Draft Environmental Impact Statement/ Environmental Impact Report

Littlerock Reservoir Sediment Removal Project

[SCH No. 2005061171]



Prepared for:

USDA Forest Services

Palmdale Water District

May 2016

Littlerock Reservoir Sediment Removal Project

State Clearinghouse #2005061171

To: Readers of the Draft Environmental Impact Statement/Environmental Impact Report

From: Jeffrey Vail, Forest Supervisor, USDA Forest Service

Matt Knudson, Palmdale Water District, Assistant General Manager

Subject: Notice of Availability, Draft Environmental Impact Statement/Environmental Impact Report for the Proposed Littlerock Reservoir Sediment Removal Project

Date: May 6, 2016

The U.S. Department of the Agriculture (USDA) Forest Service, as Lead Agency under the National Environmental Policy Act, and the Palmdale Water District, as Lead Agency under the California Environmental Quality Act, are seeking public comment on a joint Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) for consideration of the Littlerock Reservoir Sediment Removal Project.

Proposed Action/Project. The proposed action is to construct a concrete grade control structure within Littlerock Reservoir, haul sediment from behind the dam to nearby quarry sites, and maintain the storage capacity through annual sediment removal. The US Forest Service would approve the project on National Forest System lands by issuing an amendment to the existing Special Use Permit for Littlerock Dam and Reservoir. The project would restore the Littlerock Reservoir to 1992 water storage and flood control capacity and preserve habitat for the arroyo toad by preventing sediment loss and headcutting of the stream channel. The Draft EIS/EIR describes the proposed action and evaluates and describes the environmental impacts associated with construction and operation, identifies those impacts that could be adverse, and presents mitigation measures, which, if adopted by the Forest Service, Palmdale Water District, or other responsible agencies, would avoid or minimize those impacts. The Draft EIS/EIR has determined that the proposed action or alternatives may cause significant impacts to the following resources: air quality, traffic, and recreation and land use. The Draft EIS/EIR also evaluates alternatives to the proposed action; these alternatives include the following:

- *Alternative 1*: Reduced Sediment Removal Intensity Alternative. This alternative would reduce the intensity of proposed construction activities (e.g., amount of annual sediment removed, number of daily truck trips) through an extension of the construction schedule.
- *Alternative 2: No Action/No Project Alternative.* This alternative would not alter the existing conditions at the Reservoir. No grade control construction or sediment removal would occur. The Reservoir would eventually be filled with sediment and the Little Rock Creek stream flow would not be impounded. Continued sediment deposition could also compromise the long-term integrity of the Dam, requiring removal.

Availability of Draft EIS/EIR. The Draft EIS/EIR will be available for review at the following four locations:

USFS, Angeles National Forest
Santa Clara/Mojave Rivers Ranger District
33708 Crown Valley Road
Acton, CA 93510
(661) 296-2808
Hours: 8 a.m. to 4:30 p.m.
(Monday through Friday)

Angeles National Forest
Supervisor's Office
701 N Santa Anita Ave.
Arcadia, CA 91006
(626) 574-1613
Hours: 8 a.m. to 4:30 p.m.
(Monday through Friday)

Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550
(661) 947-4111
Hours: 8 a.m. to 5 p.m.
(Monday through Friday)

Littlerock Library
35119 80th Street East
Littlerock, CA 93543
(661) 944-4138
Hours: 11 a.m. to 7 p.m. (M-T)
10 a.m. to 5 p.m. (W-Sat)

Copies of the Draft EIS/EIR on CD or a separately bound Executive Summary may be requested by e-mail at LSRP@aspeneg.com. An electronic copy of the Draft EIS/EIR, and the latest project updates and information, are available for review on the Palmdale Water District's Project website at: http://www.palmdalewater.org/about/new-development-projects/district-projects/ or at the USDA Forest Service website at: http://data.ecosystem-management.org/nepaweb/nepa_project_exp.php?project=13657.

Written comments on the Draft EIS/EIR. Written comments will be accepted for 45 days following the date that a Notice of Availability is published in the **Federal Register**. The expected dates for the comment period are May 6 –June 20, 2016.

The Forest Service decision for the portion of the project occurring on National Forest System lands is subject to administrative review by the Forest Service Regional Office, in accordance with 36 CFR 218. Only those who submit timely and specific written comments during a public comment period are eligible to request this administrative review. Please see the legal notice posted to the websites above, or contact the Forest Service for specific questions on commenting and administrative reviews.

Written comments on the Draft EIS/EIR should be sent to:

USDA Forest Service/ Palmdale Water District
c/o Aspen Environmental Group
5020 Chesebro Road, Suite 200
Agoura Hills, CA 91301
E-mail: LSRP@aspeneg.com

Comments may also be submitted at the public meeting, or hand delivered during normal business hours to the offices listed above.

Public Meeting. The Forest Service and Palmdale Water District will hold a Draft EIS/EIR public meeting on May 19, 2016. The public meeting is an opportunity for interested parties to receive information, ask questions and share concerns, or provide written comments on the Draft EIS/EIR. The meeting will be open-house format with project documents and information available, and staff from each lead agency present. Only written comments will be accepted at the meeting. Details on the public meeting are as follows:

Draft EIS/EIR Public Meeting	
Location	Palmdale Water District, Board Room
Date	May 19, 2016
Time	6 pm to 9 pm
Address	2029 East Avenue Q Palmdale, CA 93550

Proyecto para Eliminar Sedimento de la Represa Littlerock

Centro de Información Estatal #2005061171

A: Lectores del borrador Informe de Impacto Ambiental y Declaración de Impacto Ambiental

De: Jeffrey Vail, Supervisor Forestal, Servicio Forestal USDA
Matt Knudson, División de Agua de la ciudad de Palmdale, Asistente Gerente General

Tema: Aviso de disponibilidad, borrador Informe de Impacto Ambiental y Declaración de Impacto Ambiental para el Proyecto para Eliminar Sedimento de la Represa Littlerock

Fecha: 06 de mayo de 2016

El Departamento de Agricultura de los Estados Unidos (USDA), Servicio Forestal, como agencia líder según la Ley Nacional de Política Ambiental y la División de Agua de la ciudad de Palmdale, como agencia líder del Estado según la Ley de Calidad Ambiental de California, invitan comentarios públicos sobre el borrador Informe de Impacto Ambiental y Declaración de Impacto Ambiental (Borrador EIS/EIR por sus siglas en inglés) para el Proyecto para Eliminar Sedimento de la Represa Littlerock.

