

RECLAMATION


Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Kaweah Delta Water Conservation District Packwood Creek Control Structures and Oakes Basin Improvements Project

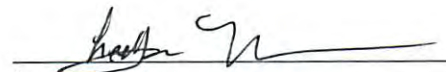
FONSI 14-06-MP

Recommended:


Brad Hubbard
Natural Resources Specialist
Mid-Pacific Regional Office

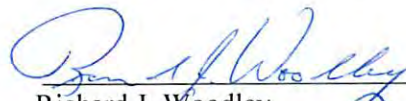
Date: 8/8/2014

Concurrence:


Lee Mao
Chief, Program Management Branch
Mid-Pacific Regional Office

Date: Aug. 8, 2014

Approved


Richard J. Woodley
Regional Resources Manager
Mid-Pacific Regional Office

Date: Aug. 8, 2014



U. S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
Sacramento, California

Background

The United States Department of Interior (DOI) Bureau of Reclamation (Reclamation) will provide DOI's WaterSMART program grant funds to the Kaweah Delta Water Conservation District (District) to construct the Packwood Creek Control Structures and Oakes Basin Improvements Project (Proposed Action). The Proposed Action consists of construction of four new check structures and retrofitting of one existing check structure on Packwood Creek and habitat improvements to the existing Oakes Basin. The Proposed Action is a cooperative program between the City of Visalia and the District.

The need for the Proposed Action, consistent with the purpose of Reclamation's WaterSMART program, is to improve the volume of groundwater recharge, improve flood protection, and improve the District's water management reclamation capabilities.

Reclamation and the District prepared the attached Draft Environmental Assessment/Initial Study (EA/IS) to evaluate the effects of the Proposed Action. The EA/IS was available for public review from March 17, 2014 to April 18, 2014. The District received two comments from State agencies concerning the Negative Declaration, as summarized below by the District:

State of California, Department of Transportation (4/15/2015) – Two of the check structures are within close proximity to state routes. The check structure design should provide 0.75 feet or more below the lowest inlet to the creek to the hydraulic grade line. The energy grade line should be below the grate flow line at the 25 year return.

State of California, Central Valley Regional Water Quality Control Board (CVRWQCB) (4/24/2014) – The mitigation proposed addresses the CVRWQCB's water quality concerns.

On May 6, 2014, the District adopted a Mitigated Negative Declaration pursuant to the provisions of the California Environmental Quality Act (CEQA) for the Project. The final Mitigated Negative Declaration is available for review at the District's office: 2975 North Farmersville Boulevard, Farmersville, Tulare County, California.

Threatened and Endangered Species

On April 2, 2014, Reclamation provided a memo to U.S. Fish and Wildlife Service requesting that the proposed action may affect, but is not likely to adversely affect the Federally listed valley elderberry longhorn beetle and San Joaquin kit fox. U.S. Fish and Wildlife Service concurred with Reclamation's determination in a memo dated April 25, 2014. No further consultation is required under Section 7 of the Endangered Species Act. Implementation of the proposed conservation measures identified in the EA/IS will help to avoid take through implementation of environmental awareness training for project related personnel, delineation of project boundaries to avoid impacts to adjacent habitats, and pre-construction surveys to ensure no federally-listed species are present with the action area prior to ground disturbance. No natural waterways containing sensitive fishes will be affected. The proposed action would support existing land uses and conditions.

No Action

Reclamation would not provide grant funds to the District to support construction of the Proposed Action. There would be no increase in groundwater recharge and no increase in flood protection.

Proposed Action

The Proposed Action Alternative consists of Reclamation providing grant funds to support the habitat restoration of Oakes Basin, the construction of four new check structures, and retrofitting one existing check structure within Packwood Creek. The Proposed Action will recharge approximately 1,465 AF/year, and improve the management of the 29,360 AF/year of water that the District oversees.

Findings

Based on the attached EA/IS, Reclamation finds that the Proposed Action is not a major Federal action that will significantly affect the quality of the human environment. The EA/IS describes the existing environmental resources in the Proposed Action area and evaluates the effects of the No Action and Proposed Action alternatives on the resources. The EA/IS was prepared in accordance with the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR 1500-1508), and Department of the Interior Regulations (43 CFR Part 46). The analysis provided in the attached EA/IS is incorporated by reference.

Following are the reasons why the impacts of the Proposed Action are not significant:

1. The Proposed Action will not affect air quality or increase greenhouse gas emissions.
2. The Proposed Action will not significantly affect water resources.
3. The Proposed Action will not significantly affect threatened or endangered species.
4. The Proposed Action will not impact historic properties. The historic property identification efforts included a cultural resources survey report prepared by Sierra Valley Cultural Planning, on behalf of KDWCD, for the proposed project. An approximately 7-mile long segment of Packwood Creek was the only cultural resource identified within the APE (Brady and Roper 2013). Brady and Roper (2013) evaluated Packwood Creek, both individually and as potentially contributing to the larger TID system, for listing on the National Register and concluded that it does not meet eligibility criteria outlined at 36 CFR § 60.4. Reclamation agreed with this determination and entered into consultation with the California State Historic Preservation Officer (SHPO) on June 27, 2014, seeking their concurrence on a finding of “no historic properties affected §800.4(d)(1).” SHPO concurred with Reclamation’s findings and determination on August 4, 2014. The proposed action will not have significant impacts on cultural resources listed, or eligible for listing, on the National Register of Historic Places and will therefore result in no impacts historic properties.

5. The Proposed Action will not affect Indian Trust Assets.
6. The Proposed Action will not affect Indian sacred sites.
7. The Proposed Action will not disproportionately affect minorities and low income populations and communities.
8. The Proposed Action will not result in adverse cumulative effects.
9. There is no potential for the effects to be considered highly controversial.

RECLAMATION

Managing Water in the West

Environmental Assessment/Initial Study

Kaweah Delta Water Conservation District Packwood Creek Control Structures and Oakes Basin Improvements Project

August 2014



U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
Sacramento, California

Kaweah Delta Water Conservation District
2975 N. Farmersville Blvd.
Farmersville, CA 93223

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.

Table of Contents

Section 1	Introduction.....	1
	Background.....	1
	Need for Proposal	12
Section 2	Alternatives Including the Proposed Action.....	14
	No Action Alternative.....	14
	Proposed Action.....	14
Section 3	Affected Environment and Environmental Consequences	21
	Resources Not Analyzed in Detail	21
	3.1.1 Indian Sacred Sites	21
	Resources Analyzed.....	22
	I. AESTHETICS	22
	II. AGRICULTURE AND FOREST RESOURCES.....	23
	III. AIR QUALITY	25
	IV. BIOLOGICAL RESOURCES.....	27
	V. CULTURAL RESOURCES	38
	VI. GEOLOGY AND SOILS	40
	VII GREENHOUSE GAS EMISSIONS	42
	VIII. HAZARDS AND HAZARDOUS MATERIALS.....	42
	IX. HYDROLOGY AND WATER QUALITY	45
	X. LAND USE AND PLANNING	48
	XI. MINERAL RESOURCES	49
	XII. NOISE	50
	XIII. POPULATION AND HOUSING	52
	XIV. PUBLIC SERVICES	53
	XV. RECREATION	54
	XVI. TRANSPORTATION/TRAFFIC	55
	XVII. UTILITIES AND SERVICE SYSTEMS.....	57
	XVIII. MANDATORY FINDINGS OF SIGNIFICANCE	58
Section 4	Consultation and Coordination	61
Section 5	References	63

List of Figures and Tables

Figure 1	Regional Location
Figure 2	Topographic Map
Figure 3	Project Location Overview
Figure 4	Oakes Basin Improvements
Figure 5	Check Structure 1A
Figure 6	Check Structure 2
Figure 7	Check Structure 3A
Figure 8	Check Structure 4B
Figure 9	Check Structure 5

Appendices

Appendix A	CEQA Checklist Signature Page
Appendix B	Biological Evaluation
Appendix C	NRCS Soils Reports
Appendix D	Packwood and Cameron Creeks Pool and Basin Reconnaissance Study
Appendix E	CalEEMod Output Files
Appendix F	Best Management Practices for Stormwater

List of Acronyms and Abbreviations

AF	Acre-feet
AWTP	Accelerated Water Transfer Program
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFS	Cubic Feet Per Second
CNDDB	California Native Diversity Database
CNPS	California Native Plant Society
CR	California Registers of Historic Resources
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
DCP	Dust Control Plan
Delta	Sacramento-San Joaquin River Delta
DOI	United States Department of the Interior
EA	Environmental Assessment
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FKC	Friant-Kern Canal
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
IS	Initial Study
ITA	Indian Trust Assets
KDWCD	Kaweah Delta Water Conservation District
MBTA	Migratory Bird Treaty Act
MDBM	Mount Diablo Base and Meridian
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Registers of Historic Places
PCE	Primary Constituent Element
Reclamation	Bureau of Reclamation
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SJRRP	San Joaquin River Restoration Program
SJVAPCD	San Joaquin Valley Air Pollution Control District
SOD	South-of-Delta
SWPPP	Storm Water Pollution Prevention Plan
TID	Tulare Irrigation District
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VWMC	Visalia Water Management Committee

THIS PAGE LEFT INTENTIONALLY BLANK

Section 1 Introduction

Background

The United States Department of Interior (DOI) Bureau of Reclamation (Reclamation) proposes to provide DOI WaterSMART program grant funds to the Kaweah Delta Water Conservation District (District) for the implementation of the Packwood Creek Control Structures and Oakes Basin Improvements Project.

Reclamation would further the goals and objectives of the WaterSMART program by providing funding for the construction of four new check structures and retrofitting of one existing check structure on Packwood Creek and habitat improvements to the existing Oakes Basin. The Proposed Action/Project is a cooperative program between the City of Visalia (City) and the KDWCD, also known as the Visalia Water Management Committee (VWMC).

In accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), this Environmental Assessment/Initial Study (EA/IS) discloses potential environmental impacts associated with the construction and operation of the check structures and basin improvements. For the purposes of NEPA, it is the Proposed Action; for the purpose of CEQA this project is the Proposed Project. The project is referred to as the Proposed Action/Project throughout this document. Reclamation is the NEPA lead agency and the District is the CEQA lead agency.

The District was formed in 1927, specifically for the purposes of conserving and storing waters and protecting land from flood damage¹. The District encompasses a total land area of 340,000 acres with approximately 255,000 acres located in the western portion of Tulare County and the balance, or 85,000 acres in the northeastern portion of the Kings County². The District holds water rights on the Kaweah River, as well as being a long-term contractor for both Class 1 and Class 2 supplies from the Friant Division of the Central Valley Project.

The District currently has developed lands totaling almost 5,000 acres for groundwater recharge purposes. Oakes Basin and Packwood Creek are locations that were strategically identified as locations that would allow for optimal pooling and water recharging capabilities. The Proposed Action/Project concept was further refined in an August 2010 study entitled “Packwood Cameron Creeks Pool and Basin Reconnaissance Study”². Oakes Basin, approximately 40 acres in size, is located within one mile east of the easternmost residential developments of Visalia. The Proposed Action/Project site is less than one half mile north of CA-198 and immediately west of the Kaweah River, Packwood and Mill Creeks (Figure 1). As shown on Figure 3, the Proposed Action/Project would include four new check structures and the retrofitting of one existing check structure within Packwood Creek. The six components of the Proposed Action/Project lie within or near Packwood Creek.

