RECLAMATION
Managing Water in the West

Draft Environmental Assessment

City of Huron Land Use Authorization

EA-16-011

U.S. Department of the Interior
Bureau of Reclamation
South-Central California Area Office

June 2017

Mission Statements

The 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.

Contents

Page

Section 1 Introduction

1.1 Background

The City of Huron (City) owns and operates a wastewater treatment plant (Treatment Plant) in the easternmost portion of Huron, California (Figure 1). On December 5, 2014, the Regional Water Quality Control Board issued Waste Discharge Requirements Order Number R5-2014-0163 (Order) to the City regarding its Treatment Plant. One of the provisions in the Order require the City to reduce nitrogen (a by-product of waste water treatment) concentrations in its effluent, or otherwise demonstrate that its disposal practices would not cause groundwater nitrogen concentrations to rise above the maximum contaminant level.

To comply with the provisions of the Order, the City proposed a project to use its treated effluent to irrigate approximately 200 acres of alfalfa crops that would uptake (remove) nitrogen from the treated effluent and prevent it from seeping into the groundwater (Proposed Project). As the nearest available land adjacent to the City's Treatment Plant, is owned by the Bureau of Reclamation (Reclamation), the City requested a land use authorization from Reclamation for their Proposed Project (Figure 1) on . The City analyzed its Proposed Project in an Initial Study and issued a Mitigated Negative Declaration pursuant to the California Environmental Quality Act (City 2017).

The Reclamation land that the City has requested to use for their Proposed Project is part of the Arroyo Pasajero Westside Detention Basin (Detention Basin) that lies adjacent to the San Luis Canal. When this segment of the San Luis Canal was constructed in 1967, it intercepted Los Gatos Creek and agricultural lands to the west flooded. Reclamation purchased the affected agricultural lands and constructed the Detention Basin to contain Los Gatos Creek floodwaters within an approximate 3,800-acre area along the western edge of the San Luis Canal from Highway 198 south to Gale Avenue.

1.2 Need for the Proposed Action

In order to comply with the Regional Water Quality Control Board's Order, the City needs to find a cost effective way to manage nitrogen, a by-product of its Treatment Plant.

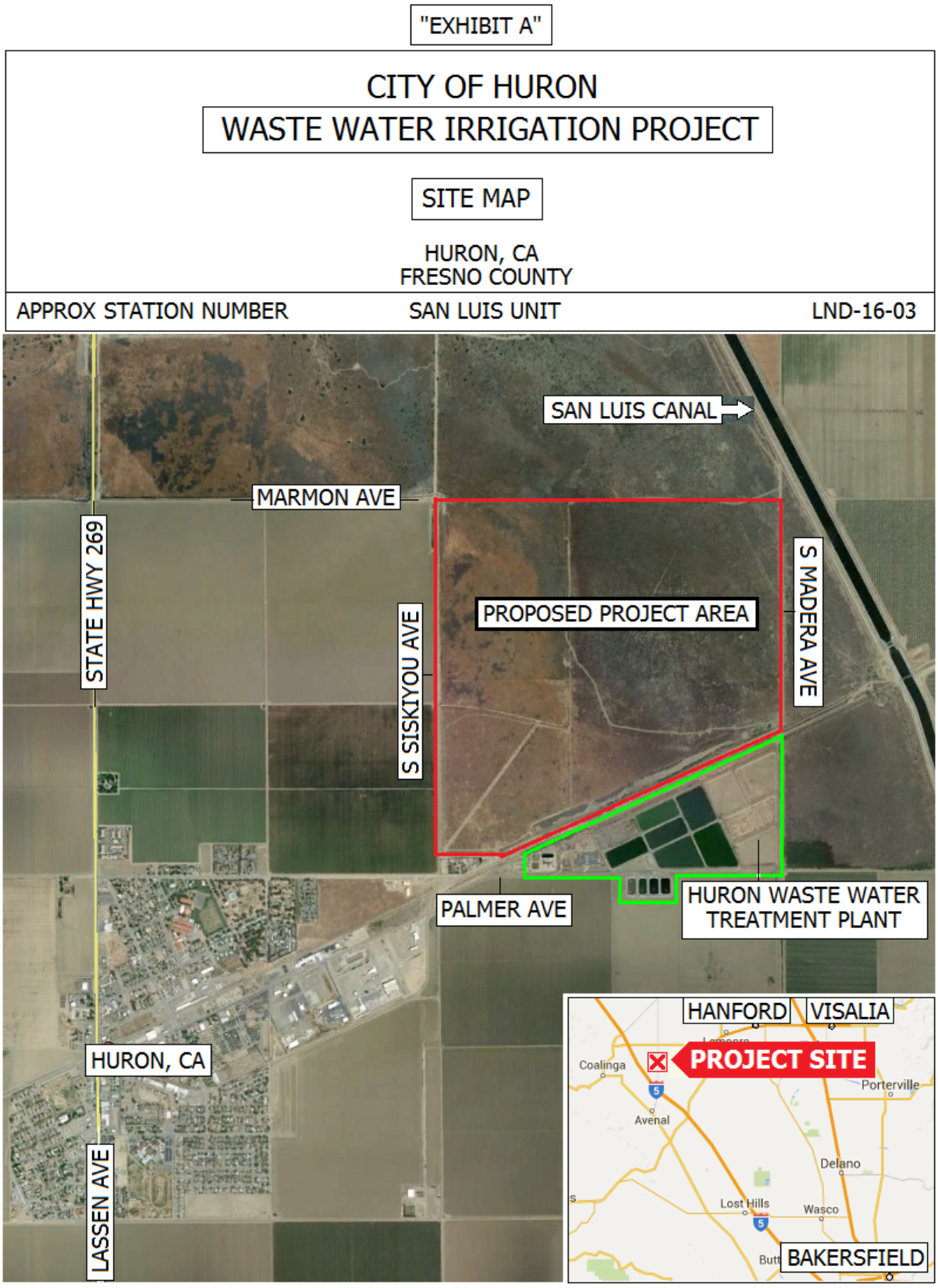

Figure 1 Proposed Action location

Section 2 Alternatives Including the Proposed Action

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

2.1 No Action Alternative

Under the No Action alternative, Reclamation would not issue a land use authorization to the City for their Proposed Project. The 188 acres of Reclamation-owned land would continue to be used for flood control. The City's effluent water would continue to be disposed of in its treatment ponds and subsequently impacting groundwater with nitrogen. In order to comply with the Order, the City would have to find another method to remediate the excess nitrogen.

2.2 Proposed Action

Reclamation proposes to issue a 25-year land use authorization to the City for its Proposed Project. This would allow the City to convert 188 acres of Reclamation land located to the north of the Treatment Plant for agricultural use (i.e., growing alfalfa). Construction actions would include building and installing dirt access roads, installing fencing, and installing and maintaining an irrigation system.

2.2.1 Construction Activities

Irrigation system improvements

The Proposed Action would require a new irrigation pump system and miscellaneous irrigation system improvements. The irrigation pump system will pump water into a pipeline that will convey effluent to the water reclamation field. At the existing Treatment Plant facility, the easternmost six evaporation/percolation ponds would be lined (Pond No. 2, 3, 4, 5, 6, and 7), and a new pump station would be constructed between ponds 2 and 6 (Figures 2 and 3) to move effluent to the water reclamation field.