Proyecto Propuesto. La acción propuesta es construir una estructura de control de grado de hormigón en la Represa de Littlerock, transportar sedimento de detrás de la represa a canteras cercanas, y mantener la capacidad de almacenamiento a través de la extracción anual de sedimento. El Servicio Forestal aprobaría el proyecto en tierras del sistema nacional forestal con una modificación del existente permiso especial de uso de la Represa Littlerock. El proyecto restaurará la capacidad de la Represa Littlerock para almacenar agua y controlar inundaciones de 1992 y preservará el hábito del sapo arroyo por prevenir la pérdida de sedimento y la erosión del cauce del arroyo. El borrador EIS/EIR describe la acción propuesta y evalúa y describe los impactos ambientales asociados con la construcción y operación del proyecto, identifica los impactos que podrían ser adversos y presenta medidas de mitigación, que, si fueran adoptadas por el Servicio Forestal, División de Agua de la cuidad de Palmdale u otras agencias responsables, evitarían o minimizarían los impactos. El borrador EIS/EIR ha determinado que la acción propuesta o las alternativas podrían causar impactos significativos a los siguientes recursos: calidad del aire, tráfico y recreación y uso de la tierra. El borrador EIS/EIR también evalúa alternativas a la acción propuesta que son las siguientes:

- Alternativa 1: Alternativa para Reducir la Eliminación del Sedimento. Esta alternativa sería para reducir la intensidad de la construcción de la acción propuesta (por ejemplo, reducir la cantidad de sedimento eliminado anualmente, reducir el número de viajes de camiones diariamente) a través de una extensión del calendario de construcción.
- Alternativa 2: No Tomar Acción/No Hacer el Proyecto. Esta alternativa no cambiaría las condiciones actuales en la represa. No ocurría la eliminación de sedimento ni la construcción del control de grado. Eventualmente se llenaría la represa con sedimento y el Arroyo Little Rock no sería capturado. A largo plazo, el depósito de sedimento podría afectar la estabilidad del embalse, requiriendo su retiro.

Disponibilidad del borrador EIS/EIR. El borrador EIS/EIR estará disponible para revisar en los siguientes cuatro lugares:

USFS, Bosque Nacional de Angeles
Distrito de Santa Clara/Mojave River
33708 Crown Valley Road
Acton, CA 93510
(661) 296-2808
Horario: 8 a.m. a 4:30 p.m.
(Lunes a Viernes)

USFS, Bosque Nacional de Angeles
Oficina del Supervisor
701 N Santa Anita Ave.
Arcadia, CA 91006
(626) 574-1613
Horario: 8 a.m. a 4:30 p.m.
(Lunes a Viernes)

División de Agua de la cuidad de Palmdale
2029 East Avenue Q
Palmdale, CA 93550
(661) 947-4111
Horario: 8 a.m. a 5 p.m.
(Lunes a Viernes)

Biblioteca Littlerock
35119 80th Street East
Littlerock, CA 93543
(661) 944-4138
Horario: 11 a.m. a 7 p.m. (Lunes y Martes)
10 a.m. a 5 p.m. (Miércoles a Sabado)

Se puede solicitar copias del borrador EIS/EIR en CD o un resumen ejecutivo en papel por correo electrónico a LSRP@aspeneg.com. Una copia electrónica del borrador EIS/EIR y las noticias más recientes sobre el proyecto están disponibles en la página web del proyecto de la División de Agua de la ciudad de Palmdale al: http://www.palmdalewater.org/about/new-development-projects/district-projects/, o en el sitio web del Servicio Forestal al: http://data.ecosystem-management.org/nepaweb/nepa_project_exp.php?project=13657.

Comentarios escritos sobre el borrador EIS/EIR. Se aceptarán comentarios escritos para 45 días después de la fecha de publicación del Aviso de Disponibilidad en el **Registro Federal**. Las fechas previstas para el período de comentar son mayo 6 – junio 20, 2016.

La decisión del Servicio Forestal sobre la parte del proyecto que ocurre en la tierra del Bosque Nacional está sujeto a ser revisado por la Oficina Regional de Servicio Forestal, según la ley 36 CFR 218. Sólo aquellos que presentan comentarios escritos específicos durante el período de comentario público son elegibles para solicitar esta revisión administrativa. Por favor vea el aviso legal publicado en los sitios web arriba o contacte el Servicio Forestal para preguntas específicas acerca de comentarios y la revisión administrativa.

Comentarios escritos sobre el borrador EIS/EIR pueden ser enviados a:

USDA Forest Service / Palmdale Water District
c/o Aspen Environmental Group
5020 Chesebro Road, Suite 200
Agoura Hills, CA 91301
Correo electrónico: LSRP@aspeneg.com

También se puede presentar comentarios en la reunión pública, o entregarlos personalmente a las oficinas mencionadas anteriormente durante el horario de negocios normal.

Reunión pública. El Servicio Forestal y la División de Agua de la ciudad de Palmdale tendrán una reunión pública a cerca del borrador EIS/EIR el 19 de mayo de 2016. La reunión pública es una oportunidad para personas interesadas para recibir información, hacer preguntas y compartir preocupaciones, o para ofrecer comentarios escritos a cerca del borrador EIS/EIR. La reunión será de formato informal con información y documentos acerca del proyecto, y con empleados de cada agencia. Solo se aceptarán comentarios escritos en la reunión. Detalles de la reunión pública son los siguientes:

Reunión pública de borrador EIS/EIR	
Localidad	División de Agua de la ciudad de Palmdale, Sala de Juntas
Fecha	19 de mayo de 2016
Horario	6 p.m. a 9 p.m.
Dirección	2029 East Avenue Q Palmdale, CA 93550

LITTLEROCK RESERVOIR SEDIMENT REMOVAL PROJECT
Draft Environmental Impact Statement/ Environmental Impact Report
County of Los Angeles, California

Lead Agencies: **USDA Forest Service**

Palmdale Water District

Responsible Official: **THOMAS A. CONTRERAS**
FOREST SUPERVISOR
Angeles National Forest
701 N. Santa Anita Avenue
Arcadia, CA 91006

For Information Contact:

LORRAINE GERCHAS
PROJECT MANAGER
Angeles National Forest
701 N. Santa Anita Avenue
Arcadia, CA 91006
(626) 574-5281

MATT KNUDSON
ASSISTANT GENERAL MANAGER
Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550
(661) 456-1018

Abstract: Palmdale Water District has applied for a special use authorization from the Forest Service to construct a grade control structure and to remove sediment from Littlerock Reservoir, located within the boundaries of the Santa Clara Mojave Rivers Ranger District of the Angeles National Forest in northern Los Angeles County. The proposed action would restore the Reservoir to 1992 water storage and flood control capacity through annual sediment removal, as well as preserve habitat for the arroyo toad by constructing a grade control structure that prevents sediment loss and headcutting of the stream channel. This Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) evaluates the following alternatives to provide a full comparison for consideration by the decision makers and the public:

- Proposed Action/Project: Involves the construction of a grade control structure within the Reservoir at Rocky Point, annual excavation and total removal or approximately 1,165,000 cubic yards of accumulated sediment, and ongoing annual sediment removal of 38,000 cubic yards per year.
- Reduced Sediment Removal Intensity Alternative: Seeks to reduce the intensity of construction activities of the proposed action through an extension of the construction schedule.
- No Action/ No Project Alternative: Would not alter the existing conditions at the Reservoir. No construction or sediment removal would occur.

