BUREAU OF RECLAMATION

Henry Miller Reclamation District #2131 High Groundwater Mitigation 25-Year Transfer Program

CGB-ED-2025-059
Draft Environmental Assessment

U.S. Department of the Interior

March 2025

Mission Statements

The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated 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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Section 1. Introduction

Executive Order 14154, Unleashing American Energy (Jan. 20, 2025), and a Presidential Memorandum, Ending Illegal Discrimination and Restoring Merit-Based Opportunity (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. Reclamation verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum.

The San Joaquin River Exchange Contractors (Exchange Contractors), which includes Central California Irrigation District, Firebaugh Canal Water District, San Luis Canal Company/Henry Miller Reclamation District #2131 and Columbia Canal Company, hold historic senior water rights to water supplies in the San Joaquin River watershed. In exchange for the Central Valley Project's (CVP's) regulation and diversion of the San Joaquin River water at Friant Dam, Reclamation agreed to provide water to the Exchange Contractors from the CVP's Sacramento-San Joaquin Delta supply.

San Luis Canal Company (SLCC or Company) is one of the four San Joaquin River Exchange Contractors with historical water rights off of the San Joaquin River. The Company, jointly with Henry Miller Reclamation District #2131 (HMRD) encompasses approximately 47,000 acres of irrigable land primarily in Merced County. Under normal hydrology, SLCC receives their water from Reclamation under the agreed upon Exchange Contract. The water originates from Shasta Dam, is conveyed down the Sacramento River into the Sacramento-San Joaquin River Delta, and then pumped at Jones Pumping Plant into the Delta Mendota Canal (DMC). The water is then transported down the DMC, into the Mendota Pool and then down the San Joaquin River and into the Arroyo Canal.

Organizationally, SLCC is a private mutual water company retaining the water rights through the Exchange Contractors and HMRD is a California public agency formed as a reclamation district. For the purpose of this environmental evaluation, SLCC and HMRD are functionally equivalent and interchangeable.

HMRD's delivery system consists of canals, drains, low lift pumps and regulating reservoirs that incorporate the following water types: (1) Reclamation surface water (2) tailwater generated within SLCC boundaries (3) HMRD #2131 Groundwater wells (4) SLCC Landowner private Groundwater wells.

SLCC's proposes to transfer up to 10,000 acre-feet per year (AFY) of its CVP water supply to state and federal water and irrigation districts as well as private, state and federal refuges including; San Joaquin Valley Wildlife Refuges, Tulare Lake Basin Wildlife Refuges, and other CVP contractors including but not limited to Friant Division and San Luis Unit CVP contractors, State Water Project contractors including but not limited to Kern County Water Agency, Valley Water (CVP/SWP Water), East Bay Municipal Utility District, Contra Costa Water District and Pajaro

