RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Tulare Irrigation District Plum Basin Project – Phase I

EA-09-77

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

January 2010

Mission Statements

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

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

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List of Acronyms and Abbreviations

APE	area of potential effects
CDFG	California Department of Fish and Game
CFR	Code of Federal regulations
Challenge Grant	Water for America Challenge Grant
CH_4	methane
cm	centimeters
CNDDB	California Natural Diversity Data Base
CO_2	carbon dioxide
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ft	feet
GHG	greenhouse gases
IS	Initial Study
ITA	Indian Trust Assets
MBTA	Migratory Bird Treaty Act
M&I	municipal and industrial
MND	Mitigated Negative Declaration
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PM_{10}	particulate matter less than 10 microns in diameter
Reclamation	U.S. Bureau of Reclamation
RGRCP	rubber-gasketed reinforced concrete pipeline
RSO	RSO Consulting
SCADA	Supervisory Control and Data Acquisition
SHPO	State Historic Preservation Officer
State	State of California
TID	Tulare Irrigation District
U.S.	United States
USFWS	U.S. Fish and Wildlife Service

Section 1 Purpose and Need for Action

1.1 Background

In January 2008, Tulare Irrigation District (TID) purchased 154-acres of property consisting of plum orchards and fallowed ground. In a joint-effort with the City of Tulare, TID prepared an Initial Study (IS) and finalized a Mitigated Negative Declaration (MND) in January 2009 to analyze the environmental impacts of converting the 154 acres of property into a three-cell recharge/regulation basin (Plum Basin Project), and is hereby incorporated by reference (TID 2009). About this same time, TID applied to the Bureau of Reclamation (Reclamation) for a Water for America Challenge Grant (Challenge Grant) and was selected as a potential recipient for federal funds to help develop one of three cells of the Plum Basin Project.

1.2 Purpose and Need

The purpose of the Plum Basin Project is to enhance water supply reliability in TID and the City of Tulare in order help meet existing and future water needs during periods when water supplies fall short. The Plum Basin Project will regulate water supplies and enhance flexibility in TID's water distribution system by reducing water spillage due to fluctuations in irrigation cycles. In addition, the project aims to reduce the rate of groundwater overdraft by recharging the aquifer underlying TID and the City of Tulare, conserve local water resources, and encourage conjunctive use.

1.3 Scope

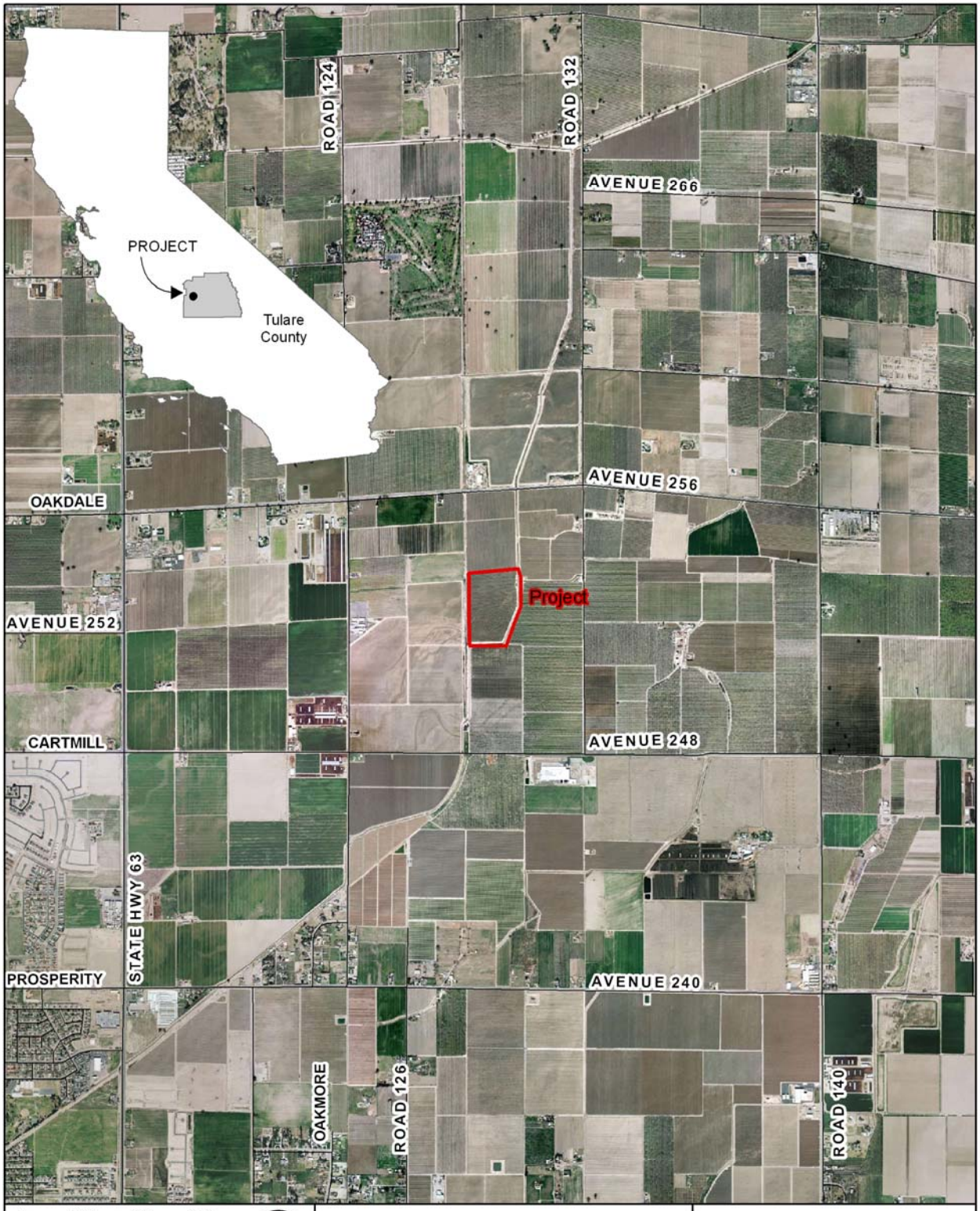
Reclamation's approval is limited to the appropriations of grant money, which is administrative in nature; however, the grant money would be used to partially fund the construction of the Proposed Action and is the focus of this Environmental Assessment (EA). Therefore, this EA is being prepared to analyze the construction and operation of a 37-acre recharge/regulation basin. The project area is located within Tulare County, California (Figure 1) in Section 29, Township 19 South, Range 25 East, Mount Diablo Basin & Meridian.

This EA has also been prepared to examine potential impacts to the affected environment associated with the No Action Alternative.

1.4 Potential Issues

The IS/MND for the Plum Basin Project evaluated impacts to numerous resources for the larger 154-acre project, which includes the Proposed Action, and found that there would be less than significant impacts to the following: aesthetics; air quality; geology/soils; noise; hydrology/water quality; transportation/traffic; and agricultural, biological and cultural resources (Appendix A).

As a result, this EA will only analyze potential and cumulative impacts to the following: Indian Trust Assets (ITA); environmental justice; global climate change; and biological, cultural and socioeconomic resources (CEQ Section 1500.4).



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PROJECT LOCATION

FIGURE 1

Section 2 Alternatives Including Proposed Action

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

Absent federal funding assistance, the project to construct recharge and recovery facilities would, at a minimum, be delayed. It is TID's intent to eventually construct and operate the project; however, the timing would be speculative. Further, there is always the chance that the project would never be built. The No Action Alternative could then have two possible scenarios: A) no change from existing conditions as the project would not be built; or B) no change from existing conditions for at least a period of time, where the length of time is unknown, after which the project would be built as described in Section 2.2 below and the impacts analyzed in Section 3 of this EA would be realized. In addition, TID prepared and completed an IS/MND for the overall project prior to applying for a Challenge Grant, which analyzed the environmental impacts of constructing and operating the Plum Basin Project. Any other subsequent actions caused by scenario B of the No Action Alternative not already covered under Section 2.2 of this EA or TID's IS/MND is speculative at best, is outside the scope of this EA, and may require additional environmental analysis. As a result, scenario A of the No Action Alternative will be analyzed from this point forward in order to reduce repeating information since scenario B mirrors the Proposed Action (but at a later date).

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not award a Challenge Grant to TID that would help fund the construction and operation of a 37-acre recharge/regulation basin. The property would continue to be fallowed ground and conditions would remain the same.

2.2 Proposed Action

Reclamation proposes to award TID with a Challenge Grant for the development of Phase I of the Plum Basin Project (Proposed Action). The Proposed Action would include converting 37 acres of fallowed ground into a basin (cell #1) with groundwater recharge and surface water regulating capabilities. Construction would also include inlet/outlet structures between the basin and TID's Main Canal (refer to Figure 2 for site plans of main construction features):

The 37-acres of fallowed ground would be excavated approximately 6 feet (ft) deep and the excavated materials would be used to build 6-ft tall levees around the cell. The inner levee berm would be at a 6:1 slope and the outer levee berm would be at a 2:1 slope. The top of the levee would be about 15 ft wide for vehicle access and the bottom width of the levee would be approximately 63 ft. An estimated 266,610 cubic-yards of cut and 39,374 cubic-yards of fill material would be involved in the construction of the first cell. Any excess excavated material

would be stockpiled immediately north of this cell for future use of constructing the levees for the remaining two cells.

A new turnout structure would be constructed from TID's Main Canal to the cell. The structure would be roughly 6 ft tall, 6 ft wide and 6 ft long, and require approximately 3 cubic-yards of concrete. The turnout structure would be outfitted with a control gate, a totalizing flowmeter, level sensors at each end, a Supervisory Control and Data Acquisition (SCADA) monitoring unit that can be remotely monitored through TID's existing SCADA system, and a screened outlet to minimize erosion on the cell side. A 36-inch diameter, 140 linear ft long rubber-gasketed reinforced concrete pipe (RGRCP) would be installed to convey water from the Main Canal into the cell. A new, concrete outlet structure would be built to move water from the cell into the Main Canal for surface water regulation. The outlet structure would be built similar to the turnout structure in size and footprint. The outlet structure would be outfitted with a control gate and a totalizing flowmeter and would convey water through a RGRCP. The estimated excavation required for each structure is 22 ft wide, 16 ft long, and 8 ft deep. Excavation for the RGRCP would vary from 6 to 18 ft deep.

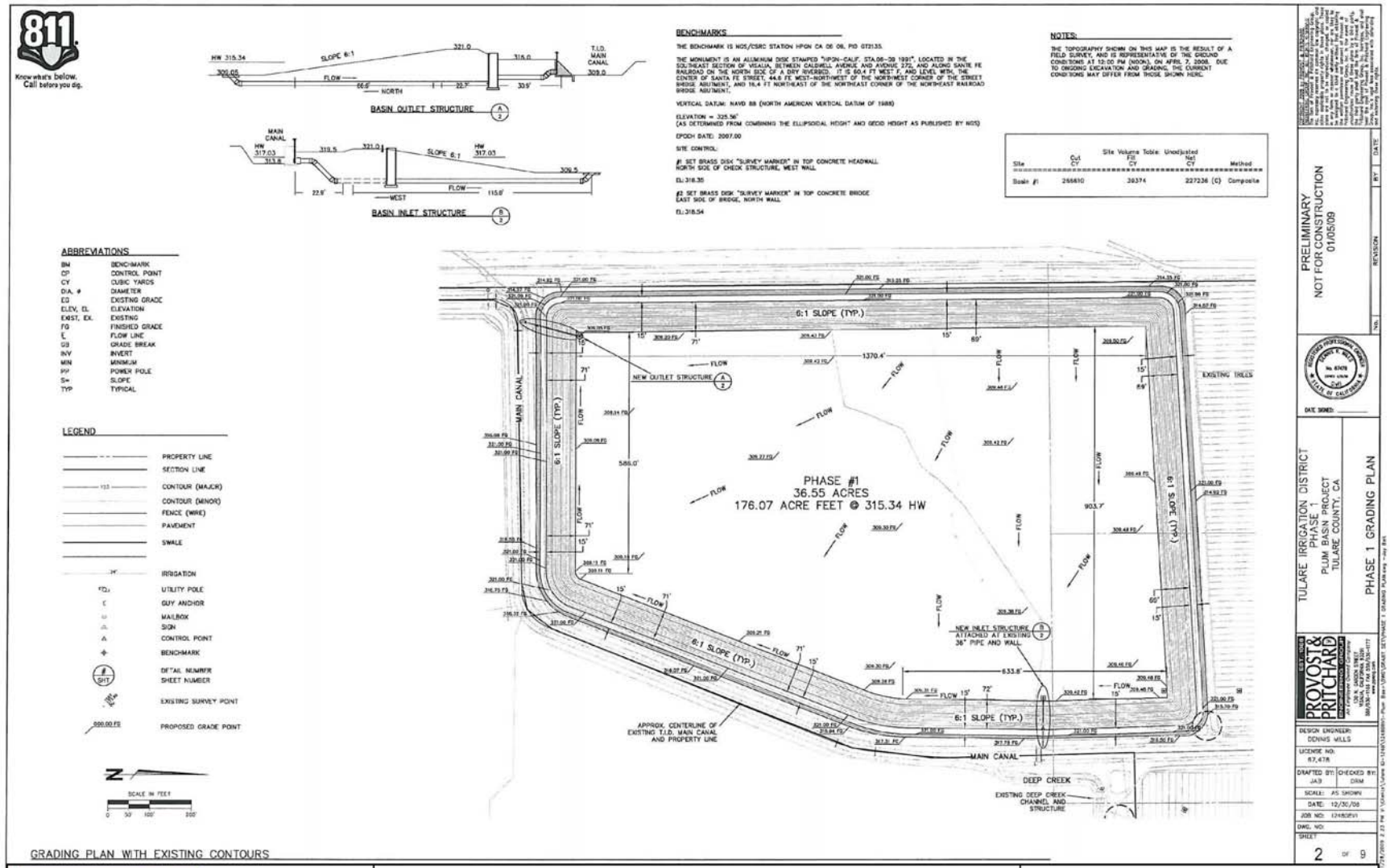
Equipment required to perform the construction include: long-boom excavators, backhoes, cranes, graders, scrapers, haulers, concrete trucks, water trucks, dump trucks, and pumper trucks. Construction would begin as soon as permitted and is anticipated to be completed by November 2010.

2.2.1 Environmental Protection Measures

TID would implement the following environmental protection measures to reduce environmental consequences associated with the Proposed Action (Table 1). Environmental consequences for resource areas assume the measures specified would be fully implemented.