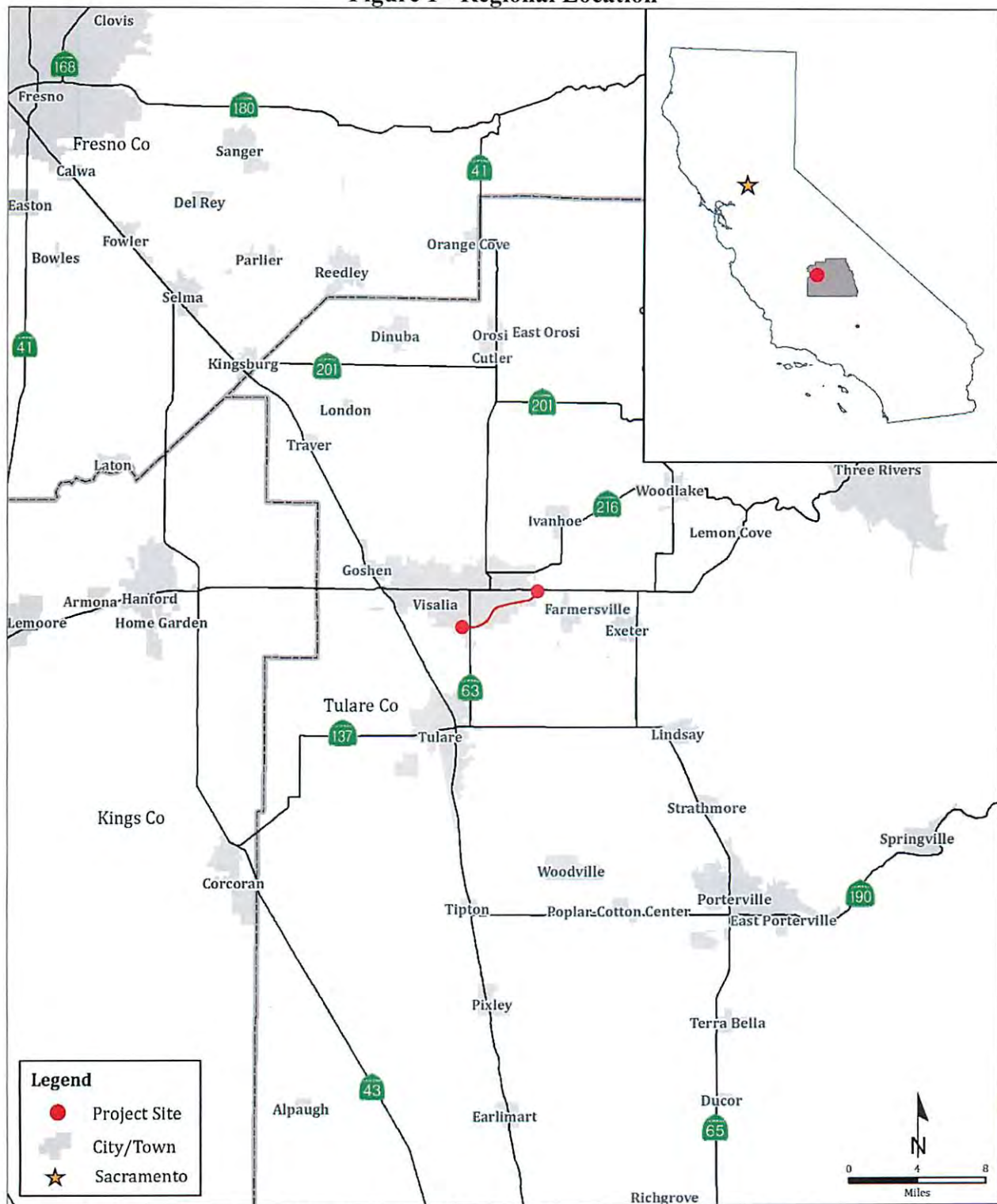
The District, City of Visalia, and Tulare Irrigation District (TID) all have existing SCADA networks for all agencies to be able to remotely collect water information. However, only the District and TID will have the ability to remotely control the check structures. When the structure gates are in their maximum up position, they would create pools storing approximately 9.2 to 18.1 acre-feet (AF) of water between check structure segments. The water retention pools would range between 8 to 8.5 feet in depth with a top dimension ranging between 37 to 52 feet wide. The Proposed Action/Project will maintain its

¹ Kaweah Delta Water Conservation District, http://www.kdwd.com/kdwdweb_003.htm

² Appendix D, Packwood and Cameron Creeks Pool and Basin Reconnaissance Study

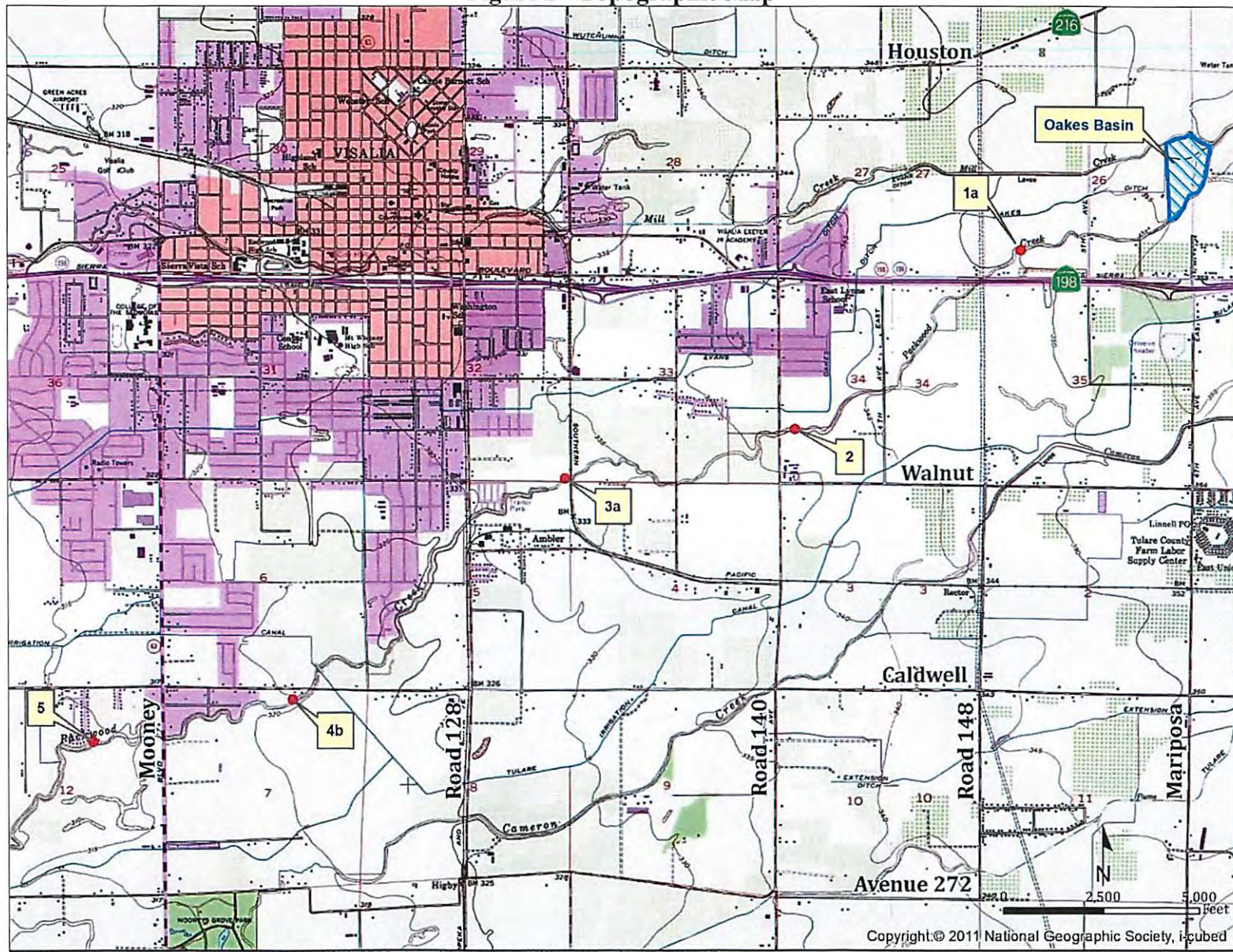
existing visual appearance, except for immediately downstream and upstream locations where earthwork may be necessary to transition some slope stabilization to channel to structure geometry.

Figure 1 - Regional Location



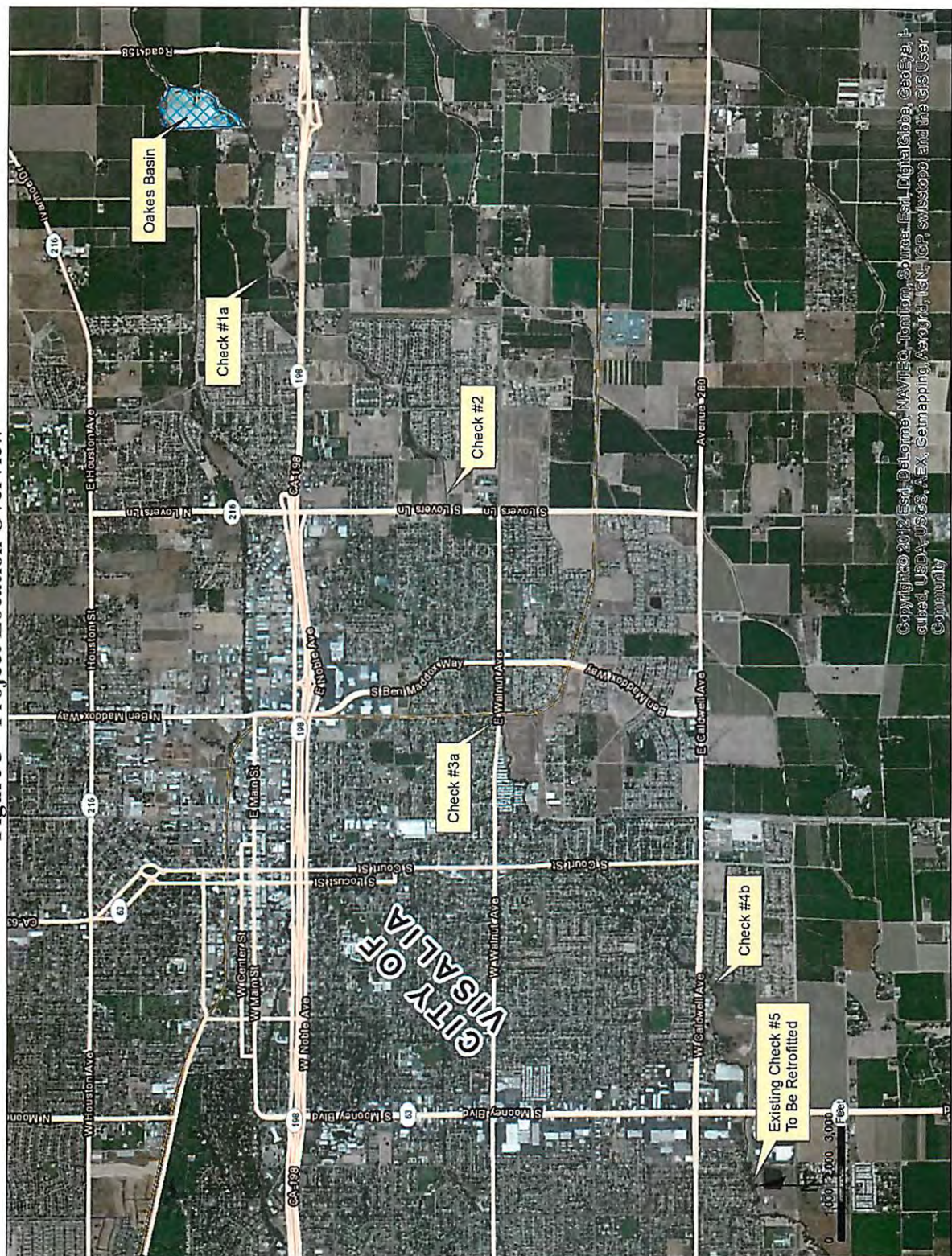
6/19/2013 V:\Clients\Kaweah Delta WCD - 1225\122512V2-WEEG Packwood Crk Structures\GIS\Map\June_2013_Revisions\figure1_regional_location.mxd

Figure 2 - Topographic Map



6/19/2013 V:\Clients\Kaweah Delta WCD - 1225\122512V2-WEEG Packwood Crk Structures\GIS\Map\June_2013_Revisions\Topo.mxd

Figure 3 - Project Location Overview



0/18/2013 V:\Clients\Kaweah Della WCD - 1225122512\2\WEEG Packwood Crk Structures\GIS\Map\June_2013_Revisions\checks_location.mxd

Copyright © 2012 Esri. All rights reserved. Esri, the Esri logo, ArcGIS, the ArcGIS logo, and the Esri User Community are trademarks or registered trademarks of Esri and/or its licensors. All other marks are the property of their respective owners.

