DRAFT

Environmental Impact Report for the IW Conveyance and IW Reclamation Facility Project

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ES Executive Summary

This Draft Environmental Impact Report (DEIR) is an informational document intended for the use by the City of Gonzales (City), other public agencies, and members of the general public in evaluating the potential environmental effects of the proposed IW Conveyance and IW Reclamation Facility Project (proposed project), which includes the Industrial Wastewater Reclamation Facility (IWRF) and wastewater conveyance line.

California Environmental Quality Act (CEQA) Section 21002 requires that an EIR identify the significant effects of a project on the environment and provide measures or alternatives that can mitigate or avoid these effects. This Draft EIR evaluates the environmental effects associated with development of the project and discusses the manner in which the project's significant effects can be reduced or avoided through the implementation of mitigation measures or feasible alternatives to the proposed project. In accordance with Section 15130 of the CEQA Guidelines, this DEIR also includes an examination of the effects of cumulative development.

This summary provides the (1) the proposed project, (2) results of the environmental analysis contained within this environmental document, (3) alternatives to the proposed project that were considered, and (4) major areas of controversy and issues to be resolved by decision makers. This summary does not contain the extensive background and analysis found throughout the individual chapters within the DEIR. Therefore, the reader should review the entire document to fully understand the proposed project and its environmental consequences.

ES.1 Project Location and Project Site

The City is located in Monterey County, California, approximately 16 miles southeast of the City of Salinas. The City has a current population of approximately 8,677 residents as of January 2019 (Department of Finance 2019), which is projected to increase to 24,000 by 2035 (City of Gonzales 2018). The City's wastewater, both domestic and industrial, is currently treated by the existing municipal wastewater treatment plant (MWWTP) located at the end of Short Road, approximately 2 miles southwest of the intersection of South Alta Road and Gonzales River Road (see **Figure 2-1, Regional Map**).

The City is home to the Gonzales Agriculture Industrial Business Park (GABIP), which is an approximately 75-acre area bounded by Alta Street to the east, Gonzales River Road to the south, and agricultural land to the north and west. The GABIP includes several large agricultural processing businesses. An additional 25 acres are planned to be added to the GABIP in the future to accommodate industrial business growth. Currently, GABIP discharges are collected in the City sewer system which collects wastewater flows from all areas of the City and conveys both domestic and industrial wastewater flows to the existing MWWTP via a 21-inch diameter sewer main along Femin Lane (Wallace Group 2020).

The proposed IWRF would be located adjacent to the existing MWWTP on Short Road (see **Figure 2-2, Project Location**). The MWWTP plant includes a 1-acre emergency over flow pond, six 2-acre facultative lagoons, two 5-acre polishing ponds, and three 6-acre rapid infiltration disposal basins. The existing MWWTP is zoned Public Facilities (PF) and designated as Public/Quasi Public in the City's General Plan (City of Gonzales 2010a). The remaining land uses surrounding the project site consist predominantly of farmland used to cultivate row crops, although there is also vacant land that was formerly used as an auto wrecking yard at the eastern boundary of the existing MWWTP, and a composting facility is located at the southern boundary of the existing MWWTP. The Salinas River is located about 0.2 miles south of the proposed IWRF.

The proposed IWRF would comprise a total of approximately 54 acres. Approximately 49 acres are within the City limits and 5 acres are within Monterey County in the City's sphere of influence (SOI) (see **Figure 2-3, IWRF Property Ownership**). The 5 acres within Monterey County would be annexed to the City as part of the proposed project. The site includes the following Assessor's Parcel Numbers (APNs): 223-061-017, 223-061-020, 223-061-019, 223-061-002, and 223-061-014. The part of the proposed project site within the City limits (APNs 223-061-017, 223-061-020, 223-061-019, and 223-061-002) is designated as Public/Quasi Public, but is currently not zoned (City of Gonzales 2010b). The remaining parcel that is within the City's SOI (APN 223-061-014) is also designated as Public/Quasi Public in the City's General Plan but is not zoned by the City (City of Gonzales 2010b); the parcel is zoned and designated F/40 (Farmlands with minimum building site of 40 acres) by Monterey County (Monterey County 2010, 2020).

As shown in Figure 2-2, Project Location, the proposed industrial wastewater conveyance line would parallel the City's existing 21-inch diameter wastewater collection system line along Femin Lane. The proposed industrial wastewater conveyance line would connect to a new wastewater collection system in the GABIP to convey flows from the GABIP area to the new IWRF.

ES.2 Project Description

There are two components of the proposed project: the IWRF, and the proposed wastewater conveyance line.

The proposed IWRF would be located on 54 acres north of the existing MWWTP and would include a headworks with influent screening to remove trash and debris; an influent lift station with a flow meter to pump water to an aerated pond system designed to introduce oxygen into wastewater; and effluent percolation beds to dispose of treated effluent. Solids management will consist of periodic dredging and removal of material deposits in the treatment ponds. The preliminary site plan for the IWRF is shown in **Figure 2-4, IWRF Site Plan.**

The IWRF would have a wastewater treatment capacity of 1.0 MGD. As part of the proposed IWRF, design criteria are established for the treatment facilities to define biological treatment capacity. The City would use General Waste Discharge Order No. R3-2004-0066 (Fruit & Vegetable Order) as a means of regulating this new facility. The Fruit & Vegetable Order includes a number of provisions related to wastewater, including Provision C.8, which states that in land-applied applications, the treated fruit and vegetable wastewater effluent shall not have an organic loading rate that exceeds 100 pounds of biochemical oxygen demand (BOD5) per acre per day (30-day average).

As described above and as shown in Figure 2-2, Project Location, the proposed industrial wastewater conveyance line would consist of approximately 10,700 linear feet of a new underground sewer pipe (up to 24" diameter) located mainly within the public City street right-of-way or existing City sewer easements within County street rights-of-way, which would parallel the existing wastewater conveyance line that currently conveys wastewater flows to the MWWTP. Similar to the existing wastewater conveyance line, the proposed industrial wastewater conveyance line would convey flows by gravity to the proposed IWRF.

Recycled Water and Future Capacity

As part of the initial design of the IWRF, there will a "stub out" for future treated wastewater effluent to be recycled. The recycled water would be used for irrigation on nearby agricultural fields. The wastewater treated by the IWRF consists solely of agricultural industrial wastewater and does not contain human fecal matter. The capacity, design, and distribution system for the recycled water would be determined in the future and is not part of this proposed project.

The initial design criteria for the IWRF is 1.0 MGD, which will accommodate the existing agricultural industrial wastewater flows of 0.6, and currently planned expansions at the GABIP. The IWRF site would accommodate future capacity expansion of up to 3.0 MGD by expanding the treatment ponds and replacing influent pumps (see **Figure 2-5 IWRF Potential Buildout**). However, the possible future expansion of the treatment plant is not part of this proposed project.

For purposes of this EIR, we assume the entire IWRF site would be affected by project construction, even though only a portion of the site is necessary to operate a 1.0 MGD facility (as shown on Figure 2-3). Future expansion of the IWRF beyond 1.0 would be subject to future CEQA review.

Circulation and Parking

Similar to the existing MWWTP, the proposed IWRF would be accessible via Short Road from Gonzales River Road. Limited employee and visitor parking would be constructed on the project site.

Located largely within the County of Monterey and City of Gonzales public City street rights-of-way and existing City sewer easements within County street rights-of-way, the proposed IWRF wastewater conveyance line would be accessible for operations and maintenance procedures, with manholes installed at- or near-grade.

Project Construction and Schedule

Construction of the IWRF would begin in 2021-2022, and would occur over a period of 10 to 14 months.

Construction of the proposed wastewater conveyance line would be achieved by open cut construction methods. Open cut construction would involve installation of the sewer pipe in a trench. The trench -would be up to 3-feet wide, and the depth would vary based on the required hydraulics, but would range from about 6 to 12 feet deep. for the use of trenchless construction techniques is not anticipated because there are no significant crossings identified along the proposed wastewater conveyance line, such as waterways, environmentally-sensitive areas or busy intersections. Construction of the wastewater conveyance line is scheduled to begin in 2021-2022, and is expected to take 3-6 months.

Construction staging associated with the development of the proposed wastewater conveyance line is expected to occur within the public City and County roadway rights-of-way. Temporary construction access to adjacent properties, if needed, would be negotiated by the contractor. In addition, materials and equipment storage in support of construction of both the proposed wastewater conveyance line and IWRF would occur within the IWRF site.

Annexation and Zoning

As noted above, 49 of the approximately 54-acre project site is within the Gonzales city limits. The easterly 5-acre parcel (APN 223-061-014) is within the City's SOI but has not been annexed to the City. Annexation is subject to approval by the Local Agency Formation Commission (LAFCO).

Annexation would require pre-zoning of the site. The project site would be zoned Public Facilities (PF) consistent with the zoning of the existing City Wastewater Treatment Plant.

ES.2.1 Project Objectives

The City of Gonzales has established the following objectives related to the proposed project.

1. Effectively treat agricultural industrial wastewater to protect groundwater quality.
2. Expand total City wastewater treatment capacity to 2.3 MGD.
3. Construct a separate industrial wastewater collection system to maximize capacity of the existing collection system.
4. Convey industrial wastewater flows from the GABIP to the treatment site while minimizing the need for additional right of way.
5. Implement the Industrial Discharger Pretreatment Program.
6. Minimize the environmental impacts of the collection system, conveyance, and treatment facility.
7. Minimize long-term costs to the City and its industrial customer.

ES.2.2 Discretionary Actions

A discretionary action is an action taken by an agency that calls for the exercise of judgment in deciding whether to approve or how to carry out a project. The proposed project would require consideration of the following discretionary actions by the City and by the County:

- City of Gonzales: Approval of the project design, issuance of construction bid documents, and approval of a construction contract.
- State Water Resources Control Board: SWPPP for General Construction.
- Central Coast Regional Water Quality Control Board: NPDES permit for operation of a wastewater facility.
- Local Agency Formation Commission: Approval of annexation of the easterly 5-acre parcel (APN 223-061-014).

ES.3 Areas of Controversy

Pursuant to Section 15082 of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) dated June 29, 2020, to begin a 30-day public scoping period, to interested agencies, organizations, and individual parties. The NOP was also sent to the State Clearinghouse at the California Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2020069049) to this EIR.

The NOP is intended to encourage interagency communication regarding the proposed action so that agencies, organizations, and individuals are afforded an opportunity to respond with specific comments and/or questions regarding the scope and content of the EIR.

Comments received during the NOP public scoping period were considered during the preparation of this EIR. The NOP and comments are included in Appendix X to this EIR. In response to the NOP and public scoping meeting, 3 comment letters were received. Comments covered a variety of topics, including biology, agricultural and forestry resources, land use/policy, cultural and tribal resources.

ES.4 Issues to Be Resolved by the City Council

The issues to be resolved by the decision-making body are whether to approve the proposed project and whether the potential significant impacts of the project with respect to agriculture and forestry resources, air quality, biological resources, cultural resources, geology and soils, hydrology and water quality, and tribal cultural resources have been fully mitigated below a level of significance, or if additional measures are required. Lastly, the City would determine whether any alternative might meet the key objectives of the project while reducing its environmental impact.

ES.5 Project Alternatives

Pursuant to the CEQA, Guidelines, EIRs are required to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126.6[a]). This EIR "must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (14 CCR 15126.6[a]). The consideration of alternatives is required even if the alternatives "would impede to some degree the attainment of the project objectives, or would be more costly" (14 CCR 15126.6[b]).

This section presents an evaluation of three alternatives to the proposed project, including:

1. No Project Alternative
2. Alignment 2 Alternative
3. MWWTP Expansion Alternative

For each alternative, a brief description is presented, followed by a discussion of the basis for selection of the alternative, the degree to which the alternative would meet project objectives, and the ways in which the alternative would avoid or reduce significant impacts of the project, or cause other new or increased impacts.

ES.5.1 No Project Alternative

Description

As required by the CEQA Guidelines, an EIR's alternatives analysis must include consideration of the No Project Alternative. The "No Project" analysis discusses the existing conditions as well as what would reasonably be expected to occur in the foreseeable future if the project was not approved (Cal. Code Regs. tit. 14, § 15126.6 (e)(2) and (3)(A)).

Under the No Project Alternative, the IWRF would not be constructed. Combined domestic and industrial wastewater flows would continue to be treated at the existing MWWTP. Total wastewater capacity would remain 1.3 MGD.

Impact Analysis

As shown in **Table -5-1**, all construction and "footprint" related impacts would be avoided (reduced to a less-than-significant level). These include agricultural resources, biological resources, cultural resources, paleontological resources, and hazards/hazardous materials. As the continued treatment of industrial wastewater at the MWWTP may

create the risk of plant violations (due to treatment capacity limitations), the air quality/odor impact would not be avoided. Similarly, while water quality impacts related to construction would be avoided, water quality impacts related to wastewater treatment would likely increase as the MWWTP capacity is met or exceeded. The existing MWWTP is located within a dam inundation zone, as the proposed project would be, so this impact would not be avoided.

Relationship to Project Objectives

The No Project Alternative would not achieve any of the project objectives.

ES.5.2 Alignment 2 Alternative

Description

The Alignment 2 Alternative would construct an alternative pipeline alignment for the industrial wastewater collection system (City of Gonzales 2019). The proposed IWRF would be the same as the proposed project. Alignment 2 would construct approximately 11,100 LF of new gravity sewer pipe. This alignment conveys flows starting near the intersection of Katherine Street and Puente Del Monte Avenue. The pipeline heads southeast on Puente Del Monte Avenue for approximately 1,400 LF before turning southerly onto Gonzales River Road. The pipeline alignment continues on Gonzales River Road for approximately 8,100 LF then turns west onto Short Road. The proposed alignment conveys flow approximately 1,600 LF on Short Road before finally terminating at the IWRF site. The alignment is located mainly on paved public street ROW.

Alignment 2 conveys flows from a starting ground surface elevation of approximately 128 ft to a ground surface elevation of approximately 116 ft at the MWWTP headworks. This 12 ft drop over approximately 11,100 LF results in an average slope of 0.0010 ft. or 0.1%. Typical minimum slopes for sewers 12-inches and larger are approximately 0.20% and so the proposed sewer will need to be installed at a depth in order to achieve the minimum slope.

Impact Analysis

Impacts related to construction of the pipeline would be similar to the proposed project, as shown in Table 5-1, below. Temporary impacts to farmland related to pipeline construction would be lessened; however, the permanent conversion of farmland at the IWRF site would remain significant. Consultation with Native American tribal representatives indicates that the southern end of Alignment 2 may be more sensitive for tribal cultural resources, due to its proximity to the Salinas River. The Alignment 2 Alternative would cause some temporary traffic delays during construction, as it would involve more construction on public roadways. However, temporary congestion is not considered a significant impact under CEQA as long as emergency access is maintained.

Relationship to Project Objectives

The Alignment 2 Alternative would achieve Objectives 1, 2, 3, 5, and 6. The alternative would partially achieve Objective 4, but to a lesser extent than the proposed project; additional right-of-way acquisition would be required for Alignment 2, as compared to the Femin Lane alignment in the proposed project which contains an existing City sewer easement.

ES.5.3 MWWTP Expansion Alternative

Description

Under this alternative, the City's existing MWWTP would be expanded to 2.3 MGD capacity. In order to achieve the necessary capacity increase, the MWWTP would be converted and/or retrofitted to an extended aeration activated sludge treatment system. An extended aeration activated sludge treatment system provides a higher degree of organics and solids removal, has the ability to achieve nitrification and denitrification, does not require primary settling, and provides stable operations and consistent effluent quality. Two extended aeration activated sludge technologies could be implemented: a Biolac wave oxidation system and an oxidation ditch facility (City of Gonzales 2018). Expansion would require an upgrade of the headworks at the MWWTP, which would include replacing the grinders, grit removal system, and Parshall flume[1]. The existing influent pump station may also have to be upgraded.

Implementation of the MWWTP Expansion Alternative would require a parallel wastewater line to transmit GABIP flows, as the existing sewer line to the MWWTP would not have sufficient capacity.

Impact Analysis

Impacts related to construction would be similar to the proposed project. The "footprint" impacts related to the proposed IWRF site would be reduced. Agricultural impacts would be avoided. Impacts to biological resources, cultural resources, paleontological resources, and hazards/hazardous materials would be reduced, but would not be avoided due to construction of the new wastewater pipeline. Water quality impacts related to construction would be reduced, but not avoided. The existing MWWTP is located within a dam inundation zone, as the proposed project would be, so this impact would not be avoided.

Relationship to Project Objectives

The MWWTP Expansion would achieve most of the project objectives.

ES.6 Comparison of Alternatives

Table 5-1 (from Chapter 5, Alternatives) shows the potentially significant environmental effects of the proposed project compared to the potential effects of the project alternatives. If a project alternative would have new or substantially greater impacts than the proposed project, this is also noted in the table.

Table 5-1. Comparison of Alternatives

Impact	Proposed Project	No Project Alternative	Alternative 2 Alternative	MWWTP Expansion Alternative
Agricultural Resources				
3.1-1. The project would convert Prime Farmland and Farmland of Statewide	PS	LTS-	PS	LTS-

[1] A Parshall flume is an open channel flow metering device, typically made out of fiberglass, that is used to measure the volume flow of wastewater.

Table 5-1. Comparison of Alternatives

Impact	Proposed Project	No Project Alternative	Alternative 2 Alternative	MWWTP Expansion Alternative
Importance (Farmland) to non-agricultural use.				
Air Quality				
3.2-4. The proposed project could result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	PS	LTS-	PS	PS-
Biological Resources				
3.3-1. The proposed project could have a substantial adverse effect on a candidate, sensitive, or special-status species.	PS	LTS-	PS	PS-
Cultural Resources				
3.4-1. The Project may cause a substantial adverse change in the significance of a previously unidentified archeological resource.	PS	LTS-	PS	PS-
3.4-2. The project may disturb human remains interred outside of dedicated cemeteries.	PS	LTS-	PS	PS-
Geology, Soils and Paleontology				
3.6-3. The project could directly or indirectly destroy a unique paleontological resource or site.	PS	LTS-	PS	PS-
Hazards, Hazardous Materials, and Wildfire				
3.8-2. The project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	PS	LTS-	PS	PS-
Hydrology and Water Quality				
3.9-1. The project could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	PS	PS-	PS	LTS-
3.9-3. The project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	PS	LTS-	PS	LTS-

Table 5-1. Comparison of Alternatives

Impact	Proposed Project	No Project Alternative	Alternative 2 Alternative	MWWTP Expansion Alternative
a. result in substantial erosion or siltation on or off site; b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.				
3.9-5. In flood hazard, tsunami, or seiche zones, the project would potentially risk release of pollutants due to project inundation.	PS	PS	PS	PS

Notes: LTS Less than Significant; PS Potentially Significant (prior to mitigation); SU Significant and Unavoidable; + Increased Impact; - Decreased Impact

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Agriculture and Forestry Resources			
Impact 3.1-1. The proposed project would not conflict with existing agricultural zoning and Williamson Act contract.	Potentially Significant	**MM-AG-1:** For each acre of Important Farmland converted (including Prime Farmland and Farmland of Statewide Importance); the project applicant shall obtain Farmland at a ratio of 1:1 to be conserved in perpetuity. The Farmland conserved shall be of equal or greater quality, as determined by the best available soil survey information. The following methods of conservation are acceptable: • Obtain the farmland conservation easement through the City's Agricultural Land Conservation Program, if it is in effect at the time of this requirement. • Obtain title for the farmland (fee simple) and dedicate the land to a qualified open space or farmland trust organization. • Obtain an Agricultural Conservation Easement (ACE) that would remove the development rights from a property and preserve it for agricultural use. The ACE shall be held by a qualified land trust. • A qualified open space or farmland trust is one with a demonstrated ability to manage and maintain agricultural lands. The City of Gonzales shall solely determine whether or not an organization is qualified. This mitigation requirement shall be implemented prior to the start of operation of the treatment facility.	Significant and Unavoidable
Impact 3.1-2. The proposed project would not conflict with existing agricultural zoning and Williamson Act contract.	No Impact	None required	No Impact
Impact 3.1-3. The proposed project would not involve other changes in the existing environment which, due to their location or	Less than Significant	None required	Less than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
nature, could result in conversion of Farmland to non-agricultural use.			
Air Quality			
Impact 3.2-1. The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.	Less than Significant	None required	Less than Significant
Impact 3.2-2. The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	Less than Significant	None required	Less than Significant
Impact 3.2-3. The proposed project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	None required	Less than Significant
Impact 3.2-4. The proposed project could result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Potentially Significant	**MM-AQ-1: Odor Abatement Plan.** The City of Gonzales shall develop an Odor Abatement Plan (OAP) for the proposed project, prior to obtaining building construction permits, to be implemented over the life of the project. The OAP shall include the following: • Description of potential odor sources at the facility. • Name and telephone number of contact person(s) at the facility responsible for logging and responding to odor complaints. • Protocol describing the actions to be taken when an odor complaint is received, including the training provided to the staff on how to respond. • Description of potential methods for reducing odors, including process changes, facility	Less than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		modifications, and/or feasible add-on air pollution control equipment • Contingency measures to curtail emissions in the event of a public nuisance complaint.	
Biological Resources			
Impact 3.3-1. The proposed project could have a substantial adverse effect on a candidate, sensitive, or special-status species.	Potentially Significant	**MM-BIO-1: Worker Environmental Awareness Training.** All construction workers shall receive a worker environmental awareness training (WEAT) to be conducted by a qualified biologist for construction of any component of the project. The WEAT may also be conducted through a video or Powerpoint presentation created by a qualified biologist specifically for the project. The WEAT shall instruct construction workers on how to recognize all special-status plant/wildlife species and their preferred habitat potentially present in the project site, applicable laws and regulations regarding each species, actions to implement if a special-status species is observed during construction activities including the name/contact information of the monitoring biologist, and the nature and purpose of protective measures including best management practices and other required mitigation measures. As new construction personnel join the construction crews throughout project construction of the various components, additional environmental awareness training sessions shall be conducted by the biologist. All attendees shall fill out a sign-in sheet. The training program shall also be recorded and subsequently shown to any construction personnel who are not able to attend the initial or subsequent training programs.	Less than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-BIO-2: Nesting Bird Survey. A qualified biologist shall conduct a survey for nesting birds approximately two days prior to vegetation removal or ground-disturbing activities during the nesting season (March through August). The survey shall cover the limits of construction and suitable nesting habitat within 500 feet for raptors and 100 feet for other nesting birds, as feasible. If any active nests are observed during surveys, a qualified biologist shall establish a suitable avoidance buffer from the active nest. The buffer distance will typically range from 50 to 300 feet, depending on the species, and shall be determined based on consideration of such factors as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active nests shall be established in the field with flagging, fencing, or other appropriate barriers and shall be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist. **MM-BIO-3: Burrowing Owl Preconstruction Surveys.** A qualified biologist shall conduct a pre-construction survey for burrowing owls two weeks prior to the initiation of construction activities. Biologist will walk 20 meter transect intervals surveying the proposed construction impact areas plus a 100 foot buffer within suitable habitat. Any suitable burrows located during the survey with signs of activity (i.e.,	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		whitewash, pellets, prey remains) will be marked for avoidance and, in consultation with CDFW, an appropriate avoidance buffer will be established.	
Impact 3.3-2. The proposed project would not have an adverse effect on riparian habitat or some other sensitive natural communities.	No Impact	None required	No Impact
Impact 3.3-3. The proposed project would not have an adverse effect on protected wetlands.	No Impact	None required	No Impact
Impact 3.3-4. The proposed project would not interfere with the movement of fish or wildlife species, established migratory wildlife corridors, or the use of native wildlife nursery sites.	No Impact	None required	No Impact
Impact 3.3-5. The proposed project would not conflict with any local policies or ordinances protecting biological resources.	No Impact	None required	No Impact
Impact 3.3-6. The proposed project would not conflict with any provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	No Impact	None required	No Impact
Cultural Resources			
Impact 3.4-1. The project may cause a substantial adverse change in the significance of a previously unidentified archaeological resource.	Potentially Significant	**CUL-1: Unidentified Cultural Materials** In the event that cultural resources (sites, features, artifacts, or fossilized material) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified specialist, meeting the Secretary of the Interior's	Less than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Professional Qualification Standards, can evaluate the significance of the find and determine whether additional study is warranted. Prehistoric archaeological deposits may be indicated by the presence of discolored or dark soil, fire-affected material, concentrations of fragmented or whole shell, burned or complete bone, non-local lithic materials, or the characteristic observed to be atypical of the surrounding area. Common prehistoric artifacts may include modified or battered lithic materials; lithic or bone tools that appeared to have been used for chopping, drilling, or grinding; projectile points; fired clay ceramics or non-functional items; and other items. Historic-age deposits are often indicated by the presence of glass bottles and shards, ceramic material, building or domestic refuse, ferrous metal, or features such as concrete foundations or privies.	
Impact 3.4-2. The project may disturb human remains interred outside of dedicated cemeteries.	Potentially Significant	**CUL-2: Unanticipated Discovery of Human Remains** The discovery of human remains is always a possibility during ground disturbances; State of California Health and Safety Code Section 7050.5 covers these findings. This code section states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend	Less than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	
Impact 3.4-3. The project would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074.	No Impact	None required	No Impact
Energy			
Impact 3.5-1. The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during proposed project construction or operation.	Less than Significant	None required	Less than Significant
Impact 3.5-2. The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than Significant	None required	Less than Significant
Geology and Soils			
Impact 3.6-1. The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking or seismic-related ground failure including liquefaction.	Less Than Significant	None required	Less than Significant
Impact 3.6-2. The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site lateral spreading, subsidence, liquefaction or collapse.	Less Than Significant	None required	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Impact 3.6-3. The project could directly or indirectly destroy a unique paleontological resource or site.	Potentially Significant	**GEO-1: Paleontological Resources.** Prior to commencement of any ground-disturbing activity in areas of moderate to high paleontological sensitivity, the City of Gonzales shall retain a qualified paleontologist per the 2010 Society of Vertebrate Paleontology guidelines. The paleontologist shall prepare a paleontological resources impact mitigation program for the project. The paleontological resources impact mitigation program shall be consistent with the Society of Vertebrate Paleontology guidelines and shall include: requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the project area based on construction plans and/or geotechnical reports; procedures for adequate paleontological monitoring and discoveries treatment; and paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting, and a paleontological monitor under the direction of the qualified paleontologist shall be on site during ground-disturbing activities that extend to depths greater than five (5) feet below the ground surface in areas of previously undisturbed moderate and/or high paleontological resources sensitivity. In the event that paleontological resources (e.g., fossils) are unearthed, the paleontological monitor shall temporarily halt and/or divert ground-disturbing activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation	Less than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		and collection of the find is completed, the paleontological monitor shall allow ground-disturbing activities to recommence in the area of the find.	
Greenhouse Gas Emissions			
Impact 3.7-1. The proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less than Significant	None required	Less than Significant
Hazards and Hazardous Materials			
Impact 3.8-1. The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less Than Significant	None required	Less than Significant
Impact 3.8-2. The project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Potentially Significant	**MM-HAZ-1: Subsurface Investigation.** Prior to construction, a subsurface investigation shall be performed in order to determine if there are impacts to soil, soil vapor and groundwater at the project site and if the potential impacts would result in human health risks. Soils will be sampled and analyzed for pesticide- and herbicide-related contaminants. In addition, soils, groundwater, and soil vapor will be sampled and analyzed for contaminants of concern associated with the upgradient junkyard, including but not limited to petroleum hydrocarbons and volatile organic compounds. In accordance with the City of Gonzales General Plan HS 5.1.6, the results of the investigation will be submitted to the City of	Less than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Gonzales as part of the development plan review, along with measures necessary to mitigate any environmental hazards to a less-than-significant level. Recommended mitigation shall be implemented prior to construction and operation of the proposed project.	
Impact 3.8-3. The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	No Impact	None required	No Impact
Impact 3.8-4. The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	No Impact	None required	No Impact
Impact 3.8-5. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less Than Significant	None required	Less Than Significant
Impact 3.8-6. The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	No Impact	None required	No Impact
Hydrology and Water Quality			
Impact 3.9-1. The project could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	Potentially Significant	**MM-HYD-1a: Stormwater Quality.** Prior to issuance of grading permits, the City of Gonzales Public Works Department or their contractor shall prepare a Stormwater Management Plan (SMP) in accordance with the Central Coast Regional Water Quality Control Board (Central Coast RWQCB) *Post-Construction Stormwater Management Requirements for Development*	Less than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Projects in the Central Coast Region (2013). The SMP shall demonstrate that post-construction Low Impact Development (LID) Best Management Practices (BMPs) are incorporated into the proposed project design and that these features are designed to effectively retain runoff generated by the 85th percentile, 24-hour storm event, as determined by local rainfall data. The LID BMPs shall also be designed to effectively reduce and/or eliminate water pollution caused by runoff flowing from the developed site. The Post-Construction Requirements that LID retention BMPs (harvesting and use, infiltration, and evapotranspiration) shall be used unless it can be demonstrated that those BMPs are infeasible. The project shall follow the LID hierarchy of infiltration, harvest and use, evapotranspiration, biofiltration, and non-retention-based treatment systems. These LID features shall be sized and designed in accordance with the specifications outlined in the *Post-Construction Stormwater Management Requirements* document. **MM-HYD-1b: Runoff-Retention.** Prior to issuance of grading permits, the City of Gonzales Public Works Department or their contractor shall design the project to meet the runoff retention requirements of the Central Coast RWQCB *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region* (2013). The project shall be designed to prevent off-site discharge from events up to the 95th percentile 24-hour rainfall event, as determined from local rainfall data. Compliance shall be achieved by optimizing infiltration. If	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		infiltration is infeasible or cannot achieve full compliance, the remaining runoff amount shall be retained on-site via storage, rainwater harvesting, and/or evapotranspiration. The City shall also delineate Drainage Management Areas (DMAs) to support a decentralized approach to stormwater management. Runoff retention specifications shall be sized and designed in accordance with the specifications outlined in the *Post-Construction Stormwater Management Requirements* document. **MM-HYD-2: Groundwater Monitoring Program.** Prior to issuance of grading permits, the City of Gonzales shall design a Groundwater Monitoring Program in accordance with the *City of Gonzales, Industrial Wastewater Recycling Facility, Draft, Preliminary Engineering Report* (City of Gonzales 2020). The monitoring program shall establish the baseline water quality to compare the water quality impacts of the project to the existing environment. Moreover, groundwater wells shall be installed upgradient and downgradient of the proposed Integrated Wastewater Treatment Plant (IWRF). At a minimum, two wells shall be installed upgradient of the proposed IWRF, and four in the downgradient direction, consistent with the Preliminary Engineering Report specifications. The wellheads shall be surveyed, and a groundwater contour map shall be prepared and updated on a semi-annual basis to determine groundwater gradient across the IWRF and direction of flow, which is known to change seasonally. Based on sampling and analysis, groundwater quality data shall be submitted to the Central Coast	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		RWQCB for review. In the event that water quality analyses are not in compliance with the Central Coast Basin Plan Water Quality Objectives, and it can be determined that the proposed IWRF is contributing to elevated concentrations of contaminants (e.g., nitrates) in groundwater, the City of Gonzales shall coordinate with the RWQCB in potentially altering the wastewater treatment process in order to lower contaminant concentrations.	
Impact 3.9-2. The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the Basin.	Less than Significant	None required	Less than Significant
Impact 3.9-3. The project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: a. result in substantial erosion or siltation on or off site; b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site; c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	Potentially Significant	**MM-HYD-1a (see above)** **MM-HYD-1-b (see above)**	Less than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Impact 3.9-4. The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.	Less than Significant	None required	Less than Significant
Impact 3.9-5. In flood hazard, tsunami, or seiche zones, the project would potentially risk release of pollutants due to project inundation.	Potentially Significant	No feasible mitigation measures are available.	Significant and unavoidable
Impact 3.9-6. The project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan.	Less Than Significant	None required	Less Than Significant
Land Use and Planning			
Impact 3.10-1. The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant	None required	Less than Significant

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1 Introduction

1.1 Purpose and Intended Use of this EIR

The City of Gonzales (City) as the lead agency has prepared this Draft Environmental Impact Report (Draft EIR) to inform the general public, the local community, responsible agencies, trustee agencies, and other interested public agencies including local Native American tribes, and the City's decision-making body (City Council) regarding the potential significant environmental effects resulting from implementation of the proposed IW Conveyance and IW Reclamation Facility Project (proposed project), as well as possible measures to mitigate those significant effects and alternatives to the proposed project. This Draft EIR was prepared in compliance with the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.), and the CEQA Guidelines (14 CCR 15000 et seq.).

As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses potential environmental impacts of a proposed project, as well as identifies mitigation measures and alternatives to a proposed project that could reduce or avoid adverse environmental impacts. As the CEQA lead agency for this project, the City is required to consider the information in the EIR along with any other available information in deciding whether to approve the project entitlements requested. The basic requirements for an EIR include providing information that establishes the environmental setting (or project baseline), and identifying environmental impacts, mitigation measures, project alternatives, growth inducing impacts, and cumulative impacts. In a practical sense, an EIR functions as a method of fact-finding, allowing an applicant, the public, other public agencies, and agency staff an opportunity to collectively review and evaluate baseline conditions and project impacts through a process of full disclosure. Additionally, this EIR provides the primary source of environmental information for the lead agency to consider when exercising any permitting authority or approval power directly related to implementation of this project. It is not the intent of an EIR to recommend either approval or denial of a project.

1.2 Project Background and Overview

The City provides wastewater collection and treatment for residents and businesses within the City, and expects an increase in wastewater flows in the upcoming years due to planned development. The City owns and operates an existing municipal wastewater treatment plant (MWWTP), currently permitted at 1.3 million gallons per day (MGD) capacity, with approximately 65% of the entire plant flow from agricultural processing facilities. Therefore, the City is motivated to expand wastewater treatment capacity for its customers. The City has prepared multiple studies of the existing facilities and alternatives for upgrade and expansion in recent years in order to evaluate the collection system, plant capacity, and condition; investigate treatment and expansion alternatives; and estimate capital costs. A Long-Term Wastewater Management Plan (LTWMP) was prepared to aggregate relevant information contained in these studies. The LTWMP recommended a number of alternatives for the City to expand treatment capacity, one of which was to construct a separate industrial treatment facility with a separate collection system for agricultural industrial wastewater treatment, under a separate, non-municipal waste discharge permit. Ultimately, the City decided to move forward with the preliminary design of a separate industrial treatment facility at a location adjacent to the north side of the existing MWWTP. The proposed plan is further described in Chapter 2, Project Description.

1.3 EIR Process

Notice of Preparation

In accordance with CEQA Guidelines Section 15082, a Notice of Preparation (NOP) was circulated for public and agency review from June 29 through July 28, 2020 (included as Appendix A). The purpose of the NOP is to provide notification that an EIR for the proposed project is being prepared and to solicit guidance on the scope and content of the document. The City also prepared an Initial Study (IS) for the project that was appended to the NOP identifying those issue areas where impacts would be less than significant. A summary of the comments received on the NOP is included in the Executive Summary, as well as in the introduction of each technical section in Chapter 3. The NOP, IS and comments received thereon are included in Appendix A to this EIR.

Draft EIR and Public Review

This Draft EIR is being circulated for public review and comment for a period of 45 days. The beginning and end dates of the comment period are identified in the Notice of Availability for this Draft EIR. Written comments may be sent to:

Patrick Dobbins, PE
Director of Public Works
147 Fourth Street
Gonzales, California 93926
Email: pdobbins@ci.gonzales.ca.us

One or more public hearings will be held as part of the City's consideration of the adequacy of the EIR.

The public can review the Draft EIR and supporting documents at the following address during normal business hours (Monday through Friday, 8 a.m. to 4 p.m.) or on the City's website at: https://gonzalesca.gov/services/community-development/community-development-documents.

City of Gonzales
Community Development Department
147 Fourth Street
Gonzales, California 93926

Final EIR and EIR Certification

Upon completion of the Draft EIR public review period, a Final EIR will be prepared that will include written comments on the Draft EIR received during the public review period and the City's responses to those comments. The Final EIR will include any revisions to the Draft EIR made in response to agency or public comments, and may include additional information at the discretion of the City. Before the City can approve the project, it must first certify that the EIR has been completed in compliance with CEQA, that the City Council has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City. The City Council is also required to adopt Findings of Fact and a Statement of Overriding Considerations (for any significant and unavoidable impacts) explaining the decision to balance the benefits of the project against unavoidable environmental impacts if it approves the proposed project (see also Public Resources Code Section 21081). When approving the project, the City shall adopt a Mitigation Monitoring and Reporting Program (MMRP) prepared in accordance with Section 21081.6 of the Public Resource Code.

Type of EIR and EIR Adequacy

This EIR is a "Project EIR," pursuant to CEQA Guidelines Section 15161. A Project EIR examines the environmental impacts of a specific project. This type of EIR focuses on the changes in the environment that would result from implementation of the project, including construction and operation.

The level of detail contained throughout this EIR is consistent with Section 15151 of the CEQA Guidelines, which states the following:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

CEQA "Plus"

Funding of the project may include the Clean Water Act State Revolving Fund (SRF), administered by the State Water Resources Control Board (SWRCB). The SWRCB would act as a responsible agency under CEQA. SRF funding includes federal funding from the United States Environmental Protection Agency (USEPA). Under the SRF, USEPA is not required to conduct environmental review under the National Environmental Policy Act (NEPA). Instead, the project must demonstrate that it applies with applicable federal environmental laws and regulations, known as federal cross-cutting authorities. SWRCB uses the applicant's CEQA document in conjunction with the federal cross-cutting documentation (e.g., air quality analysis report, biological assessment, Section 106 cultural resources report, wetland delineation, etc.) to ensure compliance with the federal cross-cutters. This process is also referred to as "CEQA Plus." This EIR therefore identifies federal cross-cutting authorities in order to meet the requirements of the SWRCB under the SRF program.

1.4 Scope of the Draft EIR

Based on the scope of the proposed project as described in the NOP and IS and comments received from the public agencies (see Appendix A), the following issues were determined to be potentially significant and are therefore addressed in Chapter 3, Environmental Impacts and Mitigation Measures, of this document:

- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources / Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning

Other environmental issues, including aesthetics, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire are evaluated in the IS Checklist found in Appendix A and summarized in Chapter 4 of this EIR. As described in the IS Checklist, the proposed project would not have a significant effect on these resources and were not evaluated further in the EIR.

This EIR also addresses the cumulative environmental effects of the project in combination with other closely related past, present, and reasonably foreseeable probable future projects in the area. In compliance with CEQA Guidelines Section 15126.6, this EIR also describes and evaluates the comparative merits of a reasonable range of alternatives to the proposed project, including the required No Project Alternative, and also identifies the environmentally superior alternative. This EIR also describes alternatives that were considered but rejected by the lead agency as infeasible and explains the reasons why.

1.5 Organization of the Draft EIR

Executive Summary—Summarizes the elements of the project and the environmental impacts that could result from implementation of the proposed project and provides a table which lists impacts, describes proposed mitigation measures, and indicates the level of significance of impacts both before and after mitigation.

Chapter 1, Introduction—Provides an introduction and overview of the EIR process and describes the intended use of the EIR and the review process.

Chapter 2, Project Description—Provides a detailed description of the proposed project, including its location, background information, project history, project objectives, and technical characteristics.

Chapter 3, Environmental Impacts and Mitigation Measures—Describes the baseline environmental setting and provides an assessment of potential project impacts for each technical issue area presented. Each section is divided into four sub-sections: Introduction, Environmental Setting, Regulatory Background, and Impacts and Mitigation Measures (project-specific and cumulative).

Chapter 4, CEQA Considerations—Provides information required by CEQA regarding impacts that would result from the proposed project, including a summary of cumulative impacts, secondary impacts including potential impacts resulting from growth inducement, and significant irreversible changes to the environment.

Chapter 5, Project Alternatives—Describes and compares the proposed project alternatives to the proposed project.

Chapter 6, EIR Preparers—Lists report authors who provided technical assistance in the preparation and review of the EIR.

Appendices (included on CD at the back of the Draft EIR)—Includes various documents and data that support the analysis presented in the Draft EIR.

2 Project Description

The City of Gonzales (City) is proposing an expansion to its wastewater treatment infrastructure and management with the construction of a 1.0 million gallon per day (MGD) separate Industrial Wastewater Reclamation Facility (IWRF) with provisions to expand up to 3.0 or 4.0 MGD in the future. The City's existing municipal wastewater treatment plant (MWWTP) has been challenged the past several years due to the nature of flows discharged to the MWWTP by local industrial uses. The new plant would separate domestic and industrial waste flows which would protect the existing domestic plant from constituents that impair the traditional biochemical treatment process. The separation of domestic and industrial waste flows requires a separate industrial waste collection system to convey industrial flows to the new treatment facility. This new facility would allow the City to effectively expand wastewater treatment capacity and protect groundwater quality.

2.1 Project Location and Setting

The City is located in Monterey County, California, approximately 16 miles southeast of the City of Salinas. The City has a current population of approximately 8,677 residents as of January 2019 (Department of Finance 2019), which is projected to increase to 24,000 by 2035 (City of Gonzales 2018). The City's wastewater, both domestic and industrial, is currently treated by the City-owned MWWTP located at the end of Short Road, approximately 2 miles southwest of the intersection of South Alta Road and Gonzales River Road (see **Figure 2-1, Regional Map**).

The City is home to the Gonzales Agricultural Business Industrial Park (GABIP), which is an approximately 75-acre area bounded by Alta Street to the east, Gonzales River Road to the south, and agricultural land to the north and west. The GABIP includes several large agricultural processing businesses. An additional 25 acres are planned to be added to the GABIP in the future to accommodate industrial business growth. Currently, GABIP discharges are collected in the City sewer system which collects wastewater flows from all areas of the City and conveys both domestic and industrial wastewater flows to the existing MWWTP via a 21-inch diameter sewer main along Femin Lane (Wallace Group 2020). The new plant would treat wastewater from the GABIP separate from the City's domestic wastewater system.

The proposed IWRF would be located adjacent to the existing MWWTP on Short Road (see **Figure 2-2, Project Location**). The MWWTP plant includes a 1-acre emergency over flow pond, six 2-acre facultative lagoons, two 5-acre polishing ponds, and three 6-acre rapid infiltration disposal basins. The existing MWWTP is zoned Public Facilities (PF) and designated as Public/Quasi Public in the City's General Plan (City of Gonzales 2010a). The remaining land uses surrounding the project site consist predominantly of farmland used to cultivate row crops, although there is also vacant land that was formerly used as an auto wrecking yard at the eastern boundary of the existing MWWTP, and a composting facility is located at the southern boundary of the existing MWWTP. The Salinas River is located about 0.2 miles south of the proposed IWRF.

The proposed IWRF would comprise a total of approximately 54 acres. Approximately 49 acres are within the City limits and 5 acres are within Monterey County in the City's sphere of influence (SOI) (see **Figure 2-3, IWRF Property Ownership**). The 5 acres within Monterey County would be annexed to the City as part of the proposed project. The site includes the following Assessor's Parcel Numbers (APNs): 223-061-017, 223-061-020, 223-061-019, 223-061-002, and 223-061-014. The part of the proposed project site within the City limits (APNs 223-061-017, 223-061-020, 223-061-019, and 223-061-002) is designated as Public/Quasi Public, but is currently not zoned (City of Gonzales 2010b). The remaining parcel that is within the City's SOI (APN 223-061-014) is also designated as Public/Quasi Public in the City's General Plan but is not zoned by the City (City of Gonzales 2010b); the parcel is

zoned and designated F/40 (Farmlands with minimum building site of 40 acres) by Monterey County (Monterey County 2010, 2020).

