provide SMUD with an interim CVP contract for up to 30,000 AFY of CVP water for M&I uses in SMUD's Rancho Seco service area (figure 1). SMUD has two IRCs previously executed following the expiration of the previous long-term water service contract.

The term of the SMUD IRC would be from March 1, 2017 through February 28, 2019. In the event a new long-term water service contract is executed, the IRC, then-in-effect, would be superseded by the long-term water service contract. Effects of executing the long-term water service contract would be analyzed under a separate environmental document.

There would be no changes to SMUD's CVP service area and no construction is required as part of the Proposed Action. Changes to the CVP service area would be a separate federal action and would be analyzed under a separate environmental document.

The use of contract water for M&I use under the proposed IRC would not change from the M&I purpose of use specified in SMUD's existing IRC.

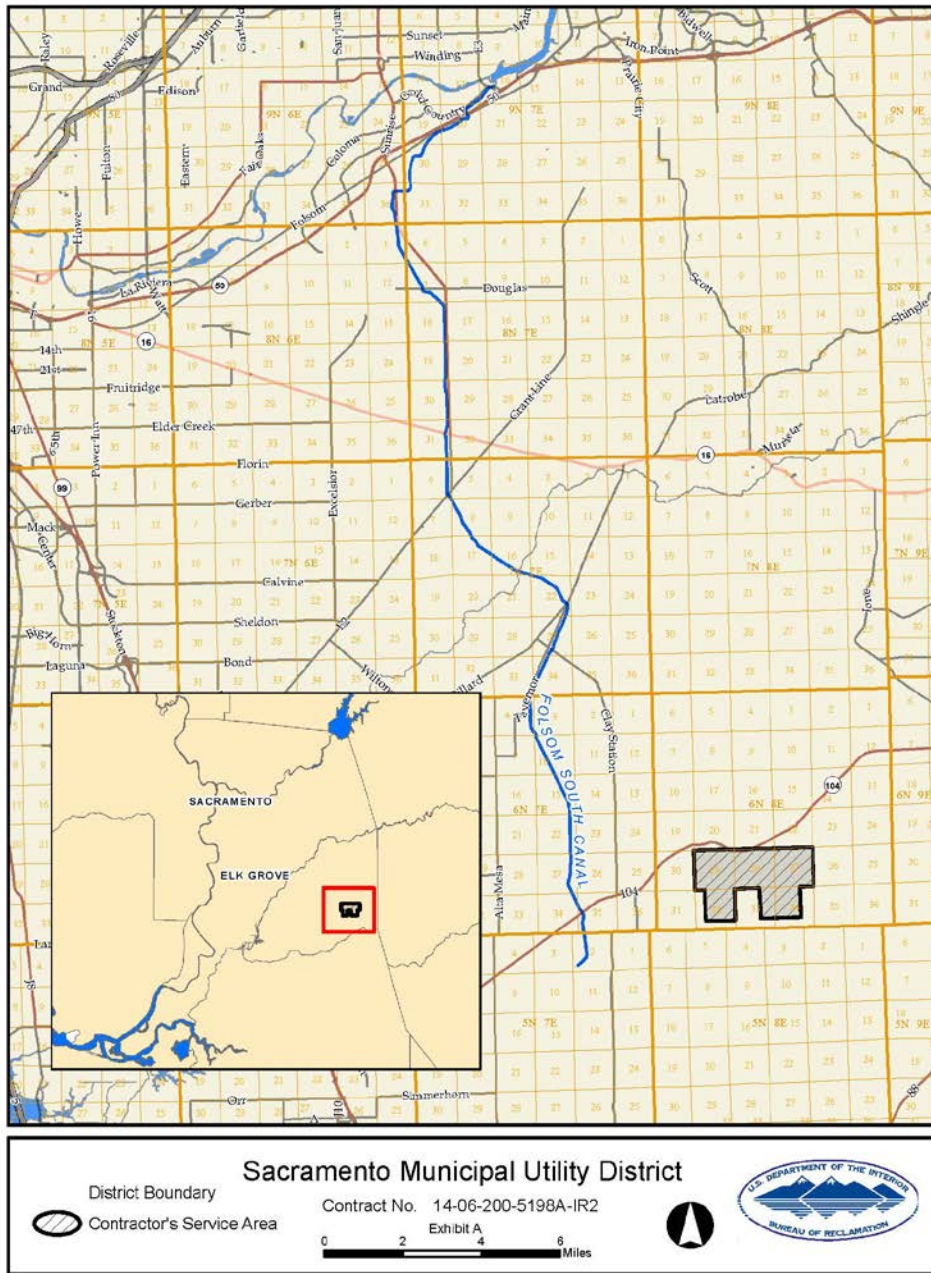


Figure 1: Map of SMUDs Rancho Seco CVP Service Area

### 1.3 Need for the Proposal

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The purpose of the Proposed Action is to execute an IRC to provide a continued contract mechanism for the delivery of CVP water to SMUD. The IRC will continue to provide a bridge between expiration of SMUDs CVP contract and a new long-term CVP contract, for use by SMUD as they reach build-out within their Rancho Seco service area. The contract also continues reimbursement to the federal government for costs related to the construction and operation of the CVP.

## Section 2 Alternatives Including the Proposed Action

This EA considers two possible actions: the No Action Alternative and the Proposed Action. The No Action Alternative reflects future conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment.

### 2.1 No Action Alternative

Under the No Action Alternative, the 2015 IRC between SMUD and Reclamation would expire on February 28, 2017. There would be no contractual mechanism for Reclamation to deliver up to 30,000 AFY of CVP water to SMUD, and the existing needs of SMUDs customers would not be met through these CVP contract supplies. It is reasonably assumed that water use in the Contractor's service area for the two year IRC period of March 1, 2017 through February 28, 2019 would not substantially change because this deficit could be covered from surface water supplies made available to the Contractor from non-CVP sources or other CVP supplies. Interim contracts, such as the IRC for this Proposed Action, are intended to serve as a bridge between the expiration of a previous long-term contract and a new long-term water contract as the contractor reaches build-out in their service area.

Under the No Action Alternative, Reclamation will still divert water under its CVP permits and operate the Project consistent with its Operating Criteria and Plan. Accordingly, water not delivered to SMUD would still be diverted by Reclamation under its permits, and that amount of CVP yield would be used to meet Project purposes.

Under the No Action Alternative, Reclamation would continue to operate the CVP consistent with all requirements as described in the 2008/2009 BOs from the FWS and NMFS, respectively on the Continued Long-Term Operations of the CVP and SWP. This includes the Reasonable and Prudent Alternatives (RPAs) contained in the 2008/2009 BOs from the FWS and NMFS, respectively on the Effects of the Coordinated Operations of the CVP and SWP to federally listed species.



## **2.2 Proposed Action**

The Proposed Action is to enter into an IRC with SMUD to provide the contract mechanism to facilitate the delivery of up to 30,000 AFY of CVP water from Folsom Reservoir.

Water associated with this action would be delivered at the point of delivery for SMUD's CVP water; milepost 24.681 (left side) on the Folsom South Canal located at a point 700 feet upstream from the inlet transition of the Laguna Creek siphon. This point of diversion is an approved CVP point of diversion.

The contract service area for the proposed IRC has not changed from current use or from that considered in the evaluation of long-term contract renewals conducted in 2005 (Reclamation, 2005). The proposed contract quantity will remain the same as SMUD's existing IRC.

In the event a new long-term water service contract is executed under the proposed IRC, the IRC then-in-effect would be superseded by the long-term water service contract, and analyzed under a separate process. For purposes of this EA, the following requirements are assumed under the Proposed Action:

- A 24-month interim renewal period, March 1, 2017 to February 28, 2019, is considered in the analysis;
- The IRC would be renewed with existing contract quantities; and
- Reclamation would continue to comply with commitments made or requirements imposed by applicable environmental documents, such as existing biological opinions (BOs) for CVP system operations including any obligations imposed on Reclamation resulting from re-consultations.

### **2.2.1 Action Area**

The Action Area consists of Folsom Reservoir downstream to the lower American River at the confluence of the Sacramento River, the FSC, and the SMUD Rancho Seco service area.



## Section 3 Affected Environment and Environmental Consequences

SMUD's CVP contract service area is contained within the American River Division of the CVP along with six other water purveyors. The service area boundary within Sacramento County where CVP water is served is identified in Appendix A.

This EA considers the potential effects of the IRC on the resources listed below. The analysis contained in the December 15, 2008 and June 4, 2009 BOs, including their RPAs, from the Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) respectively, on the *Continued Long-term Operations (LTO) of the CVP and State Water Project (SWP)* (USFWS 2008, NMFS 2009), and the ensuing 2016 LTO EIS and Record of Decision (ROD) is incorporated by reference into this document.

Reclamation formed an interdisciplinary team to identify any physical, biological, social, cultural or economic issues that might be affected by the alternatives. The analysis of these resources compares effects of the Proposal to the No Action Alternative. Reclamation considered and determined that the Proposed Action would not impact the following resources:

- **Indian Trust Assets:** Indian Trust Assets (ITAs) are legal interests in property or rights held in trust by the United States for Indian Tribes or individual Indians. Indian reservations, Rancherias, and Public Domain Allotments are common ITAs in California. There are no known ITAs present within the Action Area; therefore, the Proposed Action does not have a potential to affect ITA's (See Appendix [BA](#), Indian Trust Assets Compliance Memo).
- **Indian Sacred Sites:** Executive Order 13007 (May 24, 1996) requires that federal agencies accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and avoids adversely affecting the physical integrity of such sacred sites on federal lands. Indian sacred sites do not occur at the point of delivery on Folsom South Canal and SMUDs service area is not located on federal lands; therefore, the Proposed Action would not affect access to or use of Indian sacred sites on federal lands.
- **Environmental Justice:** Communities in SMUDs Rancho Seco service area and area near the points of delivery do not constitute low-income or minority communities. The IRC is a continuation of existing conditions and would not adversely change conditions at or near community

gathering places, institutions, workplaces, or housing within the place of use or near the point of delivery. Therefore the action would have no disproportionate effect on low-income or minority communities.

- **Land Use:** No changes to land use are associated to the Proposed Action, and therefore, there will be no impacts to land use.
- **Climate Change:** Under the Proposed Action, SMUD would continue to divert CVP water from their point of diversion on the FSC. SMUDs CVP water enters the FSC just above Nimbus Dam (which forms Lake Natoma), where it is gravity fed to SMUDs point of diversion along the FSC. Under the Proposed Action, SMUDs CVP water may flow through the Folsom Power Plant, creating hydroelectricity before it enters Lake Natoma, thus potentially creating additional power on the grid. Under the No Action Alternative, water would flow through Nimbus Dam and the Nimbus Power Plant, creating hydroelectricity and adding power to the grid. Under the No Action Alternative, SMUD would likely meet their service area demands using non-CVP surface water supplies, as described in Chapter 1, and would not require additional energy demands. There would be no impacts to global climate change under either alternative.
- **Cultural Resources:** By implementing the Proposed Action Alternative, all water will be delivered within existing water service area boundaries utilizing existing water conveyance. The Proposed Action has no potential to cause effects on historic properties pursuant to 36 CFR §800.3(a)(1).

This EA provides analysis of the affected environment of the Proposed Action and No Action Alternative in order to determine the potential impacts and cumulative effects to the following environmental resources.

## **3.1 Biological Resources**

### **3.1.1 No Action**

Implementation of the No Action Alternative would mean that the existing IRC with SMUD would expire in February 2017, and SMUD would not have a contract mechanism for delivery of their CVP water. The existing IRC provides CVP water to SMUD for M&I purposes.

The No Action Alternative assumes that water demands in SMUDs CVP service area would be met with non-CVP supplies or other CVP supplies. This is supported by other sources of water available to SMUD for use in their Rancho Seco service area. The No Action Alternative also includes the operations of the CVP consistent with all requirements as described in the 2008/2009 BOs from the

FWS and NMFS, respectively on the Continued Long-Term Operations of the CVP and SWP. This includes the Reasonable and Prudent Alternatives (RPAs) contained in the 2008/2009 BOs from the FWS and NMFS, respectively on the Effects of the Coordinated Operations of the CVP and SWP to federally listed threatened and endangered species under the Endangered Species Act.

Actions would continue to be taken to protect sensitive species in the American River including formulation of an annual water temperature management plan for steelhead, the Flow Management Standard for the lower American River, use of CVPIA Section 3406 (b)(2) water supplies to supplement flows in the Lower American River, flow and temperature requirements, and examinations of potential improvements to fish passage and structural temperature control options. There would be no adverse effects to biological resources under the No Action Alternative.

### **3.1.2 Proposed Action**

Impacts to biological resources under the Proposed Action would be identical to conditions under the No Action Alternative. The IRC would provide for the delivery of CVP water in the same quantity to the same lands for the same M&I uses as would be provided under the No Action Alternative. This would be no change from conditions under the existing IRC. Reclamation would continue to operate the CVP consistent with the 2008/09 BOs, and water deliveries would be made through existing CVP facilities.

The action does not require the construction of any new facilities, the installation of any new structures, or the modifications of existing facilities. The water would be placed to beneficial use within the authorized place of use for CVP water from Folsom Reservoir. The potential effects to biological resources occurring within the action area of this Proposed Action have been analyzed in Chapter 9 of the 2016 EIS on the LTO of the CVP and SWP. The impact analysis considered changes in the ecological attributes that affect fish and aquatic resources related to changes in CVP and SWP operations, including: changes in reservoir storage volumes, elevations, and water temperatures in primary storage reservoirs. Potential changes in reservoir storage, elevation and temperature could affect downstream fisheries by changing flow and temperature regimes.

The LTO EIS used modeling data to compare historical and future average monthly hydrologic conditions, such as reservoir elevation, storage and temperatures to understand the potential impacts to aquatic resources within the CVP and SWP. This information was compared between each alternative to consider an environmentally preferable alternative to influence positive instream conditions for ESA-listed aquatic species, and to meet downstream water objectives. Reclamation concluded that the environmentally preferable alternative

would be to operate the CVP consistent with the 2008, 2009 BOs and their associated RPAs.

The analysis contained in Chapter 9 of the LTO EIS assumed full contract deliveries of CVP water, including this Proposed Action, in respect to the potential effects on aquatic resources; these results are contained in Table 9.5 (pp. 9-424-9-426) of the LTO EIS (Reclamation, 2016).

Implementation of the Proposed Action would not change biological resources within the Action Area; therefore, the biological resources analysis contained in Chapter 9 of the 2016 EIS on the LTO of the CVP and SWP, which was conducted upon adoption of the 2008/2009 BOs, including their RPAs is incorporated by reference into this document. This action is also in accordance with Section 3404(c) of the CVPIA; in which the Final PEIS and Programmatic CVPIA BO were released in October 1999 and November 2000, respectively. The PEIS addressed the implementation of the CVPIA and the continued operation and maintenance of the CVP (incremental and cumulative effects).

In addition, as part of the essential fish habitat conservation consultation, NMFS analyzed the effects of the Proposed Action on fall-run Chinook salmon in the Lower American River. In general, NMFS identified the primary factors potentially limiting fall-run production within the Lower American River as high water temperatures, reduced flow magnitude, and flow fluctuations. NMFS identified RPAs to alleviate the effects of Folsom Reservoir operations on fall-run Chinook salmon in the Lower American River. The Proposed Action was addressed in the consultation and is subject to the NMFS BO.

Reclamation is currently operating the overall CVP system to meet all regulatory requirements, downstream water needs, and environmental requirements. Under the Proposed Action, Reclamation would continue to implement all current regulatory actions. The Proposed Action would not alter CVP operations, water storage or release patterns from CVP facilities, or the maximum volume of water to be delivered to the American River Division; therefore, conditions under the Proposed Action Alternative would be the same as those under the No Action Alternative.

## **3.2 Water Supply and Hydrology**

### **3.2.1 No Action**

Implementation of the No Action Alternative would mean that the existing IRC would expire in February 2017 and SMUD would not have a contract mechanism for the delivery of 30,000 AFY to their Rancho Seco service area. SMUD has access to additional surface water supplies, for use within their service area. It is

reasonable to assume that SMUD would still have adequate supplies to meet their demands under the No Action Alternative.

### **3.2.2 Proposed Action**

Under the Proposed Action, Reclamation would enter into a two-year IRC with SMUD to provide a contractual mechanism for the delivery of up to 30,000 AFY of CVP supplies from Folsom Reservoir. The 2016 Final EIS for the LTO of the CVP and SWP included analysis to evaluate potential impacts to Folsom Reservoir operations and Reclamation's management of the cold water pool with implementation of SMUD's CVP supply. This analysis indicates that the Proposed Action would not have any changes to cold water pool volume and therefore, would not have any additional effect on Reclamation's ability to meet downstream fisheries requirements. Because the implementation of these water service contracts was found not to affect Folsom Reservoir operations, it is reasonable to conclude that implementation of the Proposed Action would not result in any new affects to Reclamation's operation of Folsom Reservoir or management of the cold water pool, as this is a renewal for ongoing operations within the CVP.