Figure 4- Oakes Basin Improvements



Figure 5 - Check Structure 1a

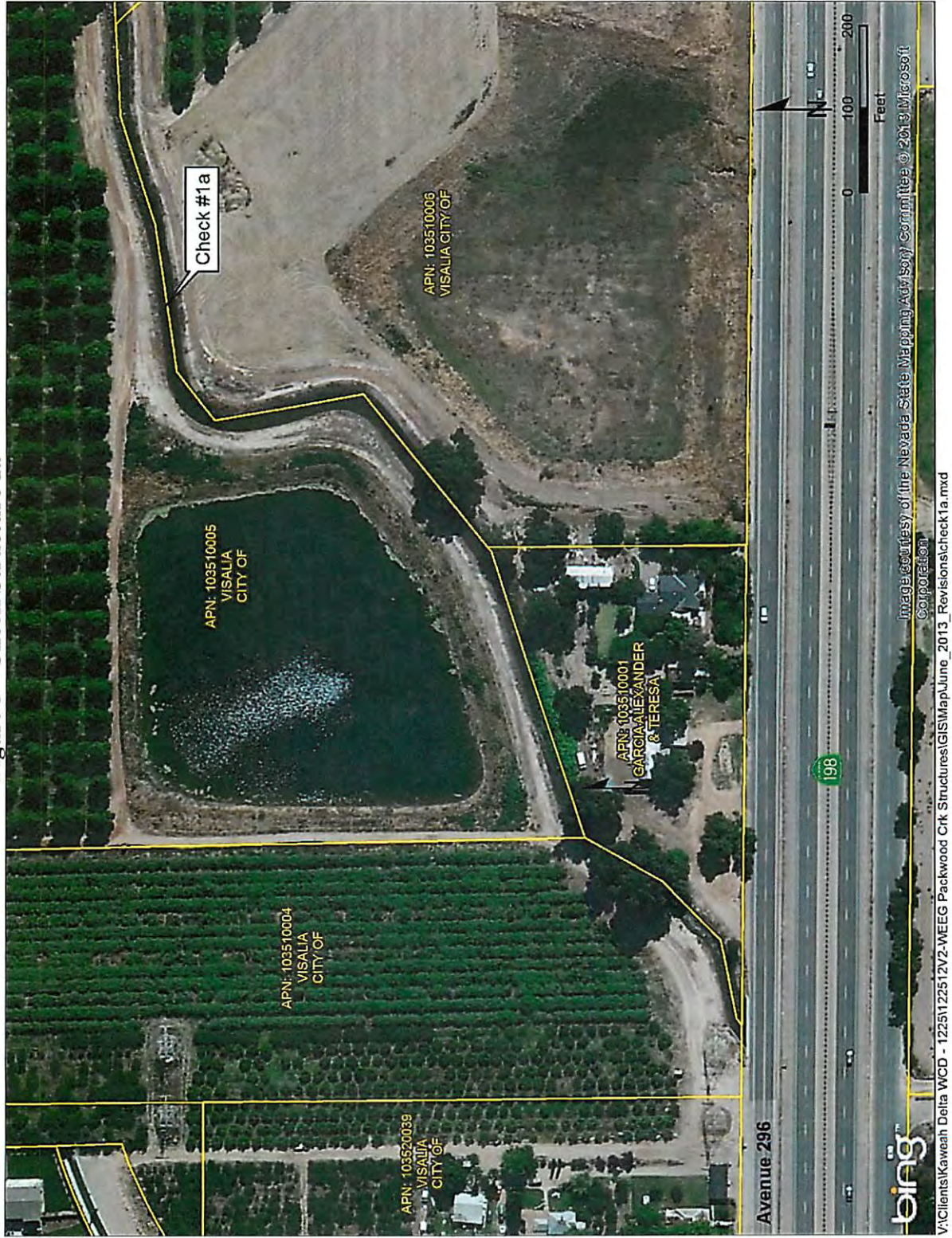


Figure 6 - Check Structure 2

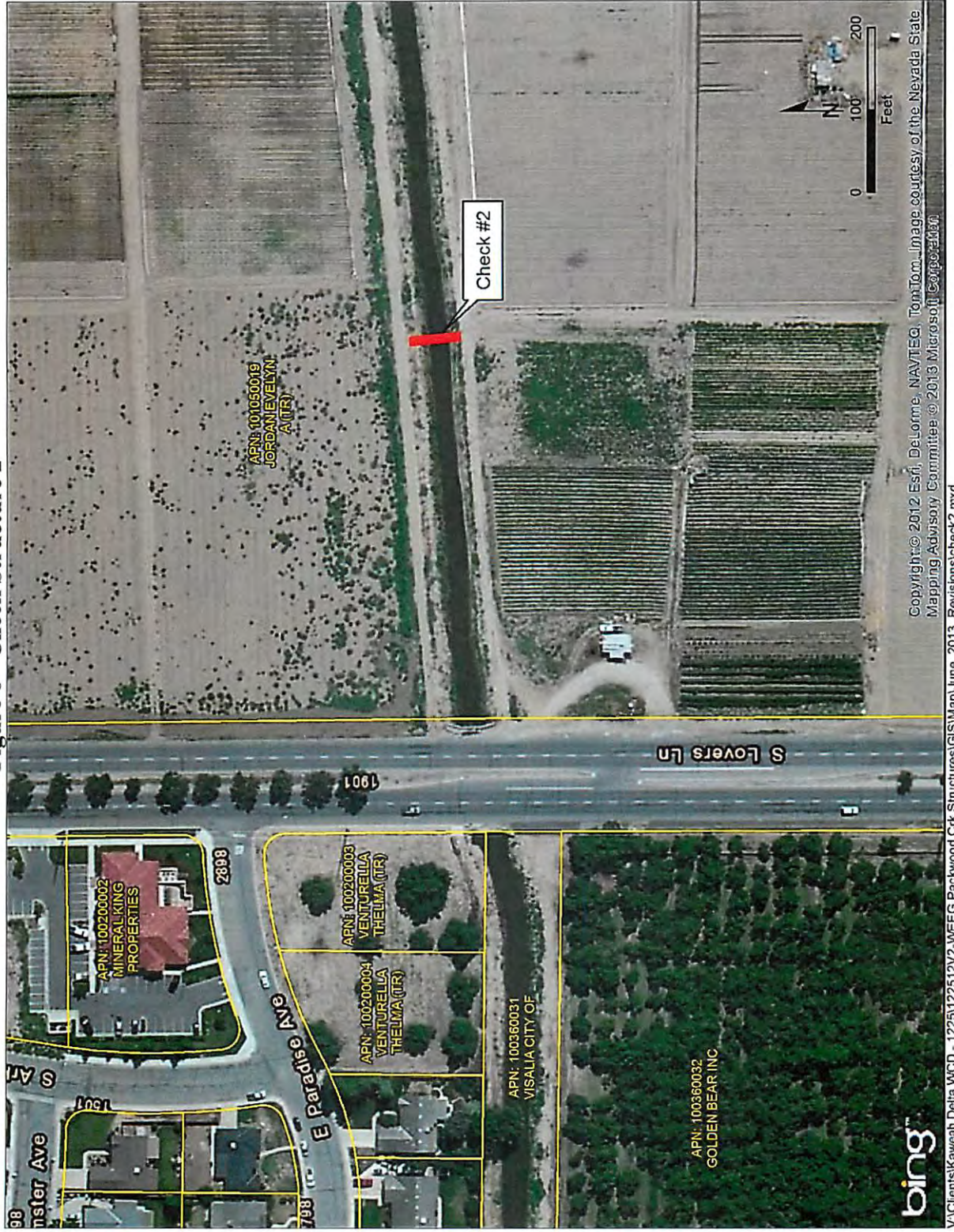


Figure 7 - Check Structure 3a

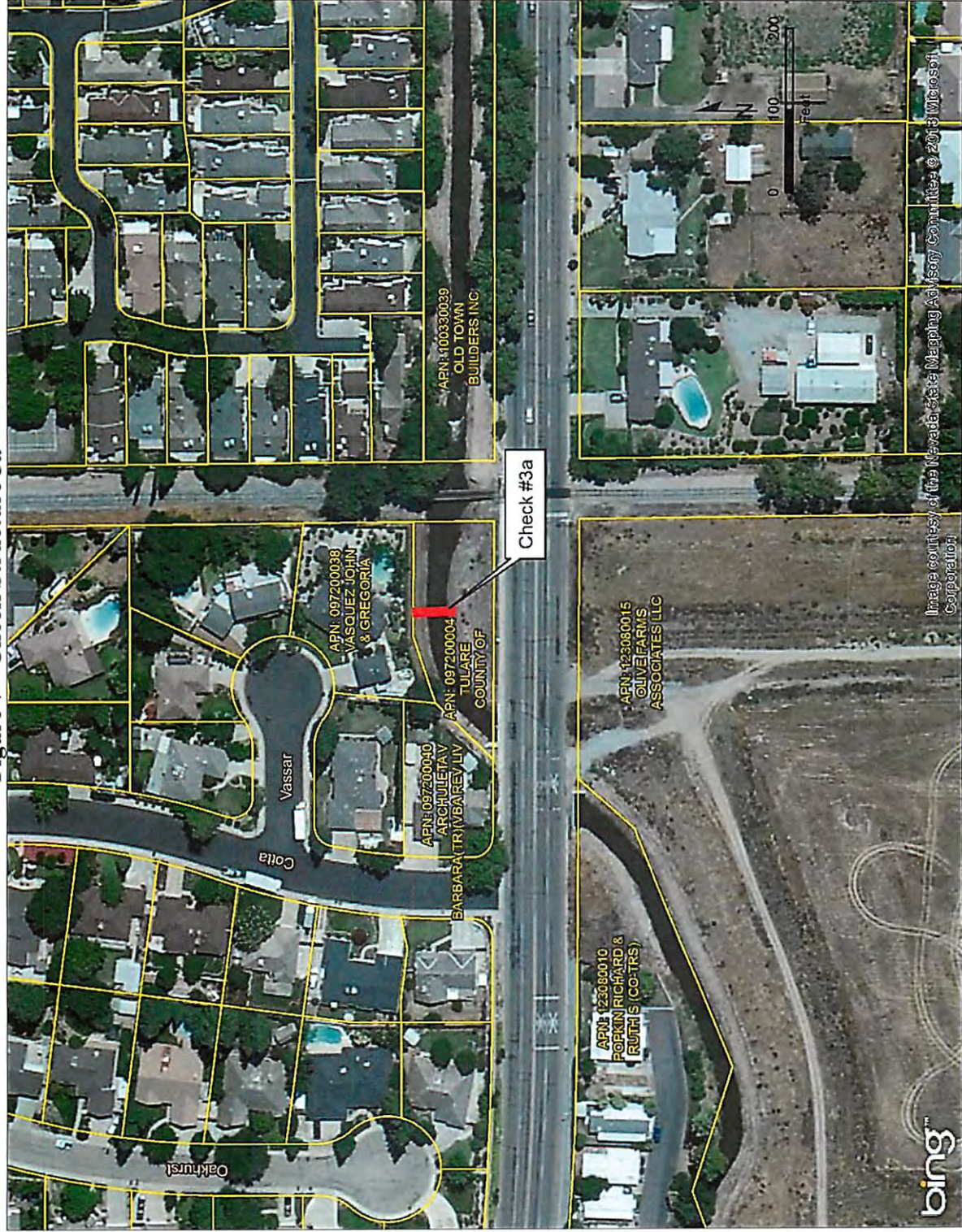


Figure 8 - Check Structure 4b

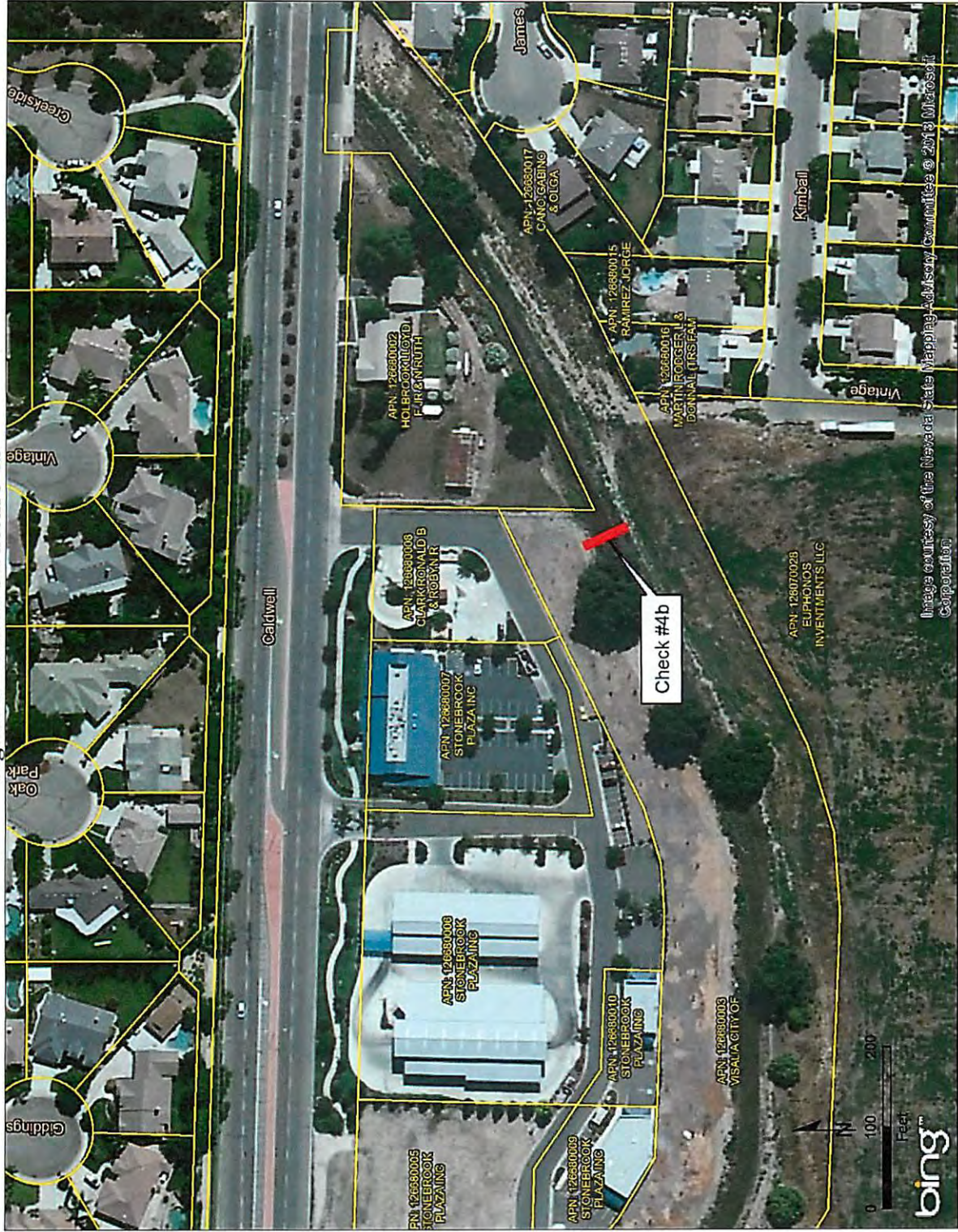
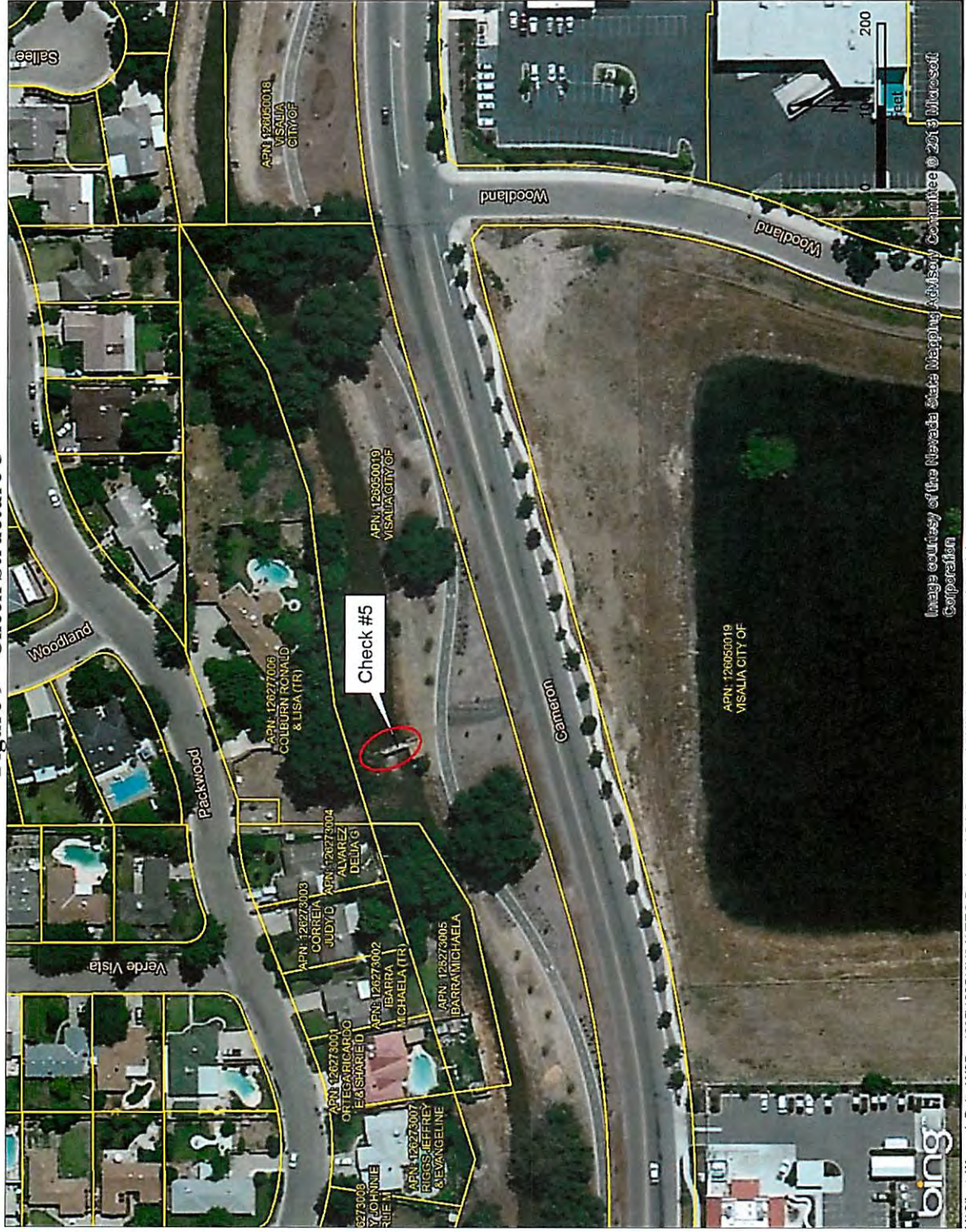


Figure 9 - Check Structure 5



Need for Proposal

Historically, conservation efforts to promote the use of non-storable storm and flood waters of the Kaweah River have been achieved by the District. The District continues looking for ways to maximize groundwater reclamation to the fullest extent possible. The Proposed Action/Project would assist in the District's effort to secure additional groundwater resources during wet seasons to enhance reclamation efforts. The Proposed Action/Project would improve volume of groundwater recharge, improve flood protection, and improve the District's water management reclamation capabilities. The purpose of the Proposed Action/Project is to provide KDWCD, City of Visalia and TID the ability to increase water pooling within the creek and efficiently facilitate groundwater management to meet community demands.

THIS PAGE LEFT INTENTIONALLY BLANK

Section 2 Alternatives Including the Proposed Action

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

No Action Alternative

Under the No Action Alternative, an estimated annual average of 1,465 AF of groundwater supplies would remain unavailable for the District's distribution system. The District would continue operations without the ability to effectively utilize the creek for water pooling, maximum water storage, and reclamation efforts. Conservation efforts promoting the use of non-storable storm and flood waters of the Kaweah River would not be expanded. The groundwater table would continue to follow normal declining patterns and flood protection would remain the same for the District, TID and City of Visalia. Consequently, the District's intent to eventually construct and operate the Proposed Action/Project would be speculative and it is possible that the check structures would never be built without assistance of federal funding resources.

Proposed Action

The Proposed Action/Project Alternative would consist of Reclamation providing grant funds to support the habitat restoration of Oakes Basin, the construction of four new check structures, and retrofitting one existing check structure within Packwood Creek. The Proposed Action/Project would provide a reliable source of groundwater recharge and would provide an opportunity for increasing flood protection. The Proposed Action/Project would recharge approximately 1,465 AF/year, and improve the management of the 29,360 AF/year of water that the District oversees.

The Oakes Basin project site is approximately 40 acres, located approximately one mile east of the easternmost residential developments of Visalia, approximately 0.3 miles north of CA-198, and immediately west of the division of Kaweah River into Packwood and Mill Creek (Figure 1). Oakes Basin is in Sections 25 and 26 of Township 18 south, Range 25 east, Mount Diablo Base and Meridian (Exeter U.S.G.S. 7.5-minute quadrangle) (Figure 2). Land uses/biotic habitats identified within the boundaries of the proposed site include seasonal wetland, non-native grassland, ruderal and irrigation ditch. Mature individual Valley oak trees are present in the Proposed Action/Project site. The proposed site is bounded by Mill Creek to the north, Packwood Creek to the east and south, and Oakes Ditch and a residential/agricultural parcel to the west. Figure 3 illustrates Oakes Basin's location in relation with the proposed four new check structures to be constructed in Packwood Creek.

The Proposed Action/Project is designed to control at least 150 cubic-feet per second (CFS), and designed to pass flood flows of approximately 350 CFS. The check structures would consist of reinforced concrete to support the gate. The foundation of the check structures may be influenced by scouring; consequently, the structures would utilize stem wall footings or "cut-off" wall footings embedded below zones of soil subject to scour or piping. Wall /cut-off wall footings may be installed five feet below the invert of the channel. The stem wall/cut-off wall footings would further be constructed into the sidewalls of the Packwood Creek for support and anchor of the check structures.

Surface vegetation and miscellaneous surface obstructions would be removed from the immediate proximity of the Proposed Action/Project areas prior to site grading. It is anticipated vegetation removal would involve the upper one to two inches, but may be deeper within localized areas of the creek.

Grading within Packwood Creek is anticipated to be minimal as the creek is not proposed to deviate from its current alignment; however, it is assumed that additional work is expected to consist of repairing steep or scoured slopes and restoration design gradients and channel geometries at the proposed check structure locations.