As the federal lead agency in compliance with the National Environmental Policy Act, the Forest Service must identify a preferred alternative, which is the alternative that the Forest Service believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors (46 Fed. Reg.

18026). The preferred alternative need not be identified until the Final EIS, and may be determined on the basis of the Draft EIS and public and agency comments. In accordance with NEPA (40 CFR Section 1502.14(e)), the Forest Service will identify its preferred alternative for the Proposed Action/Project in the Final EIS.

Reviewers should provide the Forest Service with their comments during the review period of the draft environmental impact statement. This will enable the Forest Service to analyze and respond to the comments at one time and to use information acquired in the preparation of the final environmental impact statement, thus avoiding undue delay in the decisionmaking process. Reviewers have an obligation to structure their participation in the National Environmental Policy Act process so that it is meaningful and alerts the agency to the reviewers' position and contentions. Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 553 (1978). Environmental objections that could have been raised at the draft stage may be waived if not raised until after completion of the final environmental impact statement. City of Angoon v. Hodel (9th Circuit, l986) and Wisconsin Heritages, Inc. v. Harris, 490 F. Supp. 1334, 1338 (E.D. Wis. 1980). Comments on the draft environmental impact statement should be specific and should address the adequacy of the statement and the merits of the alternatives discussed (40 CFR 1503.3).

Send Comments to:

USDA FOREST SERVICE/
PALMDALE WATER DISTRICT
c/o Aspen Environmental Group
5020 Chesebro Road, Suite 200
Agoura Hills, CA 91301

LSRP@aspeneg.com

Date Comments Must Be Received: **June 20, 2016**

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Littlerock Reservoir Sediment Removal Project
Draft Environmental Impact Statement/ Environmental Impact Report

[SCH# 2005061171]

Lead Agencies:

Palmdale Water District

USDA Forest Service

With Technical Assistance by:

Aspen Environmental Group

May 2016

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Executive Summary

ES.1 Introduction

The USDA Forest Service, Angeles National Forest, must consider whether to issue a special use authorization for the Littlerock Reservoir Sediment Removal Project that has been proposed by Palmdale Water District (PWD). The proposed action would: (1) restore the Littlerock Reservoir to 1992 water storage and flood control capacity, and would maintain that capacity through annual sediment removal; and (2) preserve habitat for the arroyo toad (*Anaxyrus californicus*) through construction of a grade control structure. The Forest Service has prepared an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act to review the potential impacts from the proposed action prior to approving the requested authorization. PWD has also taken into account the environmental impacts of the proposed action through its preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act. Based on these requirements, a joint EIS/EIR has been prepared under the direction of both lead agencies to satisfy the permitting and decision-making requirements of each agency prior to project approval.

The proposed action would be primarily located within the Littlerock Reservoir, which is a man-made feature formed by the impoundment of water by the Littlerock Dam. The Reservoir is located within the boundaries of the Santa Clara Mojave Rivers Ranger District of the Angeles National Forest, approximately 10 miles southeast of the City of Palmdale and four miles south of the community of Littlerock in northern Los Angeles County. Up to 10,000 cubic yards of sediment that is excavated from the Reservoir would be temporarily stored at a 21-acre site owned by PWD in unincorporated Los Angeles County, allowing for future use (recycling) of the material. However, the majority of removed sediment would be stored at existing quarries within the City of Palmdale.

As discussed in Section A.2 (Purpose and Need) of this EIS/EIR, the proposed action is needed in order to increase PWD's water storage capacity. Littlerock Reservoir is a critical part of the larger water resource, treatment, and distribution system operated by PWD to provide service to customers in the City of Palmdale and the surrounding unincorporated communities. The Reservoir also provides debris control and flood protection for downstream areas; however, siltation and sedimentation has resulted in a substantial reduction in water storage and flood control capacity. The Reservoir was constructed in 1924 with an initial design capacity of 4,300 acre-feet. By 1991, the capacity of the Reservoir had been reduced by siltation to approximately 1,600 acre-feet. As a result of the 1992 Littlerock Dam and Reservoir Restoration Project, the height of the Dam was raised to increase the reservoir capacity by approximately 1,723 acre-feet with a surface area of nearly 100 acres. Preliminary calculations conducted by PWD indicate that the Reservoir capacity continues to be reduced at a rate of approximately 30 to 40 acre-feet per year. PWD proposed an excavation of sediment from the reservoir as a part of the 1991/1992 Littlerock Dam and Reservoir Restoration Project EIS/EIR. This portion of the Project was not implemented, however, due to the presence of federally endangered arroyo toad upstream of River Station 4,235. PWD proposes to excavate sediment from the reservoir and construct a grade control structure at, or just downstream of River Station 4,235, also known as Rocky Point.

ES.2 Alternatives

The issues summarized in Section ES.1 led the PWD and the Forest Service to develop alternatives to the proposed action, which include the following:

- **Reduced Sediment Removal Intensity Alternative (Alternative 1).** Alternative 1 would reduce the intensity of construction activities through an extended construction schedule. Under this alternative, the initial sediment removal period would begin on July 1 (annually) instead of after Labor Day (with the proposed action). Sediment removal activities would occur 5 days per week, instead of 6 (with the proposed action). A minimum of 13 years would be required to restore the Reservoir to 1992 design water storage and flood control capacity, instead of 7 to 12 years (with the proposed action).
- **No Action/No Project Alternative.** Under this alternative, sediment removal activities would not occur. Sediment would continue to accumulate upstream of Littlerock Dam at the annual average rate of 38,000 cubic yards per year, reducing the capacity of the Reservoir by approximately 23.6 acre-feet annually. Continued sediment deposition could compromise the long-term integrity of the Dam. In this event, the California Department of Water Resources Division of Safety of Dams could require the Dam to be breached or demolished. Demolition of the Dam would eliminate water impoundment at the Reservoir and downstream flood-control. Future demolition of the Dam would also require the removal of approximately 2.8 million cubic yards of sediment and dam concrete, which would result in a project similar to, but larger, than the proposed action.