As shown in Figure 2-2, Project Location, a new conveyance line up to 24 inches in diameter would parallel the City's existing 21-inch diameter wastewater collection system line along Femin Lane. The new conveyance line would connect to a new collection system which would be installed in the City right of way and easements in the GABIP, comprised of pipelines varying in size from 8" up to 24". The proposed wastewater collection system would use gravity flow to convey GABIP wastewater to the new IWRF.

2.2 Background

The City provides wastewater collection and treatment for residents and businesses within the City. The City owns and operates an existing MWWTP, currently permitted at 1.3 MGD capacity (average daily flow). Current flows are approximately 1.1 MGD, with approximately 65% of the flows coming from agricultural processing facilities (Wallace Group 2020). The City expects an increase in wastewater flows in the upcoming years due to new industrial and residential developments. Therefore, the City is motivated to expand wastewater treatment capacity for its customers as quickly and efficiently as possible. The City has prepared several engineering studies of the existing treatment and conveyance facilities and evaluated alternatives for upgrade and expansion including the collection system, plant capacity, treatment and expansion alternatives; and capital costs. A Long-Term Wastewater Management Plan (LTWMP) was prepared in 2018 that aggregated relevant information contained in the City's studies (Dudek 2018). The LTWMP recommended a number of alternatives for the City to expand treatment capacity, one of which was to construct a separate industrial treatment facility with a dedicated collection system for agricultural industrial wastewater treatment, under a separate, non-municipal waste discharge permit. The City decided to move forward with the preliminary design of a separate IWRF at a location adjacent to the north side of the existing MWWTP.

Table 2.3-1 below shows the estimated current industrial wastewater flows at the existing MWWTP, and the design flow for the proposed IWRF.

Table 2-1. Proposed IWRF Design Wastewater Flow

Parameter	Existing Industrial Flow	Design Criteria
Average Day, Maximum Month Flow, MGD	0.6	1.0
Peak Hour Flow, MGD	NA	3.0

Source: Wallace Group 2020
Notes: Average day, maximum month flow: The average daily flow received at the wastewater treatment plant over the course of the peak month. This flow is used to report wastewater treatment plant flows to the Regional Water Quality Control Board.
Peak hour flow: The maximum one-hour flow experienced by the system. This flow is typically used for sizing the collection system components.
MGD = million gallons per day

2.3 Project Characteristics

There are two components of the proposed project: the IWRF, and the proposed wastewater conveyance line.

The proposed IWRF would be located on 54 acres north of the existing MWWTP and would include a headworks with influent screening to remove trash and debris; an influent lift station with a flow meter to pump water to an aerated pond system designed to introduce oxygen into wastewater; and effluent percolation beds to dispose of

treated effluent. Solids management will consist of periodic dredging and removal of material deposits in the treatment ponds. The preliminary site plan for the IWRF is shown in **Figure 2-4, IWRF Site Plan.**

The IWRF would have a wastewater treatment capacity of 1.0 MGD. The City would operate the new facility under the Regional Water Quality Control Board's General Waste Discharge Order No. R3-2004-0066 (Fruit & Vegetable Order). The Fruit & Vegetable Order includes a number of provisions related to wastewater, including Provision C.8, which states that in land-applied applications, the treated fruit and vegetable wastewater effluent shall not have an organic loading rate that exceeds 100 pounds of biochemical oxygen demand (BOD5) per acre per day (30-day average).

As described above and showing in Figure 2-2, the proposed industrial wastewater conveyance line would consist of approximately 10,700 linear feet of a new underground sewer pipe (up to 24" diameter) located mainly within the public City street right-of-way or existing City sewer easements within County street rights-of-way, which would parallel the existing wastewater conveyance line that currently conveys wastewater flows to the MWWTP. Similar to the existing wastewater conveyance line, the proposed industrial wastewater conveyance line would convey flows by gravity to the proposed IWRF.

Recycled Water and Future Capacity

As part of the initial design of the IWRF, there will a "stub out" for future treated wastewater effluent to be recycled. The recycled water would be used for irrigation on nearby agricultural fields and for groundwater recharge and GABIP supply. The wastewater treated by the IWRF consists solely of agricultural industrial wastewater and does not contain human fecal matter. The capacity, design, and distribution system for the recycled water would be determined in the future and is not part of this proposed project.

The initial design criteria for the IWRF is 1.0 MGD, which will accommodate the existing agricultural industrial wastewater flows of 0.6, and currently planned expansions at the GABIP. The IWRF site would accommodate future capacity expansion of up to 3.0 MGD by expanding the treatment ponds and replacing influent pumps (see **Figure 2-5 IWRF Potential Buildout**). With the use of an alternative treatment process, a capacity of 4.0 MGD may be achievable. For purposes of this EIR, we assume the entire IWRF site would be affected by project construction, even though the site is not necessary to operate a 1.0 MGD facility (as shown on Figure 2-3). The addition of recycled water and the future expansion IWRF treatment capacity beyond 1.0 would be considered in light of this EIR when project-specific information is available and may result in subsequent CEQA review.

The City also has plans to expand the existing MWWTP from 1.3 MGD to 1.9 MGD in the near term, with an ultimate long-term capacity of 2.8 MGD to accommodate future wastewater flows. These improvements would occur within the limits of the existing MWWTP, and would not affect the IWRF project.

Circulation and Parking

Similar to the existing MWWTP, the proposed IWRF would be accessible via Short Road from Gonzales River Road. Limited employee and visitor parking would be constructed on the project site.

Located within the City of Gonzales right-of-way and existing City sewer easements within County street rights-of-way, the proposed IWRF wastewater conveyance line would be accessible for operations and maintenance procedures, with manholes installed at- or near-grade.

Project Construction and Schedule

Construction of the IWRF would begin in 2021-2022, and would occur over a period of 10 to 14 months.

Construction of the proposed wastewater conveyance line would be achieved by open cut construction methods. Open cut construction would involve installation of the sewer pipe in a trench. The trench would be up to 3-feet wide, and the depth would vary based on the required hydraulics, but would range from about 6 to 12 feet deep. for the use of trenchless construction techniques is not anticipated because there are no significant crossings identified along the proposed wastewater conveyance line, such as waterways, environmentally-sensitive areas or busy intersections. Construction of the wastewater conveyance line is scheduled to begin in 2021-2022, and is expected to take 3-6 months.

Construction staging associated with the development of the proposed wastewater conveyance line is expected to occur within the public City and County roadway rights-of-way. Temporary construction access to adjacent properties, if needed, would be negotiated by the contractor. In addition, materials and equipment storage in support of construction of both the proposed wastewater conveyance line and IWRF would occur within the IWRF site.

Annexation and Zoning

As noted above, 49 of the approximately 54-acre project site is within the Gonzales city limits. The easterly 5-acre parcel (APN 223-061-014) is within the City's SOI but has not been annexed to the City. Annexation is subject to approval by the Local Agency Formation Commission (LAFCO).

Annexation would require pre-zoning of the site. The project site would be zoned Public Facilities (PF) consistent with the zoning of the existing City Wastewater Treatment Plant.

2.4 Project Objectives

The City of Gonzales has established the following objectives related to the proposed project.

1. Effectively treat agricultural industrial wastewater to protect groundwater quality.
2. Expand total City wastewater treatment capacity to 2.3 MGD.
3. Construct a separate industrial wastewater collection system to maximize capacity of the existing collection system.
4. Convey industrial wastewater flows from the GABIP to the treatment site while minimizing the need for additional right of way.
5. Implement the Industrial Discharger Pretreatment Program.
6. Minimize the environmental impacts of the collection system, conveyance, and treatment facility.
7. Minimize long-term costs to the City and its industrial customers.

2.5 Uses of the EIR

The City of Gonzales, the lead agency, will use the EIR when determining whether or not to approve the proposed project. City actions will include approval of the project design, issuance of construction bid documents, and approval of a construction contract.

Funding of the project may include the Clean Water Act State Revolving Fund (SRF), administered by the State Water Resources Control Board (SWRCB). The SWRCB would act as a responsible agency under CEQA. SRF funding includes federal funding from the United States Environmental Protection Agency (USEPA). Under the SRF, USEPA is not required to conduct environmental review under the National Environmental Policy Act (NEPA). Instead, the project must demonstrate that it applies with applicable federal environmental laws and regulations, known as federal cross-cutting authorities. SWRCB uses the applicant's CEQA document in conjunction with the federal cross-cutting documentation (e.g., air quality analysis report, biological assessment, Section 106 cultural resources report, wetland delineation, etc.) to ensure compliance with the federal cross-cutters. This process is also referred to as "CEQA Plus", since the CEQA document must specifically address the federal cross-cutters.

The Central Coast Regional Water Quality Control Board (RWQCB) must issue a permit under the National Pollution Discharge Elimination Program (NPDES) for the operation of a wastewater facility. The RWQCB would act as a responsible agency under CEQA.

The annexation of the easterly 5-acre parcel (APN 223-061-014) would require approval from the Local Agency Formation Commission (LAFCO).

A permit from the Monterey Bay Air Resources District would be required for the IWRF including a potential standby generator.

A Stormwater Pollution Prevention Plan (SWPPP) is required for General Construction by the California State Water Resources Control Board (SWRCB) because the proposed project's area of disturbance is greater than 1 acre.

2.6 References

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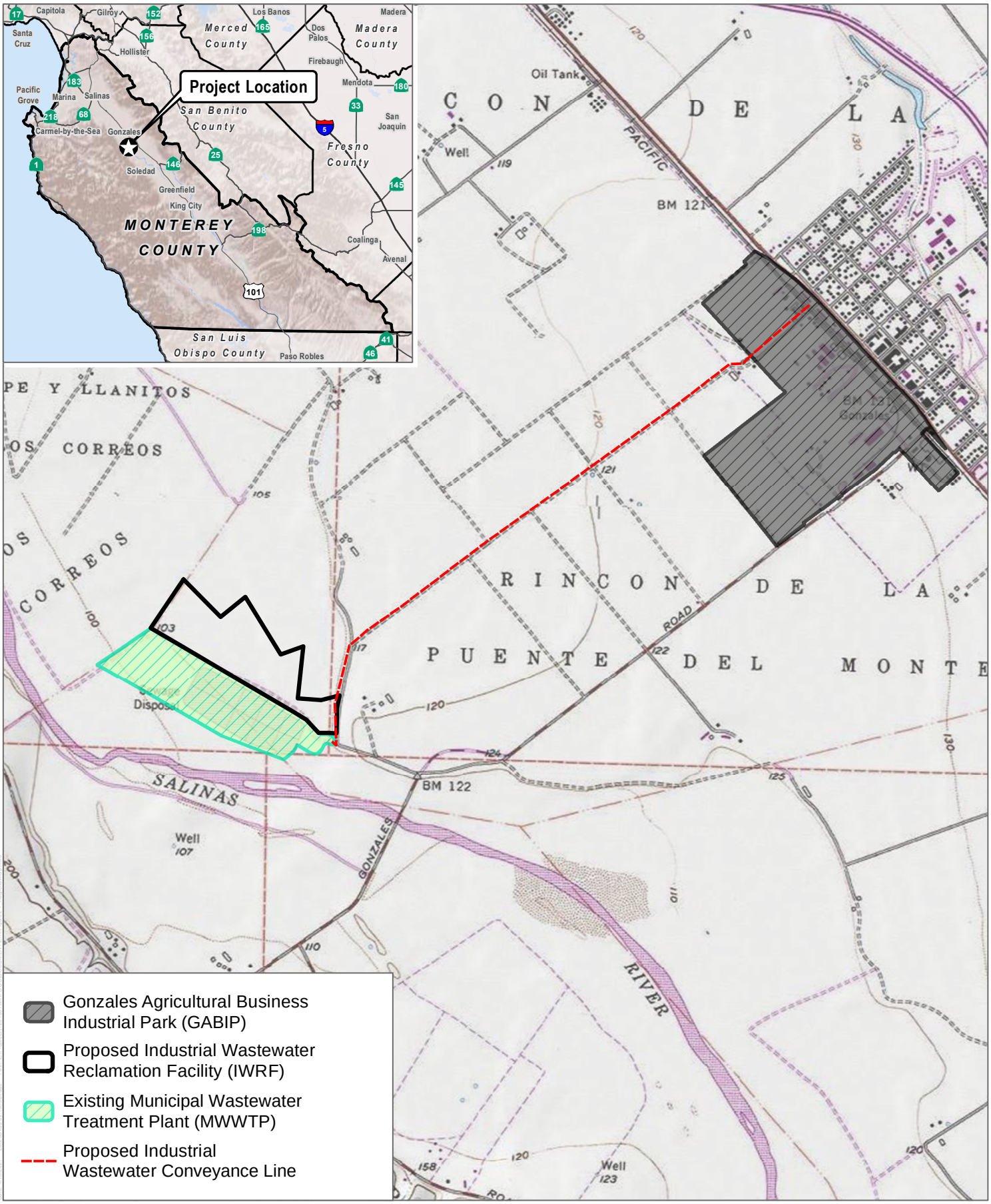

SOURCE: USGS 7.5-Minute Series Gonzales and Palo Escrito Creek Quadrangles

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0 1,000 2,000 Feet

FIGURE 2-1

Regional Map

IW Conveyance and IW Reclamation Facility Project

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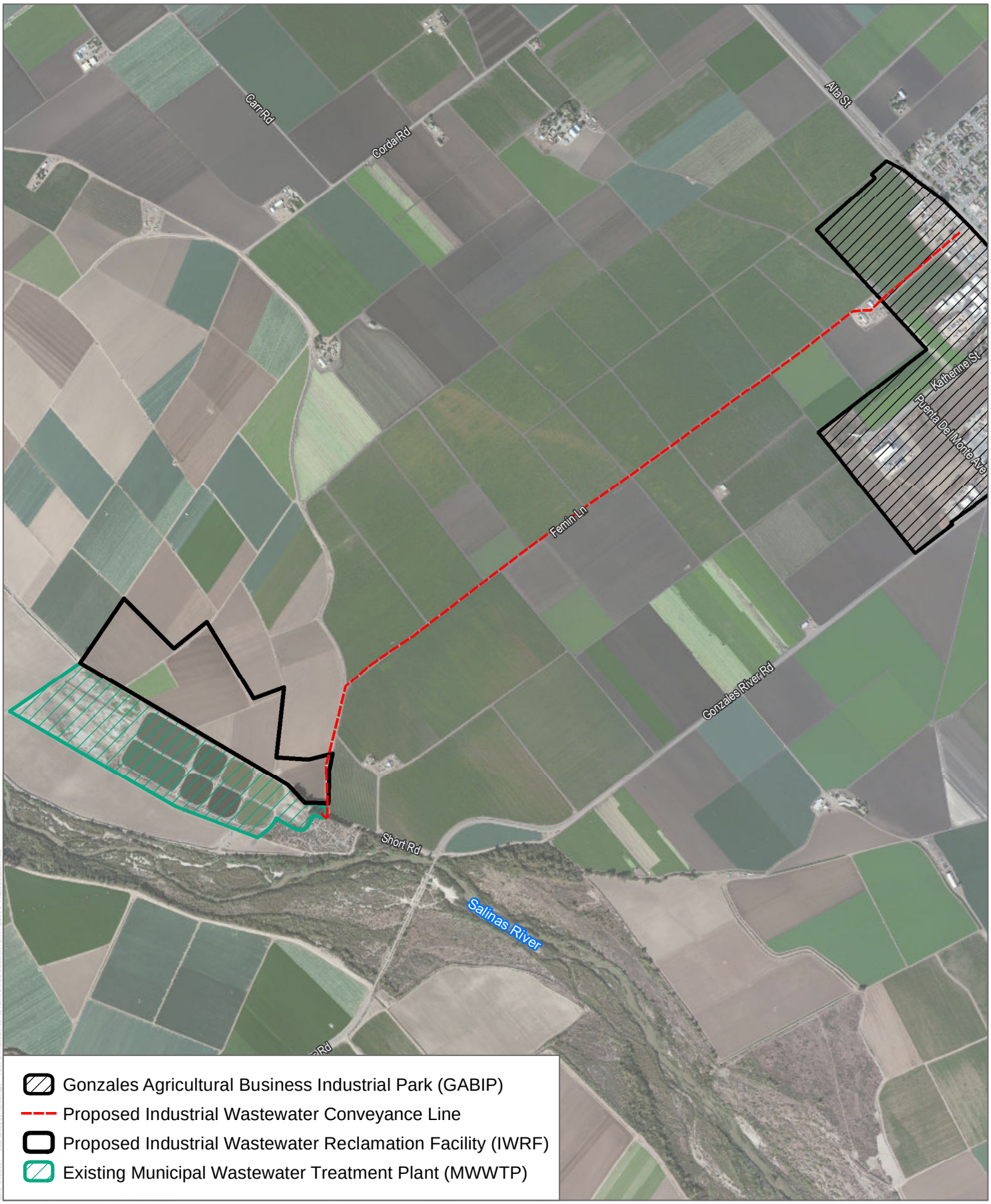

SOURCE: Esri Clarity Basemap 2019

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0 750 1,500 Feet

FIGURE 2-2

Project Location

IW Conveyance and IW Reclamation Facility Project

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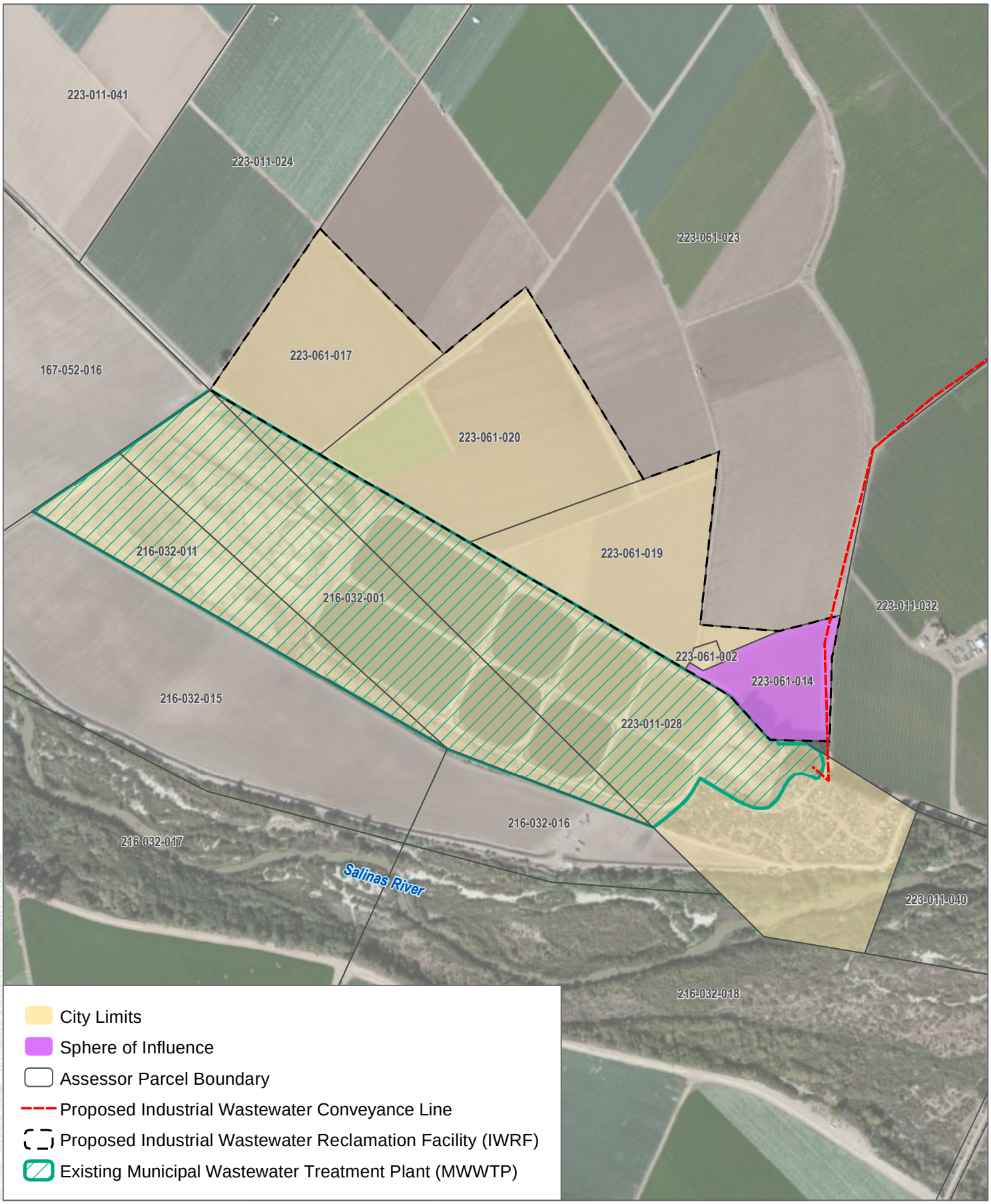

SOURCE: Esri Clarity Basemap 2019, Monterey County 2019

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0 300 600 Feet

FIGURE 2-3

Industrial Wastewater Reclamation Facility Property Ownership

IW Conveyance and IW Reclamation Facility Project

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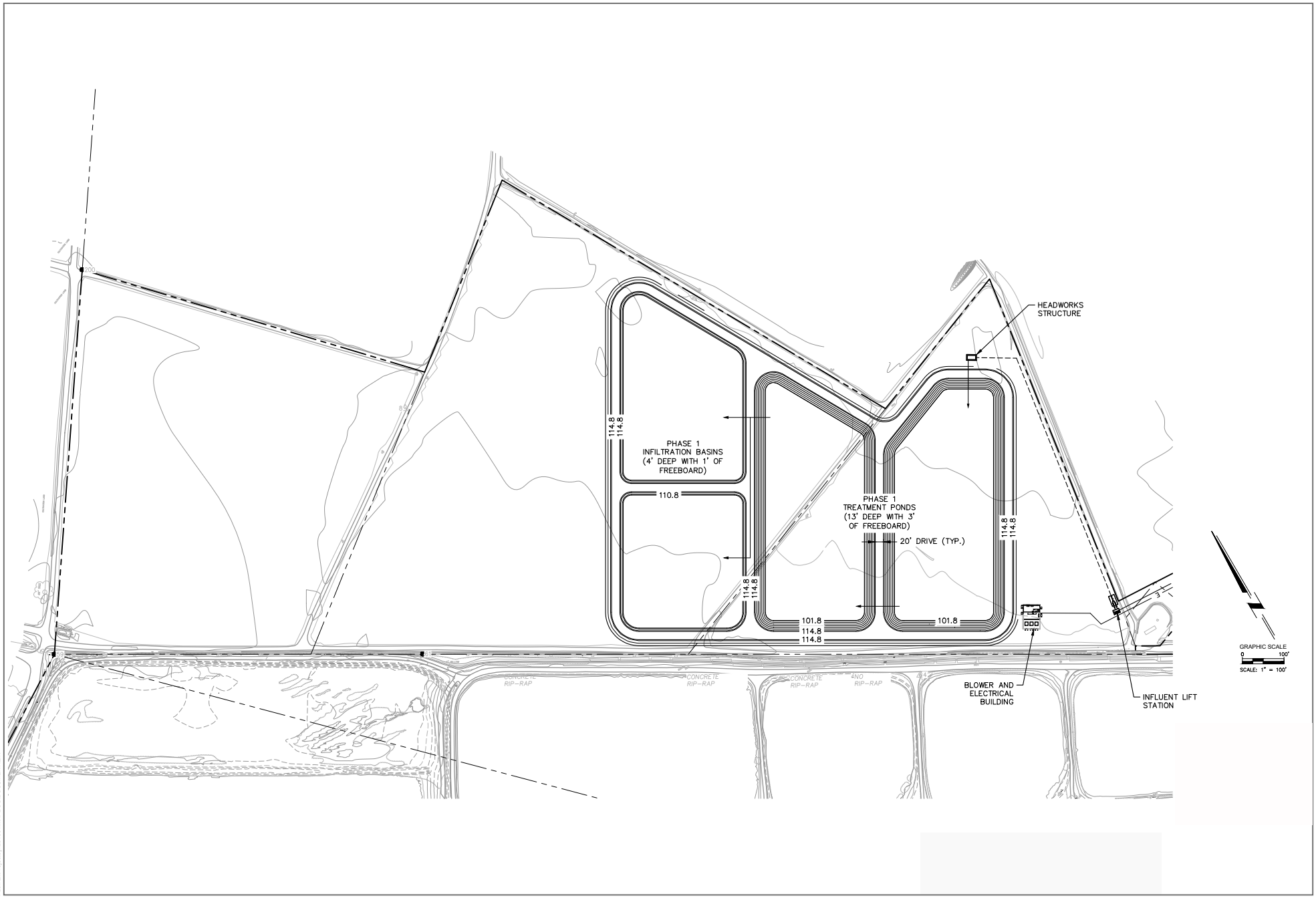

FIGURE 2-4

IWRF Site Plan

IW Conveyance and IW Reclamation Facility Project

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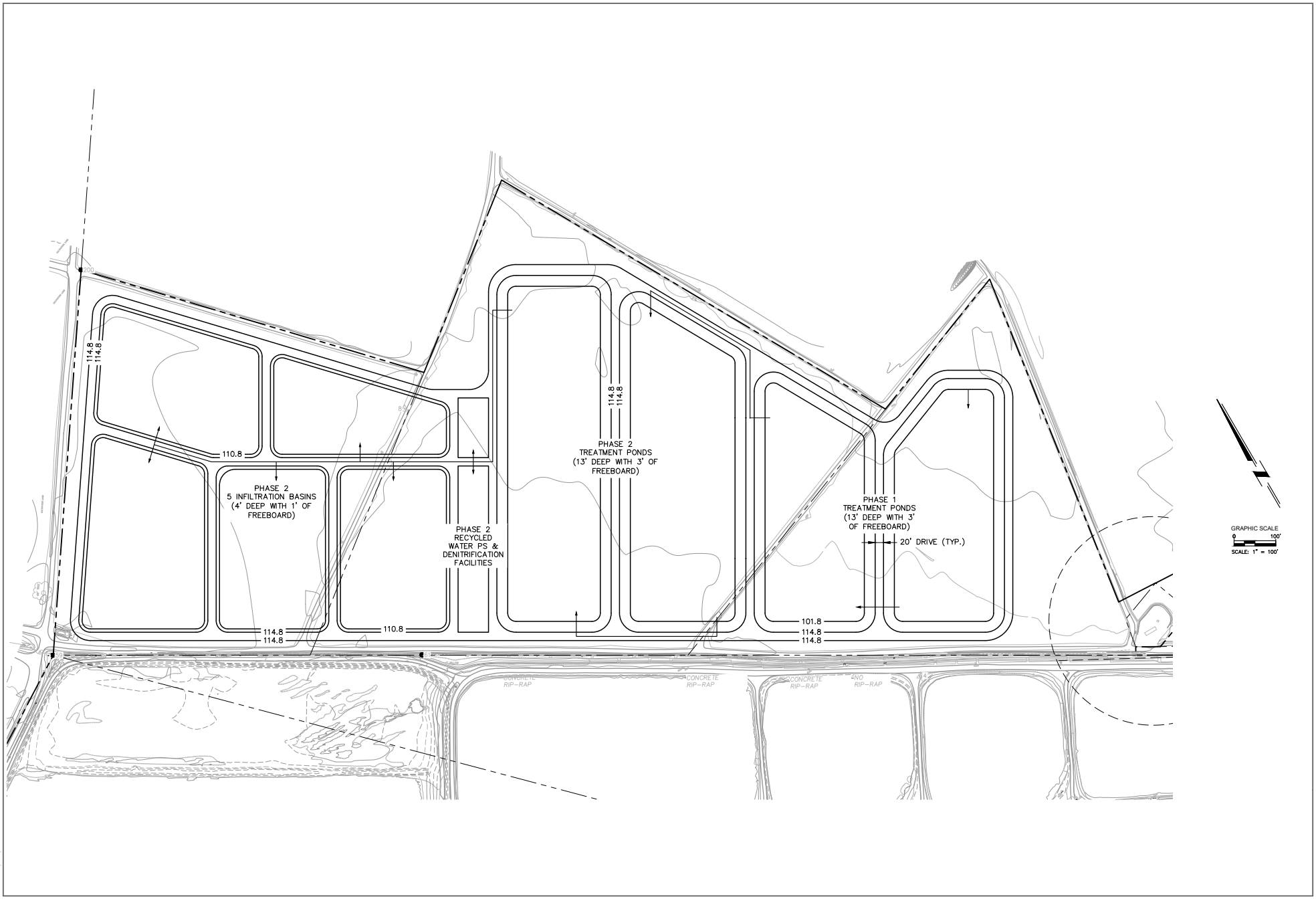

FIGURE 2-5

IWRF Potential Buildout

IW Conveyance and IW Reclamation Facility Project

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3 Introduction to the Environmental Analysis

3.0 Scope of the EIR Analysis

This section of the Draft Environmental Impact Report (EIR) discusses the environmental and regulatory setting, impacts, and mitigation measures for each of the following technical issue areas (Sections 3.1 through 3.10):

- 3.1 Agricultural Resources
- 3.2 Air Quality
- 3.3 Biological Resources
- 3.4 Cultural Resources / Tribal Cultural Resources
- 3.5 Energy
- 3.6 Geology and Soils
- 3.7 Greenhouse Gas Emissions
- 3.8 Hazards and Hazardous Materials
- 3.9 Hydrology and Water Quality
- 3.10 Land Use and Planning
- 3.11 Tribal Cultural Resources

The IW Conveyance and IW Reclamation Facility Project (proposed project) would expand the City of Gonzales wastewater treatment infrastructure and management with the planned construction of a new 1.0 million gallons per day (MGD) separate treatment plant for industrial wastewater and wastewater conveyance line. The proposed Industrial Wastewater Reclamation Facility (IWRF) would be located on 54 acres adjacent to the existing municipal Wastewater Treatment Plant (MWWTP). Wastewater would be conveyed to the IWRF via a proposed industrial wastewater conveyance line, which would connect to a new wastewater collection system to be installed in the City right-of-way and easements in the Gonzales Agricultural Business Industrial Park (GABIP). For the purposes of this EIR the location of the proposed IWRF is referred to as the "IWRF site". The location of the proposed industrial wastewater conveyance line is referred to as the "industrial wastewater conveyance line alignment".

Environmental Setting

According to subdivision (a) of Section 15125 of the California Environmental Quality Act (CEQA) Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of the project as they exist at the time when the Notice of Preparation (NOP) is published. This "environmental setting" will normally constitute the "baseline condition" against which project-related impacts are compared. Therefore, the baseline conditions for this EIR, unless noted otherwise, are based on conditions that existed in June/July 2020, when the NOP was published and circulated. The CEQA Guidelines recognize that the data for establishing an environmental baseline cannot be rigid. Because physical environmental conditions may vary over a range of time, the use of environmental baselines that differ from the date of the NOP is reasonable and appropriate in certain circumstances when doing so results in a more accurate or conservative environmental analysis.

The City of Gonzales 2010 General Plan Update EIR included an evaluation of proposed land use designations within the City's limits. Approximately 49 acres of the 54-acre IWRF site are located within City limits, in an area designated in the 2010 General Plan for future expansion of the existing wastewater treatment plant. This EIR evaluates potential impacts of the wastewater treatment expansion within the designated 49-acre area located within City limits and within an additional 5-acre area to be annexed by the City.

Section Format

Each section begins with a description of the project's **environmental setting** and **regulatory setting** as it pertains to a particular issue.

The regulatory setting provides a summary of applicable federal, state, and local regulations, plans, policies, and laws that are relevant to each issue area. The regulatory setting description in each section is followed by a discussion of **project-level impacts**. The project-specific impacts discussion is followed by an analysis of the **cumulative impacts** of the project. The impact portion of each section includes an impact statement, prefaced by a number for ease of identification followed by an analysis of that impact and a determination of whether the impact would be significant (that is, exceed the applicable threshold) or less than significant (that is, below the applicable threshold). If a significant impact is identified, one or more mitigation measures are recommended, if available, to reduce the severity of the impact. All **mitigation measures** are identified at the end of each impact discussion. The degree to which the identified mitigation measure(s) would reduce the impact is also described. The project-level impact section is followed by an analysis of the cumulative impacts (see below).

In determining the level of significance of environmental impacts associated with the proposed project, the analysis in this Draft EIR assumes that the proposed project would comply with relevant federal and state laws and regulations, City General Plan policies, ordinances, and other adopted City documents, unless otherwise noted. Therefore, such mandatory policies, ordinances, and standards are not identified as mitigation measures, but rather are discussed as part of the "Regulatory Setting" governing the proposed project and compliance with these requirements often mitigate potential impacts.

An example of an impact statement is shown below.

4.2-1: The proposed project could have a substantial adverse effect on a candidate, sensitive, or special-status species.

A discussion of potential impacts of the proposed project is presented in paragraph form. The impacts associated with construction and operation of the project are evaluated and compared to the threshold of significance for the particular impact. The analysis discusses the applicable local (including General Plan goals, policies, implementing actions, etc.), State, and federal laws and regulations/standards that would reduce impacts, and assumes that the project would comply with them. In many instances, the actions that are necessary to reduce a project impact are already required by compliance with existing laws or requirements. Further, it is assumed that the project applicant would obtain all necessary permits and comply with all required conditions of those permits. The impact analysis concludes with a determination of the impact's significance in **bold type** (e.g**., potentially significant impact, less-than-significant, no impact**).

Mitigation Measures

Following each impact analysis is a discussion of the applicable mitigation measures identified to reduce the significance of an impact, if required.

In Chapter 3, this section includes a statement indicating whether the mitigation measure will reduce the impact to a less-than-significant level. A discussion of how the mitigation would reduce the impact is included before the mitigation measure.

Mitigation measures, if applicable, are numbered and presented in the following format.

> **BIO-1:** Statement of what, if any, mitigation measures are required.

CEQA Guidelines Section 15370 defines mitigation as:

- Avoiding the impact altogether by not taking a certain action or parts of an action;
- Minimizing impacts by limiting the degree of magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- Compensating for the impact by replacing or providing substitute resources or environments.

In some instances, contribution of a project's fair-share to an established program provided there is a "reasonable plan for mitigation" and fair-share contributions are clearly designated to mitigate the impact are considered adequate mitigation for both project and cumulative impacts under CEQA.[1]

Terminology Used in the EIR

This Draft EIR uses the following terminology to describe environmental effects of the proposed project:

Standards of Significance: A set of criteria used by the lead agency to determine at what level or "threshold" an impact would be considered significant. Standards of significance used in this EIR include those set forth in CEQA Guidelines Section 15065 (Mandatory Findings of Significance) and those derived from questions set forth in Appendix G to the CEQA Guidelines; criteria based on regulatory standards of local, state, and federal agencies; and criteria based on goals and policies identified in the City of Gonzales General Plan and other applicable planning documents. In fashioning criteria based on these sources, City staff and the EIR preparers have also relied on their own professional judgment and experience in some instances. In determining the level of significance, the analysis assumes that the proposed project would comply with relevant federal, state, and local regulations and ordinances.

Less-than-Significant Impact: A project impact is considered less than significant when it does not reach the standard of significance, indicating that there would be no substantial change in the environment. No mitigation is required for less-than-significant impacts.

[1] See *Save Our Peninsula Com. v. Monterey County Bd. of Supervisors,* (2001) 87 Cal.App.4th 99, 141; and CEQA Guidelines, §15130, subd. (a)(3) ([recognizing that a project's contribution to a cumulative impact may be less than cumulatively considerable where "the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact"]). See also *Anderson First Coalition v. City of Anderson,* (2005) 130 Cal.App.4th 1173).

Potentially Significant Impact: A potentially significant impact is an environmental effect that could cause a substantial adverse change in the environment; however, additional information is needed regarding the extent of the impact to make the determination of significance. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

Significant Impact: A project impact is considered significant if it results in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects in the context of specified significance criteria. When available, potentially feasible mitigation measures and/or project alternatives are identified to reduce these effects to the environment.

Significant and Unavoidable Impact: A project impact is considered significant and unavoidable if it results in a substantial adverse change in the physical conditions of the environment and there are no potentially feasible mitigation measures and/or project alternatives available to reduce these effects to less than significant.

3.0.1 Cumulative Analysis

According to CEQA, "cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines, Section 15355). CEQA requires that cumulative impacts be discussed when the "project's incremental effect is cumulatively considerable" (CEQA Guidelines, Section 15130 (a)).

An analysis of cumulative impacts follows the evaluation of project impacts under existing conditions in each section in Chapter 3. As defined in CEQA Guidelines, Section 15355, cumulative impacts refer to two or more past, present and/or reasonably foreseeable future actions which, when considered together, result in a significant impact. The cumulative impacts analyze the extent to which the project would contribute to cumulative impacts, and whether that contribution would be considerable (i.e., would cause a cumulative condition to be significant and/or substantially increase the severity of a cumulative impact that would be significant whether or not the project was developed.

The cumulative setting for the proposed project includes the near-term MWWTP expansion and the Gonzales Microgrid Project.. The City has plans to expand the existing MWWTP, which is located directly south of the IWRF, project site from 1.3 MGD to 1.9 MGD in the near term.These improvements would occur within the limits of the existing MWWTP, and would include upgrades to existing equipment and potential expansion of the existing treatment ponds on the MWWTP site.

The Gonzales Microgrid Project would provide electric power service to customers in and adjacent to the GABIP and to export incidental power to the regional power grid, and includes the construction and operation of three components: (1) a utility-grade electric power distribution system; (2) an electric power generation and storage system; and (3) a light assembly and maintenance facility. The solar panels would be installed at the MWWTP and IWRF sites, with a smaller site at the GABIP (collocated with a proposed electrical substation). A transmission line between the MWWTP/IWRF and the GABIP would be installed on Gonzales River Road within the existing utility easement.

There are no other reasonably foreseeable projects in the unincorporated County within the Gonzales Sphere of Influence that would contribute to cumulative impacts[2]. However, in certain technical issue areas there may be other considerations in addition to the two cumulative projects identified above to characterize the cumulative

[2] Based on a search of the Monterey County Citizen Access Planning files available at: https://aca-prod.accela.com/MONTEREY/Default.aspx. Accessed June 15, 2021.

setting. For example, in Section 3.2, Air Quality, the entire North Central Coast Air Basin is the geographic context for the evaluation of cumulative air quality impacts since impacts to air quality contribute to a broader area than localized, individual project sites. In some instances, a project-specific impact may be considered less than significant, but would be considered potentially significant in combination with other development within the surrounding area. Or, in some instances, a potentially significant impact could result on a project level, but would not result in a cumulatively considerable impact. If a cumulative impact is found potentially significant or significant and unavoidable, the cumulative impact analysis is presented in the same format as the impacts section, shown above. If there is no cumulative impact or the cumulative impact is found less than significant, the cumulative impact analysis is provided in a narrative form, with no impact statement.

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3.1 Agricultural Resources

This section describes agricultural resources at the location of the Industrial Wastewater Reclamation Facility (IWRF) and wastewater conveyance line as part of the IW Conveyance and IW Reclamation Facility Project (proposed project); discusses applicable federal, state, and regional regulations pertaining to protection of farmland; and evaluates the potential effects on agricultural resources associated with development of the proposed project.

The California Department of Conservation (CDOC) provided comments in response to the Notice of Preparation (NOP, see Appendix A). The letter noted that the proposed IWRF currently contains Prime Farmland. The comment letter recommends that all mitigation measures that are potentially feasible should be included in the project's environmental review, and that agricultural conservation easements are a possible mitigation tool for the proposed project. The comment letter indicates that direct, indirect, and cumulative impacts to agricultural lands should be evaluated, and that the proposed project's compatibly with lands under Williamson Act contract be explicitly addressed.

3.1.1 Existing Conditions

3.1.1.1 Farmland

The proposed project consists of two components: the IWRF and the wastewater conveyance line. The approximately 10,700 linear-foot 21- to 24-inch wastewater conveyance line would would parallel the City's existing 21-inch diameter wastewater collection system line along Femin Lane. The new conveyance line would connect to a new collection system which would be installed in the City right of way and easements in the GABIP, comprised of pipelines varying in size from 8" up to 24". The IWRF would be developed on approximately 54 acres of land that is currently used for the cultivation of row crops. The California Department of Conservation (CDOC), Division of Land Resources Protection, operates the Farmland Mapping and Monitoring Program (FMMP). The FMMP maps the state's farmland resources and monitors the conversion of farmland to (and from) other land uses. Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are considered "Important Farmland" for the purposes of CEQA. As shown in **Figure 3.1-1**, the FMMP indicates that the portion of the wastewater collection alignment located along Femin Lane and Short Road is surrounded by Prime Farmland. The FMMP indicates that the majority of the IWRF site is classified as Prime Farmland, with a small section along the southeast portion of the site, located adjacent to the existing municipal wastewater treatment plant (MWWTP), classified as Farmland of Statewide Importance. Table 3.1-1 provides acreages for the various farmland categories within the IWRF site.

Table 3.1-1. Important Farmland

Project Component	Farmland Mapping and Monitoring Program Category	Approximate Acreage
Industrial Wastewater Reclamation Facility	Prime Farmland	49
	Farmland of Statewide Importance	5
Wastewater Conveyance line	Prime Farmland	0
	Farmland of Statewide Importance	0

Source: FMMP 2016.

The FMMP categories relevant to the project site are defined as follows:

Prime Farmland

Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Farmland of Statewide Importance

Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

3.1.2 Relevant Plans, Policies, and Ordinances

3.1.2.1 Federal

Federal agencies, or state, local, or private agencies receiving assistance or funding from a Federal agency, must consider the impacts to Prime Farmland resulting from their actions under the Farmland Protection Policy Act (subtitle I of Title XV, Section 1539-1549 of Public Law 97-98). The City is pursuing State Revolving Fund (SRF) financing, and must identify compliance with certain federal environmental regulations, including the Farmland Protection Policy Act. The purpose of the federal Farmland Protection Policy Act is to minimize federal contributions to the conversion of farmland to non-agricultural uses by ensuring that federal programs are administered in a manner compatible with state government, local government, and private programs and policies designed to protect farmland (NRCS 2020).

The Natural Resources Conservation Service (NRCS) is the agency primarily responsible for implementing the Farmland Protection Policy Act. The NRCS uses a land evaluation and site assessment system to establish a farmland conversion impact rating score on proposed sites of federally funded or assisted projects (using USDA Form AD-1006). The score is used as an indicator for the project sponsor to consider alternative sites if the potential adverse impacts on farmland exceed the recommended allowable level. When a proposed project may convert farmlands to non-agricultural uses. The sponsoring agency completes the site assessment portion of the AD-1006, which assesses non-soil related criteria such as the potential for impact on the local agricultural economy if the land is converted to non-farm use and compatibility with existing agricultural use.

The AD-1006 impact rating should be done when the impacts of a proposed project will affect farmlands in the following categories:

- prime farmland—the highest quality land for food and fiber production having the best chemical and physical characteristics for producing;
- unique farmland—land capable of yielding high value crops such as citrus fruits, olives, etc.; and
- farmlands designated as important by state and local governments, with the approval of the Secretary of Agriculture.