The Proposed Action/Project at Oakes Basin would include up to 230 plantings of Valley Oak (*Quercus lobata*) and other native plants (Blue wildrye, Meadow barley, Zorro fescue, Arroyo lupine and California poppy) on approximately 12 acres of the 40 acre existing basin site. As seen in Figure 4, all improvements will occur along the outer edge of the existing basin site, ensuring that no plantings or fill will be placed in any seasonal wetland habitat. Improvements would also include the construction of a small well (in the range of 500 gpm), pump, and irrigation system to provide water to the new plantings. SCADA improvements include remote monitoring of level and flow at the check structures which would allow the Proposed Action/Project to operate as a cohesive water storage unit, maximizing the water conservation and management potential. The benefits of the Proposed Action/Project include increased recharge capability in Packwood Creek, optimized management of both flood and irrigation water, and habitat improvements at Oakes Basin. This work would be performed in and adjacent to Packwood Creek, a channel that traverses through both urbanized and agricultural lands, and also Oakes Basin, located adjacent to rural agricultural lands.

2.2.1 Construction Elements

The Proposed Action/Project construction activities would include:

- **Check Structure Site Preparation:** A surveyor would perform topographic surveys in the vicinity of the proposed and existing structures. Vegetation and unsuitable material will be removed from the channel section. This work will most likely be performed with an excavator and dump truck to haul material from the site.
- **Check Structure Construction:** To construct the four new check structures, the subgrade will be compacted to specified compaction level by use of heavy equipment, most likely an excavator with a sheepsfoot roller. Next, formwork will be constructed and concrete poured from a concrete truck. The structure will then be backfilled and compacted.
- **Check Structure Retrofit:** After the site has been prepared as described above, the automated gate will be lowered into place by use of a crane and mounted to the face of the existing structure.
- **Finish Grading:** Finish grading would be completed both within the Oakes Basin and along check structure locations throughout Packwood Creek in preparation for hydro-seeding. This work would be completed by a grader with a sloper blade attachment.
- **Oakes Basin Well, Pump and Irrigation System:** A small well will be drilled using a drill rig and it anticipated to draw approximately 30 AF/year to deliver water to the

plantings. The well will not be placed in the seasonal wetland habitat but rather along the outer edge of the basin, as seen in Figure 4. The well casing will be set using the same rig, then backfilled most likely with gravel. A concrete sanitary seal will be pumped into the remaining annular space above the gravel. Well development will then be performed using the drill rig, small pump and engine. A pump and appurtenances will then be installed followed by an irrigation system, consisting of at-grade PVC pipe with bubbler sprinklers at each of the planting locations.

- **Oakes Basin Plantings:** Up to 230 oak trees and other native vegetation will be planted throughout the outer edge of Oakes Basin. No plantings or fill will occur within the seasonal wetland habitat area. Each planting site will most likely be dug by the use of a backhoe. Planting, backfilling, and mulching will be done by hand.
- **SCADA Improvements.** A Remote Terminal Unit (RTU) will be installed at each of the six sites that will allow remote monitoring of water level and flow rate. Disturbance will be minor and may include trenching and concrete work.

Construction is expected to begin as soon as October 2014 with completion of all improvements by October 2015. The staging area and access route would be restored to pre-project conditions.

2.2.2 Conservation Measures

Valley Elderberry Longhorn Beetle Conservation Measures

- Prior to planting of native riparian trees and other water conservation activities around the Oakes Basin, construction setbacks of 100 ft. from all elderberry shrubs within and adjacent to the study area shall be established. Furthermore, elderberries upstream of Check #5 within 100 ft. of the structure will have similar avoidance measures in place, prior to retrofitting. Should temporary impacts be necessary within the 100 foot buffer in order to accomplish the proposed project, 20 foot minimum buffers shall be established and prior to initiation of the Construction phase of the Proposed Action/Project, construction personnel shall receive United States Fish and Wildlife Services (USFWS)-approved worker environmental awareness training in the identification, life history, and legal protections of the VELB and its host plant. These elderberry avoidance areas shall be clearly marked with signs, fencing, and/or flagging, and maintained for the duration of work in that area.

Burrowing Owl Conservation Measures

- A pre-construction survey for burrowing owls shall be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area shall include all suitable non-native grassland habitat on and within 500 ft. of project sites, where accessible.
- If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or

near project sites, a 250-foot construction setback shall be established around active owl nests, or alternate avoidance measures implemented in consultation with California Department of Fish and Wildlife (CDFW). The buffer areas shall be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers shall remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.

- During the non-breeding season (September 1-January 31), resident owls occupying burrows in project sites shall be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation shall entail installing one-way doors on all potential owl burrows on and adjacent to the sites, leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and finally excavating the burrows.