The new irrigation pump station would consist of a pre-cast concrete wet well, measuring approximately 27 feet deep and 7 feet wide, that would encase a vertical turbine pump and the discharge manifold connection to a new 24-inch diameter pipeline (Figure 3). Water from the pump would flow at a rate of up to 2,500 gallons per minute (gmp). The City would utilize an open excavation technique to dig the wet well. A standard 24-inch plastic irrigation pipe, Polyvinyl Chloride (PVC), would connect to the effluent pump located above ground. The 24-inch pipeline would run above ground for approximately 40 inches and then would be buried and run 3 feet underground in trenches. All underground pipe would be made of PVC. All above ground pipe would be made of steel. Above ground pipe would be limited to the areas connecting the pumps to the underground pipelines.

The Proposed Action would include approximately 14,670 linear feet of effluent pipelines ranging between 8 to 24-inches in diameter. All delivery and irrigation pipelines would be installed underground, with a minimum of 3 feet of cover. The pipeline trenches throughout the project would typically measure up to 7 feet deep and 3 to 6 feet wide.

The City's treated effluent would be transported from the Treatment Plant through a 24-inch diameter pipeline to the alfalfa fields through approximately 8,571 feet of 21-inch diameter pipeline and two pre-cast concrete diversion structures (Figure 2). Irrigation via alfalfa valves would be spaced every 25 feet for flood irrigation of the fields. Drainage from the fields would flow east by gravity flow where it would be captured in a 12-foot deep, 3-acre tailwater pond from which it would be reapplied to the alfalfa field.

Tailwater Return System

The alfalfa field will be graded so that water can spread via by gravity. Water running off the lower end of the field will flow into an irrigation ditch that will convey runoff water into a tailwater return pond, where it will be collected and reused for irrigation.

The City would install a tailwater return pump that would return water from the pond to the head of the irrigation system where it would be reused (Figure 4). A 12-inch PVC pipe would connect the bottom of the tailwater return pump to the tailwater return pump station. The pump station would be approximately 18.5-feet below ground surface and 4-feet above ground. Similar to the irrigation pump station, the pumped water would flow at a rate of up to 1,250 gpm. An 8-inch PVC pipe, approximately 2,795 feet long, will be used as the tailwater return line.

To run the pipeline underneath the railroad, the construction crew would jack and bore approximately 5-10 feet underneath the track foundation; staying at least 30 feet away from the foundation on either side.

Miscellaneous Improvements

Other miscellaneous improvements include perimeter fencing, access roads, and signage on the fencing. The City would install a 16-foot wide, 4-inch thick aggregate base roadway around the perimeter of the Proposed Action area and through the middle of the field (Figure 2). The Proposed Action area would be enclosed by a four foot tall, three-strand barbed wire fence using 5-foot tall t-posts (Figure 2). Aluminum signs would be placed on the perimeter fencing every 100 feet to notify the public. The signs would be 10 inches wide, 15 inches long, and 1 inch thick; reading "Recycled Water Do Not Drink" in both English and Spanish.

2.2.2 Equipment and Staging

The Proposed Action would require the use of an excavator, front-end loader, scraper, a grader, rolling and compacting machinery, a bore machine, construction trucks, and hand tools. Staging of all equipment and materials would occur at the existing Treatment Plant site.

2.2.3 Operations and Maintenance of the Irrigation System

The City would operate and maintain the irrigation system after construction. The City anticipates that the irrigation system would require minimal maintenance such as, but not limited to, repairing broken valves, and/or pipelines. Maintenance would generally be on an as needed or an annual basis.

2.2.4 Harvesting of Alfalfa for Fodder Crops

The City and/or its designee would harvest alfalfa with typical farming equipment and methods consisting of but not limited to tractors, cutters, and bailers. The City anticipates four to five harvests per year. The alfalfa would be sold as fodder used to feed livestock.