Neither the Act nor the regulations apply if:

- the proposed project site does not contain farmland in categories identified above;
- the proposed project is on prime farmland that is already "committed" to urban development or water storage (applies to prime farmland only – refer to 7 CFR 658.2(a));
- projects were beyond the planning stage prior to August 6, 1984; and
- projects involving grants, loans or mortgage insurance for purchase or rehabilitation of existing structures.

Section 658.2 of the Farmland Protection Policy Act states: "Farmland means prime or unique farmlands as defined in section 1540(c)(1) of the Act or farmland that is determined by the appropriate state or unit of local government agency or agencies with concurrence of the Secretary to be farmland of statewide of local importance. 'Farmland' does not include land already in or committed to urban development or water storage."

Based on the California Department of Conservation FMMP data, the proposed IWRF is located on land designated as Prime Farmland and Farmland of Statewide Importance (FMMP 2016). Therefore, the proposed project would result in the conversion of Important Farmland and requires evaluation by the NRCS to establish a farmland conversion impact rating.

3.1.2.2 State

The following state regulations pertaining to agricultural resources would apply to the proposed project.

Williamson Act

The Williamson Act (California Government Code § 51200), also known as the California Land Conservation Act of 1965, is the premier legislation for the protection of agricultural land in California. The act underscores the importance of preserving a maximum amount of the state's agricultural land as an economic asset that provides for the generation of adequate and nutritious food resources for the nation and state into the future. The Williamson Act operates through 10-year contracts with agricultural landowners that confirm that agricultural land is being preserved as the land's best use while providing a substantial property tax break for the landowner. The property's agricultural value is assessed and the landowner under contract is dismissed from property taxes according to the property's urban development potential.

After the 10-year contract period, the contract is automatically renewed unless the landowner submits a notice of nonrenewal with the County. Upon annexation to a city, lands tied to Williamson Act contracts have their contracts managed by the city until the contract is cancelled or expires.

Cortese Knox Herzberg Act

The Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000 (California Government Code § 56000 et seq.) establishes a local agency formation commissions (LAFCO), by county, and defines its jurisdiction and procedures. CKH gives the LAFCO the power to "approve or disapprove with or without amendment, wholly, partially or conditionally" proposals concerning the formation of cities and special districts, annexation or detachment of territory to cities and special districts, and other changes in jurisdiction or organization of local government agencies. One of the factors to be considered by the LAFCO is to direct urban development away from open space and prime agricultural lands when non-prime lands are available. As described in Chapter 2, Project Description, 5 acres of land located within the City's sphere of influence (Assessor's Parcel Number 223-061-014)

would be annexed as part of the proposed project. They City's sphere of influence is documented in a Memorandum of Agreement between the City of Gonzales and County of Monterey (LAFCO of Monterey County 2014a).

Farmland Mapping and Monitoring Program

The FMMP is a non-regulatory program implemented by the California DOC, Division of Land Resource Protection. Government Code § 65570 mandates FMMP to biennially report to the Legislature on the conversion of farmland and grazing land, and to provide maps and data to local government and the public. FMMP produces Important Farmland Maps, which are a hybrid of resource quality (soils) and land use information, based on the prior federal Natural Resource Conservation Service program. Land is classified into eight categories. Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are considered "Important Farmland" for the purposes of CEQA (the conversion of which may be a significant impact).

3.1.2.3 Local

As described in Chapter 2, Project Description, approximately 5 acres of the IWRF site are located in Monterey County, within the City's sphere of influence. This area would be annexed by the City as part of the proposed project. The proposed wastewater conveyance line alignment is located within City street rights-of-way and existing City sewer easement within County street rights-of-way. Because the project is located within City limits, within existing City easements, and within land that would be annexed to the City as part of the proposed project, County plans, policies, and ordinances are not applicable to the project and are not described. The following local/regional regulations pertaining to agriculture would apply to the proposed project.

Gonzales 2010 General Plan

The Land Use Element and Conservation and Open Space Element of the City of Gonzales 2010 General Plan provides policies and implementing actions applicable to the protection of agricultural resources.

Land Use Element

Policy LU-1.3 LAFCO Applications

Submit Sphere of Influence and annexation requests to LAFCO only for lands within the Urban Growth Boundary depicted on the Land Use Diagram. In addition, submit applications as may be required to facilitate the expansion of the wastewater treatment facility located on Gonzales River Road or other essential public utilities.

Implementing Action LU- 1.3.1 – Plans for Services.

Establish the timing of Sphere of Influence and annexation applications based on completion of plans for services, plans for public facilities, and financing plans that demonstrate compliance with LAFCO standards.

Conservation and Open Space Element

Policy COS-4.1 Maintain Agricultural Economy

Maintain agriculture as the core of the local economy by conserving and protecting agricultural lands and operations within the planning area, and where agricultural land is planned for eventual urbanization, work to keep such land in production up until the time when the land is converted to urban use.

Implementing Action COS-4.1.4 – Protect Agricultural Operations.

Protect agricultural operations from interference from urban uses by:

(c) For properties on the perimeter of the City limits, require Specific Plan features that minimize potential conflicts with permanent agricultural operations. Less sensitive uses such as parking, roads, storage, and landscaping should be sited adjacent to the agricultural areas. Residential backyards should not directly abut areas planned for long term agriculture without proper mitigation measures to limit potential nuisances.

Policy COS-4.3 No Urbanization Outside of Growth Area

Maintain agricultural open space around Gonzales as a means of giving form and definition to the City. To this end, permit urban development only within the areas designated for urban uses on the Land Use Diagram. Land beyond this boundary should remain in agricultural use for the duration of the planning period.

Implementing Action COS-4.3.2 – Regional Coordination.

Encourage Monterey County to promote and support agricultural uses in the Central Salinas Valley and to discourage urban development on prime agricultural lands outside the Gonzales 2010 General Plan growth area. Support County, State, and Federal efforts which protect the soil, water, and air resources necessary for the continued viability of agriculture in the Gonzales area.

Implementing Action COS-4.3.3 – Agricultural Impact Fund.

Establish an agricultural impact mitigation fund structured to purchase agricultural easements on lands shown on the Land Use Diagram as adjacent to but outside the General Plan growth area boundary.

Implementing Action COS-4.3.4 – Discourage Industry on Agricultural Lands.

Actively oppose free-standing industries in agricultural areas outside of the General Plan Growth Area that do not require on-site locations to process and distribute commodities grown on the property.

Implementing Action COS-4.3.6 – Williamson Act.

Promote the use of Williamson Act contracts in addition to agricultural easements as a means of maintaining land in agricultural use outside the General Plan growth area. Actively discourage the use of Williamson Act contracts or agricultural easements within the General Plan growth area.

Monterey County LAFCO

The Monterey County Local Agency Formation Commission (LAFCO) is charged with reviewing proposals for the creation of new cities or special districts and the annexation of land to local jurisdictions. As described above, the approximately 5 acres of the IWRF site located within the City's sphere of influence would require annexation into the City. Approval for the proposed annexation for this project would be administered by Monterey County LAFCO. The LAFCO must consider the conservation of agricultural land. The information provided in this EIR would be considered by Monterey County LAFCO in its review of the project.

The LAFCO has developed policies and procedures relating to spheres of influence and changes of organization and reorganization (LAFCO of Monterey County 2020). The following LAFCO policies and procedures relate to agriculture:

IV. Sphere of Influence Update, Amendment and Service Review

2. LAFCO shall review Sphere of Influence determinations not less than every five years. If a local agency or the County desires amendment or revision of an adopted Sphere of Influence, the local agency by resolution may file such a request with the Executive Officer. The request shall state the nature of the proposed amendment and the reasons for the request, include a map of the proposed amendment, and contain additional data and information as may be required by the Executive Officer.

16. Except as allowed in Section VI (below) for Minor Sphere of Influence Amendments, as part of the package of LAFCO forms and procedures given to every applicant, LAFCO will screen each application for an annexation change to ensure that there is a current Sphere of Influence (within the last five years), or that the application includes a concurrent Sphere update for affirmation by LAFCO. If the screening process identifies that a Sphere update is needed, the application package already identifies the information needed for the four standard determinations by LAFCO, and informs the applicant of the City-County consultation process required by State law. This administrative procedure will result in a current Sphere of Influence for every annexation change. This procedure does not change or affect other LAFCO procedures and policies that encourage comprehensive Sphere updates with 20-year horizons, and the staggering of Sphere and annexation proposals

3.1.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to agricultural resources are based on Appendix G of the CEQA Guidelines. A significant impact related to conversion of agricultural land would occur if the proposed project would:

1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Important Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use.
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract.
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
4. Result in the loss of forest land or conversion of forest land to non-forest use.
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

As described in the Initial Study (Appendix A), the project would not impact forest land because there is no forest land on the IWRF site or along the proposed wastewater conveyance line alignment. These topics are not discussed further in this EIR.

3.1.4 Impact Analysis

3.1.4.1 Methods of Analysis

The project setting was developed by reviewing FMMP data and Williamson Act contract information from the California Department of Conservation. This review was supplemented with field observations (as part of the biological resources studies).

3.1.4.2 Project Impacts

Impact 3.1-1. The project would convert Prime Farmland and Farmland of Statewide Importance (Farmland) to non-agricultural use.

The wastewater conveyance line would parallel the City's existing wastewater collection system line located within Femin Lane and Short Road. These roadways are surrounded by Prime Farmland on one or both sides as shown on Figure 3.2-1. Because the wastewater conveyance line would be constructed within existing roadways, the Prime Farmland along the wastewater conveyance line alignment would not be disturbed. As described in Chapter 2, Project Description, temporary construction access to adjacent properties would be negotiated by the City, as needed. Such access could result in the use of areas designated as Prime Farmland for construction staging and laydown of materials. This would be a temporary use with minimal disturbance of the soil surface, and therefore would not convert Prime Farmland to non-agricultural use. For these reasons, the potential for the construction and operation of the proposed wastewater conveyance line to convert Prime Farmland along the alignment to non-agricultural use would be less than significant.

The IWRF site includes 49 acres of Prime Farmland and 5 acres of Farmland of Statewide Importance, as shown in Table 3.1.1. Development of the proposed project would permanently convert this farmland from active agriculture to developed with industrial uses. The loss of this farmland is a **significant** impact.

Impact 3.1-2. The proposed project would not conflict with existing agricultural zoning and Williamson Act contract.

The wastewater conveyance line alignment would be located within Femin Lane and Short Road. Areas surrounding these roadways in unincorporated Monterey County are zoned as F/40 (Farmlands with minimum building site of 40 acres) (Monterey County 2020). Two parcels south of Femin Lane are under Williamson Act contract (Monterey County Agricultural Commissioner's Office 2020). It is possible that during construction, some of the farmland surrounding the wastewater conveyance line alignment would be used for construction staging. Construction staging activities would be temporary and would involve minimal disturbance of the soil surface. The areas would be returned to farmland use upon completion of construction. Therefore, the development of the proposed wastewater conveyance line would not conflict with the County's existing agricultural zoning or a Williamson Act contract.

The IWRF site currently contains row crops. The IWRF site located within the City of Gonzales city limits and its sphere of influence (SOI) on land designated for Public/Quasi Public in the General Plan, but not currently zoned (City of Gonzales 2010a, 2010b). The IWRF site does not contain any land under Williamson Act contract (Monterey

County Agricultural Commissioner's Office 2020). Therefore, development of the IWRF would not conflict with existing agricultural zoning and a Williamson Act contract.

For the reasons described above, the proposed project would have **no impact** related to a conflict with existing agricultural zoning and Williamson Act contracts.

Impact 3.1-3. The proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

Development of the proposed project would directly convert farmland to non-agricultural use, as discussed under Impact 3.1-1 above. Development on and near agricultural lands can sometimes also involve other changes in the environment that may interfere with nearby agricultural operations (such as nuisance complaints that limit agricultural operations, vandalism, limits on pesticide application, etc.). The proposed project would develop new IWRF adjacent to the City's existing MWWTP. The operation of a wastewater treatment plant is not a sensitive use that would conflict with adjacent agricultural operations. Additionally, a wastewater treatment plant requires minimal staffing and is not a land use that attracts public visitation, and therefore its operation would not draw sensitive receptors that could interfere with adjacent agricultural uses. A wastewater treatment plant would also not have the potential to increase the land value and taxes of surrounding agricultural lands, thereby creating incentive for conversion of farmland to non-agricultural uses. Lastly, the purpose of the IWRF is to treat wastewater from agricultural industrial uses, which would support ongoing agricultural activities in the project vicinity. For these reasons, the proposed project would not involve other changes in the existing environment that could result in the conversion of farmland to non-agricultural use. This impact is **less than significant**.

3.1.5 Mitigation Measures

The site of the proposed IWRF is adjacent to the City's existing MWWTP, and has been planned as the site of expanded wastewater facilities since the 1996 Gonzales General Plan. 49 of the 54 acres were annexed per LAFCO Resolution 05-64. Note that 5 acres were excluded from the annexation per LAFCO Resolution 06-05, and therefore would be annexed as part of this proposed project (and LAFCO will rely on this EIR when acting on the proposed annexation). The 1996 General Plan EIR found that no feasible mitigation measures were available to reduce the impact to agricultural resources due to the annexation and development of the IWRF site (and LAFCO concurred with this finding in its resolution). Subsequently, the Gonzales 2010 General Plan EIR identified general plan policies that would reduce the effect of urban development on agricultural resources, including policies LU-1.3, LU-1.4, LU-6.2, COS-4.1, COS-4.2, and COS-4.3. Implementation of these general plan policies would reduce, but not avoid the significant impact associated with conversion of agricultural resources. The 2010 General Plan EIR did not identify additional feasible mitigation measures to avoid impacts to agricultural resources as a result of implementing the general plan, including development of the IWRF site. The analysis mitigation for agricultural resources in the 2010 General Plan EIR (SCH# 2009121017) is incorporated by reference.

There is no project specific mitigation that would further reduce the impacts beyond those identified in the 2010 General Plan EIR. Avoiding or minimizing impacts to on-site farmland would not be feasible, as ultimately the entire site will be necessary to support wastewater operations. Restoration would not be possible, as the conversion would effectively be permanent. Delaying development is often used as a tool to reduce the impact of farmland conversion by delaying premature conversion of agricultural areas. Delaying is not possible because the project is part of the City's Long Term Wastewater Management Plan that must be implemented in order to provide wastewater collection and treatment for the planned expansion of the Gonzales Agricultural Business Industrial Park (GABIP).

The City of Gonzales, Monterey County, and Monterey County LAFCO entered into a memorandum of understanding to develop a regional agricultural mitigation program (LAFCO 2014a, 2014b). However, this program has not yet been implemented. In addition, the acquisition of existing farmland (either by acquiring development rights or acquiring the land in fee simple) would not provide replacement resources for the agricultural land present on the project site.

3.1.6 Level of Significance After Mitigation

As described above, feasible mitigation measures beyond implementation of the general plan policies to protect agricultural resources have not been identified. The conversion of Important Farmland due to development of the IWRF would be **significant and unavoidable**.

3.1.7 Cumulative Analysis

The cumulative projects are located on sites that do not contain important farmland (FMMP 2016), and are not zoned or subject to Williamson Act contracts. Therefore, a cumulative impact for farmland conversion would not occur. The context for cumulative farmland conversion impacts is Monterey County. .

3.1.8 References

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SOURCE: Bing Maps 2020, Monterey County 2019 CA Department of Conservation 2012

DUDEK

0 750 1,500 Feet

FIGURE 3.1-1

Williamson Act and FMMP Map

City of Gonzales Separate Industrial Water Recycling Facility

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3.2 Air Quality

This section describes the existing regional and local air quality conditions at the location of the Industrial Wastewater Reclamation Facility (IWRF) and wastewater conveyance line as part of the IW Conveyance and IW Reclamation Facility Project (proposed project); discusses applicable federal, state, and regional regulations; and evaluates the potential effects on air quality associated with development of the proposed project.

No public and agency comments related to air quality were received during the public scoping periods in response to the original Notice of Preparation (NOP). For a complete list of public comments received during the public scoping periods refer to Appendix A.

3.2.1 Existing Conditions

3.2.1.1 Climate and Topography

The proposed project is located in the North Central Coast Air Basin (NCCAB), which consists of Monterey, Santa Cruz, and San Benito counties and encompasses an area of 5,159 square miles. The northwest sector of the basin is dominated by the Santa Cruz Mountains. The Diablo Range marks the northeastern boundary and, together with the southern extent of the Santa Cruz Mountains, forms the Santa Clara Valley, which extends into the northeastern tip of the NCCAB. Farther south, the Santa Clara Valley merges into the San Benito Valley, which extends northwest–southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley, which extends from Salinas at the northwest end to King City at the southeast end. The western side of the Salinas Valley is formed by the Sierra de Salinas, which also forms the eastern side of the smaller Carmel Valley. The coastal Santa Lucia Range defines the western side of the valley (County of Monterey 2008).

The semi-permanent high pressure cell in the eastern Pacific is the basic controlling factor in the climate of the NCCAB. In the summer, the high pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific High forming a stable temperature inversion of hot air over a cool coastal layer of air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air aloft acts as a lid to inhibit vertical air movement. The generally northwest–southeast orientation of mountainous ridges tends to restrict and channel the summer onshore air currents. Surface heating in the interior portion of the Salinas and San Benito Valleys creates a weak low pressure that intensifies the onshore air flow during the afternoon and evening. In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. The air flow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the Pacific High pressure cell, which allows pollutants to build up over a period of a few days. It is most often during this season that the north or east winds develop to transport pollutants from either the San Francisco Bay area or the Central Valley into the NCCAB. During the winter, the Pacific High migrates southward and has less influence on the NCCAB. Air frequently flows in a southeasterly direction out of the Salinas and San Benito Valleys, especially during night and morning hours. Northwest winds are nevertheless still dominant in winter, but easterly flow is more frequent. The general absence of deep, persistent inversions and the occasional storm systems usually result in good air quality for the NCCAB as a whole in winter and early spring (County of Monterey 2008).

3.2.1.2 Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The national and California standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.[1]

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly NO_x and reactive organic gases (ROG, also termed volatile organic compounds (VOCs)). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric O_3) and at the Earth's surface in the troposphere (ground-level O_3).[2] The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013).

Inhalation of O3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O3 can reduce the volume of air that the lungs breathe in, thereby causing shortness of breath. O3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O3 exposure. While there are relatively few studies on the effects of O3 on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful

[1] The descriptions of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2018a), as well as the California Air Resources Board's "Glossary" (CARB 2019a) and "Fact Sheet: Air Pollution Sources, Effects and Control" (CARB 2009).

[2] The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents and adults who exercise or work outdoors, where O3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2019b).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x plays a major role, together with ROG, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

A large body of health science literature indicates that exposure to NO2 can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for NO2, results from controlled human exposure studies that show that NO2 exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher levels of exposure compared to children with lower exposure levels. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2019c).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2019d).

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2

concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 parts per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. Older people and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2019e).

SO_2 is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in particulate matter (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO_2-induced increase in airflow resistance is greater than in healthy people, and it increases with the severity of their asthma (NRC 2005). SO_2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter, which is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter, which is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and ROG.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide based on

the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2017).

Long-term exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2017).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient (IQ) performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere and can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$.

Reactive Organic Gases. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as ROG. Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of ROG result from the formation of O_3 and its related health effects. High levels of ROG in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate ambient air quality standards for ROG as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2019f). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2019f). The CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) (17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines, including trucks, buses, and cars, and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2019f). Those most vulnerable to non-cancer health effects are children, whose lungs are still developing, and older people, who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g.,

circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Coccidioidomycosis, more commonly known as "Valley Fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The spores can be found in some areas naturally occurring in soils, can become airborne when the soil is disturbed, and can subsequently be inhaled into the lungs. Valley Fever symptoms occur within 2 to 3 weeks of exposure. Approximately 60% of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. In 2018, Monterey County had an incidence rate of 51.2 cases annually of Valley Fever per 100,000 people (CDPH 2018). *Coccidioides* is thought to grow best in soil after heavy rainfall and then disperse into the air most effectively during hot, dry conditions.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005).

The closest off-site sensitive receptors to the project site include residences located adjacent to the proposed project's northern and southern boundaries.

3.2.2 Relevant Plans, Policies, and Ordinances

3.2.2.1 Federal

Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. EPA is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants; setting hazardous air pollutant standards; approving state attainment plans; setting motor vehicle emissions standards; issuing stationary source emissions standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. NAAQS are established for criteria pollutants under the Clean Air Act, which are O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires EPA to

reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the NAAQS within mandated timeframes.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. Hazardous air pollutants (HAPs) include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

3.2.2.2 State

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a geographical area can attain the corresponding CAAQS. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

California air districts have based their thresholds of significance for California Environmental Quality Act (CEQA) purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health.

The NAAQS and CAAQS are presented in Table 3.2-1.

Table 3.2-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary[c,d]*	*Secondary[c,e]*
Ozone (O_3)	1 hour	0.09 ppm (180 μg/m^3)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m^3)	0.070 ppm (137 μg/m^3)f	

Table 3.2-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary[c,d]*	*Secondary[c,e]*
Nitrogen dioxide (NO_2)[g]	1 hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	
Carbon monoxide (CO)	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
Sulfur dioxide (SO_2)[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
Course Particulate Matter (PM_{10})[i]	24 hours	50 µg/m³	150 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m³	—	
Fine Particulate Matter ($PM_{2.5}$)[i]	24 hours	—	35 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³
Lead[j,k]	30-day Average	1.5 µg/m³	—	—
	Calendar Quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24 hours	25 µg/m³	—	—
Visibility-reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%	—	—

Source: CARB 2016.

Notes: ppm = parts per million by volume; µg/m³ = micrograms per cubic meter; mg/m³= milligrams per cubic meter; PST = Pacific Standard Time.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter—PM_{10}, $PM_{2.5}$, and visibility-reducing particles—are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] On October 1, 2015, the primary and secondary National Ambient Air Quality Standards for O_3 were lowered from 0.075 ppm to 0.070 ppm

[g] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and non-carcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment Program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several airborne toxic control measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

3.2.2.3 Local

Monterey Bay Air Resources District

The Monterey Bay Air Resources District (MBARD) is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the NCCAB, where the proposed project is located. The MBARD operates monitoring stations in the NCCAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The MBARD's Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain CAAQS and NAAQS in the NCCAB. The MBARD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

Air Quality Management Plan. The 1991 AQMP for the Monterey Bay Area was the first plan prepared in response to the California Clean Air Act of 1988, which established specific planning requirements to meet the O_3 standard. The California Clean Air Act requires that the AQMP be updated every 3 years. The most recent update is the *2012–2015 Air Quality Management Plan* (2012–2015 AQMP), which was adopted in March 2017, and is an update to the elements included in the 2012 AQMP. The primary elements updated from the 2012 AQMP are the air quality trends analysis, emission inventory, and mobile source programs.

The NCCAB is a nonattainment area for the CAAQS for both O_3 and PM_{10}. The AQMP addresses only attainment of the O_3 CAAQS. Attainment of the PM_{10} CAAQS is addressed in the MBARD's *2005 Report on Attainment of the California Particulate Matter Standards in the Monterey Bay Region* (Particulate Matter Plan), which was adopted in December 2005 and is summarized further below. Maintenance of the 8-hour NAAQS for O_3 is addressed in MBARD's *2007 Federal Maintenance Plan for Maintaining the National Ozone Standard in the Monterey Bay Region* (Federal Maintenance Plan), which was adopted in March 2007 and is also summarized below.

A review of the air monitoring data for 2013 through 2015 indicates that there were fewer exceedance days compared to previous periods (MBARD 2017). The long-term trend shows that progress has been made toward achieving O_3 standards. The number of exceedance days has continued to decline during the past 10 years despite population increases. The MBARD's 2012–2015 AQMP identifies a continued trend of declining O_3 emissions in the NCCAB primarily related to lower vehicle miles traveled (VMT). Therefore, the MBARD determined progress was continuing to be made toward attaining the 8-hour O_3 standard during the three-year period reviewed (MBARD 2017).

Federal Maintenance Plan. The Federal Maintenance Plan (May 2007) presents the strategy for maintaining the NAAQS for O_3 in the NCCAB. It is an update to an earlier maintenance plan (1994) that was prepared for maintaining the 1-hour NAAQS for O_3 and has since been revoked and superseded by the current 8-hour O_3 standard. Effective June 15, 2004, the EPA designated the NCCAB as an attainment area for the 8-hour NAAQS for O_3. The plan includes an emission

inventory for the years 1990 to 2030 for ROG and NO_x, the two primary O_3 precursor gases. A contingency plan is included to ensure that any future violation of the standard is promptly corrected (MBARD 2007).

Particulate Matter Plan. The purpose of the Particulate Matter Plan (December 2005) is to fulfill the requirements of Senate Bill 655, which was approved by the California Legislature in 2003 with the objective of reducing public exposure to particulate matter. The legislation requires CARB, in conjunction with local air pollution control districts, to adopt a list of the most readily available, feasible, and cost-effective control measures that could be implemented by air pollution control districts to reduce ambient levels of particulate matter in their air basins (MBARD 2005). The Particulate Matter Plan's proposed activities include control measures for fugitive dust, public education, administrative functions, and continued enhancements to the MBARD's smoke management and emission-reduction incentive programs.

Rules and Regulations. The MBARD establishes and administers a program of rules and regulations to attain and maintain state and national air quality standards and regulations related to TACs. Rules and regulations that may apply to the proposed project during construction and/or operations include the following:

- Regulation II (Permits), Rule 207 (Review of New or Modified Sources). The MBARD regulates criteria air pollutant emissions from new and modified stationary sources through this rule.
- Regulation IV (Prohibitions), Rule 400 (Visible Emissions). This rule provides limits for visible emissions for sources within the MBARD jurisdiction.
- Regulation IV (Prohibitions), Rule 402 (Nuisances). This rule establishes a prohibition against sources creating public nuisances while operating within the MBARD jurisdiction.
- Regulation IV (Prohibitions), Rule 403 (Particulate Matter). This rule provides particulate matter emissions limits for sources operating within the MBARD jurisdiction.
- Regulation IV (Prohibitions), Rule 416 (Organic Solvents). This rule limits the emissions of VOCs that are used as solvents within the MBARD jurisdiction.
- Regulation IV (Prohibitions), Rule 417 (Storage of Organic Liquids). This rule limits the emissions of organic solvent vapors from the storage of organic liquids within the MBARD jurisdiction.
- Regulation IV (Prohibitions), Rule 424 (National Emission Standards for Hazardous Air Pollutions). This rule is to provide clarity on the MBARD's enforcement authority for the National Emission Standards for Hazardous Air Pollution including asbestos from demolition.
- Regulation IV (Prohibitions), Rule 425 (Use of Cutback Asphalt). This rule establishes VOC emissions limits associated with the use of cutback and emulsified asphalts.
- Regulation IV (Prohibitions), Rule 426 (Architectural Coatings). This rule establishes VOC emissions limits associated with the use of architectural coatings.
- Regulation X (Toxic Air Contaminants), Rule 1000 (Permit Guidelines and Requirements for Sources Emitting Toxic Air Contaminants). The MBARD also regulates TACs from new or modified sources under Rule 1000, a Board-approved protocol that applies to any source that requires a permit to construct or operate pursuant to MBARD regulations and has the potential to emit carcinogenic or noncarcinogenic TACs. The MBARD's Rule 1000 also requires sources of carcinogenic TACs to install best control technology and reduce cancer risk to less than one incident per 100,000 population. Sources of noncarcinogenic TACs must apply reasonable control technology.

Association of Monterey Bay Area Governments

The Association of Monterey Bay Area Governments (AMBAG) is the federally designated Metropolitan Planning Organization (MPO) for transportation planning activities in the tri-county Monterey Bay region (Santa Cruz, Monterey and San Benito counties).

AMBAG, as an MPO, is required by state and federal laws to develop and adopt a Metropolitan Transportation Improvement Program (MTIP), a multi-year transportation project program that includes multi-modal projects, including but not limited to major highway, arterial, transit, bikeway and pedestrian projects. The 2018 MTIP is a four-year program that covers the federal fiscal years from October 1, 2018 through September 30, 2022. In June 2018, the AMBAG Board of Directors adopted the 2040 Monterey Bay Area Metropolitan Transportation Plan/Sustainable Communities Strategy (2040 MTP/SCS). The 2040 MTP/SCS is a long-range visioning plan that identifies the transportation needs of its respective communities over a 20-plus year timeframe. In addition, the 2040 MTP/SCS reflects a wide spectrum of sustainability objectives. In order to have a more sustainable transportation system, the 2040 MTP/SCS balances improvements to access, mobility, the environment, public health, safety, the economy and equity, as well as preservation of the current transportation system.

Gonzales 2010 General Plan

The Community Health and Safety Element of the City of Gonzales 2010 General Plan provides policies and implementing actions applicable to the reduction of air quality emissions (City of Gonzales 2010).

Community Health and Safety Element

Policy HS-6.1 Air Quality in New Construction and Redevelopment

Require all new construction and renovation to be designed in accordance with adopted Neighborhood Design Guidelines and constructed to reduce the City's overall greenhouse gas emissions and other deleterious air quality impacts.

Implementing Action HS- 6.1.1 – Support Regional Air Quality Efforts

Support regional efforts to achieve and maintain ambient air quality standards. The City should cooperate with regional, State, and Federal agencies in conducting studies and implementing regulations to improve air quality.

Implementing Action HS- 6.1.3 – Dust Abatement

Minimize local air quality impacts related to new construction by requiring dust abatement measures where applicable.

Policy HS-6.2 Siting of New Sources of TACs

New development that would be a source of TACs proposed near existing residences or other sensitive receptors shall either provide adequate buffer distances or provide other measures to reduce the potential exposure to acceptable levels.

Implementing Action HS- 6.2.1 – Project Review for New Sources of TACs

Require Specific Plans or other development applications to contain an analysis of TAC health risks for major new sources of TACs (e.g., trucking distribution centers, dry cleaners, or gasoline stations) that are to be located near a sensitive receptor. Such analysis shall include an evaluation of the adequacy of the setbacks and if necessary identify measures to reduce health risks to acceptable levels.

Local Air Quality Conditions

North Central Coast Air Basin Attainment Designations

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as attainment for that pollutant. If an area exceeds the standard, the area is classified as nonattainment for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are redesignated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as attainment or nonattainment, but based on CAAQS rather than the NAAQS. Table 3.2-2 identifies the current attainment status of the NCCAB, including the proposed project site, with respect to the NAAQS and CAAQS, and the attainment classifications for the criteria pollutants.

Table 3.2-2. North Central Coast Air Basin Attainment Classification

Pollutant	Designation/Classification	
	National Standards	*California Standards*
Ozone (O_3), 1-hour	No national standard	**Nonattainment**
Ozone (O_3), 8-hour	Unclassifiable/attainment	**Nonattainment**
Nitrogen Dioxide (NO_2)	Unclassifiable/attainment	Attainment
Carbon Monoxide (CO)	Unclassifiable/attainment	Attainment
Sulfur Dioxide (SO_2)	Unclassifiable/attainment	Attainment
Coarse Particulate Matter (PM_{10})	Unclassifiable/attainment	**Nonattainment**
Fine Particulate Matter ($PM_{2.5}$)	Unclassifiable/attainment	Attainment
Lead	Unclassifiable/attainment	Attainment
Hydrogen Sulfide	No national standard	Unclassified
Sulfates	No national standard	Attainment
Visibility-Reducing Particles	No national standard	Unclassified
Vinyl Chloride	No national standard	No designation

Sources: EPA 2020 (national); CARB 2019g (California).
Notes: Bold text = not in attainment; attainment = meets the standards; attainment/maintenance = achieves the standards after a nonattainment designation; nonattainment = does not meet the standards; unclassified or unclassifiable = insufficient data to classify; unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

In summary, the NCCAB is designated as a nonattainment area for the state O_3 and PM_{10} standards. The NCCAB is designated as unclassified or attainment for all other state and federal standards (EPA 2020a; CARB 2019g).

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. MBARD monitors local ambient air quality at the project site. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2017 to 2019 are presented in Table 3.2-3. Three air quality monitoring stations are located throughout Monterey County, including Salinas (867 East Laurel Drive), Carmel Valley (35 Ford Road), and King City (415 Pearl Street). The Carmel Valley monitoring station is the nearest air quality monitoring station to the project site, located approximately 14 miles west of the project site. This station monitors O_3 and $PM_{2.5}$. The nearest station that monitors PM_{10} is the King City monitoring station approximately 27 miles southeast of the project site. The nearest station that monitors NO_2 and CO is the Salinas monitoring station approximately 16 miles northwest of the project site. The data collected at these stations is considered representative of the air quality experienced in the project vicinity and is provided in Table 3.2-3. The number of days exceeding the ambient air quality standards is also shown in Table 3.2-3.

Table 3.2-3. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2017	*2018*	*2019*	*2017*	*2018*	*2019*
Ozone (O_3)										
Carmel Valley-Ford Road	ppm	Maximum 1-hour concentration	California	0.09	0.073	0.062	0.071	0	0	0
	ppm	Maximum 8-hour concentration	California	0.070	0.067	0.055	0.064	0	0	0
			National	0.070	0.066	0.054	0.064	0	0	0
Nitrogen Dioxide (NO_2)										
Salinas-East Laurel Drive	ppm	Maximum 1-hour concentration	California	0.18	0.034	0.047	0.030	0	0	0
			National	0.100	0.034	0.047	0.030	0	0	0
	ppm	Annual concentration	California	0.030	0.004	0.005	0.004	—	—	—
			National	0.053	—	—	—	—	—	—
Carbon Monoxide (CO)										
Salinas-East Laurel Drive	ppm	Maximum 1-hour concentration	California	20	—	—	—	—	—	—
			National	35	2.7	3.5	35	0	0	0
	ppm	Maximum 8-hour concentration	California	9.0	—	—	—	—	—	—
			National	9	0.9	1.2	5.3	0	0	0
Coarse Particulate Matter (PM_{10})[a]										
King City-Pearl Street	µg/m³	Maximum 24-hour concentration	California	50	ND	ND	ND	ND	ND	ND
			National	150	95.3	78.9	89.7	0.0 (0)	0.0 (0)	0.0 (0)

Table 3.2-3. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2017	*2018*	*2019*	*2017*	*2018*	*2019*
	μg/m³	Annual concentration	California	20	ND	ND	ND	ND	ND	ND
Fine Particulate Matter ($PM_{2.5}$)[a]										
Carmel Valley-Ford Road	μg/m³	Maximum 24-hour concentration	National	35	43.6	50.7	11.1	1.0 (1)	4.1 (4)	0.0 (0)
	μg/m³	Annual concentration	California	12	5.2	6.3	3.7	—	—	—
			National	12.0	5.1	6.2	3.6	—	—	—

Sources: CARB 2021; EPA 2021.

Notes: ppm = parts per million by volume; — = not available; μg/m³ = micrograms per cubic meter; ND = insufficient data available to determine the value.

Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.

Exceedances of national and California standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed national or California standards during the years shown. There is no national standard for 1-hour O_3, annual PM_{10}, or 24-hour SO_2, nor is there a California 24-hour standard for $PM_{2.5}$.

Carmel Valley – Ford Road Monitoring Station is located at 34 Ford Road, Carmel Valley, California 93924.

Salinas – East Laurel Drive Monitoring Station is located at 855 E. Laurel Drive, Salinas, California 93901.

King City – Pearl Street Monitoring Station is located at 415 Pearl Street, King City, California 93930.

[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

3.2.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if a project would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether a proposed project would have a significant impact on air quality.

The MBARD has adopted two sets of CEQA Guidelines, which contain different thresholds of significance depending on the CEQA lead agency. The *Guidelines for Implementing the California Environmental Quality Act* (2016 Guidelines) (MBARD 2016) were written for when the MBARD is the lead or responsible agency, whereas the *CEQA Air Quality Guidelines* (2008 Guidelines) (MBARD 2008) were written for all other lead agencies. Notably, the 2016

Guidelines include air pollutant thresholds for construction that were not included in the 2008 Guidelines. Since the MBARD is a responsible agency for this proposed project, given that it would issue air pollution permits for stationary sources that may be required for the proposed project, the thresholds included in the 2016 Guidelines were applied to the proposed project. Specifically, a project would result in a significant impact to air quality during construction and/or operations if it results in the generation of emissions of or in excess of any of the following:

- 137 pounds per day of ROG or NO_x
- 82 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$
- 550 pounds per day of CO

Consistency with the AQMP is used by MBARD to determine a project's cumulative impact on regional air quality (i.e., ozone levels). Projects which are not consistent with the AQMP have not been accommodated in the AQMP and will have a significant cumulative impact on regional air quality unless emissions are totally offset (MBARD 2008). For localized impacts of the proposed project (i.e., PM_{10}), the threshold for cumulative impacts is the same as that noted above (82 pounds per day of PM_{10}). The localized impacts related to CO hotspots and MBARD's associated thresholds are not applicable, as the proposed project would not generate a net increase in operational traffic.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The MBARD recommends an incremental cancer risk threshold of 10 in 1 million. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology. In addition, some TACs have noncarcinogenic effects. The MBARD recommends a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) effects.[3]

3.2.4 Impacts Analysis

3.2.4.1 Methods of Analysis

Emissions from construction and operation of the proposed project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2.[4]

Construction

Construction emissions were calculated for the estimated worst-case day over the construction period. ("Worst-case day" means the day with the greatest emissions.) Default CalEEMod values were used where detailed project information was not available.

[3] Non-cancer adverse health risks are measured against a hazard index, which is defined as the ratio of the predicted incremental exposure concentrations of the various noncarcinogens from a project to published reference exposure levels that can cause adverse health effects.

[4] CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant emissions associated with the construction and operational activities from a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the proposed project land use type and size and construction schedule were based on information provided by the project applicant, or default model assumptions if project specifics were unavailable.

It is anticipated that construction of the proposed project would commence in January 2022 and reach completion in October 2022.[5] Table 3.2-4 presents the construction scenario assumptions used to estimate project-generated construction emissions based on the anticipated phasing and schedule for the proposed project, as well as estimated worker trips, vendor (delivery) truck trips, haul truck trips, and construction equipment. These construction assumptions are based on input provided by the project engineers.

Notably, during the grading phase, approximately 100,000 cubic yards of material would be excavated, 50,000 cubic yards would be balanced on-site, and 50,000 cubic yards would be exported off site. It is anticipated that 3,500 round-trip haul truck trips (7,000 one-way trips) would be required to export this excavated material off site. Additional hauls would be required during various phases for erosion control products, concrete delivery, import of gravel, and import of trench backfill materials. These trips are summarized in Table 3.2-4.

Emissions from vehicle trips are estimated in CalEEMod based on the number of trips, the trip distance, and emission factors for the vehicle category. Regarding the vehicle categories, and consistent with CalEEMod default values, worker trips are assumed to be passenger vehicles and light-duty trucks, vendor truck trips are assumed to be a mix of medium- and heavy-heavy duty trucks, and haul truck trips are assumed to be heavy-heavy duty trucks. Each worker, vendor, and haul truck was estimated to result in two one-way trips. As with equipment, internal combustion engines used by vehicles would result in emissions of ROG, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$.

Fugitive dust (PM_{10} and $PM_{2.5}$ emissions) is generated by entrained dust, which results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, which occurs during earth movement phases (site preparation and grading) and during the loading of material into haul trucks. Standard construction practices would be implemented by the applicant or its contractors during construction activities, including wind erosion (dust) controls, such as watering active construction sites to control fugitive dust.

[5] The analysis assumes a construction start date of January 2022, which represents the earliest date construction would have initiated at the time of analysis. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and greenhouse gas emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Table 3.2-4. Construction Scenario Assumptions

Construction Phase	Start Date	Finish Date	Duration (Working Days)	One-Way Vehicle Trips			Equipment		
				Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Type*	*Quantity*	*Average Hours per Day*
Site Preparation	1/2/2022	1/14/2022	10	20	2	600	Grader	1	8
							Scraper	1	8
							Tractors/ Loaders/ Backhoes	2	8
							Water Truck	1	8
Grading	1/17/2022	4/22/2022	70	30	0	7,000	Scaper	2	8
							Grader	2	8
							Excavator	1	8
							Dozer	2	6
							Loaders	2	8
							Roller	2	8
							Water Truck	2	8
Civil / Site Work	4/25/2022	6/17/2022	40	20	2	400	Forklift	1	8
							Loader	1	8
							Grader	1	8
							Roller	1	8
							Water Truck	1	8
Structural	6/20/2022	8/12/2022	40	20	0	110	Excavator	1	4
							Loaders	1	8
							Forklift	1	4
							Roller	1	2
							Water Truck	1	2

Table 3.2-4. Construction Scenario Assumptions

Construction Phase	Start Date	Finish Date	Duration (Working Days)	One-Way Vehicle Trips			Equipment		
				Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Type*	*Quantity*	*Average Hours per Day*
Mechanical / Electrical / Architectural	8/15/2022	10/21/2022	50	30	4	0	Forklifts	1	6
							Generator Set	1	6
							Tractors/ Loaders/ Backhoes	1	4
							Crane	1	2
Off-site Sewer Collection System	1/3/2022	6/17/2022	120	20	2	2,000	Excavator	1	8
							Crane	1	4
							Dozer	1	8
							Roller	1	4
							Paver	1	2

Notes: See Appendix B for details.

VOC off-gassing emissions would occur during application of asphalt pavement during paving and the application of paint and other coatings during architectural coating. During paving, VOC off-gassing emissions are estimated in CalEEMod based on the area of asphalt pavement assumed and the default emission factor of 2.62 pounds per acre of VOC. During architectural coating, VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. VOC evaporative emissions from application of surface coatings was estimated based on the VOC emission factor, the estimated building square footage, and the assumed fraction of surface area. The total square footage of new structures was conservatively assumed; however, the majority of the new surfaces are not anticipated to require coating.

Operation

Emissions from the operational phase of the project were estimated using CalEEMod Version 2016.3.2. Year 2023 was assumed as the first full year of operations.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, which include emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Consumer product VOC emissions are estimated in CalEEMod based on the floor area of residential and nonresidential buildings and on the default factor of pounds of VOC per building square foot per day.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of nonresidential surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The model default reapplication rate of 10% of area per year is assumed. For asphalt surfaces, the architectural coating area is assumed to be 6% of the total square footage, consistent with the supporting CalEEMod studies provided as an appendix to the CalEEMod User's Guide (CAPCOA 2017).

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions associated with landscape equipment use are estimated based on CalEEMod default values for emission factors.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for greenhouse gas emissions in CalEEMod, since criteria pollutant emissions would occur at the site of power plants, which are not on the project site. Additionally, natural gas would not be required for operation of the proposed project per input from the project engineers.

Mobile and Off-Road Equipment Sources

As provided by the project engineers, no additional employees would be required for the proposed project and only a water truck would be needed on a monthly basis. Additionally, the treatment ponds would only need to be dredged every 15 to 20 years, which would likely require an excavator and a haul truck to export the sludge. Based on these minimal and infrequent operational activities, on-road mobile and off-road equipment source emissions were not included in the operational analysis.

Stationary Sources

A 750-kilowatt diesel emergency generator would be required to power the facility during any power outages. CalEEMod was used to model the routine testing and maintenance of this generator assuming a 2-hour testing duration per day per month. For the proposed generator, CalEEMod default emission rates were used, which represent a Tier 3 engine.

3.2.4.2 Project Impacts

Impact 3.2-1. The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.