Each of the alternatives is described in detail in Section B, including the process for selection of Project alternatives (see Sections B.4.3 and B.4.5), and the steps and rationale for elimination of certain alternatives from further analysis (see Sections B.4.4 and B.4.6).

ES.2.1 Comparison of Alternatives

Tables ES-1 and ES-2 summarize the environmental impacts that would occur from selection and implementation of each of the alternatives. A full analysis of the impacts from each alternative is presented in Sections C.2 through C.13 (Affected Environment and Environmental Consequences) of this EIS/EIR, while Section C.14 (Comparison of Alternatives) provides of summary comparison of the alternatives for each issue area.

ES.2.2 Federal Lead Agency Preferred Alternative and CEQA Environmentally Superior Alternative

Federal Lead Agency Preferred Alternative

In accordance with NEPA requirements, the “preferred alternative” is a preliminary indication of the federal responsible official’s preference of action, which is chosen from among the Littlerock Reservoir Sediment Removal Project alternatives. The preferred alternative may be selected for a variety of reasons (such as the priorities of the particular lead agency) in addition to the environmental considerations discussed in a Draft EIS. In accordance with NEPA (40 CFR Section 1502.14(e)), the Forest Service will consider the conclusions of the Draft EIS as well as public and agency comments in order to identify its preferred alternative in the Final EIS. In addition to the preferred alternative, the federal lead agency is also required to identify an “environmentally preferable alternative” in the Record of Decision for the EIS (40 CFR Section 1505.2(b)). In contrast to the preferred alternative, the environmentally preferable alternative is the alternative that will promote the purposes expressed in NEPA’s Section 101. Typically, this is the alternative that would cause the least environmental damage as well as preserve

natural resources related to cultural and historical values. Therefore, the preferred alternative identified in a Final EIS may not be the same as the environmentally preferable alternative identified in the ROD. The NEPA environmentally preferable alternative is subject to all mitigation measures applicable to National Forest System (NFS) lands identified in Section C (Affected Environment and Environmental Consequences).

Based on the analysis in this Draft EIS/EIR, and as discussed in Section C.15.1 (NEPA Environmentally Preferred Alternative), the environmentally preferable alternative would be the Reduced Sediment Removal Intensity Alternative (Alternative 1). In accordance with NEPA (40 CFR Section 1502.14(e)), the Forest Service will identify its preferred alternative (likely to be the same as the environmentally preferable alternative) in the Final EIS/EIR.

CEQA Environmentally Superior Alternative

In accordance with CEQA requirements, an "environmentally superior alternative" must be identified among the alternatives analyzed in an EIR. The environmentally superior alternative is the alternative found to have an overall environmental advantage compared to the other alternatives based on the impact analysis in the EIR. If the environmentally superior alternative is the No Project Alternative, State CEQA Guidelines Section 15126.6(e)(2) requires the EIR to identify an environmentally superior alternative from among the other alternatives.

As discussed in Section C.15.2 (CEQA Environmentally Superior Alternative), Alternative 1 was expressly developed as a modification to the proposed Project's annual sediment removal schedule in order to reduce the intensity of daily construction activities by extending the annual sediment removal period. By doing this, it would reduce the severity of impacts associated with air quality, traffic, and noise. Based upon the analysis in this Draft EIS/EIR, PWD has identified the Reduced Sediment Removal Intensity Alternative (Alternative 1) as the CEQA Environmentally Superior Alternative.

ES.3 Environmental Consequences

A summary of the environmental impacts that would occur as a result of the Littlerock Reservoir Sediment Removal Project are included in Tables ES-1 and ES-2. Section C (Affected Environment and Environmental Consequences) of this EIS/EIR describes the direct and indirect impacts of the proposed action and alternatives for each issue area, as well as the mitigation included to avoid or substantially reduce adverse impacts. The unavoidable adverse impacts that would remain after mitigation are also discussed in the Section C analyses. Section D (Cumulative Effects) of this EIS/EIR defines the cumulative scenario for each issue area and discusses the incremental impact of the proposed action and alternatives when considered with other cumulative projects.

Table ES-1. Comparison of Impacts by Alternative

Resource	Proposed Action	Alternative 1	No Action/ No Project Alternative (Alternative 2)	NFS Lands Affected
Air Quality and Climate Change	Average daily PM10 emissions would exceed the AVAQMD emissions thresholds during excavation (Impact AQ-2). Operation air pollutant emissions estimates are below the AVAQMD emissions thresholds (Impact AQ-3). GHG emissions are below AVAQMD GHG emission thresholds (Impact GHG-1).	All construction and operation air pollutant emissions estimates are below the AVAQMD emissions thresholds (Impacts AQ-2 and AQ-3). GHG emissions are below AVAQMD GHG emission thresholds, but would be slightly higher than for the proposed action due to the higher efficiencies associated with the proposed action's higher daily volume sediment hauling (Impact GHG-1).	Air pollutant emissions from eventual Dam removal construction activities may exceed AVAQMD emissions thresholds. The hauling and disposal of sediment and Dam debris that may result from dam removal would generate GHG emissions similar to, but likely greater in quantity, than that of the proposed action or Alternative 1.	Yes
Biological Resources	The proposed action would incorporate SPCs to avoid and/or minimize adverse effects on: • Riparian habitat or other sensitive natural community (Criterion BIO1); • Fully protected, endangered, or threatened species (Criterion BIO2); • Candidate, sensitive, or special-status species (Criterion BIO3); • Federally protected wetlands (Criterion BIO4); and • Migratory species or wildlife corridors (Criterion BIO5).	Extended construction schedule would increase the likelihood of disturbing nesting birds and disturbing pupping season for ringtail (Criterion BIO2). Draining the Reservoir earlier in the season may have greater impacts to arroyo toads (Impact BIO-6).	Eventual removal of sediment and demolition of the Dam would involve an intensive construction effort that would create greater impacts to biological resources above and below the Dam (i.e., native vegetation, wildlife, jurisdictional resources) than would occur from the proposed action or Alternative 1.	Yes
Cultural Resources	The proposed action would incorporate SPCs to avoid and/or minimize adverse effects on cultural resources (Impacts C-1 and C-2).	Alternative 1 would incorporate identical SPCs as the proposed action, and would avoid and/or minimize adverse effects on cultural resources (Impacts C-1 and C-2).	In the event that removal of sediment and demolition of the Dam were to occur, it is likely that SPCs similar to the proposed action would be implemented to avoid and/or minimize adverse effects on cultural resources.	Yes
Geology and Soils	The proposed action would incorporate SPCs to avoid and/or minimize adverse effects due to seismic or geologic hazards (Impact G-1), or from soil erosion, slope instability, or slope failure (Impact G-2).	Fewer workers would be exposed to risks associated with unstable slopes than under the proposed action, but risks would occur over a longer period of time (Impact G-1). Soil disturbance would be less than under the proposed action, but would occur over a longer period of time (Impact G-2).	Demolition of the Dam and sediment removal would involve more earth movement than under the proposed action, and may require working on or near steeper slopes. Direct impacts to soils and risks to construction workers may be greater than under the proposed action or Alternative 1.	Yes
Hazards and Public Safety	The proposed action would incorporate SPCs to avoid and/or minimize adverse effects to public health, including risk from hazardous material spills (Impact HAZ-1) or unsafe highway conditions (Impact HAZ-5).	Fewer workers would be exposed to risks associated with hazardous materials, but risks would occur over a longer period of time (Impact HAZ-1). Fewer disposal trucks would be utilized, which could lead to a slight reduction in unsafe highway conditions (Impact HAZ-5).	Excavation and demolition of the Dam would require the use of hazardous materials that may contribute to soil, groundwater, or surface water contamination. As the degree to which SPCs would be incorporated into this future project is unknown, impacts may be greater than under the proposed action or Alternative 1.	Yes