Table 1. Environmental Protection Measures

Resource	Protection Measure
Biological Resources	United States Fish and Wildlife Service (USFWS) approved pre-construction protocol level surveys for San Joaquin kit fox shall be conducted no fewer than 14 days and no more than 30 days prior to the onset of any ground-disturbing activity (USFWS 1999). TID shall follow Standardized Recommendations for Protection of the San Joaquin kit fox prior to and during ground disturbance (USFWS 1999).
Biological Resources	If activities take place during avian nesting season (March 1 - August 1), a qualified biologist will conduct nest surveys within a 500-ft radius of the construction site, with an emphasis on Swainson's hawks (*Buteo swainsoni*) (USFWS 1994). Appropriate measures shall be determined in consultation with the California Department of Fish and Game (CDFG) in the event an active nest is located in an area subject to disturbance. No restrictions are required for construction activities that occur during the non-breeding season (August 1 through February 28) or after the young have fledged.
Air Quality	Regulation VII Control Measures for Construction Emissions of PM_{10} shall be implemented to minimize/suppress the fugitive dust emissions during construction (see Table 2 in TID IS/MND).



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Site Plan

Figure 2

Section 3 Affected Environment & Environmental Consequences

This section identifies the potentially affected environment and the environmental consequences involved with the Proposed Action and the No Action Alternative, in addition to environmental trends and conditions that currently exist.

3.1 Biological Resources

3.1.1 Affected Environment

The Proposed Action area used to contain plum orchards which were fallowed in November 2007 and has been actively disked for weed control (D. Mills, pers. comm., Provost & Pritchard Engineering Group, Inc. Visalia, CA).

Reclamation requested an official species list from USFWS via the Sacramento Field Office's website: http://www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm on February 10, 2010. The list is for the following USGS 7½ minute quadrangles: Cairns Corner, Tulare, Paige, Exeter, Goshen, and Visalia (document number: 100210110402). Reclamation further queried the California Natural Diversity Database (CNDDB) for records of protected species within 10 miles of the project location (CNDDB 2010). This information, in addition to other information within Reclamation's files, was compiled into a table and can be found in Appendix C.

Critical Habitat The Proposed Action does not fall within designated or proposed critical habitat for any of the federal listed wildlife species identified by the USFWS.

Swainson's hawk This species is a federal species of concern and protected under the federal Migratory Bird Treaty Act (MBTA). Swainson's hawk are found in the grasslands and agricultural lands of California's Central Valley during the spring and summer. They exhibit a high degree of nest site fidelity and nests are constructed in trees, and include Fremont cottonwood (*Populus fremontia*), willow (*Salix* spp.), Valley Oak (*Quercus lobata*), and eucalyptus (*Eucalyptus* spp.) (Bloom 1980). The nesting season for Swainson's hawk occurs from March 1 through September 15. This species spends large amounts of time soaring over grasslands and agricultural fields in the Central Valley and can travel up to 29 kilometers to forage for prey (Estep 1989). Swainson's hawks will forage for prey in row crops (Estep 1989) on small mammals, insects, and birds.

CNDDB-recorded occurrences indicate Swainson's hawk occur within a 10 mile radius of the project area (CNDDB 2010). There are three records; with the nearest report of a nest located in an oak tree approximately 5 miles southwest of the project area. Six miles southwest of the project area, a Swainson's hawk pair presumed to be nesting in Fremont cottonwood tree next to alfalfa fields was reported. The third report is of a nesting site with an adult pair and one juvenile in a large valley oak located just over 6 miles to the southwest of the project area.

San Joaquin kit fox The San Joaquin kit fox is federally listed as an endangered species. Critical habitat for this species has not yet been designated. Their diet varies based on prey

availability, and includes small to mid-sized mammals, ground-nesting birds, and insects. Kit foxes excavate their own dens, other animals, and human-made structures (culverts, abandoned pipelines, and banks in sumps or roadbeds).

San Joaquin kit fox currently inhabit western and southern San Joaquin valley in grassland and scrubland communities. In Tulare County, kit foxes will inhabit irrigated agriculture (orchards and alfalfa) and urban development (USFWS 1998, Warrick et al. 2007). There are several CNDDB-recorded occurrences of San Joaquin kit fox within 10-miles of the project area (CNDDB 2010). However, because the project area occurs in actively cultivated fields, habitat quality for kit fox would be poor (Warrick et al. 2007).

3.1.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, conditions would remain the same as described above. Reclamation would not provide grant funds to TID to assist with the construction of a 37-acre recharge/regulation basin. There would be no impacts to biological resources since conditions would remain the same as existing conditions.

Proposed Action

The project area consists of the conversion of recently fallowed land that is frequently tilled for weed control. Although San Joaquin kit fox and Swainson's hawk have been reported in the area, disking for weed control would seriously degrade any suitable habitat or foraging ground for sensitive species. Reclamation has determined that the Proposed Action would have no effect to either kit fox or Swainson's hawk designated under the Endangered Species Act (ESA), and no consultation with the USFWS is required. Preconstruction surveys would be conducted before any ground-disturbing activities are to begin. If the surveys detect the presence of listed species, then the Proposed Action would be paused while Reclamation revisits the ESA determination and completes any consultation with the USFWS that might be necessary.

If preconstruction surveys find that no special-status species are present within the project area, then Reclamation's determination remains and the project could move forward. By following Environmental Protection Measures listed in section 2.2.1, this would avoid or minimize any potential impacts to kit fox or Swainson's hawk during construction. Therefore, the Proposed Action is anticipated to have no adverse impacts on biological resources.

3.2 Cultural Resources

A cultural resource is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966, as amended (16 USC § 470 *et seq*.), is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (NRHP). Those resources that are on, or eligible for inclusion on, the NRHP are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 Code of Federal Regulations (CFR) Part 800. These regulations describe the process that the Federal agency (Reclamation) takes to identify cultural resources and the level of effect that the proposed undertaking would have on historic properties. In summary, Reclamation must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, Reclamation must identify the area of potential effects (APE), determine if historic properties are present within that APE, determine the effect that the undertaking would have on historic properties, and consult with the State Historic Preservation Office (SHPO), to seek concurrence on Reclamation's findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

3.2.1 Affected Environment

TID contracted RSO Consulting (RSO) to survey the project area for cultural resources. RSO conducted a records search at the Southern San Joaquin Valley Historical Resources Information Center at California State University, Bakersfield on December 21, 2009. The records search identified no archaeological or historical sites, or cultural resources surveys, within, or adjacent to, the project area. A pedestrian survey of the project area was conducted on December 23 and 29, 2009, and January 6 and 12, 2010 by RSO Archaeologist Rebecca S. Orfila. Three cultural resources were identified within the project area: one isolated fragment of an obsidian projectile point, a portion of TID's earthen Main Canal, and the site of Swall Farms labor camp, coldbox, and packing sheds.

A medial portion of an obsidian projectile point was recorded within an open tilled field on the west side of TID's Main Canal. The isolate measures approximately 1.8 centimeters (cm) long, 2 cm wide, and 0.75 cm thick. The projectile point fragment was not associated with any other cultural materials.

The project area is roughly divided by 2,500 linear ft of TID's Main Canal. The canal appears to be generally located along its 1892 route illustrated by Thompson (1892), who recorded this alignment as the Kaweah Canal. Early construction projects included diversion works on the St. Johns River, the Main Canal heading at the river (including a large flume over the river), and the purchase of water rights of the Kaweah Canal and Irrigation Company, Rocky Ford Canal and Irrigation Company, and the Settlers Ditch Company. TID subsequently proceeded with extensive improvements to the existing canal system, and the extension of the canal system to serve annexed areas. This work was conducted primarily between 1951 and 1964 and consisted of enlarging and/or relocating canals, constructing diversion structures, road crossings, check gates, siphons, and installing pipelines.

In 1884, the project area was a small part of a 1,700-acre farm owned by William Swall (Thompson 1892). The site of the Swall Farms workers residences (labor camp), coldbox, and packing sheds were located in the developed plum orchard and equipment area on the east side of TID's Main Canal. This site dates from about 1880 to the mid-1900s and includes two buildings and a scatter of historic materials. Fragments of crockery, glass, and other household materials are sparsely distributed over an approximately 60-acre area. Two structures stand on the east

side of the artifact scatter: one is a metal building believed to be a packing shed and a brick building with a red barrel tile roof that dates back to the early 1930's. According to a neighbor, Abe Kazarian (age 85), the brick building was built by William Swall to serve as the first cold box for the workers' food supplies.

Reclamation applied the NRHP criteria of evaluation to the isolated obsidian projectile point fragment, the portion of the TID Main Canal within the project area, and the Swall Farms site. Reclamation determined that the isolated obsidian projectile point fragment does not exhibit the integrity or characteristics that demonstrate its eligibility for listing on the NRHP while the portion of TID's Main Canal within the project area and the Swall Farms site are eligible for listing on the NRHP.

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, there are no impacts to cultural resources since there would be no change in operations and no ground disturbance. Conditions related to cultural resources would remain the same as existing conditions.

Proposed Action

The Proposed Action is the type of activity that has the potential to affect historic properties. A records search, a cultural resources survey, and Tribal consultation identified historic properties within the APE. All project activities would avoid historic properties; therefore, there would be no adverse impacts pursuant to 36 CFR Part 800.5(b). Since no historic properties would be affected, no cultural resources would be impacted as a result of implementing Proposed Action.

3.3 Indian Trust Assets

ITA are legal interests in assets that are held in trust by the United States (U.S.) for Federally recognized Indian tribes or individuals. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the U.S. on behalf of Federally recognized Indian tribes. "Assets" are anything owned that holds monetary value. "Legal interests" means there is a property interest for which there is a legal remedy, such a compensation or injunction, if there is improper interference. ITA can't be sold, leased or otherwise alienated without the U.S.' approval. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something; which may include lands, minerals and natural resources in addition to hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITA may be located off trust land. Reclamation shares the Indian Trust responsibility with all other agencies of the Executive Branch to protect and maintain ITA reserved by or granted to Indian tribes, or Indian individuals by treaty, statute, or Executive Order.

3.3.1 Affected Environment

The Proposed Action area is currently fallowed land that used to contain plum orchards for several years and does not contain any known ITA. The nearest ITA is the Santa Rosa Rancheria approximately 18 miles west/northwest of the Proposed Action area.

3.3.2 Environmental Consequences

No Action

Under the No Action Alternative, there would be no impacts to ITA as there would be no ground-disturbing activities and conditions would remain the same as existing conditions.

Proposed Action

There are no tribes possessing legal property interests held in trust by the U.S. in the lands involved with the Proposed Action; therefore, this action would have no effect on ITA.

3.4 Socioeconomic Resources

3.4.1 Affected Environment

The agricultural industry in Tulare County contributes to the overall economic stability of the San Joaquin Valley. In addition, other industries include dairy and food processing. The market for seasonal workers on local farms draws thousands of migrant workers.

3.4.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, TID would not be able to regulate some of its surface water supply and conserve any potential losses. Local farmers rely on irrigation water from TID and could be impacted during years when surface water supplies are insufficient.

Proposed Action

The Proposed Action would increase the surface water reliability for TID. As a result, the viability of farming practices would also benefit from a more reliable irrigation water supply. Design and construction of the Proposed Action would temporarily increase jobs.

3.5 Environmental Justice

Environmental justice refers to the fair treatment of peoples of all races, income levels, and cultures with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment implies that no person or group of people should shoulder a disproportionate share of negative impacts resulting from the execution of Federal programs. Executive Order 12898, dated February 11, 1994, establishes the achievement of environmental justice as a Federal agency priority. The memorandum accompanying the order directs heads of departments and agencies to analyze the environmental effects of federal actions, including human health, economic, and social effects when required by National Environmental Policy Act, and to address significant and adverse effects on minority and low-income communities.

3.5.1 Affected Environment

Tulare County employs seasonal workers on local farms that include migrant workers, commonly of Hispanic origin. Approximately 57 percent of the population within Tulare County is of Hispanic origin (US Census Bureau 2008), and the communities in which they reside depend on the City of Tulare for municipal and industrial (M&I) water.

3.5.2 Environmental Consequences

No Action Alternative

The Plum Basin Project would have helped to provide long-term water supply reliability through groundwater recharge and surface water regulation. Some of the surrounding communities rely upon groundwater provided by the City of Tulare for M&I use and local farms depend on surface water delivered by TID for irrigation purposes. Under the No Action Alternative, there could be a slight adverse impact to minority or low-income populations near the project location.

Proposed Action

To the extent that water supply reliability is improved in Tulare County, it would serve to support the continued viability of available M&I water to the surrounding communities and irrigation water for local farms. As a result, there would be slight beneficial impacts to environmental justice from the implementation of the Proposed Action.

3.6 Global Climate Change

Climate change refers to significant change in measures of climate (e.g., temperature, precipitation, or wind) lasting for decades or longer. Many environmental changes (changes in sun's intensity, changes in ocean circulation, deforestation, urbanization, burning fossil fuels, etc.) can contribute to climate change (EPA 2009a). Gases that trap heat in the atmosphere are often called greenhouse gases (GHG). Some GHG such as carbon dioxide (CO_2) occur naturally and are emitted to the atmosphere through natural processes and human activities. Other GHG (e.g., fluorinated gases) are created and emitted solely through human activities. The principal GHG that enter the atmosphere because of human activities are: CO_2, methane (CH_4), nitrous oxide, and fluorinated gasses (EPA 2009b).

During the past century, humans have substantially added to the amount of GHG in the atmosphere by burning fossil fuels such as coal, natural gas, oil, and gasoline to power our cars, factories, utilities, and appliances. The added gases, primarily CO_2 and CH_4, are enhancing the natural greenhouse effect, and likely contributing to an increase in global average temperature and related climate changes. At present, there are uncertainties associated with the science of climate change (EPA 2009a).

3.6.1 Affected Environment

More than 20 million Californians rely on regulated delivery of water resources such as the SWP and the CVP, as well as established water rights from rivers. Increases in air temperature may lead to changes in precipitation patterns, runoff timing and volume, sea level rise, and changes in the amount of irrigation water needed due to modified evapotranspiration rates. These changes may lead to impacts to the State's water resources and project operations. While there is general

consensus in their trend, the magnitudes and onset-timing of impacts are uncertain and are scenario-dependent (Anderson et al. 2008).

3.6.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, there would be no impacts to global climate change since no construction would take place.

Proposed Action

Short-term impacts would consist of CO_2 emissions during construction. These emissions are anticipated to be well-below the threshold for annually reporting GHG emissions (25,000 metric tons/year), which is a surrogate for a threshold of significance (EPA 2009b). As a result, the Proposed Action would result in below *de minimis* impacts regarding global climate change.

3.7 Cumulative Impacts

While the emissions of one single project would not cause global climate change, GHG emissions from multiple projects throughout the world could result in an impact with respect to global climate change. Full build-out of the overall Plum Basin Project, of which the Proposed Action is a part, could contribute to global climate change impacts due to emissions of CO_2 during construction. However, the estimated CO_2 emissions from the Plum Basin Project is still well below the 25,000 metric tons per year threshold for reporting GHG emissions. As a result, the Proposed Action is not expected to contribute to cumulative adverse impacts to global climate change.