As described in the MBARD CEQA Guidelines (2008), project emissions that are not accounted for in the AQMP's emission inventory are considered a significant cumulative impact to regional air quality. However, for construction of a project, construction projects using typical construction equipment (such as dump trucks, scrapers, bulldozers, compactors and front-end loaders) that temporarily emit precursors of O_3 are accounted for in the AQMP emissions inventory (MBARD 2008) and would not have a significant impact. As identified in Table 3.2-4, the equipment required for construction of the proposed project would be typical and activities would not be unusually intense, and therefore proposed project construction emissions would not result in a significant impact. Furthermore, as determined in Impact 3.2-2 (discussed below), the proposed project would result in emissions during short-term construction and long-term operations that would not exceed the MBARD thresholds of significance. As such, construction and operation of the proposed project would not conflict with or obstruct implementation of the AQMP and this impact would be **less than significant**.

Impact 3.2-2. The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

Short-term construction and long-term operational activities associated with the proposed project would result in an increase in daily criteria air pollutant emissions that would not exceed the applicable MBARD thresholds. As such, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard. The NCCAB has been designated as a state nonattainment area for O_3 and PM_{10}. This impact would be less than significant, as further described below.

Construction Emissions

Construction emissions associated with the proposed project were estimated using CalEEMod and are depicted in Table 3.2-. As shown in Table 3.2-, maximum daily emissions of all criteria air pollutants associated with construction of the proposed project would not exceed the applicable MBARD significance thresholds. As such, construction emissions for the proposed project would result in a **less-than-significant** impact.

Table 3.2-5. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2022	8.51	104.91	56.86	0.22	11.46	6.09
Maximum daily emissions	**8.51**	**104.91**	**56.86**	**0.22**	**11.46**	**6.09**
MBARD threshold	*137*	*137*	*550*	*N/A*	*82*	*55*
Threshold exceeded?	**No**	**No**	**No**	**N/A**	**No**	**No**

Notes: CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; N/A = not applicable; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases; SO_x = sulfur oxides.
See Appendix B for details.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. PM_{10} and $PM_{2.5}$ includes exhaust and dust emissions, and accounts for a 55% fugitive dust reduction from water trucks, and assumes watering of active sites two times per day.

Operational Emissions

Operation of the proposed project would generate criteria pollutant emissions from area sources (consumer products, architectural coatings, and landscaping equipment) and routine testing and maintenance of the 750-kilowatt emergency generator. CalEEMod was used to estimate daily emissions from project-related operational sources. Table 3.2-6 summarizes the operational emissions criteria pollutants that would be generated from the project.

Table 3.2-6. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions

Source	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Area Sources	0.13	0.00	0.00	0.00	0.00	0.00
Stationary Source	3.30	14.77	8.42	0.02	0.49	0.49
Total	**3.43**	**14.77**	**8.42**	**0.02**	**0.49**	**0.49**
MBARD threshold	*137*	*137*	*550*	*N/A*	*82*	*55*
Threshold exceeded?	**No**	**No**	**No**	**N/A**	**No**	**No**

Notes: CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; N/A = not applicable; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases; SO_x = sulfur oxides.
See Appendix B for details.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. The diesel emergency generator stationary source was assumed to operate up to two hours in a day for routine testing and maintenance.

As depicted in Table 3.2-6, the increase in long-term operational activities would result in a minimal increase in criteria air pollutant emissions and would not exceed the applicable MBARD significance thresholds. Therefore, this impact would be **less than significant**.

As discussed in Section 3.2.2.3, the NCCAB has been designated as a state nonattainment area for O_3 and PM_{10}. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the NCCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. Construction and operation of the proposed project would generate ROG and NO_x emissions (which are precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. However, as indicated in Tables 3.2-5 and 3.2-6, project-generated construction emissions and operational emissions would not exceed the emission-based significance thresholds for ROG, NO_x, or PM_{10}.

Cumulative localized impacts would potentially occur if a construction project were to occur concurrently with another off-site project. Construction schedules for potential future projects near the proposed project area are

currently unknown; therefore, potential construction impacts associated with two or more simultaneous projects would be considered speculative. However, future projects would be subject to CEQA and would require air quality analysis and, where necessary, mitigation if the project would exceed applied thresholds. Criteria air pollutant emissions associated with construction activity of future projects would be reduced through implementation of control measures required by the MBARD.

Impact 3.2-3. The proposed project would not expose sensitive receptors to substantial pollutant concentrations.

Toxic Air Contaminants

TACs are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal HAPs, and is adopting appropriate control measures for sources of these TACs. During proposed project construction, DPM would be the primary TAC emitted from diesel-fueled equipment and trucks. The following measures are required by state law to reduce DPM emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use Off-Road Diesel Vehicles (13 CCR Chapter 9, Section 2449), the purpose of which is to reduce DPM and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles.
- All commercial diesel vehicles are subject to Title 13, Section 2485 of the California Code of Regulations (CCR), limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to 5 minutes; electric auxiliary power units should be used whenever possible.

Sensitive receptors are located immediately adjacent to the project sites. Health effects from carcinogenic air toxics are usually described in terms of cancer risk. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have noncarcinogenic effects.

DPM emissions would be emitted from heavy equipment operations and diesel-fueled trucks. Heavy-duty construction equipment and commercial trucks are subject to CARB Air Toxic Control Measures to reduce diesel particulate emissions. As presented in Table 3.2- above, maximum daily total PM_{10} emissions generated by construction equipment operation and trucks (exhaust particulate matter, or DPM, combined with fugitive dust generated by equipment operation and vehicle travel), would be well below the MBARD significance threshold. Moreover, construction of each of the proposed project would be short-term, after which project-related TAC emissions (e.g., diesel emissions) would cease. For the linear construction components, such as the off-site sewer collection system pipelines, construction would proceed along the alignment and would not require the extensive use of heavy-duty construction equipment or diesel trucks in any one location over the duration of development, which would limit the exposure of any proximate individual sensitive receptor to TACs. In regards to long-term TAC emissions, the primary source of DPM would be from the infrequent testing and maintenance of the diesel emergency generator, which would be permitted by MBARD. Due to the relatively short period of exposure at any individual sensitive receptor during construction and minimal particulate emissions generated, TACs emitted during construction and operations would not be expected to result in concentrations causing significant health risks, which would be a **less-than-significant** impact.

Valley Fever Exposure

As discussed above for TACs, the proposed project would not generate substantial fugitive dust during construction or operations. Thus, potential exposure of sensitive receptors to spores of the *Coccidioides immitis* fungus would be minimal. In addition, the applicant would require construction contractors to minimize fugitive dust through control measures such as watering all disturbed areas. Implementation of these best management practices would ensure fugitive dust impacts would be less than significant for the proposed project and also control the release of the *Coccidioides immitis* fungus from construction activities. In addition, the proposed project would be required to meet the requirements of Labor Code Section 6709 as follows:

> *"(a) The Legislature finds and declares that Valley Fever is caused by a microscopic fungus known as Coccidioides immitis, which lives in the top 2 to 12 inches of soil in many parts of the state. When soil is disturbed by activities such as digging, grading, driving, or is disturbed by environmental conditions such as or high winds, fungal spores can become airborne and can potentially be inhaled.*
>
> *(b) This section applies to a construction employer with employees working at worksites in counties where Valley Fever is highly endemic, including, but not limited to, the Counties of Fresno, Kern, Kings, Madera, Merced, Monterey, San Joaquin, San Luis Obispo, Santa Barbara, Tulare, and Ventura, where work activities disturb the soil, including, but not limited to, digging, grading, or other earth moving operations, or vehicle operation on dirt roads, or high winds. Highly endemic means that the annual incidence rate of Valley Fever is greater than 20 cases per 100,000 persons per year.*
>
> *(c) An employer subject to this section pursuant to subdivision (b) shall provide effective awareness training on Valley Fever to all employees by May 1, 2020, and annually by that date thereafter, and before an employee begins work that is reasonably anticipated to cause exposure to substantial dust disturbance. Substantial dust disturbance means visible airborne dust for a total duration of one hour or more on any day. The training may be included in the employer's injury and illness prevention program training or as a standalone training program. The training shall include all of the following topics:*
>
> > *(1) What Valley Fever is and how it is contracted.*
> >
> > *(2) High risk areas and types of work and environmental conditions during which the risk of contracting Valley Fever is highest.*
> >
> > *(3) Personal risk factors that may create a higher risk for some individuals, including pregnancy, diabetes, having a compromised immune system due to causes including, but not limited to, human immunodeficiency virus (HIV) or acquired immunodeficiency syndrome (AIDS), having received an organ transplant, or taking immunosuppressant drugs such as corticosteroids or tumor necrosis factor inhibitors.*
> >
> > *(4) Personal and environmental exposure prevention methods that may include, but are not limited to, water-based dust suppression, good hygiene when skin and clothing is soiled by dust, limiting contamination of drinks and food, working upwind from dusty areas*

when feasible, wet cleaning dusty equipment when feasible, and wearing a respirator when exposure to dust cannot be avoided.

(5) The importance of early detection, diagnosis, and treatment to help prevent the disease from progressing. Early diagnosis and treatment are important because the effectiveness of medication is greatest in early stages of the disease.

(6) Recognizing common signs and symptoms of Valley Fever, which include fatigue, cough, fever, shortness of breath, headache, muscle aches or joint pain, rash on upper body or legs, and symptoms similar to influenza that linger longer than usual.

(7) The importance of reporting symptoms to the employer and seeking medical attention from a physician and surgeon for appropriate diagnosis and treatment.

(8) Common treatment and prognosis for Valley Fever.

(d) Training materials may include existing material on Valley Fever developed by a federal, state, or local agency, including, but not limited to, the federal Centers for Disease Control and Prevention, the State Department of Public Health, or a local health department.

(e) In the event that a county which has not been previously identified as being highly endemic is determined to be highly endemic per the annual report published by the State Department of Public Health, this section shall not apply in the initial year of that county's listing in the report. However, this section shall begin to apply to employers in that county in the year subsequent to the department's publication that initially identified the county as being highly endemic.

(f) This section shall apply to an employer whenever employment exists in connection with the construction, alteration, painting, repairing, construction maintenance, renovation, removal, or wrecking of any fixed structure or its parts."

Overall, based on the preceding considerations, the proposed project would not expose sensitive receptors to substantial Valley Fever exposure. This impact would be **less than significant**.

Health Effects of Criteria Air Pollutants

ROG and NO_x are precursors to O_3, for which the NCCAB is designated as nonattainment with respect to the CAAQS. The health effects associated with O_3 are generally associated with reduced lung function. The contribution of ROG and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the NCCAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the precursor emissions would occur because exceedances of the O_3 AAQS tend to occur between April and October when solar radiation is highest. The holistic effect of a single project's emissions of O_3 precursors is speculative due to the lack of reliable and meaningful quantitative methods to assess this impact. This is particularly true of a project with less-than-significant emissions of precursors to O_3. However, the proposed project would generate ROG and NO_x exhaust emissions from typical construction activities and would not exceed the MBARD thresholds. Since these emissions are already accounted for in the emissions inventories of the state- and federally required air plans, they would not have a significant impact on the attainment and maintenance of the O_3 AAQS or result in potential health effects associated with O_3.

Construction and operation of the proposed project would not contribute to exceedances of the NAAQS and CAAQS for NO_2, which is a constituent of NO_x. Health effects that result from NO_2 and NO_x include respiratory irritation, which could be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. In addition, existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Construction and operation of the proposed project would not create substantial, localized NO_x impacts. Therefore, the proposed project is not anticipated to result in potential health effects associated with NO_2 and NO_x.

Mobile source impacts occur on two scales of motion. Regionally, project-related travel would add to regional trip generation and increase the VMT within the local airshed and the NCCAB. Locally, project-generated traffic would be added to the roadway system near the project sites during construction. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and is operating on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of substantially elevated and localized CO emissions, such as around congested intersections. During construction, the proposed project would result in CO emissions from construction worker vehicles, haul trucks, and off-road equipment. Title 40, Section 93.123(c)(5) of the CCR, Procedures for Determining Localized CO, PM_{10}, and $PM_{2.5}$ Concentrations (hot-spot analysis), states that "CO, PM_{10}, and $PM_{2.5}$ hot-spot analyses are not required to consider construction-related activities, which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established 'Guideline' methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site" (40 CCR Section 93.123). Since construction activities would be temporary, a construction hotspot analysis would not be required. The proposed project would result in negligible and infrequent additional traffic trips during operation and therefore would not exceed the MBARD CO screening criteria resulting in the formation of potential CO hotspots. Thus, the proposed project's CO emissions would not contribute to significant health effects associated with this pollutant.

As depicted in Table 3.2-5 and Table 3.2-6 above, construction and operation of the proposed project would result in minimal emissions of PM_{10} and $PM_{2.5}$ and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter or obstruct the NCCAB from coming into attainment for these pollutants. Since PM_{10} is representative of the levels of DPM, the proposed project would also not result in substantial DPM emissions during construction and operation, and therefore, would not result in significant health effects related to DPM exposure. Due to the minimal contribution of PM_{10} and $PM_{2.5}$ during construction and operations, it is not anticipated that the proposed project would result in potential health effects related to particulate matter.

The California Supreme Court's *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502 decision (referred to herein as the Friant Ranch decision) (issued on December 24, 2018), addresses the need to correlate mass emission values for criteria air pollutants to specific health consequences, and contains the following direction from the California Supreme Court: "The Environmental Impact Report (EIR) must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must explain what the agency *does* know and why, given existing scientific constraints, it cannot translate potential health impacts further." (Italics original.) (Sierra Club v. County of Fresno 2018.) Currently, the MBARD, CARB, and EPA have not approved a quantitative method to reliably, meaningfully, and consistently translate the mass emission estimates for the criteria air pollutants resulting from the proposed project to specific health effects. In addition, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days.

In connection with the judicial proceedings culminating in issuance of the Friant Ranch decision, the South Coast Air Quality Management District (SCAQMD) and the San Joaquin Valley Air Pollution Control District (SJVAPCD) filed

amicus briefs attesting to the extreme difficulty of correlating an individual project's criteria air pollutant emissions to specific health impacts. Both SJVAPCD and SCAQMD have among the most sophisticated air quality modeling and health impact evaluation capabilities of the air districts in California. The key, relevant points from SCAQMD and SJVAPCD briefs is summarized herein.

In requiring a health impact type of analysis for criteria air pollutants, it is important to understand how O_3 and PM is formed, dispersed and regulated. The formation of O_3 and PM in the atmosphere, as secondary pollutants,[6] involves complex chemical and physical interactions of multiple pollutants from natural and anthropogenic sources. The O_3 reaction is self-perpetuating (or catalytic) in the presence of sunlight because NO_2 is photochemically reformed from nitric oxide (NO). In this way, O_3 is controlled by both NO_x and ROG emissions (NRC 2005). The complexity of these interacting cycles of pollutants means that incremental decreases in one emission may not result in proportional decreases in O_3 (NRC 2005). Although these reactions and interactions are well understood, variability in emission source operations and meteorology creates uncertainty in the modeled O_3 concentrations to which downwind populations may be exposed (NRC 2005). Once formed, O_3 can be transported long distances by wind and due to atmospheric transport, contributions of precursors from the surrounding region can also be important (EPA 2008). Because of the complexity of O_3 formation, a specific tonnage amount of ROG or NO_X emitted in a particular area does not equate to a particular concentration of O_3 in that area (SJVAPCD 2015). PM can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO_x and NO_x (SJVAPCD 2015). Because of the complexity of secondary PM formation, including the potential to be transported long distances by wind, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area (SJVAPCD 2015). This is especially true for individual projects, like the proposed project, where project-generated criteria air pollutant emissions are not derived from a single "point source," but from construction equipment and mobile sources (passenger cars and trucks) driving to, from and around the project sites.

Another important technical nuance is that health effects from air pollutants are related to the concentration of the air pollutant that an individual is exposed to, not necessarily the individual mass quantity of emissions associated with an individual project. For example, health effects from O_3 are correlated with increases in the ambient level of O_3 in the air a person breathes (SCAQMD 2015). However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient O_3 levels over an entire region (SCAQMD 2015). The lack of link between the tonnage of precursor pollutants and the concentration of O_3 and $PM_{2.5}$ formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects; rather, it is the concentration of resulting O_3 that causes these effects (SJVAPCD 2015). Indeed, the AAQS, which are statutorily required to be set by EPA at levels that are requisite to protect the public health, are established as concentrations of O_3 and $PM_{2.5}$ and not as tonnages of their precursor pollutants (EPA 2018b). Because the ambient air quality standards are focused on achieving a particular concentration region-wide, the tools and plans for attaining the ambient air quality standards are regional in nature. For CEQA analyses, project-generated emissions are typically estimated in pounds per day or tons per year and compared to mass daily or annual emission thresholds. While CEQA thresholds are established at levels that the air basin can accommodate without affecting the attainment date for the AAQS, even if a project exceeds established CEQA significance thresholds, this does not mean that one can easily determine the concentration of O_3 or PM that will be created at or near the project site on a particular day or month of the year, or what specific health impacts will occur (SJVAPCD 2015).

In regard to regional concentrations and air basin attainment, the SJVAPCD emphasized that attempting to identify a change in background pollutant concentrations that can be attributed to a single project, even one as large as

[6] Air pollutants formed through chemical reactions in the atmosphere are referred to as secondary pollutants.

the entire Friant Ranch Specific Plan, is a theoretical exercise. The SJVAPCD brief noted that it "would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have" (SJVAPCD 2015). The situation is further complicated by the fact that background concentrations of regional pollutants are not uniform either temporally or geographically throughout an air basin, but are constantly fluctuating based upon meteorology and other environmental factors. SJVAPCD noted that the currently available modeling tools are equipped to model the impact of all emission sources in the San Joaquin Valley Air Basin on attainment (SJVAPCD 2015). The SJVAPCD brief then indicated that, "Running the photochemical grid model used for predicting O_3 attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO_x and VOC in the Valley) is not likely to yield valid information given the relative scale involved" (SJVAPCD 2015).

SCAQMD and SJVAPCD have indicated that it is not feasible to quantify project-level health impacts based on existing modeling (SCAQMD 2015; SJVAPCD 2015). Even if a metric could be calculated, it would not be reliable because the models are equipped to model the impact of all emission sources in an air basin on attainment and would likely not yield valid information or a measurable increase in O_3 concentrations sufficient to accurately quantify O_3-related health impacts for an individual project.

Nonetheless, following the Supreme Court's Friant Ranch decision, some EIRs where estimated criteria air pollutant emissions exceeded applicable air district thresholds have included a quantitative analysis of potential project-generated health effects using a combination of a regional photochemical grid model (PGM)[7] and the EPA Benefits Mapping and Analysis Program (BenMAP or BenMAP–Community Edition [CE])[8]. The publicly available health impact assessments (HIAs) typically present results in terms of an increase in health incidences and/or the increase in background health incidence for various health outcomes resulting from the project's estimated increase in concentrations of O_3 and $PM_{2.5}$.[9] To date, the five publicly available HIAs have concluded that the evaluated project's health effects associated with the estimated project-generated increase in concentrations of O_3 and $PM_{2.5}$ represent a small increase in incidences and a very small percent of the number of background incidences, indicating that these health impacts are negligible and potentially within the models' margin of error. It is also important to note that while the results of the five available HIAs conclude that the project emissions do not result in a substantial increase in health incidences, the estimated emissions and assumed toxicity is also conservatively inputted into the HIA and thus, overestimate health incidences, particularly for $PM_{2.5}$.

As explained in the SJVAPCD brief and noted previously, running the PGM used for predicting O_3 attainment with the emissions solely from an individual project like the Friant Ranch project or the proposed project is not likely to yield valid information given the relative scale involved. The five available HIAs support the SJVAPCD's brief

7 The first step in the publicly available HIAs includes running a regional PGM, such as the Community Multiscale Air Quality (CMAQ) model or the Comprehensive Air Quality Model with extensions (CAMx) to estimate the increase in concentrations of O_3 and $PM_{2.5}$ as a result of project-generated emissions of criteria and precursor pollutants. Air districts, such as the SCAQMD, use photochemical air quality models for regional air quality planning. These photochemical models are large-scale air quality models that simulate the changes of pollutant concentrations in the atmosphere using a set of mathematical equations characterizing the chemical and physical processes in the atmosphere (EPA 2017).

8 After estimating the increase in concentrations of O_3 and $PM_{2.5}$, the second step in the five examples includes use of BenMAP or BenMAP-CE to estimate the resulting associated health effects. BenMAP estimates the number of health incidences resulting from changes in air pollution concentrations (EPA 2018c). The health impact function in BenMAP-CE incorporates four key sources of data: (i) modeled or monitored air quality changes, (ii) population, (iii) baseline incidence rates, and (iv) an effect estimate. All of the five example HIAs focused on O_3 and $PM_{2.5}$.

9 The following CEQA documents included a quantitative HIA to address Friant Ranch: (1) California State University Dominguez Hills 2018 Campus Master Plan EIR (CSU Dominguez Hills 2019), (2) March Joint Powers Association K4 Warehouse and Cactus Channel Improvements EIR (March JPA 2019), (3) Mineta San Jose Airport Amendment to the Airport Master Plan EIR (City of San Jose 2019), (4) City of Inglewood Basketball and Entertainment Center Project EIR (City of Inglewood 2019), and (5) San Diego State University Mission Valley Campus Master Plan EIR (SDSU 2019).

contention that consistent, reliable, and meaningful results may not be provided by methods applied at this time. Accordingly, additional work in the industry and more importantly, air district participation, is needed to develop a more meaningful analysis to correlate project-level mass criteria air pollutant emissions and health effects for decision makers and the public. Furthermore, at the time of writing, no HIA has concluded that health effects estimated using the PGM and BenMAP approach are substantial provided that the estimated project-generated incidences represent a very small percent of the number of background incidences, potentially within the models' margin of error.

In summary, because construction and operation of the proposed project would not result in the emissions of criteria air pollutants that would exceed the applicable MBARD significance thresholds, and because the MBARD thresholds are based on levels that the NCCAB can accommodate without affecting the attainment date for the AAQS and the AAQS are established to protect public health and welfare, it is anticipated that the proposed project would not result in health effects associated with criteria air pollutants and the impact would be less than significant.

Impact 3.2-4. The proposed project could result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Construction and operation of the project would result in various emissions; however, criteria air pollutants, fugitive dust, and TACs are addressed under Impact 3.2-2 and 3.2-3 above. As such, the Impact 3.2-4 analysis is focused on the potential for the project to result in odor impacts. The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be potentially generated from vehicles and equipment exhaust emissions during proposed project construction. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. Such odors would disperse rapidly from the infrastructure component sites and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be less than significant.

Typical sources of odors include landfills, rendering plants, chemical plants, agricultural uses, wastewater treatment plants, and refineries. As the proposed project includes the development of an Industrial Wastewater Reclamation Facility, there is the potential for additional odors to be generated by the proposed project. However, since the proposed project is located adjacent to the existing municipal wastewater treatment plant (MWWTP) and would divert and accommodate industrial wastewater that have currently been treated at the MWWTP, it is anticipated that any potential odors would be similar to what is already being produced. Further, the proposed project treatment ponds will operate under aerobic conditions and configured in series to provide settling, biological oxidation, internal sludge digestion, and odor control. Additionally, recirculation pumps will recirculate approximately 10 to 20% of treated effluent back through the ponds to improve treatment performance, control, and mitigate odor.

Overall, although odor impacts are not anticipated, there is the possibility that adjacent sensitive residential receptors could be exposed to more intense objectionable odors than from the existing facility based on the proximity of the proposed project, which could result in a potentially significant impact without mitigation. Accordingly, Mitigation Measure (MM) AQ-1 would be implemented to reduce potential odor impacts to a less-than-significant level.

3.2.5 Mitigation Measures

AQ-1 **Odor Abatement Plan.** The City of Gonzales shall develop an Odor Abatement Plan (OAP) for the proposed project, prior to obtaining building construction permits, to be implemented over the life of the project. The OAP shall include the following:

- Description of potential odor sources at the facility.
- Name and telephone number of contact person(s) at the facility responsible for logging and responding to odor complaints.
- Protocol describing the actions to be taken when an odor complaint is received, including the training provided to the staff on how to respond.
- Description of potential methods for reducing odors, including process changes, facility modifications, and/or feasible add-on air pollution control equipment
- Contingency measures to curtail emissions in the event of a public nuisance complaint.

3.2.6 Level of Significance After Mitigation

With implementation of measure AQ-1, the City would establish an OAP that would establish a protocol for identifying odor complaints and addressing them, including implementation of abatement strategies, if appropriate. This would ensure that any potential odor impacts would be **less than significant**. All other impacts (i.e., AQMP consistency, criteria air pollutant emissions, and exposure of sensitive receptors to substantial pollutant concentrations) would be less than significant without mitigation.

3.2.7 Cumulative Analysis

Air Quality Management Plan

As described under Impact 3.2-1, project emissions that are not accounted for in the AQMP's emission inventory are considered to have a significant cumulative impact to regional air quality (MBARD 2008). Notably, construction exhaust emissions are accounted for in the AQMP emissions inventory. Further, since the proposed project would result in typical construction activities that would generate exhaust emissions that are accounted for in the AQMP, and since short-term construction and long-term operational emissions would be less than the MBARD thresholds, the proposed project would be consistent with the AQMP. Therefore, the proposed project would result in **a less-than-significant** cumulative impact as it would not conflict with MBARD's AQMP.

Criteria Air Pollutants

By its nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the MBARD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. The potential for the proposed project to result in a cumulatively considerable impact, specifically a cumulatively considerable new increase of any criteria air pollutant for which the project region is nonattainment under an applicable NAAQS and/or CAAQS, is addressed in Impact 3.2-2. As previously discussed, the proposed project would not exceed the MBARD significance thresholds for any criteria air pollutant. Therefore,

the proposed project's construction and operational air quality impacts would result in a **less-than-significant** cumulative impact on regional air quality.

Substantial Pollutant Concentrations

The entire NCCAB is the geographic context for the evaluation of cumulative air quality impacts related to substantial pollutant concentrations and related health effects. There are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and there are currently no modeling tools that could provide reliable and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects. As addressed in Impacts 3.2-2 and 3.2-3, construction and operation of the proposed project would not result in the exceedances of the MBARD significance thresholds, and the MBARD thresholds are based on levels that the NCCAB can accommodate without affecting the attainment date for the AAQS, which are established to protect public health and welfare.

TACs have a localized impact, with the geographic context consisting of sensitive receptors proximate[10] to the proposed project. However, as described under Impact 3.2-3, construction would be short term. Furthermore, the City will be required to obtain a permit to operate the emergency diesel generator from MBARD, which will require that long-term potential health risk associated with the generator operation be demonstrated to be less than significant. Even with consideration of cumulative projects including the near-term MWWTP expansion and the Gonzales Microgrid Project, due to the relatively short period of exposure at any individual sensitive receptor and minimal DPM emissions generated by the proposed project, TACs emitted during proposed project construction and operations would not be substantial. Therefore, the proposed project would result in a **less-than-significant** cumulative impact related to substantial pollutant concentrations.

Odors

Odors are a localized impact. As indicated in Impact 3.2-4, the proposed project's impact related to odor would be less than significant after mitigation. Since the MBARD does not have a specific regulation or rule that addresses objectionable odors, any actions related to odors would be based on public complaints made to the MBARD. Additionally, all future projects would be subject to MBARD Rule 402 (Nuisances), which prohibits the discharge of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property. Therefore, cumulative impacts related to odor would be **less than significant**.

3.2.8 References

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[10] The Bay Area Air Quality Management District identifies a 1,000 feet radius as the geographic context to evaluate health risk impacts, including on a cumulative basis (BAAQMD 2017). MBARD does not have a similar defined radial zone of impact.

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3.3 Biological Resources

This section describes biological resources at the location of the Industrial Wastewater Reclamation Facility (IWRF) and wastewater conveyance line as part of the IW Conveyance and IW Reclamation Facility Project (proposed project); discusses applicable federal, state, and regional regulations pertaining to protection of biological resources; and evaluates the potential effects on biological resources associated with development of the proposed project.

Comments received from California Department of Fish and Wildlife (CDFW) in response to the Notice of Preparation (NOP) relevant to biological resources generally include potential impacts to wetland and riparian habitat associated with the Salinas River, located adjacent to the project site, and to wildlife species that CDFW contends may occur there, including the Southwest/South Coast Clade of foothill yellow-legged frog (*Rana boylii*), California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), burrowing owl (*Athene cunicularia*), western spadefoot (*Spea hammondii*),and western pond turtle (*Emys marmorata*). These concerns are all addressed in this section. A copy of the NOP and comments received is included in Appendix A.

Biological resources discussed herein were identified through the review and compilation of existing biological technical information prepared for the project site. Existing documentation includes an Aquatic Resources Delineation (Dudek 2020) and a Biological Technical Report (Dudek 2020) which collectively summarize the results of field surveys and assessments conducted at the site in 2020 by Dudek. All sources referenced in this section can be found in Section 3.38, References.

3.3.1 Environmental Setting

This section provides information on the condition of natural resources in the region and project site, the extent of sensitive natural communities and critical habitat, presence or absence of jurisdictional wetlands, and the distribution and habitat requirements of special-status species with a potential to occur on the project site or in the project vicinity.

3.3.1.1 Vegetation Communities and Land Cover Types

Only one vegetation communities/land cover type was documented within the approximately 54- acre project site: Agricultural. The following land cover description is adapted from the California Wildlife Habitat Relationships System (CDFW 2020a) and the Manual of California Vegetation, Online Edition (CNPS 2020).

Agricultural. This mapping unit identifies areas where various types of food production and harvesting are actively being conducted. These areas may also support non-native grass species and have little biological resource value due to the limited habitat value provided for most native species. A majority of the project site is prepared for row crops but was not undergoing observable planting during the 2020 site assessment documented in the Biological Technical Report (Appendix D). Active agriculture on adjacent properties consisted of cauliflower and asparagus, or fallow lands. Two potential pipeline alignments are proposed as part of the project. The preferred alignment follows Fermin Lane which is a dirt road through active agricultural fields with roadside ditches relatively free of vegetation. The alternative alignment (further discussed in Chapter 5, Alternatives) is along Gonzales River Road through agricultural fields and roadside ditches with a high preponderance of non-native species. The agriculture land cover is an anthropogenic mapping unit and is not recognized on the Natural Communities List.

3.3.1.2 Aquatic Resources

Potential aquatic resources were delineated based on methodology described in the *1987 Corps of Engineers Wetlands Delineation Manual* (ACOE 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008), and applicable regulatory guidance provided by the Army Corps of Engineers (ACOE), U.S. Environmental Protection Agency, and/or Regional Water Quality Control Board (RWQCB), including the geographic extent of jurisdiction based on the respective agency's interpretation of the Clean Water Act (CWA; see Section 3.3.2, Relevant Plans, Policies and Ordinances). Non-wetland waters of the U.S. were delineated based on the presence of an OHWM, as determined using the methodology in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western U.S.* (ACOE 2010b). Sample points were taken to assess the potential for hydric soils, hydrophytic vegetation, and hydrology at the project site. Wetland plant indicator status for each plant was determined using the Arid West region of the *National Wetland Plant List: 2016* (ACOE 2016a).

No wetlands or waters of the US were found to be present within the project site. Results of the delineation are summarized in the Aquatic Resources Delineation Report (Dudek 2020, Appendix C).

3.3.1.3 Common Plant and Wildlife Species

Dudek recorded a total of 10 species of vascular plans (3 native and 7 non-native) during the 2020 field survey of the project site. Dudek biologists directly observed, or documented via scat, sign, or call, 16 wildlife species in the project site during the field survey including 14 birds, one mammal and one reptile. A list of plant and wildlife species detected during the field survey is included in Appendix D. With the exception of native and migratory nesting birds, the common plant and wildlife species observed on the project site, or in the vicinity, are not protected or special-status species, as defined below.

3.3.1.4 Special-Status Plant and Wildlife Species

For the purposes of this analysis, special-status plant species are those plants listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA) (16 USC 1531 et seq.); those listed or proposed for listing as rare, threatened, or endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050 et seq.); and plants that have a California Rare Plant Rank (CRPR) of 1 or 2 in the CNPS online Inventory of Rare and Endangered Plants (CNPS 2020).

Special-status wildlife species are those that are designated as either rare, threatened, or endangered (or candidates for designation) by CDFW or the USFWS; are protected under either the CESA or the ESA; meet the California Environmental Quality Act (CEQA) definition for endangered, rare, or threatened (14 CCR 15380[b],[d]); are considered fully protected under the California Fish and Game Code, Sections 3511, 4700, 5050, and 5515; or that are on the CDFW Special Animals List (CDFW 2019b) and determined by CDFW to be a Species of Special Concern.

Various agency databases were queried and reviewed to identify special-status species known to occur in the project site or vicinity. **Figure 3.3-1** depicts the recorded locations of special-status species based on information compiled in the database search (see Section 3.3.4 for a list of databases queried). For those species identified through this search, the potential for each species to occur on the proposed project site was determined based on a review of vegetation communities and land cover types, habitat features, soils, and elevation preferences, as well

as the known geographic range of each species. The potential for occurrence of each species was summarized according to the categories listed below. Because not all species are accommodated precisely by a given category (i.e., category definitions may be too restrictive), an expanded rationale for each category assignment is provided.

- Present — the species has been documented in the project site by a reliable observer.
- High potential to occur — the species is known to occur in the vicinity and suitable habitat is present.
- Moderate potential to occur — the species has been documented in the vicinity but habitat for the species is limited or of low to marginal quality.
- Low potential to occur — the species has not been documented in the vicinity and habitat for the species is of low to marginal quality.
- Not expected to occur — the project site is outside the known range of the species and/or habitat for the species is either absent or of low quality.

Special Status Plants

According to the Natural Resource Conservation Service (USDA 2020a), three soil types are mapped within the project site: Pico fine sandy loam 0 to 2% slopes comprises most of the site, with Cropley silty clay 0 to 2% slopes and Metz complex 2 to 9% slopes also occurring (see Appendix D). None of the soil types are known to support edaphic special-status plant species (i.e., the soils of the site are neither serpentine nor alkaline).

Results of USFWS, CNDDB, and CNPS searches revealed 25 special-status plant species that have potential to occur or that are known to occur in the Study Area region (see Appendix D). All special-status plant species were removed from consideration due to lack of suitable habitat within or adjacent to the Project site, or due to the site being outside of the species' known geographic or elevation range. A list of common and non-native plant species recorded at the project site is included in the Biological Technical Report (Appendix D).

Special Status Wildlife

Results of the USFWS and CNDDB searches revealed 33 special-status wildlife species as present or potentially present in the project region (see Appendix D). Of these, 26 species were removed from consideration due to lack of suitable habitat on or adjacent to the Project site, or due to the site being outside of the species' known geographic or elevation range as described in Table 3.3-1. The remaining seven special-status wildlife species have a potential to occur on the project site are presented in Table 3.3-1 and are discussed in detail below.

Table 3.3-1. Special-Status Wildlife Species Occurrence Potential On and Off the Project Site

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Amphibians				
Ambystoma californiense	California tiger salamander	FT/ST, WL	Annual grassland, valley–foothill hardwood, and valley–foothill riparian habitats; vernal pools and other seasonal pools, and some perennial ponds if	**Not expected to occur.** Due to the lack of suitable breeding habitat (vernal pools, stock ponds or other freshwater seasonal features), suitable upland habitat containing small mammal burrows or other underground refugia, and to the agricultural fields that dominate land use within 1.3 miles of

Table 3.3-1. Special-Status Wildlife Species Occurrence Potential On and Off the Project Site

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
			predatory aquatic species (such as fish and bullfrogs) are absent	the project area, this species is not expected to be present. The nearest occurrence record for this species is approximately 2.2 miles to the northeast of the project site and was documented in 1995.
Rana boylii	foothill yellow-legged frog	None/ST, SSC	Rocky streams and rivers with open banks in forest, chaparral, and woodland habitats.	**Not expected to occur.** Since the Salinas River does not have perennial flow in the vicinity of Gonzales (it is often dry during the summer and fall), this species is not expected to be present. Additionally, the lack of suitable stream habitats, cobble and boulder substrates for breeding, and basking sites due to extensive vegetation encroachment along the banks of the river, this species is not expected to be present. Also, since this species is highly aquatic and rarely moves very far from stream or river habitats, (even if present in the Salinas River) the distance of the project area from the river (100 to 500 m) and presence of disturbed habitat (existing municipal wastewater treatment plant (MWWTP)) between the project area and the Salinas River would preclude their presence in the vicinity of the project area. The nearest occurrence record for this species is approximately 9 miles to the southwest of the project site in 1975.
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	**Not expected to occur.** Seasonal or perennial ponds that could potentially support breeding and summer refugia by this species are not present within 1 mile of the project area. Additionally, the Salinas River does not have perennial flow in the vicinity of Gonzales (it is often dry during the summer and fall), this species is not expected to be present. Additionally, the lack of pools and suitable breeding habitats in the Salinas River (such as side pools, off channel pools, slow edgewater areas associated with cobble/gravel point and lateral bars, and other areas that can shelter egg masses and larvae from high outflows during the winter and spring when this species breeds, precludes the

Table 3.3-1. Special-Status Wildlife Species Occurrence Potential On and Off the Project Site

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
				occurrence of this species in the Salinas River. The nearest occurrence record is approximately 8 miles to the northwest of the project site and was documented in 2006.
Spea hammondii	western spadefoot	None/SSC	Occurs primarily in lowland habitats such as washes, floodplains of rivers, alluvial fans, playas, and alkali flats, but also occur in the foothills and mountains. This species prefers areas of open vegetation and short grasses, where the soil is sandy or gravelly. They breed in temporary pools and drainages that form following winter or spring rains.	**Low potential to occur.** Some wetland habitat is present along the Salinas River which could potentially provide breeding habitat for this species. However, the project area and surrounding land consists of agricultural fields which does not provide suitable breeding or upland aestivation habitat. As a result, even if suitable breeding and upland habitat is present for this species along the Salinas River, it is highly unlikely that they would cross the agricultural fields or the site of the existing MWWTP to reach the project area. The nearest occurrence record for this species is approximately 2.5 miles to the northeast of the project site and was documented in 2001.
Taricha torosa	California newt	None/SSC	Wet forests, oak forests, chaparral, and rolling grassland	**Not expected to occur.** Habitat is not present on site or within the Salinas River to support this species.
Reptiles				
Actinemys marmorata	northwestern pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	**Not expected to occur.** Since the Salinas River is often dry during the summer and fall in the vicinity of Gonzales, this species is not expected to be present. Suitable habitat for this species in the Salinas River is lacking in the vicinity of Gonzales due to the absence of pools, the abundance of margin vegetation, and the lack of suitable basking sites or basking structures (logs, etc.). The nearest occurrence record for this species is approximately 15.7 miles to the northwest of the project site and was documented in 1993.
Anniella pulchra	northern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak,	**Not expected to occur.** Habitat is not present on site to support this species.

Table 3.3-1. Special-Status Wildlife Species Occurrence Potential On and Off the Project Site

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
			and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	
Masticophis flagellum ruddocki	San Joaquin whipsnake	None/SSC	Open, dry, treeless areas including grassland and saltbush scrub	**Low potential to occur.** The agriculture fields within the land provide treeless areas however, no grassland or saltbush scrub is present. The nearest occurrence record for this species is approximately 14.6 miles southeast of the project site and was documented in 1987.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	**Not expected to occur.** Habitat is not present on site to support this species.
Birds				
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	**Not expected to nest on site.** The agriculture fields provide suitable foraging habitat but no cattails or tules are present within Salinas River making nesting adjacent to the project site unlikely. Additionally, no vegetation within the project site would provide suitable nesting habitat for this species. The nearest nesting occurrence record for this species is approximately 8.2 miles to the southeast of the project site and was documented in 2014.
Aquila chrysaetos (nesting & wintering)	golden eagle	BCC/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas	**Not expected to nest or winter on site.** The agriculture fields provide suitable foraging habitat but nesting and wintering habitat is not present. The nearest occurrence record for this species is approximately 10 miles to the southeast of the project site and was documented in 2006.

Table 3.3-1. Special-Status Wildlife Species Occurrence Potential On and Off the Project Site

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
			and forages in open habitats	
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	**Moderate potential to occur.** Agriculture fields provide foraging habitat. Suitable burrows and ground squirrels were both present during the site visit on April 13, 2020. The nearest occurrence is approximately 2.4 miles to the northeast of the project site and was documented in 1998.
Buteo swainsoni (nesting)	Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	**Not expected to nest.** The agriculture fields provide suitable foraging habitat but nesting habitat is not present. The nearest occurrence record for this species is approximately 9.3 miles to the northwest of the project site and was documented in 1915.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	**Not expected to nest on site.** Habitat is not present on site to support this species.
Coturnicops noveboracensis	yellow rail	BCC/SSC	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water	**Not expected to nest on site.** Habitat is not present on site to support this species.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	**Not expected to nest on site.** Habitat is not present on site to support this species.
Gymnogyps californianus	California condor	FE/FP, SE	Nests in rock formations, deep caves, and occasionally in cavities in giant sequoia trees (Sequoiadendron giganteus); forages in relatively open habitats where large	**Not expected to nest on site.** Habitat is not present on site to support this species.

Table 3.3-1. Special-Status Wildlife Species Occurrence Potential On and Off the Project Site

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
			animal carcasses can be detected	
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	**Not expected to nest on site.** Habitat is not present on site to support this species.
Riparia riparia (nesting)	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	**Not expected to nest** on site due to lack of suitable bank habitat but open country that may be occupied during migration is present. The nearest occurrence record for this species is approximately 17.4 miles to the southeast of the project site and was documented in 1972.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	**Low potential to nest** on site. Riparian vegetation is present but sparse making nesting unlikely. Foraging habitat is present adjacent to the Salinas River. This species has not been historically documented within the project site.
Fishes				
Oncorhynchus mykiss irideus pop. 9	steelhead - south-central California coast DPS	FT/None	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	**Not expected to occur.** Central Coast steelhead are known to use the Salinas River (in the vicinity of Gonzales) as a migration corridor to spawning and rearing sites on tributaries in the upper watershed. The project area is located from 100 m to greater than 500 m east of the river.
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	**Low potential to roost on site.** Agriculture fields provide foraging opportunities as well as the bridge where the Salinas River crosses under the road adjacent to the project site could provide roosting habitat. The nearest occurrence record for this species is approximately 10.7 miles to the south of the project site and was documented in 1936.
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but	**Low potential to roost on site.** Riparian vegetation is present providing foraging opportunities as well as the bridge where the Salinas River crosses under the road adjacent to the project site

Table 3.3-1. Special-Status Wildlife Species Occurrence Potential On and Off the Project Site

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
			also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	could provide roosting habitat. The nearest occurrence record for this species is approximately 10 miles south of the project site and was documented in 1937.
Dipodomys venustus elephantinus	big-eared kangaroo rat	None/SSC	Chaparral-covered slopes in the southern part of the Gabilan Range	**Not expected to occur.** Habitat is not present on site to support this species.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	**Not expected to occur.** Habitat is not present on site to support this species.
Lasiurus blossevillii	western red bat	None/SSC	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	**Not expected to occur.** Habitat is not present on site to support this species.
Neotoma macrotis luciana	Monterey dusky-footed woodrat	None/SSC	Dense forest, oak woodland, and chaparral with a moderately dense understory and abundant dead wood	**Not expected to occur.** Habitat is not present on site to support this species.
Perognathus inornatus psammophilus	Salinas pocket mouse	None/SSC	Habitat not well known; annual grassland, desert scrub, and oak savanna communities on sandy and other friable soils	**Not expected to occur.** Habitat is not present on site to support this species.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Low potential to occur**. Agriculture fields on project site are very active making it unlikely for the species to be preset. The nearest occurrence record for this species is approximately 8.3 miles east of the project site and was documented in 2007.