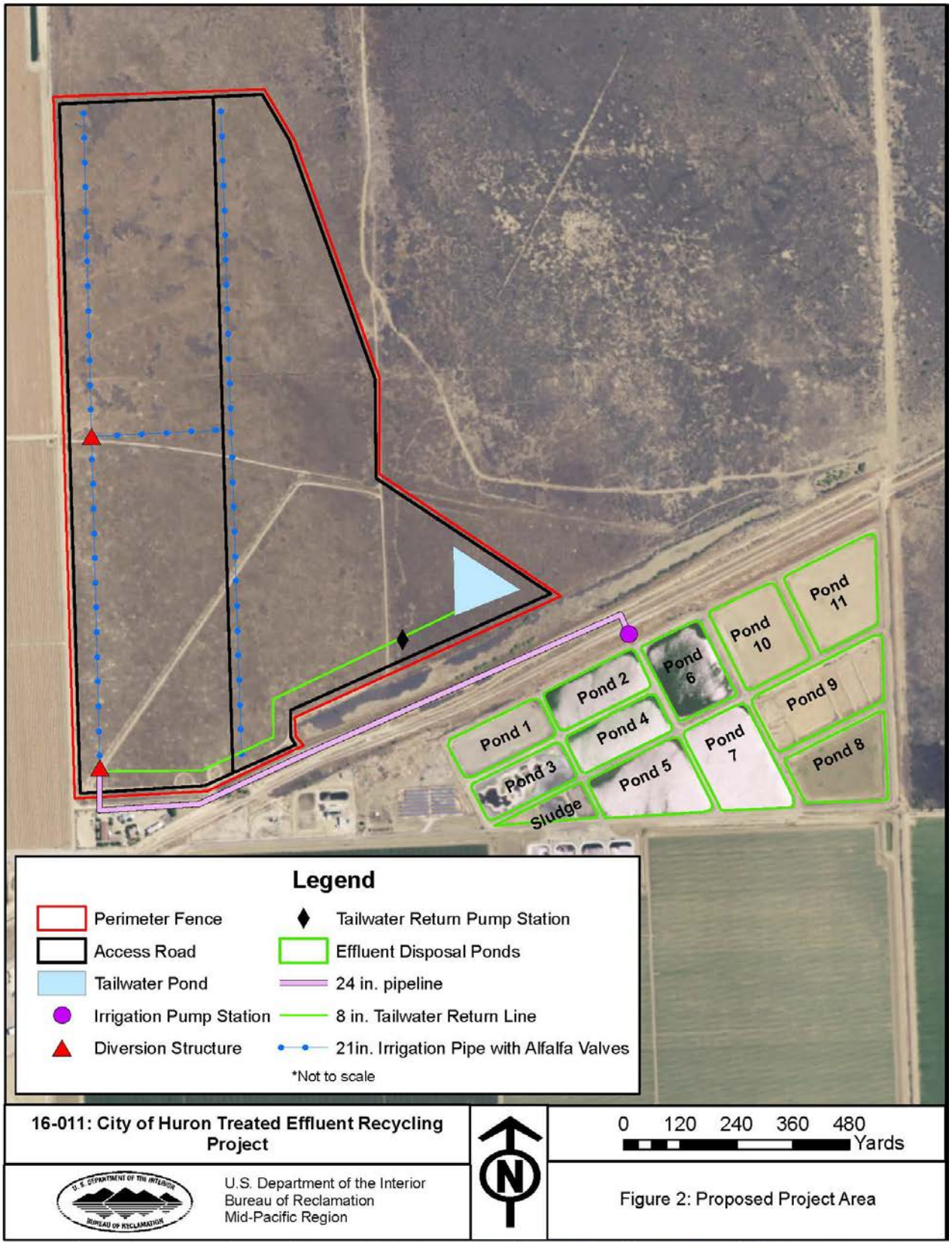

Figure 2 Schematic for the Proposed Action

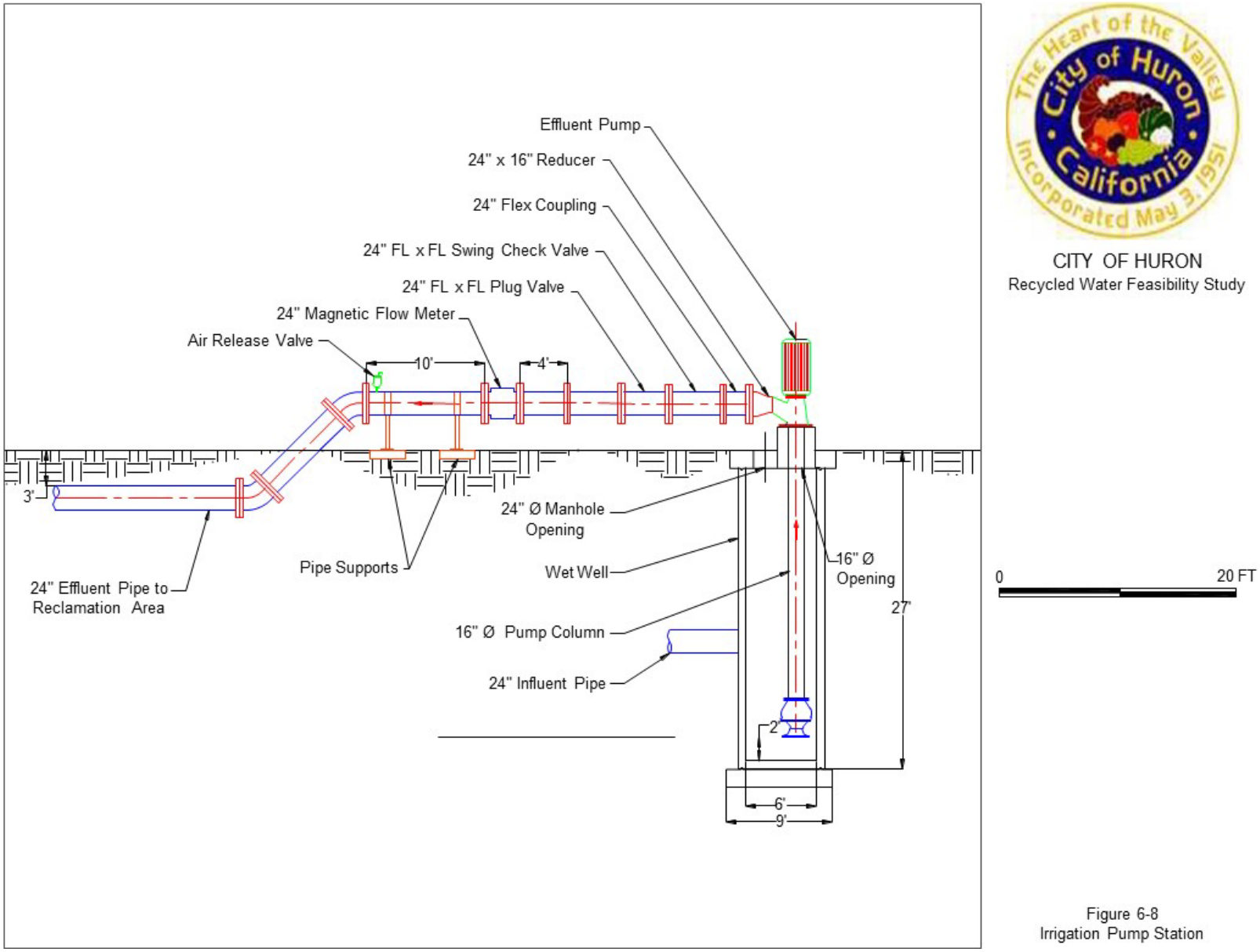

Figure 3 Proposed Irrigation Pump Station. Image created for *Appendix D, City of Huron Recycled Water Feasibility Study*.