The contract quantity was included in the impact analysis presented in the December 15, 2008 and June 4, 2009 BOs from the FWS and the NMFS, respectively, on the Continued Long-term Operations of the CVP and the SWP, as well as the FRWP EIS/EIR (Reclamation, 2004). In addition, this action is also in accordance with Section 3404(c) of the CVPIA; in which the Final PEIS and Programmatic CVPIA BO were released in October 1999 and November 2000, respectively. The PEIS addressed the implementation of the CVPIA and the continued operation and maintenance of the CVP (incremental and cumulative effects). The impact assessments for the CVPIA PEIS and the 2008/2009 BOs including the full deliveries, were able to adequately address the hydrologic, operational, and system-wide cumulative conditions expected under the future conditions.

The Proposed Action does not require the construction of any new facilities, the installation of any new structures, or the modification of existing facilities. With implementation of the Proposed Action, CVP reservoir storage and operations, surface water elevations, and release patterns would not change. The Proposed Action would not result in impacts to water resources.

## **3.3 Facility Operations**

### **3.3.1 No Action**

Implementation of the No Action Alternative would mean that the existing IRC would expire in February 2017 and SMUD would not have a contract mechanism

for up to 30,000 AFY of CVP to be delivered through Folsom South Canal to flow to SMUD facilities at Rancho Seco in the south eastern portion of Sacramento County. SMUD would not have a contract mechanism for delivery of their CVP water. SMUD would likely continue to meet demands within their Rancho Seco service area through the use of non-CVP surface water supplies, as described in Chapter 1.

However, under the No Action Alternative, Reclamation would continue to operate the CVP consistent with all requirements as described in the 2008/2009 BOs from the FWS and NMFS, respectively on the Continued Long-Term Operations of the CVP and SWP. This includes the Reasonable and Prudent Alternatives (RPAs) contained in the 2008/2009 BOs from the FWS and NMFS, respectively. Potential impacts to CVP facilities and CVP operations resulting from the implementation of the 2008/09 BiOps were analyzed in the 2016 LTO EIS, and is hereby incorporated by reference (Reclamation 2016).

Deliveries of non-CVP water through the Folsom South Canal to SMUD are analyzed under separate environmental documents.

### **3.3.2 Proposed Action**

Under the Proposed Action, Reclamation would enter into a two-year IRC with SMUD to provide a contractual mechanism for the delivery of up to 30,000 AFY of CVP supplies from Folsom Reservoir. The 2016 Final EIS for the LTO of the CVP and SWP included analysis to evaluate potential impacts to Folsom Reservoir operations and Reclamation's management of the cold water pool with implementation of SMUDs CVP supply. This analysis indicates that the Proposed Action would not have any changes to cold water pool volume and therefore, would not have any additional effect on Reclamation's ability to meet downstream fisheries requirements. Because the implementation of these water service contracts was found not to affect Folsom Reservoir operations, it is reasonable to conclude that implementation of the Proposed Action would not result in any new effects to Reclamation's operation of Folsom Reservoir or management of the cold water pool, as this is a renewal for ongoing operations within the CVP.

The contract quantity was included in the impact analysis presented in the December 15, 2008 and June 4, 2009 BOs from the FWS and the NMFS, respectively, on the Continued Long-term Operations of the CVP and the SWP. In addition, this action is also in accordance with Section 3404(c) of the CVPIA; in which the Final PEIS and Programmatic CVPIA BO were released in October 1999 and November 2000, respectively. The PEIS addressed the implementation of the CVPIA and the continued operation and maintenance of the CVP (incremental and cumulative effects). The impact assessments for the CVPIA



PEIS and the 2008/2009 BOs including the full deliveries, were able to adequately address the hydrologic, operational, and system-wide cumulative conditions expected under the future conditions.

The Proposed Action does not require the construction of any new facilities, the installation of any new structures, or the modification of existing facilities. With implementation of the Proposed Action, CVP reservoir storage and operations, surface water elevations, and release patterns would not change. The Proposed Action would not result in impacts to water resources.

### **3.4 Cumulative Impacts**

According to the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA, a cumulative impact is defined as the *impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.* Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The IRC for SMUD would not result in cumulative adverse impacts to environmental resources when considered in combination with other past, present, and reasonably foreseeable future actions. This action is a continuation of current CVP water conveyance, and implementation of this action would be the continuation of current events. The CVPIA PEIS included the full contract deliveries in the assumptions regarding future use. By including full deliveries, these impact assessments were able to adequately address the hydrologic, operational, and system-wide cumulative conditions expected under future conditions. The analyses also indicated that future projects, including future water transfer projects, may improve CVP water supply reliability. These types of programs would modify water supply reliability but not change long-term CVP contract amounts or deliveries from within the historical ranges.

Additionally, full contract deliveries for this Proposed Action were included in the analysis of the 2016 LTO EIS, and is considered to be a continuation of current operations. Reclamation has determined that the Proposed Action has been adequately addressed in the Cumulative Effects analysis for the 2016 LTO EIS. A detailed description of the LTO EIS cumulative effects for water supply is described in Table 5.117 (pp. 5-276-78) of the LTO EIS (Reclamation, 2016).

The Proposed Action, when added to other past, present, and reasonably foreseeable future actions, would not result in additional cumulative effects to the surrounding environment, CVP operations, Folsom Reservoir operations, water supply or hydropower.

## **Section 4 Consultation and Coordination**

This section presents the agencies and parties that were coordinated or consulted with during development of the document, the applicable federal, State and local requirements the project will comply with, and the distribution list.

It is reasonable to assume that the 2008 and 2009 BOs, and proceeding BOs have properly identified and analyzed biological impacts associated with the movement of this water through Folsom Reservoir. Furthermore, the 2008/2009 BOs provided additional analyses for the movement of this water and RPAs developed by NMFS and FWS allowed for continued and ongoing operation of the CVP. Therefore, renewal of this contract is seen as an administrative action and not a new action that will hinder current operations in managing Folsom Reservoir or the Lower American River.

The 2008 FWS BO and 2009 NMFS BO for the LTO of CVP the CVP and SWP issued RPAs to ensure that project related effects on protected species and their habitats are ameliorated to the extent possible.

### **4.1 Public Review Period**

Reclamation provided the public with an opportunity to comment on the Draft EA between December 27, 2016 and January 27, 2017. Reclamation received comments from the public during the comment period, and a copy of those comments and Reclamation's response to the comments are provided in Appendix C.

### **4.2 Endangered Species Act (16 U.S.C. § 1531 et seq.)**

Section 7 of the Endangered Species Act requires Federal agencies, in consultation with the Secretary of the Interior and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

The Proposed Action is consistent with: (1) CALFEDs 2000 Ecosystem Restoration Program Plan (ERPP) and Multi-Species Conservation Strategy (MSCS); (2) the programmatic determinations for the CALFED program, which include California Department of Fish and Wildlife's (CDFW) Natural Community Conservation Planning Act (NCCPA) approval and the 2009 NMFS,

2008 USFWS and 2004/2005 BOs; (3) USFWSs 1997 Draft Anadromous Fish Restoration Program (AFRP), which identifies specific actions to protect anadromous salmonids; (4) CDFWs 1996 Steelhead Restoration and Management Plan for California, which identifies specific actions to protect steelhead; and (5) CDFWs Restoring Central Valley Streams, A Plan for Action (1993), which identifies specific actions to protect salmonids.

### **4.3 National Historic Preservation Act (16 U.S.C. § 470 et seq.)**

The NHPA of 1966, as amended (16 U.S.C. 470 et seq.), requires that federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for inclusion in the National Register. The 36 CFR Part 800 regulations implement Section 106 of the NHPA.

Section 106 of the NHPA requires federal agencies to consider the effects of federal undertakings on historic properties, properties determined eligible for inclusion in the National Register. Compliance with Section 106 follows a series of steps that are designed to identify interested parties, determine the APE, conduct cultural resource inventories, determine if historic properties are present within the APE, and assess effects on any identified historic properties.

Reclamation has considered the potential effects on cultural and historic resources resulting from the Proposed Action. The cultural resources compliance memorandum is contained in Appendix A

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## Section 5 References

- National Marine Fisheries Service (NMFS). June 4, 2009. Biological Opinion on the Continued Long-term Operations of the Central Valley Project and the State Water Project.
- Reclamation Projects Authorization and Adjustment Act of 1992 (Public Law 102-575), Title 34, the Central Valley Project Improvement Act, October 30, 1992
- U.S. Department of the Interior. Bureau of Reclamation. U.S. Fish and Wildlife Service, Sacramento, California. Central Valley Project Improvement Act Programmatic Environmental Impact Statement, October 1999.
- U.S. Bureau of Reclamation (Reclamation). June 2005. Long-term Renewal of the American River Division water service contract.
- U.S. Bureau of Reclamation (Reclamation). 2016. Environmental Impact Statement (EIS) on the Coordinated Long-Term Operation of the CVP and SWP.
- U.S. Fish and Wildlife Service (USFWS). December 15, 2008. Biological Opinion on the Continued Long-term Operations of the Central Valley Project and the State Water Project.
- Sacramento Water Forum. January 2000. Sacramento Water Forum Agreement.  
[http://www.waterforum.org/wp-content/uploads/2015/09/WF\\_Agreement\\_Compiled.pdf](http://www.waterforum.org/wp-content/uploads/2015/09/WF_Agreement_Compiled.pdf)

# **Appendix A: Cultural Resources**

## **Compliance Memo**

**CULTURAL RESOURCES COMPLIANCE**  
**Division of Environmental Affairs**  
**Cultural Resources Branch (MP-153)**

**MP-153 Tracking Number:** 17-CCAO-049

**Project Name:** 2017 American River Division Interim Water Service Contract Renewal for the Sacramento Municipal Utility District

**NEPA Document:** EA

**NEPA Contact:** John Hutchings, Natural Resources Specialist

**MP-153 Cultural Resources Reviewer:** BranDee Bruce, Architectural Historian

**Date:** December 13, 2016

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Reclamation proposes to enter into a 24-month Interim Water Service Contract (IRC) with the Sacramento Municipal Utility District (SMUD), an American River Central Valley Project (CVP) contractor, to facilitate the annual delivery of up to 30,000 acre-feet per year of CVP water for municipal and industrial (M&I) use in SMUD's CVP service area. SMUD has previously executed two IRCs following the expiration of the previous long-term water service contract. This will be the third IRC that Reclamation has entered into with SMUD. No new construction or modification of existing facilities will occur in order to complete the Proposed Action.

Reclamation has determined that the proposed action is the type of activity that does not have the potential to cause effects on historic properties pursuant to 36 CFR § 800.3(a)(1). As such, Reclamation has no further obligations under Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108). Based on analysis of the project activities, the proposed action would have no significant impacts on properties listed, or eligible for listing on the National Register of Historic Places.

This document conveys the completion of the cultural resources review and Section 106 process for this undertaking. Please retain a copy with the administrative record for this action. Should the proposed action change, additional review under Section 106, possibly including consultation with the State Historic Preservation Officer, may be required.

# **Appendix B: Indian Trust Assets**

## **Compliance Memo**



## Indian Trust Assets Request Form (MP Region)

Submit your request to your office's ITA designee Sarah Perrin at [sperrin@usbr.gov](mailto:sperrin@usbr.gov).

**Date: January 25, 2017**

<b>Requested by (office/program)</b>	John Hutchings, Central California Area Office
<b>Fund</b>	<b>17XR0680A1</b>
<b>WBS</b>	<b>RX.03538943.3325400</b>
<b>Fund Cost Center</b>	<b>RR02000000</b>
<b>Region # (if other than MP)</b>	
<b>Project Name</b>	2017 American River Division Interim Water Service Contract Renewal for the Sacramento Municipal Utility District
<b>CEC or EA Number</b>	FONSI CC-1605
<b>Project Description (attach additional sheets if needed and include photos if appropriate)</b>	<p>The Proposed Action is to enter into a 24-month (third) IRC with the SMUD, an American River contractor, to facilitate the annual delivery of up to 30,000 AFY of CVP water for M&amp;I use in SMUD's Rancho Seco CVP service area (see map). SMUD has two IRCs previously executed following the expiration of the previous long-term water service contract. The Proposed Action is the third IRC for SMUD.</p> <p>The term of the SMUD IRC would be from March 1, 2017 through February 28, 2019. In the event a new long-term water service contract is executed, the IRC, then-in-effect, would be superseded by the long-term water service contract and analyzed under a separate environmental review process.</p> <p>No changes to SMUD's CVP service area and no construction is required as part of the Proposed Action. Any request by SMUD to change its existing service area would be a separate federal action. Separate appropriate environmental compliance and documentation would be completed before Reclamation approves a land inclusion or exclusion to SMUD's CVP service area.</p>

<p><b>*Project Location (Township, Range, Section, e.g., T12 R5E S10, or Lat/Long cords, DD- MM-SS or decimal degrees). Include map(s)</b></p>	<p>Sacramento County, California. Attached map includes UTM coordinates and SCWAs CVP service are in Sacramento County.</p> <p>Approximate midpoint: Latitude: 38.25152 Longitude: -121.10868</p>
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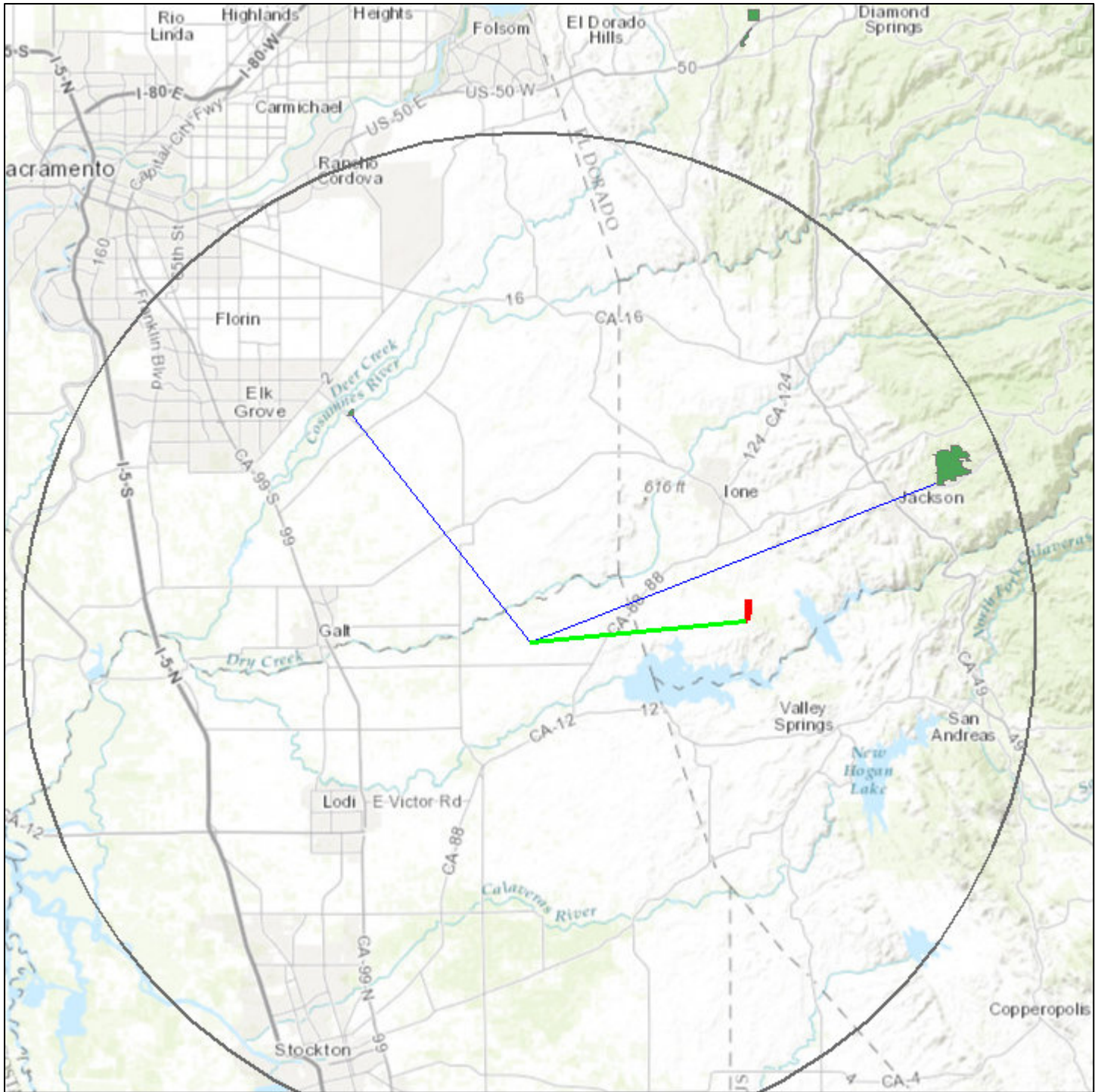
**ITA Determination: FONSI-CC-1605**

The closest ITA to the proposed **2017 American River Division Interim Water Service Contract Renewal for the Sacramento Municipal Utility District** activity is the **Buena Vista, Buena Vista Rancheria of Me-Wuk Indians** about 10.74 miles to the east (see attached image).

Based on the nature of the planned work it **does not** appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action **will not** have any impacts on ITAs.