Table 3.3-1. Special-Status Wildlife Species Occurrence Potential On and Off the Project Site

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Vulpes macrotis mutica	San Joaquin kit fox	FE/ST	Grasslands and scrublands, including those that have been modified; oak woodland, alkali sink scrubland, vernal pool, and alkali meadow	**Not expected to occur.** Habitat is not present on site to support this species.
Invertebrates				
Bombus crotchii	Crotch bumble bee	None/PSE	Open grassland and scrub communities supporting suitable floral resources.	**Not expected to occur.** Habitat is not present on site to support this species.
Branchinecta lynchi	vernal pool fairy shrimp	FT/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	**Not expected to occur.** Habitat is not present on site to support this species.
Euphydryas editha bayensis	Bay checkerspot butterfly	FT/None	Serpentine or serpentine-like grasslands	**Not expected to occur.** Habitat is not present on site to support this species.

Status Legend: FE: Federally listed as endangered; FT: Federally listed as threatened; FDL: Federal delisted; SE: State listed as endangered; ST: State listed as threatened; SSC: State Species of Special Concern; SDL: State delisted; FP: Fully protected by state; BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern.
Source: Appendix D.

Western Spadefoot (*Spea hammondii*). Western spadefoot is a CDFW Species of Special Concern with a low potential to occur on the Project site. This species is primarily found in areas of open vegetation and short grasses, where the soil is sandy or gravelly. They breed in vernal pools and ephemeral wetlands. The project area and surrounding land consists of agricultural fields and the existing MWWTP which do not provide suitable breeding or upland aestivation habitat. As a result, even if suitable breeding and upland habitat is present for this species along the Salinas River, it is highly unlikely that they would cross the agricultural fields or the site of the existing MWWTP to reach the project area.

San Joaquin Whipsnake (*Masticophis flagellum ruddocki*). San Joaquin whipsnake is a CDFW Species of Special Concern with a low potential to occur on the project site. This species prefers open, dry, treeless areas including grassland and saltbush scrub. The agriculture fields within the land provide treeless areas however; no grassland or saltbush scrub is present.

Burrowing Owl (*Athene cunicularia*). Burrowing owl is a CDFW Species of Special Concern with moderate potential to occur on the project site. This species nests and forages in grassland, open scrub, and agriculture, particularly when ground squirrel burrows are present. Agriculture fields on the project site provide foraging habitat and suitable burrows and ground squirrels were both present during the Dudek site visit.

Least Bell's Vireo (*Vireo bellii pusillus*). Least Bell's vireo is a Federally and State endangered species with a low potential to nest on the project site. This species nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams. It is also known to forage in riparian and adjacent shrubland late in the nesting season. Foraging habitat is present adjacent to the Salinas River but riparian vegetation is sparse, making nesting unlikely.

Pallid Bat (*Antrozous pallidus*). Pallid bat is a CDFW Species of Special Concern with low potential to roost on the project site. This species prefers grasslands, shrublands, woodlands, and forests. It is most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees. Agriculture fields present on site provide foraging opportunities, and the bridge on Gonzales River Road over the Salinas River adjacent to the project site provides potential roosting habitat.

Townsend's Big-eared Bat (Corynorhinus townsendii). Townsend's big-eared bat is a CDFW Species of Special Concern with low potential to roost on the project site. Species prefers mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas. Often roosts in limestone caves and lava tubes, man-made structures, and tunnels. Riparian vegetation is present providing foraging opportunities. The bridge on Gonzales River Road over the Salinas River adjacent to the project site provides potential roosting habitat.

American Badger (*Taxidea taxus*). The American badger is a CDFW Species of Special Concern with a low potential to occur on the project site. This species prefers dry, open, treeless areas as well as grasslands, coastal scrub, agriculture, and pastures, especially with friable soils. Although the agricultural fields and soils present on the project site are suitable for this species, the overall disturbed nature of the site and the agricultural fields being highly active and consistently disked make it unlikely the species would be present on site.

Nesting and Migratory Birds and Birds of Prey. Native migratory bird species are protected by the federal MBTA and California Fish and Game Code 3503.5 (which specifically protects raptors). The existing vegetation within the project site provides suitable nesting habitat for migratory birds and raptors, and the bridge where the Salinas River cross underneath the road adjacent to the project site could provide nesting habitat for birds that build mud nests, such as swallows, swifts, phoebes, and others. Certain ground-nesting species, such as killdeer (*Charadrius vociferous*), may nest in disturbed areas where gravels are present. No active nests were noted on the project site by Dudek during the field survey.

3.3.1.5 Sensitive Natural Communities

There are no communities identified as sensitive vegetation communities in CDFW's California Natural Community List (CDFW 2020) within the project site.

3.3.1.6 Potentially Jurisdictional Waters

The project site is located within the Salinas River Watershed, which is the largest watershed in the Central Coast of California, draining approximately 4,240 square miles of land in Monterey and San Luis Obispo counties. The Salinas River, which eventually connects to Monterey Bay, is the only potential water mapped within the vicinity of the project site (USGS 2020b; USFWS 2020). The National Wetlands Inventory (NWI) formally classifies the Salinas River as riverine, intermittent, streambed, seasonally flooded (R4SBC). There are no other potential wetlands previously mapped within/adjacent to the project site outside the Salinas River and the existing treatment plant (USGS 2020b; USFWS 2020). The predominant direction of groundwater flow is to the north, mostly driven when there is flow in the river and by runoff (that recharges the groundwater basin) from the mountains in the west. The

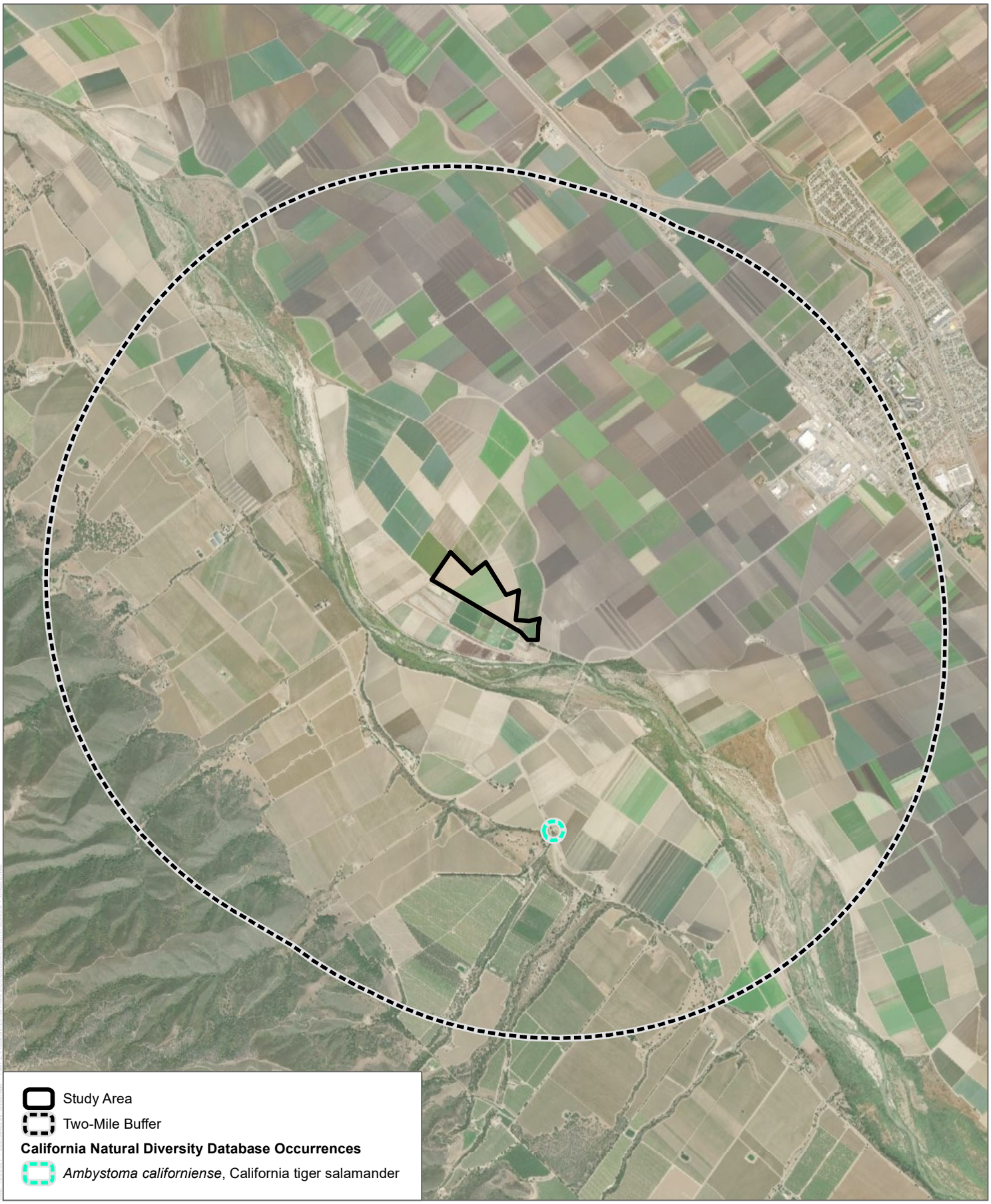
Salinas River bed is about 5 feet below land surface at the site. The water table (at its highest peak) is about 10 ft. below grade. The project site does not support Traditional Navigable Waters (TNWs) or other waters that may meet the criteria for waters of the U.S. subject to Army Corp of Engineers (ACOE) jurisdiction. See Section 3.9, Hydrology and Water Quality for an in-depth discussion of hydrology on the project site. Results of a 2020 jurisdictional delineation are summarized in the Aquatic Resources Delineation Report (Dudek 2020) found in Appendix C.

3.3.1.7 Wildlife Corridors and Habitat Linkages

Wildlife corridors are typically linear landscape features that connect large patches of often disjunct natural open space and provide avenues for dispersal or migration of animals, as well as dispersal of plants (e.g., via wildlife vectors). Corridors can be small and even man-made (e.g., highway underpasses, culverts, bridges), narrow linear habitat areas (e.g., riparian strips, hedgerows), or wider landscape-level extensions of habitat that ultimately connect even larger core habitat areas. Wildlife corridors contribute to population viability in several ways: (1) they ensure continual exchange of genes between populations, which helps maintain genetic diversity; (2) they provide access to adjacent habitat areas representing additional territory for foraging and breeding; (3) they allow for an improved carrying capacity; and (4) they provide routes for colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes.

Habitat linkages are patches of native habitat that function to join two larger patches of habitat and help reduce the adverse effects of habitat fragmentation. Although often used as movement corridors for larger animal species, habitat linkages may also serve as habitat and avenues of gene flow for small animals such as reptiles, amphibians, and rodents. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat “islands” that function as stepping stones for dispersal and movement (especially for birds and flying insects).

The project site is composed of active agriculture and bounded by a combination of agriculture and urban development causing a high level of habitat disturbance. The Salinas River located southwest of the project site could provide a potential link between habitats but the project site itself does not function as a wildlife movement corridor due to the surrounding development and lack of connectivity with other undeveloped areas.



SOURCE: CDFW 2020, ESRI (Accessed 2020)

DUDEK

0 1,750 3,500 Feet
0 500 1,000 Meters
1:42,000

FIGURE 3.3-1

California Natural Diversity Database Occurrences

Gonzales Industrial Wastewater Treatment Plant Project

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3.3.2 Relevant Plans, Policies, and Ordinances

3.3.2.1 Federal Regulations

Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973, as amended, (16 USC 1531 et seq.) serves as the enacting legislation to list, conserve, and protect threatened and endangered species, and the ecosystems on which they depend, from extinction. In addition, for those wildlife species listed as federally endangered, FESA provides for the ability to designate critical habitat, defined as that habitat considered "essential to the conservation of the species" and that "may require special management considerations or protection." Under FESA Section 7, if a project that would potentially result in adverse impacts to threatened or endangered species includes any action that is authorized, funded, or carried out by a federal agency, that agency must consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any such action is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat for that species. FESA Section 9(a)(1)(B) prohibits the taking, possession, sale, or transport of any endangered fish or wildlife species. "Take" is defined to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC 1532 (19)). With respect to any endangered species of plant, Sections 9(a)(2)(A) and 9(a)(2)(B) prohibit the possession, sale, and import or export, of any such species, and prohibits any action that would "remove and reduce to possession any such species from areas under federal jurisdiction; maliciously damage or destroy any such species on any such area; or remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law." Pursuant to FESA Section 10(a)(1)(B), the USFWS may issue a permit for the take of threatened or endangered species provided that such taking is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity."

The project site is within the range of California red-legged frog and California tiger salamander, both federally threatened species protected under the federal ESA. If these species occur on or near the project site, project implementation could indirectly impact these species and the provisions of the federal ESA would apply. Critical habitat is designated for the steelhead (South Central California Coast DPS) within the Salinas River west of the project site.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50, Section 10.13 of the Code of Federal Regulations. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country and is enforced in the United States by the U.S. Fish and Wildlife Service. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50, Section 20 of the Code of Federal Regulations. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). In late December 2017, the Department of Interior issued an opinion that interprets the above prohibitions as only applying to direct and purposeful actions of which the intent is to kill, take, or harm migratory birds; their eggs; or their active nests. Incidental take of birds, eggs, or nests that are not the purpose of such an action, even if there are direct and foreseeable results, is not prohibited.

Native and migratory birds may utilize vegetation communities or land cover types within the proposed project site for nesting. Intentional take of any of these birds or their nests and young, if present, is prohibited under the MBTA.

Clean Water Act – Section 404

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Under Section 404 of the CWA, the ACOE has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. The ACOE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.

On January 23, 2020, the ACOE and Environmental Protection Agency (EPA) finalized the "Navigable Waters Protection Rule," which establishes a new definition of "Waters of the U.S." under the CWA. The new Navigable Waters Protection Rule (Rule) repeals the Obama-era 2015 Clean Water Rule and replaces it with a definition that drastically limits the scope of federal regulation to a much narrower collection of aquatic resource features. Among the greatest changes, the Rule eliminates "significant nexus" determinations to determine if potential tributaries have a significant effect on the "chemical, physical, and biological integrity of downstream traditional navigable waters." The Rule also redefines the term "adjacent." In order for an adjacent wetland to be jurisdictional, it must touch "at least one point or side of a jurisdictional water" or have a direct hydrological surface connection to a traditional navigable waterway. Hydrological connections through groundwater, which have been suggested to maintain federal jurisdiction in the past, are now outside of the scope of federal purview. Most importantly, the Rule identifies four specific categories of aquatic resource features that will be regulated by the federal government under the CWA, leaving oversight for other "excluded" waterbodies to states and tribes. The four specific categories of aquatic resources regulated under the CWA are:

1. Territorial seas and traditional navigable waters
2. Perennial and intermittent tributaries
3. Certain lakes, ponds, and impoundments
4. Wetlands that are adjacent to jurisdictional waters

The revised Rule does not expand federal regulation to include new categories of aquatic features; however, it does provide a list of excluded features that would no longer be considered Waters of the U.S. under the final Rule. Most significantly, "ephemeral" streams and other features that only flow in direct response to precipitation, and are particularly prevalent in the western United States, would no longer be subject to CWA regulation. The revised Rule redefining Waters of the U.S. would go into effect within 60 days of its publication in the Federal Register, which occurred on April 21, 2020. Implementation of the revised rule may be delayed by legal challenge.

The project site does not support any aquatic resources that are expected to meet the criteria of Waters of the U.S. regulated under Section 404 of the CWA. However, the project has potential to indirectly impact aquatic resources adjacent to the project site along the Salinas River, as evaluated in the EIR..

Clean Water Act – Section 401

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards.

The Central Coast RWQCB has authority for Section 401 compliance in the project area. A request for certification is submitted to the regional board at the same time that an application is filed with the ACOE.

The project site does not support any wetlands that are expected to meet the criteria of the Porter-Cologne Water Quality Act and/or Section 401 of the Clean Water Act. However, the project has potential to indirectly impact wetlands adjacent to the project site along the Salinas River, as evaluated in the EIR..

3.3.2.2 State

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Fish and Game Commission has the responsibility of maintaining a list of threatened and endangered species. CESA prohibits the take of state-listed threatened or endangered animals and plants unless otherwise permitted pursuant to CESA. Take under CESA is defined as any of the following: "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (California Fish and Game Code Section 86). Unlike the federal Endangered Species Act, CESA does not include harassment or harm (e.g., habitat degradation) in its definition of take. Species determined by the State of California to be candidates for listing as threatened or endangered are treated as if listed as threatened or endangered and are, therefore, protected from take. Pursuant to CESA, a state agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species, or candidate species, could be potentially impacted by that project.

The project site is located within the range of the Southwest/South Coast Clade of foothill yellow-legged frog, California red-legged frog, and California tiger salamander, threatened species protected under CESA. If the site or area of indirect effects possesses habitat for these species, proposed project implementation could indirectly impact these species and the provisions of CESA would apply.

Fish and Game Code Section 1600 – Lake and Streambed Alteration Agreement

Under Sections 1600–1616 of the California Fish and Game Code, the CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFW's jurisdiction are defined in the code as the "bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit" (Section 1601). In practice, CDFW usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

The project site does not support any channels or riparian areas protected under Fish and Game Code Section 1600.

California Department of Fish and Wildlife – Wetlands Protection Regulations

The CDFW derives its authority to oversee activities that affect wetlands from state legislation. This authority includes California Fish and Game Code Sections 1600–1616 (lake and streambed alteration agreements), the California ESA (protection of state-listed species and their habitats, which could include wetlands), and the Keene–Nejedly California Wetlands Preservation Act of 1976 (states a need for an affirmative and sustained public policy program directed at wetlands preservation, restoration, and enhancement). In general, CDFW asserts authority over wetlands within the state through any of the following: review and comment on U.S. ACOE Section 404 permits, review and comment on CEQA documents, preservation of state-listed species, or lake and streambed alteration agreements.

The project site does not support any aquatic resources that may be regulated under the CDFW Wetlands Protection Regulations. However, there are aquatic resources associated with the Salinas River located adjacent to the project site.

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act provides that "All discharges of waste into the waters of the State are privileges, not rights." Waters of the state are defined in Section 13050(e) of the Porter–Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." All dischargers are subject to regulation under the Porter–Cologne Water Quality Control Act, including both point and nonpoint source dischargers. The Central Coast RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction. As noted in the discussion of the CWA, the Central Coast RWQCB is the appointed authority for Section 401 compliance in the project area.

On April 2, 2019, the SWRCB adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures). The Procedures provide information on wetlands and other waters of the state (outside of federal jurisdiction), as well as field delineation and permit application procedures. The Procedures will codify and standardize the evaluation of impacts and protection of waters of the state from dredge and fill activities. On February 14, 2020, the SWRCB published *Draft Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Draft Guidance). The Draft Guidance is intended to assist in the implementation of the Procedures and is expected to be finalized following the incorporation of comments made during public circulation of the document.

The project site does not support any aquatic resources that are anticipated to meet the criteria of waters of the state regulated under the Porter-Cologne Water Quality Act and/or Section 401 of the Clean Water Act.

Fish and Game Code Section 1940 – Sensitive Natural Communities

California Fish and Game Code Section 1940 requires CDFW to develop and maintain a vegetation mapping standard for the state. More than half of the vegetation communities in the state have been mapped through the Vegetation Classification and Mapping Program.

Natural vegetation communities are evaluated by CDFW and are assigned global (G) and state (S) ranks based on rarity of and threats to these vegetation communities in California. Natural communities with ranks of S1 through S3 (S1: critically imperiled; S2: imperiled; S3: vulnerable) are considered sensitive. Sensitive natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. These communities may or may not contain special-status species or their habitats. For purposes of this assessment, sensitive natural communities include vegetation communities listed in CDFW's California Natural Diversity Database and communities listed in the Natural Communities List with a rarity rank of S1, S2, or S3 (S1: critically imperiled; S2: imperiled; S3: vulnerable). Additionally, all vegetation associations within the alliances with ranks of S1 through S3 are considered sensitive habitats. CEQA requires that impacts to sensitive natural communities be evaluated and mitigated to the extent feasible.

There are no natural communities or vegetation alliances on the project site with a rarity rank of S1, S2, or S3.

Fish and Game Code Section 1900-1913 – California Native Plant Protection Act

The California Native Plant Protection Act (California Fish and Game Code Sections 1900–1913) and the Natural Communities Conservation Planning Act provide guidance on the preservation of plant resources. Vascular plants

which have no designated status or protection under state or federal endangered species legislation, but are ranked as rare or endangered by the CNPS, are defined as follows:

- Rank 1A: Plants presumed extinct
- Rank 1B: Plants rare, threatened, or endangered in California and elsewhere
- Rank 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere
- Rank 3: Plants about which more information is needed – a review list
- Rank 4: Plants of limited distribution – a watch list

Generally, plants with CRPR of 1A, 1B, or 2 are considered to meet the criteria for endangered, threatened, or rare species as outlined by Section 15380 of the CEQA Guidelines. Additionally, plants listed on CNPS List 1A, 1B, or 2 also meet the definition of Section 1901, Chapter 10 (Native Plant Protection Act) and Sections 2062 and 2067 (CESA) of the California Fish and Game Code.

No plants that meet the criteria for endangered, threatened, or rare species under the California Native Plant Protection Act are present within the project site.

California Fish and Game Code – Sections 3503, 3511, 3513

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

The project site provides potential nesting habitat for many bird species protected under Fish and Game Code Sections, 3503, 3511, and 3513. If raptors are present off site but within visual and auditory range of the project site, nests of these species are protected during the breeding season. Similarly, nests of most native and migratory birds, including raptors, would need to be protected if present in or adjacent to the project site prior to project construction during the breeding season.

California Fish and Game Code – Section 4150

California Fish and Game Code Section 4150 states a mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a non-game mammal. A non-game mammal may not be taken or possessed under this code. All bat species occurring naturally in California are considered non-game mammals and are therefore prohibited from take as stated in California Fish and Game Code Section 4150.

There is a potential for native bats to forage on the project site and/or roost in trees on site or in the vicinity. If bat maternity or overwintering colonies are present in or adjacent to the project site during construction, measures must be implemented to avoid take of native bats.

California Fish and Game Code – Sections 4700, 5515, 5050

The classification of "fully protected" was the CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. California Fish and Game Code sections (fish at Section 5515, amphibians and reptiles at Section 5050, birds at Section 3511 (discussed above), and mammals at Section 4700)

dealing with "fully protected" species state that these species may not be taken or possessed at any time, and no provisions in this code or any other law shall be construed to authorize permits for the take of fully protected species. In October 2011, the State passed legislation allowing take of a fully protected species covered under an approved Natural Community Conservation Plan. No Fully Protected species are expected to occur at the project site.

Species of Special Concern are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing, or they historically occurred in low numbers and known threats to their persistence currently exist. This classification is intended to elicit special consideration for these animals by the CDFW, land managers, consulting biologists, and others. Additionally, this classification is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them.

Burrowing owl is a Species of Special Concern with a moderate potential to use the project site for nesting and foraging. Western spadefoot is a Species of Special Concern with a low potential to utilize the project site but may be present in habitat associated with the adjacent Salinas River

California Environmental Quality Act

CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain criteria. These criteria have been generally modeled after the definition in FESA and Chapter 1.5 of the California Fish and Game Code that addresses rare or endangered plants and animals. Appendix G of the CEQA Guidelines requires a lead agency to determine whether or not a project would "have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service." CEQA Guidelines Section 15065 requires that a lead agency find an impact to be significant if a project would "substantially reduce the number or restrict the range of an endangered, rare, or threatened species."

3.3.2.3 Local

Gonzales 2010 General Plan

The Conservation and Open Space Element of the City of Gonzales 2010 General Plan provides policies and implementing actions regarding the protection of biological resources.

Policy COS-1.1- Protect Regulated Habitats

> Protect regulated habitats (e.g., freshwater marsh, riparian woodland, and aquatic habitat) that are located within the Planning Area and prevent the isolation of individual habitat areas by interconnecting them to the degree practicable with open space corridors.

Policy COS-2.1- Protect Special-Status Species

> Protect special-status species that are located within the Planning Area and create the conditions necessary for such species to become self-sustaining.

Salinas River Long-Term Management Plan

The Salinas River flows southwest of the project site and is managed by the Monterey County Water Resource Agency (MCWRA). The MCWRA has developed a Long-Term Management Plan (LTMP) for resource management along the Salinas River with a plan for future development of a Habitat Conservation Plan (HCP).

3.3.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact to biological resources would occur if the proposed project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local, state, regional or federal agencies.
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional, or state habitat conservation plan?

3.3.4 Impacts Analysis

3.3.4.1 Methods of Analysis

CEQA requires that projects analyze the potential impacts on special-status plant and animal species, as well as on sensitive habitats, wildlife corridors, and waters of the United States. Impacts on wildlife species that are not considered special-status under CEQA are generally not considered significant unless impacts are associated with the species' migration routes or movements, or the species are considered locally important. Therefore, impacts on common species (e.g., skunk, raccoon, and possum) that are not be considered special-status species are limited to their movements and migration routes. In addition, regardless of listing status, impacts on all nesting native bird species are addressed because they are protected from harm under the state Fish and Game Code and the federal MBTA.

The significance of impacts to biological resources was assessed by comparing the potential changes resulting from the proposed project to the significance thresholds listed below. An evaluation of whether or not an effect on biological resources would be substantial with respect to the significance thresholds generally considers the following:

- amount and/or extent of the resource (numbers, acres, etc.) to be affected versus preserved;
- the biological value (rarity, functions, and values) and/or sensitivity status of the resource and its relevance within a specified geographical area;

- the type and severity of impact (i.e., would the project adversely affect wildlife through mortality, injury, displacement, or habitat loss or adversely impact vegetation through destruction of a sensitive plant population?);
- timing of the impact (i.e., would the impact occur at a critical time in the life cycle of a special-status plant or animal, such as breeding, nesting, or flowering periods?); and
- duration of the impact (i.e., whether the impact is temporary or permanent).

The analysis of direct and indirect impacts covers construction, operation, and maintenance of the proposed project. Direct impacts include those that would occur immediately as a result of the proposed project on a particular biological resource. Indirect impacts refer to off-site and on-site "edge effects" that are short-term (i.e., not permanent) and result from project construction or long-term (i.e., permanent) due to the design of the project and the effects it may have to adjacent resources. Examples of "edge effects" include dust, noise, and general human presence that may temporarily disrupt species and habitat vitality and construction-related soil erosion and runoff.

The following sources were reviewed in the process of evaluating potential project impacts including the biological reports prepared by Dudek, online databases that include the CNPS Online Inventory, CNDDB, and USFWS list of threatened and endangered species, and relevant Federal, State, and local regulations and plans as they relate to sensitive biological resources. Copies of the Dudek biological reports listed above are included as Appendices C and D.

3.3.4.2 Impact Analysis

Impact 3.3-1 The proposed project could have a substantial adverse effect on a candidate, sensitive, or special-status species.

Implementation of the proposed project has a low chance of impacting special-status species through permanent conversion of habitat, temporary construction-related impacts, and/or operation and maintenance activities. Potential impacts on special-status species and their habitat that could result from eventual project implementation are addressed below.

Special-Status Plant Species

As discussed in Section 3.3.1.5, Special-Status Plant and Wildlife Species, no special-status plant species are present or have the potential to occur within the project site. For this reason, **no impacts** to special-status plant species are expected to occur as a result of project activities.

Special-Status Wildlife Species

Of the species discussed to have the potential to occur on the project site in Section 3.3.1.5 Special Status Plant and Wildlife Species, eleven of these species are federally listed: California tiger salamander (federally threatened), California red-legged frog (federally threatened), golden eagle (federally protected), Western yellow-billed cuckoo (federally threatened), Southwestern willow flycatcher (federally endangered), California condor (federally endangered), Least Bell's vireo (federally endangered), steelhead (federally threatened), San Joaquin kit fox (federally endangered), vernal pool fair shrimp (federally threatened), and the bay checkerspot butterfly (federally threatened). Only Least Bell's vireo has a low potential to nest on the project site; the other federally-listed species are not expected to occur on the project site. Critical habitat for steelhead (South-Central California Coast DPS is located in the Salinas River to the west of the project site, but the IWRF would not result in changes to hydrology or disturbance in potential habitat within the Salinas River.

Additionally, six wildlife species considered special-status by the state have a potential to occur on the project site: western spadefoot, San Joaquin whipsnake, burrowing owl, pallid bat, Townsend's big-eared bat, American badger. In addition, native and migratory birds protected by the California Fish and Game Code have a potential to occur on site.

Habitat for western spadefoot is potentially present near the Salinas River which is not part of the project site. However, even if western spadefoot were present in that area, they are highly unlikely to move into the project site due to the presence of agricultural lands and the existing MWWTP. Further, the IWRF would not result in changes to hydrology or disturbance in potential habitat adjacent to the Salinas River. Therefore, direct and indirect impacts to this species would be, **less than significant**.

San Joaquin whipsnake prefer treeless land combined with grassland or saltbush scrub and are unlikely to be found in the agricultural fields that comprise the project site. If present in areas outside the project site, the species may be indirectly impacted due to temporary increases in noise, vibration, and human activity during construction. These temporary construction impacts would be **less than significant** given the lack of suitable habitat within the project site, and the low quality of potential habitat in the project vicinity.

Burrowing owls have been documented using agricultural fields to forage. Although the project site is currently farmed, there are also multiple California ground squirrel burrows at the project site that may provide suitable nesting or wintering sites. The majority of the project site is disced or plowed multiple times per year, which prevents occurrence of burrowing owl burrows in those areas. Therefore, the areas of potential burrowing owl occurrence on the project site are around the margins of fields where burrows persist throughout the year. If present on site during construction activities related to the project, **potentially significant** impacts to individuals present may occur.

American badgers are unlikely to be present within the project site due to the agricultural fields being highly active with disking and row crop planting occurring regularly throughout the site. The habitat adjacent to the site is not suitable for this species, and **no impacts** are expected to occur to this species.

Least Bell's vireo nest and forage in riparian thickets along water or dry parts of intermittent streams. No riparian vegetation is present within the project site and only sparsely present in adjacent areas, and no direct effects would occur. If nesting occurs near the project site within the riparian corridor of the Salinas River, indirect impacts from project related activities may impact the species but the impacts would be **less than significant**.

Pallid bat, Townsend's big-eared bat, or other roosting bats are unlikely to be roosting on site due to lack of suitable roosting habitat. However, the agricultural fields do provide foraging opportunities and the adjacent bridge where the Salinas River crosses under the road adjacent to the project site could provide suitable roosting habitat. No direct impacts would occur to roosting bats due to project activities but there is a chance of indirect impacts. However, any impacts would be **less than significant**.

The project site provides suitable habitat for nesting birds. Native and migratory birds protected by the MBTA and California Fish and Game Code, such as killdeer (*Charadrius vociferous*), northern mockingbird (*Mimus polyglottos*), and red-tailed hawk (*Buteo jamaicensis*), have been observed on site and could use the project site for nesting or foraging. Potential impacts to native or migratory bird nests on the project site due to project initiation or construction-related activities could cause an adult to abandon an active nest, leaving eggs or chicks vulnerable to predation or starvation or cause direct mortality or injury to birds or destruction of nests. Project operation and maintenance activities, including an increase in noise and lighting associated with development could also impact potential nesting on site or in adjacent areas. These are considered **potentially significant** impacts.

Overall, impacts to special status species are considered **potentially significant** and will require the implementation of feasible mitigation measures to avoid or reduce impacts to burrowing owl and other protected nesting birds.

Impact 3.3-2 The proposed project would not have an adverse effect on riparian habitat or some other sensitive natural communities.

As discussed in Section 3.3.1.2, Vegetation Communities and Land Cover Types, no sensitive vegetative communities are present on site and only agricultural land is present within the project area. Therefore, **no impact** is expected to occur to riparian habitat or any other sensitive natural communities.

Impact 3.3-3 The proposed project would not have an adverse effect on protected wetlands.

As discussed in Section 3.3.1.3, Aquatic Resources, no wetlands or waters of the US were found to be present within the project site. Therefore, **no impacts** to protected waters are expected to occur.

Impact 3.3-4 The proposed project would not interfere with the movement of fish or wildlife species, established migratory wildlife corridors, or the use of native wildlife nursery sites.

As discussed in Section 3.3.1.8, Wildlife Corridors and Habitat Linkages, wildlife corridors are linear features that connect large areas or patches of natural open space and provide avenues for the movement of animals, such as coyote and deer. Habitat linkages are small areas or patches of land that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that essentially function as 'stepping stones' for wildlife dispersal. As stated in Section 3.3.1.8, the project site is composed of active agriculture and bounded by a combination of agriculture and urban development causing a high level of habitat disturbance. The Salinas River located southwest of the project site could provide a potential link between habitats but the project area itself does not function as a wildlife movement corridor due to the surrounding development and lack of connectivity with other undeveloped areas. Therefore, **no impacts** to established migratory wildlife corridors or to the movement of fish or wildlife species are expected to occur.

Impact 3.3-5 The proposed project would not conflict with any local policies or ordinances protecting biological resources.

The Conservation and Open Space Element of the City of Gonzales 2010 General Plan provides policies and implementing actions regarding the protection of biological resources. However, no regulated habitats, natural corridors or special-status species are present or expected to be present within the project area. General mitigation measures described in Section 3.3.5 will be implemented to ensure potential biological resources that fall into these categories that are adjacent to the project site will be protected. Therefore, **no impacts** that conflict with local policies or ordinances are expected to occur.

Impact 3.3-6 The proposed project would not conflict with any provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As discussed in Section 3.3.2, Regulatory Setting, the Salinas River LTMP discusses the development of a future HCP for the river but none is currently in place and no timeline for completion of a draft HCP or associated permitting is available. Therefore, **no impacts** from conflicts with provisions of an adopted HCP or other conservation plan would occur.

3.3.5 Mitigation Measures

MM-BIO-1 Worker Environmental Awareness Training

All construction workers shall receive a worker environmental awareness training (WEAT) to be conducted by a qualified biologist for construction of any component of the project. The WEAT may also be conducted through a video or Powerpoint presentation created by a qualified biologist specifically for the project. The WEAT shall instruct construction workers on how to recognize all special-status plant/wildlife species and their preferred habitat potentially present in the project site, applicable laws and regulations regarding each species, actions to implement if a special-status species is observed during construction activities including the name/contact information of the monitoring biologist, and the nature and purpose of protective measures including best management practices and other required mitigation measures. As new construction personnel join the construction crews throughout project construction of the various components, additional environmental awareness training sessions shall be conducted by the biologist. All attendees shall fill out a sign-in sheet. The training program shall also be recorded and subsequently shown to any construction personnel who are not able to attend the initial or subsequent training programs.

MM-BIO-2 Nesting Bird Survey

A qualified biologist shall conduct a survey for nesting birds approximately two days prior to vegetation removal or ground-disturbing activities during the nesting season (March through August). The survey shall cover the limits of construction and suitable nesting habitat within 500 feet for raptors and 100 feet for other nesting birds, as feasible.

If any active nests are observed during surveys, a qualified biologist shall establish a suitable avoidance buffer from the active nest. The buffer distance will typically range from 50 to 300 feet, depending on the species, and shall be determined based on consideration of such factors as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active nests shall be established in the field with flagging, fencing, or other appropriate barriers and shall be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.

MM-BIO-3 Burrowing Owl Preconstruction Surveys

A qualified biologist shall conduct a pre-construction survey for burrowing owls two weeks prior to the initiation of construction activities. Biologist will walk 20 meter transect intervals surveying the proposed construction impact areas plus a 100 foot buffer within suitable habitat. Any suitable burrows located during the survey with signs of activity (i.e., whitewash, pellets, prey remains) will be marked for avoidance and, in consultation with CDFW, an appropriate avoidance buffer will be established.

3.3.6 Level of Significance After Mitigation

The sole special-status wildlife species with a moderate potential to occur in or near the project site is burrowing owl. Construction of the proposed project, especially involving vegetation removal, could result in direct and indirect temporary impacts to native and migratory birds, should any be nesting on site or near the project site during construction. Potential impacts to active bird nests would be considered potentially significant without implementation of mitigation measures. The project site has suitable burrows and ground squirrels that increase habitat suitability for burrowing owl.

MM-BIO-2 and MM-BIO-3 require pre-construction surveys to identify and avoid potential burrows used by burrowing owl, or native or migratory nesting birds. With implementation of MM-BIO-1, crews would be able to alert the project's qualified biologist if any burrowing owl or nesting birds are encountered during project activities. With implementation of these mitigation measures, Impact 3.3-1 would be reduced to **less than significant**.

3.3.7 Cumulative Analysis

No sensitive vegetation communities, special-status plants or jurisdictional features are present within the project site. The project area does not function as a wildlife movement corridor due to the surrounding development and lack of connectivity with other undeveloped areas. Habitat for sensitive status wildlife is minimal and mostly present adjacent to the Salinas River where only the potential for temporary indirect impacts due to construction activities (noise, dust, etc.) are expected to occur. Only burrowing owls and nesting birds have the potential to be significantly impacted. These same species may be affected by the cumulative projects, resulting in a potential cumulative impact. However, with the proposed mitigation measures, the potential impacts to these species would be less than significant and would not contribute to a cumulative impact. The habitat present for these species on the project site will not be permanently impacted. A review of local ordinances showed that no policies are currently in place that this project and its associated activities would conflict with. The Salinas River LTMP was also considered in this analysis and it was confirmed that the project would not conflict with any of the goals set forth in the plan. Therefore, any cumulative impacts on biological resources would be temporary and **less than significant** given the disturbed nature of the project site and lack of biological resources present.

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3.4 Cultural Resources and Tribal Cultural Resources

This section assesses potential effects on cultural and tribal cultural resources that could result from implementation of the IW Conveyance and Reclamation Facility Project (proposed project). This section describes the existing cultural resources conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. Cultural resources are defined as prehistoric or historic-period archaeological resources, Native American resources of cultural and religious significance, historic-period architectural resources, and historic period engineering features, including canals and railroad resources. Tribal Cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, in the national or state register of historical resources, or listed in a local register of historic resources, or that the lead agency determines, in its discretion, is a tribal cultural resource. The information in this section is based on and summarized from the Cultural Resources Inventory report prepared by Dudek (2020) and included as Appendix E.

A comment letter was received during the scoping period from the Native American Heritage Commission (NAHC). The letter described the lead agency's responsibilities to evaluate tribal cultural resources under Assembly Bill (AB) 52 and Senate Bill (SB) 18.

3.4.1 Existing Conditions

The effort to identify cultural resources in the project area included a records search and a review of the archaeological, ethnographic, and historical literature; an NAHC Sacred Lands File Search; examination of historic maps; historical research; and field surveys. The following section provides abbreviated archaeology contexts, the methods used to identify cultural resources, and inventory and evaluation findings for the project area regarding cultural resources.

3.4.1.1 Contextual Overview

Prehistoric

Within the archaeological record, the prehistory of indigenous people from Monterey County follows similar patterns to the greater Central Coast of California. These patterns include adaptive shifts in settlement, subsistence strategies and technological innovation stemming from the Holocene and earlier (Table 3.4-1). The project area lies within the territory occupied by people currently known as Amah Mutsun or Ohlone. The Ohlone spoke eight separate Penutian dialects and lived between the vicinities of what is now Richmond in the north to Big Sur in the south. They were organized under approximately fifty autonomous polities or tribelets. At the time of European contact, the Chalon tribelet occupied the area around the current-day City of Gonzales. Ethnographic accounts of Ohlone at the time of contact described them as living in permanent villages, but also spending time in smaller camps to collect or process seasonal resources such as acorn or shellfish.

Table 3.4-1. California Central Coast Chronology

Temporal Period	Date (BP)	Artifact Assemblage
Paleo-Indian	10,000 or older	Flaked stone: isolated fluted points, sparse lithic scatters
Millingstone/ Early Archaic	5,500 – 10,000	Groundstone: millingstones, handstones Flaked stone: core-cobble tools, lanceolate or large side-notched projectile points, eccentric crescents, *Olivella* beads: L-series
Early	2,600 – 5500	Groundstone: mortar/pestle technology introduced, millingstone/ handstones Flaked stone: formalized tools (Rossi Square-stem, Año Nuevo long-stem) *Olivella* beads: A, B2b, B2c, B4, L-series
Middle	950 – 2,600	Groundstone: mortars/pestles, millingstone/handstones Flaked stone: contracting-stemmed projectile points *Olivella* beads: greater variety *Haliotis* ornaments: circular shell fishhooks; bone tools, grooved stone net sinkers
Middle-Late Transition	700 – 950	Groundstone: mortars/pestles, millingstone/handstones, hopper mortars Flaked stone: bow/arrow technology introduced, notched net sinkers *Olivella* bead types: B2, B3, G1, G2, G6, and K1 Haliotis ornaments: circular shell fishhooks
Late	181 – 700	Groundstone: mostly mortars/pestles (but still some millingstone/handstones) Flaked stone: Cottonwood (or Canaliño), Desert side-notched, flaked stone drills *Olivella* bead types: E1, E2, B2, B3, G1, G6, K1 types, *Haliotis* disc beads, steatite and clamshell disc beads,

Historic

Spanish Period (1770–1822)

Spain, England, and Russia sponsored the initial European exploration of California by sending ships to navigate the coastline in search of areas suitable to colonize or to identify the illusive Northwest Passage. These explorers include Juan Rodríguez Cabrillo (1542) and Sebastián Vizcaíno (1602) of Spain, and Sir Francis Drake (1579) of England, and possibly others that went unrecorded. In 1769, Spain sent an overland exploratory mission, led by Don Gaspar de Portolá and Padre-Presidente, Junípero Serra, to establish missions within Spanish-held Alta California. Spain established 21 missions, 5 presidios and 3 pueblos between 1769 and 1823. Mission Nuestra Señora de la Soledad, or "Our Lady of Solitude" was established in nearby Soledad on October 9, 1791 by Fermín Francisco de Lasuén. It was the 13th of a total of 21 missions constructed in California between 1769 and 1823. The Chalon Ohlone, along with their neighbors the Esselen and Yokut, were brought to the mission in Soledad as neophytes and were forced to adapt to a European lifestyle and ideology. Domestic farm animals such as cattle, sheep, goats, horses, chickens, and pigs were raised at the mission, and the hides and tallow became a primary trade product. The Mission also developed 20,000 acres of farmland, which included various crops to sustain itself, and built a 15-mile aqueduct to water the crops of the mission. Many indigenous people were killed resisting capture or perished from European diseases which they lacked the immunity to fight off.

Mexican Period (1822–1846)

When Mexico won independence from Spain in 1821, the newly established Mexican government secularized the missions in Alta California and offered extensive land grants to the citizens of Alta California. The Soberanes family applied for the land grant formerly belonging to the Soledad Mission, and their offer was accepted by the Mexican governor. The Soberanes family built four adobes, each serving as the headquarters for one of their farming or ranching operations. In 1842, California Governor Alvarado and General Vallejo, who managed Alta California, declared California independent and waged war with Mexico in 1845. The Mexican American War concluded in 1848 with the signing of the Treaty of Guadalupe-Hidalgo, just days before the announcement of the gold discovery at Sutter's Mill.