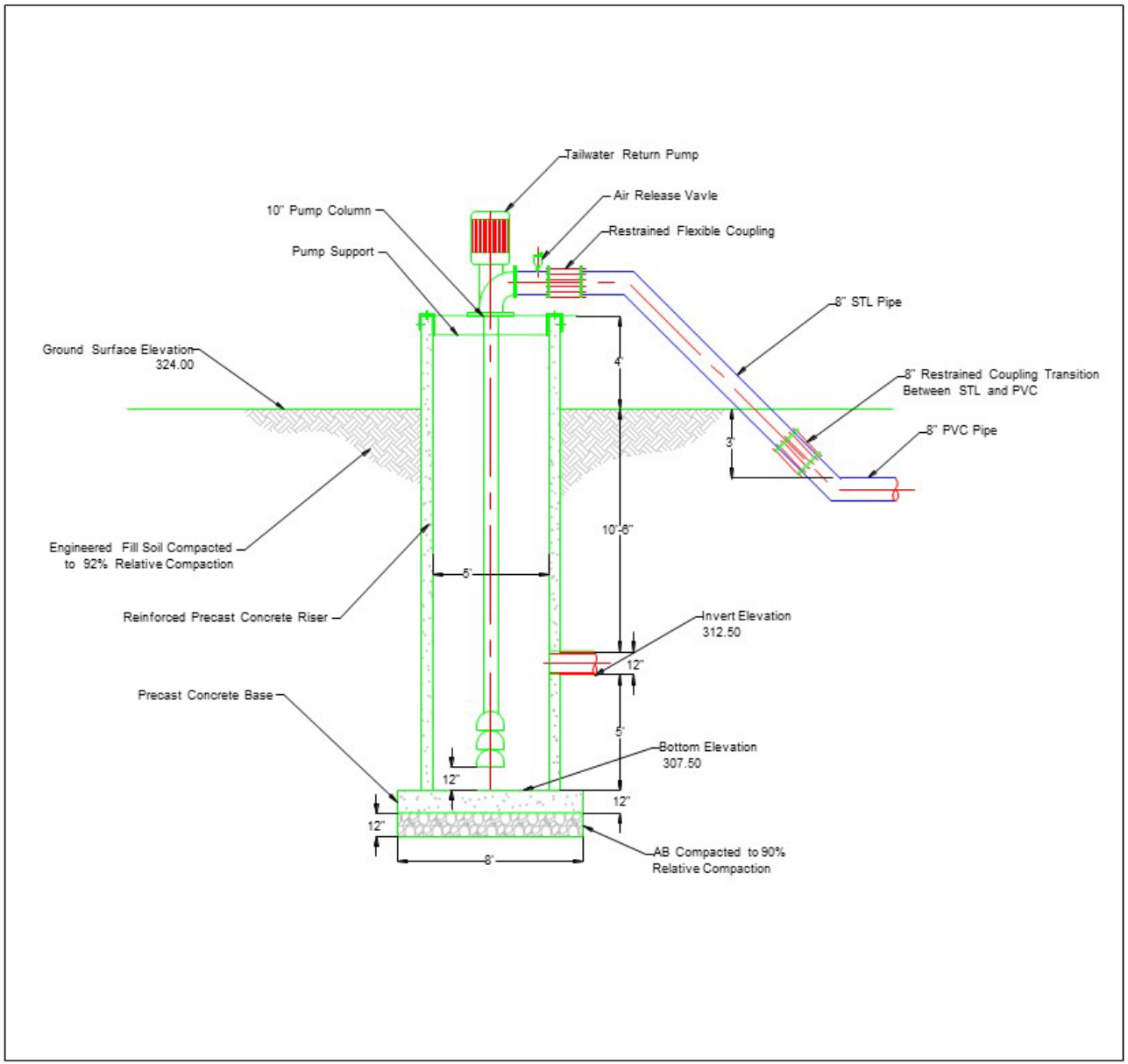

Figure 4 Tailwater Return Pump Station. Image created for *Appendix D of the City of Huron, Recycled Water Feasibility Study*

2.2.5 Environmental Commitments

The City must implement the following environmental protection measures to avoid and/or reduce environmental consequences associated with the Proposed Action (Table 1).

Table 1 Environmental commitments

Resource	Protection Measure
Biological Resources	In order to avoid impacts to nesting Swainson's hawks, construction activities shall occur, where possible, outside the nesting season (defined as March 1-September 15).
Biological Resources	If construction activities must occur between March 1 and September 15, a qualified biologist shall conduct nest surveys for Swainson's hawks on and within a ½ mile of the Proposed Action area in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (SHTAC, 2000). Three nest surveys shall be conducted in each of two survey periods, with the survey periods defined as follows: Period I – January 1 to March 20, Period II – March 20 to April 5, Period III – April 5 to April 20, Period IV – April 21 to June 10, and Period V – June 10 to July 30. Surveys shall take place in the two survey periods immediately prior to the start of construction, with the exception of Period III, when no surveys should take place per the SHTAC 2000 guidelines. The surveys shall consist of inspecting all accessible, suitable trees of the survey area for the presence of nests and hawks.
Biological Resources	If any active Swainson's hawk nests are discovered within the survey area, an appropriate disturbance-free buffer shall be established based on local conditions and Service guidelines. Disturbance-free buffers shall be identified on the ground with flagging, fencing, or by other easily visible means, and shall be maintained until a qualified biologist has determined that the young have fledged and are capable of foraging independently.
Biological Resources	A pre-construction "take avoidance" survey shall be conducted by a qualified biologist for burrowing owls within 14 days of the onset of construction according to methods described in the *Staff Report on Burrowing Owl Mitigation* (CDFG, 2012). The survey shall include all accessible suitable habitat on and within 200 meters of Project impact areas. The survey shall also take into account the location of the burrowing owl burrows that were previously identified during the December 2016 survey.
Biological Resources	If Proposed Action activities are undertaken during the breeding season (February 1- August 31) and active nest burrows are identified within or near Proposed Action areas, a 200-meter disturbance-free buffer shall be established around these burrows, or alternate avoidance measures implemented in consultation with Reclamation and California Department of Fish and Wildlife (CDFW). The buffers shall be enclosed with temporary fencing to prevent construction equipment from entering the setback area. Buffers shall remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described in the following Environmental Commitment.

Biological Resources	During the non-breeding season (September 1-January 31), resident owls occupying burrows in Proposed Action areas shall either be avoided, or passively relocated to alternative habitat. If the proponent chooses to avoid active owl burrows within the impact area during the non-breeding season, a 50-meter disturbance-free buffer shall be established around these burrows, or alternate avoidance measures implemented in consultation with Reclamation and CDFW. The buffers shall be enclosed with temporary fencing, and shall remain in place until a qualified biologist determines that the burrows are no longer active. If the proponent chooses to passively relocate owls during the non-breeding season, this activity shall be conducted in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50-foot buffer around all active burrowing owl burrows, 2) removing all suitable buffers outside the 50-foot buffer, 3) installing one-way doors on all potential owl burrows within the 50-foot buffer, 4) leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50-foot buffer.
Hazardous Materials	Any visible track-out on a paved public road where vehicles exit the work site will be removed using a wet sweeping vacuum device at the end of the work day.
Hazardous Materials	Provide adequate watering of all active soil storage areas and trenches (for pipelines) to prevent dust from becoming airborne.
Hazardous Materials	Provide adequate watering of paved and unpaved roadways within the project site.
Hazardous Materials	During earthmoving activities, provide adequate watering of areas involving earthmoving prior to, during and after activities to prevent dust from becoming airborne.
Hazardous Materials	Implement other watering strategies as necessary on and around the project site to ensure that dust does not become airborne.

Environmental consequences for resource areas assume the measures specified would be fully implemented. Copies of all reports would be submitted to Reclamation.

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 direct, indirect, or cumulative adverse effects to the resources listed in Table 2.

Table 2 Resources Eliminated from Further Analysis

Resource	Reason Eliminated
Environmental Justice	The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease. The Proposed Action would not disproportionately impact economically disadvantaged or minority populations as there would be no changes to existing conditions.
Indian Sacred Sites	The Proposed Action would not limit access to ceremonial use of Indian Sacred Sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites. Therefore, there would be no impacts to Indian Sacred Sites as a result of the Proposed Action.
Indian Trust Assets	The Proposed Action would not impact Indian Trust Assets as there are none in the Proposed Action area.
Recreation	The Proposed Action would not impact recreational resources as there are none in the proposed action area.

3.2 Air Quality

Section 176 (C) of the Clean Air Act (42 U.S.C. 7506 (C)) requires any entity of the federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan required under Section 110 (a) of the Federal Clean Air Act (42 U.S.C. 7401 [a]) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with State Implementation Plan's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements would, in fact conform to the applicable State Implementation Plan before the action is taken.

On November 30, 1993, the Environmental Protection Agency (EPA) promulgated final general conformity regulations at 40 CFR 93 Subpart B for all federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed federal action in a non-attainment or maintenance area if the total of direct and indirect emissions of the

relevant criteria pollutants and precursor pollutant caused by the Proposed Action equal or exceed certain *de minimis* amounts thus requiring the federal agency to make a determination of general conformity (Table 3).

3.2.1 Affected Environment

The Proposed Action area lies within the San Joaquin Valley Air Basin under the jurisdiction of the San Joaquin Valley Air Pollution Control District. The pollutants of greatest concern in the San Joaquin Valley are carbon monoxide, ozone, ozone precursors such as reactive organic gases (ROG) or volatile organic compounds (VOC), inhalable particulate matter between 2.5 and 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). The San Joaquin Valley Air Basin has reached Federal and State attainment status for carbon monoxide, nitrogen dioxide, and sulfur dioxide (Table 3). Although Federal attainment status has been reached for PM_{10} the State standard has not been met and both are in non-attainment for ozone and $PM_{2.5}$. There are no established standards for nitrogen oxides (NO_x); however, they do contribute to nitrogen dioxide standards and ozone precursors (San Joaquin Valley Air Pollution Control District 2017).