<u>Sarah Perrin</u>	<u>Sarah Perrin</u>	<u>01 Feb 2017</u>
Signature	Printed name of approver	Date

# ITA Map FONSI-CC-1605

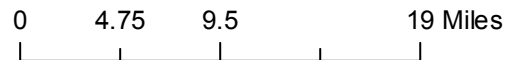


**Native American Lands FL**

Rancheria

**Native American Lands**

- <all other values>
- Alaska Native Regional Corporation
- Alaska Native Village Statistical Area
- American Indian Reservation
- Colony
- Community



**Appendix C: Comment Letters and  
Reclamation's Responses to  
Comments**

Stephan C. Volker  
Alexis E. Krieg  
Stephanie L. Clarke  
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11.211.02

January 26, 2017

***VIA EMAIL AND U.S. MAIL***

John Hutchings  
U.S. Bureau of Reclamation  
Central California Area Office  
7794 Folsom Dam Road  
Folsom, CA 95630  
Attn: CC-413  
jhutchings@usbr.gov

**Re: Comments of Pacific Coast Federation of Fishermen’s Associations, San Francisco Crab Boat Owners Association, Inc., Institute for Fisheries Resources and North Coast Rivers Alliance on Environmental Assessment for the 2017 American River Division Interim Water Service Contract Renewal for the Sacramento Municipal Utility District**

Mr. Hutchings:

On behalf of Pacific Coast Federation of Fishermen’s Associations, San Francisco Crab Boat Owners Association, Inc., Institute for Fisheries Resources, and North Coast Rivers Alliance, we submit the following comments on the Bureau of Reclamation’s (“Reclamation’s”) Environmental Assessment (“EA”) for the 2017 American River Division Interim Water Service Contract Renewal for the Sacramento Municipal Utility District (“SMUD”).

The EA is inadequate because it fails to apprise the public of the environmental impacts of approving the interim contract for SMUD. The EA’s analysis lacks substance and asserts that the impacts of renewing the interim contract would be the same as the impacts of not renewing the contract without any explanation at all. Further, the EA improperly dismisses consideration of certain impacts, including land use and global climate change. Finally, the EA improperly fails to study a reasonable range of alternatives, including but not limited to a reduced-contract-quantity alternative. *No* alternatives were considered. For these reasons, the EA violates the National Environmental Policy Act (“NEPA”) and cannot lawfully be approved. Moreover, an Environmental Impact Statement (“EIS”) must be prepared.

## I. THE INTERIM CONTRACT REQUIRES ENVIRONMENTAL REVIEW

- (a) PCFFA previously noted that Reclamation improperly failed to provide the public with any opportunity to comment on the interim contract itself, and thereby prevented the public from suggesting alterations to the contract based upon such environmental review. NEPA requires more. “NEPA imposes obligations on agencies considering major federal actions that may affect the environment. An agency may not evade these obligations by contracting around them.” *Pacific Coast Federation of Fishermen’s Associations v. United States Department of the Interior* (“PCFFA”), 655 Fed. Appx. 595, 598 (9th Cir. 2016).
- (b) The interim contract states explicitly that it is governed by Reclamation Law, including the Reclamation Act of June 17, 1902 (32 Stat. 388) as amended. The 1902 Act makes clear that “beneficial use shall be the basis, the measure, and the limit of the right” to use water acquired under its provisions. *See* 43 U.S.C. § 372. Reclamation’s boiler-plate incorporation of its prior interim renewal contracts, as is its practice for Central Valley Project (“CVP”) interim renewals, provides little basis for the public to determine whether SMUD has, in fact, met its obligations under existing contracts, including obligations to ensure beneficial use. Absent evidence of beneficial use, Reclamation cannot justify contract renewal at existing quantities.
- (c) The EA falsely implies that Reclamation has no discretion not to renew the interim contract. EA at 1 (“[s]ection 3404(c) mandated that upon request all existing CVP contracts be renewed”). In fact, the Central Valley Project Improvement Act (“CVPIA”) expressly provides Reclamation with the discretion to approve *or* reject interim contracts. *PCFFA*, 655 Fed.Appx. at 598 (“we do not agree with the district court that the . . . CVPIA . . . required Reclamation to enter into the interim contracts”). Reclamation’s false assumption that it had no discretion to reject SMUD’s interim contract violates NEPA just as the same incorrect assumption did in *PCFFA*. 655 Fed. Appx. at 698.
- (d) By circulating the contracts for public comment *prior to any NEPA review*, Reclamation will continue to harm water quality and quantity and dependent fish and wildlife species in the Bay-Delta and its watershed. Reclamation must conduct the necessary review to determine the significance of those impacts, and to determine whether those impacts necessitate changes to the contract terms. Renewal of the interim contract with SMUD will directly harm fish and wildlife by altering the hydrologic flow patterns in the Delta, adversely affecting the Delta’s salinity barrier, and reducing freshwater flows in the Delta. Reducing the contract quantity or rejecting the interim contract would have environmental benefits that Reclamation must acknowledge. The adverse environmental impacts of Reclamation’s voluntary decision to provide SMUD with CVP water must be analyzed in an Environmental Impact Statement (“EIS”) *prior* to project approval.

## **II. THE ENVIRONMENTAL ASSESSMENT IS INADEQUATE**

- 1) Reclamation's EA violates NEPA in four respects. First, the EA falsely claims that contract approval would have the same environmental impacts as non-approval. More generally, the analysis of the impacts of both the proposed action and the no-action alternative is completely lacking in substance. Second, the EA improperly relies upon an outside EIS to support its conclusions without providing the reader with sufficient information to verify the validity of the EA's assertions. Third, the EA's analysis of land use and global warming impacts is inadequate. Fourth, the EA studies no alternatives, much less the required reasonable range of alternatives.

### **A. THE ANALYSIS OF THE IMPACTS OF THE PROPOSED ACTION AND THE NO-ACTION ALTERNATIVE VIOLATES NEPA**

- 1) The EA's analysis of the environmental impacts of the proposed action and the no-action alternative violates NEPA for two reasons. First, the EA falsely claims that contract approval would have "identical" impacts to the No Action Alternative. EA at 9. This conclusion defies logic. Second, the EA contains no actual analysis of the environmental effects, either beneficial or adverse, of the no-action alternative. For example, the EA contains no analysis of how rejection of the interim contract would improve flows in the Delta, nor does it analyze whether rejecting the contract would prompt more groundwater pumping. Rather than provide information sufficient to inform the public about the environmental impacts of approving the interim contract, the EA repeatedly insists that Reclamation will comply with all regulatory requirements without explaining how doing so will affect the environment.
- 2) The EA falsely claims that the proposed action has the same environmental impacts as the no-action alternative, but it never explains the basis for this untenable conclusion. The EA's conclusory statements about alternative water supplies are inadequate to support the EA's paradoxical and confounding claim that the proposed action of approving the interim contract "would provide for the delivery of CVP water in the same quantity to the same lands for the same M&I uses as would be provided under the No Action Alternative," pursuant to which "SMUD would not have a contract mechanism for delivery of their CVP water." EA at 8-9. Moreover, delivering CVP water to SMUD will necessarily have different and greater impacts – including but not limited to reduced freshwater flows in the Delta – than not doing so.
- 3) The EA admits that under the No Action Alternative, "[t]here would be no contractual mechanism for Reclamation to deliver up to 30,000 [acre-feet] of CVP water to SMUD, and the existing needs of SMUD's customers would not be met through these CVP contract supplies." EA at 6. The EA claims that if the interim contract is rejected SMUD could instead use unspecified "surface water supplies . . . from non-CVP sources or other CVP supplies." *Id.* But there is *no* explanation of what alternative water sources might be available, only the excessively vague, and thus meaningless, statement that there are "other sources of water available to SMUD



for use in their Rancho Seco service area.” EA at 8. What sources are these? Will they be available in every type of water year? Are they themselves dependent upon discretionary actions taken by Reclamation? Without *any* factual basis for concluding that alternative water sources are available to SMUD, the EA’s conclusion that such supplies will certainly be available is entirely inadequate to “promote informed decision-making and public participation,” as required. *NPCA v. BLM*, 606 F.3d 1058, 1073 (9th Cir. 2009).

- 4) Reclamation has an obligation to disclose the environmental impacts of alternative water supplies. *NPCA*, 606 F.3d at 1073. The EA’s meaningless and uninformative statements entirely fail to perform this function. *Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998) (“some quantified or detailed information is required” for an adequate impact analysis because “[w]ithout such information, neither the courts nor the public, in reviewing the [agency’s] decisions, can be assured that the [agency] provided the hard look that it is required to provide”). The EA’s entire analysis of the impacts that the no-action alternative will have on biological resources consists of a few conclusory claims that Reclamation will continue to operate “the CVP consistent with all requirements.” EA at 8. There is no analysis of whether rejecting the contract would increase flows in the Delta, no analysis of the environmental impacts – like ground subsidence – that SMUD’s alternative water supplies might create, no analysis of what use Reclamation will make of the water if it is not given to SMUD,<sup>1</sup> no analysis of how downstream diverters and fishermen would be affected by a halt in water deliveries, no analysis of how reservoir levels would be affected by an end to deliveries, and no analysis of how SMUD’s customers would be affected by a cessation of water deliveries. There is no substantive analysis at all, which violates NEPA. *NPCA*, 606 F.3d at 1073; *Cuddy Mountain*, 137 F.3d at 1379.
- 5) The EA also violates NEPA because it fails to account for cumulative impacts. The Delta environment is deteriorating, and species are moving ever-closer to extinction. Reclamation is obliged to analyze how the environmental impacts of current operations are magnified by such conditions. As the Delta’s water quality continues to decline, and its fish and wildlife are pushed closer to extirpation, the impacts of a given quantity of diversions are magnified. The EA completely fails to grapple with these impacts and thus violates NEPA.

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<sup>1</sup> If the water is instead given to agricultural water districts south of the Delta, for example, environmental impacts could result because the land underneath such districts is contaminated with pollutants that return to the Delta in return flows when such land is irrigated. If the water is instead put to environmental uses, by contrast, freshwater flows in the Delta would increase. The public is entitled to know the environmental effects of Reclamation’s actions.

**B. THE EA IMPROPERLY RELIES UPON THE LONG TERM OPERATION EIS**

- 1) Reclamation's EA relies upon the Long Term Operation ("LTO") EIS, prepared to implement the U.S. Fish and Wildlife Service's ("FWS") and National Marine Fisheries Service's ("NMFS") Biological Opinions to protect imperiled fisheries resources. But the LTO EIS treated the FWS and NMFS Reasonably Prudent Alternatives to protect those species as the *ceiling*, and not the *floor*, for appropriate management actions to prevent the extinction of listed species. Moreover, the LTO EIS does not address the site specific impacts of contract renewal. These site specific impacts, both at the point of delivery *and* at the points of diversion (i.e., the original source such as upper watershed reservoirs) and rediversion (e.g., from storage in Folsom Reservoir), *must be addressed now*. Additionally, the LTO EIS does not examine the alternative of reducing SMUD's deliveries, and incorrectly assumes that Reclamation has no discretion to reject interim contracts. *See PCFFA*, 655 Fed.Appx. at 598 (use of "may" in CVPIA means that interim contract renewal is discretionary). Without examining how the renewal of these contracts operates comprehensively as part of the larger CVP picture, and analyzing the cumulative impacts both directly and indirectly of that diversion and delivery system, and whether these contracts should be modified to more effectively protect imperiled fish and other public trust resources, Reclamation has failed to take the required "hard look" at the impacts of its proposed actions.

For example, and for illustrative purposes only, the EA states that the LTO EIS indicated that providing SMUD with water "would not have any *changes* to cold water pool volume." EA at 12. But since the LTO EIS was premised on Reclamation being unable to stop providing water to SMUD, this statement apparently means only that *continuing* to provide water to SMUD would not affect cold pool volume *compared to the status quo of deliveries to SMUD*. Such a conclusion is entirely inadequate to support the EA's analysis, which is comparing Reclamation's option of providing SMUD with water to Reclamation's option to cease providing water to SMUD altogether. The EA does not, and cannot, claim that cold pool volume in Folsom Reservoir will be the same if Reclamation delivers water to SMUD *compared to not delivering any water to SMUD at all*. This deficiency is emblematic of how Reclamation's improper reliance on the LTO EIS skewed the EA's analysis and obscured the interim contract's environmental impacts. Reclamation's wholesale failure to provide the public with any substantive information about the environmental impacts of its water deliveries violates NEPA. *NPCA*, 606 F.3d at 1073; *Cuddy Mountain*, 137 F.3d at 1379.

- 2) NEPA also forbids Reclamation from satisfying its informational obligations by incorporating outside documents into an EA. *Natural Resources Defense Council v. Duvall*, 777 F.Supp. 1533, 1538-39 (E.D.Cal. 1991) (disallowing incorporation by reference into an EA because (1) 40 C.F.R. section 1508.21, allowing incorporation by reference, applies only to EISs and (2) an EA's conclusions should "be close to self-evident and . . . not require an extended

document incorporating other studies”). NEPA requires Reclamation to study the impacts of its actions and expose its conclusions to public scrutiny, not obliquely and opaquely refer the reader to outside documents whose location the reader is not directed to and whose conclusions – let alone data and analysis – are not summarized or provided to the reader.

Even assuming for the sake of argument that the requirements governing incorporation by reference into EISs are also applicable to EAs, Reclamation failed to satisfy them. Putatively incorporated documents must satisfy “three standards: 1) the material is reasonably available; 2) the statement is understandable without undue cross reference; and 3) the incorporation by reference meets a general standard of reasonableness.” *Duvall*, 777 F.Supp. at 1539. Because Reclamation’s EA neither summarizes the conclusions of the outside documents nor tells the reader where they can be obtained, the incorporation requires undue cross reference and fails the general standard of reasonableness. *E.g.*, EA at 10-11; *cf. Siskiyou Regional Education Project v. Rose*, 87 F.Supp.2d 1074, 1097 (D.Or. 1999) (incorporation impermissible because EA failed to specify which portions of documents it incorporated).

### **C. THE EA IMPROPERLY FAILS TO CONSIDER ENVIRONMENTAL IMPACTS**

The EA only analyzes two categories of impacts – impacts to biological resources, and impacts to facility operations and water supply. The EA’s failure to address growth-inducing impacts and the effects of global warming violates NEPA.

#### **1. Land Use**

SMUD will use the water provided under the interim contract to supply water to its customers as it “reach[es] build-out within” its “service area.” EA at 5. But the EA completely ignores the extent to which supplying SMUD with water enables SMUD to “reach build-out within” its “service area.” *Id.* The EA must consider whether approving the interim contract will induce or enable population growth within SMUD’s service area. Population growth leads to substantial environmental impacts including but not limited to impacts on public services, biological resources, and transportation. It is reasonably foreseeable that approving SMUD’s interim water contract will enable or induce population growth and Reclamation must disclose that indirect environmental impact.

#### **2. Global Warming**

The EA fails to analyze how global climate change will affect the project. Climate change is likely to reduce flows, increase water temperatures even assuming constant flows, reduce dissolved oxygen, increase salinity, reduce the populations of fish species, and, overall, add many more stressors to already compromised Delta fish and wildlife. Yet the EA does not

analyze whether and how global climate change will increase the environmental impacts of the proposed interim contract by negatively affecting the environment surrounding it. That violates NEPA, as recent guidance from the Council on Environmental Quality (“CEQ”) makes clear. On August 1, 2016, the CEQ issued its official guidance about federal agencies’ analysis of greenhouse gases, titled “Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews,” which is attached hereto as Exhibit 1. The CEQ’s Guidance emphasizes that agencies have an obligation to disclose how the environmental impacts of their actions will be exacerbated by climate change:

For example, a proposed action may require water from a stream that has diminishing quantities of available water because of decreased snow pack in the mountains, or add heat to a water body that is already warming due to increasing atmospheric temperatures. Such considerations are squarely within the scope of NEPA and can inform decisions on whether to proceed with, and how to design, the proposed action to eliminate or mitigate impacts exacerbated by climate change.

Exhibit 1 at 21. Reclamation must provide detailed and specific information about how climate change will affect the impacts of approving the interim contract to enable the public to understand the consequences of its actions. *Id.*; *Neighbors of Cuddy Mountain*, 137 F.3d at 1379.

#### **D. THE EA FAILS TO STUDY A REASONABLE RANGE OF ALTERNATIVES**

Reclamation’s EA violates NEPA because it fails to study a reasonable range of alternatives. *PCFFA*, 655 Fed.Appx. at 599 (“Reclamation’s decision not to give full and meaningful consideration to the alternative of a reduction in maximum interim contract water quantities was an abuse of discretion”). “[C]ourts require consideration of a reasonable range of alternatives in environmental assessments as well as in impact statements.” Mandelker, *NEPA Law and Litigation*, § 10:30; *see also Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1052 (9th Cir. 2013) (agency’s failure to consider in detail any “meaningful[ly] differen[t]” alternative impaired its ability to “make an informed decision on a project’s environmental impacts”). The EA fails to consider a reasonable range of alternatives; the only alternative is the no-action alternative. A proper range of alternatives would have considered interim contract renewals at amounts less than the current allocation along with nonrenewal of the contracts. Such alternatives would show the environmental and land use impacts of such reductions, giving Reclamation, Congress and the public a proper understanding of the contract renewals’ impacts. The EA’s failure to provide a reasonable range of alternatives violates NEPA.