Table ES-1. Comparison of Impacts by Alternative

Resource	Proposed Action	Alternative 1	No Action/ No Project Alternative (Alternative 2)	NFS Lands Affected
Hydrology	The proposed action would incorporate SPCs to avoid and/or minimize adverse effects associated with groundwater supply, erosion and siltation, or flooding (Criteria H1 through H3).	Alternative 1 would incorporate identical SPCs as the proposed action to avoid and/or minimize adverse effects associated with groundwater supply, erosion and siltation, or flooding (Criteria H1 through H3).	May contribute to a decline in groundwater levels from a greater reliance on alternative water sources (i.e., groundwater and State Water Project) (Impact H-1). Loss of water storage capacity in the Reservoir would increase the risk of flood hazard downstream of the Dam (Impact H-3).	Yes
Noise	The proposed action would incorporate SPCs to avoid and/or minimize adverse noise impacts from mobile and stationary sources (Impacts N-1 and N-2), and to minimize impacts to sensitive receptors (Impacts N-3 and N-4).	Reduction in daily truck trips would reduce the amount of mobile noise occurring per day, but would increase the overall number of days per year that noise is generated (Impact N-1). Reduction in daily truck trips would reduce the overall daily frequency of potential vibration, but would increase the number of days where temporary vibration may be generated (Impact N-4).	Excavation and demolition of the Dam would generate construction noise. As the degree to which SPCs would be incorporated into this future project is unknown, impacts may be greater than under the proposed action or Alternative 1.	Yes
Recreation and Land Use	After the Project's initial construction and excavation during the summer and fall of the first year, annual closure of the Reservoir would occur after Labor Day until mid-November to January, for a minimum of 7 years up to 12 years (Impact L-1). Truck trips would create nuisance impacts to nearby residences (Impact L-2).	Construction and excavation would require annual closure of the Reservoir during the peak summer period (beginning July 1st of each year until mid-November to January) for a minimum of 13 years (Impact L-1). Reduction in daily truck trips would lessen the daily nuisance impacts to nearby residences, but would lengthen the time that disturbances would occur (Impact L-2).	Future excavation and demolition of the Dam would require an intensive construction effort that would create greater disturbances to residences along the truck routes and disposal sites than under the proposed action or Alternative 1 (Impact L-2). Removal of the Dam would result in the irreversible loss of a recreational resource (Impact L-3).	Yes
Transportation and Traffic	Number of truck trips would be 480 trips (240 round trips). Truck traffic under the proposed action would adversely affect the intersection of Pearblossom Highway and Avenue T (Impact T-1). The proposed action would create excessive traffic delays at the stop sign on northbound Cheseboro Road at Pearblossom Highway (Impact T-1).	Number of truck trips would be reduced to 180 trips (90 round trips). No adverse impact would occur at the intersection of Pearblossom Highway and Avenue T (Impact T-1). Traffic delays at the stop sign on northbound Cheseboro Road at Pearblossom Highway would still occur, but impacts would be reduced (Impact T-1).	Future excavation and demolition of the Dam would require an intensive construction effort that would involve a greater number of truck trips than under the proposed action or Alternative 1.	Yes
Visual Resources	The proposed action would not greatly alter the existing visual landscape and would avoid adverse effects on visual resources (Criteria VIS1 and VIS2).	Alternative 1 would be identical to the proposed action in that it would not greatly alter the existing visual landscape and would avoid adverse effects on visual resources (Criteria VIS1 and VIS2).	In the event that the Reservoir became filled with sediment, construction of a downstream flood-control channel may be required. Future flood control facilities could result in visual contrast and adverse visual impacts.	Yes

Table ES-1. Comparison of Impacts by Alternative

Resource	Proposed Action	Alternative 1	No Action/ No Project Alternative (Alternative 2)	NFS Lands Affected
Water Quality and Resources	The proposed action would incorporate SPCs to avoid and/or minimize adverse effects associated with waste discharge and hazardous material spills (Impacts WQ-1 and WQ-2).	Alternative 1 would incorporate identical SPCs as the proposed action to avoid and/or minimize adverse effects associated with waste discharge and hazardous material spills (Impacts WQ-1 and WQ-2).	In the event that the Dam would be breached or demolished, downstream erosion and sedimentation would occur. As the degree to which SPCs would be incorporated into this future project is unknown, impacts may be greater than under the proposed action or Alternative 1.	Yes
Wildfire Prevention and Suppression	The proposed action would incorporate SPCs to avoid and/or minimize interference with wildfire suppression activities or risk of wildfire ignition (Impacts WF-1 through WF-3).	Alternative 1 would incorporate identical SPCs as the proposed action to avoid and/or minimize interference with wildfire suppression activities or risk of wildfire ignition (Impacts WF-1 through WF-3).	In the absence of construction or excavation activities, no impacts or conflicts with fire prevention and suppression activities would occur. However, In the event that the Dam would be demolished, Alternative 2 would incorporate identical SPCs as the proposed action to avoid and/or minimize interference with wildfire suppression activities or risk of wildfire ignition (Impacts WF-1 through WF-3).	Yes