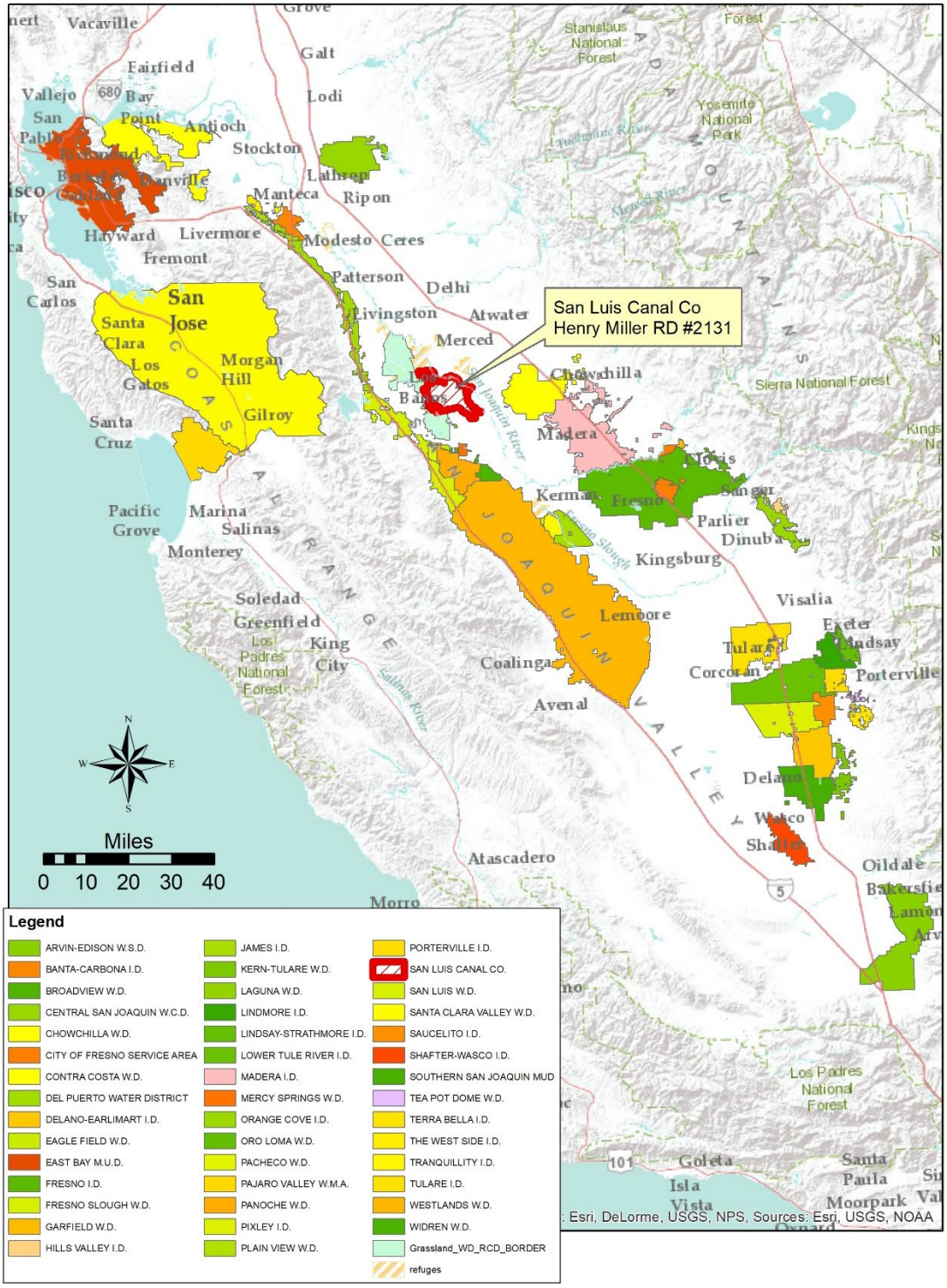
Valley Water Management Agency (collectively; Transfer Recipients). SLCC would make this water available through water conservation and shallow groundwater pumping program that would conserve an equivalent volume within the Company's service area.

1.1 Purpose and Need for the Proposed Action

The Proposed Action addressed two critical needs, one local, and one region wide. Growers within HMRD are plagued by shallow groundwater conditions, with the depth to groundwater in some areas less than 18 inches. These conditions reduce crop yields, restrict the planting of permanent crops, and, in some areas, create a subsurface drainage issue that must be managed at significant cost. On a region-wide scale, the State of California has experienced unprecedented water management challenges due to severe drought in recent years. South of Delta CVP contractors, such as the Transfer Recipient Districts, experienced reduced water supply allocations from 2007 to 2022 due to hydrologic conditions and regulatory requirements. In 2020, based on hydrologic conditions, Reclamation declared an initial 20 percent allocation for South of Delta CVP agricultural contractors for the 2020 Contract Year1. In both 2021 and 2022, South of Delta CVP contractors received an allocation of 0% percent. As a result, South of Delta water contractors have a need to find alternative sources of water to fulfill demands. The proposed transfers would allow SLCC and landowners in the Transfer Recipient Districts greater flexibility to manage limited water supplies (Figure 1).

[1] Contract Year is from March 1 through February 28/29 of the following year.

Figure 1 Proposed Action Area



Section 2. Alternatives Including Proposed Action

This environmental assessment (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[2] to the human environment.

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not approve a series of annual transfers over a 25-year period (2025 through 2050) of up to 10,000 AFY of SLCC's Exchange Contract CVP water supplies to the Transfer Recipient Districts. Reclamation would continue to deliver CVP water to SLCC and the Transfer Recipient Districts pursuant to their respective CVP water service contracts. HMRD would continue to implement their groundwater management and conservation programs.

2.2 Proposed Action

Reclamation proposes to approve a series of annual transfers over a 25-year period (calendar year 2025 through 2050) of up to 10,000 AF

Y of SLCC's Exchange Contract CVP water supplies to the Transfer Recipient Districts. The proposed transfers could occur from January through December of each year when water is transferred and would not exceed the cumulative maximum of 250,000 AF over the 25-year period.