### III. RECLAMATION MUST PREPARE AN EIS

“An agency is required to prepare an EIS where there are substantial questions about whether a project *may* cause significant degradation of the human environment.” *Native Ecosystems Council v. Forest Service*, 428 F.3d 1233, 1239 (9th Cir. 2005) (emphasis in original); *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013). When determining if an action may significantly affect the environment, agencies must consider “context and intensity.” 40 C.F.R. § 1508.27; 42 U.S.C. § 4332(2)(C). “Context refers to the setting in which the proposed action takes place. . . . Intensity means the severity of the impact,” as determined by “up to ten factors” listed in 40 C.F.R. section 1508.27(b). *Ocean Advocates v. U.S. Army Corps of Engineers*, 402 F.3d 846, 865 (9th Cir. 2004). These factors indicate that an action is significant “where it is reasonable to anticipate a cumulatively significant impact.” 40 C.F.R. § 1508.27(b)(7). In examining whether an action is significant, agencies must consider “the degree to which the action may adversely affect an endangered or threatened species” or its critical habitat. 40 C.F.R. § 1508.27(b)(9). The presence of just “one of these factors may be sufficient to require preparation of an EIS.” *Ocean Advocates*, 402 F.3d at 865.

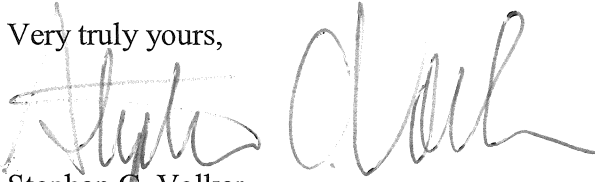
Here, at least three of the factors are met, so an EIS is required. First, Reclamation has entirely failed to engage in any substantive analysis of the direct, indirect and cumulative impacts of renewing the interim contract, and has failed to adequately compare the no-action alternative with the proposed action. This omission renders the impacts of contract renewal “highly uncertain,” and thus an EIS is required. 40 C.F.R. § 1508.27(b)(5). Second, contract renewal will have potentially significant cumulative impacts in light of the deteriorating condition of the Delta, as discussed above. This further indicates the need for an EIS. 40 C.F.R. § 1507.27(b)(7) (“Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts”). And finally, an EIS is required because contract renewal may have a significant impact on the endangered species living in the Delta. 40 C.F.R. § 1508.27(b)(9). While each of these reasons is independently sufficient to mandate an EIS, they collectively remove all doubt that Reclamation must conduct a thorough analysis of these impacts of contract renewal by preparing such a document. *Ocean Advocates*, 402 F.3d at 865.

For all of these reasons, Pacific Coast Federation of Fishermen’s Associations, San Francisco Crab Boat Owners Association, Inc., Institute for Fisheries Resources, and North Coast Rivers Alliance urge Reclamation to prepare an EIS addressing contract renewal, and to consider modifications to the contract to better protect California’s remaining imperiled salmon and other impacted wildlife and public trust resources.

John Hutchings, U.S. Bureau of Reclamation  
January 26, 2017  
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Thank you for considering our comments on this important matter.

Very truly yours,

A handwritten signature in black ink, appearing to read "Stephan C. Volker". The signature is written in a cursive style with a large, sweeping initial "S".

Stephan C. Volker  
Attorney for Pacific Coast Federation of Fishermen's  
Associations, San Francisco Crab Boat Owners  
Association, Inc., Institute for Fisheries Resources and  
North Coast Rivers Alliance

# EXHIBIT 1



EXECUTIVE OFFICE OF THE PRESIDENT  
COUNCIL ON ENVIRONMENTAL QUALITY  
WASHINGTON, D.C. 20503

August 1, 2016

MEMORANDUM FOR HEADS OF FEDERAL DEPARTMENTS AND AGENCIES

FROM:  CHRISTINA GOLDFUSS  
COUNCIL ON ENVIRONMENTAL QUALITY

SUBJECT: Final Guidance for Federal Departments and Agencies on  
Consideration of Greenhouse Gas Emissions and the Effects of  
Climate Change in National Environmental Policy Act Reviews

I. INTRODUCTION

The Council on Environmental Quality (CEQ) issues this guidance to assist Federal agencies in their consideration of the effects of greenhouse gas (GHG) emissions<sup>1</sup> and climate change when evaluating proposed Federal actions in accordance with the National Environmental Policy Act (NEPA) and the CEQ Regulations Implementing the Procedural Provisions of NEPA (CEQ Regulations).<sup>2</sup> This guidance will facilitate compliance with existing NEPA requirements, thereby improving the efficiency and consistency of reviews of proposed Federal actions for agencies, decision makers, project proponents, and the public.<sup>3</sup> The guidance provides Federal agencies a common

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<sup>1</sup> For purposes of this guidance, CEQ defines GHGs in accordance with Section 19(m) of Exec. Order No. 13693, Planning for Federal Sustainability in the Next Decade, 80 Fed. Reg. 15869, 15882 (Mar. 25, 2015) (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride). Also for purposes of this guidance, "emissions" includes release of stored GHGs as a result of land management activities affecting terrestrial GHG pools such as, but not limited to, carbon stocks in forests and soils, as well as actions that affect the future changes in carbon stocks. The common unit of measurement for GHGs is metric tons of CO<sub>2</sub> equivalent (mt CO<sub>2</sub>-e).

<sup>2</sup> See 42 U.S.C. 4321 et seq.; 40 CFR Parts 1500–1508.

<sup>3</sup> This guidance is not a rule or regulation, and the recommendations it contains may not apply to a particular situation based upon the individual facts and circumstances. This guidance does not change or substitute for any law, regulation, or other legally binding



approach for assessing their proposed actions, while recognizing each agency's unique circumstances and authorities.<sup>4</sup>

Climate change is a fundamental environmental issue, and its effects fall squarely within NEPA's purview.<sup>5</sup> Climate change is a particularly complex challenge given its global nature and the inherent interrelationships among its sources, causation, mechanisms of action, and impacts. Analyzing a proposed action's GHG emissions and the effects of climate change relevant to a proposed action—particularly how climate change may change an action's environmental effects—can provide useful information to decision makers and the public.

CEQ is issuing the guidance to provide for greater clarity and more consistency in how agencies address climate change in the environmental impact assessment process. This guidance uses longstanding NEPA principles because such an analysis should be similar to the analysis of other environmental impacts under NEPA. The guidance is intended to assist agencies in disclosing and considering the reasonably foreseeable effects of proposed actions that are relevant to their decision-making processes. It confirms that agencies should provide the public and decision makers with explanations of the basis for agency determinations.

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requirement, and is not legally enforceable. The use of non-mandatory language such as “guidance,” “recommend,” “may,” “should,” and “can,” is intended to describe CEQ policies and recommendations. The use of mandatory terminology such as “must” and “required” is intended to describe controlling requirements under the terms of NEPA and the CEQ regulations, but this document does not affect legally binding requirements.

<sup>4</sup> This guidance also addresses recommendations offered by a number of stakeholders. See President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, *Recommendations to the President* (November 2014), p. 20 (recommendation 2.7), available at [www.whitehouse.gov/sites/default/files/docs/task\\_force\\_report\\_0.pdf](http://www.whitehouse.gov/sites/default/files/docs/task_force_report_0.pdf); U.S. Government Accountability Office, *Future Federal Adaptation Efforts Could Better Support Local Infrastructure Decision Makers*, (Apr. 2013), available at <http://www.gao.gov/assets/660/653741.pdf>. Public comments on drafts of this guidance document are available at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/comments>.

<sup>5</sup> NEPA recognizes “the profound impact of man's activity on the interrelations of all components of the natural environment.” (42 U.S.C. 4331(a)). It was enacted to, *inter alia*, “promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” (42 U.S.C. 4321).

Focused and effective consideration of climate change in NEPA reviews<sup>6</sup> will allow agencies to improve the quality of their decisions. Identifying important interactions between a changing climate and the environmental impacts from a proposed action can help Federal agencies and other decision makers identify practicable opportunities to reduce GHG emissions, improve environmental outcomes, and contribute to safeguarding communities and their infrastructure against the effects of extreme weather events and other climate-related impacts.

Agencies implement NEPA through one of three levels of NEPA analysis: a Categorical Exclusion (CE); an Environmental Assessment (EA); or an Environmental Impact Statement (EIS). This guidance is intended to help Federal agencies ensure their analysis of potential GHG emissions and effects of climate change in an EA or EIS is commensurate with the extent of the effects of the proposed action.<sup>7</sup> Agencies have discretion in how they tailor their individual NEPA reviews to accommodate the approach outlined in this guidance, consistent with the CEQ Regulations and their respective implementing procedures and policies.<sup>8</sup> CEQ does not expect that implementation of this guidance will require agencies to develop new NEPA implementing procedures. However, CEQ recommends that agencies review their NEPA procedures and propose any updates they deem necessary or appropriate to facilitate their consideration of GHG emissions and climate change.<sup>9</sup> CEQ will review agency

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<sup>6</sup> The term “NEPA review” is used to include the analysis, process, and documentation required under NEPA. While this document focuses on NEPA reviews, agencies are encouraged to analyze GHG emissions and climate-resilient design issues early in the planning and development of proposed actions and projects under their substantive authorities.

<sup>7</sup> See 40 CFR 1502.2(b) (Impacts shall be discussed in proportion to their significance); 40 CFR 1502.15 (Data and analyses in a statement shall be commensurate with the importance of the impact...).

<sup>8</sup> See 40 CFR 1502.24 (Methodology and scientific accuracy).

<sup>9</sup> See 40 CFR 1507.3. Agency NEPA implementing procedures can be, but are not required to be, in the form of regulation. Section 1507.3 encourages agencies to publish explanatory guidance, and agencies also should consider whether any updates to explanatory guidance are necessary. Agencies should review their policies and implementing procedures and revise them as necessary to ensure full compliance with NEPA.

proposals for revising their NEPA procedures, including any revision of CEs, in light of this guidance.

As discussed in this guidance, when addressing climate change agencies should consider: (1) The potential effects of a proposed action on climate change as indicated by assessing GHG emissions (e.g., to include, where applicable, carbon sequestration);<sup>10</sup> and, (2) The effects of climate change on a proposed action and its environmental impacts.

This guidance explains the application of NEPA principles and practices to the analysis of GHG emissions and climate change, and

- Recommends that agencies quantify a proposed agency action’s projected direct and indirect GHG emissions, taking into account available data and GHG quantification tools that are suitable for the proposed agency action;
- Recommends that agencies use projected GHG emissions (to include, where applicable, carbon sequestration implications associated with the proposed agency action) as a proxy for assessing potential climate change effects when preparing a NEPA analysis for a proposed agency action;
- Recommends that where agencies do not quantify a proposed agency action’s projected GHG emissions because tools, methodologies, or data inputs are not reasonably available to support calculations for a quantitative analysis, agencies include a qualitative analysis in the NEPA document and explain the basis for determining that quantification is not reasonably available;

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<sup>10</sup> Carbon sequestration is the long-term carbon storage in plants, soils, geologic formations, and oceans.

- Discusses methods to appropriately analyze reasonably foreseeable direct, indirect, and cumulative GHG emissions and climate effects;
- Guides the consideration of reasonable alternatives and recommends agencies consider the short- and long-term effects and benefits in the alternatives and mitigation analysis;
- Advises agencies to use available information when assessing the potential future state of the affected environment in a NEPA analysis, instead of undertaking new research that is , and provides examples of existing sources of scientific information;
- Counsels agencies to use the information developed during the NEPA review to consider alternatives that would make the actions and affected communities more resilient to the effects of a changing climate;
- Outlines special considerations for agencies analyzing biogenic carbon dioxide sources and carbon stocks associated with land and resource management actions under NEPA;
- Recommends that agencies select the appropriate level of NEPA review to assess the broad-scale effects of GHG emissions and climate change, either to inform programmatic (e.g., landscape-scale) decisions, or at both the programmatic and tiered project- or site-specific level, and to set forth a reasoned explanation for the agency’s approach; and
- Counsels agencies that the “rule of reason” inherent in NEPA and the CEQ Regulations allows agencies to determine, based on their expertise and

experience, how to consider an environmental effect and prepare an analysis based on the available information.

## II. BACKGROUND

### A. NEPA

NEPA is designed to promote consideration of potential effects on the human environment<sup>11</sup> that would result from proposed Federal agency actions, and to provide the public and decision makers with useful information regarding reasonable alternatives<sup>12</sup> and mitigation measures to improve the environmental outcomes of Federal agency actions. NEPA ensures that the environmental effects of proposed actions are taken into account before decisions are made and informs the public of significant environmental effects of proposed Federal agency actions, promoting transparency and accountability concerning Federal actions that may significantly affect the quality of the human environment. NEPA reviews should identify measures to avoid, minimize, or mitigate adverse effects of Federal agency actions. Better analysis and decisions are the ultimate goal of the NEPA process.<sup>13</sup>

Inherent in NEPA and the CEQ Regulations is a “rule of reason” that allows agencies to determine, based on their expertise and experience, how to consider an environmental effect and prepare an analysis based on the available information. The usefulness of that information to the decision-making process and the public, and the

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<sup>11</sup> 40 CFR 1508.14 (“‘Human environment’ shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment.”).

<sup>12</sup> 40 CFR 1508.25(b) (“Alternatives, which include: (1) No action alternative. (2) Other reasonable courses of actions. (3) Mitigation measures (not in the proposed action).”).

<sup>13</sup> 40 CFR 1500.1(c) (“Ultimately, of course, it is not better documents but better decisions that count. NEPA’s purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.”).

extent of the anticipated environmental consequences are important factors to consider when applying that “rule of reason.”

## B. Climate Change

Climate change science continues to expand and refine our understanding of the impacts of anthropogenic GHG emissions. CEQ’s first Annual Report in 1970 referenced climate change, indicating that “[m]an may be changing his weather.”<sup>14</sup> At that time, the mean level of atmospheric carbon dioxide (CO<sub>2</sub>) had been measured as increasing to 325 parts per million (ppm) from an average of 280 ppm pre-Industrial levels.<sup>15</sup> Since 1970, the concentration of atmospheric carbon dioxide has increased to approximately 400 ppm (2015 globally averaged value).<sup>16</sup> Since the publication of CEQ’s first Annual Report, it has been determined that human activities have caused the carbon dioxide content of the atmosphere of our planet to increase to its highest level in at least 800,000 years.<sup>17</sup>

It is now well established that rising global atmospheric GHG emission concentrations are significantly affecting the Earth’s climate. These conclusions are built upon a scientific record that has been created with substantial contributions from the

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<sup>14</sup> See CEQ, *Environmental Quality – The First Annual Report*, p. 93 (August 1970); available at [https://ceq.doe.gov/ceq\\_reports/annual\\_environmental\\_quality\\_reports.html](https://ceq.doe.gov/ceq_reports/annual_environmental_quality_reports.html).

<sup>15</sup> See USGCRP, *Climate Change Impacts in the United States – The Third National Climate Assessment* (Jerry M. Melillo, Terese (T.C.) Richmond, & Gary W. Yohe eds., 2014) [hereinafter “Third National Climate Assessment”], *Appendix 3 Climate Science Supplement*, p. 739; EPA, April 2015: *Inventory of U.S. Greenhouse Emissions and Sinks 1990-2013*, available at <https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Main-Text.pdf>. See also Hartmann, D.L., A.M.G. Klein Tank, M. Rusticucci, et al., 2013 *Observations Atmosphere and Surface*. In *Climate Change 2013 The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K., et al. (eds)]. Cambridge University Press: Cambridge, United Kingdom and New York, NY, USA. Available at [http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5\\_Chapter02\\_Final.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter02_Final.pdf).

<sup>16</sup> See Ed Dlugokencky & Pieter Tans, National Oceanic and Atmospheric Administration/Earth System Research Laboratory, <http://www.esrl.noaa.gov/gmd/ccgg/trends/global.html>.

<sup>17</sup> See <http://earthobservatory.nasa.gov/Features/CarbonCycle>; University of California Riverside, National Aeronautics and Space Administration (NASA), and Riverside Unified School District, *Down to Earth Climate Change*, <http://globalclimate.ucr.edu/resources.html>; USGCRP, *Third National Climate Assessment, Appendix 3 Climate Science Supplement*, p. 736 (“Although climate changes in the past have been caused by natural factors, human activities are now the dominant agents of change. Human activities are affecting climate through increasing atmospheric levels of heat-trapping gases and other substances, including particles.”).