Biological resources would continue to be affected by other types of activities that are ongoing but unrelated to the Proposed Action. Impacts to biological resources from the implementation of the Proposed Action would occur only during construction activities. Pending results from the kit fox and Swainson's hawk surveys, the Proposed Action, when added to other existing and proposed actions, does not contribute to cumulative adverse impacts to wildlife resources since construction activities are short-term.

Pending SHPO concurrence, the Proposed Action would not impact historic properties; therefore, it is not expected to contribute to cumulative impacts on cultural resources.

The Proposed Action would result in an increase in the region's M&I water supply reliability and improve surface water supply conservation. When added to other similar existing and proposed actions, the Proposed Action would slightly contribute to beneficial cumulative impacts on socioeconomic resources and environmental justice.

As analyzed in the IS/MND, construction of the overall Plum Basin Project would have less than significant impacts to water resources, land use, and air quality. Since the Proposed Action is a part of the Plum Basin Project, it would not contribute to adverse cumulative impacts to those resources. In addition, the Proposed Action would not impact ITA and therefore would not contribute to cumulative impacts to ITA.

Section 4 Consultation and Coordination

This section contains applicable Federal laws, permits, licenses, and policy requirements that have directed, limited, or guided the National Environmental Policy Act analysis and decision-making process of this EA.

4.1 National Historic Preservation Act (16 USC § 470 et seq.)

The NHPA of 1966, as amended, is the primary Federal legislation that outlines the Federal Government's responsibility to consider the effects of their actions on historic properties. The 36 CFR Part 800 regulations that implement Section 106 of the NHPA describe how Federal agencies address these effects. Additionally, Native American human remains, cultural objects, and objects of cultural patrimony are protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 32) and its implementing regulation outlined at 43 CFR Part 10. The Archaeological Resources Protection Act of 1979 (16 USC 470aa), as amended, and its implementing regulations at 43 CFR 7, protects archaeological resources on Federal land.

Reclamation sent a letter to the Tule River Indian Tribe and Santa Rosa Rancheria on November 25, 2009 to invite their assistance in identifying sites of religious and cultural significance pursuant to the regulations at 36 CFR 800.3(f)(2) and 36 CFR Part 800.4(a)(4). Reclamation also sent a letter to an individual with knowledge of possible historic properties located within the project area on November 25, 2009 pursuant to 36 CFR Part 800.4(a)(3).

Reclamation intends to consult with the SHPO regarding a finding that the Proposed Action would result in no adverse effects to historic properties pursuant to 36 CFR Part 800.5(b). Concurrence from SHPO is pending.

4.2 Public Review Period

Reclamation intends to provide the public with an opportunity to comment on the draft FONSI and draft EA from March 16, 2010 through April 9, 2010.

Section 5 List of Preparers and Reviewers

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Provost & Pritchard Consulting Group

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Dennis Mills, P.E.

Section 6 References

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Appendix A – Tulare Irrigation District Mitigated Negative Declaration

TULARE IRRIGATION DISTRICT
1350 W. SAN JOAQUIN AVE.
TULARE, CA 93274

Tulare Irrigation District Plum Basin Project

Mitigated Negative Declaration

January 2009

Prepared by:

1248 08V1

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ATTACHMENTS

A – Groundwater Recharge Agreement
B – 2006 Recharge Report
C – URBEMIS Output Files
D – Cultural Records Letter

Chapter 1

INTRODUCTION

1 INTRODUCTION

The Tulare Irrigation District (District) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to address the environmental effects of the proposed Plum Basin Project (proposed Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §1500 *et.seq.* The Tulare Irrigation District is the CEQA lead agency for this project.

The proposed Project involves the construction of a recharge basin in the County of Tulare. The proposed Project is described in detail in Chapter 2, Project Description. The proposed Project would provide mutual benefit to the District and the City of Tulare as both draw from the same aquifer.

DOCUMENT FORMAT

This IS/MND contains five chapters, one District-City agreement, and three technical attachments. Section 1, Introduction, provides an overview of the project and the CEQA environmental documentation process. Chapter 2, Project Description, provides a detailed description of project objectives and components. Chapter 3, Initial Study Checklist, presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible mitigation measures. If the proposed project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. Chapter 4, References, provides a list of reference materials used during the preparation of the IS/MND, and Chapter 5, List of Preparers, provides a list of key personnel involved in the preparation of the IS/MND.

Four attachments are provided at the end of this document, including the Groundwater Recharge Agreement between the City of Tulare and the Tulare Irrigation District, the 2006 Recharge Report, the URBEMIS output files, and the Cultural Resources letter.

Environmental impacts are separated into the following categories:

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce

impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less Than Significant After Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less Than Significant Impact. This category is identified when the project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.

Chapter 2

PROJECT DESCRIPTION

2 PROJECT DESCRIPTION

PROJECT LOCATION

The Tulare Irrigation District (TID or District) is located in Tulare County, northwest of the City of Tulare, approximately 220 miles south of Sacramento and 70 miles north of Bakersfield. The project site is within the District boundaries; north of Cartmill Avenue (Ave 248), south of Oakdale Avenue (Ave 256), west of Road 132, and east of Oakmore Road (Rd. 124) (see Figure 1). The project is within Section 29, Township 19 South, Range 25 East, M.D. B&M., and is within the Visalia and Tulare USGS 7.5 minute quadrangles.
Latitude: 36° 15' 23.1618"
Longitude: -119° 17' 1.0998"
APN: 150-010-026, 027, 028 and 150-110-013

PROJECT BACKGROUND AND OBJECTIVES

The District is a political subdivision of the State of California – an independent agency operating under the California Water Code. TID delivers surface water from two sources: Kaweah River water rights and the Central Valley Project. TID delivers surface water to approximately 230 farms in Tulare County[1]. Farmers within the District pump groundwater from private wells when surface water is not available to meet irrigation needs.

The project is a joint effort between the District and the City of Tulare (City) to reduce groundwater overdraft through the construction and operation of a new recharge basin. The City boundary is approximately five miles west of the project site. According to the California Department of Finance (2008) the City has a population of 57,375. The City is not part of TID; however, the City is within TID boundaries and works cooperatively with TID.

The proposed improvements would better serve TID and City by increasing groundwater recharge potential within TID via this new recharge facility. By written agreement, TID and the City have formed a joint operations committee which, among other things, evaluates projects of mutual benefit to and including the development of additional groundwater recharge facilities. Under separate agreement, the City financially contributes towards TID's acquisition of surplus water supplies for groundwater recharge purposes to both help reduce regional overdraft and to provide benefits to the City's well field and attendant extraction capabilities (referenced agreements are included herein as Attachments A and B, respectively). In wet years, the combined access to expanded recharge facilities and utilization of increased funding for water purchases will increase groundwater reliability to the City.

[1] Information from TID website, www.tulareid.org.

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FIGURE 1

PROJECT LOCATION

ENVIRONMENTAL SETTING

The project site is approximately 55 miles east of the Coast Range and approximately 12 miles west of the Sierra Nevada Mountain Range. The lands surrounding the project site are predominantly agricultural with the majority being prime agricultural lands under Williamson Act Contracts. Agriculture in the area include row crops, vineyards, and stone fruit orchards, most of which rely heavily on a combination of groundwater and surface water resources to support irrigation demands.

The project site is surrounded by the following uses: to the immediate north is the Creamline Basin (a TID recharge basin) and to the immediate south, east and west are operational row crop and stone fruit tree agricultural lands.

North:
Zoning: AE 40 (Agricultural 40 acre minimum)
Land Use: Recharge basin, scattered residences, operational farmlands.

East:
Zoning: AE 40 (Agricultural 40 acre minimum)
Land Use: Scattered residences, operational farmlands.

West:
Zoning: AE 40 (Agricultural 40 acre minimum)
Land Use: Scattered residences, operational farmlands.

South:
Zoning: AE 40 (Agricultural 40 acre minimum)
Land Use: Scattered residences, operational farmlands.

PROJECT DESCRIPTION

The project site is zoned AE-40 (Agriculture – 40 acre minimum) and is under Williamson Act Contract number 7288, Agricultural Preserve #2576, designated Williamson Act Prime. According to the California Government Code §51238 the construction of water facilities are determined to be compatible uses within any agricultural preserve. The majority of the 154 acre site is currently operational stone fruit orchards with approximately 40 fallow acres.

The project includes the construction of a 154 acre recharge basin consisting of three cells (see Figure 2). The basin would be excavated six feet in depth. Excavated materials would be used to create a six foot berm around the basin with excess excavated materials being stockpiled on-site. The cells would receive water via the District's Main Canal which transverses the site in a

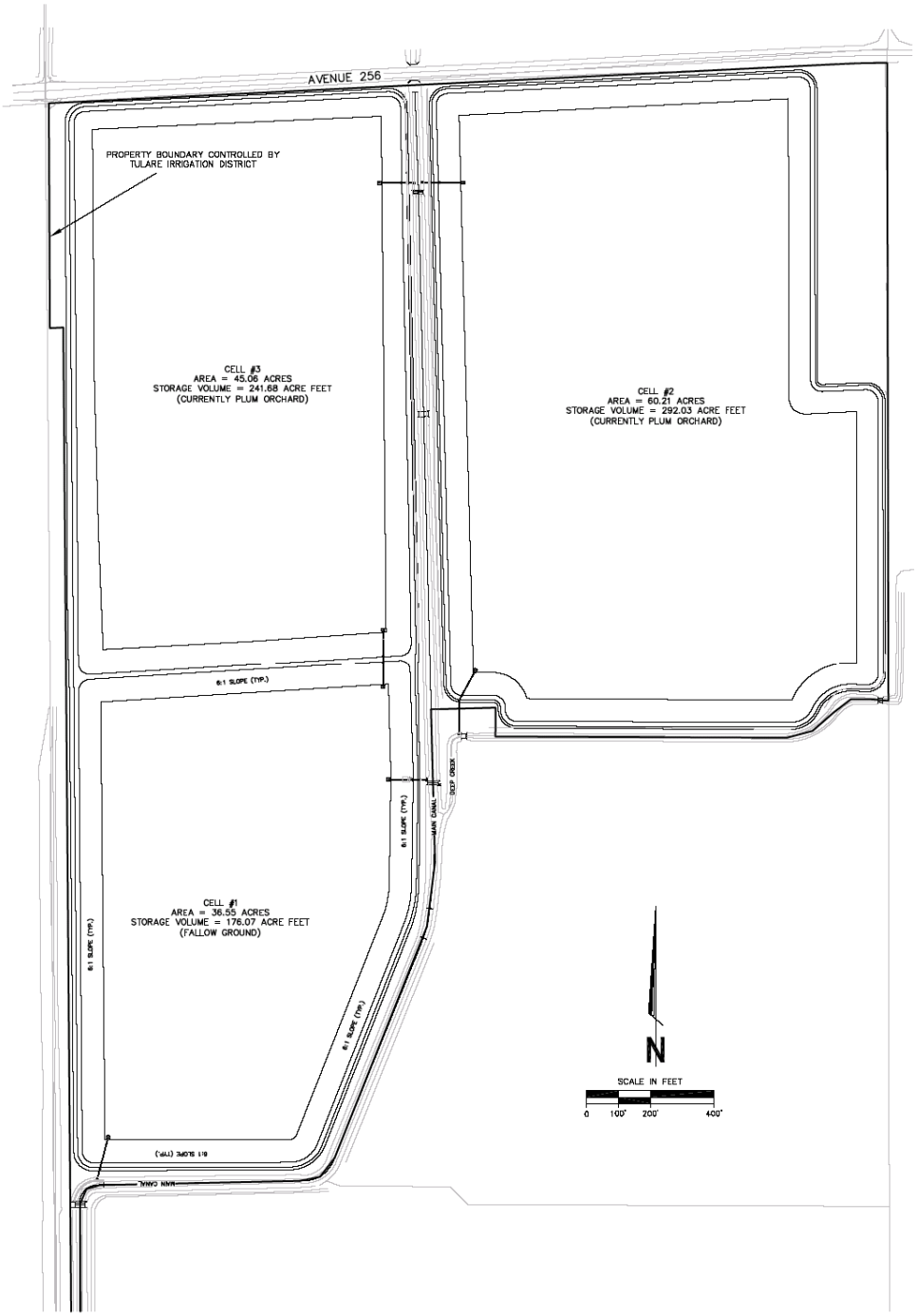

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FIGURE 2

SITE PLAN

north-south direction. Each cell would have a turnout from the Main Canal to deliver water from the Main Canal to the basin. It is anticipated that the basin would be filled when surface waters are available, therefore, when surface water is not available, the basin would be dry. Water depth is anticipated to range from 0-6 ft, although typical depth is expected to range from 3-5 ft. Groundwater monitoring around the facility would occur semi-annually.

Chapter 3

INITIAL STUDY CHECKLIST

3 INITIAL STUDY CHECKLIST

1. Project title:	Plum Basin Project
2. Lead agency:	Tulare Irrigation District 1350 West San Joaquin Avenue Tulare, CA 93274
3. Contact person:	Aaron Fukuda, District Engineer (559) 686-3425
4. Project location:	The Project is located in central Tulare County; north of Cartmill Avenue (Ave 248), south of Oakdale Avenue (Ave 256), west of Road 132, and east of Oakmore Road (Rd. 124); within Section 29, Township 19 South, Range 25 East, M.D. B&M.
5. Latitude, Longitude:	36° 15' 23.1618", -119° 17' 1.0998"
6. General plan designation:	Exclusive Agricultural District – 40 acres (AE-40)
7. Zoning:	Exclusive Agricultural Zone – 40 acres (AE-40)
8. Description of project:	See Chapter 2, Project Description
9. Surrounding land uses and setting:	See Chapter 2, Project Description
10. Other public agencies whose approval is required	None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and subsequent discussion on the following pages.