To make the SLCC CVP water supplies available for transfer, HMRD and SLCC will implement a water conservation program that includes shallow groundwater pumping and water conservation projects that will capture shallow groundwater and reduce surface water seepage losses by up to 10,000 AFY. Groundwater wells will pump shallow groundwater from a depth of between 21 and 69 feet below ground surface (Table 4), well above the Corcoran Clay layer, to

[2] Executive Order 14154, Unleashing American Energy (Jan. 20, 2025), and a Presidential Memorandum, Ending Illegal Discrimination and Restoring Merit-Based Opportunity (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. Reclamation verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum.

remove water from the crop root zone. The pumped groundwater would be conveyed in HMRD's existing conveyance system and delivered to water users. Groundwater pumped into the system under the project would be blended at a rate that meets daily flow and water quality objectives established by the Company. Company staff would collect and tabulate monthly meter readings from the wells to provide an accounting of each well's pumping and total pumping for the program. A like amount of Company CVP water supply (up to 10,000 AFY) would be made available for transfer to the Transfer Recipient Districts. All transfers would be consistent with CVP Place of Use requirements.

Only existing wells would initially be used for the program. New wells are not proposed for the program, but wells drilled by HMRD after the program is initiated would be eligible to participate under the same terms as the existing wells. The wells that would be used to participate in the program are in Fresno and Merced Counties, within SLCC or within parcels that adjoin SLCC.

For a transfer to occur, HMRD and SLCC must prove water is being made available for transfer as outlined in the Draft Technical Information for Preparing Water Transfer Proposals (Water Transfer White Paper, 2019) and Background and Recent History of Water Transfers in California (2015).

2.2.1 Environmental Commitments

Reclamation, HMRD/SLCC, and the Transfer Recipient Districts shall implement the environmental protection measures to avoid environmental consequences associated with the Proposed Action.

Table 1 Environmental Protection Measures and Commitments

Resource	Protection Measure
Various Resources	The Proposed Action cannot alter the flow regime of natural waterways or natural watercourses such as rivers, streams, creeks, ponds, pools, wetlands, etc., so as to have a detrimental effect on fish or wildlife or their habitats.
Various Resources	The Proposed Action must comply with all applicable Federal, State and local laws, regulations, permits, guidelines and policies.
Various Resources	The Proposed Action would not increase or decrease water supplies that would result in development.
Biological Resources	Lands that have never been tilled or that have been fallowed and untilled for three or more years would not receive water as a part of the Proposed Action, without surveys for Federally listed or proposed species and evidence of compliance with the Endangered Species Act.
Biological Resources	New facilities would not be constructed as part of the Proposed Action unless the new facilities would already be constructed under the No Action Alternative.

Environmental consequences for resource areas assume the measures specified would be fully implemented.

Section 3. Affected Environment and 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 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that the Proposed Action did not have the potential to cause adverse effects to the following resources:

3.1.1 Air Quality

All the shallow groundwater wells have electric motors which do not produce emissions that impact air quality. Water conserved through improved conveyance systems will not require additional pumping.

3.1.2 Climate Change

The Proposed Action does not include construction of new facilities or significant modification to existing facilities. While pumping would be necessary to deliver CVP water, no additional electrical production beyond baseline conditions would occur. In addition, the generating power plant that produces electricity for the electric pumps operates under permits that are regulated for greenhouse gas emissions. Precipitation has increasingly become more variable statewide since the 1980s, with years of abnormally high precipitation followed by years of very low precipitation. Also, in recent years, the fraction of precipitation that falls as rain instead of snow has increased in the Sierra Nevada, reducing the water stored in the snowpack that historically provides most of California's water supply as runoff in the winter and early spring months (OEHHA 2022). Despite high year-to-year variability, recent years trend toward more precipitation falling as rain in large storms that produce heavy precipitation rather than snow, (OEHHA 2022). Further, CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operation flexibility. As such, there would be no additional impacts to global climate change as a result of the Proposed Action.

3.1.3 Cultural Resources

There would be no impacts to cultural resources as a result of implementing the Proposed Action as the Proposed Action would facilitate the flow of water through existing facilities to existing users. No new construction or ground disturbing activities would occur as part of the Proposed Action. Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

3.1.4 Indian Sacred Sites

Executive Order 13007 (May 24, 1996) requires that federal agencies accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoids adversely affecting the physical integrity of such sacred sites. The Proposed Action would not limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or affect the physical integrity of such sacred sites. There would be no impacts to Indian sacred sites as a result of the Proposed Action.

3.1.5 Indian Trust Assets

Indian Trust Assets are legal interests in assets that are held in trust by the United States for federally recognized Indian tribes or individuals. There are no Indian reservations, rancherias or allotments in the Proposed Action area. The nearest Indian Trust Asset is the Table Mountain Rancheria, which is about 42 miles to the east-northeast of the Proposed Action area. The Proposed Action does not have a potential to affect Indian Trust Assets.