United States Global Change Research Program (USGCRP), which informs the United States’ response to global climate change through coordinated Federal programs of research, education, communication, and decision support.<sup>18</sup> Studies have projected the effects of increasing GHGs on many resources normally discussed in the NEPA process, including water availability, ocean acidity, sea-level rise, ecosystem functions, energy production, agriculture and food security, air quality and human health.<sup>19</sup>

Based primarily on the scientific assessments of the USGCRP, the National Research Council, and the Intergovernmental Panel on Climate Change, in 2009 the Environmental Protection Agency (EPA) issued a finding that the changes in our climate caused by elevated concentrations of greenhouse gases in the atmosphere are reasonably anticipated to endanger the public health and public welfare of current and future generations.<sup>20</sup> In 2015, EPA acknowledged more recent scientific assessments that “highlight the urgency of addressing the rising concentration of CO<sub>2</sub> in the atmosphere,” finding that certain groups are especially vulnerable to climate-related effects.<sup>21</sup> Broadly

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<sup>18</sup> See Global Change Research Act of 1990, Pub. L. 101–606, Sec. 103 (November 16, 1990). For additional information on the United States Global Change Research Program [hereinafter “USGCRP”], visit <http://www.globalchange.gov>. The USGCRP, formerly the Climate Change Science Program, coordinates and integrates the activities of 13 Federal agencies that conduct research on changes in the global environment and their implications for society. The USGCRP began as a Presidential initiative in 1989 and was codified in the Global Change Research Act of 1990 (Public Law 101–606). USGCRP-participating agencies are the Departments of Agriculture, Commerce, Defense, Energy, Interior, Health and Human Services, State, and Transportation; the U.S. Agency for International Development, the Environmental Protection Agency, NASA, the National Science Foundation, and the Smithsonian Institution.

<sup>19</sup> See USGCRP, *Third National Climate Assessment*, available at [http://nca2014.globalchange.gov/system/files\\_force/downloads/low/NCA3\\_Climate\\_Change\\_Impacts\\_in\\_the\\_United%20States\\_Low\\_Res.pdf?download=1](http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Climate_Change_Impacts_in_the_United%20States_Low_Res.pdf?download=1); IPCC, *Climate Change 2014 Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (R.K. Pachauri, & L.A. Meyer eds., 2014), available at [https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\\_AR5\\_FINAL\\_full.pdf](https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full.pdf); see also <http://www.globalchange.gov>; 40 CFR 1508.8 (effects include ecological, aesthetic, historic, cultural, economic, social, and health effects); USGCRP, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*, available at <https://health2016.globalchange.gov/>.

<sup>20</sup> See generally *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66496 (Dec. 15, 2009). (For example, at 66497–98: “[t]he evidence concerning how human-induced climate change may alter extreme weather events also clearly supports a finding of endangerment, given the serious adverse impacts that can result from such events and the increase in risk, even if small, of the occurrence and intensity of events such as hurricanes and floods. Additionally, public health is expected to be adversely affected by an increase in the severity of coastal storm events due to rising sea levels”).

<sup>21</sup> See EPA, *Final Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64661, 64677 (Oct. 23, 2015) (“Certain groups, including children, the elderly, and the poor, are most vulnerable to climate-related effects. Recent studies also find that certain communities, including low-income communities and some communities of color ... are disproportionately affected by certain climate change related impacts—including heat waves, degraded air quality, and

stated, the effects of climate change observed to date and projected to occur in the future include more frequent and intense heat waves, longer fire seasons and more severe wildfires, degraded air quality, more heavy downpours and flooding, increased drought, greater sea-level rise, more intense storms, harm to water resources, harm to agriculture, ocean acidification, and harm to wildlife and ecosystems.<sup>22</sup>

### III. CONSIDERING THE EFFECTS OF GHG EMISSIONS AND CLIMATE CHANGE

This guidance is applicable to all Federal actions subject to NEPA, including site-specific actions, certain funding of site-specific projects, rulemaking actions, permitting decisions, and land and resource management decisions.<sup>23</sup> This guidance does not – and cannot – expand the range of Federal agency actions that are subject to NEPA.

Consistent with NEPA, Federal agencies should consider the extent to which a proposed action and its reasonable alternatives would contribute to climate change, through GHG emissions, and take into account the ways in which a changing climate may impact the proposed action and any alternative actions, change the action’s environmental effects over the lifetime of those effects, and alter the overall environmental implications of such actions.

This guidance is intended to assist agencies in disclosing and considering the effects of GHG emissions and climate change along with the other reasonably foreseeable environmental effects of their proposed actions. This guidance does not establish any

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extreme weather events—which are associated with increased deaths, illnesses, and economic challenges. Studies also find that climate change poses particular threats to the health, well-being, and ways of life of indigenous peoples in the U.S.”).

<sup>22</sup> See <http://www.globalchange.gov/climate-change/impacts-society> and Third National Climate Assessment, Chapters 3-15 (Sectors) and Chapters 16-25 (Regions), available at <http://nca2014.globalchange.gov/downloads>.

<sup>23</sup> See 40 CFR 1508.18.



particular quantity of GHG emissions as “significantly” affecting the quality of the human environment or give greater consideration to the effects of GHG emissions and climate change over other effects on the human environment.

A. GHG Emissions as a Proxy for the Climate Change Impacts of a Proposed Action

In light of the global scope of the impacts of GHG emissions, and the incremental contribution of each single action to global concentrations, CEQ recommends agencies use the projected GHG emissions associated with proposed actions as a proxy for assessing proposed actions’ potential effects on climate change in NEPA analysis.<sup>24</sup> This approach, together with providing a qualitative summary discussion of the impacts of GHG emissions based on authoritative reports such as the USGCRP’s National Climate Assessments and the Impacts of Climate Change on Human Health in the United States, a Scientific Assessment of the USGCRP, allows an agency to present the environmental and public health impacts of a proposed action in clear terms and with sufficient information to make a reasoned choice between no action and other alternatives and appropriate mitigation measures, and to ensure the professional and scientific integrity of the NEPA review.<sup>25</sup>

Climate change results from the incremental addition of GHG emissions from millions of individual sources,<sup>26</sup> which collectively have a large impact on a global scale.

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<sup>24</sup> See 40 CFR 1502.16, 1508.9.

<sup>25</sup> See 40 CFR 1500.1, 1502.24 (requiring agencies to use high quality information and ensure the professional and scientific integrity of the discussions and analyses in environmental impact statements).

<sup>26</sup> Some sources emit GHGs in quantities that are orders of magnitude greater than others. See EPA, *Greenhouse Gas Reporting Program 2014 Reported Data*, Figure 2: Direct GHG Emissions Reported by Sector (2014), available at <https://www.epa.gov/ghgreporting/ghgrp-2014-reported-data> (amounts of GHG emissions by sector); *Final Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources Electric Utility Generating Units*, 80 Fed. Reg. 64661, 64663, 64689 (Oct. 23, 2015) (regulation of GHG emissions from fossil fuel-fired electricity generating power plants); *Oil and Natural Gas Sector Emission Standards for New, Reconstructed, and Modified Sources*, 81 Fed. Reg. 34824, 35830 (June 3, 2016) (regulation of GHG emissions from oil and gas sector).

CEQ recognizes that the totality of climate change impacts is not attributable to any single action, but are exacerbated by a series of actions including actions taken pursuant to decisions of the Federal Government. Therefore, a statement that emissions from a proposed Federal action represent only a small fraction of global emissions is essentially a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether or to what extent to consider climate change impacts under NEPA. Moreover, these comparisons are also not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations because this approach does not reveal anything beyond the nature of the climate change challenge itself: the fact that diverse individual sources of emissions each make a relatively small addition to global atmospheric GHG concentrations that collectively have a large impact. When considering GHG emissions and their significance, agencies should use appropriate tools and methodologies for quantifying GHG emissions and comparing GHG quantities across alternative scenarios. Agencies should not limit themselves to calculating a proposed action's emissions as a percentage of sector, nationwide, or global emissions in deciding whether or to what extent to consider climate change impacts under NEPA.

#### 1. GHG Emissions Quantification and Relevant Tools

This guidance recommends that agencies quantify a proposed agency action's projected direct and indirect GHG emissions. Agencies should be guided by the principle that the extent of the analysis should be commensurate with the quantity of projected GHG emissions and take into account available data and GHG quantification tools that

are suitable for and commensurate with the proposed agency action.<sup>27</sup> The rule of reason and the concept of proportionality caution against providing an in-depth analysis of emissions regardless of the insignificance of the quantity of GHG emissions that would be caused by the proposed agency action.

Quantification tools are widely available, and are already in broad use in the Federal and private sectors, by state and local governments, and globally.<sup>28</sup> Such quantification tools and methodologies have been developed to assist institutions, organizations, agencies, and companies with different levels of technical sophistication, data availability, and GHG source profiles. When data inputs are reasonably available to support calculations, agencies should conduct GHG analysis and disclose quantitative estimates of GHG emissions in their NEPA reviews. These tools can provide estimates of GHG emissions, including emissions from fossil fuel combustion and estimates of GHG emissions and carbon sequestration for many of the sources and sinks potentially affected by proposed resource management actions.<sup>29</sup> When considering which tool(s) to employ, it is important to consider the proposed action's temporal scale, and the availability of input data.<sup>30</sup> Examples of the kinds of methodologies agencies might consider using are presented in CEQ's 2012 Guidance for Accounting and Reporting GHG Emissions for a wide variety of activities associated with Federal agency operations.<sup>31</sup> When an agency determines that quantifying GHG emissions would not be

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<sup>27</sup> See 40 CFR 1500.1(b) ("Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail."); 40 CFR 1502.2(b) (Impacts shall be discussed in proportion to their significance); 40 CFR 1502.15 (Data and analyses in a statement shall be commensurate with the importance of the impact...).

<sup>28</sup> See [https://ceq.doe.gov/current\\_developments/GHG-accounting-tools.html](https://ceq.doe.gov/current_developments/GHG-accounting-tools.html).

<sup>29</sup> For example, USDA's COMET-Farm tool can be used to assess the carbon sequestration of existing agricultural activities along with the reduction in carbon sequestration (emissions) of project-level activities, <http://cometfarm.nrel.colostate.edu/>. Examples of other tools are available at [https://ceq.doe.gov/current\\_developments/GHG-accounting-tools.html](https://ceq.doe.gov/current_developments/GHG-accounting-tools.html).

<sup>30</sup> See 40 CFR 1502.22.

<sup>31</sup> See

[https://www.whitehouse.gov/sites/default/files/microsites/ceq/revised\\_federal\\_greenhouse\\_gas\\_accounting\\_and\\_reporting\\_guidance\\_](https://www.whitehouse.gov/sites/default/files/microsites/ceq/revised_federal_greenhouse_gas_accounting_and_reporting_guidance_)

warranted because tools, methodologies, or data inputs are not reasonably available, the agency should provide a qualitative analysis and its rationale for determining that the quantitative analysis is not warranted. A qualitative analysis can rely on sector-specific descriptions of the GHG emissions of the category of Federal agency action that is the subject of the NEPA analysis.

When updating their NEPA procedures<sup>32</sup> and guidance, agencies should coordinate with CEQ to identify 1) the actions that normally warrant quantification of their GHG emissions, and consideration of the relative GHG emissions associated with alternative actions and 2) agency actions that normally do not warrant such quantification because tools, methodologies, or data inputs are not reasonably available. The determination of the potential significance of a proposed action remains subject to agency practice for the consideration of context and intensity, as set forth in the CEQ Regulations.<sup>33</sup>

## 2. The Scope of the Proposed Action

In order to assess effects, agencies should take account of the proposed action – including “connected” actions<sup>34</sup> – subject to reasonable limits based on feasibility and practicality. Activities that have a reasonably close causal relationship to the Federal action, such as those that may occur as a predicate for a proposed agency action or as a consequence of a proposed agency action, should be accounted for in the NEPA analysis.

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060412.pdf. Federal agencies’ Strategic Sustainability Performance Plans reflecting their annual GHG inventories and reports under Executive Order 13514 are available at <https://www.performance.gov/node/3406/view?view=public#supporting-info>.

<sup>32</sup> See 40 CFR 1507.3.

<sup>33</sup> 40 CFR 1508.27 (“‘Significantly’ as used in NEPA requires considerations of both context and intensity: (a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. . . . (b) Intensity. This refers to the severity of impact.”).

<sup>34</sup> 40 CFR 1508.25(a) (Actions are connected if they: (i) Automatically trigger other actions which may require environmental impact statements; (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously, or; (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.).

For example, NEPA reviews for proposed resource extraction and development projects typically include the reasonably foreseeable effects of various phases in the process, such as clearing land for the project, building access roads, extraction, transport, refining, processing, using the resource, disassembly, disposal, and reclamation. Depending on the relationship between any of the phases, as well as the authority under which they may be carried out, agencies should use the analytical scope that best informs their decision making.

The agency should focus on significant potential effects and conduct an analysis that is proportionate to the environmental consequences of the proposed action.<sup>35</sup> Agencies can rely on basic NEPA principles to determine and explain the reasonable parameters of their analyses in order to disclose the reasonably foreseeable effects that may result from their proposed actions.<sup>36</sup>

### 3. Alternatives

Considering alternatives, including alternatives that mitigate GHG emissions, is fundamental to the NEPA process and accords with NEPA Sections 102(2)(C) and 102(2)(E).<sup>37</sup> The CEQ regulations emphasize that the alternatives analysis is the heart of the EIS under NEPA Section 102(2)(C).<sup>38</sup> NEPA Section 102(2)(E) provides an independent requirement for the consideration of alternatives in environmental documents.<sup>39</sup> NEPA calls upon agencies to use the NEPA process to “identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.”<sup>40</sup> The requirement to

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<sup>35</sup> See 40 CFR 1501.7(a)(3), 1502.2(b), and 1502.15.

<sup>36</sup> See 40 CFR 1502.16.

<sup>37</sup> 42 U.S.C. 4332(2)(C), 4332(2)(E); 40 CFR 1502.14, 1508.9(b).

<sup>38</sup> 40 CFR 1502.14.

<sup>39</sup> See 40 CFR 1500.2, 1508.9(b).

<sup>40</sup> 40 CFR 1500.2(e).

consider alternatives ensures that agencies account for approaches with no, or less, adverse environmental effects for a particular resource.

Consideration of alternatives also provides each agency decision maker the information needed to examine other possible approaches to a particular proposed action (including the no action alternative) that could alter the environmental impact or the balance of factors considered in making the decision. Agency decisions are aided when there are reasonable alternatives that allow for comparing GHG emissions and carbon sequestration potential, trade-offs with other environmental values, and the risk from – and resilience to – climate change inherent in a proposed action and its design.

Agencies must consider a range of reasonable alternatives consistent with the level of NEPA review (e.g., EA or EIS) and the purpose and need for the proposed action, as well as reasonable mitigation measures if not already included in the proposed action or alternatives.<sup>41</sup> Accordingly, a comparison of these alternatives based on GHG emissions and any potential mitigation measures can be useful to advance a reasoned choice among alternatives and mitigation actions. When conducting the analysis, an agency should compare the anticipated levels of GHG emissions from each alternative – including the no-action alternative – and mitigation actions to provide information to the public and enable the decision maker to make an informed choice.

Agencies should consider reasonable alternatives and mitigation measures to reduce action-related GHG emissions or increase carbon sequestration in the same fashion as they consider alternatives and mitigation measures for any other environmental effects. NEPA, the CEQ Regulations, and this guidance do not require the decision

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<sup>41</sup> See 42 U.S.C. 4332(2)(C), 4332(2)(E), and 40 CFR 1502.14(f), 1508.9(b). The purpose and need for action usually reflects both the extent of the agency's statutory authority and its policies.

maker to select the alternative with the lowest net level of emissions. Rather, they allow for the careful consideration of emissions and mitigation measures along with all the other factors considered in making a final decision.

#### 4. Direct and Indirect Effects

If the direct and indirect GHG emissions can be quantified based on available information, including reasonable projections and assumptions, agencies should consider and disclose the reasonably foreseeable direct and indirect emissions when analyzing the direct and indirect effects of the proposed action.<sup>42</sup> Agencies should disclose the information and any assumptions used in the analysis and explain any uncertainties.

To compare a project's estimated direct and indirect emissions with GHG emissions from the no-action alternative, agencies should draw on existing, timely, objective, and authoritative analyses, such as those by the Energy Information Administration, the Federal Energy Management Program, or Office of Fossil Energy of the Department of Energy.<sup>43</sup> In the absence of such analyses, agencies should use other available information. When such analyses or information for quantification is unavailable, or the complexity of comparing emissions from various sources would make quantification overly speculative, then the agency should quantify emissions to the extent that this information is available and explain the extent to which quantified emissions information is unavailable while providing a qualitative analysis of those emissions. As

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<sup>42</sup> For example, where the proposed action involves fossil fuel extraction, direct emissions typically include GHGs emitted during the process of exploring for or extracting the fossil fuel. The indirect effects of such an action that are reasonably foreseeable at the time would vary with the circumstances of the proposed action. For actions such as a Federal lease sale of coal for energy production, the impacts associated with the end-use of the fossil fuel being extracted would be the reasonably foreseeable combustion of that coal.

<sup>43</sup> For a current example, see Office of Fossil Energy, Nat'l Energy Tech. Lab., U.S. Dep't of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, Pub. No. DOE/NETL-2014/1649 (2014), available at <http://energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf>.

with any NEPA analysis, the level of effort should be proportionate to the scale of the emissions relevant to the NEPA review.