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, the City would continue to operate the Treatment Plant as it currently does. There would be no change in air emissions.

Proposed Action

Minimal short-term air quality impacts would occur associated with construction; generally arising from dust generation (fugitive dust) and operation of construction equipment. Fugitive dust results from land clearing, grading, excavation, concrete work, and vehicle traffic on paved and unpaved roads. Fugitive dust is a source of airborne particulates less than 10 microns, including PM_{10} and $PM_{2.5}$.

The California Emissions Estimator Model (CalEEMod®), Version 2013.2.2, was used to estimate air pollutant emissions resulting from construction and operation of the Proposed Action. Modeling results are summarized in Table 3. The output files from CalEEMod are included in Appendix A.

Table 3 Estimated Construction and Operation Emissions

	(ROG) (tons/year)	**CO (tons/year)**	**NOx (tons/year)**	**PM_{10} (tons/year)**	**$PM_{2.5}$ (tons/year)**	**CO_2e (metric tons/year)**
Total Project Construction Emissions	0.3602	2.8762	3.9515	1.407	0.6604	319.22
Total Project Operation and Area	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total Project Emissions	0.3602	2.8762	3.9515	1.407	0.6604	319.22
Threshold of Significance	10.0	NA	10.0	15.0	15.0	--

As shown in Table 3, temporary and short term emissions related to construction and operation of the Project would not produce criteria air pollutants in excess of San Joaquin Valley Air Pollution Control District thresholds, and would not result in a substantial increase in long-term regional or local emissions. Therefore, construction-related emissions would not violate an air quality standard, contribute substantially to an existing or projected air quality violation or conflict with or obstruct implementation of California Air Resources Board and San Joaquin Valley Air Pollution Control District air planning efforts. A general conformity determination pursuant to the Clean Air Act is not required.

In addition, the City and/or its designee would comply with the San Joaquin Valley Air Pollution Control District's Regulation VIII dust control requirements during any proposed construction (including Rules 8011, 8031, 8041, and 8071). This would further reduce the potential for localized PM_{10} impacts.

Cumulative Impacts

Emissions for the Proposed Action are well below the *de minimis* thresholds established by the San Joaquin Valley Air Pollution Control District and would not have a considerable contribution to a cumulative adverse impact on air quality.

3.3 Biological Resources

3.3.1 Affected Environment

The Proposed Action area consists of non-native grassland habitat that is dominated by barnyard barley, red brome, London rocket, and red-stemmed filaree. Dense patches of Russian thistle are present in portions of the Proposed Action area and cover approximately 18 acres of the site (LOA 2016a).

Historical imagery of the Proposed Action area shows that the majority of the site was in agricultural production until at least 1982, and was fallow by 1994.

The Proposed Action area is bordered to the west by row crops and is bordered to the south by a small drainage basin with riparian trees and, immediately beyond that, the Treatment Plant. To the north and east, the Proposed Action area is bordered by lands within the Detention Basin. Outside of the Detention Basin, the Proposed Action area is surrounded by broad expanses of agricultural land for several miles in each direction.

On June 28, 2016 Reclamation requested an official species list from the United States Fish and Wildlife Service (Service) via the Service's website, http://ecos.fws.gov/ipac, (Consultation Code: 08ESMF00-2016-SLI-1745). The list covers the Proposed Action area shown in Figure 3. The California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) was also queried for records of protected species within the vicinity of the Proposed Action area (CNDDB 2016). Ecologists from Live Oak Associates Inc. conducted reconnaissance-level field surveys of the Action area on April 6, 2016 and May 23, 2016 (LOA 2016a), a Reclamation biologist visited the site on June 13, 2016 to assess the suitability of the habitat in the Proposed Action area for federally listed species, and ecologists from Live Oak Associates Inc. returned to the site to conduct a habitat assessment for San Joaquin kit fox on

December 7, 2016 and December 8, 2016 (LOA 2016b). The information collected above, in addition to information within Reclamation's files, was combined to determine the likelihood of protected species occurrence within the Proposed Action area and is summarized in Table 4.

Table 4 Special Status Species in the Proposed Action area

Species	Status[1]	Effects[2]	Potential to occur and summary basis for ESA determination [3]
Amphibians			
California red-legged frog *Rana draytonii*	T	NE	**Absent.** This species was extirpated from the Central Valley in the late 1950s, and does not occur in the Proposed Action area. There would be *No Effect* to this species.
Birds			
Swainson's hawk *Buteo swainsonii*	MBTA	NT	**Possible.** There are trees near the Proposed Action area which may provide suitable nesting habitat for this species. Avoidance measures would be implemented to avoid take of this species.
Burrowing owl *Athene cunicularia*	MBTA	NT	**Present.** Suitable grassland habitat for this species is present within the Proposed Action area. Burrowing owls and burrowing owl burrows were observed in the Proposed Action area during the December 2016 (LOA, 2016a). Avoidance measures would be implemented to avoid take of this species.
Fish			
Delta smelt *Hypomesus transpacificus*	T	NE	**Absent.** This species is not present in the Proposed Action area due to a lack of suitable aquatic habitat. There would be *No Effect* to this species.
Invertebrates			
Vernal pool fairy shrimp *Branchinecta lynchi*	T	NE	**Absent.** Vernal pool habitat is not present within the Proposed Action area. There would be *No Effect* to this species.
Mammals			
Giant kangaroo rat *Dipodomys ingens*	E	NE	**Absent.** The Proposed Action area is located outside of the current known range of this species. There would be *No Effect* to this species.
San Joaquin kit fox *Vulpes macrotis mutica*	E	NLAA	**Possible.** There are records of this species near the Proposed Action area. Although it is unlikely, there is some potential for kit foxes to occur within the Proposed Action area. With the implementation of the conservation measures, the Proposed Action is not likely to adversely affect this species.
Tipton kangaroo rat *Dipodomys nitratoides nitratoides*	E	NE	**Absent.** The Proposed Action area is located outside of the current known range of this species. There would be *No Effect* to this species
Plant			
California jewelflower *Caulanthus californicus*	T	NE	**Absent.** This species does not occur within the Proposed Action area. There would be *No Effect* to this species.
San Joaquin wooly-threads *Monolopia congdonii*	E	NE	**Absent.** This species does not occur within the Proposed Action area. There would be *No Effect* to this species.
Reptiles			
Blunt-nosed leopard lizard *Gambelia sila*	E	NE	**Absent.** The nearest occurrences of this species are all located to the west of Interstate-5, more than 8-miles from the Proposed Action area. Department of Water Resources biologists have conducted protocol-level surveys for blunt-nosed leopard lizards within the Detention Basin since 2000, and have failed to detect any in the area (Caltrans, 2015). This species is not expected to occur within the Proposed Action area. There would be *No Effect* to this species.

Species	Status[1]	Effects[2]	Potential to occur and summary basis for ESA determination [3]
Giant Garter Snake *Thamnophis gigas*	T	NE	**Absent.** This species is not present within the Proposed Action area due to a lack of suitable habitat. There would be *No Effect* to this species.