San Joaquin Kit Fox Conservation Measures

Incidental sightings indicate that the San Joaquin Kit Fox currently occupies available habitat lands in the San Joaquin Valley floor and in the surrounding foothills. Consistent with District construction policies and the Endangered Species Act consultation with USFWS and Streambed Alteration Agreement conditions, preconstruction surveys would be conducted before ground disturbance activities begin. If surveys detect the presence of listed species or migratory birds, then construction efforts shall be put on hold until an appropriate measure(s) and/or consultation with the USFWS and/or CDFW take place. If surveys do not detect the presence of listed species or migratory birds, then the District would proceed with on-site monitoring prior to and during the construction phase. In addition to the conservation measures previously mentioned, the following measures would be implemented:

- No less than 14 days and no more than 30 days prior to operations and maintenance activities that involve ground disturbance, off-road travel, or vegetation management in suitable San Joaquin kit fox habitat, a Service-approved biologist will conduct San Joaquin kit fox surveys within the project area and in a 200 foot buffer surrounding the project area to determine the presence of any natal, potential or atypical San Joaquin kit fox as those dens are defined in *Standardized Recommendations for the Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (Service 2011). Any natal, potential or atypical den would be monitored for evidence of San Joaquin kit fox use by placing a wildlife monitoring camera or tracking media at the entrance for at least three consecutive nights to survey suspected dens. Active dens would be marked with a 100-foot no disturbance buffer and natal or pupping dens would be marked with a 1000-foot buffer.
- Project-related vehicles shall observe a daytime speed limit of 20 miles per hour throughout the site except on county roads and State and Federal highways. Kit foxes are most active at night; therefore, nighttime construction should be minimized to the extent possible. If work occurs at night, the nighttime speed limit should be reduced to 10 miles per hour. Traffic outside of designated driving areas within the project area should be prohibited.

- To prevent inadvertent entrapment of kit foxes or other animals during construction, all excavated, steep-walled holes or trenches more than two feet deep should be covered with plywood or a similar material at the close of each workday. If trenches cannot be closed, one or more escape ramps constructed of earthen fill or wooden planks should be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the CDFW shall be contacted.
- Kit foxes are attracted to den-like structures such as pipes or culverts. To avoid foxes entering stored structures and becoming trapped or injured, all construction pipes, culverts, or similar structures with a diameter of 4 inches or greater which are stored at the project site overnight should be thoroughly inspected for kit foxes before the pipe is buried, capped, or otherwise used or moved. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under direct supervision of the USFWS biologist, the pipe may be moved once to remove it from the construction area until the fox has escaped.
- All food-related trash items such as wrappers, cans, bottles and food scraps should be disposed of in securely closed containers and removed at least once a week from the construction area.
- No firearms shall be allowed on the project site.
- No pets such as dogs or cats should be permitted on the project site to prevent harassment or mortality of kit foxes and to prevent destruction of dens.
- Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes as well as the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
- A representative appointed by the project proponent shall be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative will be identified during the employee education program detailed below.
- An employee education program should be conducted for any project that could affect kit fox. The program should consist of a brief presentation by an individual knowledgeable in kit fox biology, the Endangered Species Act and the California Endangered Species Act (ESA), to explain endangered species concerns to contractors and their employees involved in the project. The program shall include:
 - a description of the San Joaquin kit fox and its habitat needs;

- an explanation of the status of the species and its protection under the ESA; and
 - a list of measures being taken to reduce impacts to the species during project construction.
- A fact sheet conveying this information shall be prepared for distribution to personnel involved with the construction of the project.
- Upon completion of the Proposed Action/Project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc., shall be re-contoured and re-vegetated to the extent necessary to restore the area to pre-project conditions.
- The USFWS and CDFW shall be notified in writing within 24 hours of the discovery of an accidental death or injury to a kit fox. Notification must include the date, time, and location of the incident as well as any other pertinent information.

U.S. Fish and Wildlife Service
 Chief of the Division of Endangered Species
 2800 Cottage Way, Suite W2605
 Sacramento, California 95825-1846
 (916)414-6620 or (916)414-6600

California Department of Fish and Wildlife
 Endangered Species Division
 1701 Nimbus Road, Suite A
 Rancho Cordova, California 95670
 (916)358-2900

American Badger Conservation Measures

- A pre-construction survey for American badgers shall be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use at Oakes Basin. Pre-construction surveys shall cover all suitable non-native grassland habitat within and immediately adjacent to the study area.
- Should an active den be identified during the preconstruction survey, a disturbance-free buffer shall be established around the den and maintained until a qualified biologist has determined that the badger, and cubs if it's a natal den, has dispersed or the den has been abandoned.

Conservation Measures for Swainson's Hawk and Other Nesting Raptors and Migratory Birds

- In order to avoid impacts to nesting raptors and migratory birds, applicable activities shall occur, where possible, between September 1st and January 31st (outside the nesting season).
- If applicable, activities must occur during the nesting season (February 1-August 31), a qualified biologist shall conduct pre-construction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. If no nesting pairs are found within the vicinity of Proposed Action/Project sites, no further mitigation is required.
- Should any active nests be discovered near Proposed Action/Project sites, the biologist shall determine appropriate construction setback distances based on the biology of the affected species. Construction-free buffers shall be identified on the ground with flagging, fencing, or by other easily visible means, and shall be maintained until the biologist has determined that the young have fledged.

Conservation Measures to Protect Riparian and Other Sensitive Natural Communities

- Where construction areas are within 100 ft. of riparian vegetation, the District shall define the limits of construction and place barriers (i.e. flagging or fencing) between the construction area and the riparian vegetation.
- A qualified biologist shall conduct an environmental awareness program for all construction and on-site personnel prior to the start of construction. The training shall include a discussion of riparian vegetation and avoidance measures.

Wetland Conservation Measures

- Construction activities along Check Structures 1 through 5 are subject to Sections 404 and 401 of the Clean Water Act; as soil disturbances will occur within an approximate 100-foot radius around each check structure. All ground disturbances would be followed by reseeding vegetation for bank stabilization. Removal of trees, large shrubs or riparian vegetation would be minimal.

Conservation Measures to Protect Human Remains

- If human remains or any bones of possible human remains are encountered during construction, all work on the Proposed Action/Project site shall cease and the Tulare County Coroner's Office shall be immediately contacted. If the remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) shall be notified within 24 hours of determination, as required by PRC Section 5097. The NAHC shall notify designated Most Likely Descendants, who would provide recommendations for the treatment of the remains within 24 hours. The NAHC would mediate any disputes regarding treatment of remains.

Section 3 Affected Environment and Environmental Consequences

To satisfy the need to consider environmental impacts of the action pursuant to both NEPA and CEQA, possible effects to resources were analyzed using an initial study checklist adapted from the CEQA Guidelines Appendix G. This section addresses both CEQA and NEPA requirements, including NEPA requirements to evaluate Indian Trust Assets, Indian Sacred Sites, and Environmental Justice. Where there is a possibility for the action to affect a specific resource, there is a discussion of the direction and magnitude of the impact.

Resources Not Analyzed in Detail

Reclamation has determined that there is no potential for direct, indirect, or cumulative effects to the following resources:

3.1.1 Indian Sacred Sites

The Proposed Action/Project would not limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites. No Indian Sacred Sites have been identified within the footprint of the Proposed Action/Project.

3.1.2 Indian Trust Assets

Indian Trust Assets (ITA) are legal interests in assets that are held in trust by the United States Government for federally recognized Indian tribes or individual Indians. There are no Indian reservations, Rancherias or allotments in the Proposed Action/Project area. No impact to Indian Trust Assets would occur under the No Action alternative as conditions would remain the same as existing conditions. Under the Proposed Action, the Proposed Action/Project would not have a potential to affect ITA.

3.1.3 Environmental Justice

Low income and minority populations are commonly found working in agricultural settings throughout the region, therefore, the Proposed Action/Project would not disproportionately affect the health, economy, environment of minority, or low-income populations as change in the need for farm labor is not anticipated.

Resources Analyzed**I. AESTHETICS****Would the project:**

a) Have a substantial adverse effect on a scenic vista?

The Proposed Action/Project includes habitat and landscape improvements at Oakes Basin and construction of four new check structures inside Packwood Creek. Also, the Proposed Action/Project would retrofit one existing check structure (Check Structure #5). The proposed check structures are spread throughout Packwood Creek which traverses through the rural areas of the City of Visalia and enters into the City. There are no scenic vistas near the Proposed Action/Project site. No impacts to aesthetics would occur as a result of the Proposed Action/Project.

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

State Route (SR) 198 is just south of the nearest Proposed Action/Project site; however, only portions of SR 198 are eligible for the Scenic Highway program. The nearest eligible portion of SR 198 is more than 13 miles east of the Proposed Action/Project site. The Proposed Action/Project would not substantially result in any impact on existing scenic resources or historic buildings as there are none designated in the vicinity. No impacts would occur to this impact area near the Proposed Action/Project sites.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

All disturbed or displaced earthen materials would be restored and reseeded with vegetation similar to what existed pre-construction. Once the vegetation matures it would provide for Oakes Basin and check structures areas to blend in with the existing landscape features. There would be no impact.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

At project completion, check structures will have minimal visual presence as they would be in Packwood Creek, and would be slightly below the ground surface. All disturbed or displaced earthen material would be re-planted with vegetation. Once vegetation matures, it would allow the disturbed areas to blend in with the existing landscape features. There would be no impact.

☐ ☐ ☐ ☒

II. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

☐ ☐ ☐ ☒

The Proposed Action/Project will occur along the existing Packwood Creek and existing Oakes Basin. No agricultural land will be converted and the land use designation will remain the same. There will be no impact.

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The check structures will be constructed within the existing creek and habitat improvements would occur at the existing Oaks Basin. All land use designations will remain the same. The Proposed Action/Project would not impact lands subject to Williamson Act Contracts.

☐ ☐ ☐ ☒

- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

There are no identified forest lands within the boundary of the Proposed Action/Project. The Proposed Action/Project does not request rezoning of any lands nor would it conflict with the existing land use designation. No impacts would occur related to this impact area.

☐ ☐ ☐ ☒

- d) Result in the loss of forest land or conversion of forest land to non-forest use?

See remarks under II-c).

☐ ☐ ☐ ☒

- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The Proposed Action/Project will result in groundwater recharge along Oakes Basin and Packwood Creek, which will benefit the continuation of farmable lands within the District. No substantial land changes will occur within the existing environment of the Proposed Action/Project.

☐ ☐ ☐ ☒

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

- a) Conflict with or obstruct implementation of the applicable air quality plan?

The Proposed Project/Action would not conflict with any applicable air quality plan. During construction, the selected contractor would be required to comply with the San Joaquin Valley Air Pollution Control District's (SJVAPCD) dust generation and control regulations. The California Emissions Estimator Model (CalEEMod), Version 2011.1.1, was utilized to generate potential criteria pollutants emissions and the data is presented in Appendix E. All emissions are anticipated to be below the SJVAPCD's significance thresholds. Any impacts to regional air quality plans or standards as a result of potential emissions would be less than significant.

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The Proposed Action/Project would disturb less than a 100-foot radius at each of the five check structure locations. Furthermore, approximately 12 acres of the 40-acre Oakes Basin would be to accommodate habitat improvements and plant new vegetation. CalEEMod was utilized to generate potential criteria pollutants emissions and the data is presented in Appendix E. All criteria pollutants are anticipated to be under the significance thresholds set by the SJVAPCD. As such, any impacts would be less than significant.

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

emissions which exceed quantitative thresholds for ozone precursors)?

The Proposed Action/Project would comply with the SJVAPCD required construction specifications, including minimum protocols for the contractor to follow during the project construction. Enforcement of the standard procedures would reduce significant discharge of excess pollutants. Operational activities are considered passive and would not generate any pollutant discharges. Any impacts would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

See remarks under III-b and III-c. Any impacts would be less than significant.

☐ ☐ ☒ ☐

e) Create objectionable odors affecting a substantial number of people?

The Proposed Action/Project would not create objectionable odors. The Proposed Action/Project results in a single operational procedure, which is the temporary retention of surface water that will recharge at Oakes Basin and along Packwood Creek. No materials would be introduced at the project site which would become the source of objectionable odor. There is no impact

☐ ☐ ☐ ☒

IV. BIOLOGICAL RESOURCES**Would the project:**

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

A CNDDDB search of the twelve U.S.G.S. 7.5-minute quadrangles encompassing the Proposed Action/ Project area (Visalia, Exeter, Traver, Monson, Ivanhoe, Woodlake, Rocky Hill, Lindsay, Cairns Corner, Tulare, Paige, and Goshen) was completed on February 5, 2013.

A reconnaissance-level field survey of the Proposed Action/Project site was also conducted on February 5, 2013 by Live Oak Associates. The biological report prepared by Live Oak Associates is presented in Appendix B. Prior to construction, the District will need to obtain a Section 1602 Permit through CDFW, 404 permit through the USACE, Section 401 permit through the State Water Resource Control Board, and prepare a Dust Control Plan for the Air Resource Board.