## 5. Cumulative Effects

“Cumulative impact” is defined in the CEQ Regulations as the “impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”<sup>44</sup> All GHG emissions contribute to cumulative climate change impacts. However, for most Federal agency actions CEQ does not expect that an EIS would be required based *solely* on the global significance of cumulative impacts of GHG emissions, as it would not be consistent with the rule of reason to require the preparation of an EIS for every Federal action that may cause GHG emissions regardless of the magnitude of those emissions.

Based on the agency identification and analysis of the direct and indirect effects of its proposed action, NEPA requires an agency to consider the cumulative impacts of its proposed action and reasonable alternatives.<sup>45</sup> As noted above, for the purposes of NEPA, the analysis of the effects of GHG emissions is essentially a cumulative effects analysis that is subsumed within the general analysis and discussion of climate change impacts. Therefore, direct and indirect effects analysis for GHG emissions will adequately address the cumulative impacts for climate change from the proposed action and its alternatives and a separate cumulative effects analysis for GHG emissions is not needed.

## 6. Short- and Long-Term Effects

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<sup>44</sup> 40 CFR 1508.7.

<sup>45</sup> See 40 CFR 1502.16, 1508.7, 1508.8. See also CEQ Memorandum to Heads of Federal Agencies, *Guidance on the Consideration of Past Actions in Cumulative Effects Analysis*, June 24, 2005, available at [https://ceq.doe.gov/nepa/regs/Guidance\\_on\\_CE.pdf](https://ceq.doe.gov/nepa/regs/Guidance_on_CE.pdf).



When considering effects, agencies should take into account both the short- and long-term adverse and beneficial effects using a temporal scope that is grounded in the concept of reasonable foreseeability. Some proposed actions will have to consider effects at different stages to ensure the direct effects and reasonably foreseeable indirect effects are appropriately assessed; for example, the effects of construction are different from the effects of the operations and maintenance of a facility.

Biogenic GHG emissions and carbon stocks from some land or resource management activities, such as a prescribed burn of a forest or grassland conducted to limit loss of ecosystem function through wildfires or insect infestations, may result in short-term GHG emissions and loss of stored carbon, while in the longer term a restored, healthy ecosystem may provide long-term carbon sequestration. Therefore, the short- and long-term effects should be described in comparison to the no action alternative in the NEPA review.

## 7. Mitigation

Mitigation is an important component of the NEPA process that Federal agencies can use to avoid, minimize, and compensate for the adverse environmental effects associated with their actions. Mitigation, by definition, includes avoiding impacts, minimizing impacts by limiting them, rectifying the impact, reducing or eliminating the impacts over time, or compensating for them.<sup>46</sup> Consequently, agencies should consider reasonable mitigation measures and alternatives as provided for under existing CEQ Regulations and take into account relevant agency statutory authorities and policies. The NEPA process is also intended to provide useful advice and information to State, local

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<sup>46</sup> See 40 CFR 1508.20, 1508.25 (Alternatives include mitigation measures not included in the proposed action).

and tribal governments and private parties so that the agencies can better coordinate with other agencies and organizations regarding the means to mitigate effects of their actions.<sup>47</sup> The NEPA process considers the effects of mitigation commitments made by project proponents or others and mitigation required under other relevant permitting and environmental review regimes.<sup>48</sup>

As Federal agencies evaluate potential mitigation of GHG emissions and the interaction of a proposed action with climate change, the agencies should also carefully evaluate the quality of that mitigation to ensure it is additional, verifiable, durable, enforceable, and will be implemented.<sup>49</sup> Agencies should consider the potential for mitigation measures to reduce or mitigate GHG emissions and climate change effects when those measures are reasonable and consistent with achieving the purpose and need for the proposed action. Such mitigation measures could include enhanced energy efficiency, lower GHG-emitting technology, carbon capture, carbon sequestration (e.g., forest, agricultural soils, and coastal habitat restoration), sustainable land management practices, and capturing or beneficially using GHG emissions such as methane.

Finally, the CEQ Regulations and guidance recognize the value of monitoring to ensure that mitigation is carried out as provided in a record of decision or finding of no significant impact.<sup>50</sup> The agency's final decision on the proposed action should identify those mitigation measures that the agency commits to take, recommends, or requires

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<sup>47</sup> NEPA directs Federal agencies to make "advice and information useful in restoring, maintaining, and enhancing the quality of the environment" available to States, Tribes, counties, cities, institutions and individuals. NEPA Sec. 102(2)(G).

<sup>48</sup> See CEQ Memorandum to Heads of Federal Agencies, *Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact*, 76 FR 3843 (Jan. 21, 2011) available at [https://ceq.doe.gov/current\\_developments/docs/Mitigation\\_and\\_Monitoring\\_Guidance\\_14Jan2011.pdf](https://ceq.doe.gov/current_developments/docs/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf).

<sup>49</sup> See Presidential Memorandum: *Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment* (<https://www.whitehouse.gov/the-press-office/2015/11/03/mitigating-impacts-natural-resources-development-and-encouraging-related>) defining "durability" and addressing additionality.

<sup>50</sup> See 40 CFR 1505.2(c), 1505.3. See also CEQ Memorandum to Heads of Federal Agencies, *Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact*, 76 FR 3843 (Jan. 21, 2011) available at [https://ceq.doe.gov/current\\_developments/docs/Mitigation\\_and\\_Monitoring\\_Guidance\\_14Jan2011.pdf](https://ceq.doe.gov/current_developments/docs/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf).

others to take. Monitoring is particularly appropriate to confirm the effectiveness of mitigation when that mitigation is adopted to reduce the impacts of a proposed action on affected resources already increasingly vulnerable due to climate change.

## B. CONSIDERING THE EFFECTS OF CLIMATE CHANGE ON A PROPOSED ACTION AND ITS ENVIRONMENTAL IMPACTS

According to the USGCRP and others, GHGs already in the atmosphere will continue altering the climate system into the future, even with current or future emissions control efforts.<sup>51</sup> Therefore, a NEPA review should consider an action in the context of the future state of the environment. In addition, climate change adaptation and resilience — defined as adjustments to natural or human systems in response to actual or expected climate changes — are important considerations for agencies contemplating and planning actions with effects that will occur both at the time of implementation and into the future.<sup>52</sup>

### 1. Affected Environment

An agency should identify the affected environment to provide a basis for comparing the current and the future state of the environment as affected by the proposed action or its reasonable alternatives.<sup>53</sup> The current and projected future state of the environment without the proposed action (i.e., the no action alternative) represents the reasonably foreseeable affected environment, and this should be described based on

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<sup>51</sup> See Third National Climate Assessment, *Appendix 3 Climate Science Supplement 753-754*, available at [http://s3.amazonaws.com/nca2014/low/NCA3\\_Full\\_Report\\_Appendix\\_3\\_Climate\\_Science\\_Supplement\\_LowRes.pdf?download=1](http://s3.amazonaws.com/nca2014/low/NCA3_Full_Report_Appendix_3_Climate_Science_Supplement_LowRes.pdf?download=1).

<sup>52</sup> See Third National Climate Assessment, Chapter 28, “Adaptation” and Chapter 26, “Decision Support: Connecting Science, Risk Perception, and Decisions,” available at <http://www.globalchange.gov/nca3-downloads-materials>; see also, Exec. Order No. 13653, 78 Fed. Reg. 66817 (Nov. 6, 2013) and Exec. Order No. 13693, *Planning for Federal Sustainability in the Next Decade*, 80 Fed. Reg. 15869 (Mach 25, 2015) (defining “climate-resilient design”).

<sup>53</sup> See 40 CFR 1502.15 (providing that environmental impact statements shall succinctly describe the environmental impacts on the area(s) to be affected or created by the alternatives under consideration).

authoritative climate change reports,<sup>54</sup> which often project at least two possible future scenarios.<sup>55</sup> The temporal bounds for the state of the environment are determined by the projected initiation of implementation and the expected life of the proposed action and its effects.<sup>56</sup> Agencies should remain aware of the evolving body of scientific information as more refined estimates of the impacts of climate change, both globally and at a localized level, become available.<sup>57</sup>

## 2. Impacts

The analysis of climate change impacts should focus on those aspects of the human environment that are impacted by both the proposed action and climate change. Climate change can make a resource, ecosystem, human community, or structure more susceptible to many types of impacts and lessen its resilience to other environmental impacts apart from climate change. This increase in vulnerability can exacerbate the effects of the proposed action. For example, a proposed action may require water from a stream that has diminishing quantities of available water because of decreased snow pack in the mountains, or add heat to a water body that is already warming due to increasing atmospheric temperatures. Such considerations are squarely within the scope of NEPA and can inform decisions on whether to proceed with, and how to design, the proposed action to eliminate or mitigate impacts exacerbated by climate change. They can also

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<sup>54</sup> See, e.g., Third National Climate Assessment (Regional impacts chapters) available at <http://www.globalchange.gov/nca3-downloads-materials>.

<sup>55</sup> See, e.g., Third National Climate Assessment (Regional impacts chapters, considering a low future global emissions scenario, and a high emissions scenario) available at <http://www.globalchange.gov/nca3-downloads-materials>.

<sup>56</sup> CEQ, *Considering Cumulative Effects Under the National Environmental Policy Act* (1997), [https://ceq.doe.gov/publications/cumulative\\_effects.html](https://ceq.doe.gov/publications/cumulative_effects.html). Agencies should also consider their work under Exec. Order No. 13653, *Preparing the United States for the Impacts of Climate Change*, 78 Fed. Reg. 66817 (Nov. 6, 2013), that considers how capital investments will be affected by a changing climate over time.

<sup>57</sup> See, e.g., <http://nca2014.globalchange.gov/report/regions/coasts>.

inform possible adaptation measures to address the impacts of climate change, ultimately enabling the selection of smarter, more resilient actions.

### 3. Available Assessments and Scenarios

In accordance with NEPA's rule of reason and standards for obtaining information regarding reasonably foreseeable effects on the human environment, agencies need not undertake new research or analysis of potential climate change impacts in the proposed action area, but may instead summarize and incorporate by reference the relevant scientific literature.<sup>58</sup> For example, agencies may summarize and incorporate by reference the relevant chapters of the most recent national climate assessments or reports from the USGCRP.<sup>59</sup> Particularly relevant to some proposed actions are the most current reports on climate change impacts on water resources, ecosystems, agriculture and forestry, health, coastlines, and ocean and arctic regions in the United States.<sup>60</sup> Agencies may recognize that scenarios or climate modeling information (including seasonal, inter-annual, long-term, and regional-scale projections) are widely used, but when relying on a single study or projection, agencies should consider their limitations and discuss them.<sup>61</sup>

### 4. Opportunities for Resilience and Adaptation

As called for under NEPA, the CEQ Regulations, and CEQ guidance, the NEPA review process should be integrated with agency planning at the earliest possible time that would allow for a meaningful analysis.<sup>62</sup> Information developed during early

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<sup>58</sup> See 40 CFR 1502.21 (material may be incorporated by reference if it is reasonably available for inspection by potentially interested persons during public review and comment).

<sup>59</sup> See <http://www.globalchange.gov/browse/reports>.

<sup>60</sup> See Third National Climate Assessment, *Our Changing Climate*, available at <http://nca2014.globalchange.gov/report>. Agencies should consider the latest final assessments and reports when they are updated.

<sup>61</sup> See 40 CFR 1502.22. Agencies can consult [www.data.gov/climate/portals](http://www.data.gov/climate/portals) for model data archives, visualization tools, and downscaling results.

<sup>62</sup> See 42 U.S.C. 4332 (“agencies of the Federal Government shall ... utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision-making”); 40 CFR 1501.2 (“Agencies shall integrate the NEPA process with other planning at the earliest possible time...”); See also CEQ Memorandum

planning processes that precede a NEPA review may be incorporated into the NEPA review. Decades of NEPA practice have shown that integrating environmental considerations with the planning process provides useful information that program and project planners can consider in the design of the proposed action, alternatives, and potential mitigation measures. For instance, agencies should take into account increased risks associated with development in floodplains, avoiding such development wherever there is a practicable alternative, as required by Executive Order 11988 and Executive Order 13690.<sup>63</sup> In addition, agencies should take into account their ongoing efforts to incorporate environmental justice principles into their programs, policies, and activities, including the environmental justice strategies required by Executive Order 12898, as amended, and consider whether the effects of climate change in association with the effects of the proposed action may result in a disproportionate effect on minority and low income communities.<sup>64</sup> Agencies also may consider co-benefits of the proposed action, alternatives, and potential mitigation measures for human health, economic and social stability, ecosystem services, or other benefit that increases climate change preparedness or resilience. Individual agency adaptation plans and interagency adaptation strategies, such as agency Climate Adaptation Plans, the National Fish, Wildlife and Plants Climate Adaptation Strategy, and the National Action Plan: Priorities for Managing Freshwater

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for Heads of Federal Departments and Agencies, *Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act*, 77 Fed. Reg. 14473 (Mar. 12, 2012), available at [https://ceq.doe.gov/current\\_developments/docs/Improving\\_NEPA\\_Efficiencies\\_06Mar2012.pdf](https://ceq.doe.gov/current_developments/docs/Improving_NEPA_Efficiencies_06Mar2012.pdf).

<sup>63</sup> See Exec. Order No. 11988, "Floodplain Management," 42 Fed. Reg. 26951 (May 24, 1977), available at <http://www.archives.gov/federal-register/codification/executive-order/11988.html>; Exec. Order No. 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*, 80 Fed. Reg. 6425 (Jan. 30, 2015), available at <https://www.gpo.gov/fdsys/pkg/FR-2015-02-04/pdf/2015-02379.pdf>.

<sup>64</sup> See Exec. Order No. 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, 59 Fed. Reg. 7629 (Feb. 16, 1994), available at <https://ceq.doe.gov/nepa/regs/eos/ii-5.pdf>; CEQ, *Environmental Justice Guidance Under the National Environmental Policy Act* (Dec. 1997), available at <http://ceq.doe.gov/nepa/regs/ej/justice.pdf>.

Resources in a Changing Climate, provide other good examples of the type of relevant and useful information that can be considered.<sup>65</sup>

Climate change effects on the environment and on the proposed project should be considered in the analysis of a project considered vulnerable to the effects of climate change such as increasing sea level, drought, high intensity precipitation events, increased fire risk, or ecological change. In such cases, a NEPA review will provide relevant information that agencies can use to consider in the initial project design, as well as alternatives with preferable overall environmental outcomes and improved resilience to climate impacts. For example, an agency considering a proposed long-term development of transportation infrastructure on a coastal barrier island should take into account climate change effects on the environment and, as applicable, consequences of rebuilding where sea level rise and more intense storms will shorten the projected life of the project and change its effects on the environment.<sup>66</sup> Given the length of time involved in present sea level projections, such considerations typically will not be relevant to short-term actions with short-term effects.

In addition, the particular impacts of climate change on vulnerable communities may be considered in the design of the action or the selection among alternatives to

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<sup>65</sup> See <http://sustainability.performance.gov> for agency sustainability plans, which contain agency adaptation plans. See also <http://www.wildlifeadaptationstrategy.gov>; [http://www.whitehouse.gov/sites/default/files/microsites/ceq/2011\\_national\\_action\\_plan.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ceq/2011_national_action_plan.pdf); and <https://www.epa.gov/greeningepa/climate-change-adaptation-plans>

<sup>66</sup> See U.S. Department of Transportation, Gulf Coast Study, Phase 2, *Assessing Transportation Vulnerability to Climate Change Synthesis of Lessons Learned and Methods Applied*, FHWA-HEP-15-007 (Oct. 2014) (focusing on the Mobile, Alabama region), available at [http://www.fhwa.dot.gov/environment/climate\\_change/adaptation/ongoing\\_and\\_current\\_research/gulf\\_coast\\_study/phase2\\_task6/fhwahep15007.pdf](http://www.fhwa.dot.gov/environment/climate_change/adaptation/ongoing_and_current_research/gulf_coast_study/phase2_task6/fhwahep15007.pdf); U.S. Climate Change Science Program, Synthesis and Assessment Product 4.7, *Impacts of Climate Change and Variability on Transportation Systems and Infrastructure: Gulf Coast Study, Phase I* (Mar. 2008) (focusing on a regional scale in the central Gulf Coast), available at <https://downloads.globalchange.gov/sap/sap4-7/sap4-7-final-all.pdf>. Information about the Gulf Coast Study is available at [http://www.fhwa.dot.gov/environment/climate\\_change/adaptation/ongoing\\_and\\_current\\_research/gulf\\_coast\\_study](http://www.fhwa.dot.gov/environment/climate_change/adaptation/ongoing_and_current_research/gulf_coast_study). See also Third National Climate Assessment, Chapter 28, “Adaptation,” at 675 (noting that Federal agencies in particular can facilitate climate adaptation by “ensuring the establishment of federal policies that allow for “flexible” adaptation efforts and take steps to avoid unintended consequences”), available at <http://nca2014.globalchange.gov/report/response-strategies/adaptation#intro-section-2>.

assess the impact, and potential for disproportionate impacts, on those communities.<sup>67</sup> For example, chemical facilities located near the coastline could have increased risk of spills or leakages due to sea level rise or increased storm surges, putting local communities and environmental resources at greater risk. Increased resilience could minimize such potential future effects. Finally, considering climate change preparedness and resilience can help ensure that agencies evaluate the potential for generating additional GHGs if a project has to be replaced, repaired, or modified, and minimize the risk of expending additional time and funds in the future.