1 Status = Status of federally protected species protected under the ESA.
E: Listed as Endangered
MBTA: Migratory Bird Treaty Act protected species
T: Listed as Threatened
2 Effects = ESA Effect determination
NE: No Effect anticipated from the Proposed Action to federally listed species or designated critical habitat
NLAA: Proposed Action Not Likely to Adversely Affect federally listed species
3 Definition of Occurrence Indicators
Absent: Species not recorded in study area and suitable habitat absent.
Present: Species recorded in area and suitable habitat present.
Possible: Species recorded in area and habitat suboptimal.

There is no Critical Habitat in the Proposed Action area. Several of the special-status species named on the official species last have no potential to occur within the Proposed Action area due to a lack of suitable habitat, and would therefore not be affected by the Proposed Action. Federally protected species with some potential to occur in or near the Proposed Action area include Swainson's hawk, burrowing owl, and San Joaquin kit fox.

Swainson's Hawk

The Swainson's hawk is a federal species of concern and is protected under the federal Migratory Bird Treaty Act (MBTA). They are found in the grasslands and agricultural lands of California's Central Valley in spring and summer. Swainson's hawks exhibit a high degree of nest site fidelity and usually construct nests in large trees including Fremont cottonwood, willow, and mature oak trees (Bloom 1980). This species spends large amounts of time soaring over grasslands and agricultural fields in the Central Valley and can travel up to 18 miles to forage for prey. Swainson's hawks prey on small mammals, insects, and birds. They have adapted to use certain croplands, including alfalfa, grain, tomatoes, beets and other row crops, for foraging (Estep 1989).

Burrowing Owl

The burrowing owl is a federal species of concern and is protected under the MBTA. Their diet consists of small mammals, birds, amphibians, invertebrates and insects. Burrowing owls forage in pastures, croplands, and areas with sparse vegetation. They nest in mammal burrows or natural cavities. The primary reason for the species decline is habitat loss and degradation. The use of pesticides in agricultural areas also contributes to the decline of burrowing owls by reducing burrowing mammal populations and potentially poisoning the owls (Klute et al. 2003).

San Joaquin Kit Fox

The San Joaquin kit fox is federally listed as an endangered species. Their diet varies based on prey availability, and includes small to mid-sized mammals, ground-nesting birds, and insects. Kit foxes generally live in arid, relatively flat annual grassland and saltbush scrub habitats, but they are also found in urban areas like parks and golf courses. Kit foxes excavate their own dens or could use other animal and human-made structures (culverts, abandoned pipelines, and banks in sumps or roadbeds). Primary reasons for the species decline include loss and degradation of habitat (Service 2010).

3.3.2 Environmental Consequences

No Action

Under the No Action alternative, Reclamation would not allow the City to irrigate alfalfa on their land with treated effluent from the Treatment Plant. Reclamation's land within the Detention basin would remain in its current condition. Evidence of illegal dumping was discovered during surveys of the site, and is expected to continue in the future under the No Action alternative. Because conditions would remain unchanged from current conditions, there would be no new impacts to biological resources.

Proposed Action

Under the Proposed Action, Reclamation would allow the City to convert 188-acres of Reclamation-owned land into an alfalfa field that would be irrigated with treated effluent from the Treatment Plant. Potential effects from the Proposed Action are discussed below in further detail for each special-status species with the potential to occur in the Proposed Action area.

Swainson's Hawk

There are 8 CNDDB-recorded occurrences of Swainson's hawks within 5 miles of the Proposed Action area. The closest record was a 2011 observation of an active nest along the western edge of the California Aqueduct, about 0.75 miles from the Proposed Action area (CNDDB 2016). The Proposed Action area consists of non-native grassland habitat and does not contain trees that would provide suitable nesting habitat for this species; however, there are some cottonwood trees bordering the southeastern portion of the Proposed Action area (south of where the tail-water pond would be constructed) which may provide suitable nesting habitat for this species. If construction occurs within 0.25 miles of an active Swainson's hawk nest during the critical phases of the species nesting cycle (March 1-September 15) it may result in nest abandonment or failure (CDFG 1994). To insure that the Proposed Action does not cause any take of Swainson's hawks, if work on the Proposed Action is scheduled to occur between March 1st and September 15th a qualified biologist would survey areas of suitable nesting habitat within 0.5 miles of the Proposed Action area for active Swainson's hawk nests. If an active Swainson's hawk nest is found, an appropriate disturbance-free buffer shall be established until a qualified biologist determines that the young have fledged and are capable of foraging independently.

Alfalfa fields provide suitable foraging habitat for Swainson's hawks, so no foraging habitat would be permanently lost as a result of the Proposed Action. With the implementation of the provided avoidance measures, Reclamation has determined that the Proposed Action would result in *No Take* of Swainson's hawks.

Burrowing Owl

There are two CNDDB-recorded occurrences of burrowing owls within 5 miles of the Proposed Action area. The closest record was a 2001 observation of 3 active burrowing owl burrows adjacent to the southwestern corner of the Proposed Action area (CNDDB 2016). The Proposed Action area consists of relatively flat non-native annual grassland with some scattered ground squirrel burrows, and provides suitable habitat for burrowing owls. Five burrowing owls, and eleven burrowing owl burrows were observed in the Proposed Action area when the site was surveyed on December 7th and 8th of 2016 (LOA 2016a). If burrowing owls are present within the Proposed Action area during construction, the Proposed Action may displace or disturb the

burrowing owls and could result in nest failure. Avoidance measures would be implemented in order to avoid take of burrowing owls during the construction phase of the Proposed Action.

Once construction is complete, the Proposed Action area would be operated as an irrigated alfalfa field. The Proposed Action area would no longer provide suitable denning habitat for burrowing owls; however, burrowing owl burrows have been found to be more abundant near irrigated agricultural fields due to a greater abundance of invertebrate prey in these areas (Moulton et al. 2006). The remainder of the land in the detention basin would continue to provide suitable denning habitat, and the Proposed Action area would continue to provide suitable foraging habitat for burrowing owls.

With the implementation of the provided avoidance measures, Reclamation has determined that there would be *No Take* of burrowing owls.

San Joaquin Kit Fox

There are 15 CNDDB-recorded occurrences of San Joaquin kit foxes within a 10 mile radius of the Proposed Action area. The 8 CNDDB occurrences closest to the Proposed Action area were recorded along the California Aqueduct, but all of these records are now over 30 years old (CNDDB 2016). The Proposed Action area is located in an area that has not been identified as a priority for the recovery of the species, nor as a potential movement corridor for the species, and is surrounded by dense agriculture. In Fresno County, San Joaquin kit foxes generally occur further west than the Proposed Action area, in a thin band of suitable habitat west of the Interstate-5 and east of the Coast Range Foothills (Service 2010).

The California Department of Water Resources (DWR) conducted spotlighting and camera trap surveys for San Joaquin kit foxes in the Detention Basin in 2002 and 2003. No San Joaquin kit foxes were photographed at any of the camera stations, and no confirmed observations of San Joaquin kit foxes were made during the spotlighting survey; however, there was one unconfirmed sighting of a potential kit fox (Caltrans 2015). Live Oak Associates Inc. surveyed the Proposed Action area on December 7th and 8th of 2016 and found no evidence of kit fox presence (i.e. tracks, scat, etc.) or burrows that appeared to fit the dimensions (greater than 4-inches) typical of San Joaquin kit fox dens (LOA 2016b).