3.2 Biological Resources

3.2.1 Affected Environment

A list of federally threatened and endangered species and critical habitat that occur within the project area and/or may be affected as a result of the Proposed Action was obtained on May 21, 2024, and updated on February 12, 2025, by accessing the United States Fish and Wildlife Service (USFWS) database: https://ecos.fws.gov/ipac/. The list is summarized below (Table 2) and was generated from a polygon that encompassed the entire Proposed Action area. The California Department of Fish and Wildlife's online database, the California Natural Diversity Database (CNDDB), was also queried for records of protected species within the boundaries of the project location and additional federally listed species were added (Table 2) (CNDDB 2025). The Proposed Action area does not fall within any proposed or designated critical habitat. As Grassland Water District and wildlife refuges are part of the Proposed Action Area, a greater detail than is typically provided has been included in Table 2 for various migratory bird species, protected by the Migratory Bird Treaty Act, as well as Bald and Golden Eagles, which are additionally protected under the Bald and Golden Eagle Protection Act.

Table 2 Federally Listed and Proposed Threatened and Endangered Species and Migratory Birds

Species	Status	Effects	Potential to occur and summary basis for ESA determination
Mammals			
Fresno Kangaroo Rat (*Dipodomys nitratoides exilis*)	E, X	NE	**Absent.** Habitat consists of alkali sink and grasslands in western Fresno County and Madera County. May occur in areas such as Madera Ranch, part of Madera Irrigation District. However, lands such as those that have never been tilled would not be converted as a part of the Proposed Action.

Species	Status	Effects	Potential to occur and summary basis for ESA determination
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	E	NE	**Present.** Project area shows 9 records in CNDDB, preferred habitat consisting of alkali shrub and arid grasslands, but can use agricultural lands that lie close to better-quality habitat.
Birds			
California Condor (*Gymnogyps californianus*)	E, X	NE	**Absent**. Project area outside mapped known populations and preferred habitat is not present in the project area.
Reptiles			
Blunt-nosed Leopard Lizard (*Gambelia silus*)	E	NE	**Absent.** Project area shows 1 record in CNDDB, preferred habitat consisting of alkali and desert scrub. The northern-most known population occurs at Madera Ranch, within Madera Irrigation District. However, lands that have never been tilled would not be converted as a result of the Proposed Action.
Giant Garter Snake (*Thamnophis gigas*)	T	NE	**Present.** Project area shows 13 records in CNDDB, preferred habitat consisting of freshwater marsh and low gradient streams. This species can occur in wetland habitat at Grassland Water District and wildlife refuges. However, the Proposed Action won't either increase or decrease available habitat and won't result in land conversion or new construction.
Western Pond Turtle (*Actinemys marmorata*)	PT	NE	**Present.** Project area shows 13 records in CNDDB, preferred habitat consisting of marshes, rivers, streams, and irrigation ditches. Available habitat would not be affected because of incorporated measures regarding land conversion and construction
Amphibians			
California Tiger Salamander (*Ambystoma californiense*)	T, X	NE	**Absent.** Project area shows 7 records in CNDDB, preferred habitat consisting of grassland, savanna, or open woodland. This species occurs in areas such as within Santa Clara Valley Water District. However, lands that have never been tilled would not be converted as a result of the Proposed Action, and the Proposed Action would not result in new construction.
Western Spadefoot (*Spea hammondii*)	PT	NE	**Absent.** Project areas shows 7 records in CNDDB, preferred habitat consisting of grassland and valley-foothill hardwood woodlands. This species occurs in areas such as within the eastern edges of some of the Transfer Recipient Districts. However, lands that have never been tilled would not be converted as a result of the Proposed Action, and the Proposed Action would not result in new construction.
Insects			
Monarch Butterfly (*Danaus plexippus*)	PT, PX	NE	**Possible.** Milkweed plant critical to life cycle, known to occur in Merced County. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new

Species	Status	Effects	Potential to occur and summary basis for ESA determination
			construction.
Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphu	T, X	NE	**Possible.** Occurs only in California's Central Valley, found with blue elderberry along riparian corridors. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Crustaceans			
Conservancy Fairy Shrimp (*Branchinecta conservatio*)	E, X	NE	**Absent.** Project area shows 5 records in CNDDB, preferred habitat consisting of grasslands (vernal pools). However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	T, X	NE	**Absent.** Project area shows 4 records in CNDDB, preferred habitat consisting of grasslands (vernal pools). However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	T, X	NE	**Absent.** Project area shows 8 records in CNDDB, preferred habitat consisting of grasslands (vernal pools). However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Longhorn Fairy Shrimp (*Branchinecta longiantenna*)	E	NE	**Absent.** Project area shows 2 records in CNDDB, preferred habitat consisting of grasslands (vernal pools). However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Flowering Plants			
Colusa Grass (*Neostapfia colusana*)	T, X	NE	**Absent.** Project area shows 1 record in CNDDB, preferred habitat consisting of vernal pools. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Hoover's Spurge (*Chamaesyce hooveri*)	T, X	NE	**Absent.** Project areas shows 1 record in CNDDB, preferred habitat consisting of vernal pools. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in