☒ Aesthetics	☒ Agriculture Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☐ Hazards & Hazardous Materials	☒ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☒ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☒ Transportation/Traffic
☐ Utilities / Service Systems	☒ Mandatory Findings of Significance	

DETERMINATION: (To be completed by the Lead Agency)
On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____
Signature Date

_____ _____
Printed name For

Issues:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
I. AESTHETICS				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Responses:

a) Less Than Significant Impact. The project area is located on the San Joaquin Valley floor south of the City of Visalia, east of the City of Tulare, in central Tulare County. The entire project area is developed to production agriculture, which dominates the aesthetics of the surrounding area. While the project would modify the existing character of the subject site, it would not degrade the visual quality of the site. Temporary construction activities would be visible from roadside; however, would not affect a scenic vista. The impact would be less than significant.

b) No Impact. The scenic highway program protects and enhances California's natural scenic beauty by allowing county and city governments to apply to the California Department of Transportation (Caltrans) to establish a scenic corridor protection program. Three state routes are located near the project site; State Route 99 (SR 99) is approximately 4.5 miles east of the project site, State Route 137 (SR 137) is approximately 2.4 miles south of the project site and State Route 63 (SR 63) is approximately 1.5 miles west of the project site. According to Caltrans, SR 99, SR 137 and SR 63 are not designated eligible State Scenic Highways in this area. There would be no impact.

c) No Impact. The project is immediately surrounded by agricultural land used for stone fruit orchards and the existing Creamline Basin to the north. None of this area is considered a scenic resource. The project will not degrade the existing visual character or quality of the area or its surroundings. The creation of recharge basins blend into the existing character and are commonplace in the regional setting. There is no impact.

d) Less Than Significant Impact. Additional water surface, created by the groundwater recharge basins, may create a minor source of light or glare, which will not be visible from highways, county roads or residences because the surrounding levees would block the glare path. The impact would be less than significant.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
II. AGRICULTURE 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. **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?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☒	☐

Responses:

a) Less Than Significant Impact. According to the soil survey of the Tulare County, Western Part the project site contains two soil types:

(124) Hanford sandy loam, 0 to 2 percent slopes. The soil is characterized by moderately rapid permeability, low shrink-swell potential, and a land capability rating of 1 if irrigated and 3c nonirrigated. The soil is considered prime agricultural land in the areas that are irrigated and protected from flooding. Approximately two-thirds of the southern portion of the project site contains this soil type.

(130) Nord fine sandy loam, 0 to 2 percent slopes. The soil is characterized by a moderate permeability class, low shrink-swell potential, and a land capability rating of 1 if irrigated and 4c nonirrigated. The soil is considered prime agricultural land in areas that are irrigated and protected from flooding. Approximately one-third of the northern portion of the project site contains this soil type.

The District's intent of the recharge basin would help to ensure the viability of farming practices. The recharge basin will also replenish groundwater consumed by the City of Tulare and other local urban demands. Urban demands on groundwater impact the availability of groundwater to meet agricultural needs. Therefore, this project is intended to stabilize groundwater depletion for the Tulare area.

Prime agricultural farmland would not be converted to a non-agricultural use. The construction of the proposed groundwater recharge basin would enhance the services provided to lands both under and not under Williamson Act contracts. The supply of water to these lands would allow for additional farming that would otherwise not occur due to a lack of water during times of drought. These actions would help to ensure the continued operation and ultimate survival of agricultural entities in the Tulare County. Logically it would follow that more land would remain under, and/or new lands would apply for, Williamson Act contracts if water sources are available to ensure continued agricultural operations. The impact would be less than significant.

b) Less Than Significant Impact. The project site area is zoned Exclusive Agriculture – 40 acres. The AE-40 zone is an exclusive zone for intensive and extensive agricultural uses and for those uses which are a necessary and integral part of intensive and extensive agricultural operations. The project site is under Williamson Act contract #7288, Agricultural Preserve #4448, designated Williamson Act Prime Agricultural Land. The parcels are surrounded on three sides by agricultural land under Williamson Act contracts, mostly prime agricultural lands.

According to the California Government Code §51238 (a)(1) the construction of water facilities are determined to be compatible uses within any agricultural preserve. The project would include the construction of facilities which would allow the District to recharge surplus water in wet years that would be made available for farmers in dry years. The impact is less than significant.

c) Less Than Significant Impact. Any impacts regarding the potential conversion of farmland due to the project's location have been discussed in the analysis of Impacts II-a and II-b. The impact is less than significant.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
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 emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒
f) Substantially alter air movement, moisture, or temperature, or cause any substantial change in climate?	☐	☐	☒	☐

Response:

a) Less than Significant Impact. The project lies within the San Joaquin Valley Air Basin, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2),

particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Areas are classified under the Federal Clean Air Act as either "attainment" or "non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley (SJV) is designated as a State and Federal non-attainment area for O_3, and $PM_{2.5}$, and a State and Federal attainment area for CO, SO_2, NO_2, and Pb (SJVAPCD, 2008). The SJV is designated a Non-attainment area by State standards and an attainment area by Federal standards for PM^{10}.

The project would not conflict with or obstruct the implementation of the air quality management plan. Operation of the project would not change following implementation of the project and no land uses are proposed that are different than those anticipated for the property in long range planning. Standards set by the SJVAPCD, CARB, and Federal agencies relating to the project would be required and incorporated at applicable design and approval stages. Specific air quality impacts related to criteria pollutants are discussed below. Impacts relating to obstructing implementation of air quality plans would be less than significant for the project.

b) Less Than Significant Impact. The San Joaquin Valley is designated as a Federal and State non-attainment area for O_3 and PM_{10}, and $PM_{2.5}$. The SJVAPCD, the regional agency that regulates air permitting and maintains an extensive air quality monitoring network to measure criteria pollution concentrations throughout the San Joaquin Valley air basin.

The project includes the construction of a 154-acre recharge basin with three cells and appurtanences. Project operations would not contribute to criteria pollutant emissions, as groundwater recharge is a passive process; however, emissions would be associated with construction. The operational phases of the project would generate at most ten trips monthly.

The URBEMIS model, Version 9.2.4 2007 was used to estimate construction emissions for the project. The modeling results are provided below in Table 1 and the output files can be seen in Attachment C.

Table 1
Proposed Project Operation and Construction Emissions

	ROG (tons/year)	NO_x (tons/year)	PM_{10} (tons/year)
Total Project Construction Emissions	0.09	0.70	0.81
Threshold of Significance	**10**	**10**	**--**

Source: URBEMIS Model, Version 9.2.4 2007
* Complying with SJAPCD's Regulation VIII reduces any Project impact to less than significant.

Regulation VIII measures are SJVAPCD mandated requirements for any type of ground moving activity and would be adhered to during the construction of the project. These requirements are listed in Table 2. Implementation of Regulation VIII measures would reduce any construction related PM_{10} emission impacts to less than significant. As demonstrated in Table 1, project construction and operation emissions would not create a significant impact.

Table 2
San Joaquin Valley Air Pollution Control District
Regulation VIII Control Measures for Construction Emissions of PM_{10}

Regulation VIII Control Measures. The following are required to be implemented at all construction sites.
All disturbed areas, including storage piles, which are not actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizers/suppressants, covered with a tarp or other similar cover, or vegetative ground cover.
All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions during construction using water or chemical stabilizer suppressant.
All land clearing, grubbing, scraping, excavation, land leveling, grading cut and fill, and demolition activities during construction shall be effectively controlled of fugitive dust emissions utilizing application of water or pre-soaking.
When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from top of container shall be maintained.
All operations shall limit, or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.
Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site at the end of each workday.
Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

c) Less Than Significant Impact. As discussed above, the project would result in increases in criteria pollutants during construction; however, during construction, air quality impacts would be less than SJVAPCD thresholds for non-attainment pollutants and operation of the project would not result in impacts to air quality standards for criteria pollutants. Accordingly, net increases of non-attainment criteria pollutants would not be significant for the project.

d) Less Than Significant Impact. Section 3 of the Guide for Assessing and Mitigating Air Quality Impacts defines a sensitive receptor as a location where human populations, especially children, seniors, and sick persons are present and where there is a reasonable expectation of human exposure to pollutants. Sensitive receptors normally refer to people with heightened sensitivity to localized, rather than regional pollutants. There are approximately 15 single family residences within one mile of the project site; however, concentrations of pollutants would not pose a hazardous threat to any sensitive receptors as emissions resulting from the project would be below significance thresholds, as demonstrated in the analysis of Impact III-a. The impact is less than significant.

e) No Impact. The project would not be a source of odors, therefore, there would be no impact.

f) Less Than Significant Impact. While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions; these regulations will apply to automobiles and light trucks beginning with the 2009 model year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the year 2020, and 3) 80% below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that ARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change.

Temporary project construction emissions will be minimal, as demonstrated above and the operation of the project would generate new emissions below the thresholds of significance established by the SJVAPCD. In addition, Regulation VIII measures, as seen in Table 2, would be implemented, further decreasing potential emissions. The project would not significantly contribute to the emission of GHGs. The impact would be less than significant.

IV. BIOLOGICAL RESOURCES **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Response:

a) Less Than Significant Impact with Mitigation Incorporation. The project site is located within the United States Geological Survey (USGS) Visalia and Tulare 7.5-minute topographic quadrangles. Based on a review

of information from the California Department of Fish and Game Natural Diversity Database (CNDDB) RareFind2 data (2008, September) for these quadrangles, and the quadrangles immediately surrounding the project site (Cairns Corner, Exeter, Goshen, Ivanhoe, Monson, Paige, and Traver) there are four species of plants with federal and state-listed status, and/or California Native Plant Society (CNPS) Listed status, eight species of wildlife that are federally or state-listed or have other special status, and four sensitive terrestrial natural communities or habitat types that are reported from historical information for the nine quadrangles as shown below in Table 3.

Table 3
Federal and State-Listed Status

Scientific Name	Common Name	Special Status	CNPS	Habitat
	Plant Species			
Atriplex cordulata	Heartscale		List 1B.2	Absent
Atriplex erecticaulis	Earlimart orache		List 1B.2	Absent
Atriplex minuscule	Lesser saltscale		List 1B.1	Absent
Atriplex persistens	Vernal pool smallscale		List 1B.2	Absent
Atriplex subtilis	Subtle orache		List 1B.2	Absent
Caulanthus californicus	California jewel-flower		List 1B.1	Absent
Chamaesyce hooveri	Hoover's spurge		List 1B.2	Absent
Delphinium recurvatum	Recurved larkspur		List 1B.2	Absent
Eryngium spinosepalum	Spiny-sepaled button-celery		List 1B.2	Absent
Imperata brevifolia	California satintail		List 2.1	Absent
Orcuttia inaequalis	San Joaquin Valley orcutt grass		List 1B.1	Absent
Pseudobahia peirsonii	San Joaquin adobe sunburst		List 1B.1	Absent
	Wildlife Species			
Actinemys marmorata	Western pond turtle			Absent
Ambystoma californiense	California tiger salamander	FT		Absent
Andrena macswaini	Andrenid bee			Absent
Antrozous pallidus	Pallid bat			Absent
Athene cunicularia	Burrowing owl			Absent
Branchinecta lynchi	Vernal pool fairy shrimp	FT		Absent
Buteo swainsoni	Swainson's hawk	ST		Potential
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	FT		Absent
Dipodomys nitratoides	Tipton kangaroo rat			Absent
Eumpos perotis californicus	Western mastiff bat			Absent
Gambelia sila	Blunt-nosed leopard lizard	FE; SE		Absent
Lepidurus packardi	Vernal pool tadpole shrimp	FE		Absent
Lytta hoppingi	Hopping's blister beetle			Absent
Spea hammondii	Western spadefoot			Absent
Talanites moodyae	Moody's gnaphosid spider			Absent
Taxidea taxus	American badger			Absent
Vulpes macrotis mutica	San Joaquin kit fox	FE; ST		Potential
	Sensitive Vegetation Communities			
Great Valley Valley Oak Riparian Forest	Great Valley Valley Oak Riparian Forest		--	Absent
Northern Claypan Vernal Pool	Northern Claypan Vernal Pool			Absent

Northern Hardpan Vernal Pool	Northern Hardpan Vernal Pool	Absent
Valley Sacaton Grassland	Valley Sacaton Grassland	

Sources: USFWS (1992, 1995, 1996, 1997, and 1998) CNDDB (2008), and CNPS (2008)

FE:	Federally listed as Endangered
FT:	Federally listed as Threatened
FC:	Federal Candidate species (former Category 1 candidate species) where enough data are on file to support listing
FS:	USDA Forest Service "Sensitive Species" recovery program (in cooperation with CDFG and USFWS) identifies and manages species whose populations are declining
SE:	State listed as Endangered
ST:	State listed as Threatened
SS:	State listed as Sensitive
CSC:	California Special Concern species by CDFG
List 1B:	Plants considered by the CNPS to be rare, threatened, or endangered in California and elsewhere
List 2:	Plants considered by the CNPS to be rare, threatened, or endangered in California but more common elsewhere

The impact is potentially significant; however, implementation of the following mitigation measure will reduce any impacts to less than significant.

Mitigation Measures

I) San Joaquin Kit Fox (*Vulpes macrotis mutica*)

Because there is a potential for kit fox to occur on the project site, TID shall follow the Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 1999). The measures that are listed below have been excerpted from these guidelines.

1. A pre-construction survey shall be conducted by a qualified biologist no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities on the project site, or prior to any project activity likely to impact the San Joaquin kit fox. The surveyor shall thoroughly check the project site for kit fox dens and, if found, exclusion zones shall be placed in accordance with USFWS Recommendations at the following radii:

1. Potential den	2. 50 feet
3. Known den	4. 100 feet
5. Natal/pupping den (occupied and unoccupied)	6. Contact Service
7. Atypical den	8. 50 feet

2. If dens must be removed, they must be appropriately monitored and excavated by a qualified wildlife biologist. Replacement dens will be required. Destruction of natal dens and other "known" kit fox dens must not occur until authorized by USFWS.
3. Project-related vehicles shall observe a 20-mph speed limit in all project areas during construction, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. To the extent possible, nighttime construction should be avoided. Off-road traffic outside of designated project areas should be prohibited during construction.
4. To prevent inadvertent entrapment of kit foxes or other animals during project construction, all excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape

ramps constructed of earth fill or wooden planks. 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 procedures under numbers 8 and 9 of this section must be followed.

5. Kit foxes are attracted to den-like structures such as pipes and therefore may enter stored pipe, becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. 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 the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped.
6. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from a construction or project site.
7. No firearms shall be allowed on the project site.
8. To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets shall be permitted on project sites during construction.
9. A representative shall be appointed by TID who will 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 individual. The representative's name and telephone number shall be provided to the USFWS.
10. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS shall be contacted for advice.
11. Any contractor, employee(s), or military or agency personnel who inadvertently kills or injures a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045. The CDFG contact will contact the local warden or biologist.
12. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, 2800 Cottage Way, Suite W2605, Sacramento, CA 95825-1846, (916) 414-6620. The CDFG contact is Mr. Ron Schlorff at 1416 9th Street, Sacramento, CA 95814, (916) 654-4262.

II) Swainson's Hawk and other birds protected under the Migratory Bird Treaty Act.