The Proposed Action area is located within a small isolated patch of non-native grassland habitat surrounded by agricultural lands which are unsuitable for occupation by San Joaquin kit foxes. This patch of non-native grassland may serve as a stepping stone between other isolated areas of natural land, but conversion of the site to irrigated agriculture should not preclude San Joaquin kit fox from passing through the site in route to other suitable areas because after conversion, foraging and dispersing kit fox would still be able to use, at a minimum, the margins of the alfalfa field (LOA 2016b).

San Joaquin kit foxes are not expected to den within the Proposed Action area, but there is some potential for dispersing kit foxes to move through or forage within the Proposed Action area. If kit foxes are present during construction, they may be disturbed or displaced; however, with the implementation of the environmental protection measures in Appendix B, no mortality take or destruction of active kit fox dens is expected to occur as a result of the Proposed Action.

Reclamation determined that the Proposed Action is *Not Likely to Adversely Affect* the endangered San Joaquin kit fox, and on February 12, 2017 the Service concurred with Reclamation's determination.

Cumulative Impacts

During surveys of the Proposed Action area, evidence of illegal dumping was discovered on the site (i.e. mattresses, pallets, cans, debris piles, etc.). Once construction for the Proposed Action is complete the Action area would be fenced, so illegal dumping at the site is expected to stop. Reclamation is currently unaware of any future State or private activities planned for the Proposed Action area. The land within the Proposed Action area is federally owned by Reclamation; therefore, any future State or private activities proposed within the Action area would undergo appropriate review in accordance with Section 7 of the Endangered Species Act (16 U.S.C. §1531 et seq.). This, in conjunction with the avoidance and minimization measures required, any potential cumulative contribution to biological resource impacts due to the Proposed Action would be minimized.

3.4 Cultural Resources

Cultural resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act of 1966 is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the National Historic Preservation Act 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 (National Register). Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 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.

3.4.1 Affected Environment

Providing Federal land use authorization constitutes an undertaking as defined in 36 CFR § 800.16(y). This authorization would result in new construction of agricultural fields and irrigation infrastructure, which is a type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a). As a result of this determination, Reclamation implemented the steps in the Section 106 process as outlined at §800.3 to §800.6.

In an effort to identify historic properties, the City contracted Applied EarthWorks, Incorporated to conduct a cultural resources inventory covering the APE. One historic era cultural resource was identified within the APE: a segment of the Goshen Division of the Southern Pacific Railroad (P-10-003930). This segment of railroad was not evaluated for inclusion on the National Register because the new pipeline from the Treatment Plant would be bored approximately 5-10 feet underneath the track foundation, and would stay at least 30 feet away from each side, completely avoiding the railroad alignment. No prehistoric cultural resources were identified.

Utilizing these identification efforts, Reclamation entered into consultation with the SHPO to seek their concurrence on a finding of "no historic properties affected pursuant to 36 CFR § 800.4(d))(1)." Concurrence from SHPO was received on June 02, 2017 and is included in Appendix C.

3.4.2 Environmental Consequences

No Action

Under the No Action Alternative, there would be 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

Reclamation determined that there would be no historic properties affected pursuant to 36 CFR § 800.4(d)(1); therefore, no cultural resources would be affected as a result of implementing the Proposed Action.

Cumulative Impacts

Reclamation determined that there would be no historic properties affected pursuant to 36 CFR § 800.4(d)(1); therefore, there would be no cumulative impacts to cultural resources as a result of implementing the Proposed Action.

3.5 Global Climate Change

3.5.1 Affected Environment

Climate change refers to significant change in measures of climate (e.g., temperature, precipitation, or wind) lasting for decades or longer. Many environmental changes can contribute to climate change [changes in sun's intensity, changes in ocean circulation, deforestation, urbanization, burning fossil fuels, etc.] (EPA 2014a).

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases, such as carbon dioxide (CO_2), occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are: CO_2, methane (CH_4), nitrous oxide, and fluorinated gasses (EPA 2014a).

During the past century humans have substantially added to the amount of greenhouse gases 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 2014b).

Climate change has only recently been widely recognized as an imminent threat to the global climate, economy, and population. As a result, the national, state, and local climate change regulatory setting is complex and evolving.

In 2006, the State of California issued the California Global Warming Solutions Act of 2006, widely known as Assembly Bill 32, which requires California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verification of statewide greenhouse gases emissions. CARB is further directed to set a greenhouse gases emission limit, based on 1990 levels, to be achieved by 2020.

In addition, the EPA has issued regulatory actions under the Clean Air Act as well as other statutory authorities to address climate change issues (EPA 2014c). In 2009, the EPA issued a rule (40 CFR Part 98) for mandatory reporting of greenhouse gases by large source emitters and suppliers that emit 25,000 metric tons or more of greenhouse gases [as CO_2 equivalents ($CO2_e$) per year] (EPA 2009). The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change and has undergone and is still undergoing revisions (EPA 2014c).

3.5.2 Environmental Consequences

No Action

Under the No Action Alternative, the City would continue to operate the Treatment Plant as it currently does. There would be no change in air emissions.

Proposed Action

As shown in Table 3, annual construction and operational emissions of CO_{2e} are estimated to be 319.22 metric tons, well less than the EPA's 25,000 metric tons per year threshold for annually reporting greenhouse gases emissions. Accordingly, the Proposed Action would result in below *de minimis* impacts to global climate change.

Cumulative Impacts

Greenhouse gase emissions generated by the Proposed Action are expected to be small, as seen in Table 3. While any increase in greenhouse gases emissions would add to the global inventory of gases that would contribute to global climate change, the Proposed Action would result in potentially minimal to no increases in greenhouse gases emissions and a net increase in greenhouse gases emissions among the pool of greenhouse gases would not be detectable.

3.6 Hazardous Materials

A "hazardous material" is any substance "that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment" (Health and Safety Code 25501 and 22 California Code of Regulations [CCR] 66260.10).

3.6.1 Affected Environment

The Detention Basin is included in the Atlas Asbestos Mine Superfund site as part of the Johns-Manville Mill Operating Unit. The Detention Basin geographic area was included in the site because of concerns that asbestos mining and milling waste from the Atlas Mine Area were being transported to these areas by water or wind. The abandoned Johns-Manville Mill Operating Unit consists of a former asbestos mine, former processing mill, former support buildings, and asbestos tailings. The area is drained by Pine Canyon Creek, which flows into the Los Gatos Creek, a tributary to the Detention Basin (EPA 2006).

In 1992, EPA published a public notice regarding the status of the Detention Basin (EPA 1992). In that notice, EPA stated that plans for the Detention Basin established by Reclamation and DWR were adequate to address the threat from asbestos. These plans included (1) planting cover crops to reduce exposure to airborne asbestos and (2) expanding the ponding basin to reduce chances of asbestos run-off from entering the California Aqueduct.

3.6.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not approve the land use authorization and there would be no change in operations or ground disturbance. Conditions would remain the same as existing conditions.

Proposed Action

The Proposed Action would be consistent with the plans established by Reclamation and DWR (i.e., planting cover crops to reduce exposure to airborne asbestos) that was previously approved by the EPA. As alfalfa fields would reduce the potential for airborne asbestos, the Proposed Action would beneficially reduce the hazards posed by the existing asbestos within the Proposed Action area.