American Period (post 1846)

California held its first constitutional convention in Monterey in September of 1849 resulting in the creation of regional counties in California. Monterey was designated as one of California's 27 original counties on February 18, 1850, shortly before California officially became a state. By 1875 and through the end of the nineteenth century, many of the Mexican land grants were subdivided and re-sold to some of the influx of settlers from the east that had come in hopes of striking it rich in the Gold Rush. In the Salinas Valley, many farmsteads developed, and farming became a central industry to the region, an industry that still holds strong. The Southern Pacific Railroad Company was extended to the Salinas Valley in 1873. The addition of the railroad not only enabled large-scale farms to produce larger yields to distribute to more distant markets, but small towns like Gonzales emerged at the railroad stops.

Gonzales

In 1836, Brothers Dr. Mariano and Alfredo Gonzalez inherited the 15,200-acre land grant, Rancho Rincon de la Puente del Monte, from their father, who served as an alcalde (mayor). The Gonzalez brothers donated an easement of their land to the railroad and developed a small town there in 1874. The area supported grain and cattle farms, and in the 1890s, many dairies developed with the arrival of many Swiss immigrants. The town of Gonzales, which differs in spelling from the founders by using an "s" at the end instead of a "z," now supports mostly vegetable farming.

3.4.1.2 Archaeological Resources

A records search of the project area/APE and 0.5-mile radius was conducted through the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) in May 2020 and expanded in September 2020. The records search indicated that no archaeological resources had been recorded within the study area. A search of the Sacred Lands File was also conducted through the Native American Heritage Commission (NAHC) in May 2020, with negative findings. Intensive field surveys of the entire project area, including conveyance lines, were conducted in May and September. Addressing built environment resources such as buildings, structures, roads, or bridges were not part of the scope of the project.

Dudek archaeologists recorded one prehistoric isolate, a Monterey chert flake, as GZ-I-01. The flake was located along the proposed alternative collection pipeline alignment, adjacent to Gonzales River Road. The isolate was determined not eligible for inclusion on the CRHR or NRHP.

3.4.1.3 Tribal Cultural Resources

A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource (TCR) is a project that may have a significant effect on the environment (Pub. Resources Code, § 21084.2.). An appropriate approach to potential impacts to TCRs is developed in response to the identified presence of a TCR by California Native American Tribes through the process of consultation. Under Assembly Bill (AB) 52 a tribal cultural resource must have tangible, geographically defined properties that can be impacted by project implementation. A NAHC Sacred Lands File Search and CHRIS records search failed to identify any previously recorded cultural resources of Native American origin within the project area or a surrounding 0.5-mile buffer.

Formal notification of the project was sent to the Salinan Tribe, which had filed standing letters of request for project notification and consultation with the City of Gonzales on June 19, 2020. The Salinan Tribe did not respond to the City's notification about the project. The Cultural Resources Inventory (Appendix E) did not identify potential tribal cultural resources.

Native American Coordination

After receiving negative findings for the Sacred Lands File search with NAHC, Dudek sent emails to the Native American representatives provided by the NAHC to request additional information on sites within the project vicinity. Dudek made follow up telephone calls and/or emails to all contacts on the NAHC list in June 2020. Valentin Lopez (Amah Mutsun Tribal Band) commented that Native Americans often lived close to natural waterways, and he requested a Native American monitor to be present for ground disturbance within 400 feet of the Salinas River. Sue Morley and Tom Nason (Esselen Tribe of Monterey County) also provided comments. The Esselen Tribe of Monterey County would like to be informed if any cultural resources are found during ground-disturbing activities from the project. Finally, Irenne Zwierlein of the Amah Mutsun Tribal Band of Mission San Juan Bautista requested that all construction crew involved in earth disturbance for the project undergo Cultural Sensitivity training.

3.4.2 Regulatory Setting

3.4.2.1 Federal

Section 106 of the National Historic Preservation Act

The NHPA established the National Register of Historic Places (NRHP) and the President's Advisory Council on Historic Preservation (ACHP), and provided that states may establish State Historic Preservation Officers (SHPOs) to carry out some of the functions of the NHPA. Most significantly for federal agencies responsible for managing cultural resources, Section 106 of the Act directs that "[t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP." Section 106 also affords the ACHP a reasonable opportunity to comment on the undertaking (16 U.S.C. 470f).

Title 36 of the Code of Federal Regulations, Part 800 (36 CFR 800), implements Section 106 of the NHPA (ACHP 2004). It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for

listing in the NRHP), including consultation with federally recognized Native American tribes to identify resources of concern to them; to determine whether or not they may be adversely affected by a proposed undertaking; and the process for eliminating, reducing, or mitigating the adverse effects.

The content of 36 CFR 60.4 also defines criteria for determining eligibility for listing in the NRHP (NPS 2012). The BLM evaluates the significance of cultural resources identified during inventory phases in consultation with the California SHPO to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association. A resource may be considered historically significant and eligible for NRHP listing if it is found to meet one of the following criteria:

A. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
B. It is associated with the lives of persons important to local, California, or national history.
C. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.
D. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Integrity is defined in NRHP guidance, *How to Apply the National Register Criteria for Evaluation*, as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1990). NRHP guidance further states that properties must have been completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration G) to be considered for listing.

A historic property is defined as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria" (36 Code of Federal Regulations (CFR) Section 800.16(i)(1)).

Effects on historic properties under Section 106 of the National Historic Preservation Act are defined in the assessment of adverse effects in 36 CFR Sections 800.5(a)(1) as follows:

> An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.

Adverse effects on historic properties are defined as follows (36 CFR 800.5 (2)):

i. Physical destruction of or damage to all or part of the property;

ii. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines;

iii. Removal of the property from its historic location;

iv. Change of the character of the property's use or of physical features within the property's setting that contributes to its historic significance;

v. Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

vi. Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

vii. Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

To comply with Section 106 of the National Historic Preservation Act, the criteria of adverse effects are applied to historic properties, if any exist in the project area of potential effects, pursuant to 36 CFR Sections 800.5(a)(1). If no historic properties are identified in the area of potential effects, a finding of "no historic properties affected" would be made for the proposed project. If there are historic properties in the area of potential effects, application of the criteria of adverse effect (as described above) would result in project-related findings of either "no adverse effect" or of "adverse effect." A finding of no adverse effect may be appropriate when the undertaking's effects do not meet the thresholds in criteria of adverse effect (36 CFR Sections 800.5(a)(1)), in certain cases when the undertaking is modified to avoid or lessen effects, or if conditions are imposed to ensure review of rehabilitation plans for conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (codified in 36 CFR Part 68).

If adverse effects were expected to result from a project, mitigation would be required, as feasible, and resolution of those adverse effects by consultation may occur to avoid, minimize, or mitigate adverse effects on historic properties pursuant to 36 CFR Part 800.6(a).

3.4.2.2 State of California

The California Register of Historical Resources

In California, the term "historical resource" includes "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Public Resources Code (PRC) Section 5020.1(j)). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). The criteria for listing resources on the CRHR, enumerated in the following text, were developed to be in accordance with previously established criteria developed

for listing in the NRHP. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
(2) Is associated with the lives of persons important in our past
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
(4) Has yielded, or may be likely to yield, information important in prehistory or history

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; CEQA Guidelines Section 15064.5(b)). If a site is either (i) listed or eligible for listing in the CRHR, (ii) included in a local register of historic resources, or (iii) identified as significant in a historical resources survey (meeting the requirements of Public Resources Code Section 5024.1(q)), then it qualifies as a "historical resource" for purposes of CEQA (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)(1)-(3)). The CEQA lead agency also is not precluded from determining, based on substantial evidence, that a resource that does not meet one of these three specific criteria nevertheless qualifies as a historic resource for CEQA purposes (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" is defined to mean "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of an historical resource is materially impaired when a project "demolishes or materially alters in an adverse manner those physical characteristics" that account for the resource being identified as an historic resource under CEQA (CEQA Guidelines Section 15064.5(b)(2)).

With respect to archaeological sites, the first issue is whether the site qualifies as a historic resource under the provisions discussed above. If the archaeological site does not qualify as an historic resource, and if the site also does not meet the definition of a "unique archaeological resource" or a "tribal cultural resource," then any impacts to the resource are not considered significant and further evaluation is not required (PRC Section 21083.2(h); CEQA Guidelines Section 15064.5(c)). A "unique archaeological resource" is defined to mean an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) Contains information needed to

answer important scientific research questions and that there is a demonstrable public interest in that information; (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Sections 21083.2(g)).

"Tribal cultural resources" are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" that are either (a) included, or determined to be eligible for inclusion, in the CRHR; (b) included in a local register of historic resources; or (c) otherwise determined to be significant, based on substantial evidence, according to specified statutory criteria (PRC Sections 5024.1(c) & 21074).

Native American Historic Cultural Sites

State law (PRC Section 5097 et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and established the Native American Heritage Commission (NAHC) to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Health and Safety Code section 7050.5

In the event that Native American human remains or related cultural material are encountered, Section 15064.5(e) of the CEQA Guidelines (as incorporated from PRC Section 5097.98) and California Health and Safety Code Section 7050.5 define the subsequent protocol. If human remains are encountered, excavation or other disturbances shall be suspended of the site or any nearby area reasonably suspected to overlie adjacent human remains or related material. Protocol requires that a county-approved coroner be contacted in order to determine if the remains are of Native American origin. Should the coroner determine the remains to be Native American, the coroner must contact the NAHC within 24 hours. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98 (14 CCR 15064.5(e)).

3.4.3.3 Local Regulations

Monterey County

Although the project is located within areas either incorporated by the City of Gonzales, or proposed to be annexed, it is noted this report also satisfies Section 21.66.050 Standards for Archaeological and Tribal Cultural Resource Protection from the Monterey County Zoning Ordinance, Title 21.

City of Gonzales

The General Plan Community Element (City of Gonzales 2011) contains the following implementation action.

Implementing Action CC-7.1.10- Project-Level Cultural Analysis Required.

> The City shall require Specific Plans and development applications to contain a project-level analysis of cultural resources for all areas planned for urbanization under the Specific Plan or development approval.

Such an analysis shall evaluate the full range of cultural resources, including historical, archaeological and paleontological resources, and buried human remains. The analysis shall recommend measures to mitigate any significant impact that a specific project may have on cultural resources.

3.4.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to §15063.4.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15063.4.
3. Disturb any human remains, including those interred outside of dedicated cemeteries.
4. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
    b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

CEQA defines a "*unique archaeological resource*" as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC §21083.2(g)).

CEQA (Public Resources Code section 21074) defines a "*tribal cultural resource*" as either of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    - Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    - Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

State CEQA Guidelines Section 15064.5 defines a *historical resource* as:

- A resource listed in, or determined to be eligible for listing in, the California Register;
- A resource listed in a local register of historical resources.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…Generally, a resource shall be considered by the lead agency to be :historically significant." Generally a resource is considered historically significant if it meets criteria for listing in the California Register of Historical Resources, including:
    1. Is associated with events that made a significant contribution to the broad patterns of California's history and cultural heritage.
    2. Is associated with the lives of people important in our past.
    3. Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values.
    4. Has yielded or may be likely to yield information important in prehistory or history; or
- A resource determined to be a historical resource by a project's lead agency.

CEQA Guidelines Section 15064.5 defines a "historical resource." If a cultural resource in question is an archaeological resource, CEQA Guidelines Section 15064.5[c][1]) requires that the lead agency first determine if the resource is a historical resource as defined in Section 15064.5(a). If the resource qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource. If the archaeological resource does not qualify as a historical resource but does qualify as a "unique archaeological resource," then the archaeological resource is treated in accordance with Public Resources Code Section 21083.2 (see also CEQA Guidelines Section 15069.5[c][3]).

CEQA Guidelines Section 15064.5(b) defines a "*substantial adverse change*" to a historical resource as: "physical demolition, destruction, relocation or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. The significance of an historical resource is *materially impaired* when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register of Historical Resources or in registers meeting the definitions in Public Resources Code 5020.1(k) or 5024.1(g).

3.4.4 Impact Analysis

3.4.4.1 Methodology

The following impact analysis is based on the data base searches, literature reviews, field surveys and other documentation provided in the Cultural Resources Report prepared for the project (see Appendix E)

Archaeological sites are usually adversely affected only by physical destruction or damage that can be caused by grading and excavation, trenching, weather-induced erosion, etc. Impacts to archaeological resources and human remains most often occur as the result of excavation or grading within the vertical or horizontal boundaries of a significant archaeological site. Archaeological resources may also suffer impacts as the result of project activity that increases erosion, or increases the accessibility of a surface resource, and thus increases the potential for

vandalism or illicit collection. Because archaeological resources often are buried or cannot be fully defined or assessed on the basis of surface manifestations, substantial ground-disturbing work below areas of existing fill may have the potential to uncover previously unidentified resources, including archaeological deposits and human remains. The mitigation measures developed to address impacts to unique archaeological resources and historical resources of an archaeological nature address potential impacts both to identified archaeological resources, if any, and to archaeological resources that might be discovered during construction.

3.4.4.2 Project Impacts

This section provides a detailed evaluation of potential impacts to cultural resources and tribal cultural resources that would be associated with the project. The analysis addresses impacts related to historical resources (standard a), archaeological resources (standard b), human remains (standard c), and tribal cultural resources (standard d).

3.4-1. The project may cause a substantial adverse change in the significance of a previously unidentified archaeological resource.

As described in the Project Description (Chapter 2), the City of Gonzales is proposing to upgrade its wastewater treatment infrastructure by constructing a separate Industrial Wastewater Reclamation Facility (IWRF) adjacent to the City's existing municipal wastewater treatment plant (MWWTP). This would include the placement of a wastewater conveyance line 10,700 linear feet long within a trench 3-feet wide and 6-10 feet deep in addition to project-related grading of the IWRF.

Although no eligible archaeological resources were identified in the records search or field survey, unknown subsurface archaeological resources may exist within the project area/APE. Disturbance to native soils or surface features would have the potential to result in impacts to unknown archaeological resources of the prehistoric or historic period. Substantial adverse changes to unknown archaeological deposits and features may result from ground disturbance in native soils or from increased traffic, erosion, vibrations or other activities that could affect the physical integrity of archaeological deposits or features. Such substantial adverse changes to an unknown archaeological site would result in a significant impact if the site is determined to be a unique archaeological resource or historic archaeological resource.

The implementation of Mitigation **CUL-1** will provide standard inadvertent discovery clauses in all construction contracts that include stop work requirements if resources are discovered, evaluation of any identified resources and data recovery and other measures that would provide for the preservation of significant information.

3.4-2. The project may disturb human remains interred outside of dedicated cemeteries.

While no human remains have been identified within the project area/APE through the records searches or surveys, the potential to encounter human remains during project construction still exists. Per Section 7050.5 of the California Health and Safety Code, if human remains are discovered during project construction, no further work shall occur in the immediate vicinity of the discovered remains until the County Coroner has made the necessary findings as to the origin of the remains. Furthermore, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until recommendations for treatment have been made. These regulations are incorporated into **MM-CUL-2**.

3.4-3. The project would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074.

A NAHC Sacred Lands File Search and CHRIS records search failed to identify any previously recorded cultural resources of Native American origin within the project area/APE or a surrounding 0.5-mile area. No prehistoric Native American resources were identified within the project area/APE during intensive-pedestrian archaeological survey. The City of Gonzales notified tribes traditionally associated with the project area/APE and having requested notice under AB 52 on July 29, 2020.

Government to government consultation initiated by the City of Gonzales, acting in good faith and after a reasonable effort, has not resulted in the identification of a TCR within or near the project area. No known geographically-defined TCRs were identified within, or in the immediate vicinity of, the project area through consultation. As such, no TCRs have been identified in the project area/APE.

3.4.5 Mitigation Measures

Dudek recommends the following mitigation measures to ensure that potential project impacts to previously undiscovered potentially significant historical resources or historic properties are less than significant.

CUL-1: Unidentified Cultural Materials

In the event that cultural resources (sites, features, artifacts, or fossilized material) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified specialist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether additional study is warranted. Prehistoric archaeological deposits may be indicated by the presence of discolored or dark soil, fire-affected material, concentrations of fragmented or whole shell, burned or complete bone, non-local lithic materials, or the characteristic observed to be atypical of the surrounding area. Common prehistoric artifacts may include modified or battered lithic materials; lithic or bone tools that appeared to have been used for chopping, drilling, or grinding; projectile points; fired clay ceramics or non-functional items; and other items. Historic-age deposits are often indicated by the presence of glass bottles and shards, ceramic material, building or domestic refuse, ferrous metal, or features such as concrete foundations or privies.

CUL-2: Unanticipated Discovery of Human Remains

The discovery of human remains is always a possibility during ground disturbances; State of California Health and Safety Code Section 7050.5 covers these findings. This code section states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

3.4.6 Level of Significance After Mitigation

With implementation of CUL-1, potential impacts to archaeological resources would be **less than significant.**

With implementation of CUL-2, impacts to previously undiscovered human remains would be **less than significant.**

Cumulative impacts on cultural resources would be **less than significant** with mitigation incorporated (mitigation measures **CUL-1** and **CUL-2.**

3.4.7 Cumulative Impacts

Cumulative impacts on cultural resources consider whether the impacts of the proposed project together with other related projects substantially diminish the number of archaeological or tribal resources within the same or similar context or property type. No archaeological or tribal resources have been identified within the project area (APE) and the 0.5-mile buffer area, which covers the majority of the cumulative project sites. Therefore, the proposed project would not contribute to a cumulative effect.

3.4.8 References

City of Gonzales. 2011. Gonzales 2010 General Plan. Adopted January 18, 2011. Revised June 2018.

Dudek. 2020. Cultural Resources Inventory Report for the City of Gonzales Separate Industrial Water Treatment Plant Project, Gonzales, Monterey County, California. October 2020.

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3.5 Energy

This section describes the existing energy conditions within the vicinity of the Industrial Wastewater Reclamation Facility (IWRF) and wastewater conveyance line as part of the IW Conveyance and IW Reclamation Facility Project (proposed project); discusses applicable federal, state, and regional regulations; and evaluates the potential effects on energy resources associated with development of the proposed project.

No public and agency comments related to energy were received during the public scoping periods in response to the original Notice of Preparation (NOP). For a complete list of public comments received during the public scoping periods refer to Appendix A.

3.5.1 Existing Conditions

3.5.1.1 Electricity

According to the U.S. Energy Information Administration, California used approximately 255,224 gigawatt hours of electricity in 2018 (EIA 2020a). Electricity usage in California for different land uses varies substantially by the types of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the residential sector is lower than any other state except Hawaii (EIA 2020b).

Pacific Gas & Electric Company (PG&E) provides electric services to 5.4 million customers, including 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines over a 70,000-square-mile service area that includes in Northern California and central California (PG&E 2016). As presented in **Table 3.5-1**, according to PG&E, customers consumed 78,072 million kilowatt-hours (kWh) of electricity in 2019 (CEC 2020a).

Table 3.5-1. Pacific Gas & Electric Company 2019 Electricity Consumption

Sector	Total Electricity (in millions of kWh)
Agricultural and Water Pump	4,489.70
Commercial Buildings	29,559.93
Commercial Other	4,348.76
Industry	9,709.56
Mining and Construction	1,642.02
Residential	28,014.18
Streetlight	307.51
Total Consumption	**78,071.66**

Notes: kWh = kilowatt-hour.
Source: CEC 2020a.

PG&E receives electric power from a variety of sources. According to California Public Utilities Commission's (CPUC's) 2019 Renewable Portfolio Standard (RPS) Annual Report to the Legislature, 39% of PG&E's power came from eligible renewable energy sources in 2018, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (CPUC 2019a). The California Renewables Portfolio Standard (RPS) Program establishes a goal for California to increase

the amount of electricity generated from renewable energy resources to 20% by 2010, and to 33% by 2020. Recent legislation revised the current RPS target for California to obtain 50% of total retail electricity sales from renewable sources by 2030, with interim targets of 40% by 2024, and 45% by 2027 (CPUC 2016).

Based on recent energy supply and demand projections in California, statewide annual peak electricity demand is projected to grow an average of 890 megawatts per year for the next decade, or 1.4% annually, and consumption per capita is expected to remain relatively constant at 7,200–7,800 kWh per person (CEC 2018a).

In Monterey County, PG&E reported an annual electrical consumption of approximately 2,470.65 million kWh in 2019, with 1,772.56 million kWh for non-residential uses and 698.09 million kWh for residential uses (CEC 2020b).

Central Coast Community Energy (previously Monterey Bay Community Power) was formed in March 2017 as a joint powers authority to provide locally controlled, clean and renewable electricity to residents and businesses in Monterey, San Benito, and Santa Cruz Counties, as well as parts of Santa Barbara and San Luis Obispo Counties through the Community Choice Energy (CCE) model established by the State of California. The CCE model enables communities to choose clean-source power at a cost equivalent to PG&E while retaining PG&E's role in maintaining power lines and providing customer service. The CCE model helps ensure local economic vitality because surplus revenues that would normally flow to PG&E will stay in the community. CCCE started serving electricity to customers beginning spring 2018, with current PG&E customers automatically switched over (CCCE 2020). Notably, the City of Gonzales included multiple measures in the 2018 Climate Action Plan (CAP) that pertain to purchasing 100% carbon-free electricity from CCCE (City of Gonzales 2018).

3.5.1.2 Natural Gas

According to the California Energy Commission (CEC), California used approximately 22,149 million therms[1] of natural gas in 2019 (EIA 2020c). In 2019 (the most recent year for which data is available), by sector, electric power utilized 45% of the state's natural gas, followed by 24% from residential, 19% from industrial, and 12% from commercial uses (CEC 2020c). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (EIA 2020c).

PG&E provides natural gas service to most of Northern California, including Monterey County. As provided in **Table 3.5-2**, PG&E customers consumed approximately 4,969 million therms of natural gas, in 2019 (CEC 2020d).

Table 3.5-2. Pacific Gas & Electric Company 2019 Natural Gas Consumption

Sector	Total Natural Gas (in millions of therms)
Agricultural and Water Pump	34.31
Commercial Buildings	926.59
Commercial Other	61.61
Industry	1,874.15
Mining and Construction	169.63
Residential	1,902.79
Total Consumption	**4,969.08**

Source: CEC 2020d.

[1] One therm is equal to 100,000 BTU or 100 kBTU.

Demand for natural gas can vary depending on factors such as weather, price of electricity, the health of the economy, environmental regulations, energy efficiency programs, and the availability of alternative renewable energy sources. As previously indicated, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available through existing delivery systems, thereby increasing the availability and reliability of resources.

CPUC regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. The CPUC regulates natural gas utility service for approximately 11 million customers who receive natural gas from PG&E, Southern California Gas, San Diego Gas & Electric, Southwest Gas, and several smaller natural gas utilities. Most of the natural gas used in California comes from out-of-state natural gas basins (CPUC 2019b).

In 2017, California customers received 38% of their natural gas supply from basins located in the Southwest, 27% from Canada, 27% from the Rocky Mountains, and 8% from basins located within California (CPUC 2019b). Natural gas from out-of-state production basins is delivered into the state through the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Southern Trails Pipeline, and Mojave Pipeline. The North Baja–Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers it through California into Mexico. The Federal Energy Regulatory Commission regulates the transportation of natural gas on interstate pipelines, and CPUC often participates in Federal Energy Regulatory Commission regulatory proceedings to represent the interests of California natural gas consumers (CPUC 2019b).

Most of the natural gas transported through interstate pipelines, as well as some California-produced natural gas, is delivered through the PG&E and Southern California Gas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). CPUC has regulatory jurisdiction over 100,000 miles of utility-owned natural gas pipelines and thousands more miles of service lines (CPUC 2019b).

PG&E and Southern California Gas own and operate several natural gas storage fields located in Northern and Southern California. These storage fields and four independently owned storage utilities—Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage—help meet peak-season natural gas demands and allow California natural gas customers to secure natural gas supplies more efficiently (CPUC 2019b).

California's regulated utilities do not own any natural gas production facilities. All natural gas sold by these utilities must be purchased from suppliers and/or marketers (CPUC 2019b). In 2019 (the most recent year for which data is available), PG&E had delivered 115 millions of therms to Monterey County, with the majority going to non-residential uses (63 million therms) (CEC 2020e).

3.5.1.3 Petroleum

According to the U.S. Energy Information Administration, California used approximately 681 million barrels of petroleum in 2018, with the majority (584 million barrels) used for the transportation sector (EIA 2020d). This total annual consumption equates to a daily use of approximately 1.9 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 78.4 million gallons of petroleum per day, adding up to an annual consumption of 29 billion gallons of petroleum. In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel.

California has implemented policies to improve vehicle efficiency and to support use of alternative transportation, which are described in Section 3.5.2.

3.5.2 Relevant Plans, Policies, and Ordinances

3.5.2.1 Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased corporate average fuel economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

This federal legislation (the RFS) requires ever-increasing levels of renewable fuels to replace petroleum (EPA 2017). The U.S. Environmental Protection Agency is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions in greenhouse gas (GHG) emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program (RFS2) includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel, and set separate volume requirements for each one.
- EISA required the U.S. Environmental Protection Agency to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green" jobs.

3.5.2.2 State

Warren–Alquist Act

The California Legislature passed the Warren–Alquist Act in 1974, which created the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high-demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

Integrated Energy Policy Report (IEPR)

Senate Bill (SB) 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301a]). The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2019 IEPR was adopted January 31, 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast.

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure the provision of adequate, reliable, and reasonably priced electrical power and natural gas supplies; it also identified cost-effective and environmentally sound energy policies, strategies, and actions for California's consumers and taxpayers. In 2005, the CEC and CPUC adopted a second Energy Action Plan to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Senate Bill 1078 (2002)

SB 1078 established the California RPS Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

Senate Bills 107 (2006), X1-2 (2011), 350 (2015), and 100 (2018)

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% will come from renewables.

SB 350 (2015) requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

SB 100 (2018) increased the standards set forth in SB 350. The bill establishes that 44% of the total electricity sold per year to retail customers in California be secured from qualifying renewable energy sources by December 31, 2024, with that number increasing to 52% by December 31, 2027, and 60% by December 31, 2030. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 60% RPS in 2030. Therefore, any project's reliance on non-renewable energy sources would also be reduced.

Assembly Bill 1007 (2005)

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with other state agencies, plus federal and local agencies. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of

GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focused on increasing energy efficiencies, using renewable resources, and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 3.7, Greenhouse Gas Emissions, of this Environmental Impact Report (EIR).

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The 2019 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards will reduce energy used and associated GHG emissions compared to prior standards. In general, nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018b).

Title 24 also includes Part 11, California's Green Building Standards (CALGreen). CALGreen establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The 2019 CALGreen standards are the current applicable standards. For nonresidential projects, some of the key mandatory CALGreen 2019 standards involve requirements related to bicycle parking, designated parking for clean air vehicles, electric vehicle (EV) charging stations, shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, excavated soil and land clearing debris, and commissioning (24 CCR Part 11).

State Vehicle Standards

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, AB 1493 was enacted in 2002. AB 1493 required CARB to set GHG emissions standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emissions standards for motor vehicles manufactured in 2009 and all subsequent model years. The 2009–2012 standards resulted in a reduction in approximately 22% of GHG emissions compared to emissions from the 2002 fleet, and the 2013–2016 standards resulted in a reduction of approximately 30% compared to the 2002 fleet.

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global-warming gases with requirements for greater numbers of zero-emissions vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the rules would be fully implemented, new automobiles would emit 40% fewer global-warming gases and 75% fewer smog-forming emissions (CARB 2012). However, the EPA and National Highway Traffic Safety Administration published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, which revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On January 20, 2021, President Joe Biden issued an Executive Order (EO) on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, which includes review of Part One Rule by April 2021 and review of the Part

Two Rule by July 2021 (The White House 2021). As such, the effect of the SAFE Rule on the Advanced Clean Cars program is still to be determined pending this review.

Although the focus of the state's vehicle standards is on the reduction of air pollutants and GHG emissions, one co-benefit of implementation of these standards is a reduced demand for petroleum-based fuels.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates established in AB 32. As codified in California Government Code Section 65080, SB 375 requires metropolitan planning organizations to include a sustainable communities strategy in their regional transportation plan. The main focus of the sustainable communities strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also part of a bigger effort to address other development issues, including transit and vehicle miles traveled, which influence the consumption of petroleum-based fuels.

3.5.2.3 Local

Gonzales 2010 General Plan

The Conservation and Open Space, Community Character, and Sustainability Elements of the City of Gonzales 2010 General Plan provides policies and implementing actions applicable to energy conservation.

Conservation and Open Space Element

Policy COS-5.1 Water Conservation and Groundwater Recharge

Safeguard the quality and availability of groundwater supplies in Gonzales and the Salinas Valley.

Implementing Action COS- 5.1.2 – Water Conservation

Encourage water conservation by Gonzales residents by continuing to follow the State's model ordinance promoting the use of drought-tolerant landscaping and the City's water ordinance promoting water conservation practices.

Community Character Element

Policy CC-2.3 Energy Efficiency

Promote energy and resource efficient buildings. Encourage the incorporation of "green" building practices and materials within all new developments.

Implementing Action CC-2.3.1 – Green Building Program

Adopt a Green Building program which establishes incentives for incorporating green building features into new building construction or building retrofits.

Sustainability Element

Policy SUS-1.3 Increase Use of Renewable Energy

Increase the local use and production of renewable energy.

Implementing Action SUS-1.5.1 – Renewable Energy Systems

Encourage the local construction and use of renewable energy systems such as solar electric, wind power, methane power and biodiesel.

Policy SUS-1.6 Encourage Green Building Practices

Employ sustainable or "green" building techniques for the construction and operation of buildings where feasible.

Implementing Action SUS-1.6.1 – Energy Efficient Buildings

The City shall adopt the "CALGreen Code," by July 1, 2011. The City shall encourage the use of "green" technology and principals such as:

- Designing mechanical and electrical systems that achieve maximum energy efficiency with currently available technology.
- Minimizing energy use through innovative site design and building orientation that address factors such as sun-shade patterns, prevailing winds, and sun screens.
- Employ self-generation of energy using renewable technologies.
- Combining energy efficiency measures that have longer payback periods with measures that have shorter payback periods.
- Recuing levels of non-essential lighting, heating, and cooling.

Implementing Action SUS-1.6.2 – Standards for Green Building

Consider developing and adopting interim and long-term standards for green building in addition to those identified in the CALGreen Code.

Implementing Action SUS-1.6.3 – Municipal Buildings as Green Building Models

Utilize green building practices in the design of new and major remodels to City buildings. Greening of public buildings should provide a model for private construction/retrofit.

Implementing Action SUS-1.6.4 – Recycled Building Materials

Promote the reuse of building material, use materials that have recycled content, or use of materials that are derived from sustainable or rapidly renewable sources to the extent feasible.

Implementing Action SUS-1.6.5 – Construction/Demolition Recycling

Develop standard conditions of approval for all new developments to prepare and implement a construction/demolition waste recycling plan as a condition of project approval and entitlement. Enforce through the building inspection process.

Implementing Action SUS-1.6.7– Life-cycle Costing

Encourage use of life cycle costing in determining materials and construction techniques. Life cycle costing analyses the costs and benefits over the life of a particular product, technology or system.

Implementing Action SUS-1.6.8– Reduce Cooling Load

Encourage use of cool roofing and parking lot design, and strategic tree planting in parking lots to reduce the need for mechanical cooling of buildings.

- Encourage the use of cool roofing materials, such as reflective, low heat retention tiles, membranes and coatings, to reduce heat build-up.
- Plant trees and other vegetation to provide shade and cool air temperatures. In particular, properly position trees to shade buildings, air conditioning units, and parking lots.
- Recue heat build-up in parking lots through increased shading or use of cool paving materials as feasible.

Implementing Action SUS-1.6.9– Sustainable Landscape

Implement sustainable landscape design and maintenance, where feasible.

- Decrease the amount of impervious surfaces in developments.
- Strategically plant deciduous shade trees, evergreen trees, and drought tolerant native vegetation, as appropriate.
- Implement water conservation measures in site/building design and landscaping.
- Encourage the use of high efficiency irrigation technology, and recycled site water to reduce the use of potable water for irrigation.

Policy SUS-1.7 Green Municipal Operations

Utilize green practices in conducting municipal operations.

Implementing Action SUS-1.7.1– Buy Energy Efficient Products

Purchase municipal office equipment and appliances that are Energy Star products where feasible.

Implementing Action SUS-1.7.2– Green the City Fleet

Purchase the most cost-effective and lowest emission vehicle possible. Reduce vehicle size while eliminating old and underused vehicles. Promote fleet use of biodiesel as appropriate.

Implementing Action SUS-1.7.3– Reduce Municipal Office Waste

Reduce municipal waste going into landfills as a means of reducing methane emissions.

Implementing Action SUS-1.7.4– Recyclable Supplies

Promote use of recycled paper products.

3.5.3 Thresholds of Significance

The significance criteria used to evaluate the proposed project impacts to energy are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to energy would occur if the proposed project would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during proposed project construction or operation.
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
3. Result in cumulatively considerable energy impacts.

3.5.4 Impacts Analysis

3.5.4.1 Methods of Analysis

Construction

Electricity. The amount of electricity used during construction of the proposed project would be minimal because typical demand would stem from electrically powered hand tools. As such, construction electricity demand is qualitatively addressed.

Natural Gas. Natural gas is not anticipated to be required during construction of the proposed project; therefore, construction natural gas demand is qualitatively addressed.

Petroleum. Potential impacts were assessed for off-road equipment and on-road vehicle trips during construction, as provided by the California Emissions Estimator Model (CalEEMod) outputs (see Appendix B). Fuel consumption from construction equipment and vehicle trips was estimated by converting the total CO_2 emissions anticipated to be generated by the construction of the proposed project to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton (MT) CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per MT CO_2 per gallon (The Climate Registry 2020). Heavy-duty construction equipment associated with construction activities, vendor trucks, and haul trucks are assumed to use diesel fuel. Worker vehicles are assumed to be gasoline fueled. All details for construction criteria air pollutant emissions modeling discussed in Section 3.2, Air Quality, as well as Appendix B, are also applicable for the estimation of construction-related energy consumption. See Section 3.2.4.1, Methods of Analysis, and Appendix B for a discussion of construction emissions calculation methodology and assumptions used in the energy analysis.

Operation

The estimation of operational energy emissions was based on input from proposed project engineers, which estimated that the project would require approximately 1,300,000 kWh of electricity annually. Additionally, natural gas would not be required for operation of the proposed project.

Diesel fuel consumed from the testing of the emergency generator was estimated by converting the total CO_2 emissions generated by the generator to gallons using conversion factors for CO_2 to gallons of diesel. As provided by the project engineers, no additional employees would be required for the proposed project and only a water truck would be needed on a monthly basis. Additionally, the treatment ponds would only need to be dredged every 15 to 20 years, which would likely require an excavator and a haul truck to export the sludge. Based on these minimal and infrequent operational activities, which would be substantially less intense than during construction, on-road mobile and off-road equipment source energy were not quantified in the operational analysis.

3.5.4.2 Project Impact Discussion

3.5-1. The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during proposed project construction or operation.

Construction

Electricity. Temporary electric power for as-necessary lighting and electronic equipment would be provided by CCCE. The amount of electricity used during construction would be minimal because typical demand would be generated by electrically powered hand tools. The electricity used for construction activities would be temporary and minimal; therefore, proposed project construction would not result in wasteful, inefficient, or unnecessary consumption of electricity.

Natural Gas. Natural gas is not anticipated to be required during construction of the proposed project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below. Any minor amounts of natural gas that may be consumed as a result of proposed project construction would be temporary and negligible and would not have an adverse effect; therefore, proposed project construction would not result in wasteful, inefficient, or unnecessary consumption of natural gas.

Petroleum. Heavy-duty equipment associated with construction would rely on diesel fuel, as would vendor trucks involved in delivery of materials to the project site and haul trucks exporting materials off site. Construction workers would travel to and from the project sites throughout the duration of construction. It is assumed in this analysis that construction workers would travel in gasoline-powered light-duty vehicles. Appendix B lists the assumed equipment usage and vehicle trips for construction of each phase of the proposed project development.

The estimated diesel fuel usage from construction equipment, haul trucks, and vendor trucks, as well as estimated gasoline fuel usage from worker vehicles is shown in **Table 3.5-3**.

Table 3.5-3. Proposed Project Construction Petroleum Demand

Construction Phase	Off-Road Equipment (diesel)	Haul Trucks (diesel)	Vendor Trucks (diesel)	Worker Vehicles (gasoline)
	gallons			
Site Preparation	1,773.96	2,235.67	24.17	123.61
Off-site Sewer Collection System	9,848.41	7,452.22	290.12	1,483.35
Grading	31,848.56	26,082.79	0.00	1,297.94
Civil-Site Work	5,203.32	1,490.45	96.71	494.45
Structural	2,333.19	409.87	0.00	494.45

Table 3.5-3. Proposed Project Construction Petroleum Demand

Construction Phase	Off-Road Equipment (diesel)	Haul Trucks (diesel)	Vendor Trucks (diesel)	Worker Vehicles (gasoline)
	gallons			
Mechanical-Elect-Architectural	1,929.49	0.00	241.76	927.10
Total	**52,936.93**	**37,671.01**	**652.76**	**4,820.90**

Notes: See Appendix B for details.

As shown in Table 3.5-3, the proposed project is estimated to consume approximately 96,081 gallons of petroleum during the construction phase. Notably, the proposed project will be subject to CARB's In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation: (1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; (2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; (3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and 4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The fleet must either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the Best Achievable Control Technology (BACT) requirements. Overall, because the proposed project would not be unusual as compared to overall local and regional demand for energy resources and would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or state, the proposed project construction would not result in wasteful, inefficient, or unnecessary consumption of petroleum.

Operations

Electricity. As provided by the project engineers, the proposed project is anticipated to require approximately 1.3 million kWh per year for facility operations. The additional electricity demand for the proposed project would not be unusual or wasteful as compared to overall local and regional demand for energy resources. In addition, as described in Chapter 3.7, Greenhouse Gases, the proposed project would purchase 100% renewable electricity from CCCE and would connect to the solar microgrid to be developed for the Agricultural Industrial Business Park. Therefore, proposed project operations would not result in wasteful, inefficient, or unnecessary consumption of electricity.

Natural Gas. Natural gas is not anticipated to be required during operation of the proposed project. Therefore, proposed project operations would not result in wasteful, inefficient, or unnecessary consumption of natural gas.

Petroleum. The estimated diesel fuel usage associated with the emergency generator testing for proposed project operations would be approximately 1,876 gallons per year. This fuel usage would represent a minimal increase in diesel demand and emergency generator testing would be limited based on CARB's Airborne Toxics Control Measure for Stationary Compression Ignition Engines, 17 CCR § 93115; therefore, proposed project operations would not result in wasteful, inefficient, or unnecessary consumption of petroleum.

Overall, based on all of the above considerations, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation and would have **less-than-significant** energy-related impacts.

3.5-2. The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Part 6 of Title 24 of the California Code of Regulations establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically (every 3 years) to incorporate and consider new energy efficiency technologies and methodologies. Title 24 also includes Part 11, CALGreen. CALGreen institutes mandatory minimum environmental performance standards for all ground-up, new construction of commercial and state-owned buildings. The proposed project would meet any applicable Title 24 and CALGreen standards to reduce energy demand and increase energy efficiency. Conservation measures implemented into the proposed project design would include, but not limited to, the following: light-emitting diode (LED) strip lighting, water conservation fixtures, and energy efficient equipment.

Additionally, as discussed in Section 3.7, Greenhouse Gas Emissions, the proposed project would not conflict with the various state and local plans that mandate reduced energy use. Overall, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, impacts during construction and operation of the proposed project would be **less than significant**.

3.5.5 Mitigation Measures

No mitigation measures are required.

3.5.6 Level of Significance After Mitigation

Energy impacts associated with the proposed project would be less than significant without mitigation.

3.5.7 Cumulative Analysis

The cumulative setting for the proposed project includes the near-term MWWTP expansion from 1.3 MGD to 1.9 MGD, and the Gonzales Microgrid Project which would provide electric power service to customers in and adjacent to the GABIP and would export incidental power to the regional power grid.

As discussed in Impact 3.5-1 and Impact 3.5-2, the proposed project would not result in wasteful, inefficient, or unnecessary use of energy during construction or operations, nor would it conflict with an applicable plan. The near-term MWWTP expansion and the Gonzales Microgrid Project would have construction periods during which primarily petroleum would be used; however, it is expected that such usage would be temporary and would not constitute a wasteful, inefficient, or unnecessary consumption of energy. Furthermore, it is expected that the MWWTP would not have an adverse effect on energy efficiency (by maximizing the use of an existing facility and upgrading equipment), and the proposed Microgrid project would produce renewable energy. Therefore, the proposed project, together with cumulative projects, would not result in wasteful, inefficient, or unnecessary use of energy or conflicts with applicable plans. Therefore, the proposed project, in combination with past, present, and reasonably foreseeable future development, would not result in a significant cumulative impact related to energy.

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3.6 Geology and Soils

This section describes the existing geologic and soils conditions in the Industrial Wastewater Reclamation Facility (IWRF) and wastewater conveyance line area as part of the IW Conveyance and IW Reclamation Facility Project (proposed project), identifies associated regulatory requirements, and evaluates the potential impacts related to geology and soils as a result of implementation of the proposed project. This section addresses seismic conditions, the stability of the underlying geologic units, and surface soil conditions.

No comments were received during the scoping period regarding geology and soils. The analysis of the proposed project impacts related to geology and soils is partly based on information provided in the *Geotechnical Investigation, Gonzales Industrial Wastewater Recycling Facility, Gonzales, California* prepared by Pacific Crest Engineering Inc, dated March 2, 2020 (Appendix F).

3.6.1 Existing Conditions

Regional Geologic Setting

The project site is located in the northwest-southeast trending Salinas Valley, which is bound to the northeast by the Gabilan Range and to the southwest by the Sierra De Salinas Range. The Salinas Valley is underlain by the Salinian tectonic block, a geologic basement rock consisting of metamorphic and granitic rock of Paleozoic to Mesozoic age. The Salinian Block is bordered on both east and west by tectonic blocks of the Franciscan Complex. The boundaries between these tectonic blocks are large scale strike-slip faults: the San Andreas Fault Zone on the east, and the Sur-Nacimiento Fault Zone on the west (SVBGSA 2018).

The combination of tectonically driven land movement and sea-level changes has influenced the depositional environment in the Salinas Valley. Over time, the Salinas Valley has been filled with 10,000 to 15,000 feet of both marine and continental sediments. A major rise in sea-level in the middle to late Miocene epoch, between approximately 16 and 6 million years ago, resulted in thick accumulations of fine-grained marine sediments that became the Monterey Formation (SVBGSA 2018).

Following the Monterey Formation deposition, gravels, sands, silts, and clays were eroded from the surrounding mountain ranges and deposited by the Salinas River and its tributaries. These non-marine deposits include fluvial deposits as well as the alluvial fans that border portions of the basin. The alluvial fans coalesce with fluvial deposits near the main stem of the Salinas River (SVBGSA 2018).