Valley Elderberry Longhorn Beetle

Fourteen blue elderberry shrubs were found around the perimeter of Oakes Basin and six blue elderberries were found within 400 ft. upstream of Check #5 to be retrofitted. The USFWS typically considers shrubs to be directly impacted if disturbance occurs within 20 feet of the shrubs dripline. Site impacts within 100-ft. from the outer edge of the canopy for some of the shrubs may be necessary to accomplish the Proposed Action/Project; however, no disturbance, temporary or permanent, will occur within 20 feet of the dripline of any blue elderberry shrub. Implementation of the following mitigation measure will further reduce any impacts to the Valley Elderberry Longhorn Beetle to less than significant:

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------



BIO-1 (establish buffers): Prior to planting of native riparian trees and other water conservation activities around the Oakes Basin, construction setbacks of 100 ft. from all elderberry shrubs within and adjacent to the study area shall be established. Furthermore, elderberries upstream of Check #5 within 100 ft. of the structure will have similar avoidance measures in place, prior to retrofitting. Should temporary impacts be necessary within the 100 foot buffer in order to accomplish the proposed project, 20 foot minimum buffers shall be established and prior to initiation of the Construction phase of the Proposed Action/Project, construction personnel shall receive USFWS-approved worker environmental awareness training in the identification, life history, and legal protections of the VELB and its host plant. These elderberry avoidance areas shall be clearly marked with signs, fencing, and/or flagging, and maintained for the duration of work in that area.

Burrowing Owl

Although the burrowing owl has not been observed within the study area or adjacent areas, the species is known to occur in the immediate vicinity. If burrowing owls are present during construction, they could be injured or killed by Proposed Action/Project activities involving ground disturbance or use of heavy equipment, or could be disturbed during the breeding season such that they would abandon their nests. Activities that adversely affect the nesting success of burrowing owls or result in mortality of individual owls constitute a violation of state and federal and are considered a potentially significant impact under CEQA. Implementation of the following mitigation measures will reduce any potential impacts to less than significant.

BIO-2 (Pre-construction surveys): A pre-construction survey for burrowing owls shall be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area shall include all suitable non-native grassland habitat on and within 500 ft. of project sites, where accessible.

BIO-3 (Avoidance of Active Nests): If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or near project sites, a 250-foot construction setback shall be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas shall be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers shall remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.

BIO-4 (Passive Relocation of Resident Owls): During the non-breeding season (September 1-January 31), resident owls occupying burrows in project sites shall be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation shall entail installing one-way doors on all potential owl burrows on and adjacent to the sites, leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and finally excavating the burrows.

San Joaquin Kit Fox

Kit fox are unlikely to occur on the study area; however, occurrences of the San Joaquin kit fox have been documented in the vicinity of the Proposed Action/Project site and the potential exists for an individual kit fox to pass through the site during dispersal activity. If kit fox were present at the time of construction, then construction related activities have the potential to cause kit fox mortality. Kit fox mortality as a result of the Proposed Action/Project is a potentially significant impact; however, implementation of the following mitigation measures will reduce any impacts to less than significant.

BIO-5 (Pre-construction Surveys): Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction

activities, and/or any project activity likely to impact the San Joaquin kit fox. The primary objective is to identify kit fox habitat features (e.g., potential dens and refugia) on the project site and evaluate their use by kit foxes. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately to determine the best course of action.

BIO-6 (Minimization):

- No less than 14 days and no more than 30 days prior to operations and maintenance activities that involve ground disturbance, off-road travel, or vegetation management in suitable San Joaquin kit fox habitat, a Service-approved biologist will conduct San Joaquin kit fox surveys within the project area and in a 200 foot buffer surrounding the project area to determine the presence of any natal, potential or atypical San Joaquin kit fox as those dens are defined in *Standardized Recommendations for the Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (Service 2011). Any natal, potential or atypical den would be monitored for evidence of San Joaquin kit fox use by placing a wildlife monitoring camera or tracking media at the entrance for at least three consecutive nights to survey suspected dens. Active dens would be marked with a 100-foot no disturbance buffer and natal or pupping dens would be marked with a 1000-foot buffer.
- Project-related vehicles shall observe a daytime speed limit of 20 miles per hour throughout the site except on county roads and State and Federal highways. Kit foxes are most active at night; therefore, nighttime construction shall be minimized to the extent possible. If work occurs at night, the nighttime speed limit shall be reduced to 10 miles per hour. Traffic outside of designated driving areas within the project area shall be prohibited.
- To prevent inadvertent entrapment of kit foxes or other animals during construction,

all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or a similar material at the close of each workday. If trenches cannot be closed, one or more escape ramps constructed of earthen fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the CDFW shall be contacted as described below.

- Kit foxes are attracted to den-like structures such as pipes or culverts. To avoid foxes entering stored structures and becoming trapped or injured , all construction pipes, culverts, or similar structures with a diameter of 4 inches or greater which are stored at the Proposed Action/Project site overnight shall be thoroughly inspected for kit foxes before the pipe is buried, capped, or otherwise used or moved. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under direct supervision of the USFWS biologist, the pipe may be moved once to remove it from the construction area until the fox has escaped.
- All food-related trash items such as wrappers, cans, bottles and food scraps shall be disposed of in securely closed containers and removed at least one a week from the construction area.
- No firearms shall be allowed on the Proposed Action/Project site.
- No pets such as dogs or cats shall be permitted on the project site to prevent harassment or mortality of kit foxes and to prevent destruction of dens.
- Use of rodenticides and herbicides in project areas shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes as well as the

depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation. If rodent control must be conducted, zinc phosphide shall be used because of a proven lower risk to kit fox.

- A representative appointed by the project proponent shall be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The representative will be identified during the employee education program detailed in the subsequent minimization measure.
- An employee education program shall be conducted for any project that could affect kit fox. The program shall consist of a brief presentation by an individual knowledgeable in kit fox biology, the Endangered Species Act and the California Endangered Species Act (ESA), to explain endangered species concerns to contractors and their employees involved in the Proposed Action/Project. The program shall include:
 - a description of the San Joaquin kit fox and its habitat needs;
 - an explanation of the status of the species and its protection under the ESA; and
 - a list of measures being taken to reduce impacts to the species during project construction.

A fact sheet conveying this information should be prepared for distribution to personnel involved with the construction of the Proposed Action/Project.

- Upon completion of the Proposed Action/Project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc., shall be re-

contoured and re-vegetated to the extent necessary to restore the area to pre-project conditions.

- The USFWS and CDFW shall be notified in writing within 24 hours of the discovery of an accidental death or injury to a kit fox. Notification must include the date, time, and location of the incident as well as any other pertinent information.

U.S. Fish and Wildlife Service
Chief of the Division of Endangered Species
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916)414-6620 or (916)414-6600

California Department of Fish and Wildlife
Endangered Species Division
1701 Nimbus Road, Suite A
Rancho Cordova, California 95670
(916)358-2900

- New sightings of the kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and topographic map clearly marked with the location of the observation shall be provided to the USFWS at the address above.

American Badger

Although badger dens were not observed within the study area during the February 2013 field survey, potential denning habitat exists around the Oakes Basin. Construction mortality of badgers is a potentially significant impact of the project under CEQA; however, implementation of the following mitigation measures will reduce any potential impacts to less than significant.

BIO-7 (Pre-construction Surveys): A pre-construction survey for American badgers shall be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use at Oakes Basin. Pre-construction surveys shall cover all suitable non-native grassland habitat within and immediately adjacent to the study area.

BIO-8 (Avoidance): Should an active den be identified during the preconstruction survey, a disturbance-free buffer shall be established around the den and maintained until a qualified biologist has determined that the badger, and cubs if it's a natal den, has dispersed or the den has been abandoned.

Swainson's Hawk, other nesting raptors and migratory birds

Raptors such as the Swainson's hawk, white tailed kite, northern harrier, red-tailed hawk, red-shouldered hawk, American kestrel, and great-horned owl (*Bubo virginianus*) could nest in the Proposed Action/Project vicinity. The study area also provides suitable nesting habitat for migratory bird species, including loggerhead shrike, and colonial breeders such as the red-winged and tricolored blackbirds. Ground-nesting or migratory birds potentially nesting in emergent vegetation within project sites could be injured or killed by ground-disturbing activities or operation of heavy equipment. In addition to direct "take" of nesting birds, Proposed Action/Project construction activities could disturb birds nesting within or adjacent to project sites such that they would abandon their nests. Activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA; however, implementation of the following mitigation measures will reduce any impacts to less than significant.

BIO-9 (Avoidance): In order to avoid impacts to nesting raptors and migratory birds, applicable activities shall occur, where possible, between September 1st and January 31st (outside the nesting season).

BIO-10 (Pre-construction Surveys): If applicable, activities must occur during the nesting season (February 1-August 31), a qualified biologist shall conduct pre-construction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. If no nesting pairs are found within the vicinity of Proposed

Action/Project sites, no further mitigation is required.

BIO-11 (Establish Buffers): Should any active nests be discovered near Proposed Action/Project sites, the biologist shall determine appropriate construction setback distances based on the biology of the affected species. Construction-free buffers shall be identified on the ground with flagging, fencing, or by other easily visible means, and shall be maintained until the biologist has determined that the young have fledged.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Riparian habitat is present along Packwood Creek and Mill Creek adjacent to the Oakes Basin, outside of the Proposed Action/Project area. Individual native trees typically occurring in riparian habitat occur sporadically upstream of the five check dams. These areas contain a mix of mature native (primarily Valley oak) and nonnative trees of varying densities and maturity. Riparian habitat adjacent to the Oakes Basin will not be impacted and is outside of the Proposed Action/Project site; alternatively, with the planting of native trees as proposed, there will be an increase in riparian habitat at Oakes Basin as a result of the Proposed Action/Project. Construction and retrofitting of the check dams as proposed would not require removal of any trees. However, indirect impacts could result if equipment inadvertently causes damage to nearby native riparian trees, which would be considered a significant impact per CEQA. Implementation of the following mitigation measures will reduce any potential impacts to less than significant.



BIO-12 (Avoidance): Where construction areas are within 100 ft. of riparian vegetation, the District shall define the limits of construction and place barriers (i.e. flagging or fencing) between the construction area and the riparian vegetation.

BIO-13 (Employee Education Program): A qualified biologist shall conduct an environmental awareness program for all construction and on-site personnel prior to the start of construction. The training shall include a discussion of riparian vegetation and avoidance measures.

- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Packwood Creek is considered a Water of the U.S. The Proposed Action/Project will result in impacts below the ordinary high water line of Packwood Creek which includes temporary disturbance during construction, as well as permanent impacts from the new and retrofitted check structures. The District will only conduct construction and maintenance activities during the dry period. Based on the U.S. Army Corps unverified delineation and the Section 404 application, approximately 0.20 acres of wetland could be impacted which could be considered potentially significant. Impacts to Waters of the U.S. are also subject to the permit requirements of Section 404 and 401 of the Clean Water Act. The placement of fill within any wetlands or other jurisdictional features will require 1) a Clean Water Act permit from the USACE, and 2) a Water Quality Certification from the RWQCB. These permits cannot be issued without a verified wetland delineation by the USACE. Additionally, impacts to the seasonal drainages may require a Streambed Alteration Agreement from the CDFW. Implementation of the following mitigation measures will reduce any potential impacts to less than significant.

☐☒☐☐

BIO-14 (Minimization): The project shall be designed to minimize impacts to Waters of the U.S. to the maximum extent

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native

☐☐☒☐

resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Proposed Action/Project would not develop land which would lead to threaten or eliminate any animal community or established animal corridor, as the Proposed Action/Project would entirely take place within existing facilities. The Proposed Action/Project would have a less than significant effect on habitat for native wildlife.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Proposed Action/Project is complementary to the existing setting at Packwood Creek and Oakes Basin. The Proposed Action/Project would not conflict with the General Plan of Tulare County or City of Visalia General Plan relevant to natural resources protection. The reseeding and planting of additional vegetation are restorative. The Proposed Action/Project is consistent with both the County and Visalia's General Plan by encouraging habitat protection/re-generation which is supportive to the USFWS's endangered species recovery program.

☐☐☐☒

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Proposed Action/Project is consistent with the District's approved Work Plan for the Habitat Conservation Plan (HCP), which is one of three HCP's instituted or proposed for Tulare County. The principal purposes of the District's HCP and NCCP are to address impacts related to the District's efforts to maintain storm and flood channel capacity and allow for construction of a specific list of construction projects within a 20 year completion horizon. Therefore, the Proposed Action/Project would not conflict with any such plan.

☐☐☐☒

V. CULTURAL RESOURCES

Cultural resources investigations were conducted by Sierra Valley Cultural Planning in 2013 (Brady and Roper 2013). A record search and archival research was conducted along with an in-field survey. The 7 mile segment of Packwood Creek from Oakes Basin to Check 5 was surveyed for cultural resources.

This includes the area of potential effects for the Proposed Action. Packwood Creek was identified as a natural water course that has been culturally modified since the late 1800s to convey water for irrigation and other uses. Three check structures and one culvert were identified in the creek. Brady and Roper (2013) recommended that none of these resources are significant historical resources/historic properties. No archaeological resources were identified. Reclamation initiated consultations under Section 106 of the National Historic Preservation Act on a finding of no historic properties affected.