### C. Special Considerations for Biogenic Sources of Carbon

With regard to biogenic GHG emissions from land management actions – such as prescribed burning, timber stand improvements, fuel load reductions, scheduled harvesting, and livestock grazing – it is important to recognize that these land management actions involve GHG emissions and carbon sequestration that operate within the global carbon and nitrogen cycle, which may be affected by those actions. Similarly, some water management practices have GHG emission consequences (e.g., reservoir management practices can reduce methane releases, wetlands management practices can enhance carbon sequestration, and water conservation can improve energy efficiency).

Notably, it is possible that the net effect of ecosystem restoration actions resulting in short-term biogenic emissions may lead to long-term reductions of atmospheric GHG concentrations through increases in carbon stocks or reduced risks of future emissions. In the land and resource management context, how a proposed action affects a net carbon sink or source will depend on multiple factors such as the climatic region, the distribution

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<sup>67</sup> For an example, *see* [https://www.blm.gov/epl-front-office/projects/nepa/5251/42462/45213/NPR-A\\_FINAL\\_ROD\\_2-21-13.pdf](https://www.blm.gov/epl-front-office/projects/nepa/5251/42462/45213/NPR-A_FINAL_ROD_2-21-13.pdf).



of carbon across carbon pools in the project area, and the ongoing activities and trends. In addressing biogenic GHG emissions, resource management agencies should include a comparison of estimated net GHG emissions and carbon stock changes that are projected to occur with and without implementation of proposed land or resource management actions.<sup>68</sup> This analysis should take into account the GHG emissions, carbon sequestration potential, and the changes in carbon stocks that are relevant to decision making in light of the proposed actions and timeframes under consideration.

One example of agencies dealing with biogenic emissions and carbon sequestration arises when agencies consider proposed vegetation management practices that affect the risk of wildfire, insect and disease outbreak, or other disturbance. The public and the decision maker may benefit from consideration of the influence of a vegetation management action that affects the risk of wildfire on net GHG emissions and carbon stock changes. NEPA reviews should consider whether to include a comparison of net GHG emissions and carbon stock changes that are anticipated to occur, with and without implementation of the proposed vegetation management practice, to provide information that is useful to the decision maker and the public to distinguish between alternatives. The analysis would take into account the estimated GHG emissions (biogenic and fossil), carbon sequestration potential, and the net change in carbon stocks relevant in light of the proposed actions and timeframes under consideration. In such cases the agency should describe the basis for estimates used to project the probability or likelihood of occurrence or changes in the effects or severity of wildfire. Where such

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<sup>68</sup> One example of a tool for such calculations is the Carbon On Line Estimator (COLE), which uses data based on USDA Forest Service Forest Inventory & Analysis and Resource Planning Assessment data and other ecological data. COLE began as a collaboration between the National Council for Air and Stream Improvement, Inc. (NCASI) and USDA Forest Service, Northern Research Station. It currently is maintained by NCASI. It is available at <http://www.fs.usda.gov/ccrc/tools/cole>.

tools, methodologies, or data are not yet available, the agency should provide a qualitative analysis and its rationale for determining that the quantitative analysis is not warranted. As with any other analysis, the rule of reason and proportionality should be applied to determine the extent of the analysis.

CEQ acknowledges that Federal land and resource management agencies are developing agency-specific principles and guidance for considering biological carbon in management and planning decisions.<sup>69</sup> Such guidance is expected to address the importance of considering biogenic carbon fluxes and storage within the context of other management objectives and ecosystem service goals, and integrating carbon considerations as part of a balanced and comprehensive program of sustainable management, climate change mitigation, and climate change adaptation.

#### IV. TRADITIONAL NEPA TOOLS AND PRACTICES

##### A. Scoping and Framing the NEPA Review

To effectuate integrated decision making, avoid duplication, and focus the NEPA review, the CEQ Regulations provide for scoping.<sup>70</sup> In scoping, the agency determines the issues that the NEPA review will address and identifies the impacts related to the proposed action that the analyses will consider.<sup>71</sup> An agency can use the scoping process to help it determine whether analysis is relevant and, if so, the extent of analysis

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<sup>69</sup> See Council on Climate Change Preparedness and Resilience, *Priority Agenda Enhancing the Climate Resilience of America's Natural Resources*, at 52 (Oct. 2014), available at [http://www.whitehouse.gov/sites/default/files/docs/enhancing\\_climate\\_resilience\\_of\\_americas\\_natural\\_resources.pdf](http://www.whitehouse.gov/sites/default/files/docs/enhancing_climate_resilience_of_americas_natural_resources.pdf).

<sup>70</sup> See 40 CFR 1501.7 (“There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. This process shall be termed scoping.”); see also CEQ Memorandum for Heads of Federal Departments and Agencies, *Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act*, March 6, 2012, available at [https://ceq.doe.gov/current\\_developments/docs/Improving\\_NEPA\\_Efficiencies\\_06Mar2012.pdf](https://ceq.doe.gov/current_developments/docs/Improving_NEPA_Efficiencies_06Mar2012.pdf) (the CEQ Regulations explicitly require scoping for preparing an EIS, however, agencies can also take advantage of scoping whenever preparing an EA).

<sup>71</sup> See 40 CFR 1500.4(b), 1500.4(g), 1501.7.

appropriate for a proposed action.<sup>72</sup> When scoping for the climate change issues associated with the proposed agency action, the nature, location, timeframe, and type of the proposed action and the extent of its effects will help determine the degree to which to consider climate projections, including whether climate change considerations warrant emphasis, detailed analysis, and disclosure.

Consistent with this guidance, agencies may develop their own agency-specific practices and guidance for framing the NEPA review. Grounded on the principles of proportionality and the rule of reason, such aids can help an agency determine the extent to which an analysis of GHG emissions and climate change impacts should be explored in the decision-making process and will assist in the analysis of the no action and proposed alternatives and mitigation.<sup>73</sup> The agency should explain such a framing process and its application to the proposed action to the decision makers and the public during the NEPA review and in the EA or EIS document.

#### B. Frame of Reference

When discussing GHG emissions, as for all environmental impacts, it can be helpful to provide the decision maker and the public with a recognizable frame of reference for comparing alternatives and mitigation measures. Agencies should discuss relevant approved federal, regional, state, tribal, or local plans, policies, or laws for GHG emission reductions or climate adaptation to make clear whether a proposed project's

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<sup>72</sup> See 40 CFR 1501.7 (The agency preparing the NEPA analysis must use the scoping process to, among other things, determine the scope and identify the significant issues to be analyzed in depth) and CEQ, *Memorandum for General Counsels, NEPA Liaisons, and Participants in Scoping*, April 30, 1981, available at <https://ceq.doe.gov/nepa/regs/scope/scoping.htm>.

<sup>73</sup> See, e.g., Matthew P. Thompson, Bruce G. Marcot, Frank R. Thompson, III, Steven McNulty, Larry A. Fisher, Michael C. Runge, David Cleaves, and Monica Tomosy, *The Science of Decisionmaking Applications for Sustainable Forest and Grassland Management in the National Forest System* (2013), available at [http://www.fs.fed.us/rm/pubs\\_other/rmrs\\_2013\\_thompson\\_m004.pdf](http://www.fs.fed.us/rm/pubs_other/rmrs_2013_thompson_m004.pdf); U.S. Forest Service Comparative Risk Assessment Framework And Tools, available at [http://www.fs.fed.us/psw/topics/fire\\_science/craft/craft/](http://www.fs.fed.us/psw/topics/fire_science/craft/craft/); and Julien Martin, Michael C. Runge, James D. Nichols, Bruce C. Lubow, and William L. Kendall, *Structured decision making as a conceptual framework to identify thresholds for conservation and management* (2009), *Ecological Applications* 19:1079–1090, available at <http://www.esajournals.org/doi/abs/10.1890/08-0255.1>.

GHG emissions are consistent with such plans or laws.<sup>74</sup> For example, the Bureau of Land Management has discussed how agency actions in California, especially joint projects with the State, may or may not facilitate California reaching its emission reduction goals under the State's Assembly Bill 32 (Global Warming Solutions Act).<sup>75</sup> This approach helps frame the policy context for the agency decision based on its NEPA review.

### C. Incorporation by Reference

Incorporation by reference is of great value in considering GHG emissions or where an agency is considering the implications of climate change for the proposed action and its environmental effects. Agencies should identify situations where prior studies or NEPA analyses are likely to cover emissions or adaptation issues, in whole or in part. When larger scale analyses have considered climate change impacts and GHG emissions, calculating GHG emissions and carbon stocks for a specific action may provide only limited information beyond the information already collected and considered in the larger scale analyses. The NEPA reviews for a specific action can incorporate by reference earlier programmatic studies or information such as management plans, inventories, assessments, and research that consider potential changes in carbon stocks, as well as any relevant programmatic NEPA reviews.<sup>76</sup>

Accordingly, agencies should use the scoping process to consider whether they should incorporate by reference GHG analyses from other programmatic studies, action

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<sup>74</sup> See 40 CFR 1502.16(c), 1506.2(d) (where an inconsistency exists, agencies should describe the extent to which the agency will reconcile its proposed action with the plan or law). See also Exec. Order No. 13693, 80 Fed. Reg. 15869 (Mar. 25, 2015) (establishing GHG emission and related goals for agency facilities and operations. Scope 1, 2, and 3 emissions are typically separate and distinct from analyses and information used in an EA or EIS.).

<sup>75</sup> See, e.g., U.S. Bureau of Land Management, Desert Renewable Energy Conservation Plan Proposed Land Use Plan Amendment and Final Environmental Impact Statement, Vol. I, § I.3.3.2, at 12, available at <http://drecp.org/finaldrecp/>.

<sup>76</sup> See 40 CFR 1502.5, 1502.21.

specific NEPA reviews, or programmatic NEPA reviews to avoid duplication of effort. Furthermore, agencies should engage other agencies and stakeholders with expertise or an interest in related actions to participate in the scoping process to identify relevant GHG and adaptation analyses from other actions or programmatic NEPA documents.

#### D. Using Available Information

Agencies should make decisions using current scientific information and methodologies. CEQ does not expect agencies to fund and conduct original climate change research to support their NEPA analyses or for agencies to require project proponents to do so. Agencies should exercise their discretion to select and use the tools, methodologies, and scientific and research information that are of high quality and available to assess the impacts.<sup>77</sup>

Agencies should be aware of the ongoing efforts to address the impacts of climate change on human health and vulnerable communities.<sup>78</sup> Certain groups, including children, the elderly, and the poor, are more vulnerable to climate-related health effects, and may face barriers to engaging on issues that disproportionately affect them. CEQ recommends that agencies periodically engage their environmental justice experts, and the Federal Interagency Working Group on Environmental Justice,<sup>79</sup> to identify approaches to avoid or minimize impacts that may have disproportionately high and

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<sup>77</sup> See 40 CFR 1502.24 (requiring agencies to ensure the professional and scientific integrity of the discussions and analyses in environmental impact statements).

<sup>78</sup> USGCRP, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment* (Apr. 2016), available at <https://health2016.globalchange.gov/downloads>.

<sup>79</sup> For more information on the Federal Interagency Working Group on Environmental Justice co-chaired by EPA and CEQ, see <http://www.epa.gov/environmentaljustice/interagency/index.html>.

adverse human health or environmental effects on minority and low-income populations.<sup>80</sup>

#### E. Programmatic or Broad-Based Studies and NEPA Reviews

Agency decisions can address different geographic scales that can range from the programmatic or landscape level to the site- or project-specific level. Agencies sometimes conduct analyses or studies that are not NEPA reviews at the national level or other broad scale level (e.g., landscape, regional, or watershed) to assess the status of one or more resources or to determine trends in changing environmental conditions.<sup>81</sup> In the context of long-range energy, transportation, and resource management strategies an agency may decide that it would be useful and efficient to provide an aggregate analysis of GHG emissions or climate change effects in a programmatic analysis and then incorporate by reference that analysis into future NEPA reviews.

A tiered, analytical decision-making approach using a programmatic NEPA review is used for many types of Federal actions<sup>82</sup> and can be particularly relevant to addressing proposed land, aquatic, and other resource management plans. Under such an approach, an agency conducts a broad-scale programmatic NEPA analysis for decisions such as establishing or revising USDA Forest Service land management plans, Bureau of Land Management resource management plans, or Natural Resources Conservation Service conservation programs. Subsequent NEPA analyses for proposed site-specific

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<sup>80</sup> *President's Memorandum for the Heads of All Departments and Agencies, Executive Order on Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (Feb. 11, 1994), available at <https://ceq.doe.gov/nepa/regs/eos/ii-5.pdf>; CEQ, *Environmental Justice Guidance Under the National Environmental Policy Act*, available at <https://ceq.doe.gov/nepa/regs/ej/justice.pdf>.

<sup>81</sup> Such a programmatic study is distinct from a programmatic NEPA review which is appropriate when the action under consideration is itself subject to NEPA requirements. See CEQ, *Memorandum for Heads of Federal Departments and Agencies, Effective Use of Programmatic NEPA Reviews*, Dec. 18, 2014, § 1(A), p. 9, available at [https://www.whitehouse.gov/sites/default/files/docs/effective\\_use\\_of\\_programmatic\\_nepa\\_reviews\\_final\\_dec2014\\_searchable.pdf](https://www.whitehouse.gov/sites/default/files/docs/effective_use_of_programmatic_nepa_reviews_final_dec2014_searchable.pdf) (discussing non-NEPA types of programmatic analyses such as data collection, assessments, and research, which previous NEPA guidance described as joint inventories or planning studies).

<sup>82</sup> See 40 CFR 1502.20, 1508.28. A programmatic NEPA review may be appropriate when a decision is being made that is subject to NEPA, such as establishing formal plans, programs, and policies, and when considering a suite of similar projects.

decisions – such as proposed actions that implement land, aquatic, and other resource management plans – may be tiered from the broader programmatic analysis, drawing upon its basic framework analysis to avoid repeating analytical efforts for each tiered decision. Examples of project- or site-specific actions that may benefit from being able to tier to a programmatic NEPA review include: constructing transmission lines; conducting prescribed burns; approving grazing leases; granting rights-of-way; issuing leases for oil and gas drilling; authorizing construction of wind, solar or geothermal projects; and approving hard rock mineral extraction.

A programmatic NEPA review may also serve as an efficient mechanism in which to assess Federal agency efforts to adopt broad-scale sustainable practices for energy efficiency, GHG emissions avoidance and emissions reduction measures, petroleum product use reduction, and renewable energy use, as well as other sustainability practices.<sup>83</sup> While broad department- or agency-wide goals may be of a far larger scale than a particular program, policy, or proposed action, an analysis that informs how a particular action affects that broader goal can be of value.

#### F. Monetizing Costs and Benefits

NEPA does not require monetizing costs and benefits. Furthermore, the weighing of the merits and drawbacks of the various alternatives need not be displayed using a monetary cost-benefit analysis and should not be when there are important qualitative considerations.<sup>84</sup> When an agency determines that a monetized assessment of the impacts of greenhouse gas emissions or a monetary cost-benefit analysis is appropriate and

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<sup>83</sup> See Exec. Order No. 13693, 80 Fed. Reg. 15869 (Mar. 25, 2015).

<sup>84</sup> See 40 CFR 1502.23.

relevant to the choice among different alternatives being considered, such analysis may be incorporated by reference<sup>85</sup> or appended to the NEPA document as an aid in evaluating the environmental consequences.<sup>86</sup> For example, a rulemaking could have useful information for the NEPA review in an associated regulatory impact analysis which could be incorporated by reference.<sup>87</sup> When using a monetary cost-benefit analysis, just as with tools to quantify emissions, the agency should disclose the assumptions, alternative inputs, and levels of uncertainty associated with such analysis. Finally, if an agency chooses to monetize some but not all impacts of an action, the agency providing this additional information should explain its rationale for doing so.<sup>88</sup>

## V. CONCLUSION AND EFFECTIVE DATE

Agencies should apply this guidance to all new proposed agency actions when a NEPA review is initiated. Agencies should exercise judgment when considering whether to apply this guidance to the extent practicable to an on-going NEPA process. CEQ does not expect agencies to apply this guidance to concluded NEPA reviews and actions for

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<sup>85</sup> See 40 CFR 1502.21 (material may be cited if it is reasonably available for inspection by potentially interested persons within the time allowed for public review and comment).