During construction, the City and/or its designee shall implement best management practices included in Table 1 to ensure that airborne dust containing asbestos is minimized.

Cumulative Impacts

The planting of cover crops such as alfalfa to reduce the chance of asbestos entering the waterway or becoming airborne is consistent with the EPA determination and would have a cumulatively beneficially impact to reducing this hazard in the Proposed Action area.

3.7 Land Use

3.7.1 Affected Environment

The Proposed Action area is ruderal and currently used by Reclamation for flood management. The lands surrounding the Proposed Action area are either ruderal or agricultural (Figure 1).

3.7.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not approve the land use authorization and there would be no change in land use.

Proposed Action

Construction of the alfalfa fields would be done in a manner that would not disrupt the current uses of the land for flood control. Reclamation would continue to be able to use the surrounding area for flood control when needed during flood events.

The Proposed Action would not facilitate unplanned growth, land use changes, or conflict with existing land uses. Therefore, there would be no adverse impacts to land use in this area as a result of the Proposed Action.

Cumulative Impacts

The Proposed Action, along with all known projects in the City of Huron, would not change the intensity of land uses within the City's planning area. All projects proposed and constructed within Huron are reviewed for consistency with citywide land use controls and development standards during the course of the project review and approval process.

3.11 Water Resources

3.11.1 Affected Environment

The principal drainage of the Proposed Action area is Los Gatos Creek (also referred to as Arroyo Pasajero), the historic channel of which travels in an easterly direction approximately 0.7 mile north of the Proposed Action area. Los Gatos Creek initiates in the Diablo Range, some 30 miles west of the site, at an elevation of approximately 3,000 feet. Historically, Los Gatos Creek terminated near the northern boundary of the historic Tulare Lake in very wet years. Currently, the Detention Basin constrains Los Gatos Creek floodwaters to an approximate 3,800 acre area with a set of gates that allow overflow to be pumped into the San Luis Canal, as needed.

City of Huron

The City's sole water supply is CVP water received from a lateral connection to the San Luis Canal. Water is transported to Huron via Lateral 27, which is operated by Westlands Water District. CVP water is treated at Huron's Water Treatment Plant prior to distribution to local water users. The City does not pump groundwater as the groundwater in the area is very deep, of poor quality, and almost non-potable.

Currently, the City's Water Treatment Plant effluent is not further treated for nitrogen. During 2015, the total nitrogen in the effluent was between 21 milligrams per liter (mg/L) and 57 mg/L when measured (AM Consulting Engineers, Inc. 2016).

3.11.2 Environmental Consequences

No Action

Reclamation would not issue a land use authorization to the City. The City would continue to operate the Water Treatment Plant as it currently does and would need to find another means to meet requirements of the Order. Groundwater quality could continue to be impacted due to these discharges until the City could find another way to remove nitrogen.

Proposed Action

The high levels of nitrogen in the City's effluent could impact groundwater levels within the Proposed Action area; however, as a result of natural processes, it is expected that most of the nitrogen would be converted to ammonium or nitrate and would therefore be available for uptake by the alfalfa plants during the growing season. In addition, nitrogen may also be lost in the system through denitrification and volatilization of ammonia. Ammonia loss rates through volatilization have been estimated at up to 20 percent in wastewater. Loss of nitrogen through denitrification has been estimated at 10 percent to 20 percent for sandy loam and loam soils, such as those in the Proposed Action area, with a medium denitrification potential (AM Consulting Engineers, Inc. 2016). Due to losses from volatilization and denitrification, only a certain portion of the nitrogen in the applied wastewater would be left over for the alfalfa plants for uptake.

The City conducted a water feasibility study which determined that a minimum of 140 acres of alfalfa would be necessary to bind the nitrogen present in the typical 1.0 million gallons of effluent processed each day at the Wastewater Treatment Plant (AM Consulting Engineers, Inc. 2016). Based on these processes discussed in the previous paragraph, the City estimates that the Proposed Action area of 188 acres would be sufficient to uptake the entire nitrogen load contained within the applied recycled water (AM Consulting Engineers, Inc. 2016).

The Proposed Action would not require a disruption of the City's customers in service for water or the treatment of wastewater. The Regional Water Quality Control Board has determined that, "The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System General Industrial Storm Water Permit for the discharge because all storm water runoff is retained onsite and does not discharge to a water of the United States." Completion of the Proposed Action would allow the City to meet its wastewater treatment requirements from the Order. The City does not use groundwater so its use would not change under this action.

The land would be planted in alfalfa irrigated with treated effluent from the Treatment Plant in order to remove nitrogen. The removal of nitrogen by alfalfa would reduce the amount of nitrogen that have previously permeated into the groundwater beneath the City's Treatment Plant. This would be an overall beneficial impact to groundwater quality and would enable the City to meet the requirements of the Order.

No facilities are being proposed that would alter the existing drainage pattern of the area. Reclamation would continue to use the surrounding Detention Basin for flood control when needed. Berms would be installed around the alfalfa fields to ensure that no treated effluent would leave the area and potentially enter the San Luis Canal.

Cumulative Impacts

As the Proposed Action would not disrupt the City's customer's water service or water treatment, there would be cumulatively beneficial impacts over the long term as the potential for local groundwater contamination from nitrogen would be greatly reduced.

Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation intends to provide the public with an opportunity to comment on the Draft Finding of No Significant Impact and Draft Environmental Assessment during a 30-day public review period.

4.2 List of Agencies and Persons Consulted

Reclamation has consulted with the following regarding the Proposed Action:

- U.S. Fish and Wildlife Service
- California State Historic Preservation Office

Reclamation is coordinating the Proposed Action with the City of Huron.

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

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

On September 20, 2016 Reclamation sent a letter to the Service requesting concurrence with their Not Likely to Adversely Affect determination for the federally endangered San Joaquin kit fox and initiated informal consultation. On February 27, 2017 Reclamation received a letter from the Service stating that they concurred with Reclamation's determination (Appendix A).

4.4 Executive Order 11988 – Floodplain Management

Executive Order 11988 requires that all Federal agencies take action to reduce the risk of flood loss, to restore and preserve the natural and beneficial values served by floodplains, and to minimize the impact of floods on human safety, health, and welfare.

Reclamation has determined that there is no need for any action related to Executive Order 11988 as the land use change would be consistent with maintaining a floodplain. The conversion of the ruderal land to alfalfa promotes water infiltration and reduces the velocity of runoff that contributes to floodplain erosion and the severity of flood events. Further, construction of the alfalfa fields would not prevent Reclamation using the Detention Basin for flood control if needed.

4.5 National Historic Preservation Act (Title 54 USC § 306108)

The National Historic Preservation Act of 1966, as amended (Title 54 USC § 306108), requires that federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for inclusion in the National Register. The 36 CFR Part 800 regulations implement Section 106 of the National Historic Preservation Act.

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

Reclamation initiated Section 106 consultation with the SHPO, and made a finding of "no historic properties affected" pursuant to 36 CFR §800.4(d)(1), for the proposed undertaking. On June 05, 2017 Reclamation received a letter from the SHPO stating that they concurred with Reclamation's determination (Appendix C).

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