Would the project:

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

- a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No significant historical resources or historic properties were identified during the cultural resources investigations. Reclamation found no historic properties present, pursuant to 36 CFR §800.4(d)(1), implementing regulations for Section 106 of the National Historic Preservation Act. No impacts to such resources would occur as a result of the Proposed Project/Action.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

No significant archaeological resources were identified during the cultural resources investigations. Reclamation found no historic properties present, pursuant to 36 CFR §800.4(d)(1),

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

implementing regulations for Section 106 of the National Historic Preservation Act. No impacts to archaeological resources would occur as a result of the Proposed Project/Action.

- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The proposed project location is in a disturbed setting and no unique paleontological resources or sites or unique geologic features were identified. No impacts to such resources would occur as a result of the Proposed Project/Action.

☐☐☐☒

- d) Disturb any human remains, including those interred outside of formal cemeteries?

No human remains were identified during the cultural resources surveys and none are likely to be present due to the disturbed setting and location of the proposed project. No impacts to such resources would occur as a result of the Proposed Project/Action.

☐☐☐☒

a-d) No Impact. No significant historical or archaeological resources, unique paleontological resources or sites, or unique geological features, or human remains were identified within the proposed area of potential effects. Therefore, the Proposed Action would have no impact to these resource types.

Cumulative Effects

Since the proposed project will have no impacts to cultural resources (including historical resources, archaeological resources, or historic properties), paleontological resources, or human remains, this project will not contribute to cumulative effects to significant cultural resources.

VI. GEOLOGY AND SOILS**Would the project:**

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

According to Table 4 in Special Publications 42, prepared by the California Divisions of Mines and Geology, the nearest earthquake fault zones are Southern Sierra Nevada Fault located approximately 40 miles east of the propose Action/Project sites and the Nunez Fault Zone located approximately 66 miles west of the Proposed Action/Project sites. As this Project does not involve the construction of new facilities for the general public to utilize; the risk to people or structures by earthquake, ground shaking, ground failure, liquefaction or landslides is negligible and would be considered less than significant. Further, the portion of the County of Tulare in which the Proposed Action/Project is located is not listed in said table as an area to be affected by earthquake fault zones. Any impacts would be less than significant.

- ii) Strong seismic ground shaking?

See remarks under IV-a.i.

- iii) Seismic-related ground failure, including liquefaction?

See remarks under IV-a.i.

- iv) Landslides?

See remarks under IV-a.i.

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- b) Result in substantial soil erosion or the loss of topsoil?

No land conversion would result in soil erosion or loss of topsoil. The Proposed Action/Project includes a habitat rehabilitation component planned for the Oakes Basin area as well as the construction of four new check structures and the retrofitting of an existing check structure within Packwood Creek. The habitat rehabilitation will help minimize soil erosion from occurring at the Oakes Basing area, further reducing any potential impacts. Any impacts would be less than significant.

☐ ☐ ☒ ☐

- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

The Proposed Action/Project area is located on ground that is stable. The slope of the land through the various project sites are fairly mild with an approximately 0-2 percent slope, as seen in Appendix C. Potential occurrence of on-or-off site landslide, lateral spreading, subsidence, liquefaction or collapse is anticipated less than significant.

☐ ☐ ☒ ☐

- d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial risks to life or property?

The Proposed Action/Project does not include the construction of livable structures or residential dwelling units. Therefore the Proposed Action/Project will not create substantial risk to life or property.

☐ ☐ ☐ ☒

- e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The Proposed Action/Project does include the installation of septic tanks or wastewater disposal systems that are an alternative to septic tanks.

☐ ☐ ☐ ☒

There would be no impact.

VII GREENHOUSE GAS EMISSIONS

Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The Proposed Action/Project is estimated to generate 27.99 metric tons of Carbon Dioxide equivalent, as seen in Appendix E, which is well below the 25,000 metric tons action threshold for greenhouse gas emissions. The impact is less than significant.

- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Proposed Action/Project would not conflict with any applicable plan, policy or regulation adopted for reducing the emissions of greenhouse gases, because the Proposed Action/Project is estimated to generate emissions well below the metric tons action threshold of 25,000. Any potential impact would be less than significant.

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The Proposed Action/Project would not involve the management of hazardous materials, transport, use, or dispose hazardous materials. No impacts would occur on this resource.

- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

The operation of the Proposed Action/Project would not generate, require use, or involve the management of any hazardous materials. There would be no impact.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The Proposed Action/Project will not emit hazardous emissions or handle hazardous materials or produce hazardous waste within one-quarter mile of a school or planned school facility. There are no identified hazardous material sites located within one quarter mile area from the Proposed Action/Project site. There are no recorded hazardous material sites located within the Proposed Action/Project area. There would be no impact.

☐☐☐☒

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The Proposed Action/Project site is not a registered hazardous materials site. The site is not listed on the "Cortese list." The Proposed Action/Project will not emit hazardous emissions or handle hazardous materials or produce hazardous waste within one-quarter mile distance of a school or planned school facility.

There are 10 hazardous material sites located within a two mile area from the Project sites. The sites identified by CDTSC are listed as follows: Former Lamoure's Cleaners (60001055), Parisian Dry Cleaners (60000243), Pole Storage Area (Visalia Pole Yard) (54490020), Visalia Civic Center Brownfields (60000965), Country Club Cleaners (60001054), Lamoure's Mooney (60001052), Miller's Cleaners (60001050), Former Village Cleaners (60001053), Mission Uniform (60000969), 19-Acre Elementary (54010014). There are no recorded hazardous material sites located within the Proposed Action/Project area. There would be no impact.

☐☐☐☒

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

☐ ☐ ☐ ☒

The Proposed Action/Project site (Check structure 5) is located approximately 4.5 miles southeast from the closest public airport (Visalia Municipal Airport). There would be no impact.

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

☐ ☐ ☐ ☒

A review of an aerial map dated August 30, 2013, indicated no private air strips within the vicinity of the Proposed Action/Project area. There would be no impact.

- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

☐ ☐ ☐ ☒

There are no emergency response plans which involve the Proposed Action/Project site. There would be no impact.

- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

☐ ☐ ☒ ☐

The Proposed Action/Project site exists completely within the Packwood Creek channel and the existing Oakes Basin. The sites and basin are regularly managed and maintained by the District and are not considered to be wildland areas. Any impact would be less than significant.

IX. HYDROLOGY AND WATER QUALITY**Would the project:**

- a) Violate any water quality standards or waste discharge requirements?

The construction and operation of the Proposed Action/Project area is subject to water quality standards based on Clean Water Act Section 401 and Section 402 requirements. Due to the distance between Project components, a Storm Water Pollution Prevention Plan (SWPPP) will not be required, however the following California Stormwater Best Management Practices (BMPs) will be implemented as part of the proposed Project:

- EC-1 Scheduling
- EC-2 Preservation of Existing Vegetation
- WE-1 Wind Erosion Control
- TC-1, 2 and 3 Tracking Control
- NS-6 Illicit Discharge/Connection
- NS-8, 9, and 10 Vehicle/Equipment Cleaning, Fueling & Maintenance
- WM 1-10 Waste Management & Materials Pollution Control

Detailed descriptions of each of these BMPs are included as a part of Appendix F. As the Proposed Action/Project will be in compliance with the above regulations and requirements, any impacts are less than significant.

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

The purpose of the Proposed Action/Project facilities is to recharge groundwater that the District is currently unable to recharge. The Proposed Action/Project would recharge an approximate 1,465 AF annually, while the proposed well to be installed at Oakes Basin would draw approximately

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

☐☐☒☐☐☐☒☐

30 AF annually. As such, the net anticipated annual recharge would be 1,435 AF, which would assist in improving reclamation, increase production rates in local wells and increase the local groundwater table. Any impacts to the underlying groundwater supply would be less than significant.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

To allow for increased groundwater recharge, the Proposed Action/Project would increase the volume of water directed to Oakes Basin and Packwood Creek during non-flood periods. The addition of the check structures within Packwood Creek would increase water recharge capabilities by pooling waters within Packwood Creek, facilitating passive recharge. Alteration of the course of Packwood Creek or waters running from the Oakes Basin site into Packwood Creek would not occur, as the check structures would be placed within the existing Creek. In addition, damaging storm and/or flood waters would be detained on site, to the extent of available capacity, where a portion of such detained flows would percolate to useable groundwater. The remaining detained supply would be released when either damage is occurring due to the continued detention, or sufficient downstream channel capacity exists to allow for non-damaging passage of such retained volumes.



In the case of the Oakes Basin, annual rainfall quantities total less than ten inches. The rainfall amounts normally percolate into the soil, which would continue to occur post Proposed Action/Project. No substantial site drainage pattern changes would result from either the proposed construction or operation of the Proposed Action/Project. Any potential impacts would be less than significant.

- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?



Please see the response to Impact IX-c.

- e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

☐ ☐ ☒ ☐

See remarks under IX-c.

- f) Otherwise substantially degrade water quality?

The Proposed Action/Project, whether during or following construction, would not lead to degraded water quality. Compliance with SWPPP conditions, Streambed Alteration Permit conditions and USACE 404 Permit conditions would avoid any adverse water quality discharge events. The impact would be less than significant.

☐ ☐ ☒ ☐

- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

☐ ☐ ☐ ☒

The Proposed Action/Project does not propose the construction of any residential dwelling units. Therefore, no impacts would occur as a result of the Proposed Action/Project implementation.

- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

The check structures proposed to be constructed within the existing Packwood Creek channel would allow for all flows to pass safely. The design of the structures would allow for this to take place through the installation of overshot gates, which would allow water flow and any trash to bypass through the control structure. The design of the control structures "Langemann Gate" and "Hydra- Lopac Gate" was completed with a safety factor to allow for the passage of all flows, including any trash that may be conveyed, as well as, improve trash management abilities. When the overshot gates are in the full "down" position, no interference with either the passage of water or trash exists, the depth

☐ ☐ ☒ ☐

of water through the structure zone would be the same as if the structure and gates had not been constructed. Conversely, in the full “up” position, water builds up behind the gate to an elevation where water coming through the channel passes over the gates, except for that portion percolating to groundwater. Any impacts would be less than significant.

- i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The Proposed Action/Project/will take place within the established Packwood Creek channel. The structures are designed to not restrict Packwood Creek flows when not in operation. The purpose of the structures is to pond water in the Creek outside of the rainy season. Operation of the structures for recharge will happen in wet years after the rain season has passed. As such, the Proposed Action/Project/will not increase the exposure of potential flood waters to people or structures during a levee or dam failure event. There would be no impact.

☐☐☐☒

- j) Inundation by seiche, tsunami, or mudflow?

The Proposed Action/Project area is located over 125 miles east of the Pacific Ocean and is not subject to inundation by tsunami. The existing creek, which would convey waters to the Proposed Project/Action area is not an enclosed body of water, which indicates that inundation by seiche would not occur. The Proposed Action/Project area is not located in an area where mud flows occur. There would be no impact.

☐☐☐☒

X. LAND USE AND PLANNING

Would the project:

- a) Physically divide an established community?

The entirety of the Proposed Action/Project area takes place within the existing Packwood Creek alignment as well as on the existing Oakes Basin. The creek’s pathway runs through County lands and through various City of Visalia properties. The

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

☐☐☐☒

Proposed Action/Project would be introduced at specific locations, as illustrated in Figure 3. The Proposed Action/Project does not propose to divide an established community. Therefore, no impact would occur as a result of Proposed Action/Project implementation.

- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

☐☐☐☒

The Proposed Action/Project is consistent with the General Plan Policies of the District, Tulare County, and City of Visalia. There would be no impact.

- c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

The Proposed Action/Project is consistent with the District's Habitat Conservation Plan (HCP). There is a HCP under development and is one of three HCP's instituted or proposed for Tulare County. There would be no impact.

☐☐☐☒

XI. MINERAL RESOURCES

Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The Proposed Action/Project site is not a site which is designated by the State Department of Mines and Geology as a site with known rock and sand resources and requiring protection from development. The Proposed Action/Project does not bring about the loss of any known mineral resources, nor does it result in the loss of access to known mineral resources of value to the region or such a designation as such to be applied to the site at some point in the future. There would be no impact.

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

☐☐☐☒

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The Proposed Action/Project does not result in the loss of a locally-important mineral resource recovery site which has been designated as such by an applicable agency of jurisdiction. Such designation has not been conferred on the site and the Proposed Action/Project does not restrict access to the site for any purpose in the future. There would be no impact.

☐☐☐☒

XII. NOISE

Would the project:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Upon completion, the Proposed Action/Project will not create any adverse noise that would negatively affect the environment. The County of Tulare and City of Visalia Noise Element does not, however, identify short-term, construction noise level thresholds. They do not limit noise generating activities such as construction to hours of normal business operation unless specific approval is given. The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA and NEPA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they will not accept for permanent noise sources. A more severe approach will be impractical and might preclude the kind of construction activities that are to be expected from time to time in urban and agricultural environments. Construction activities will be restricted to daytime hours and will be short-term in nature, the impact will be less than significant.

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

☐☐☒☐

- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random or continuous. The approximate threshold of vibration perception is 65 vibration decibels (VdB), while 85 VdB is the vibration acceptable only if there are an infrequent number of events per day³. A typical small bulldozer emits approximately 58 VdB at a distance of 25 feet⁴. Vibration from construction activities will be temporary and not exceed the FTA threshold for the nearest residence. The impact will be less than significant.