Topography

The proposed IWRF site is located immediately north of the City of Gonzales's (City) existing municipal wastewater treatment plant (MWWTP) and the proposed wastewater conveyance line corridor extends 10,700 feet along Femin and Short Road, as described in Chapter 2, Project Description and shown on Figure 2-2, Project Location. The IWRF portion of the project site is located within agricultural fields (Appendix F). The topography of the project site is generally flat with an overall gentle slope gradient to the southwest, and ranges in elevation from about 130 feet above mean sea level (asml) along Puente Del Monte Avenue to 100 feet amsl near the existing MWWTP (Figure 2-1, Regional Map).

Geologic Units

Subsurface explorations conducted by Pacific Crest Engineering Inc., as part of a site-specific geotechnical investigation, determined that the material underlying Short Road, Gonzales River Road, and Puente Del Monte Avenue predominately consists of interbedded sandy clay, sandy silt, and clayey to silty sand. The coarser-grained sand material was generally described as poorly graded and very fine- to fine-grained. In addition, previous subsurface explorations and mapping efforts of the project site adjacent to the existing MWWTP indicate that the area is underlain by alluvial material, consisting of thick beds of sand with relatively thin, discontinuous lenses of sand mixtures, silt mixtures, and clay (Appendix F).

Seismicity and Faulting

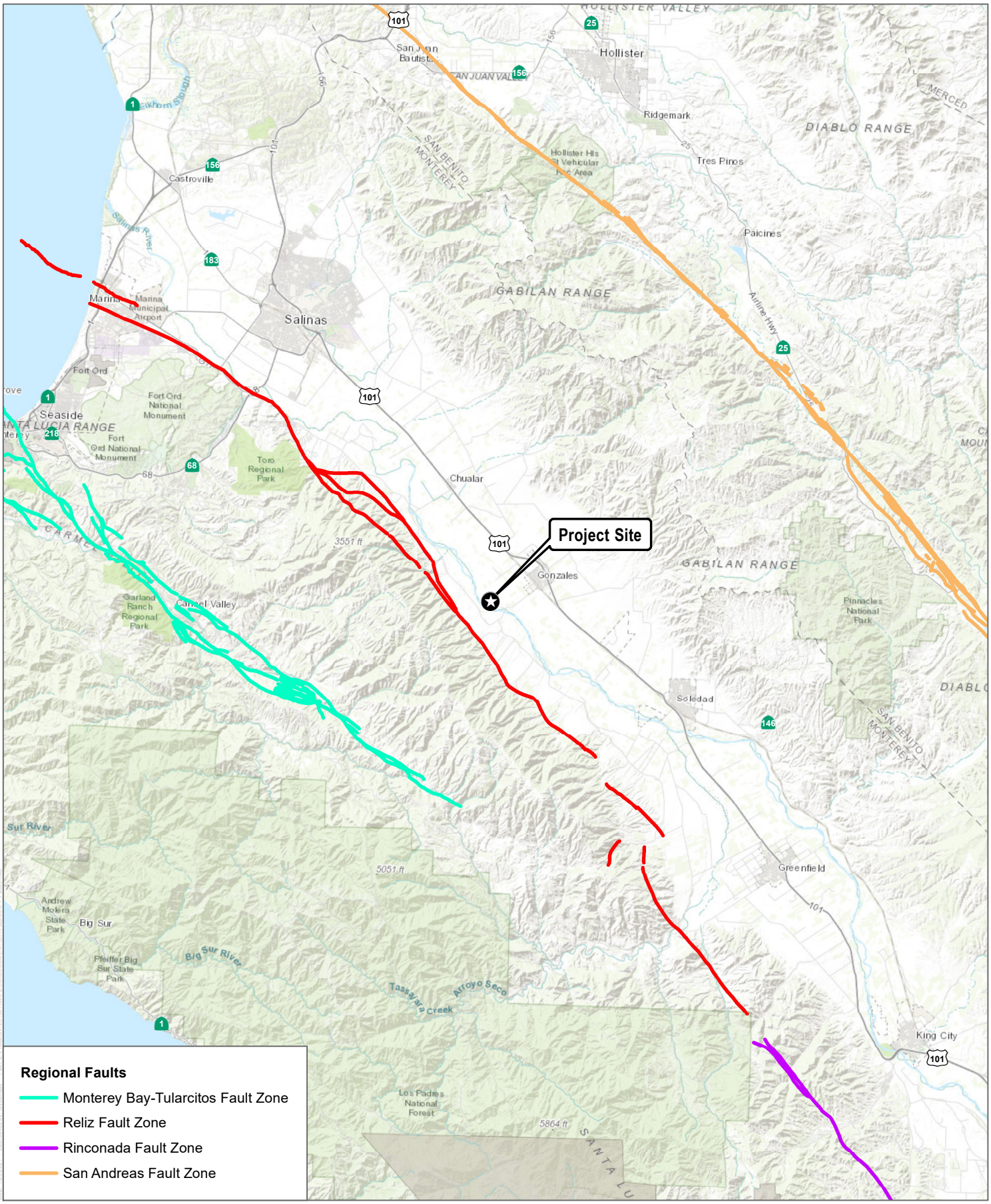
The project site is located in a seismically active region. Several large and well-known faults are located near the project site, and movement along those faults, most notably the San Andreas Fault Zone, has greatly influenced the erosional and depositional history of the area (**Figure 3.6-1, Regional Faulting**). The fault closest to the project site is the Reliz-Rinconada Fault, located approximately 1.5 miles to the southwest . The other significant faults in the region is the Monterey Bay-Tularcitos Fault. Smaller faults within the area include the Bear Valley and Pinnacles Fault (City of Gonzales 2010).

The California Geological Survey (CGS) (2018) classifies faults as:

- Holocene-active faults: faults that have had surface displacement during the past approximately 11,700 years (i.e., Holocene time). These faults exhibit signs of geologically recent movement, are most likely to experience movement in the near future and are capable of surface rupture. These faults are considered "active faults." In addition, Holocene-active faults that have had surface displacement in the last 200 years can be further classified as "historic faults."
- Pre-Holocene faults: faults that have not had surface displacement in the past 11,700 years (Holocene) but have moved during the past 130,000 years (late Quaternary) or 1.6 million years (Quaternary undifferentiated). These faults are considered "potentially active faults" and may be capable of surface rupture, but are less likely than Holocene-active faults to cause surface rupture. These faults are also capable of generating future earthquakes.
- Age-undetermined faults: faults where the recency of fault movement has not been determined. These faults are considered "inactive faults."

Holocene-active faults have been responsible for large historical earthquakes in central and northern California, including the 1868 Hayward earthquake (estimated moment magnitude [Mw] 6.9); the 1906 San Francisco earthquake (estimated Mw 7.9); and the 1989 Loma Prieta earthquake (Mw 6.9).

Most of the Holocene-active faults in California are manifested as fault zones. Fault zones are defined as a region, varying in width from yards to miles, that is bounded by major faults within which subordinate faults may be arranged variably or systematically. For example, the San Andreas Fault Zone is a region of crushed and broken rock, varying in width from a few hundred feet to a mile wide. Many smaller faults branch from and join the San Andreas Fault Zone (USGS 2016). Faults in proximity to the project site are listed in **Table 3.6-1**. Distances from the project site to individual faults represent the distance to the nearest fault segment within the respective fault zones.



SOURCE: ESRI (Accessed 2020),USGS 2020

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FIGURE 3.6-1

Regional Faulting

City of Gonzales IWTP Project

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San Andreas Fault

The Holocene-active San Andreas Fault extends for about 680 miles along the western margin of California. This fault is located near the coast in Northern California, but traverses inland portions of the State to the south of San Francisco (Figure 3.6-1), extending to the Salton Sea in Imperial County. The San Andreas Fault is the defining element of a network of right-lateral faults that constitute the San Andreas Fault System, which collectively accommodates the majority of relative north-south motion between the Pacific and North American plates (USGS 2020a).

Many large and historical earthquakes have occurred on active faults associated with the regional stress field of the San Andreas Fault System. In addition, the San Andreas Fault has generated significant damaging earthquakes in 1838 and 1865, as well as the Great San Francisco Earthquake of 1906 (USGS 2020a). Expected seismic magnitudes vary between each segment of the San Andreas. The closest fault segment of the San Andreas Fault to the project site is the Creeping section, which is located approximately 17.0 miles to the northeast and has the potential to generate between a Mw 7.2 to 7.4 earthquake (Johnson, K.M. 2013; CGS 2010).

Reliz-Rinconada Fault

The Late-Quaternary Reliz-Rinconada Fault and its related faults constitute a major structural element of the Salinas Valley. The Rinconada Fault extends approximately 145 miles from the vicinity of Frazier Park (to the south) to King City (to the north). The Reliz Fault, which continues as a right step-over from the Rinconada Fault, trends northwestward along the northeastern base of the Sierra de Salinas of the Santa Lucia Range for about 37 miles near the town of Spreckels, where it is largely concealed. While definitive geologic evidence of Holocene surface rupture has not been found, these faults are regarded as a potential earthquake source by the CGS. At its closest point, the Reliz-Rinconada Fault is approximately 1.5 miles to the southwest of the project site and has the potential to generate up to a Mw 7.3 (USGS 2009, 2020a).

Monterey Bay-Tularcitos Fault

The Holocene-active Monterey Bay-Tularcitos Fault extends approximately 52 miles, from about 4 miles southwest of Santa Cruz, near the San Gregorio Fault, across Monterey Bay southeast to the Monterey Peninsula, to near the crest of the Sierra de Salinas. This fault is located approximately 9 miles to the southwest of the project site and is capable of producing up to a Mw 7.1 earthquake (USGS 1996).

Table 3.6-1. Regional Faulting

Regional Faulting	Approximate Closest Distance to Project Site (miles)	Fault Age	Probable Magnitude (Mw)[1]
Reliz-Rinconada Fault	1.5	Pre-Holocene	7.3
Monterey Bay-Tularcitos Fault Zone	8.5	Holocene-active to Pre-Holocene	7.1
Pinnacles Fault	15.0	Age-undetermined	Unknown
San Andreas Fault Zone	17.0	Holocene-active	7.2-7.4
Bear Valley Fault	17.0	Holocene-active	7.2-7.4

[1] Moment Magnitude (Mw) is a measure of an earthquakes magnitude (size or strength) based on its seismic energy. Magnitudes are based on a logarithmic scale (base 10) which means that every whole number you go up on the magnitude scale, recorded ground motion goes up 10 times in strength. Probable Magnitude is the estimated magnitude of a given fault if it were to activate.

Table 3.6-1. Regional Faulting

Regional Faulting	Approximate Closest Distance to Project Site (miles)	Fault Age	Probable Magnitude (Mw)[1]
Pinerock Fault	17.5	Pre-Holocene	Unknown
San Benito Fault	18.0	Pre-Holocene	Unknown
San Gregorio Fault	21.5	Holocene-active to Pre-Holocene	7-7.3
Bradford Fault	21.5	Pre-Holocene	Unknown

Source: Appendix F; CGS 2010; USGS 1996, 2009; Johnson 2013; Lettis et al. 1997

Ground Shaking

Ground shaking is the movement of the Earth's surface as a result of an earthquake. Ground motion produced by seismic waves emanates from a slow or sudden slip on a fault. The degree of ground shaking felt at a given site depends on the distance from the earthquake source, the magnitude of the earthquake, the type of subsurface material on which the site is situated, and topography. Generally, ground shaking is less severe on rock than on alluvium or fill, but other local phenomena may override this generalization. Ground shaking can produce significant ground horizontal and vertical movement that can result in severe damage to structures that are generally not equipped to withstand it.

Monterey County is subject to very strong (0.3–0.6 g [percent of gravity]) to severe (greater than 0.6 g) shaking from the San Andreas, Reliz-Rinconada, and Monterey Bay-Tularcitos Faults (County of Monterey 2008). As such, the project site could be subject to moderate to strong ground shaking in the event of an earthquake on one of the many active regional faults.

Liquefaction and Lateral Spreading

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Factors determining the liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Liquefaction generally occurs at depths of less than 40 feet in soils that are young (Holocene-aged), saturated, and loose. Soils that are most susceptible to liquefaction are clay-free deposits of sands and silts, and unconsolidated alluvium. Lateral spreading is lateral soil movement on an unsupported slope, which can occur in association with liquefaction.

Subsurface explorations of the project site, conducted as part of a site-specific geotechnical investigation (Appendix F), determined that groundwater levels ranged from 11.4 to 23.1 feet below ground surface (bgs) adjacent to the existing MWWTP facility. Explorations along Short Road, Gonzales River Road, and Puenta Del Monte did not encounter groundwater to the maximum depth explored (10 to 15 feet bgs). As such, it is generally assumed that groundwater depths would decrease with distance from the Salinas River. However, actual groundwater levels within the project site may vary depending upon variances in rainfall, runoff, irrigation, and other changes compared to the time of measurement (Appendix F).

A quantitative analysis of the liquefaction potential of the project site was conducted as part of the site-specific geotechnical evaluation. The analysis considered a Mw 6.6 earthquake with an estimated peak ground acceleration value of 0.664g and a design groundwater depth of 15 feet bgs. Based on the results of the analysis, Pacific Crest

Engineering concluded that there is a very high probability that liquefaction would occur within the project site during strong seismic shaking. It is estimated that up to 8 to 12 inches of seismically-induced ground settlement could occur as a result of the model seismic event. In addition, differential settlement is estimated to result in about half of the total settlement (4 to 6 inches) (Appendix F). Similarly, as the project is underlain by soils with high groundwater levels and is in proximity to regional faults, the Monterey County Seismic Safety Map indicates that the southwestern portion of the project site, near the existing MWWTP, is located within a high liquefaction susceptible zone, while the remainder of the site, extending away from the Salinas River, is located within a moderate liquefaction susceptibility zone (County of Monterey 2020).

Landslide

A landslide is the downhill movement of masses of earth material under the force of gravity. The factors contributing to landslide potential are steep slopes, unstable terrain, and proximity to earthquake faults. This process typically involves the surface soil and an upper portion of the underlying bedrock. Movement may be very rapid, or so slow that a change of position can be noted only over a period of weeks or years (creep). The size of a landslide can range from several square feet to several square miles.

Landslides are common in Monterey County due to the combination of the rapidly uplifting mountains, locally fractured and weak rocks, and sometimes intense rainfall along the coast. However, the project site is located along gently sloping farmland, away from exposed hillslopes. Accordingly, the site-specific geotechnical evaluation determined that the potential for shallow landsliding to occur is negligible (Appendix F). Moreover, Exhibit 4.4.4, Earthquake Induced Landslide Susceptibility, of the Monterey County General Plan EIR, indicates that the project site is located in a zone of low earthquake-induced landslide susceptibility (County of Monterey 2008). As such, the project site has little to no potential to be affected by landslides.

Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface owing to subsurface movement of earth materials. The principal causes of land subsidence in the region are groundwater mining, which can cause the collapse of aquifer sediments and compaction, drainage of organic soils, underground mining, hydrocompaction, and sinkholes. There is little documentation of widespread subsidence in Monterey County (County of Monterey 2008).

Aquifer-system compaction results from pumping groundwater out of the aquifer faster than it is able to recover through recharge. This has caused considerable subsidence—as much as 15 to 25 feet in parts of the Santa Clara and San Joaquin Valleys. However, subsidence is typically less common in the Salinas Valley due to the relatively natural state of the Salinas River and lower evapotranspiration rates, particularly near the coastal margin. Subsidence can also result from pumping oil and gas, although this is less common than the pumping of groundwater. No significant subsidence was reported for any other oil fields in the County (County of Monterey 2008). Similarly, the U.S. Geological Survey Areas of Land Subsidence in California Map indicates that the project site is not within an area of recorded subsidence as a result of groundwater pumping, peat loss, or oil extraction (USGS 2020b).

Paleontological Resources

The project site is mapped as being underlain by Holocene (less than approximately 11,700 years old) surficial Quaternary alluvium (map unit Qa), according to published, geological mapping at a 1:24,000 scale (Dibblee and Minch 2006, Cohen et al. 2020). Pleistocene (approximately 2.58 million to 11,700 years old) alluvial deposits are

mapped at the surface to the southwest and to the northeast of the project site (Dibblee and Minch 2006). The younger alluvial deposits have a low paleontological resource sensitivity at the surface and at shallow depths; however, older, Pleistocene age, Quaternary alluvial deposits presumably underlie the younger alluvial deposits. Pleistocene or "Ice-Age" alluvial deposits have produced scientifically significant vertebrates in the region and have a moderate to high paleontological resource sensitivity (Natural History Museum of Los Angeles County [LACM, or museum] 2020).

Older Quaternary alluvial deposits, which can be reddish-brown in color, have been known to produce Ice-Age mammals in the project vicinity, as confirmed by the records search results (LACM, 2020). According to the museum, vertebrate fossil locality LACM 4069 is located in the San Benito River Valley. This locality yielded fossil specimens of horse (*Equus*), pronghorn antelope (Antilocapridae), and deer (Cervidae) (LACM, 2020). Another vertebrate fossil locality within the San Benito gravels, LACM (California Institute of Technology [CIT]), has also been documented nearby (LACM, 2020).

3.6.2 Relevant Plans, Policies, and Ordinances

Federal

The following federal regulations pertaining to seismicity and geologic hazards would apply to the proposed project.

Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States, through the establishment and maintenance of an effective earthquake hazards reduction program. To accomplish this goal, the act established the National Earthquake Hazards Reduction Program (NEHRP). This program was substantially amended in November 1990 by the National Earthquake Hazards Reduction Program Act (NEHRPA), which refined the description of agency responsibilities, program goals, and objectives.

The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land-use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation, and the U.S. Geological Survey.

State

The following state regulations pertaining to seismicity and geologic hazards would apply to the project.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The act also specifies that the lead agency for a project may withhold development permits

until geologic or soils investigations are conducted for specific sites, and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

California Building Standards Code

The state regulations protecting structures from geo-seismic hazards are contained in the California Building Code (CBC)(24 CCR Part 2), which is updated on a triennial basis. These regulations apply to public and private buildings in the State. The 2019 CBC, effective January 1, 2020, is based on the current International Building Code and enhances the sections dealing with existing structures. Seismic-resistant construction design is required to meet more stringent technical standards than those set by previous versions of the CBC.

Chapters 16 and 16A of the 2019 CBC include structural design requirements governing seismically resistant construction, including (but not limited to) factors and coefficients used to establish seismic site class and seismic occupancy category for the soil/rock at the building location and the proposed building design. Chapters 18 and 18A include (but are not limited to) the requirements for foundation and soil investigations (Sections 1803 and 1803A); excavation, grading, and fill (Sections 1804 and 1804A); damp-proofing and water-proofing (Sections 1805 and 1805A); allowable load-bearing values of soils (Sections 1806 and 1806A); the design of foundation walls, retaining walls, embedded posts and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of shallow foundations (Sections 1809 and 1809A) and deep foundations (Sections 1810 and 1810A). Chapter 33 of the 2019 CBC includes (but is not limited to) requirements for safeguards at work sites to ensure stable excavations and cut or fill slopes (Section 3304).

Construction activities are subject to occupational safety standards for excavation and trenching, as specified in the California Safety and Health Administration regulations (Title 8 of the California Code of Regulations) and in Chapter 33 of the CBC. These regulations specify the measures to be used for excavation and trench work where workers could be exposed to unstable soil conditions.

Paleontological Resources

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state laws and regulations (California Environmental Quality Act [CEQA]). Paleontological resources are explicitly afforded protection under CEQA, specifically in Section VII(f) of CEQA Guidelines Appendix G, the Environmental Checklist Form, which addresses the potential for adverse impacts to "unique paleontological resource[s] or site[s] or … unique geological feature[s]" (14 CCR 15000 et seq.). This provision covers fossils of significant importance—remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group—as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Further, CEQA provides that, generally, a resource shall be considered "historically significant" if it has yielded or may be likely to yield information important in prehistory (14 CCR 15064.5 [a][3][D]). Paleontological resources would fall within this category. The California Public Resources Code, Chapter 1.7, Sections 5097.5 and 30244, also regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites.

Local

The following local/regional regulations pertaining to seismicity and geologic hazards would apply to the project.

City of Gonzales General Plan

The Community Health and Safety chapter of the Gonzales General Plan, in part, summarizes goals and specific policies related to seismic hazards. Goals or policies related to geology and seismic hazards in the General Plan include the following:

Goals HS-1: Reduced risk of personal injury, loss of life, and damage to property resulting from earthquakes.

Policy HS-1.1 Seismic Safety in New Construction and Redevelopment.

Require all new construction and renovation to be designed and constructed to retain structural integrity when subject to seismic activity, in accordance with the City's building codes.

Implementation Action HS-1.1.1—Design for Seismic Safety. Require new development in areas of moderate or high seismic hazard to assess the extent of seismic hazards in accordance with State guidelines and incorporate mitigation measures that reduce them.

Implementation Action HS.1.1.3—Setbacks from New Faults. In the event that potentially active faults are discovered in the future, establish setbacks between such faults and any structures for human occupancy.

Implementation Action HS.1.1.4—Soil Analysis. Conduct soil analyses for all applications where development is proposed in areas with moderate or high seismic risks or where soil stability may be an issue.

Implementation Action HS.1.1.5—Geotechnical Investigations. Conduct geotechnical investigations using a State-registered geologist, for major development proposals on those sites within 500 feet of the Gonzales Slough and those sites identified as having high seismic hazards. These reports should evaluate measures to mitigate the effects of ground shaking, liquefaction, subsidence, settlement, and fault displacement.

Implementation Action HS-1.1.7—Public Awareness. Continue to promote public awareness of earthquake hazards and ways to reinforce buildings and prevent damage, including bolting of homes to their foundations.

Implementation Action HS-1.1.9—Subsidence and Differential Settlement. Maintain building codes, engineering standards, and groundwater withdrawal practices that minimize the risk of subsidence and differential settlement.

County of Monterey General Plan

The Safety Element of the County of Monterey General Plan Includes the following policies related to geology and soils. While the project is not subject to County jurisdiction, a portion of the project (pipeline alignment) is within unincorporated Monterey County.

Goal S-1 Minimize the potential for loss of life and property resulting from geologic and seismic hazards.

Policies

S-1.1 Land uses shall be sited and measures applied to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from ground shaking, liquefaction, landslides, and other geologic hazards in the high and moderate hazard susceptibility areas.

S-1.2 A Geologic Constraints and Hazards Database shall be developed and maintained in the County Geographic Information System (GIS). The GIS shall be used to identify areas containing hazards and constraints that could potentially impact the type or level of development allowed in these areas. Maps maintained as part of the GIS include:

a. Active Regional Faults
b. Relative Seismic Shaking Hazards
c. Relative Landslide Susceptibility
d. Relative Earthquake-Induced Liquefaction Susceptibility
e. Steep Slope Constraints
f. Coastal Erosion
g. Moderate and High Erosion Hazards
h. Highly Erodible Soils

S-1.3 Site-specific geologic studies may be used to verify the presence or absence and extent of the hazard on the property proposed for new development and to identify mitigation measures for any development proposed. An ordinance including permit requirements relative to the siting and design of structures and grading relative to seismic hazards shall be established.

S-1.5 Structures in areas that are at high risk from fault rupture, landslides, or coastal erosion shall not be permitted unless measures recommended by a registered engineering geologist are implemented to reduce the hazard to an acceptable level. Development shall be discouraged in the following areas:

a. Areas within 50 feet of active faults. Within State or County Earthquake Fault Zones, trenching or other suitable methodology shall be used to determine the location of the fault.
b. Areas within or adjacent to large active landslides. Large active landslides are those that are economically or technically infeasible to mitigate because of their rate of movement or size and volume.

S-1.6 New development shall not be permitted in areas of known geologic or seismic hazards unless measures recommended by a California certified engineering geologist or geotechnical engineer are implemented to reduce the hazard to an acceptable level. Areas of known geologic or seismic hazards include:

a. Moderate or high relative landslide susceptibility.
b. High relative erosion susceptibility.
c. Moderate or high relative liquefaction susceptibility.
d. Coastal erosion and seacliff retreat.
e. Tsunami run-up hazards.

S-1.7 Site-specific reports addressing geologic hazard and geotechnical conditions shall be required as part of the planning phase and review of discretionary development entitlements and as part of review of ministerial permits in accordance with the CBC as follows:

a. Geotechnical reports prepared by State of California licensed Registered Geotechnical Engineers are required during building plan review for all habitable structures and habitable additions over 500 square feet in footprint area. Additions less than 500 square feet and non-habitable buildings may require geotechnical reports as determined by the pre-site inspection.

b. A Registered Geotechnical Engineer shall be required to review and approve the foundation conditions prior to plan check approval, and if recommended by the report, shall perform a site inspection to verify the foundation prior to approval to pour the footings. Setbacks shall be identified and verified in the field prior to construction.

c. All new development and subdivision applications in State- or County-designated Earthquake Fault Zones shall provide a geologic report addressing the potential for surface fault rupture and secondary fracturing adjacent to the fault zone before the application is considered complete. The report shall be prepared by a Registered Geologist or a Certified Engineering Geologist and conform to the State of California's most current Guidelines for evaluating the hazard of surface fault rupture.

d. Geologic reports and supplemental geotechnical reports for foundation design shall be required in areas with moderate or high landslide or liquefaction susceptibility to evaluate the potential on- and off-site impacts on subdivision layouts, grading, or building structures.

e. Where geologic reports with supplemental geotechnical reports determine that potential hazards affecting new development do not lead to an unacceptable level of risk to life and property, development in all Land Use Designations may be permissible, so long as all other applicable General Plan policies are complied with.

f. Appropriate site-specific mitigation measures and mitigation monitoring to protect public health and safety, including deed restrictions, shall be required.

S-1.8 As part of the planning phase and review of discretionary development entitlements, and as part of the review of ministerial permits in accordance with the CBC Code, new development may be approved if it can be demonstrated that the site is physically suitable and the development will neither create nor significantly contribute to geologic instability or geologic hazards.

3.6.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact geology and soils would occur if the proposed project would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
   ii. Strong seismic ground shaking
   iii. Seismic-related ground failure, including liquefaction
   iv. Landslides

2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
5. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.
6. Directly or indirectly destroy a unique paleontological resources or site or unique geologic feature.

As described in the Initial Study (Appendix A), the project would have no impact related to rupture of a known earthquake fault, landslide, substantial erosion, expansive soils, or soils inadequately capable of supporting septic tanks.

3.6.4 Impacts Analysis

3.6-1: ***The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:***

Strong seismic ground shaking.

The project site is located in the seismically active region of California. The pre-Holocene Reliz-Rinconada Fault is located approximately 1.5 miles to the southwest of the project site. This fault, as well as other regional faults (e.g., San Andreas and Monterey Bay-Tularcitos Faults), are capable of producing moderate to large earthquakes that could affect the proposed IWRF and wastewater conveyance line. However, project construction would be completed in accordance with relevant State, County, and City building codes. As with all development with the County and City, development within the project site would be required to comply with the seismic safety requirements of the CBC and relevant County and City building codes. The CBC provides procedures for earthquake-resistant structural design that includes considerations for on-site soil conditions, occupancy, and the configuration of the structure, including the structural system and height. The CBC also requires the completion of a site-specific geotechnical investigation during the design phase of the project.

A site-specific geotechnical investigation has been prepared for the project and includes recommendations of specific design criteria to mitigate the potential for structural damage as a result of seismic ground shaking. Recommendations provided in the investigation include over-excavation of incompetent material, compaction of backfilled soils, and foundation specifications designed to resist seismic hazards (Appendix F). Although substantial damage to structures may be unavoidable during large earthquakes, the proposed IWRF facilities, including a headworks with influent screen, an influent lift station with a flow meter, and effluent percolation beds, would be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage, and loss of life.

As previously discussed, Chapters 18 and 18A of the CBC include (but are not limited to) the requirements for foundation and soil investigations (Sections 1803 and 1803A); excavation, grading, and fill (Sections 1804 and 1804A); damp-proofing and water-proofing (Sections 1805 and 1805A); allowable load-bearing values of soils (Sections 1806 and 1806A); the design of foundation walls, retaining walls, embedded posts

and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of shallow foundations (Sections 1809 and 1809A) and deep foundations (Sections 1810 and 1810A).

In addition to being constructed in accordance with relevant State, County, and City building codes, construction and operation of the proposed IWRF and wastewater conveyance line would not directly or indirectly cause substantial adverse effects involving strong seismic ground shaking. Therefore, impacts would be **less than significant**.

Seismic-related ground failure, including liquefaction.

As previously discussed, the proposed IWRF site, as well as portions of Short Road, are located in an area of very high liquefaction potential. With the exception of Short Road, the proposed wastewater conveyance line corridor is located within an area of moderate liquefaction potential. Hazards associated with soil liquefaction and seismic-related ground failure include temporary loss of soil bearing capacity, lateral spreading, differential compaction, and slope instability. A site-specific liquefaction analysis concluded that the project could be susceptible to up to 6 to 12 inches of seismically induced settlement and up to 4 to 6 inches of differential settlement. However, implementation of the recommendations provided in the geotechnical investigation would ensure that the IWRF and proposed pipeline are constructed to resist seismically-related ground-failure. These recommendations include over-excavation of unconsolidated (or loose) material, the compaction of fill soils, concrete design (including footings), and the installation of reinforced concrete mat foundations and retaining walls that are designed to reduced static and seismically-included settlement (Appendix F).

The site-specific geotechnical investigation (Appendix F) determined that groundwater levels at the proposed IWRF site ranged from 11 to 23 feet bgs. An infiltration test completed for the project (Dudek 2020) included installation of monitoring wells adjacent to the infiltration test pond, to evaluate the effect of water infiltration on the shallow groundwater in the area of the proposed IWRF rapid percolation ponds. Testing indicated only a minor increase in groundwater levels (i.e., 0.06 feet) as a result of water infiltration. Based on the lack of groundwater response to the infiltration tests, there does not appear to be a significant potential for rising groundwater beneath the proposed IWRF percolation ponds. Groundwater levels may increase regionally due to higher rainfall and higher Salinas River levels, in combination with IWRF percolations (Dudek 2020). However, the liquefaction potential would not increase as a result of groundwater mounding beneath the IWRF site, as the liquefaction potential at the site is already very high.

As previously discussed, project construction would be completed in accordance with relevant State, County, and City building codes. As with all development within the County and City, development within the project site would be required to comply with the seismic safety requirements of the CBC and relevant building codes. Therefore, potential groundwater mounding associated with operation of percolation beds would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction-induced ground failure. Impacts would be **less than significant.**

3.6-2. The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site lateral spreading, subsidence, liquefaction or collapse.

As previously discussed for significance threshold 3.6-1, the proposed project would not increase the potential for liquefaction and lateral spreading to occur. Therefore, the potential impacts associated with these geologic hazards would be **less than significant**.

Subsidence

As previously discussed, the Salinas Valley has not been historically prone to subsidence as a result of groundwater extraction, oil extraction, or peat loss. In addition, project construction and operation would not exacerbate the potential for subsidence to occur. Although groundwater dewatering may be required during construction, including excavation of ponds, the relative amount of groundwater extracted would be minimal. Therefore, potential impacts associated with subsidence would be **less than significant**.

Collapsible Soils

Soils underlying the project site are generally comprised of sandy clay, sandy silt, clayey to silty sand, and thick beds of sand, which may be conducive to soil collapse. Nevertheless, project structures would be constructed in accordance with recommendations of the site-specific geotechnical investigation (Appendix F). In addition, structures incuding the blower and electrical building and lift station, would be built in compliance with CBC requirements, including allowable load-bearing values of soils (Sections 1806 and 1806A); the design of embedded posts and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of deep foundations (Sections 1810 and 1810A), which are designed to assure safe construction requirements appropriate to site conditions. Therefore, the project would not be located on a geologic unit that is unstable due to soil collapse, or would become unstable as a result of project development, and potentially result in on- or off-site soil collapse. Potential impacts associated with collapsible soils would be **less than significant**.

3.6-3. The project could directly or indirectly destroy a unique paleontological resource or site.

No paleontological resources were identified within the project site as a result of the institutional records search or desktop geological review. However, intact paleontological resources may be present below the original layer of younger, Holocene age alluvial deposits. Given the proximity of past fossil discoveries in the surrounding area and the underlying older Pleistocene age deposits, the project site is highly sensitive for supporting paleontological resources at depth. In the event that intact paleontological resources are located on the project site, ground-disturbing activities associated with construction of the project, such as grading during site preparation and trenching for utilities, have the potential to destroy a unique paleontological resource or site. Without mitigation, the potential damage to paleontological resources during construction would be a **potentially significant** impact.

3.6.5 Mitigation Measures

With respect to paleontological resources, the following mitigation measure would be required should excavations extend to depths greater than five (5) feet below the ground surface, impacting older Quaternary alluvium (Pleistocene age) within the project area.

GEO-1: Paleontological Resources. Prior to commencement of any ground-disturbing activity in areas of moderate to high paleontological sensitivity, the City of Gonzales shall retain a qualified paleontologist per the 2010 Society of Vertebrate Paleontology guidelines. The paleontologist shall prepare a paleontological resources impact mitigation program for the project. The paleontological resources impact mitigation program shall be consistent with the Society of Vertebrate Paleontology guidelines and shall include: requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the project area based on construction plans and/or geotechnical

reports; procedures for adequate paleontological monitoring and discoveries treatment; and paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting, and a paleontological monitor under the direction of the qualified paleontologist shall be on site during ground-disturbing activities that extend to depths greater than five (5) feet below the ground surface in areas of previously undisturbed moderate and/or high paleontological resources sensitivity. In the event that paleontological resources (e.g., fossils) are unearthed, the paleontological monitor shall temporarily halt and/or divert ground-disturbing activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the paleontological monitor shall allow ground-disturbing activities to recommence in the area of the find.

3.6.6 Level of Significance After Mitigation

Impacts to geology and soils would be **less than significant**. Impacts to paleontological resources would be reduced to a level less than significant with implementation of mitigation measure MM-GEO-1.

3.6.7 Cumulative Impacts

As described above, potential geological impacts, including paleontological impacts, are site specific. Cumulative projects including the near-term MWWTP expansion and the Gonzales Microgrid Project would not interact or combine with these impacts to create significant cumulative impacts.

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3.7 Greenhouse Gases

This section describes the existing setting related to climate change and greenhouse gases (GHGs), conditions present at the location of the Industrial Wastewater Reclamation Facility (IWRF) and wastewater conveyance line as part of the IW Conveyance and IW Reclamation Facility Project (proposed project); discusses applicable federal, state, and regional regulations; and evaluates the potential effects on GHGs associated with development of the proposed project.

No public and agency comments related to GHGs were received during the public scoping periods in response to the original Notice of Preparation (NOP). For a complete list of public comments received during the public scoping periods refer to Appendix A.

3.7.1 Existing Conditions

3.7.1.1 Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017a).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-twentieth century and is the most significant driver of observed climate change (IPCC 2013; EPA 2017a). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system.

3.7.1.2 Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (see also 14 CCR 15364.5).[1] Some GHGs, such as CO_2, CH_4, and N_2O, are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, PFCs, and SF_6, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.[2]

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are from the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (such as in rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., CFCs, hydrochlorofluorocarbons [HCFCs], and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the ozone depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable

[1] Climate forcing substances include GHGs and other substances such as black carbon and aerosols. This discussion focuses on the seven GHGs identified in the California Health and Safety Code Section 38505, because impacts associated with other climate forcing substances are not evaluated herein.

[2] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change's Second Assessment Report and Fourth Assessment Report (IPCC 1995, 2007), the California Air Resources Board's Glossary of Terms Used in GHG Inventories (CARB 2018), and the U.S. Environmental Protection Agency's Glossary of Climate Change Terms (EPA 2016).

molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.

- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF_3 is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere) and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric ozone (O_3).

Hydrochlorofluorocarbons. HCFCs are a large group of compounds, whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential. Diesel particulate matter emissions are a major source of black carbon and are toxic air contaminants that have been regulated and controlled in California for several decades to protect public health. In relation to declining diesel particulate matter from the California Air Resources Board's (CARB's) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O_2), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

3.7.1.3 Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2020). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons of CO_2 equivalent (MT CO_2e).

The current version of the California Emissions Estimator Model (CalEEMod) (Version 2016.3.2) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC's Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the Project.

3.7.1.4 Greenhouse Gas Inventories

Global Inventory

Anthropogenic GHG emissions worldwide in 2018 (the most recent year for which data is available) totaled approximately 51,800 million metric tons (MMT) of CO_2e, excluding land use change and forestry (PBL 2019). Six countries—China, the United States, the Russian Federation, India, Japan, and Brazil—and the European community accounted for approximately 65% of the total global emissions, or approximately 33,700 MMT CO_2e (PBL 2019). **Table 3.7-1** presents the top GHG-emissions-producing countries.

Table 3.7-1. Six Top Greenhouse-Gas-Producer Countries and the European Union

Emitting Countries (listed in order of emissions)	Greenhouse Gas Emissions (MMT CO_2e)
China	13,600
United States	6,700
European Union	4,500
India	3,700
Russian Federation	2,500
Japan	1,400
Brazil	1,300
Total	**33,700**

Source: PBL 2019.
Note: MMT CO_2e = million metric tons of carbon dioxide equivalent.

National Inventory

Per the U.S. Environmental Protection Agency (EPA) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018 (EPA 2020), total United States GHG emissions were approximately 6,676.6 million metric tons (MMT) CO_2e in 2018 (EPA 2020). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 81.3% of total GHG emissions (5,428.1 MMT CO_2e). The largest source of CO_2, and of overall GHG

emissions, was fossil-fuel combustion, which accounted for approximately 92.8% of CO_2 emissions in 2018 (5,031.8 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2018 are higher by 3.7%, down from a high of 15.2% above 1990 levels in 2007. GHG emissions decreased from 2017 to 2018 by 2.9% (188.4 MMT CO_2e) and overall, net emissions in 2018 were 10.2% below 2005 levels (EPA 2020).

State Inventory

According to California's 2000–2018 GHG emissions inventory (2020 edition), California emitted 425 MMT CO_2e in 2018, including emissions resulting from out-of-state electrical generation (CARB 2020). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2018 are presented in **Table 3.7-2**.

Table 3.7-2. Greenhouse Gas Emissions in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	169.50	40%
Industrial	89.18	21%
Electric power[b]	63.11	15%
Agriculture	32.57	8%
Residential	25.74	6%
Commercial	13.46	4%
High global-warming potential substances	20.46	5%
Recycling and waste	9.09	2%
Total	**425.28**	**100%**

Source: CARB 2020.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent per year.
Emissions reflect the 2018 California GHG inventory.
[a] Percentage of total has been rounded, and total may not sum due to rounding.
[b] Includes emissions associated with imported electricity, which account for 24.57 MMT CO_2e annually.

Between 2000 and 2018, per-capita GHG emissions in California have dropped from a peak of 14.0 MT per person in 2001 to 10.7 MT per person in 2018, representing a 24% decrease. In addition, total GHG emissions in 2018 were approximately 1 MMT CO_2e higher than 2017 emissions (CARB 2020).

Local Inventory

The City has established a goal to reduce its community-wide GHG to reduce community GHG emissions by 15% below baseline emissions by 2020, a 49% reduction in baseline emissions by 2030, and an 83% reduction in baseline emissions by 2050 (City of Gonzales 2018). The City's community-wide GHG emissions inventory for baseline year 2005 is presented in **Table 3.7-3**.

Table 3.7-3. City of Gonzales (Year 2005) Communitywide Greenhouse Gas Emissions Inventory

Community Sector	Total MT CO_2e/year	CO_2e (%)[1]
Residential	6,155	24.5%
Commercial and Industrial	8,069	32.1%
Transportation	3,664	14.6%

Table 3.7-3. City of Gonzales (Year 2005) Communitywide Greenhouse Gas Emissions Inventory

Community Sector	Total MT CO_2e/year	CO_2e (%)[1]
Solid Waste	1,988	7.9%
Government Operations	742	3.0%
Agriculture Operations	4,520	18.0%
Total	**639,419**	**100%**

Source: City of Gonzales 2018.
Note: GHG = greenhouse gas; MT CO_2e = metric tons of carbon dioxide equivalent per year
1 Totals may not sum due to rounding.

As shown on Table 3.7-3, approximately 32% of the City's GHG emissions in 2005 were attributed to commercial and industrial sources with the next highest attributed to residential, which accounted for approximately 25% of the City's GHG emissions.

3.7.1.5 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 IPCC Synthesis Report (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, rising sea levels, and ocean acidification (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting the long-term warming trend since pre-industrial times, observed global mean surface temperature for the decade 2006–2015 was 0.87°C (likely between 0.75°C and 0.99°C) higher than the average over the 1850–1900 period (IPCC 2018). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0°C (1.8°F) of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C (1.4°F to 2.2°F) (IPCC 2018). Global warming is likely to reach 1.5°C (2.7°F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2018).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernible evidence that climate change is occurring in California and is having significant, measurable impacts in the state. Changes in the state's climate have been observed including an increase in annual average air temperature with record warmth from 2012 to 2016, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days, and an increase in variability of statewide precipitation (OEHHA 2018).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers and snowpack—upon which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state's annual water supply.

Impacts of climate on physical systems have been observed such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in spring snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (2006, 2009, 2012, and 2018), which have addressed the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming. To address local and regional governments' need for information to support action in their communities, the Fourth Assessment (CNRA 2018a) includes reports for nine regions of the state, including the Central Coast region, which includes Monterey County where the proposed project is located. Key projected climate changes for the Central Coast region include the following (CNRA 2018a):

- Continued future warming over the Central Coast region. Across the region, average maximum temperatures are projected to increase around 4°F to 5°F by the mid-century, and 7°F to 8°F by the late-century.
- Extreme temperatures are also expected to increase. The hottest day of the year may be up to 8°F warmer for many locations across the Central Coast region by the late century under certain model scenarios. The number of extremely hot days is also expected to increase across the region.
- Despite small changes in average precipitation, dry and wet extremes are both expected to increase. By the late twenty-first century, the wettest day of the year is expected to increase across most of the Central Coast region, with some locations experiencing a 26% increase under certain model scenarios. When combined with higher temperatures, these changes will create significant challenges for the state's water supplies, potentially creating more serious flooding events as well as drier conditions.
- Wildfire is a frequent occurrence within the Central Coast region. Prediction of wildfire severity and frequency change in Central Coast is challenging, particularly given uncertainty in climate predictions of precipitation and wind for this region and the high and complex sensitivity of fire regimes in Mediterranean type Ecosystems to precipitation and climatic water deficits. It is important to recognize, however, that the basic characterization of this system as one that is dominated by fire is unlikely to change, and it is highly likely that the Central Coast will continue to see large, severe fires. Maximum and minimum temperatures for the Central Coast will continue to increase through the next century, with greater increases in the inland region. Precipitation is expected to increase slightly, but precipitation variability will increase substantially.
- The future of fog is uncertain because system feedbacks and their response to climate change are not well characterized. Fog can be intercepted by coastal zone fora (which obtain up to one-third of their moisture from fog) and can also prevent low stream flows, which can keep salmonids from drying out during dry periods.