Species	Status	Effects	Potential to occur and summary basis for ESA determination
			any new construction.
Bald & Golden Eagles			
Bald Eagle (Haliaeetus leucocephalus)	BGEPA, MBTA	NE	**Unlikely.** Preferred habitat not present in project area but are occasionally observed on valley floor particularly during wet years. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Golden Eagle (Aquila chrysaetos)	BGEPA, MBTA	NE	**Possible.** Habitats consist of, among others, upland forest and grasslands. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Migratory Birds			
Belding's Savannah Sparrow (Passerculus sandwichensis beldingi)	MBTA	NE	**Absent.** Preferred habitat, salt marshes, not present in project area.
Black Swift (Cypseloides niger)	MBTA	NE	**Absent.** Preferred habitat, steep cliffs along the coast or near streams in the mountains, not present in the project area.
Black Tern (Chlidonias niger surinamenisis)	MBTA	NE	**Possible.** Habitat consists of wetlands and lakes, particularly areas with mix of extensive vegetation and open water. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the participating refuges.
Bullock's Oriole (Icterus bullockii)	MBTA	NE	**Possible.** Habitat consists of trees in open habitats, cottonwoods in riparian areas in particular. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
California Gull (Larus californicus)	MBTA	NE	**Possible.** Spends breeding season inland around lakes and wetlands, not uncommon to forage around farms. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the participating refuges.

Species	Status	Effects	Potential to occur and summary basis for ESA determination
California Thrasher (Toxostoma redivivum)	MBTA	NE	**Possible.** While it can occur in thickets in riparian areas, most commonly found in chaparral habitat. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Clark's Grebe (Aechmophorus clarkia)	MBTA	NE	**Possible.** Habitat consists of wetlands, rivers, lakes, and ponds. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the participating refuges.
Common Yellowthroat (Geothlypis trichas sinuosa)	MBTA	NE	**Possible.** Habitat consists of wetlands and other wet areas with dense growth. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the participating refuges.
Lawrence's Goldfinch (Spinus lawrencei)	MBTA	NE	**Unlikely.** In California prefers oak-pine woodlands and chaparral. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Marbled Godwit (Limosa fedoa)	MBTA	NE	**Possible.** Shorebird likely only to be seen during migration where it would be found in wetlands, ponds, and mudflats. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the participating refuges.
Mountain Plover (Charadrius montanus)	MBTA	NE	**Possible.** Central Valley provides wintering grounds with grasslands as preferred habitat. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Northern Harrier (Circus hudsonius)	MBTA	NE	**Present.** Project area shows 3 records in CNDDB, preferred habitat consisting of freshwater marsh and grasslands. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the

Species	Status	Effects	Potential to occur and summary basis for ESA determination
			participating refuges.
Nuttall's Woodpecker (Dryobates nuttallii)	MBTA	NE	**Possible.** Habitat consists of foothills and riparian areas, almost always associated with areas containing oaks. Will also utilize cottonwoods, willows, and sycamores. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Oak Titmouse (Baeolophus inornatus)	MBTA	NE	**Possible.** Preferred habitat most commonly is oak woodland, notably in riparian areas. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Olive-sided Flycatcher (Contopus cooperi)	MBTA	NE	**Unlikely.** Prefers coniferous forests and foothill canyons, might be seen during migration. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Santa Barbara Song Sparrow (Mospiza melodia graminea)	MBTA	NE	**Possible.** Found throughout California in a variety of habitats. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Short-billed Dowitcher (Limnodromus griseus)	MBTA	NE	**Possible.** Shorebird likely only to be seen during migration but will use inland freshwater habitats. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the participating refuges.
Tricolored Blackbird (Agelaius tricolor)	MBTA	NE	**Present.** Project area shows 18 records in CNDDB, species is numerous in Central Valley generally preferring open water habitat and wetlands. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the participating refuges.
Western Grebe (Aechmophorus occidentalis)	MBTA	NE	**Possible.** Is present during all seasons in the Central Valley preferring lakes and sloughs. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the

Species	Status	Effects	Potential to occur and summary basis for ESA determination
			Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the participating refuges.
Willet (Tringa semipalmata)	MBTA	NE	**Possible.** Shorebird that will nest inland utilizing wetlands and grasslands. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction. No habitat would be created or lost at Grassland Water District or the participating refuges.
Wrentit (Chamaea fasciata)	MBTA	NE	**Unlikely.** Preferred habitat consists of chaparral and coastal sage scrub. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.
Yellow-billed Magpie (Pica nuttalli)	MBTA	NE	**Possible.** Found most often in riparian areas comprised of oak, cottonwood, or sycamore that border open ground. However, lands that have never been tilled or that have been fallowed and untilled for three years or more would not be converted as part of the Proposed Action, and the Proposed Action would not result in any new construction.