☐ ☐ ☒ ☐

- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

☐ ☐ ☒ ☐

See remarks under XII-a.

- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

☐ ☐ ☒ ☐

See remarks under XII-a.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

☐ ☐ ☐ ☒

The Proposed Action/Project area is located greater than two miles from a public airport (Visalia Municipal Airport) and as such, there would be no impact resulting from this analysis area.

³ U.S. Department of Transportation, Federal Transit Administration. The Noise and Vibration Impact Assessment. May 2006.

⁴ U.S. Department of Transportation, Federal Transit Administration. The Noise and Vibration Impact Assessment. May 2006.

- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

☐ ☐ ☐ ☒

See remarks under XII-e.

XIII. POPULATION AND HOUSING

Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Proposed Action/Project scope of work would neither directly or indirectly substantially induce population growth to the area as a result of Proposed Action/Project implementation. There is no construction of residential units associated with the Proposed Action/Project and the purpose of the Proposed Action/Project is to replenish groundwater resources that would otherwise be lost. There is no impact.

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

☐ ☐ ☐ ☒

- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The entirety of the Proposed Action/Project area takes place within the existing Oakes Basin and along the alignment of the existing Packwood Creek. No residential units will be displaced as a result of Proposed Action/Project implementation. There is no impact.

☐ ☐ ☐ ☒

- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

☐ ☐ ☐ ☒

See remarks for XII-b.

XIV. PUBLIC SERVICES**Would the project:**

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

The Proposed Project/Action would have no impact to this impact analysis area as the construction of check structures within an existing water channel and landscaping activities at an existing recharge basin will not require additional governmental services. There is no impact.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Fire protection?				
<u>See remarks under XIV-a.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?				
<u>See remarks under XIV-a.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?				
<u>See remarks under XIV-a.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?				
<u>See remarks under XIV-a.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?				
<u>See remarks under XIV-a.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XV. RECREATION**Would the project:**

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Natural and man-made creeks, canals, and ditches are abundant in the Central Valley as integral to supporting the agronomic economy as surface water sources for irrigation and augmenting groundwater sources. The Proposed Action/Project plans to allow for extended duration and periodic/seasonal rise of water levels and water flow carried in Packwood Creek to enhance groundwater recharge capabilities. As such, it is possible the higher water level or longer duration of water flow in the creek could attract greater use of the existing public parks along Packwood Creek, but there is no accurate way to quantify, without unnecessary speculation or with any certainty, what that increase in park utilization might be, and whether such increase would have a direct result in substantial physical deterioration or an acceleration of deterioration of the park facility. Further, even though these waterways traverse through city/county public parks and are perceived as a park "amenity" they are not considered part of the park "ownership" and are not, therefore, a feature available for active recreation such as swimming, boating, rafting, or even fishing. Commonly these uses are expressly discouraged and in some instances prohibited. Therefore, impacts are considered to be less than significant.

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The Proposed Action/Project does not propose or intend to include recreational facilities. There is no impact.

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVI. TRANSPORTATION/TRAFFIC**Would the project:**

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Construction activities would be performed at the Proposed Action/Project site which is an existing creek alignment and recharge basin and would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness. The Proposed Action/Project does not involve construction or land alteration that would have the potential to impact transportation, create additional traffic, or affect any established emergency access routes, as check structure construction will occur in the established Packwood Creek and the proposed landscaping improvements would occur within and around Oakes Basin. There would be no increase in aircraft transportation as a result of the Proposed Action/Project and it would not conflict with any adopted transportation management plan. There would be no impact to this resource category as a result of this Proposed Action/Project.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

All construction activities would be performed at the Proposed Action/Project site or in accordance with approved encroachment permit conditions and would not conflict with an applicable congestion management program. There will be no impact.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

The Proposed Action/Project site is located approximately 4.5 miles southeast from the closest airport (Visalia Municipal Airport) and would not result in a change in air traffic patterns. There will be no impact.

☐ ☐ ☐ ☒

- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Proposed Action/Project design does not feature substantial hazardous features nor proposes incompatible uses. Construction activities will take place on an existing recharge basin as well as along the alignment of an existing creek channel. There is no impact.

☐ ☐ ☐ ☒

- e) Result in inadequate emergency access?

The Proposed Action/Project would not result in the alteration of existing access points into Packwood Creek or at Oakes Basin. Therefore, emergency access points at both locations will continue to provide adequate emergency accessibility. There is no impact.

☐ ☐ ☐ ☒

- f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The Proposed Action/Project would take place completely within the existing alignment of Packwood Creek, with the exception of plantings immediately surrounding Oakes Basin. The Proposed Action/Project would not conflict with any adopted policies, plans or programs. There is no impact.

☐ ☐ ☐ ☒

XVII. UTILITIES AND SERVICE SYSTEMS**Would the project:**

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No impacts would result associated with this item due to Proposed Action/Project implementation.

- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

The Proposed Action/Project will not result in additional generation of water or wastewater that requires treatment. There is no impact.

- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

The Proposed Action/Project will not alter the existing drainage patterns of the site. As such, there will be no impact.

- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The District holds existing Kaweah River water rights with related entitlements and is a Long-Term Contractor through Reclamation's Central Valley Project – Friant Division. The District will have sufficient water supplies available to serve the Proposed Action/Project through these entitlements.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

- e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

☐ ☐ ☐ ☒

See XVII-b.

- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

☐ ☐ ☐ ☒

The Proposed Action/Project would not generate any solid waste. There would be no impact.

- g) Comply with federal, state, and local statutes and regulations related to solid waste?

The Proposed Action/Project operations would not generate any solid waste other than that which is construction related. The selected general contractor will be required to properly manage and implement specifications created for construction solid waste disposal associated with the Proposed Action/Project. There is no impact.

☐ ☐ ☐ ☒

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

☐ ☐ ☒ ☐

The Proposed Action/Project is a water management action for Packwood Creek, as well as a habitat enhancement action for Oakes Basin. As such, the purpose of the Proposed Action/Project is to enhance habitats leading to species maintenance and offering enhanced water recovery opportunities over

those which currently exist. The Proposed Action/Project will promote: water conservation, groundwater recharge, water reliability, water management, increase energy efficiency at nearby wells, wildlife habitat enhancements, and water marketing. Any short-term species related impacts which might occur during construction would be designed to be mitigated to a less than significant level based on Proposed Action/Project construction specification requirements.

The analysis conducted in this EA/IS results in a determination that the Proposed Action/Project will have a less than significant effect on the existing local environment. The Proposed Action/Project would involve no potential for significant impacts through the degradation of the quality of the environments, the reduction in the habitat or population of fish or wildlife, including endangered plants or animals, the elimination of a plant or animal community or example of a major period of California history or prehistory. The Proposed Action/Project will not contribute to any cumulatively considerable impacts to the environment, nor will it result in substantial adverse effects to human beings, either directly or indirectly. Any impacts would be less than significant.

Refer to Appendix A for the CEQA Environmental Checklist and proposed adoption of a Mitigated Negative Declaration.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The Proposed Action/Project is not part of a tiered or serial project. There are no elements of other projects which rely on the completion of the subject Proposed Action/Project. Therefore, the individual issues and their described potential impacts do not have other project(s) issues and related impacts which need to be collectively analyzed. As for the individual Proposed Action/Project impacts, there are no cumulative, collective assemblages of



impacts which exceed the “less than significant impact” level. The effort to group Proposed Action/Project issues together to accomplish the cumulative impacts perspective, in fact, leads to the conclusion that the Proposed Action/Project has net positive cumulative effects, particularly as they apply to recharge of groundwater and additions to and enhancement of available habitat. Any negative impacts would be less than significant.

- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The Proposed Action/Project objectives are such that, when implemented, they have the potential to provide a net positive gain on the environment and, therefore, on the human population. No adverse effects on the human population have been identified as being associated with the Proposed Action/Project other than short-term potential construction related impacts which have had specific mitigation measures developed to reduce potential impacts to a less than significant level.



Section 4 Consultation and Coordination

4.1 Public Review Period

The Environmental Assessment/Initial Study (EA/IS) will be available for a not less than thirty (30) day period from March 17, 2014 to April 18, 2014.

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

Section 7 of the Endangered Species Act requires Federal agencies to ensure that discretionary federal actions do not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of the critical habitat of these species. This consultation would be concluded prior to completing NEPA.

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 initiated NHPA Section 106 consultation with the California State Historic Preservation Officer on a finding of “no adverse effects to historic properties 36 CFR §800.5(b).

4.4 Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.)

The Oakes Basin site and Packwood Creek have been determined to not be utilized by migratory birds as defined by the MBTA. It is likely, however, that when water is present on the site for recharge purposes, waterfowl and possibly shore birds covered by provisions of the MBTA would utilize the site to forage.

4.5 Executive Order 11988 – Floodplain Management and Executive Order 11990 – Protection of Wetlands

Executive Order 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The Proposed Action/Project would not alter any existing drainage pattern in the area, create additional runoff, or otherwise degrade water quality and thus would not affect floodplains or wetlands.

4.6 Clean Water Act (33 U.S.C. § 1251 et seq.)

Section 401

The sources of water which could be discharged into Packwood Creek or at Oakes Basin from the site at post Proposed Action/Project condition are the same as the sources which currently exist. Runoff from the site would have the same source, which is rainfall, in both pre and post Proposed Action/Project conditions. Likewise, no new source(s) of pollution are introduced to the site as a result of the Proposed Action/Project. Discharge of any water detained as a result of the operation of the Packwood Creek structure would be of the identical quality to the same water which would have otherwise flowed downstream from the Oakes Basin site if not detained for flood water management purposes. There are no additional activities or exposures to waters associated with the Oakes Basin site which are as a result of the operation of the features constructed as a part of the Proposed Action/Project.

Section 404

The District has instructed the preparation of a draft section 404 permit application which would be completed and submitted following the completion of the NEPA/CEQA process being addressed by this EA/IS. The District acknowledges that no construction involving Packwood Creek would be initiated prior to a 404 permit being issued.

Section 5 References

California Department of Substances Control. "*Defining Hazardous Waste*." DTSC.ca.gov, 09 Feb 2007. Web. 4 January 2014.

<http://www.dtsc.ca.gov/HazardousWaste/upload/HWMP_DefiningHW111.pdf>.

City of Visalia, Ca. "*Visalia Interactive Map-General Plan Diagram & Zoning*", Web. 4 January 2014, <<http://204.155.47.66:8080/silverlightviewer/viewer.html?Viewer=Public>>

County of Tulare, CA. "*Tulare County General Plan 2030 Update, Recirculated Draft EIR SCH#2006041162*". February 2010. Print.

<<http://generalplan.co.tulare.ca.us/documents/generalplan2010/RecirculatedDraftEIR.pdf>>

Environ International Corporation and the California Air Districts, California Emissions Estimator Model." *CalEEMod User's Guide Version 2013.2*". California Air Pollution Control Officers Association, Web. 14 October 2013. <<http://www.caleemod.com/>>.

Federal Emergency Management Agency, On-line Map Service Center, "*Flood Insurance Rate Map ID #06107C0955E*" 16 June 2009. Web. 23 November 2013

<<https://msc.fema.gov/webapp/wcs/stores/servlet/QuickOrderResultView>>

Kaweah Delta Water Conservation District. "*Home Page – About Us*", Kaweah Delta Water Conservation District, n.d. Web. January 2014. <http://www.kdwcd.com/kdwcdweb_003.htm>

Moss, Richard, and Randy Hopkins. "*Packwood and Cameron Creek Pool and Basin Reconnaissance Study*". Provost & Pritchard Consulting Group, August 2010. Print

Pearson , Austin, Wendy Fisher, and Rebekah Jensen. "*Packwood Creek Water Conservation Project Kaweah Delta Water Conservation District PN 1708-01*". May 2013.

Provost & Pritchard Consulting Group. "*Basis of Design Report for Packwood Creek Control Structures*". Provost & Pritchard Consulting Group, November 2012. Print.

Reich, Shaun, and Stephen Plauson. "*Geotechnical Investigation Report, Proposed Packwood Creek Check Structures N/O Highway 198 to S/O Caldwell Avenue- Visalia, CA*". Technicon Engineering Services, Inc. April 2013. Print.

United States Census Bureau, "*2010 Census of Population and Housing*", Demographic Profile Summary File: Technical Documentation, 2011. Print.
<<http://www.census.gov/prod/cen2010/doc/dpsf.pdf>>

United States Department of Agriculture, Natural Resources Conservation Services. "*Web Soil Survey*". United States Department of Agriculture. Web. January 2014.
<<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>>.

United States Environmental Protection Agency. "*Climate Change Science*". U.S. EPA, 09 Sep 2013. Web. 4 Mar 2014. <<http://www.epa.gov/climatechange/science/index.html>>.

United States, The White House. Presidential Documents. "*Executive Order 13007, Indian Sacred Sites*". 1996. Print. <<http://www.gpo.gov/fdsys/pkg/FR-1996-05-29/pdf/96-13597.pdf>>.