A pre-construction nest survey for avian predators and other resident and migratory birds shall be conducted prior to project construction if any heavy equipment operations are to occur during the nesting season (February 15 through September 15). All trees, vegetation, and small mammal burrows on the site shall be inspected for nests. If any occupied nests are observed, heavy equipment operations shall be minimized or avoided until the young have fledged and nesting has ceased. If this is not feasible, the USFWS and CDFG, would need to be contacted for guidance on how to proceed. The USFWS would prescribe specific mitigation dependent upon the particular species involved and the manner in which heavy equipment operations are to be conducted.

b) No Impact. No wetlands or riparian communities exist on or near the project site. There would be no impact.

c) No Impact. There are no wetlands in the immediate project vicinity. There is no impact.

d) Less Than Significant Impact. Any impacts to migratory species have been discussed in the analysis of Impact IV-a. The impact is less than significant.

e) Less Than Significant Impact. There is no adopted biological preservation or tree preservation ordinance in Tulare County. There would be no impact.

f) No Impact. There is no adopted habitat conservation plan in the project area**.** There would be no impact.

V. CULTURAL RESOURCES **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?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Response:

a) Less Than Significant With Mitigation Incorporation. The project proposes a water recharge basin to be constructed to recharge the underlying basin that serves TID. Construction of the basin would consist of excavating six feet and using the excavated materials to raise a six-foot berm around the excavation area.

A cultural resources records search (RS# 08-320; CAR Project No. 09-22) was conducted for the project site by the Center for Archaeological Research (Attachment D). According to the search there are no known historical structures or monuments recorded on the site. Although no archaeological or historical sites appear to be within the project area, it has not been surveyed and as such, the possibility remains that resources do exist on the site. There would be a potentially significant impact if historical resources were uncovered; however, implementation of the following mitigation measure would reduce potential impacts to historical or archaeological resources to less than significant.

Mitigation Measure

If, in the course of project construction or operation, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within fifty (50) feet of the find shall be ceased. A qualified archaeologist shall be contacted and advise TID of the site's significance. If the findings are deemed significant by the District's Staff, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the project.

b) Less Than Significant Impact. Any impacts to archaeological resources have been discussed in Impact V-a. Impacts are less than significant with the implementation of the mitigation measure stated in Impact V-a.

c) Less Than Significant Impact. No known paleontological resources exist within the project area. There are no geologic features in the project area. Grading activities would be consistent with that of a water recharge basin. The majority of project construction would occur on flat areas; however, the construction of the water recharge basin would include six feet of excavation over approximately 154 acres. Project construction would not be expected to disturb any paleontological resources not previously disturbed; however, the possibility that such resources would occur on the project site does exist. Any impacts to paleontological resources would be reduced to less than significant with the implementation of the mitigation measure identified in the analysis of Impact V-a.

d) No Impact. No formal cemeteries or other places of human internment are known to exist at the site. In the event human remains are encountered during construction activities, all work within the vicinity of the remains would halt in accordance with Health and Safety Code §7050.5, Public Resources Code §5097.98, and Section 15064.5 of the CEQA Guidelines, and the Tulare County coroners office would be contacted. As such, potential impacts to human remains and paleontological resources would not occur as a result of the project. There would be no impact.

VI. GEOLOGY AND SOILS **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Response:

a-i) Less Than Significant Impact. No substantial faults are known to occupy Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation. The potential for the rupture of a known earthquake fault are less than significant.

a-ii) Less Than Significant Impact. Any impacts regarding strong seismic ground shaking have been discussed in Impact IV-a-i. The impact would be less than significant.

a-iii) Less Than Significant Impact. No subsidence-prone soils, oil or gas production exists at the project site. Overdraft exists throughout the Western portion of Tulare County; however, the project is a recharge basin and will decrease the amount of overdraft experienced in the surrounding areas. Furthermore, soil conditions on the site are not prone to soil instability due to their low shrink-swell behavior. The impact would be less than significant.

a-iv) No Impact. No geologic landforms exist on or near the site that would result in a landslide event. There would be no impact.

b) Less Than Significant Impact. Grading activities associated with the construction of the recharge basins would involve earthmoving, excavation, stockpiling, and grading. These activities could expose soils to erosion processes. The extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions.

The project site is relatively flat which would reduce the potential for erosion and loss of topsoil to a certain degree. To further prevent water and wind erosion during the construction period, a Storm Water Pollution Prevention Plan (SWPPP) would be developed for the project as required for all projects which disturb more than one acre. As part of the SWPPP, the applicant would be required to provide erosion control measures to protect the topsoil. Topsoil materials would be stripped from the ground surface and used in part for construction of the earthen berms of the recharge basins. This would ensure that organic matter, the existing seed bank, and topsoil texture are maintained for any future agricultural activities and soil-stabilizing revegetation efforts at the project site. Any stockpiles soils would also be watered and/or covered to prevent loss due to wind erosion as part of the SWPPP during construction. As a result of these efforts, loss of topsoil and substantial soil erosion during the construction period are not anticipated.

During recharge operations, the recharge basins would contain water, which would inhibit erosion; during periods of non-recharge, the recharge basins would be subject to wind erosion, however, plant cover at the project site would minimize wind erosion. The impact is less than significant.

c) Less Than Significant Impact. Substantial grade change would not occur in the topography to the point where the project would expose people or structures to potential substantial adverse effects on, or offsite, such as landslides, lateral spreading, subsidence, liquefaction or collapse. The impact would be less than significant.

d) Less Than Significant Impact. No subsidence-prone soils, oil or gas production exists at the project site. Furthermore, soil conditions on the site are not prone to soil instability due to their low to moderate shrink-swell behavior. Although the underlying water basin is in a state of overdraft, which is often a catalyst to subsidence, the construction of a new recharge basin with recharge capacity of 49 acre feet per day would result in a net increase of groundwater at the project site, which would lessen the overdraft. The impact would be less than significant.

e) No Impact. The project does not require septic tanks. There is no impact.

VII. HAZARDS AND HAZARDOUS MATERIALS **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Response:

a) No Impact. There would be no transport, use or disposal of hazardous materials. There is no impact.

b) No Impact. The project would not create a significant hazard to the public or the environment as the project would not discharge hazardous materials into the environment. There is no impact.

c) No Impact. Two schools are located within 2 miles of the project site. Liberty Elementary School is approximately 1.6 miles northwest of the project site and Sundale Elementary School is located approximately 2.0 miles south of the project site. The project involves construction of a water recharge basin and would not emit hazardous emissions, involve hazardous materials, or create a hazard to the schools in any way. There is no impact.

d) No Impact. The project site is not listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control. There is no impact.

e) No Impact. The project is not located within an airport land use plan. There are three airports located within a 10-mile radius of the project site: Mefford Field – 6.6 miles to the southwest; Visalia Municipal Airport – 7.3 miles to the northwest; and Thunderhawk Field – 7.2 miles east of the project site. Therefore, the project would not result in a safety hazard for people within the project area. There is no impact.

f) No Impact. Any impacts regarding private airstrips have been discussed in Impact VII-e. There is no impact.

g) No Impact. The project does not cross any publicly accessed routes, and would not interfere with implementation of an emergency response plan or evacuation. There is no impact.

h) No Impact. The project site and the surrounding lands are in intensive agricultural production and are not considered wildlands. The area is routinely maintained for weed control. There is no impact.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Response:

a) Less Than Significant Impact. According to the Tulare County General Plan (2007) the assurance of water quality requires the review of major land uses and development plans to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from strorage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site. The project would not result in any of the above mentioned water quality deteriorating events. The impact is less than significant.

b) Less Than Significant Impact. The project site is located in the Tulare Lake Basin and is in an area significantly affected by overdraft. The Department of Water Resources (DWR) has estimated the groundwater by hydrologic region and for the Tulare Lake Basin, the total overdraft is estimated at 820,000 acre-feet per year, the greatest overdraft projected in the state, and 56 percent of the statewide total overdraft. Within the Kaweah Subbasin portion of the regional area it is estimated to be about 20,000 to 30,000 acre-feet per year. The District imports a significant amount of water from the Friant Unit of the Central Valley Project (CVP) to help offset this ongoing overdraft.

The project includes the construction of a 154-acre recharge basin which would recharge an average of 49 acre feet per day. No extraction wells would be constructed as a part of the project thus the project would result in a net increase in groundwater supplies. There would be a less than significant impact.

c) Less Than Significant Impact. Drainage patterns would change as a result of project buildout. Construction of the proposed groundwater recharge basin would consist of excavating six feet in depth and using the excavated materials to raise a six foot berm around each of the three basins. Each of the three cells would have a turnout constructed from the Main Canal. Implementation of erosion control measures described by the Tulare County Development Standards and mandated in the Stormwater Pollution Prevention Program would minimize any potential impacts to less than significant.

d) Less Than Significant Impact. Any impacts regarding the alteration of drainage patterns to increase runoff water that would potentially induce flooding have been discussed in the impact analysis for Impact VIII-c.

e) Less Than Significant Impact. Any impacts regarding the creation or contribution to runoff water that would potentially exceed the capacity of existing stormwater drainage systems have been discussed in the impact analysis for Impact VIII-c.

f) Less Than Significant Impact. Any impacts to water quality have been discussed in the impact analysis for Impact VIII-a.

g) No Impact. According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) for Community Number 065066 0650 C dated October 6, 1998, Panel No. 650, the project site is located within Zone B, outside of the 100-year flood plain. There would be no impact with regards to flood related events.

h) No Impact. Any impacts regarding the placement of structures in a 100-year flood hazard area that would impede or redirect flood flows have been discussed in the analysis of Impact VIII-g.

i) No Impact. The dam potentially affecting the project site, Terminus Dam, is approximately 20 miles to the northeast of the project site. According to the United States Army Corps of Engineers the inundation flow from dam failure would not affect the project site. There would be no impact.

j) No Impact. Due to the lack of a significant water body near the project site, there would be no potential for seiche or tsunami to occur. There would be no impact.

IX. LAND USE AND PLANNING **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Response:

a) No Impact. The project is located in a rural agricultural setting, approximately four miles north of the City of Visalia and approximately five miles southwest of the City of Tulare in Tulare County; however, the project will not physically divide these or any other established community. There is no impact.

b) No Impact. According to the California Government Code §51238 (a)(1) the construction of water facilities are determined to be compatible uses within any agricultural preserve. The project would include the construction of facilities to be used by the Tulare Irrigation District for the purposes of increase the efficiency with which TID delivers water to agricultural operations. There is no impact.

c) No Impact. There are no adopted habitat conservation plans or natural community conservation plans in the area of the project, therefore there is no impact.

X. MINERAL RESOURCES **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Response:

a) No Impact. According to the Tulare County General Plan Policy Summary (2001) no known mineral resources have been found in the vicinity of the project site thus the project would not result in the loss of an available known mineral resource. There is no impact.

b) No Impact. The project site is not delineated on a local land use plan as a locally important mineral resource recovery site, therefore, the existence of the project would not result in the loss of availability of any mineral resources. There is no impact.

XI. NOISE **Would the project result in:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Response:

a) Less than Significant Impact. The project would involve temporary noise sources associated with general construction activity. Typical construction equipment would include scrapers, backhoes, drilling rigs and miscellaneous equipment (i.e. pneumatic tools, generators and portable air compressors). Typical noise levels generated by this type of construction equipment at various distances from the noise source are listed in Table 4 below:

Table 4
Typical Construction Noise Levels

Construction Equipment Noise Source	dBA at 50 ft	dBA at 100 ft	dBA at 1.0 mile
Pneumatic tools	85	79	45
Truck (e.g. dump, water)	88	82	48
Concrete mixer (truck)	85	79	45
Scraper	88	82	48
Bulldozer	87	81	47
Backhoe	85	79	45
Generator	76	70	36
Portable air compressor	81	75	41

Source: Borba Farms Dairy EIR, BASELINE Consulting, 1999, Cunniff 1977

Noise levels generated by the equipment would range from 76 to 88 dBA at a distance of 50 feet from the noise source; at 100 feet, the noise levels would range from 70 to 82 dBA. Noise from construction activities would not exceed the Tulare County General Plan (2007) noise standards of 60 dBA at the exterior of nearby residences, approximately 2,640 feet away from the project site. The impact is less than significant.

b) Less than Significant Impact. The Federal Railway Administration (FRA) and the Federal Transmit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 0.5 peak particle velocity (PPV) without experiencing structural damage (FRA, 1998). The FTA has identified the human annoyance response to vibration levels as 80 root mean square amplitude (RMA) (FTA, 1995).

The project would involve temporary vibration sources associated with general construction activity. Typical vibration levels generated by generic construction equipment a distance of 50 feet from the vibration sources are listed below:

Construction Equipment Noise Source	PPV at 50 ft (inches/second)	RMS at 50 ft
Large Bulldozer	0.031	81
Caisson drilling	0.031	81
Loaded trucks	0.027	80

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, April 1995.

Vibration from construction activities would not exceed the FTA or FRA threshold for the nearest residence, approximately 2,640 feet away from the project site. The impact is less than significant.

c) Less than Significant Impact. Upon completion of construction activities, the majority of project operational activity would be passive and would include the movement of water through pipes. Potential noise sources resulting from project implementation include noise associated with vehicular trips for maintenance/repair activities. Maintenance would involve activities such as clearing debris and dredging recharge basins and vegetation management activities. Maintenance activities would occur infrequently and are not expected to substantially increase ambient noise levels in the area above existing levels without the project. The impact would be less than significant.

d) Less Than Significant Impact. Any impacts regarding the temporary increase in ambient noise levels have been discussed in the analysis of Impact XI-a. The impact is less than significant.

e) No Impact. The project is not located within an airport land use plan. There are three airports located within a 10 mile radius of the project site: Mefford Field – 6.6 miles to the southwest; Visalia Municipal Airport – 7.3 miles to the northwest; and Thunderhawk Field – 7.2 miles east of the project site. The project is not located within a noise contour of these airports; therefore, the project would not expose residents or employees to noises associated with public or private airport use. There would be no impact.

f) No Impact. Any impacts regarding the noise levels associated with private airstrips have been discussed in Impact XI-e. There would be no impact.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
XII. 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Response:

a) No Impact. According to the City of Tulare's Urban Water Management Plan (2005) the City has established policy to recharge 10 to 15,000 acre feet per year. The portion of water recharged by the City is to offset its portion of the state of overdraft within the Kaweah Subbasin and will not induce population growth. The District's intent of the recharge basin is to conserve wet year water supplies, and not contribute to population growth. There is no impact.

b) No Impact. No housing or people would be displaced by the project. There is no impact.

c) No Impact. Any impacts regarding the displacement of people have been discussed in Impact XII-b. There is no impact.

XIII. PUBLIC SERVICES	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Response:

a) No Impact. The project would not rely on the addition or alteration of any public services. The subject site is within the County of Tulare and would receive needed services from existing agencies and departments. There would be no impact.