Status - Status of federally protected species under ESA
E: Listed as Endangered
T: Listed as Threatened
PT: Proposed Threatened
X: Critical Habitat designated for this species
PX: Critical Habitat proposed for this species
BGEPA: Bald and Golden Eagle Protection Act
MBTA: Migratory Bird Treaty Act

Effects - ESA Effect determination
NE: No Effect anticipated from the Proposed Action to federally listed species or designated critical habitat

Definitions of Occurrence Indicators
Present: Species recorded in the area and suitable habitat present
Possible: Species recorded in the area and habitat suboptimal
Unlikely: Species recorded in the area but habitat marginal or lacking entirely
Absent: Species not recorded in the area and suitable habitat absent

3.2.2 Environmental Consequences

3.2.2.1 No Action

Under the No Action alternative, Reclamation would not approve annual CVP transfers. HMRD would continue to manage their shallow groundwater issues and implement water conservation programs. There would be no impacts to biological resources since conditions would remain the same as existing conditions.

3.2.2.2 Proposed Action

The Proposed Action does not include the construction of new facilities or modifications to existing facilities, but rather the transfer of water generated from water conservation measures intended to capture shallow groundwater and reduce seepage loss. In addition, the Proposed Action would not involve the conversion of any land that has never been tilled or land that has been fallowed and untilled for three or more years or change the land use patterns of cultivated or fallowed fields that have value to listed species or to birds protected by the Migratory Bird Treaty Act. No natural stream courses or waterways potentially utilized by listed aquatic species would be altered. No critical habitat occurs within the area affected by the Proposed Action and so none of the primary constituent elements of any critical habitat would be affected.

3.2.3.3 Cumulative Impacts

As the Proposed Action is not expected to result in any direct or indirect impacts to biological resources, there would be no cumulative impacts.

3.3 Water Resources

3.3.1 Affected Environment

Surface Water Resources

The Exchange Contractors hold senior water rights on the San Joaquin River for which they exchanged the point of diversion to receive their water with the Federal government, allowing for delivery of CVP water supplies from the Sacramento-San Joaquin River Delta (Delta). This water is delivered through the Delta-Mendota Canal, when available. Or, when conveyance down the Delta-Mendota Canal cannot meet these obligations, the Exchange Contractors can request delivery down the San Joaquin River. In non-critical years, the Exchange Contractors receive up to 840,000 AFY. In critical years, they receive a 75% allocation or 650,000AF.

Although the region had largely recovered from the drought of 2014-2016, conditions continued to fluctuate and, in 2021 and 2022, much of California was again in extreme or exceptional drought, with Reclamation unable to make South-of-Delta CVP agricultural supply allocations (Table 3). The 2022 water year was a critically dry year and met the criteria of a "Shasta Critical" year as defined in the Exchange Contractors' respective contracts. Due to the inability of Reclamation to provide enough water from the Delta, Reclamation began making releases from Friant Dam on April 1, 2022, to meet the demands of senior water rights holders at the Mendota Pool, including the Exchange Contractors.

Groundwater Resources

The Proposed Action area overlies the Delta-Mendota Subbasin (5-022.07), which has two principal aquifers separated by an aquitard termed "Corcoran Clay." While the California Department of Water Resources (DWR) has designated the Delta-Mendota Subbasin as critically

overdrafted, requiring a groundwater sustainability plan (GSP) pursuant to the Sustainable Groundwater Management Act (SGMA).

However, the groundwater conditions within HMRD's service area are distinct from conditions elsewhere within the subbasin. Groundwater depths throughout HMRD range from less than 18" to 10 feet, causing significant adverse impacts to agricultural production throughout the service area (see Figure 2). Because the water supplied to the Proposed Action will be generated from well pumping from this shallow groundwater (Table 4) source or other conservation measures, the Proposed Action will not contribute to either subbasin overdraft or subsidence.

Groundwater pumped from wells within SLCC will remain within the SLCC water conveyance system for delivery to farmland within the District. Water quality testing by SLCC show an average well electrical conductivity (EC) of approximately 1300 µs/cm, an average boron of 0.3 mg/L (K. Schmidt, 2024).