Table ES-2. Summary of Significant CEQA Impacts and Mitigation Measures

Impact	Impact Significance			Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	
Air Quality and Climate Change				
AQ-2: The Project's Construction Emissions Would Exceed AVAQMD Significance Criteria	Class III	Class III	Class I	SPC AQ-1 (Limit Engine Idling) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-3 (Off-Road Engine Specifications) SPC AQ-4 (On-Road Engine Specifications) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
GHG-1: The Project would produce GHG emissions that exceed the AVAQMD CO2e annual emissions threshold	Class III	Class III	Class I	SPC GHG-1 (Recycle Construction Wastes)
GHG-2: The Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.	Class III	Class III	Class I	SPC GHG-1 (Recycle Construction Wastes)
Biological Resources				
BIO-1: The Project would result in temporary and permanent losses of native vegetation.	Class III	Class III	No impact* Class II**	SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program)
BIO-2: The Project would result in the establishment and spread of noxious weeds.	Class III	Class III	No impact* Class II**	SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program)
BIO-3: The Project would cause the loss of foraging habitat for wildlife or result in disturbance to wildlife in adjacent habitat.	Class III	Class III	No impact* Class II**	SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan)
BIO-4: The Project would result in disturbance to nesting birds or raptors.	Class III	Class III	No impact* Class II**	SPC BIO-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds) SPC BIO-1b (Worker Environmental Awareness Program)
BIO-5: The Project could disturb endangered, threatened, or proposed plant species or their habitat.	Class III	Class III	No impact* Class II**	SPC BIO-5 (Conduct Preconstruction Surveys for State and federally Threatened, Endangered, Proposed, Petitioned, Candidate, and Forest Service Sensitive Plants and Avoid Any Located Occurrences of Listed Plants) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan)

Table ES-2. Summary of Significant CEQA Impacts and Mitigation Measures

Impact	Impact Significance			Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	
BIO-6: The Project would result in loss or disturbance to arroyo toads.	Class III	Class III	No impact* Class II**	SPC BIO-6a (Conduct Surveys and Implement Avoidance Measures) SPC BIO-6b (Conduct Clearance Surveys and Construction Monitoring) SPC BIO-6c (Seasonal Surveys During Water Deliveries) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds) SPC HYDRO-1 (Fill From Reservoir Excavation Will Not Be Placed in Stream Channels) SPC WQ-1 (Prepare Spill Response Plan)
BIO-7: The Project could result in the loss of California condors.	Class III	Class III	No impact* Class II**	SPC BIO-7 (Monitor Construction and Remove Trash and Microtrash) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-8: The Project could disturb nesting willow flycatchers, southwestern willow flycatchers, least Bell's vireos, or their habitat.	Class III	Class III	No impact* Class II**	SPC BIO-8 (Conduct Protocol Surveys for Least Bell's Vireo and Avoid Occupied Habitat) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-9: The Project would disturb Swainson's hawks.	Class III	Class III	No impact* Class II**	SPC BIO-9 (Conduct Pre-Construction Surveys for Swainson's hawks) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)

Table ES-2. Summary of Significant CEQA Impacts and Mitigation Measures

Impact	Impact Significance			Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	
BIO-10: The Project would result in disturbance to Bald or Golden Eagles.	Class III	Class III	No impact* Class II**	SPC BIO-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds) SPC BIO-8 (Conduct Protocol Surveys for Least Bell's Vireo and Avoid Occupied Habitat) SPC BIO-9 (Conduct Pre-Construction Surveys for Swainson's hawks) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-11: The Project would result in disturbance or loss of habitat for the ringtail.	Class III	Class III	No impact* Class II**	SPC BIO-11 (Conduct Focused Surveys for Ringtail and Avoid Denning Areas) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-12: The Project would result in the loss of candidate, Forest Service Sensitive, or special-status plant species.	Class III	Class III	No impact* Class II**	SPC BIO-5 (Conduct Preconstruction Surveys for State and federally Threatened, Endangered, Proposed, Petitioned, Candidate, and Forest Service Sensitive plants and Avoid Any Located Occurrences of Listed Plants) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-13: The Project could result in the loss of Shoulderband Snails or San Emigdio Blue Butterfly.	Class III	Class III	No impact* Class II**	SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)

Table ES-2. Summary of Significant CEQA Impacts and Mitigation Measures

Impact	Impact Significance			Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	
BIO-14: The Project could result in mortality or injury to southwestern pond turtles or a disruption of nesting habitat.	Class III	Class III	No impact* Class II**	SPC BIO-14 (Conduct Surveys for Southwestern Pond Turtle and Implement Monitoring, Avoidance, and Minimization Measures) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-15: The Project could result in injury or mortality for two-striped garter snakes.	Class III	Class III	No impact* Class II**	SPC BIO-15 (Conduct Surveys for Two-Striped Garter Snakes and Implement Monitoring, Avoidance, and Minimization Measures) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-16: The Project could result in injury or mortality for Coast Range newts.	Class III	Class III	No impact* Class II**	SPC BIO-16 (Conduct Surveys for Coast Range Newts and Implement Monitoring, Avoidance, and Minimization Measures) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds) SPC HYDRO-1 (Fill From Reservoir Excavation Will Not Be Placed in Stream Channels) SPC WQ-1 (Prepare Spill Response Plan) SPC WQ-2 (Prepare a Storm Water Pollution Prevention Plan [SWPPP])

Table ES-2. Summary of Significant CEQA Impacts and Mitigation Measures

Impact	Impact Significance			Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	
BIO-17: The Project could result in injury or mortality of terrestrial California Species of Special Concern and Forest Service Sensitive amphibian and reptile species.	Class III	Class III	No impact* Class II**	SPC BIO-17 (Conduct Surveys for Terrestrial Herpetofauna and Implement Monitoring, Avoidance, and Minimization Measures) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds) SPC HYDRO-1 (Fill From Reservoir Excavation Will Not Be Placed in Stream Channels) SPC WQ-1 (Prepare Spill Response Plan) SPC WQ-2 (Prepare a Storm Water Pollution Prevention Plan [SWPPP])
BIO-18: The Project would result in the loss of suitable burrowing owl habitat.	Class III	Class III	No impact* Class II**	SPC BIO-18 (Conduct Protocol Surveys for Burrowing Owls) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC BIO-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds) SPC BIO-8 (Conduct Protocol Surveys for Least Bell's Vireo and Avoid Occupied Habitat) SPC BIO-9 (Conduct Pre-Construction Surveys for Swainson's hawks) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-19: The Project could disturb Forest Service Sensitive or California Species of Special Concern birds.	Class III	Class III	No impact* Class II**	SPC BIO-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds) SPC BIO-8 (Conduct Protocol Surveys for Least Bell's Vireo and Avoid Occupied Habitat) SPC BIO-9 (Conduct Pre-Construction Surveys for Swainson's hawks) SPC BIO-18 (Conduct Protocol Surveys for Burrowing Owls) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)