Fire Protection – The project area is located within the Tulare County Fire Department (TCFD) and is serviced by the Visalia Fire Station #1. No residential or commercial construction is identified with this project and no change in existing land use is associated with this project, therefore, no additional services would be required from the TCFD. There is no impact.

Police Protection – The District is located in the Tulare County Sheriff's Department law enforcement services and is serviced by the Tulare County Headquarters, located in Visalia. As discussed in Impact XIII-a, no residential or commercial construction or change in existing land use is proposed in this project. The project would not impact existing law enforcement services.

Schools – The project site is within the Liberty Elementary School District and the Tulare Union High School District; however, as discussed in Impact XIII-a, the project would not include construction of any residential structures, nor change the existing land use. The project would not result in an increase of population that would require additional school facilities. There is no impact.

Parks - The project site is located within the Tulare County RMA Parks and Recreation Branch. State law requires each new residential development to dedicate land for park facilities or pay an in-lieu fee to cover the cost of acquiring park land elsewhere; however, this project involves the recharge of groundwater utilizing the existing and new infrastructure. The project will not create a need for additional park or recreational services. There is no impact.

Other public facilities – The proposed improvements would better serve the District by increasing the groundwater recharge potential within the District via a new recharge facility. There is no impact.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
XIV. RECREATION				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Response:

a) No Impact. As discussed in Impact XIII-a, the project will not increase the demand for recreational facilities nor put a strain on the existing recreational facilities. There is no impact.

b) No Impact. The project does not include the construction or expansion of recreational facilities. There is no impact.

XV. TRANSPORTATION/TRAFFIC **Would the project:**	Potentially Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	Significant No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Response:

a) Less than Significant Impact. The project will consist of the construction of a groundwater recharge basin and does not require construction of any new roadways. The project location is adjacent to current District facilities (Creamline Basin) which receives regular maintenance, therefore, no additional trips would be

needed for maintenance activities at the Plum Basin project site. Typical construction traffic would be temporary in nature. The permanent impact to local roadways would be less than significant.

b) No Impact. The project does not require construction of any roadways, and would not generate new trips for operation. As the project would not generate any new traffic, it would not contribute to congestion on the local roadways. There is no impact.

c) No Impact. As the project is not in the vicinity of an airport, the project would not cause an increase in air traffic levels or cause a change in air traffic location. There is no impact.

d) No Impact. No roadway design features are associated with this project and there is no change in the existing land use which would result in an incompatible use. There is no impact.

e) No Impact. No roads would be modified as a result of this project; therefore, there is no impact to any emergency access.

f) No Impact. The project would not generate any additional traffic that would subsequently result in an increased need for parking. There is no impact.

g) No Impact. There are no adopted alternative transportation policies, plans, or programs in the project area. There is no impact.

XVI. UTILITIES AND SERVICE SYSTEMS **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Response:

a) No Impact. The project involves improving groundwater recharge capacities and recapturing efforts which will increase the District's ability to reliably deliver irrigation water to agricultural users within its boundaries during "dry" years. The project would not involve any change or increase in wastewater properties. There is no impact.

b) No Impact. As discussed in Impact XVI-a, operation of the project would not require additional water supplies nor would it generate any wastewater. There is no impact.

c) No Impact. The amount of runoff at the project site would not increase as a result of this project. Accordingly, no impact to storm water drainage capacity would occur. There is no impact.

d) No Impact. The project involves a groundwater recharge basin from water that is already allocated to the District pursuant to the terms of previous agreements. In years where additional water is available for purchase through the Central Valley Project, the District shall purchase for additional groundwater replenishment efforts of the Kaweah Subbasin. There is no impact.

e) No Impact. As discussed in Impact XVI-a, the project would not generate wastewater. There is no impact.

f) No Impact. Operation of the project would not generate any solid waste. There is no impact.

g) No Impact. Any Impacts regarding the generation of waste have been discussed in Impact XVI-f. There is no impact.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Response:

a) Less Than Significant Impact. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the project would have a less than significant effect on the local environment. The project includes the construction of a 154-acre recharge basin with three cells and appurtanences.

As described above, the potential for impacts to biological resources from the construction of TID groundwater recharge facility and continued operation would be less than significant with the incorporation of mitigation measures stated in the previous impact sections. Accordingly, the project would involve no potential for significant impacts through the degradation of the quality of the environment, 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 impact is less than significant.

b) Less Than Significant Impact. As discussed above, the project would result in less than significant impacts to biological resources with mitigation incorporation. The implementation of the identified project-specific mitigation measures and compliance with applicable codes, ordinances, laws and other required regulations would reduce the magnitude of any impacts associated with construction activities to a less than significant level.

c) Less Than Significant Impact. The project would not result in substantial adverse effects on human beings, either directly or indirectly. Mitigation measures are provided to reduce the project's potential effects on biological and cultural resources below the level of significance. No additional mitigation measures would be required. Adverse effects on human beings resulting from implementation of the project would be less than significant.

Chapter 4

REFERENCES

4 REFERENCES

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California Air Pollution Control Officers Association. CEQA and Climate Change, January 2008

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Federal Emergency Management Agency. Flood Insurance Rate Map. Community Number 065066, Panel 0650C. October 6, 1998.

Guide for Assessing and Mitigating Air Quality Impacts. San Joaquin Valley Air Pollution Control District. January 2002.

Tulare Irrigation District, District Profile, www.tulareid.org

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U.S. Fish and Wildlife Service. Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior To or During Ground Disturbance. June, 1999

Chapter 5

LIST OF PREPARERS

5 LIST OF PREPARERS

The following firms, individuals and agency staff contributed to the preparation of this document:

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130 N. Garden Street
Visalia, CA 93291

Attachment A

Groundwater Recharge Agreement

AGREEMENT REGARDING DELIVERY OF WATER TO CERTAIN GROUNDWATER RECHARGE FACILITIES

THIS AGREEMENT is made and entered into this 6th day of May, 2008, by and between TULARE IRRIGATION DISTRICT, an Irrigation District organized and existing pursuant to the laws of the State of California (hereinafter referred to as "District"), and the CITY OF TULARE, a Municipal Corporation of the State of California (hereinafter referred to as "City").

WITNESSETH

A. WHEREAS, District is a public entity engaged in the importation and delivery of water for irrigation purposes to landowners within the District; and

B. WHEREAS, City and District entered into an Agreement dated May 10, 2005 (the "Master Agreement"), which provides for the use by City of certain canal and ditch facilities owned and controlled by District for the purpose of disposing of storm drainage; payments by City in lieu of District assessments; an agreement to develop joint policies related to impacts of new urban development on District facilities; and an agreement to consider and enter into various joint projects; and

C. WHEREAS, City has determined that it is in City's interest to acquire water from District and to deliver such water to groundwater recharge basins in locations that will provide a groundwater recharge benefit to areas that serve City; and

D. WHEREAS, in addition to purchasing water, City has the need to acquire basins to which such water can be delivered; and

E. WHEREAS, City and District have entered into an agreement dated December 4, 2007, ("Joint Purchase Agreement") providing for the joint purchase of property located at the corner of Road 132 and Avenue 256, known as the "Plum Property", for the purpose developing such property to a groundwater recharge basin. The Joint Purchase Agreement establishes joint rights in the Plum Property. After execution of the Joint Purchase Agreement, the property has been acquired as envisioned; and

F. WHEREAS, the Joint Purchase Agreement obligates the parties to negotiate and enter into a subsequent agreement providing for the purchase of water by City and the delivery of such water to various City, District and joint City-District facilities; and

G. WHEREAS, the parties now desire to set forth their agreement regarding the obligation of District to deliver water to various facilities, and the obligation of the City to pay the costs of such delivered water.

NOW THEREFORE, the parties hereto covenant and agree as follows:

1. **Definitions.** The following terms, when appearing as capitalized terms elsewhere in this Agreement, shall have the following meanings:

"Agreed Facilities" shall mean all of those facilities described in Exhibit A attached hereto. City may identify in the future any City-owned property it believes would be beneficial to receive water pursuant to this Agreement, and with the consent of District, such facility shall be added to the Agreed Facilities list, subject the District maintaining its discretion for determining the timing and amount of water to be delivered to such City facilities.

"Average Annual Quantity" shall initially mean approximately 10,000 a.f., such amount to be increased proportionally if adjustments to City's jurisdictional boundaries consistent with the Master Agreement results in more land being included within City boundaries or if the City increases its groundwater extractions from City-owned wells. Said Average Annual Quantity is to be annually derived in accordance with a formula as defined in Exhibit B attached hereto.

"Credited Water Balance" is defined as the amount of water, in acre feet, calculated by determining the total cumulative water delivered by District during the five year period immediately preceding the date of calculation, and subtracting from that amount the sum of the Average Annual Quantity for each of the previous five years or the number of years this Agreement has been in effect, whichever is less. By way of example only and not by limitation, assuming 55,000 acre feet have been delivered to the Agreed Facilities during the past five years, and assuming that the Average Annual Quantity in effect through the past five years is 10,000 acre feet, the Credited Water Balance would be equal to: 55,000 a.f. – (10,000 a.f. * 5); or 55,000 a.f. – 50,000 a.f.; or +5,000 a.f.

2. **Obligation to Deliver Water.** District hereby agrees to deliver on an annual basis a certain average quantity of water, defined above as the Average Annual Quantity, to the facilities defined above as the Agreed Facilities. District shall be responsible for determining, with the advice and consent of City, the manner and location of the water to be delivered, and shall not be

required to deliver all or any percentage of the water to be delivered to any particular basin, including the basin to be constructed by City and District jointly on the Plum Property. District shall endeavor to ensure that the Credited Water Balance, as annually reported pursuant to the provisions of paragraph 3 below, remains greater than or equal to zero. The purpose of the Credited Water Balance calculation is ensure that a total of 10,000 acre-feet of water is delivered on a rolling five year average annual basis, recognizing that water conditions will allow for more water to be delivered in some years and less in other years. The Credited Water calculation and accounting is not intended to establish a "water bank" or in any other way establish a right to the amount of water calculated through the Credited Water accounting system.

3. **Accounting for Delivered Water.** District shall, by October 31st each year, document and provide an annual summary of the water deliveries made pursuant the Water Purchase Agreement, and shall endeavor to document estimates of groundwater recharge benefits that resulted from or are anticipated to result from such water deliveries. As part of such annual summary, District shall calculate the Credited Water Balance according to the formula defined above.

4. **Timing of Water Deliveries.** Water deliveries shall occur only during those times when water is available to District for delivery, and can be recharged into the Agreed Facilities. To the extent that District makes deliveries to any of the Agreed Facilities that are under the City's control ("City's Facilities"), District shall provide an anticipated schedule of such deliveries and flow rate with reasonable advance notice to City for approval, and District shall not cause water to flow into any such City's Facilities without City's consent.

5. **Water Charges.** City shall pay a unit water delivery charge associated with such delivered water that is equal to the water charge paid by District for its Central Valley Project Class 2 contract supply. Such payment shall be made annually and shall be based on the then-current Average Annual Quantity.

6. **Water Source & Quality.** District reserves the right to determine the source of the water from which deliveries will be made to satisfy this Agreement. District does not guarantee the quality of water delivered pursuant to this Agreement; District agrees that such water shall be of a similar quality to water District delivers to other users from the Friant-Kern Canal or the Kaweah River.

7. **District's Obligations Contingent Upon Continuation of US-District Contract, Etc.** District's obligations to deliver water to the Agreed Facilities pursuant to this Agreement are contingent upon, and subject to, the continuing existence of **(i)** a contract between the United States government (or agency thereof) and District for the provision of water from the Central Valley Project via the Friant-Kern Canal, or **(ii)** a contract or entitlement otherwise affording District sufficient water to meet its obligations pursuant to Section 5.

8. **Term.** The Water Purchase Agreement shall be in effect for as long as the City and District continue to abide by the terms of the Master Agreement.

9. **Representations and Warranties of Authority.** Each party represents to all other parties that such party has the full power and authority to enter into this Agreement, that the execution and delivery thereof will not violate any agreement to which such party is a party or by which such party is bound, and that this Agreement, as executed and delivered, constitutes a valid and binding obligation of such party, enforceable in accordance with its terms. The corporate, partnership, and association signatories to this Agreement expressly warrant that they have been authorized by their respective company, partnership, or association entities to execute this Agreement and to bind them to the terms and provisions hereof. Any public agency signatory to this Agreement represents and warrants that the Agreement is executed in compliance with a resolution of the governing entity of the public agency, duly adopted by the governing entity and transcribed in full in the minutes of the governing entity. Any individual signing this Agreement on behalf of a public agency represents that she/he has full authority to do so.

10. Duty to Cooperate. Each party shall cooperate so as to facilitate the other party's efforts to carry out its obligations under this Agreement.

11. Successors and Transferees. The obligations and benefits of this Agreement do not run with the land, and are personal to the City and the District and are not assignable or transferable.

12. Entire Agreement. This Agreement constitutes the entire agreement between the parties, and it is expressly understood and agreed that the Agreement has been freely and voluntarily entered into by the parties with the advice of counsel, who have explained the legal effect of this Agreement. The terms of this Agreement are contractual and not mere recitals. The parties further acknowledge that no warranties, representations or inducements not contained in this Agreement have been made on any subject in connection with this Agreement, and that

they have not been induced to execute this Agreement by reason of non-disclosure or suppression of any fact. This Agreement may not be altered, modified or otherwise changed in any respect except by writing, duly executed by the parties or their authorized representatives. This Agreement is fully integrated.

13. Construction. The parties acknowledge that each party and its counsel have reviewed and revised this Agreement and that no rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall be employed in the interpretation of this Agreement.

14. Severability. In the event any of the terms, conditions or covenants contained in this Agreement is held to be invalid, any such invalidity shall not affect any other terms, conditions or covenants contained herein which shall remain in full force and effect.

15. Governing Law. California law shall govern the interpretation and enforcement of this Agreement.

16. Remedies. Any motion or other action by the parties to enforce this Agreement shall be filed or otherwise brought and adjudicated in the Tulare County Superior Court. The Tulare County Superior Court shall maintain and reserve jurisdiction of this action for the purpose of enforcing the terms of this Agreement as a judgment or order of the Court. Nothing in this paragraph shall be interpreted in a manner to preclude whatever rights the parties may have to appeal rulings of the Tulare County Superior Court. The parties otherwise retain the full range of legal and equitable remedies to enforce the terms of this Agreement, including injunctive relief and specific performance, to ensure the parties comply with their commitments under this Agreement. In any action to enforce this Agreement, each party shall be responsible for its own attorneys' fees and costs. The parties shall meet and confer and attempt to resolve their differences informally before commencing any action to enforce this Agreement.

17. Further Assurances. In addition to the documents and instruments to be delivered as herein provided, each of the parties shall, from time to time at the request of the other parties, execute and deliver to the other parties such other instruments of transfer, conveyance and assignment and shall take such other action as may be required to more effectively carry out the terms of this Agreement.