Subsidence Land subsidence is caused by subsurface movement of earth materials. Principal causes of subsidence within the San Joaquin Valley include aquifer compaction due to groundwater pumping, hydrocompaction caused by application of water to dry soils, and oil mining. Compaction can be "elastic" or "inelastic". Elastic compaction occurs relatively immediately in response to water level declines which can later be reversed when groundwater levels recover. Inelastic compaction occurs when water levels decline and are not able to rebound (expand) when water levels recover. Various entities, including the U.S. Geological Survey, DWR, the San Luis & Delta-Mendota Water Authority, and the Exchange Contractors monitor subsidence trends within the Central Valley. Reclamation surveys a network of over 70 control points across the San Joaquin Valley in July and December of each year to monitor ongoing subsidence (San Joaquin River Restoration Program 2024). Subsidence data gathered between December 2011 and December 2023 show overall subsidence rates of about -0.15 feet per year.

Results from the 20-years of monitoring have shown that land subsidence from groundwater pumping from above the Corcoran Clay is generally reversible and insignificant, i.e. 0.05 foot over a 20-year period (Schmidt 2019). The total area of lands impacted by subsidence within the Delta-Mendota Subbasin between 2016 and 2023 has generally increased during periods of drought and decreased in years with higher precipitation and runoff. However, as noted earlier, the water supplied through the Proposed Action will be sourced through very shallow groundwater above the Corcoran Clay layer or other conservation measures and will not contribute to subsidence.

3.3.2 Environmental Consequences

3.3.2.1 No Action

Under the No Action alternative, Reclamation would not approve annual CVP transfers. HMRD would continue to manage their shallow groundwater issues and implement water conservation

programs. Water made available through the management and conservation programs would not be transferred to refuges and other water users limiting their water management flexibility.

3.3.2.2 Proposed Action

Under the Proposed Action, Reclamation would approve HMRD annual CVP transfers for up to 10,000 AFY over a 25-year period to the Transfer Recipient Districts. These transfers would improve the water management flexibility of the Transfer Recipient Districts.

As the water supplies would be from existing CVP allocations and transfer would be consistent with the CVP Place of Use, the Proposed Action would not alter CVP operations, water storage, or release patterns from CVP facilities. The Proposed Action does not alter the maximum volume of CVP water delivered to contractors. CVP water would be delivered through existing infrastructure and would not require additional construction or modification of facilities for delivery.

Due to the shallow nature of groundwater (18 inches to 10 feet) within SLCC's service area, SLCC must manage the groundwater levels, via pumping, to mitigate impacts to crop root zones. This pumping occurs above the Corcoran Clay aquitard and would occur regardless of the transfer. Additionally, water being pumped by SLCC will be blended and delivered for agricultural use within the SLCC service area.

As such, the Proposed Action would not affect CVP operations, groundwater overdraft or localized subsidence. The Proposed Action would not interfere with Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes.

3.3.2.3 Cumulative Impacts

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies which drive requests for water service actions. Water districts provide water to their customers based on available water supplies and timing, while attempting to minimize costs. Farmers irrigate and grow crops based on these conditions and factors, and a myriad of water service actions are approved and executed each year to facilitate water needs. It is likely that more districts will request exchanges, transfers, and Warren Act Contracts due to hydrologic conditions in the future. Each water service transaction involving Reclamation undergoes environmental review prior to approval.

The Proposed Action and other similar projects would not hinder the normal operations of the CVP or Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat. Since the Proposed Action would not involve construction or modification of facilities, there would be no cumulative impacts to existing facilities or other contractors.

Table 3 CVP Agricultural Allocations Since 2014

Year	South of Delta CVP Agricultural Allocation (% of Contract Total)
2014	0%
2015	0%
2016	5%
2017	100%
2018	50%
2019	75%
2020	20%
2021	0%
2022	0%
2023	100%

Table 4 Participating Well Information

Well Name	Latitude	Longitude	Static Water Level	Pumping Water Level
A-04	37.040267	-120.64018	21	72
A-05A	37.044166	-120.65175	24	60
A-06	37.040425	-120.69605	14	77
A-07	37.022944	-120.60364	18	68
A-08	37.031877	-120.61146	17	65
A-09	37.032603	-120.61958	19	46
A-1B	37.01128	-120.58835	20	54
D-02	37.066559	-120.67254	28	93
D-03	37.075049	-120.67486	20	60
D-04B	37.078571	-120.68529	14	54
H-02	37.156527	-120.75417	10	55
H-03	37.160784	-120.75795	26	52
LT-03	37.066006	-120.69087	22	49
SJ-5B	37.086704	-120.65543	26	74
T-02	37.059957	-120.61199	28	87
T-1B	37.045182	-120.56452	22	80