Table ES-2. Summary of Significant CEQA Impacts and Mitigation Measures

Impact	Impact Significance			Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	
BIO-20: The Project could result in mortality of, and loss of habitat for, special-status bat species.	Class III	Class III	No impact* Class II**	SPC BIO-20 (Survey for Maternity Colonies or Hibernaculum for Roosting Bats) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-21: The Project could result in mortality of, and loss of habitat for, special-status mammals.	Class III	Class III	No impact* Class II**	SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-22: The Project could result in mortality of American badgers or desert kit fox.	Class III	Class III	No impact* Class II**	SPC BIO-22 (Conduct Surveys for American Badger and Desert Kit Fox and Avoid During the Breeding Season) SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds)
BIO-23: The Project would disturb Nelson's bighorn sheep.	Class III	Class III	No impact* Class II**	SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds) SPC FIRE-1 (Curtailment of Activities) SPC FIRE-2 (Preparation of a Fire Plan) SPC FIRE-3 (Spark Arrester Requirements)

Table ES-2. Summary of Significant CEQA Impacts and Mitigation Measures

Impact	Impact Significance			Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	
BIO-24: The Project could result in the loss of wetland habitats.	Class III	Class III	No impact* Class II**	SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-5 (Reduce Off-Road Vehicle Speeds) SPC HYDRO-1 (Fill From Reservoir Excavation Will Not Be Placed in Stream Channels) SPC WQ-1 (Prepare Spill Response Plan)
BIO-25: The Project would interfere with established wildlife migratory corridors.	Class III	Class III	No impact* Class II**	Not Applicable
BIO-26: The Project would result in effects to Management Indicator Species.	Class III	Class III	No impact* Class II**	SPC BIO-1a (Provide Restoration/Compensation for Impacts to Native Vegetation Communities) SPC BIO-1b (Worker Environmental Awareness Program) SPC BIO-2 (Prepare and Implement a Weed Control Plan) SPC BIO-4 (Conduct Pre-Construction Surveys and Monitoring for Breeding Birds) SPC BIO-6a (Conduct Surveys and Implement Avoidance Measures) SPC BIO-6b (Conduct Clearance Surveys and Construction Monitoring) SPC BIO-6c (Seasonal Surveys During Water Deliveries)
Cultural Resources				
C-2: Implementation of the Project could uncover, expose, and/or damage human remains.	Class I	Class I	No impact	SPC CUL-3 (Unidentified Human Remains Discovery Procedures)
Geology and Soils				
G-1: The Project would expose people or structures to potential substantial adverse effects due to seismic or geologic hazards.	Class III	Class III	Class I	SPC GEO-1 (Geotechnical Investigation)
G-2: The Project would cause or be affected by substantial soil erosion, slope instability, or slope failure.	Class III	Class III	Class I	SPC GEO-1 (Geotechnical Investigation) SPC HYDRO-1 (Fill From Reservoir Excavation Will Not Be Placed in Stream Channels)
Hazards and Public Safety				
HAZ-1: Hazardous material use and transport may result in spills that contaminate Reservoir water or groundwater, or endanger public health	Class III	Class III	Class I	SPC WQ-1 (Prepare Spill Response Plan)

Table ES-2. Summary of Significant CEQA Impacts and Mitigation Measures

Impact	Impact Significance			Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	
HAZ-2: Project activities would result in Littlerock Dam safety or degradation issues	Class III	Class III	Class I	None
Hydrology				
H-1: The Project would deplete groundwater supplies downstream of the dam	Class III	Class III	Class I	None
H-3: The Project would alter Little Rock Creek flow volumes downstream of the dam, and otherwise alter stream flow characteristics, increasing the potential for flooding.	Class IV	Class IV	Class I	None
Noise				
N-1: Noise from mobile sources could substantially disturb sensitive receptors or violate local rules, standards, and/or ordinances	Class III	Class III	Class I	SPC NOI-1 (Prepare a Construction Noise Complaint and Vibration Plan) SPC NOI-2 (PWD Site Buffer Requirements)
N-2: Noise from stationary sources could substantially disturb sensitive receptors or violate local rules, standards, and/or ordinances	Class III	Class III	Class I	None
N-3: Temporary construction activities may occur outside allowable hours and substantially disturb sensitive receptors	Class III	Class III	Class I	None
N-4: Vibration from temporary construction equipment use could substantially disturb sensitive receptors	Class III	Class III	Class I	SPC NOI-1 (Prepare a Construction Noise Complaint and Vibration Plan) SPC NOI-2 (PWD Site Buffer Requirements)
Recreation and Land Use				
L-1: Project construction and excavation would preclude or disturb existing recreational resources.	Class II	Class I	NA	Mitigation Measure L-1a: Coordinate Project scheduling and maintenance activities with Forest Service Authorized Officer Mitigation Measure L-1b: Provide Compensation to Forest Service for Lost Recreational Opportunity SPC LAND-2 (Design Grading to Accommodate OHV Access)

Table ES-2. Summary of Significant CEQA Impacts and Mitigation Measures

Impact	Impact Significance			Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	
L-2: Sediment transport and disposal would preclude or disturb existing uses along the truck route and disposal sites.	Class I	Class I	Class I	SPC AQ-1 (Limit Engine Idling) SPC AQ-2 (Fugitive Dust Controls) SPC AQ-3 (Off-Road Engine Specifications) SPC AQ-4 (On-Road Engine Specifications) SPC AQ-5 (Reduce Off-Road Vehicle Speeds) SPC NOI-1 (Prepare a Construction Noise Complaint and Vibration Plan) SPC NOI-2 (PWD Site Buffer Requirements)
L-3: Increased sedimentation of the Reservoir would contribute to the long-term degradation of a recreational resource.	NA	NA	Class I	None
Transportation and Traffic				
T-1: Exceed, either individually or cumulatively, an established level of service standard for roadways, highways, and intersections utilized by the Project	Class II	Class II	Class III* Class I**	Mitigation Measure T-1 (Restrict Haul Truck Movements during PM Peak Period) SPC TRA-1 (Prepare Traffic Control Plan)
T-2: Result in inadequate emergency response	Class II	Class II	Class III	Mitigation Measure T-1 (Restrict Haul Truck Movements during PM Peak Period) SPC TRA-1 (Prepare Traffic Control Plan)
Water Quality				
WQ-1: The Project would violate water quality standards or waste discharge requirements, or otherwise degrade water quality	Class III	Class III	Class I	SPC WQ-1 (Prepare Spill Response Plan) SPC HYDRO-1 (Fill From Reservoir Excavation Will Not Be Placed in Stream Channels)