<sup>86</sup> When conducting a cost-benefit analysis, determining an appropriate method for preparing a cost-benefit analysis is a decision left to the agency's discretion, taking into account established practices for cost-benefit analysis with strong theoretical underpinnings (for example, see OMB Circular A-4 and references therein). For example, the Federal social cost of carbon (SCC) estimates the marginal damages associated with an increase in carbon dioxide emissions in a given year. Developed through an interagency process committed to ensuring that the SCC estimates reflect the best available science and methodologies and used to assess the social benefits of reducing carbon dioxide emissions across alternatives in rulemakings, it provides a harmonized, interagency metric that can give decision makers and the public useful information for their NEPA review. For current Federal estimates, see Interagency Working Group on Social Cost of Carbon, United States Government, *Technical Support Document Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866* (revised July 2015), available at <https://www.whitehouse.gov/omb/oira/social-cost-of-carbon>.

<sup>87</sup> For example, the regulatory impact analysis was used as a source of information and aligned with the NEPA review for Corporate Average Fuel Economy (CAFE) standards, see National Highway Traffic Safety Administration, Corporate Average Fuel Economy Standards, Passenger Cars and Light Trucks, Model Years 2017-2025, Final Environmental Impact Statement, Docket No. NHTSA-2011-0056 (July 2012), § 5.3.2, available at <http://www.nhtsa.gov/Laws+&+Regulations/CAFE+-+Fuel+Economy/Environmental+Impact+Statement+for+CAFE+Standards,+2017-2025>.

<sup>88</sup> For example, the information may be responsive to public comments or useful to the decision maker in further distinguishing between alternatives and mitigation measures. In all cases, the agency should ensure that its consideration of the information and other factors relevant to its decision is consistent with applicable statutory or other authorities, including requirements for the use of cost-benefit analysis.



which a final EIS or EA has been issued. Agencies should consider applying this guidance to projects in the EIS or EA preparation stage if this would inform the consideration of differences between alternatives or address comments raised through the public comment process with sufficient scientific basis that suggest the environmental analysis would be incomplete without application of the guidance, and the additional time and resources needed would be proportionate to the value of the information included.

# # #

**Sacramento Municipal Utility District 2017 IRC**  
**Response to Comments from Volker Law**

**I. The Interim Contract Requires Environmental Review**

**Responses:**

(a) The commenter indicated that Reclamation did not provide the public with any opportunity to comment on the interim contract itself, thus preventing the public from suggesting alterations to the contract based upon such environmental review. Reclamation did however provide the public with an opportunity to comment on the draft contracts for a 60-day period between November 1, 2016 and December 30, 2016. A press release was issued on November 1, 2016 by Reclamation's Mid-Pacific Region's Public Affairs office, and the contracts were made available to the public on Reclamation's website. Reclamation will not sign the Interim contracts until all comments on the related draft Environmental Assessment (EA) have been received and addressed.

With respect to the renewal of this Interim Contract, Reclamation does not claim that the contract itself mandates renewal nor does Reclamation claim that it is not required to undertake appropriate NEPA analysis before renewing the contract.

(b) The commenter questions whether SMUD will put its full CVP contract supply to beneficial use. Reclamation's describes the need for the Proposed Action is to provide a bridge between the expiration of SMUDs CVP contract and a new long-term contract, for use by SMUD as they reach build-out within their Rancho Seco service area. See Response II(D).

(c) The commenter states that Reclamation's EA implies that Reclamation is left without discretion in renewing the interim contract, and that the CVPIA expressly provides Reclamation with the discretion to approve or reject interim contracts. Reclamation's description of the No Action reads as follows: Under the No Action Alternative, the 2015 IRC2 between SMUD and Reclamation would expire on February 28, 2017. There would be no contract for Reclamation to deliver CVP water to SMUD, and the existing needs of SMUDs customers would not be met through CVP contract supplies. Reclamation would continue to operate the CVP consistent with all requirements as described in the 2008/2009 BOs from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. The No Action Alternative, as described above, does not imply that Reclamation is left without discretion in regards to not signing the contract.

(d) Please see Response No. I(a), above, regarding the public review of the draft Interim Renewal Contract. The commenter claims that the review period for the draft Interim Renewal Contract expired before the review period for the EA began. Reclamation released the EA for public review on December 27, 2016 and that period of review ran through January 27, 2017. Moreover, a NEPA document is deemed timely as long as it

occurs before the agency makes any irreversible and irretrievable commitment of resources.

The commenter asserts that Reclamation must prepare an EIS to analyze the impacts associated with the renewal of the Interim Contract for SMUD. NEPA regulations state that no EIS is required when there is no evidence that the contemplated federal action will have any significant effect on the quality of the human environment. "If the agency concludes in the EA that there is no significant effect from the proposed project, the federal agency may issue a finding of no significant impact ("FONSI") in lieu of preparing an EIS. 40 C.F.R. § 1508.9(a)(1) (2000), § 1508.13 ("Finding of no significant impact' means a document by a Federal agency briefly presenting the reasons why an action . . . will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared.").

The environmental impacts that the commenter identifies, such as "directly harm [to] fish and wildlife by altering the hydrologic flow patterns in the Delta," concern Reclamation's diversion of water and operation of the CVP. These environmental impacts were fully analyzed in the EIS for the Long-Term Operation of the CVP under the Biological Opinions. These environmental impacts are not altered by signing the contract; Reclamation will continue to operate to current regulations with or without a CVP contract with SMUD. The contract authorizes a point of delivery and a recipient, but does not change the permits and laws that allow Reclamation to divert the CVP water supplies.

The Interim Renewal Contracts establish the terms for the annual delivery of CVP water supplies to the contractor. None of the environmental impacts cited by the commenter are caused by the signing of this Interim Renewal Contract. Consequently, there is no need to perform an EIS to analyze these impacts before signing the contract.

## **II. The Environmental Assessment is Inadequate**

- 1) This comment consists of a conclusory summary of the comments that are set forth in more detail in the remainder of the letter. Please see Responses Nos. II(b)-II(d) for the substantive responses to these comments.

### **(A) The Analysis of the Impacts of the Proposed Action and the No Action Alternative Violates NEPA**

- 1) The commenter claims that Reclamation must prepare an EIS to analyze whether the No Action Alternative would have significant environmental effects, either beneficial or adverse. The commenter suggests potential effects could include improved Delta flows, or lead to increased groundwater pumping, which could affect SMUDs groundwater management program, or cause ground subsidence.

In regards to the commenters claim that Reclamation must prepare an EIS: consistent with NEPA's implementing regulations, 40 C.F.R. § 1508.9, Reclamation prepared this EA to determine whether the proposed federal action will have a significant effect on the environment and to determine whether preparation of an EIS will be necessary. NEPA defines "effects" as: "(a) Direct effects, which are caused by the action and occur at the same time and place, and (b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." By definition, impacts to the environment that may result from the No Action Alternative are not the type of "effects" that could trigger preparation of an EIS.

In regards to the EA's description of the No Action Alternative, PCFFA argues that the Draft EA does not analyze what specific uses Reclamation will make of the water if it is not provided to SMUD under the interim renewal contract. Reclamation cannot determine in advance what other uses might be made of water were it not available to SMUD under the proposed interim renewal contract. With respect to environmental considerations, Reclamation identified that conditions under the No Action Alternative would remain the same as under the Proposed Action, thus not affecting Delta flows. CVP water not delivered to SMUD under the No Action Alternative would likely be delivered elsewhere in-basin, and would not impact Delta flows.

As described in the EA, Reclamation acknowledges that SMUD has alternative surface water supplies available to meet service area demands in absence of their CVP contract. Please refer to Response I(b). The SMUD Draft EA includes a discussion of SMUDs present and future water needs and beneficial uses. In regards to the available surface water demands and projected service area demands, the EA assumes that SMUD could continue to meet those service area demands with alternate surface water supplies over the two-year period analyzed in the EA.

2) The commenter states that Reclamation's analysis of the environmental impacts of the proposed action and no action alternatives violate NEPA, because the EA implies that both alternatives would yield identical impacts. The commenter also states that the EA does not analyze how the no action alternative may lead to improved Delta flows or increased groundwater pumping. The EA has correctly defined the No Action Alternative as a decision not to renew SMUDs contract, which would mean that up to 30,000 AFY of CVP water would not continue to be delivered to SMUD from their existing diversion point on the Folsom and water demands in SMUDs Rancho Seco CVP service area would not be met with CVP supplies." In other words, if the contract is not renewed, SMUD would need to find alternative sources of water supply to serve the demand that is currently being met with its CVP supplies. In regards to the assertion of potentially improved Delta flows, please see Response I(D). The EA identifies

potential sources of CVP and non-CVP surface water supplies that may be readily available to SMUD to continue to meet their service area demands in the event of the No Action Alternative. Under either the No Action Alternative or the proposed action, the same quantity of water will be needed to serve the same lands with the same existing M&I uses.

The EA correctly defines the effects of the No Action Alternative in comparison to those of the Proposed Action Alternative. If Reclamation does not renew SMUDs Interim contract, Reclamation will still operate the CVP pursuant to the same regulatory requirements as with an executed CVP contract with SMUD; water that is not delivered to the SMUD still would be lawfully diverted by Reclamation and that amount of CVP yield would become available for project purposes, including being made available for allocation to other contractors in the same or subsequent years. If the water is not contracted to SMUD, it would not free up water for instream flow use. Instream flow requirements, and other operational requirements set forth in CVP water rights or Biological Opinions are legal obligations and must be met prior to making any CVP yield available to contractors. The contract includes water supply shortage provisions which do not give contractors rights to water that is needed for legal obligations. Thus, the commenter's assumption that, under the No Action Alternative, Reclamation would use the additional water for instream flows or Delta outflows is not correct. Under the No Action Alternative, Reclamation would not sign the contract and thus would not be able to deliver this amount of CVP yield to SMUD, but, consistent with its permits and its other legal obligations, Reclamation would still divert the same amount of water and develop the same amount of CVP yield.

3) The EA correctly defines the effects of the No Action Alternative in comparison to those of the Proposed Action Alternative. Furthermore, Section 1.1.1 of the EA for SMUDs IRC identifies those *'unspecified'* surface water supplies as up to 15,000 acre-feet per year of water rights water obtained from the City of Sacramento. Section 1.1.1 of the EA further explained that this water is delivered to SMUD under a Warren Act contract with Reclamation. Reference to SMUDs non-CVP surface water supplies is further addressed in Chapters 2 and 3 as well. Section 1.1.1 of the Final EA has been updated to better describe the source of SMUDs non-CVP surface water supplies.

4) The commenter states that Reclamation has an obligation to disclose the environmental impacts of the various scenarios under the [No Action Alternative]. Reclamation's obligation to disclose potential environmental impacts of alternative water supplies pertain specifically to discretionary actions undertaken by Reclamation. SMUDs use of water rights water made available by the City of Sacramento is conveyed to SMUD through the Folsom South Canal (FSC), a federal facility. Reclamation has a discretionary action in authorizing the use of the FSC for the conveyance of non-CVP water to SMUDs service area. This

action has been analyzed under a separate environmental document. The EA for SMUDs IRC simply identifies the availability of such water; however, the delivery of this water has already been analyzed in an EA, and thus does not require additional analysis.

The commenter states that the EA is based entirely on conclusory claims that if the project were rejected, “Reclamation would continue to operate the CVP consistent with all requirements,” and thus would not have impacts on biological species. The commenter further implies that the EA improperly prevents “informed decision-making and public participation,” in violation of NEPA. The commenter further states that the EA is lacking in analysis of whether rejecting the contract would increase flows in the Delta from current levels, or no analysis of what use Reclamation will make of the water if not given to SMUD. The proposed action is the renewal of an existing water service contract. The renewal proposes to deliver the same amount of water, to the same user, for the same uses, as the previous contracts. Deliveries to SMUD under the existing contract are made consistent with all regulatory requirements that apply to the operations of the CVP; these regulatory requirements ensure that CVP operations protect biological resources. The proposed action will not result in any new impacts to biological resources.

The commenter states that the analysis of environmental impacts associated to the Proposed Action is inadequate because Reclamation has failed to provide a substantive discussion of the different outcomes that will occur if the contract is approved or rejected. The proposed action is the renewal of an existing water service contract. The comment confuses the proposed action with Reclamation's operation of the CVP and diversion of water pursuant to its water rights permits.

The commenter speculates that, if Reclamation did not renew SMUDs contract, the water could increase Delta flows or released as instream flows. Please see Response II(A)(1) in regards to Reclamation’s use of Project water under the No Action Alternative.

**5)** The commenter incorrectly states that Reclamation failed to account for cumulative impacts, thus discounting the potential impacts to downstream resources. In respect to Response II(A)(1), deliveries to SMUD under the existing contract are made consistent with all regulatory requirements that apply to the operations of the CVP; these regulatory requirements ensure that CVP operations protect biological resources. Potential environmental impacts, including cumulative impacts were fully analyzed in the EIS for the Long-term Operations of the CVP under the Biological Opinions. These environmental impacts are not altered by signing the contract. The contract authorizes a point of delivery and a recipient, but it does nothing to change the permits and laws that allow Reclamation to divert the CVP water supplies. None of the environmental impacts

cited by the commenter are caused by signing the contract. The cumulative effects that may result from the actual deliveries of this CVP water have already been analyzed in the LTO EIS, which was correctly referenced in the EA.

**(B) The EA Improperly Relies on the Long-term Operation EIS**

1. The commenter objects to the EA's reference to the LTO EIS. The EA does not seek to incorporate the LTO EIS, because the EA for this proposed contract renewal was not required to evaluate the CVP's operations or the CVP's impacts to biological resources caused by water diversions and deliveries. The EA was simply pointing out that Reclamation has analyzed the environmental effects of CVP operations, including water diversions.

Regarding the analysis of the proposed action in the LTO EIS in respect to the EA for SMUDs IRC: the EA's reference to the LTO EIS points to the effects analysis of full CVP contract deliveries, including SMUDs CVP contract. The EA's reference to the LTO EIS correctly analyzes the site-specific effects and effects to the CVP of full CVP contract deliveries, including SMUD. In respect to the description of the Proposed Action in SMUDs EA, the EA does not imply that Reclamation is without discretion in regards to renewing the contract.

In regards to the commenter's claim about changes to the Folsom cold water pool volume with deliveries to SMUD. Reclamation maintains the position that deliveries under the No Action and Proposed action would remain the same, as Reclamation would continue to divert water under its permits, and would remain in accordance with the terms and conditions in the biological opinions. Impacts to the cold water pool would not change under either scenario.

2) The commenter states that NEPA forbids Reclamation from satisfying its informational obligations by incorporating outside documents into an EA. We disagree. Incorporation by reference is allowed for EAs, and was done appropriately here.

**(C) The EA Improperly Fails to Consider Environmental Impacts**

This comment consists entirely of a conclusory summary of the comments that are set forth in more detail in the remainder of the letter. Please see Responses Nos. II(C)(1) and II(C)(2) for the substantive responses to these comments.

**1) Land Use**

The commenter suggests that: "by emphasizing SMUDs long-term water planning horizon, the EA also strongly implies that water use within SMUDs delivery area is expected to rise over time. EA at 2 (water demands projected

through 2040). But the EA completely ignored the question of whether approving the interim contract will induce or enable population growth within SMUDs service area, which is contrary to NEPA.” Please see Response Nos. I(b), I(d) and II(A)(1) regarding SMUDs projected water use. SMUD has yet to use their full CVP contract to meet water demands within their service area. Furthermore, SMUDs CVP contract is used specifically for their Cosumnes Power Plant; SMUD does not provide CVP water for residential demands.. This contract will be used to meet future demands in SMUDs Rancho Seco service area.

## **2) Global Warming**

The commenter states that climate change is likely to reduce flows. Reclamation is not aware of any evidence to support this claim; the best available scientific data available to Reclamation states that, over the long term, streamflows will be increased as a result of climate change, due to precipitation falling as rain rather than snow which remains upstream for a longer period of time.

Furthermore, climate change is incremental and occurs over the long-term. The term of this renewal contract is 2 years. During this limited, short-term period, there will not be any significant, measurable environmental changes due to climate change.

## **(D) The EA Fails to Study a Reasonable Range of Alternatives**

The commenter suggests that Reclamation had an obligation to evaluate an alternative that contemplates a reduced amount of water being delivered to SMUD. The commenter suggests that Reclamation had an obligation to evaluate an alternative that contemplates a reduced amount of water being delivered to SMUD. The proposed IRC is intended to serve as a bridge between the expiration of a previous long-term contract and a new water contract. The IRC for SMUD will provide SMUD the contract mechanism to make full use of their contract for beneficial uses to meet projected service area demands. Reclamation recognizes that many of their CVP M&I customers have contract entitlements far greater than their current demand; however, these contracts are intended to meet current and projected demands within the respective service areas, some of which are further out than others. Given that SMUD is still reaching build-out within their service area, Reclamation has evaluated two alternatives: the Proposed Action and the No Action Alternative, which is permissible for EAs.

## **III. Reclamation Must Prepare an EIS**

(a) This comment consists of statements of NEPA case law. Comment noted.



The commenter states that Reclamation has failed to engage in any substantive analysis of the direct, indirect and cumulative impacts of renewing the interim contract, thus an EIS is required. The proposed action will not have any significant effect on the quality of the human environment. Therefore, Reclamation is not required to prepare an EIS.

**(b)** The commenter claims an EIS is required. This is not correct because there is no evidence that the proposed action will cause any significant effect on the quality of the human environment. Please see Responses all previous comments.