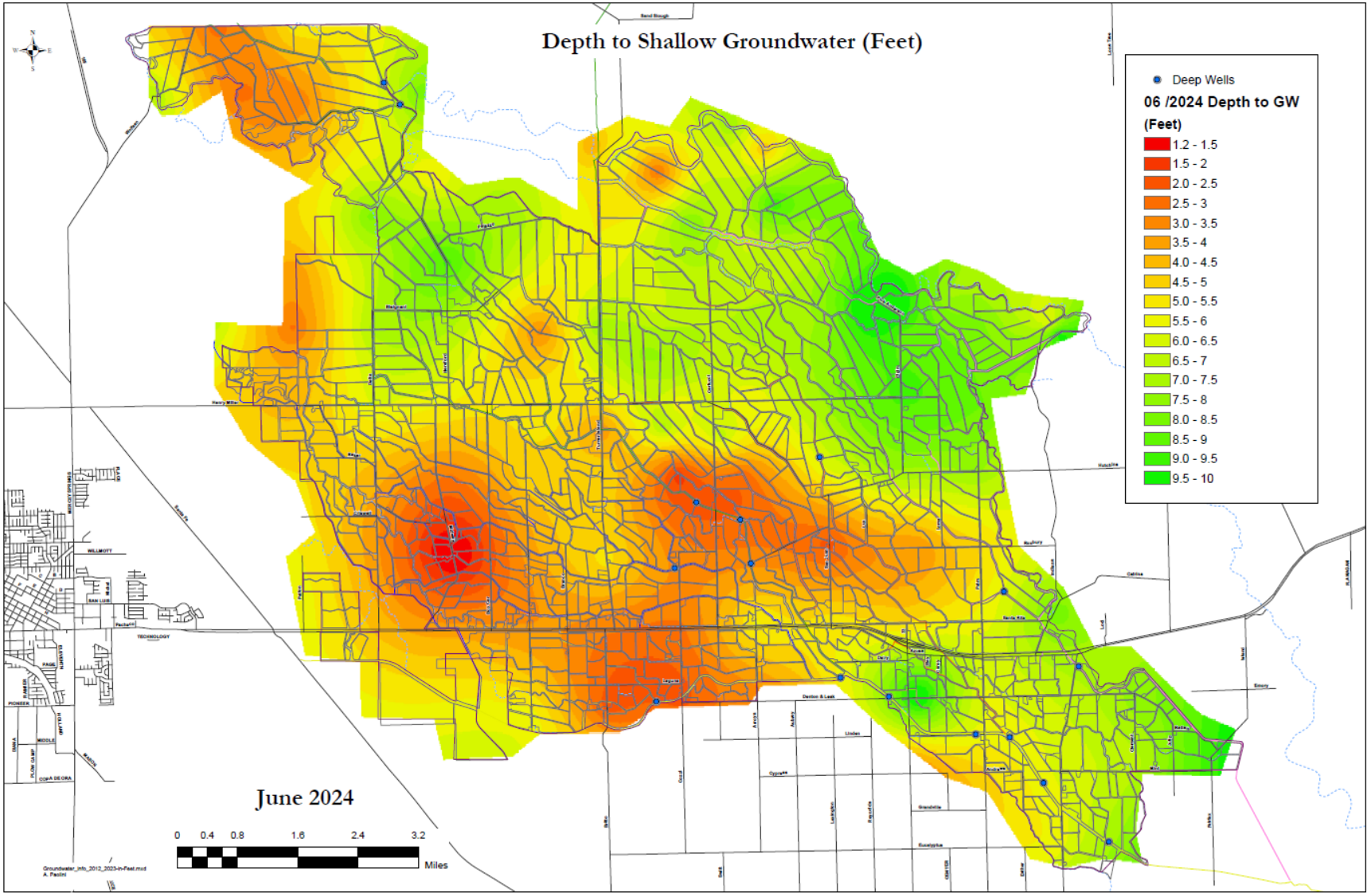


Figure 2 June 2023 HMRD Depth to Shallow Groundwater. Blue dots represent groundwater well location

Section 4. Consultation and Coordination

4.1 Agencies and Persons Consulted

Reclamation coordinated on the Proposed Action with the HMRD/SLCC and Summers Engineering Inc. in the preparation of this EA.

4.2 Public Involvement

Reclamation intends to provide the public with an opportunity to comment on the Draft Environmental Assessment during a 30-day public review period.

Section 5. References

Background and Recent History of Water Transfers in California, 2015. https://cawaterlibrary.net/wp-content/uploads/2018/03/Background_and_Recent_History_of_Water_Transfers.pdf

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