18. Time of the Essence. Time is expressly declared to be of the essence of this Agreement and of every provision hereof in which time is an element.

19. Captions. Paragraph titles or captions contained herein are inserted as a matter of convenience and for reference, and in no way define, limit, extend or describe the scope of this Agreement or any provision thereof.

20. Notices. Where required by this Agreement, notice shall be provided by regular mail or overnight delivery, and shall be considered made when deposited in U.S. or express mail.

21. Counterparts. The parties may execute this agreement in counterparts. The counterparts, if any, constitute a single agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement to be effective as of the date and year last below written.

CITY OF TULARE

"CITY"

By: _____ 5-7-08

Darrel L. Pyle — Date

City Manager

TULARE IRRIGATION DISTRICT

"DISTRICT"

By: _____ 6-10.2008

David G. Bixler — Date

President, Board of Directors

Attested

By: _____ 5/7/08

Chief Deputy City Clerk — Date

By: _____ 6/11/08

J. Paul Hendrix — Date

General Manager

Approved as to form and content.

By: _____ 5/6/08

S.L. Kabot — Date

City Attorney

Approved as to form and content.

By: _____ 6/11/08

Alex M. Peltzer — Date

District Counsel

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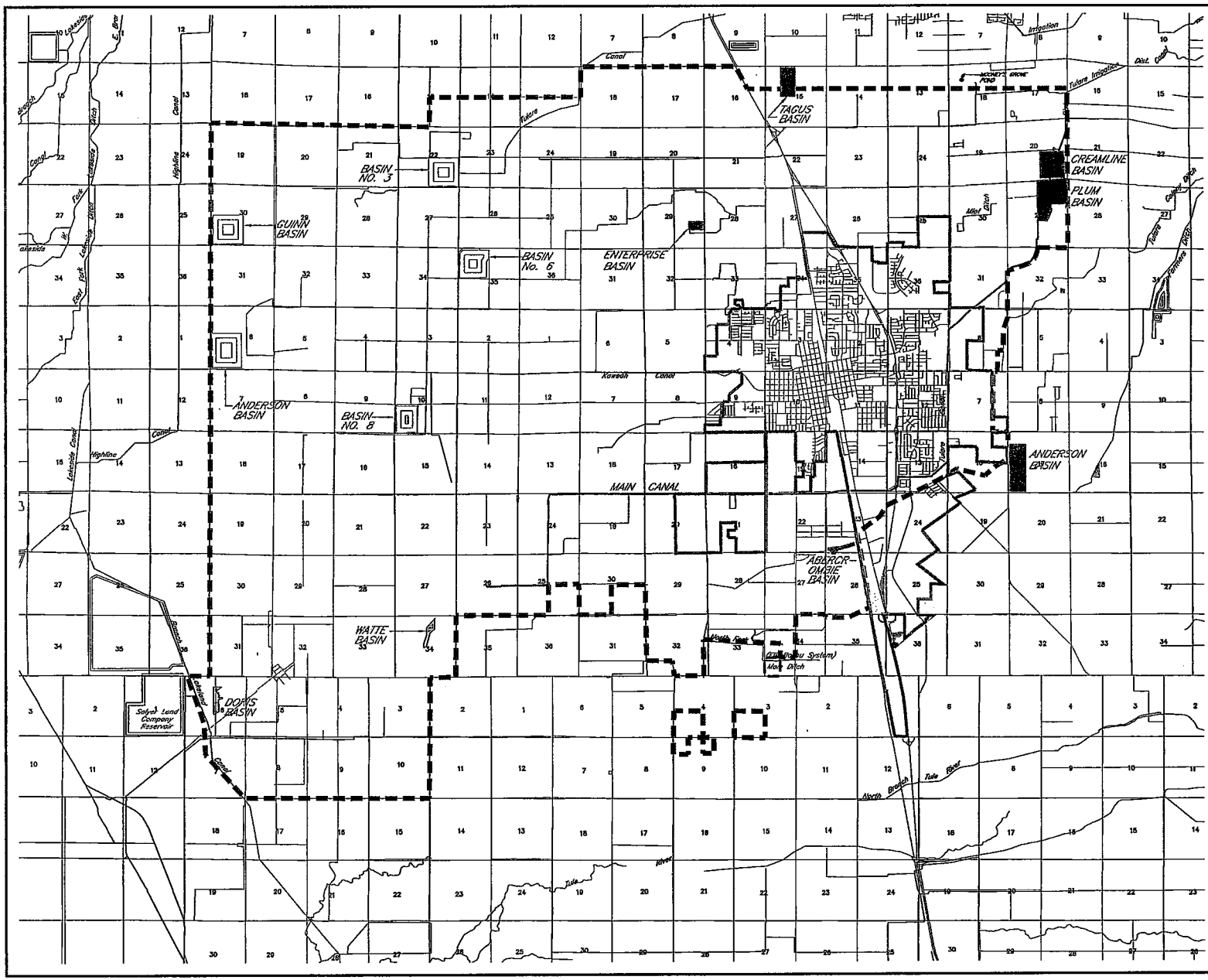
EXHIBIT A



LEGEND

- TULARE IRRIGATION DISTRICT SERVICE AREA
- CITY OF TULARE CITY LIMITS
- BASIN UTILIZED TO SINK WATER FOR CITY OF TULARE RECHARGE

NORTH

TULARE IRRIGATION DISTRICT

TID BASIN LOCATION MAP

TULARE IRRIGATION DISTRICT
FORMED IN 1887
1350 W. SAN JOAQUIN AVE.
TULARE, CA 93274
TEL: (559) 686-3425
FAX: (559) 686-3673
WEB: www.tularekl.org

Exhibit B
Calculation of Average Annual Quantity

For the purposes of the Agreement, the following parameters will apply:

Avg. surface water supply to TID water users: 60%[1]

Groundwater overdraft in Tulare region: 7,000 AF[2]

City annual groundwater pumping: City Use

District area: TID A

City area: City A

City share of total area: City A ÷ (TID A + City A)

Based on the foregoing parameters, the Average Annual Quantity shall be computed as follows:

Average Annual Quantity = 60% X City Use + (City A/(TID A+City A) X 7,000)

Example for 2007: 60% X 18,870 AF + (18.78 sq. mi./ (104.04 sq. mi. + 18.78 sq. mi.)X 7,000 AF) = 12,392 AF

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(1) Based on long-term TID surface water deliveries and crop water usage
(2) Per KDWCD "Water Resources Investigation Report" - April 2005

Attachment B

2006 Recharge Report

Tulare Irrigation District

Report on 2006 Water Management Operations
for
City of Tulare

Purpose:

The purpose of this report is to provide information regarding the District's 2006 water operations and how such operations have afforded a groundwater benefit to the City and surrounding environs. Such benefits are being sought by the City in order to improve groundwater conditions under the City area and are in furtherance of related goals and objectives of the City/District Joint Operations Committee.

Overview:

Experiencing the second wet year in a row (about 180% of average runoff in the southern Sierras), the District has diverted to-date about 293,000 AF for irrigation deliveries and groundwater recharge during the lengthy water run in calendar year 2006. This is nearly double the average-year diversion of about 150,000 AF. Of the total, about 146,000 AF was percolated to the underground, much of which by utilizing various recharge basins operated by, or accessible to, the District. To accomplish the sizable recharge and delivery operations, the District purchased 85,000 AF of additional water both under its own CVP contract and from others selling CVP or Kaweah supplies. Of the total recharge accomplished, about 32,300 AF was percolated in recharge basins providing direct and immediate benefit to the groundwater depression under the City. Also, additional CVP water was purchased over and above this year's recharge and delivery capability in order to carry over 10,000 AF for delivery in early winter 2007 to further both direct and in-lieu recharge operations.

Background:

One of the goals the Committee was charged with implementing was as referenced in Section 15 of the City-District Agreement, that being programs to further groundwater recharge in the Tulare area. Early in 2006 the Committee conferred on this topic and discussed possible programs. These included (a) long-term projects which would include ways to expand upon and build groundwater recharge facilities, and (b) short-term programs such as establishment of a City groundwater augmentation fund to provide financial assistance to the District in its purchase of imported water for groundwater replenishment. See "City Groundwater Augmentation Program," included as Attachment A, for a summary of the intended objectives and funding basis for this program as reviewed by the Committee. The Committee determined, and the City Council and District Board both concurred, that a program to secure

about 9,000 to 10,000 AF on average of imported water for recharge deliveries in a manner to demonstrate benefits to the City would be pursued.

District Purchase of Additional Water for Recharge:

The District aggressively pursued the purchase of additional water supplies this year, both to provide water for recharge operations and to extend the District's irrigation run well into September (to reduce farmer pumping from the underground). Surplus water was available this year and the District, under its CVP contract, purchased 63,000 AF of such surplus water. An additional 15,000 AF of CVP water and 5,000 AF of Kaweah water was also purchased from others for these purposes.

Program with KDWCD:

The District also purchased an additional 24,500 AF of CVP water for exchanges with, and deliveries by, KDWCD. This program enabled KDWCD to import more water into the Kaweah basin, thereby reducing the pumping demands on groundwater.

District Recharge Basin Deliveries:

Of the total 146,000 AF recharged to the underground during this year's extensive water run, about 32,300 AF was directed into recharge basins within the District providing a direct benefit to City groundwater extraction operations. See the map in Attachment B showing these basins and the estimated quantities of water delivered to each. Also depicted on the map are the groundwater elevation contours in and around the City. These contours indicate that, because of the pumping depression under much of the City, all such basins utilized in this 2006 program provide a benefit to the City. Groundwater pressure gradients direct water recharged in all such basins towards the City and its groundwater well field.

Other Recharge Basin Deliveries:

In addition to District-operated basins, several others located within the Farmers Ditch Co. system east of the City were utilized. These also are shown in Attachment B. The District arranged for the diversion of 2,600 AF directed to recharge deliveries into these basins. A series of Kaweah/CVP exchanges and acquisition of additional Kaweah water made this joint program with Farmers Ditch Co. possible.

Water Secured for Winter 2007:

By intention, the District purchased more CVP and Kaweah water than its operational capacity could fully utilize through the spring and summer irrigation run, which extended to the end of September. After cessation of the run, 10,000 AF of CVP water has been retained for delivery during the January – February period next year. This water will be used to both provide for a pre-irrigation run for farmers as well as for groundwater recharge. Should the winter be wet and demands commensurately

low, all of the water would be devoted to recharge operations. A portion of this recharge will be planned for the aforementioned basins providing benefits to the City.

Groundwater Level Changes:

The graph shown on Attachment C depicts recent changes in groundwater levels, comparing depth to water in the fall of 2006 with the fall of 2005. The general trend in Section 1, within which lies the City, is an upward gain of about 10 feet during that time period. Farther west in Sections 2 and 3, the data indicate that groundwater levels have risen 13 to 16 feet during the same time period. Differences among the sections is probably due to several factors, including movement of upstream recharge waters down-gradient over time, possible impacts of the pumping depression under the City, and confined aquifer v. unconfined aquifer readings as among the various well data collected.

City water supply well data for this same time period indicate a similar trend, showing an increase of about 6 feet. Such data, however, do not represent "static" levels but, rather, reflect water levels generally during drawdown conditions at the wells since the City well field is extracting water generally on a year-around basis.

Proposed Financial Contribution by City:

Based on earlier discussions held by the Committee, there was consensus that the City could be said to be on par with District water user pumpers if, on average, the City enabled an additional 9,000 to 10,000 AF of surface water to be recharged to the underground. Furthermore, the most immediate benefits to the City would be achieved if such recharge were conducted "up gradient" from the City's well field. Based on the District's unit cost (ranging from about $20 to $30 per AF) to import surplus water for diversion into the Kaweah basin, a cost reimbursement in the range of $200,000 to $300,000 was discussed by the Committee as justifiable in light of the average surface water quantities needed to achieve parity with adjacent District water user operations.

The consensus of the Committee was that a significant payment would be supportable this year given the wet rainfall/runoff conditions that developed and the potential for substantial groundwater recharge by the District. Given the sizable importation of 85,000 AF and the attendant ability of the District to accomplish significant gains in groundwater recharge (about 32,000 AF of which has been described as providing a direct benefit to the City), the District concludes that a payment in the order of $250,000 to be fully supportable by the accomplishments as summarized herein.

Attachments

Attachment A

City Groundwater Augmentation Program

Concept: City buys, through the District, imported CVP water targeted for recharge in existing basins that provide direct underground benefits to City

Basis for City Imported Water Purchases:

- Relative acreage – City v. District
  8,000/(8,000 + 63,000) = 11% 0.11 X 80,000 CVP avg. = 9,000 AF/yr
- Avg. surface water for District farmers (60%) as surrogate + share of remaining overdraft
  0.6 X 15,000 City pumping + 0.11 X 7,000 overdraft = 10,000 AF/yr
- Purchase quantity dictated by available capacity in existing basins and proximity to City perimeter

Recharge Locations:

- District basins – Creamline, Tagus, Abercrombie, Enterprise
- Shannon, Anderson Basins (via Farmers DC canal system)
- Possible program with County at Mooney Grove Park (fed by District canal)

Water Sources:

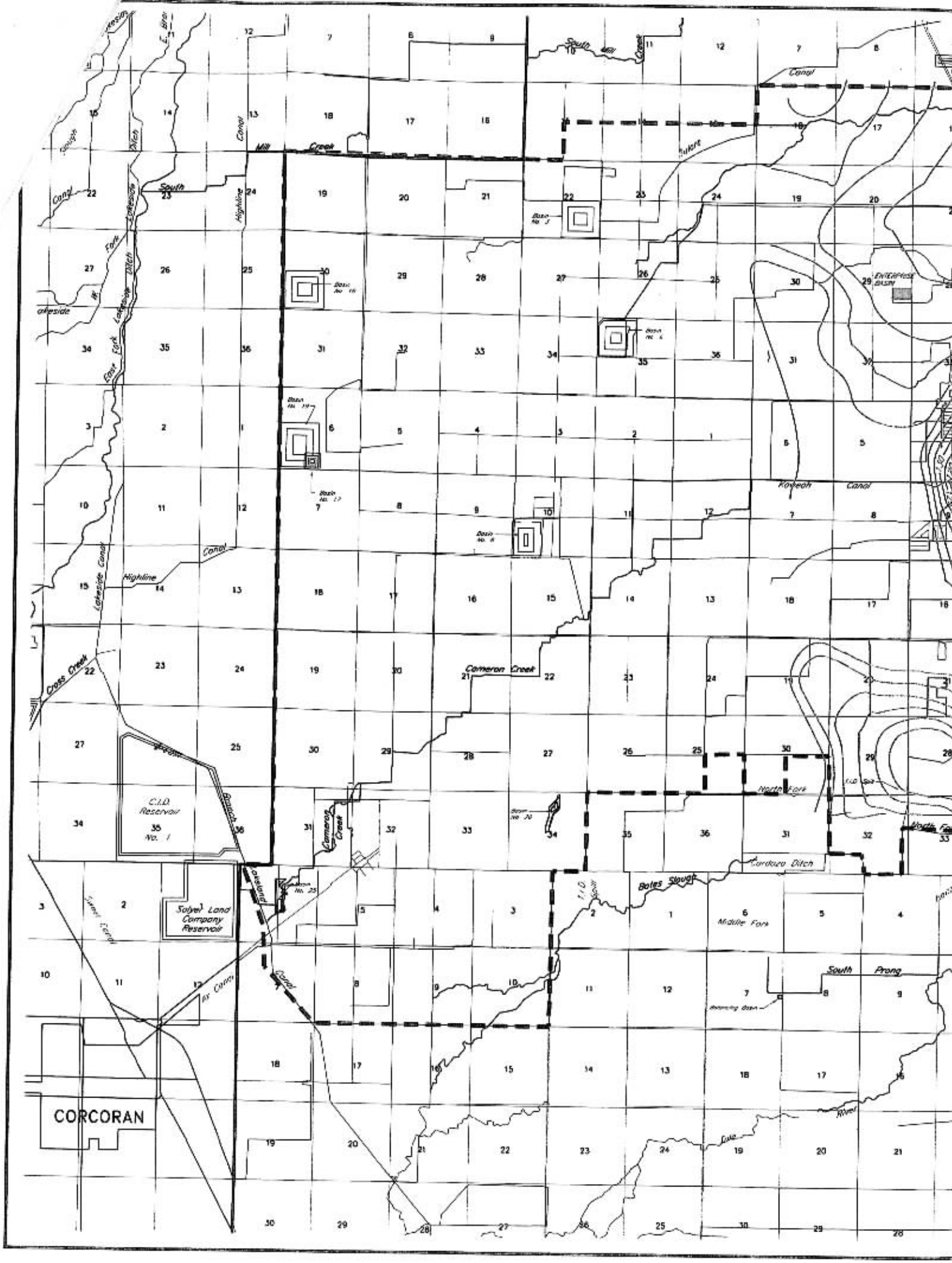
- CVP from TID Contract – Class 2 or Section 215, both of which are intended for recharge operations. Class 2 price currently at $26/AF; Section 215 price at $12 to $26/AF. Contract prices escalate over time.
- Kaweah River – May be times during which additional Kaweah water could be purchased to fill local basins.

Possible Fee Collection Mechanisms:

- Average annual – e.g., CVP Class 2 rate X fixed water quantity
- Variable based on District diversion devoted to recharge each year. Studies should demonstrate that amount collected is sufficient to cover avg. target amount.
- Fee collection begins at reasonable start-up level with full collection within 2 to 3 years

Fund Accounting:

- Separate District revolving fund, used only for additional Class 2/Sec. 215 water purchases for deliveries to targeted basins. Annual fund report to City, accompanied by operations report depicting benefits (e.g., amount recharged, estimated reduction in depth to groundwater, etc.)


Mill Creek
South Mill Creek
Canal
Highline Canal
Lakeside Ditch
East Fork
Lakeside Canal
Cross Creek
Cameron Creek
Kaweah Canal
C.I.D. Reservoir No. 1
Solyel Land Company Reservoir
Cordoza Ditch
Bates Slough
Middle Fork
South Prong
North Fork
CORCORAN

Attachment C

URBEMIS Output Files

12/10/2008 2:58:47 PM

Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: V:\Clients\Tulare ID-1248\124808V1-Plum Basin_DOCUMENTS\CEQA\plum basin output files.urb924

Project Name: Plum Basin

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5
2009 TOTALS (tons/year unmitigated)	0.09	0.70	0.77	0.04	0.81	0.16	0.03	0.19

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	PM10	PM2.5
TOTALS (tons/year, unmitigated)	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	PM10	PM2.5
TOTALS (tons/year, unmitigated)				

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	PM10	PM2.5
TOTALS (tons/year, unmitigated)	0.00	0.00	0.00	0.00

Attachment D

Cultural Records Letter

Center for Archaeological Research
California State University, Bakersfield
9001 Stockdale Highway, 24 DDH
Bakersfield, CA 93311

661-654-3297 office
661-654-2143 fax

October 7, 2008

Jenni Byers
Provost & Pritchard Engineering Group
1800 30th Street, Suite 280
Bakersfield, CA 93301-1918

Re: Record Search Results for the Tulare Irrigation District Project, Tulare County, California (CAR Project No. 09-22)

Dear Ms. Byers,

Per your request, a cultural resources records search (RS# 08-320; CAR Project No. 09-22) was conducted for the above-referenced project on September 30, 2008, at the Southern San Joaquin Valley Historical Resources Information Center at California State University, Bakersfield. The Project Area is located on approximately 170 acres in the NE ¼ of Section 29, T19S, R25E on the Visalia CA 7.5' and the Tulare, CA 7.5' USGS Topographic Quadrangle, northeast of the city of Tulare, Tulare County, California.

The results of the records search showed that no surveys have been performed on or adjacent to the Project Area. No archaeological or historical sites have been recorded within the Project Area. Two surveys have been performed within one-half mile radius of the Project Area (Benté *et. al*. 1995 and Wickstrom and Anderson 1997), but results were negative for archaeological or historical resources (see Figure 1). No archaeological or historical sites have been recorded within a one-half mile radius of the Project Area. Two surveys have been performed within one-half to one mile radius of the Project Area (Cantwell 1976 and Schmidt 2001). No archaeological or historical sites have been recorded within one-half to one mile radius of the Project Area.

The records search included an examination of the *National Register of Historic Places, the California Register of Historical Resources, California Points of Historical Interest, California Inventory of Historic Resources*, *California State Historic Landmarks Registry,* and the HRIC files of pertinent historical and archaeological data.

The Project Area has not been surveyed and as such, the possibility remains that resources do exist there and may be identifiable at this time. We recommend that the Project Area be surveyed by a qualified archaeologist.

The invoice for this records search will follow. If you have any further questions or concerns, please feel free to contact me at 661-654-6161 or by email at rorfila@csub.edu.

Sincerely,

Rebecca S. Orfila, M.A., RPA
Assistant Director

REFERENCES

Benté, Vance, Brian Hartoff, Barb Voss, Sharon Waechter, and Stephen Wee
1995 Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project. Report on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield.

Cantwell, R. J.
1976 Archaeological Survey Report: New Tulare County Pest Control Facility, Road 140 and Ave. 256. Report on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield.

Schmidt, James J.
2001 S.C.E. Tulare Deteriorated Pole Replacement Project: Phase I: Tulare County. Report on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield.

Wickstrom, Brian and Emily Anderson
1997 Cultural Resource Inventory for the Selma to Bakersfield Fiberoptic Line, Southern San Joaquin Valley, California. Report on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield.

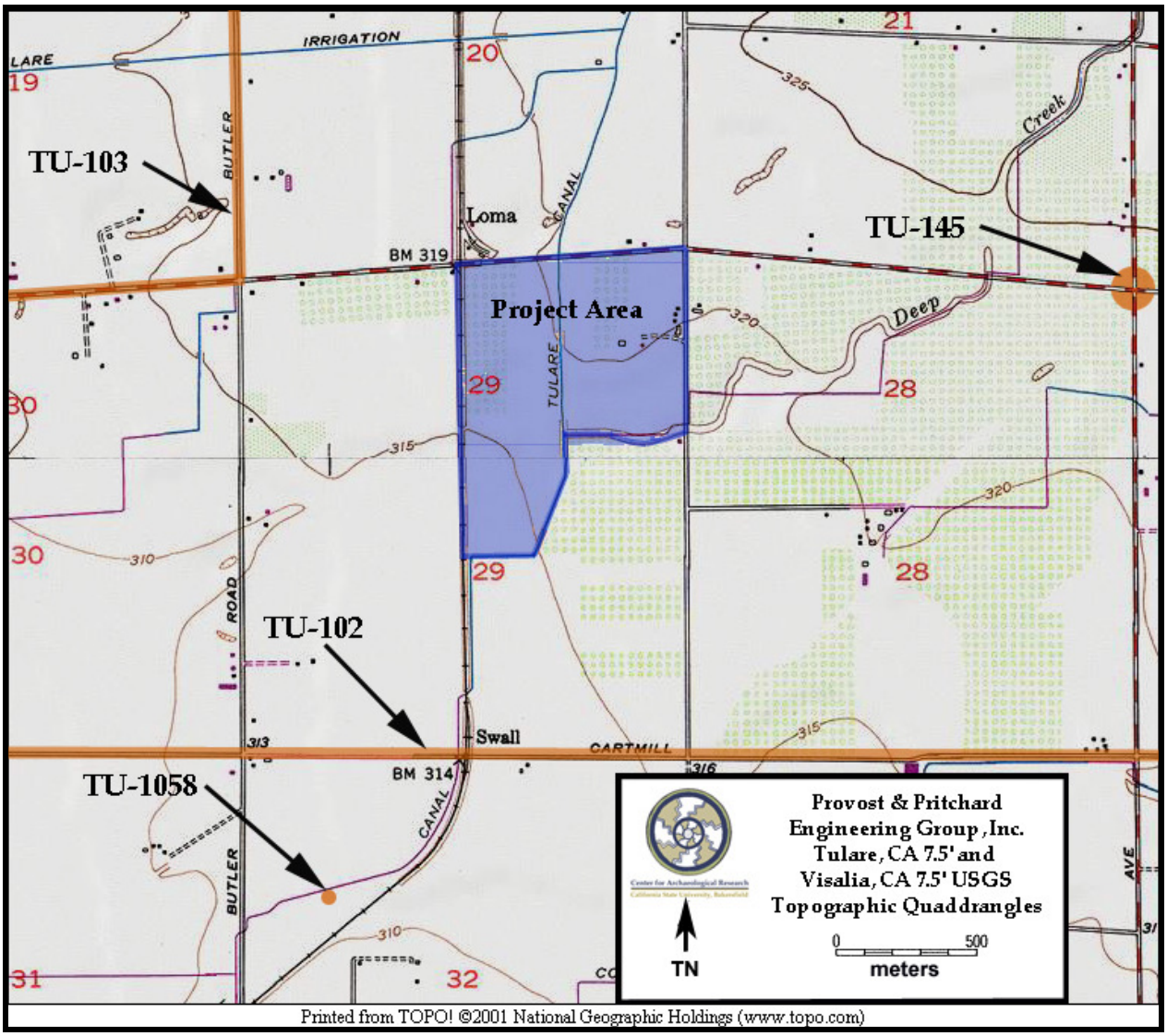


Fig. 1. Project Area shown in blue, while previous surveys shown in orange. Adapted from Visalia, California, 7.5' and Tulare, California, 7.5' USGS Topographic Quadrangle.

Appendix B – Biological Resources Supporting Documents

U.S. Fish & Wildlife Service

Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 100210110402

Database Last Updated: December 1, 2009

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus
delta smelt (T)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana aurora draytonii
California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila
blunt-nosed leopard lizard (E)

Thamnophis gigas
giant garter snake (T)

Mammals

Dipodomys nitratoides exilis
Fresno kangaroo rat (E)

Dipodomys nitratoides nitratoides
Tipton kangaroo rat (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Caulanthus californicus
California jewelflower (E)

Pseudobahia peirsonii
San Joaquin adobe sunburst (T)

Quads Containing Listed, Proposed or Candidate Species:

CAIRNS CORNER (310B)
TULARE (311A)
PAIGE (311B)
EXETER (333C)
GOSHEN (334C)
VISALIA (334D)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We

recommend that your surveys include any proposed and candidate species on your list. See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals

on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 11, 2010.

Common Name	***Scientific Name***	***Status[1]***	***Effects[2]***	***Occurrence in the Study Area[3]***
Amphibians				
California red-legged frog	*Rana aurora draytonii*	T	NE	**Absent.** No individuals or habitat in area of effect.
California tiger salamander, central population	*Ambystoma californiense*	T	NE	**Absent.** No individuals or habitat in area of effect.
Birds				
Swainson's hawk	*Buteo swainsoni*	P	NE	**Present.** CNDDB[4] records do not indicate this species occurs in Project Area but habitat is present.
Fish				
delta smelt	*Hypomesus transpacificus*	T	NE	**Absent**. No natural waterways within the species' range will be affected by the proposed action.
Invertebrates				
valley elderberry longhorn beetle	*Desmocerus californicus*	T	NE	**Absent.** No individuals or habitat in area of effect.
vernal pool fairy shrimp	*Branchinecta lynchi*	T	NE	**Absent.** No individuals or vernal pools in area of effect.
vernal pool tadpole shrimp	*Lepidurus packardi*	E	NE	**Absent.** No individuals or vernal pools in area of effect.
Mammals				
Fresno kangaroo rat	*Dipodomys nitratoides exilis*	E	NE	**Absent.** No individuals or vernal pools in area of effect.
San Joaquin kit fox	*Vulpes macrotis mutica*	E	NE	**Possible**. CNDDB records indicate this species occurs within 10-mile radius of the project area. The area could possibly be used for denning or as foraging habitat. TID shall implement environmental protective measures as described in
Tipton kangaroo rat	*Dipodomys nitratoides nitratoides*	E	NE	**Absent.** No individuals or habitat in area of effect. Disturbed agricultural lands do not provide
Plants				
California jewelflower	*Caulanthus californicus*	E	NE	**Absent.** CNDDB records indicated this species is extirpated from area.
San Joaquin adobe sunburst	*Pseudobahia peirsonii*	T	NE	**Absent.** CNDDB records indicated this species is believed extirpated from area. Not expected to occur close enough to croplands to colonize bare soil.
Reptiles				
blunt-nosed leopard lizard	*Gambelia sila*	E	NE	**Absent.** No individuals or habitat in area of effect.

giant garter snake	*Thamnophis gigas*	T	NE	**Absent.** Species believed to have been extirpated from Tulare Basin.

1 Status= Status of species protected under federal Endangered Species Act
E: Listed as Endangered under the federal Endangered Species Act
P: Protected under the Migratory Bird Treaty Act
T: Listed as Threatened under the federal Endangered Species Act
2 Effects = Effect determination
NE: No Effect anticipated from the Proposed Action to federally listed species
3 Definition Of Occurrence Indicators
Present: Species recorded in area and habitat present
Possible: Species recorded within a 10-mile radius of Project Area and if habitat present, of marginal quality
Absent: Species not recorded in study area and/or habitat requirements not met
4 CNDDB = California Natural Diversity Database 2010