Notes:
* Assumes the Dam remains stable
**Assumes the Dam becomes unstable and requires demolition
NA = Not Applicable

ES.3.1 Major Conclusions

Many of the technical issue area analyses determined that impacts associated with the proposed action and Alternative 1 would be identical for the grade control construction and for operation and maintenance excavation activities. Notable differences among the impact discussions were attributed to the extended schedule for restoring the Reservoir to design capacity under Alternative 1. Major conclusions include the following:

- **Air Quality and Climate Change-** Compared with the proposed action, Alternative 1 would reduce the number of daily truck trips and reduce the daily and annual air pollutant emissions during the excavation construction phase. However, the total Project-life GHG emissions would be higher for Alternative 1 than the proposed action. The No Action/No Project Alternative would likely eventually result in temporarily increased short-term and annual (for one year or more) air quality impacts when compared to both the proposed action and Alternative 1.
- **Biological Resources-** The Project was developed to restore the water storage and flood control capacity of the Reservoir while avoiding biological resource impacts to the federally endangered arroyo toad. The proposed construction of a grade control structure preserves arroyo toad habitat by preventing sediment loss and headcutting upstream of Rocky Point, where critical arroyo toad habitat has been identified. While necessary to avoid adverse impacts to arroyo toad during Project implementation, the grade control structure is also considered beneficial as it provides long-term stability to upstream arroyo toad habitat that could otherwise be eroded. Additionally, as discussed in Section B.2.3.2, all non-native fish would be removed from the Reservoir as part of the proposed action and Alternative 1. The removal of non-native fish species would improve habitat conditions for arroyo toad and other native species. Given that non-native fish tissue samples from the Reservoir show a large number of contaminants at high levels, removal of these fish during the Project's first year of sediment excavation would create a beneficial effect on birds and other wildlife that would otherwise be at risk from ingesting contaminated fish.

  Compared with the proposed action, Alternative 1 would result in greater potential for adverse impacts to nesting birds because sediment removal activities would commence during the nesting season. Alternative 1 would also have greater impacts to aquatic species including arroyo toads, southwestern pond turtle, and two-striped garter snake because of the need to drain the Reservoir in June rather than after Labor Day. Under the No Action/No Project Alternative, should future removal of the Dam and accumulated sediment be required, such a project would likely result in greater impacts to biological resources compared to either the proposed action or Alternative 1.
- **Noise-** Alternative 1 would reduce the amount of mobile noise occurring per day compared to the proposed action, but would increase the overall number of days that activities would generate noise. Under the No Action/No Project Alternative, should future removal of the Dam and accumulated sediment be required, such a project would likely require extensive construction that would generate noise at a similar or greater intensity as the proposed action.
- **Recreation and Land Use-** Compared with the proposed action, Alternative 1 may double the number of years that the Reservoir would be closed to the public, and would include annual closures during the peak summer period. The No Action/No Project Alternative would limit the future water-based recreational opportunities at the Reservoir due to the reduction of Reservoir capacity from annual sediment accumulation, and may result in the permanent closure of the Reservoir if the Dam were to be removed or the Reservoir become filled with sediment.

- **Transportation and Traffic-** Compared with the proposed action, Alternative 1 would reduce the number of daily truck trips and eliminate the afternoon peak period impact at the intersection of Pearblossom Highway and Avenue T during the initial sediment removal phase. Under the No Action/No Project Alternative, should future removal of the Dam and accumulated sediment be required, such a project would likely result in increased traffic impacts when compared to both the proposed action and Alternative 1.

ES.3.2 Areas of Controversy

Public input on the focus and content of the EIS/EIR was sought during the Project's scoping period that commenced on March 7, 2014 and ended on April 15, 2014. A public scoping meeting was held on March 25, 2014. Comments that were received during the scoping period identified the following concerns:

- Potential impacts to sensitive plants and wildlife, and to sacred sites in the Project area;
- Existing fish and soil contamination in the Reservoir;
- Risk of exposure to Valley Fever;
- Number of truck trips and other construction-related traffic; and
- The need for best management practices and mitigation measures to reduce Project impacts.

The key issues that were identified during scoping are further described in Section F.1 (Public Participation and Notification) of this EIS/EIR, and are addressed throughout the impact discussions as appropriate (see Section C [Affected Environment and Environmental Consequences]).

ES.3.3 Issues to be Resolved

PWD has a standing agreement with the California Department of Water Resources' (DWR) under the Davis-Grunsky Act. In 1992, DWR provided grant funds for the Littlerock Dam and Reservoir Restoration Project, which obligates PWD to do the following:

- Phase I: Strengthen and enlarge Littlerock Dam to correct for seismic and spillway deficiencies. This phase was completed in 1994; and
- Phase II: Restore the lost water supply and water storage benefits of Littlerock Reservoir. This phase would be completed by the proposed action.

The DWR agreement also requires PWD to maintain a minimum recreation pool (i.e., 500 acre-feet in volume, and 3,228 feet in elevation) in the Reservoir throughout the recreation season (ending Labor Day each year) as long as sufficient surface flows from Little Rock Creek are available (DWR, 1998). However, in June 2014, PWD stated its plan to address the current statewide drought by diverting water from Littlerock Reservoir to Lake Palmdale for treatment and distribution to customers, beginning July 1, 2014 through August 2014 until the Reservoir was completely empty. The PWD diversion plan was determined consistent with the DWR contract per Article A-26 (Force Majeure) of that contract, which provides exceptions to the stated obligations in the event of an "Uncontrollable Force" such as a drought (DWR, 1998).

It should also be noted that Forest Service Land Management Plan identifies the Reservoir as a non-recreation special use and therefore the Reservoir is not a designated recreation area. Recreational opportunities have not been consistently available to the public, and currently the Reservoir is closed to public access. Based on these factors, PWD has been discussing the potential for DWR to lift the minimum recreation pool obligation of the agreement. As of the writing of this document, discussions with DWR are ongoing, and as such PWD will continue to be subject to its obligations and responsibilities under its agreement with DWR. However, during these discussions, DWR has indicated that a temporary suspension to the minimum pool obligation starting in July (as proposed in Alternative 1) would be considered for purposes of restoring the Reservoir's water storage capacity.