- Periodic El Niño events dominate coastal hazards across the Central Coast while atmospheric rivers, expected to increase, are the dominant drivers of locally-extreme rainfall events.
- Recently observed and projected acceleration in sea level rise (SLR) poses a significant threat to the regions' coastal communities. Future flooding is also a serious concern.
- Estuarine systems will be affected by accelerated SLR, warming of water and air, ocean acidification, and changes in runoff. Some Central Coast marshes may drown or become shallow mudflats, leading to a loss of the ecosystem services that marshes provide, including carbon sequestration.
- Many beaches will narrow considerably. As many as two-thirds will be completely lost over the next century, along with the ecosystems supported by those beaches. The landward erosion of beaches will be driven by accelerating SLR combined with a lack of ample sediment, effectively drowning the beaches between the rising ocean and the backing cliffs and/or urban hardscape.
- Projected future droughts are likely to be a serious challenge to the region's already stressed water supplies.
- Water supply shortages, already common during drought, will be exacerbated. Higher temperatures may result in increases in water demand for agriculture and landscaping. Reduced surface water will lead to increases in groundwater extractions that may result in increased saltwater intrusion. Lower surface flows will lead to higher pollutant concentrations and will impact aquatic species.
- Central Coast native plants are a large part of the world's floristic provinces. Plant species responses to climate change will in general depend on the climate in which a population evolved and its own unique climate tolerances. Coastal shrublands resilience depends on climate effects to physiological responses that are modified by biotic interactions and the extent of anthropogenic land use. Grasslands closer to the coast will be less affected than interior grasslands where warming is already documented.
- Climate change outcomes for forests will depend largely on multiple abiotic drivers (increased air temperatures, altered fog patterns, changes in winter precipitation), and biotic factors (invasive species and insect and pest outbreaks).
- Terrestrial wildlife is already experiencing local extinctions. Species may have robust climate refugia in the region's mountains characterized by cooler temperatures and higher levels of precipitation.
- The aquatic life of streams and rivers are threatened by projected extreme swings from drought to foods, and exacerbated by fire and erosion that buries habitat in sediments. Climate impacts can threaten the survival of already endangered Steelhead and Coho salmon, and further reduce the diversity and abundance of sensitive aquatic insects.
- Impacts to the region's public health include increases in heat-related illnesses for agricultural workers, harmful particulate matter from wildfires, and an increase in ground-level O_3. Infectious/ vector-borne diseases include an increase in Valley Fever and Pacific Coast tick fever, and an increase in harmful algal blooms will have detrimental effects on animals and people exposed to toxins released from the algae.
- Residential electricity demand is likely to be affected by more frequent heat waves due to increases in cooling requirements, and warming temperatures are likely to affect electricity supply from gas-fired plants.
- Agricultural production is highly sensitive to climate change, including amounts, forms, and distribution of precipitation, changes in temperatures, and increased frequency and intensity of climate extremes.

3.7.2 Relevant Plans, Policies, and Ordinances

3.7.2.1 International

United Nations Framework Convention on Climate Change, Kyoto Protocol, and Paris Agreement

In 1992, numerous countries joined an international treaty, the United Nations Framework Convention on Climate Change (UNFCCC), as a framework for international cooperation to combat climate change by limiting average global temperature increases and the resulting climate change, and coping with associated impacts. Currently, there are 197 Parties (196 States and 1 regional economic integration organization) in the UNFCCC (UNFCCC 2019).

By 1995, countries launched negotiations to strengthen the global response to climate change, and, two years later, adopted the Kyoto Protocol, which was the first international agreement to regulate GHG emissions. The Kyoto Protocol legally binds developed country Parties to emission reduction targets. The Protocol's first commitment period started in 2008 and ended in 2012. The second commitment period began on January 1, 2013 and will end in 2020. More than 160 countries signed the Kyoto Protocol (UNFCCC 2019). In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended the United States involvement in the Kyoto Protocol.

The 2015 Paris Agreement, adopted in Paris on December 12, 2015, marks the latest step in the evolution of the UN climate change regime and builds on the work undertaken under the Convention. The Paris Agreement charts a new course in the global effort to combat climate change. The Paris Agreement central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C (UNFCCC 2019). The Paris Agreement also aims to strengthen the ability of countries to deal with the impacts of climate change. The Paris Agreement requires all Parties to put forward their best efforts through nationally determined contributions and to strengthen these efforts in the years ahead.

The Paris Agreement entered into force on November 4, 2016, 30 days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55% of the total global GHG emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depositary (UNFCCC 2019). On November 4, 2019, the Trump Administration gave formal notice of intention to withdraw from the Paris Agreement; however, the withdrawal becomes effective one year after notification (in November 2020). Notably, President Joe Biden re-joined the Paris Agreement on January 21, 2021, which was accepted by the United Nations; the United States will be formally re-entered into the Paris Agreement on February 29, 2021.

3.7.2.2 Federal

Massachusetts v. EPA

In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."

- The administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling previously discussed, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728).

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021 (77 FR 62624–63200). On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks (EPA 2017b).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018 (76 FR 57106–57513). The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6%–23% over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

In August 2018, EPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards now in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2%–3% of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of 1°C by 2100 (EPA and NHTSA 2018). California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives.

On September 27, 2019, the EPA and NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program (84 FR 51310), which became effective November 26, 2019. The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the EPA and NHTSA issued the Part Two Rule, which will go into effect 60 days after being published in the Federal Register. The Part Two Rule sets CO_2 emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. On January 20, 20201, President Joe Biden issued an Executive Order (EO) on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, which includes review of Part One Rule by April 2021 and review of the Part Two Rule by July 2021 (The White House 2021).

3.7.2.3 State

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

The state has taken a number of actions to address climate change. These include EOs, legislation, and CARB plans and requirements. These are summarized below.

EO S-3-05. EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, GHG emissions should be reduced to 1990 levels by 2020, and GHG emissions should be reduced to 80% below 1990 levels by 2050.

Assembly Bill (AB) 32. In furtherance of the goals established in EO S-3-05, the legislature enacted AB 32. The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive multi-year program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives.

CARB's 2007 Statewide Limit. In 2007, in accordance with California Health and Safety Code, Section 38550, CARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO_2e).

CARB's Climate Change Scoping Plan. One specific requirement of AB 32 is for CARB to prepare a scoping plan for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (California Health and Safety Code, Section 38561[a]), and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan. The Climate Change Scoping Plan: A Framework for Change (Scoping Plan) included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
2. Achieving a statewide renewable energy mix of 33%.
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions.
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS) (17 CCR 95480 et seq.).
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15% from then levels (2008) by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EO S-3-05 and EO B-16-2012. The First Update concluded that California is on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions (CARB 2014). The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050 including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the state's 1990 emissions level, using more recent GWPs identified by the IPCC, from 427 MMT CO_2e to 431 MMT CO_2e (CARB 2014).

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. The governor called on California to pursue a new and ambitious set of strategies, in line with the five climate change pillars from his inaugural address, to reduce GHG emissions and prepare for the unavoidable impacts of climate change. In the summer of 2016, the legislature affirmed the importance of addressing climate change through passage of SB 32 (Chapter 249, Statutes of 2016).

In December 2017, CARB adopted the 2017 Climate Change Scoping Plan Update (2030 Scoping Plan) (CARB 2017). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' known commitments include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the LCFS, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the cap-and-trade program and a measure to reduce GHGs from refineries by 20%.

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions. CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse Gases (Title 40, CFR, Part 98). Specifically, Section 95100(c) of the Mandatory Reporting Regulation incorporated those requirements that EPA promulgated in the Federal Register on October 30, 2009; July 12, 2010; September 22, 2010; October 28, 2010; November 30, 2010; December 17, 2010; and April 25, 2011. In general, entities subject to the Mandatory Reporting Regulation that emit over 10,000 MT CO_2e per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 MT CO_2e per-year threshold are required to have their GHG emission report verified by a CARB-accredited third party.

EO B-18-12. EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

SB 605 and SB 1383. SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state, and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of short-lived climate pollutants (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy in March 2017. The Short-Lived Climate Pollutant Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, CH_4, and fluorinated gases.

EO B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achieving this

goal, EO B-30-15 called for CARB to update the Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also called for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

Senate Bill (SB) 32 and AB 197. SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to the CARB Board as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

EO B-55-18. EO B-55-18 (September 2018) establishes a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." This EO directs CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code, Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402[d]) and cost effectiveness (California Public Resources Code, Sections 25402[b][2] and [b][3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards, and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards will further reduce energy used and associated GHG emissions compared to prior standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as California's Green Building Standards (CALGreen), and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and

interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2019 standards, which are the current standards, became effective January 1, 2020. The CALGreen standards also include voluntary efficiency measures that are implemented at the discretion of local agencies and applicants.

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems.

SB 1. SB 1 (August 2006, "Go Solar California" or "Million Solar Roofs") established a $3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. The goals included establishing solar energy systems as a viable mainstream option for both homes and businesses within 10 years of adoption, and placing solar energy systems on 50% of new homes within 13 years of adoption.

AB 1470 (Solar Water Heating). This bill established the Solar Water Heating and Efficiency Act of 2007. The bill includes findings and declarations of the legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand.

Renewable Energy and Energy Procurement

SB 1078. SB 1078 (September 2002) established the Renewables Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (EO S-14-08 and EO S-21-09).

SB 1368. SB 1368 (September 2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities.

AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting, to reduce electricity consumption by 50% for indoor residential lighting and 25% for indoor commercial lighting.

EO S-14-08. EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020.

EO S-21-09 and SB X1-2. EO S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, Statutes of 2011) signed by Governor Brown in April 2011.

SB X1-2 expanded the RPS by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years.

Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. SB X1-2 applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators.

SB 350. SB 350 (October 2015, Clean Energy and Pollution Reduction Act) further expanded the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. Regarding mobile sources, as one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see California Public Utilities Code Section 740.12).

SB 100. SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024; 52% by December 31, 2027; and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Mobile Sources

State Vehicle Standards (AB 1493 and EO B-16-12). AB 1493 (July 2002) was enacted in a response to the transportation sector accounting for more than half of California's CO_2 emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emissions vehicles. It ordered CARB, CEC, California Public Utilities Commission, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare. As explained under the "Federal Vehicle Standards" description above, EPA and NHTSA approved the SAFE Vehicles Rule Part One and Two, which revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. As the EPA rule is under review per President Biden's EO, and CARB has not issued GHG adjustment factors for EMFAC, this analysis continues to utilize the best available information at this time, as set forth in EMFAC.

Heavy Duty Diesel. CARB adopted the final Heavy Duty Truck and Bus Regulation, Title 13, Division 3, Chapter 1, Section 2025, on December 31, 2014, to reduce particulate matter and NO_x emissions from heavy-duty diesel vehicles. The rule requires particulate matter filters be applied to newer heavier trucks and buses by January 1,

2012, with older vehicles required to comply by January 1, 2015. The rule will require nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxic Control Measure to limit idling of diesel-fueled commercial vehicles on December 12, 2013. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR 2485).

EO S-1-07. EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining LCFS for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020 (17 CCR 95480 et seq.). The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered.

SB 375. SB 375 (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035 and to update those targets every 8 years. SB 375 requires each of the state's 18 regional metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG reduction targets set by CARB. If a metropolitan planning organization is unable to devise an SCS to achieve the GHG reduction target, the metropolitan planning organization must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), a SCS does not (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In September 2010, CARB adopted the first SB 375 targets for the regional metropolitan planning organizations. CARB set SB 375 GHG-reduction targets for the Monterey Bay Area at 0% increase from 2005 per capita emissions by 2020, and 5% below 2005 per capita emissions by 2035. In March 2018. In March 2018, CARB updated the SB 375 targets for AMBAG to require 3% reduction by 2020 and a 6% reduction by 2035 in per capita passenger vehicle GHG emissions. The AMBAG MTP/SCS to achieve these targets is described below in Section 3.7.2.4.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program. The Advanced Clean Cars Program (January 2012) is a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2012). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025, cars will emit 75% less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The Zero-Emissions Vehicle Program will act as the focused technology of the Advanced Clean Cars Program by requiring manufacturers to produce increasing numbers of zero-emissions vehicles and plug-in hybrid electric vehicles in the 2018 to 2025 model years.

AB 1236. AB 1236 (October 2015) required a city, county, or city and county to approve an application for the installation of EV charging stations, as defined, through the issuance of specified permits, unless the city or county makes specified written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provided for appeal of that decision to the planning commission, as specified. The bill provided that the implementation of consistent statewide standards to achieve the timely and cost-effective installation of EV charging stations is a matter of statewide concern. The bill required EV charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for EV charging stations, as specified. The bill also required a city, county, or city and county with a population of less than 200,000 residents to adopt this ordinance by September 30, 2017.

Solid Waste

AB 939, AB 341, and AB 1826. In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 (Chapter 476, Statutes of 2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identifies five priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020, legislative and regulatory recommendations, and an evaluation of program effectiveness (CalRecycle 2012).

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

EO B-37-16. Issued May 2016, EO B-37-16 directed the State Water Resources Control Board (SWRCB) to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state. The SWRCB also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The SWRCB and Department of Water Resources will develop new, permanent water use targets that build upon the existing state law requirements that the state achieve 20% reduction in urban water usage by 2020. EO B-37-16 also specifies that the SWRCB permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.

Other State Actions

Senate Bill 97. SB 97 (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under the California Environmental Quality Act (CEQA) for the mitigation of GHG emissions. In 2008, the Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, but instead allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009a).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance-based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009b), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018b).

3.7.2.4 Local

Monterey Bay Air Resources District

California has 35 Air Pollution Control Districts and Air Quality Management Districts, many of which are currently addressing climate change issues by developing significance thresholds, performance standards, and mitigation measures. The Monterey Bay Air Resources District (MBARD) is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the North Central Coast Air Basin (NCCAB), where the proposed project is located. In February 2016, the MBARD adopted the staff-recommended significance threshold of 10,000 MT of CO_2e for stationary source projects (MBARD 2016).

Association of Monterey Bay Area Governments

AMBAG is the designated MPO for the Monterey region. The AMBAG region includes Monterey, San Benito, and Santa Cruz counties. As of 2009, many of the cities and counties in the AMBAG jurisdiction had not quantified their baseline GHG inventories, due to lack of staff and funding. The AMBAG Energy Watch designed a program to assist member jurisdictions in a variety of climate action planning support services. Additionally, in 2008, AMBAG adopted the *Monterey Bay Regional Energy Plan* (Regional Energy Plan) (AMBAG 2008). The Regional Energy Plan provides a framework that local cities and counties can adopt, or use as guidelines to reduce energy use. Additionally, in June 2014, AMBAG adopted the *Moving Forward 2035 Monterey Bay – Metropolitan Transportation Plan/Sustainable Communities Strategy* (2035 MTP/SCS) (AMBAG 2014). The 2035 MTP/SCS demonstrates that, if implemented, the region will achieve over a 3%-per-capita GHG reduction in passenger vehicle emissions in 2020, and an approximately 6% reduction in 2035. In June 2018, AMBAG adopted an update to the 2035 MTP/SCS, *Moving Forward Monterey Bay 2040* (2040 MTP/SCS), the implementation of which is anticipated to achieve a 4%-per-capita reduction and nearly 7%-per-capita reduction in GHG emissions from passenger vehicles by 2020 and 2035, respectively (AMBAG 2018). The 2040 MTP/SCS outlines the region's proposed transportation network, emphasizing multimodal system enhancements, system preservation, and improved access to high quality transit, as well as land use development that complements this transportation network (AMBAG 2018).

Gonzales 2010 General Plan

The Conservation and Open Space, Community Character, and Sustainability Elements of the City of Gonzales 2010 General Plan provides policies and implementing actions applicable to reducing GHG emissions.

Conservation and Open Space Element

Policy COS-5.1 Water Conservation and Groundwater Recharge

Safeguard the quality and availability of groundwater supplies in Gonzales and the Salinas Valley.

Implementing Action COS- 5.1.2 – Water Conservation

Encourage water conservation by Gonzales residents by continuing to follow the State's model ordinance promoting the use of drought-tolerant landscaping and the City's water ordinance promoting water conservation practices.

Community Character Element

Policy CC-2.3 Energy Efficiency

Promote energy and resource efficient buildings. Encourage the incorporation of "green" building practices and materials within all new developments.

Implementing Action CC-2.3.1 – Green Building Program

Adopt a Green Building program which establishes incentives for incorporating green building features into new building construction or building retrofits.

Sustainability Element

Policy SUS-1.3 Increase Use of Renewable Energy

Increase the local use and production of renewable energy.

Implementing Action SUS-1.5.1 – Renewable Energy Systems

Encourage the local construction and use of renewable energy systems such as solar electric, wind power, methane power and biodiesel.

Policy SUS-1.6 Encourage Green Building Practices

Employ sustainable or "green" building techniques for the construction and operation of buildings where feasible.

Implementing Action SUS-1.6.1 – Energy Efficient Buildings

The City shall adopt the "CALGreen Code," by July 1, 2011. The City shall encourage the use of "green" technology and principals such as:

- Designing mechanical and electrical systems that achieve maximum energy efficiency with currently available technology.
- Minimizing energy use through innovative site design and building orientation that address factors such as sun-shade patterns, prevailing winds, and sun screens.

- Employ self-generation of energy using renewable technologies.
- Combining energy efficiency measures that have longer payback periods with measures that have shorter payback periods.
- Reducing levels of non-essential lighting, heating, and cooling.

Implementing Action SUS-1.6.2 – Standards for Green Building

Consider developing and adopting interim and long-term standards for green building in addition to those identified in the CALGreen Code.

Implementing Action SUS-1.6.3 – Municipal Buildings as Green Building Models

Utilize green building practices in the design of new and major remodels to City buildings. Greening of public buildings should provide a model for private construction/retrofit.

Implementing Action SUS-1.6.4 – Recycled Building Materials

Promote the reuse of building material, use materials that have recycled content, or use of materials that are derived from sustainable or rapidly renewable sources to the extent feasible.

Implementing Action SUS-1.6.5 – Construction/Demolition Recycling

Develop standard conditions of approval for all new developments to prepare and implement a construction/demolition waste recycling plan as a condition of project approval and entitlement. Enforce through the building inspection process.

Implementing Action SUS-1.6.7– Life-cycle Costing

Encourage use of life cycle costing in determining materials and construction techniques. Life cycle costing analyses the costs and benefits over the life of a particular product, technology or system.

Implementing Action SUS-1.6.8– Reduce Cooling Load

Encourage use of cool roofing and parking lot design, and strategic tree planting in parking lots to reduce the need for mechanical cooling of buildings.

- Encourage the use of cool roofing materials, such as reflective, low heat retention tiles, membranes and coatings, to reduce heat build-up.
- Plant trees and other vegetation to provide shade and cool air temperatures. In particular, properly position trees to shade buildings, air conditioning units, and parking lots.
- Recue heat build-up in parking lots through increased shading or use of cool paving materials as feasible.

Implementing Action SUS-1.6.9– Sustainable Landscape

Implement sustainable landscape design and maintenance, where feasible.

- Decrease the amount of impervious surfaces in developments.

- Strategically plant deciduous shade trees, evergreen trees, and drought tolerant native vegetation, as appropriate.
- Implement water conservation measures in site/building design and landscaping.
- Encourage the use of high efficiency irrigation technology, and recycled site water to reduce the use of potable water for irrigation.

Policy SUS-1.7 Green Municipal Operations

Utilize green practices in conducting municipal operations.

Implementing Action SUS-1.7.1– Buy Energy Efficient Products

Purchase municipal office equipment and appliances that are Energy Star products where feasible.

Implementing Action SUS-1.7.2– Green the City Fleet

Purchase the most cost-effective and lowest emission vehicle possible. Reduce vehicle size while eliminating old and underused vehicles. Promote fleet use of biodiesel as appropriate.

Implementing Action SUS-1.7.3– Reduce Municipal Office Waste

Reduce municipal waste going into landfills as a means of reducing methane emissions.

Implementing Action SUS-1.7.4– Recyclable Supplies

Promote use of recycled paper products.

Gonzales Climate Action Plan

On August 20, 2018, the City of Gonzales adopted the Climate Action Plan (CAP), which provides a framework for reducing GHG emissions, creates a path to achieving long-term targets, and help the City become healthier and more sustainable (City of Gonzales 2018). The CAP recommends GHG emissions targets that are consistent with the reduction targets of the State of California and presents a number of reduction measures that will make it possible for the City to meet the recommended targets. Each reduction measure includes the time frame for implementing the measure (i.e., short-, medium-, or long-term), and the agency or department responsible for implementing the reduction measure. Based on the State CEQA Guidelines criteria, the CAP is considered a qualified GHG reduction strategy (City of Gonzales 2018).

3.7.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if a project would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.
3. Result in cumulatively considerable impacts with regard to greenhouse gas emissions.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project, such as the proposed project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated at a project level under CEQA.

The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009a). The State of California has not adopted emission-based thresholds for GHG emissions under CEQA. The Governor's Office of Planning and Research's Technical Advisory, titled Discussion Draft CEQA and Climate Change Advisory, states that (OPR 2018):

> [N]either the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. Even in the absence of clearly defined thresholds for GHG emissions, such emissions must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice." Section 15064.7(c) of the CEQA Guidelines specifies that "when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

As discussed previously, the City CAP is considered a qualified GHG reduction strategy based on the State CEQA Guidelines criteria (City of Gonzales 2018). Therefore, if a project is consistent with the CAP, the project shall be considered to have a less than significant impact on GHG emissions. Using the CAP reduction measures as a guide, this analysis evaluates whether the proposed project would comply with the City's CAP.

In addition, proposed project emissions were compared to the MBARD adopted significance threshold of 10,000 MT of CO_2e for stationary source projects (MBARD 2016) in order to provide additional context to the level of emissions generated by the proposed project.

3.7.4 Impacts Analysis

3.7.4.1 Methods of Analysis

Construction

CalEEMod Version 2016.3.2 was used to estimate project-generated GHG emissions during construction. Construction of the project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 3.2 (Air Quality) of this EIR, are also applicable for the estimation of construction-related GHG emissions. As such, see Section 3.2 for a discussion of construction emissions calculation methodology and assumptions used in the GHG emissions analysis.

Operations

Emissions from the operational phase of the project were estimated using CalEEMod Version 2016.3.2. Year 2023 was assumed based on the anticipated first full year of operations.

Area

CalEEMod was used to estimate GHG emissions from operation of gasoline-powered landscape maintenance equipment, which produce minimal GHG emissions. Consumer product use and architectural coatings result in reactive organic gases emissions, which are analyzed in air quality analysis only, and generate little to no GHG emissions.

Energy

The estimation of operational energy emissions was based on input from proposed project engineers, which estimated that the project would require approximately 1,300,000 kilowatt-hours of electricity annually. Additionally, natural gas would not be required for operation of the proposed project. Emissions were calculated by multiplying the energy use by the utility carbon intensity (pounds of GHGs per kilowatt-hour for electricity for CO_2 and other GHGs. Emission factors (in pounds per megawatt-hour) for CH_4 and N_2O are from CalEEMod for Pacific Gas & Electric (PG&E). The CO_2 emission factor is from PG&E's reported intensity for 2017 (PG&E 2019).

Mobile and Off-Road Equipment Sources

As provided by the project engineers, no additional employees would be required for the proposed project (which would be maintained and operating by staff at the existing municipal wastewater treatment plant [MWWTP]) and only a water truck would be needed on a monthly basis. Additionally, the treatment ponds would only need to be dredged every 15 to 20 years, which would likely require an excavator and a haul truck to export the sludge. Based on these minimal and infrequent operational activities, which would be substantially less intense than during construction, on-road mobile and off-road equipment source emissions were not included in the operational analysis.

Stationary Sources

A 750-kilowatt diesel emergency generator would be required to power the facility during any power outages. CalEEMod was used to model the routine testing and maintenance of this generator assuming up to 50-hours

testing duration per year. For the proposed generator, CalEEMod default emission rates were used, which represent a Tier 3 engine.

Solid Waste

The proposed project would generate solid waste, and therefore, result in CO_2e emissions associated with landfill off-gassing. As provided by the project engineers, 27.5 tons was assumed to be generated annually.

Water and Wastewater Treatment

Supply, conveyance, treatment, and distribution of water for the proposed project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the project requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. As provided by the project engineers, up to 20 gallons of water was assumed to be consumed in the new facilities per day.

Notably, the treatment of industrial wastewater at the proposed project would be fully aerobic, with no anaerobic treatment conditions. As such, no CH_4 emissions are anticipated from the treatment process.

3.7.4.2 Project Impact Discussion

3.7-1. The proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Project Consistency with the City's CAP

The City of Gonzales adopted their CAP in 2018, which is a qualified GHG reduction strategy. In order to evaluate whether or not the proposed project is consistent with the CAP, **Table 3.7-4** outlines the CAP GHG reduction measures and the project's consistency with each measure.

Table 3.7-4. Proposed Project Consistency with City of Gonzales Climate Action Plan

CAP Measure	Measure Number	Proposed Project Consistency
Commercial and Industrial Emissions		
Gonzales Renewables Program	P-2.3	*Consistent.* The proposed project would connect to the solar microgrid to be developed for the Agricultural Industrial Business Park.
Transportation Emission Reduction Measures		
Gonzales/MBCP EV Program	P-3.1	*No conflict.* This action involves coordination between the City and MBCP to develop a program aimed to introduce 600 new EVs into the Gonzales market. The proposed project would not preclude the City from implementing this measure.

Table 3.7-4. Proposed Project Consistency with City of Gonzales Climate Action Plan

CAP Measure	Measure Number	Proposed Project Consistency
Solid Waste Emission Reduction Measures		
Waste Diversion (75% Diversion)	P-4.1	*Consistent*. The proposed project would comply with all City and state regulations (including AB 341) related to solid waste generation, storage, and disposal.
Government Operations Emissions Reduction Measures		
MBCP 100% Carbon-Free Power	P-5.1	*Consistent*. The proposed project would procure electricity from MBCP.

Source: City of Gonzales 2018.
Notes: MBCP = Monterey Bay Community Power; EV = electric vehicle; AB = assembly bill.

As demonstrated in Table 3.7-4, the proposed project would be consistent with the applicable strategies and measures in the City CAP. In addition, since the City's local GHG reduction targets contained in the CAP are consistent with the long-term GHG reduction goals of EO S-3-05, EO B-30-15, AB 32, and SB 32, the proposed project would also be consistent with these statewide GHG reduction goals. Therefore, the proposed project's GHG contribution would not be cumulatively considerable and is less than significant.

MBARD Quantitative Threshold

Construction of the proposed project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, vendor and haul trucks, and worker vehicles. CalEEMod was used to calculate the annual GHG emissions. A detailed depiction of the construction schedule—including information regarding phasing, equipment utilized during each phase, trucks, and worker vehicles—is included in Appendix B. The estimated project-generated GHG emissions from construction activities are shown in **Table 3.7-5**.

Table 3.7-5. Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	metric tons per year			
2022	974.10	0.19	0.00	978.80
			Amortized GHG Emissions	**32.63**

Notes: See Appendix B for detailed results.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.

As shown in Table 3.7-5, estimated total annual construction GHG emissions would be approximately 979 MT CO_2e. Construction GHG emissions are a one-time release and, therefore, typically not expected to generate a significant contribution to global climate change. In order to present a worst-case scenario, the proposed project's construction-related GHG emissions have been amortized over 30 years (i.e., the general lifetime of a project per the South Coast Air Quality Management District)[3] and included with the operational GHG emissions.

[3] Per the *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (South Coast Air Quality Management District 2008).

Operation of the proposed project would generate GHG emissions through landscape maintenance equipment operation; energy use (generation of electricity consumed by the project); emergency generator testing; solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution and facility-generated wastewater treatment. The estimated project-generated GHG emissions from operational activities were estimated using CalEEMod and are shown in **Table 3.7-6**.

Table 3.7-6. Estimated Annual Operational GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	metric tons per year			
Area	<0.01	0.00	0.00	<0.01
Energy	123.83	0.02	<0.01	125.31
Emergency Generator Testing	19.15	<0.01	0.00	19.22
Waste	5.58	0.33	0.00	13.83
Water/Wastewater	0.01	<0.01	<0.01	0.01
			Maximum Annual Emissions	**158.38**
			Amortized Construction Emissions	*32.63*
			Total Operational + Amortized Construction GHGs	**191.01**
			MBARD GHG Threshold	*10,000*
			Threshold Exceeded?	**No**

Notes: See Appendix B for detailed results.
<0.01 = value less than reported 0.01 metric tons per year.
MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.

As shown in Table 3.7-6, estimated annual project-generated GHG emissions would be approximately 158 MT CO_2e per year as a result of project operations only.[4] After summing the amortized project construction emissions, total GHGs generated by the project would be approximately 191 MT CO_2e per year. Notably, this GHG estimate does not account for procuring 100% carbon-free energy through Monterey Bay Community Power or for waste diversion from landfills, as specified by CAP measures P-5.1 and P-4.1, respectively, which would reduce GHGs associated with the proposed project to approximately 56 MT CO_2e per year. Overall, annual operational GHG emissions with amortized construction emissions would be minimal and would not exceed the threshold of 10,000 MT CO_2e per year.

Summary

Based on the considerations outlined above, the proposed project would not generate GHGs, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and potential impacts would be **less than significant.**

[4] As discussed in Section 3.7.4.1, Methods of Analysis, no additional employees would be required for the proposed project and only a water truck would be needed on a monthly basis. Further, although the treatment ponds would need to be dredged every 15 to 20 years, which would likely require an excavator and a haul truck to export the sludge, these activities would be minimal and infrequent and would generate substantially less GHGs than during construction. As such, on-road mobile and off-road equipment source emissions were not included in the operational analysis.

3.7.5 Mitigation Measures

No mitigation measures are required.

3.7.6 Level of Significance After Mitigation

GHG emissions associated with the proposed project would be less than significant without mitigation.

3.7.7 Cumulative Analysis

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. As previously discussed in Section 3.7.1, Existing Conditions, GHG emissions inherently contribute to cumulative impacts, and thus, any additional GHG emissions would result in a cumulative impact. As discussed in Impact 3.7-1 above, the proposed project would not conflict with applicable GHG reduction plans, including the City CAP, nor result in GHG emissions that would not exceed the applied MBARD threshold. Therefore, the proposed project would result in a less than cumulatively considerable impact. As such, cumulative impacts are considered less than significant.

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3.8 Hazards and Hazardous Materials

This section describes the existing hazardous materials conditions of the Industrial Wastewater Reclamation Facility (IWRF) and wastewater conveyance line as part of the IW Conveyance and IW Reclamation Facility Project (proposed project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. No comments were received regarding hazards or hazardous materials during the scoping period in response to the Notice of Preparation (NOP).

3.8.1 Existing Conditions

The proposed IWRF and wastewater conveyance line (10,700 linear feet) is located in the City of Gonzales, Monterey County, California (Figure 2-1). These areas are referred to herein as the IWRF and conveyance line, and are collectively considered the "project site." Figure 3.8-1 shows the project site as evaluated in this section. The 54-acre proposed IWRF is located approximately 0.77 miles east of county road G17 and 1.24 miles west of mixed residential/commercial/industrial area of City of Gonzales. The proposed collection line starts within the Femin Lane right-of-way in the Gonzales Agricultural Business Industrial Park (GABIP), heads southwest on Femin Lane then turns south onto Short Road before finally terminating at the proposed IWRF site. The proposed IWRF is bounded by the existing municipal wastewater treatment plant (MWWTP) to the south-southwest and agricultural lands to the north, northwest, east and southeast. The area where the collection line starts is part of the GABIP. The proposed plan is to pass the GABIP industrial wastewater through the new conveyance line which will connect to a new collection system in the GABIP and extend to the new IWRF.

3.8.1.1 Environmental Setting

Most of the 54-acre project site is located within the City Limits, on the northeastern side of Monterey County. The eastern 5-acre portion of the proposed IWRF lies outside the Gonzales city limits but is within the City's Sphere of Influence and would still be managed by and under the jurisdiction of the City of Gonzales. The City of Gonzales lies in the northern portion of the Central Coast Region of California, in the Salinas Valley with the Santa Lucia mountain range to the west and Diablo mountain range to the east. The topography of the project site is generally flat, with elevations ranging from 108 feet above mean sea level (amsl) in the northwestern portion to 122 feet amsl in the southeastern portion of the project site (Google Earth Imagery 2018). The Salinas River flows approximately 0.3 miles southwest of the project site. The project site is underlain by Pico fine sandy loam soils (well drained with high infiltration rates) and Cropley silty clay (well drained with slow infiltration rates) (UC Davis 2020).

The nearest public water supply well is located approximately 153 feet east-southeast of Short Road (GAMA 2020). The City of Gonzales is within the Salinas Valley Groundwater basin. A hydrological study conducted for the existing MWWTP identified six monitoring wells installed for monitoring the MWWTP (Dudek 2019). Recent depth to water in these monitoring wells ranged from approximately 8 to 32 feet below ground surface, measured between 2017 and 2019. The average groundwater flow direction was determined to be northeasterly to northwesterly.

3.8.1.2 Historical Site Uses

Dudek reviewed historical aerials photographs from 1953, 1967, 1981, 1989, 1994, 2005, 2009, 2010, 2010, 2012, 2014 and 2016; and historical topographic maps from 1910, 1915, 1921, 1932, 1934, 1940, 1941, 1947, 1948, 1956, 1957, 1966, 1970, 1981, 1982, 1984, 1986, 2012, 2015 and 2018 for the project site, obtained

from an online source (NETR 2021). The review of historical aerial photographs and topographic maps indicated that the proposed IWRF has been used for agricultural purposes since at least the 1950s. It is currently agriculturally developed with multiple sections of row crops. The prevalent agricultural use also indicates potential ongoing use of pesticides and herbicides. The chemicals used in pesticides and herbicides are bioaccumulative; therefore, the historical and ongoing agricultural use has likely resulted in elevated concentrations of pesticide- and herbicide-related chemicals in surface soils on the proposed project site, specifically at the IWRF.

Femin Lane (the proposed route of the wastewater conveyance line) appears as a light duty road between 1910 and 1948, after which it's depicted as a secondary highway. A rural residence and associated agricultural buildings have been located on the northeastern end of Femin Lane since at least 1910. Southwest of this residence, Femin Lane and the surrounding area was agricultural land with irrigation ditches running throughout from at least 1910 through the late 1940s. Femin Lane was developed as a light duty road in the late 1940s. Development of the MWWTP began in the late 1950s. An automotive repair facility began operation adjacent to the east-southeast of the project site around the late 1960s. This site was previously an automotive junkyard. The City acquired the junkyard property and removed the junk cars and debris. The City of Gonzales was founded in the late 1800s. The area between the main city center and the proposed IWRF has consisted of agricultural properties with light duty or dirt roads transecting the area since at least 1910. Road configurations have changed, but use has remained similar. The majority of the City lies northeast of N Alta Road; development of the GABIP south of N Alta Road began in the 1980s.

3.8.1.3 Hazardous Material Release Sites

Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop a Cortese List that is updated at least annually. While the CalEPA no longer maintains a single Cortese List, CalEPA uses the following databases and lists to meet the requirements of Government Code Section 65962.5.

1. List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database.
2. List of Leaking Underground Storage Tank (LUST) Sites from the State Water Board's GeoTracker database.
3. List of solid waste disposal sites identified by State or Regional Water Board with waste constituents above hazardous waste levels outside the waste management unit.
4. List of "active" CDO and CAO from State Water Board.
5. List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

In addition to the Cortese List databases, the State Water Board and DTSC maintain databases of other hazardous material release sites with documented environmental contamination (GeoTracker 2020; EnviroStor 2020). While these do not qualify as Cortese List sites, they have the potential to impact the project site. For example, voluntary cleanup sites and sites under corrective action by DTSC do not qualify as Cortese List sites, but have documented hazardous material releases. A regulatory search was conducted to identify if the project site is listed in any hazardous materials release databases, including Cortese List databases. The project site was not identified on the hazardous materials site databases.

SOURCE: Esri Aerial Imagery 2020

DUDEK

0 600 1,200 Feet

FIGURE 3.8-1

Potential Project Hazards

City of Gonzales Separate Industrial Water Recycling Facility

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A regulatory search was also conducted to identify sites with documented environmental contamination, including Cortese List sites, within 1 mile of the project site (except for LUST sites in the GeoTracker database, for which the search radius was 0.5 miles from the project site). Findings were as follows:

- One site was identified on the list of "active" CDO and CAO from the State Water Board: Martella Property, 347 Market Street, Gonzales, CA. The site location was georeferenced, and it was determined that the address is actually in the City of Salinas, greater than 10 miles from the project site.
- Four LUST sites were identified within the City of Gonzales, three of which are located east and southeast of Femin Lane and N Alta Road junction (the approximate beginning of the proposed water conveyance line). The fourth and nearest site is 350 feet north of the proposed conveyance line. Dudek reviewed the data available for these sites and determined that, based on the distance from the project site and extent of documented contamination, these sites do not appear to have impacted the environmental condition of the proposed project site.

The National Pipeline Mapping System (NPMS) is a web-based mapping application designed to identify gas transmission and hazardous liquid pipelines, liquefied natural gas plants, and breakout tanks under Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) jurisdiction (NPMS 2020). One liquid natural gas pipeline runs northwest-southeast along N Alta Road and the railroad (Union Pacific Coast Subdivision MT1). The pipeline is owned by Pacific Gas & Electric Company and spans 25 miles through the Salinas Valley. The proposed water collection pipeline would begin south of this pipeline in the Femin Lane right-of-way.

The California Department of Conservation Geologic Energy Management Division (CalGEM) online mapping application Well Finder provides public access to oil and gas industry information, including location of oil and gas wells, oil fields, and other related facilities (CalGEM 2020). No oil and gas wells were identified within one mile of the proposed project site.

3.8.1.4 Hazardous Material Use and Permits

The proposed IWRF would treat industrial wastewater discharges from the City of Gonzales. Currently, the proposed project site is undeveloped, and hazardous materials are not stored onsite. As with the current MWWTP, the proposed IWRF would utilize biological treatment systems, including aeration, filtration, and biological digestion and oxidation (Dudek 2018; Wallace 2020). Operation of the proposed project would require use of common water treatment chemicals, all of which are currently used at the existing MWWTP.

The MWWTP discharges treated water back to the Salinas River groundwater sub-basin under Waste Discharge Requirements (WDR) Order No. R3-2006-0005. The WDR requires groundwater monitoring for water quality parameters, including total dissolved solids, nitrate, pH, sodium, chloride, and sulfate. Sampling does not include organic or inorganic hazardous materials-related contaminants, such as volatile organic compounds. While recent sampling data indicates nitrate levels are above the water quality concentrations established in the WDR, this is not an indication of a hazardous material release to the proposed project site.

The California Environmental Protection Agency (CalEPA) Regulated Site Portal online database combines data about environmentally regulated facilities in California, including those that handle, store, and dispose of hazardous materials (CalEPA 2020). This site was consulted to identify hazardous material handling on or adjacent to the proposed project site. The Gonzales MWWTP was identified on the CalEPA database for the WDR discussed above. In addition, more than 50 sites were identified within 0.50 miles of the proposed project site. Most of these sites were identified as chemical storage facilities, hazardous waste generators, or facilities that have hazardous

material handling permits or water discharge permits; violations, if any, appeared to be administrative in nature (e.g., failure to properly document and/or report hazardous wastes and business plans). These types of violations do not indicate an unauthorized or uncontrolled release of hazardous materials to the environment. Sites with documented or suspected releases to the environment are also identified in GeoTracker and Envirostor databases, as discussed in Section 3.8.1.4, Hazardous Material Sites.

Two sites were identified adjacent to the proposed project site. While these sites do not have documented hazardous material releases, based on their proximity to the proposed project site, use of hazardous materials, and industrial operations, these sites could pose a potential environmental impact to the proposed project site.

- King's Towing Auto Wreckers, Short Road: The site is located adjacent to the east-southeast of the proposed IWRF site. The site has been used as an automotive junkyard since late 1960s. The site has an active industrial stormwater discharge permit. No violations have been identified that would suggest impacts to soil or groundwater. However, junkyards are known to contain hazardous materials such as lead batteries, mercury from light switches, anti-freeze, freon from cooling systems, polychlorinated biphenyls (PCBs), chlorofluorocarbons (CFCs), asbestos found in the brake pads and lining of older cars, motor oil, and heavy metals, which have the potential to impact soil and groundwater. While the site was recently acquired by the City and the junk cars were removed, the site was been a junkyard for over 50 years, therefore it is likely that releases of this type have occurred over time. As discussed above, monitoring at the existing MWWTP does not include hazardous constituents, such as heavy metals or petroleum products, nor are there nearby monitoring wells are analyzed for these constituents (GAMA 2020; GeoTracker 2020). Therefore, the impacts associated with the historical and ongoing use of this automotive junkyard are unknown. Groundwater beneath the MWWTP flows northeast-northwest, and groundwater depths are shallow (less than 20 feet bgs; see Section 3.8.1.1, Environmental Setting). Therefore, there is a high likelihood that potential contamination associated with the junkyard would migrate toward the proposed project site.
- Gonzales Compost Facility/Operations, Short Road: This is an active composting facility that is registered as a solid waste and recycling site, and as an unregulated discharger. The details regarding the discharge are not documented on the site portal. However, according to the 2020 Preliminary Engineering Report for the IWRF (Wallace 2020), the composting facility may be contributing to water quality issues (elevated nitrate) observed at the existing MWWTP. This is not indicative of a hazardous material release to the environment.

3.8.1.5 Previous Environmental Investigations and Reports

City of Gonzales, 2010 General Plan, Environmental Impact Report

An EIR was conducted on the City of Gonzales planning area for development of the 2010 General Plan (Coastal Plans 2010). The project area for this EIR was the City of Gonzales, which included the current proposed project site (IWRF and conveyance line). The EIR discussed the impacts of hazardous material handling and its disposal in the City of Gonzales. The areas adjacent and near to the City of Gonzales are dominated by agricultural land, which has been subjected to pesticide and chemical fertilizer use for decades. The report identified Fanoe Ranch as a state voluntary cleanup site, located approximately 1.9 miles north-northeast of the proposed IWRF and conveyance line. Soil at the Fanoe Ranch site is contaminated with petroleum, pesticides, and lead. While the 2010 EIR identified Fanoe Ranch as a potential hazard, the site is at a great enough distance that it is not likely impact the proposed IWRF and conveyance line project.

The 2010 EIR also discussed distribution of hazardous materials within the City of Gonzales, which are transported via Highway 101 and Union Pacific Railroad.

The City of Gonzales adopted multiple health and safety policies designed to address hazardous material safety in the planning area. These policies, as they pertain to the proposed project, are discussed in Section 3.8.2, Relevant Plans, Policies, and Ordinances. The 2010 EIR identified the following potentially significant impacts:

- The potential for co-location of new schools and current industrial uses is a potentially significant impact. As a result, the City proposed to identify and evaluate potential land conflicts between schools and industrial uses as part of development plan review. This would significantly reduce the potential for hazardous material emissions within 0.25 miles of a current or proposed school.
- The Fanoe Ranch voluntary cleanup site has documented soil contamination related to ongoing and historical use of pesticides and herbicides. Future use of the Fanoe Ranch property would require a remediation plan and site-specific investigation for potentially contaminated soils. This would significantly reduce the potential for exposure to hazardous materials associated with a contaminated site.
- There are portions of the City that are exposed to areas with very high fire hazard potential, specifically those areas east of Iverson Road. The City proposed requiring site-specific investigations and reports on wildfire potential prior to any development east of Iverson Road. This would significantly reduce the potential for significant loss or injury due to wildfires.

3.8.1.6 Schools

There are five schools serving students from pre-kindergarten through 12th grade in the City of Gonzales (CSCD 2020). There are no proposed schools located within the Gonzales zip code 93926 (CDE 2020). These schools are greater than 0.25 miles from the proposed project site. The nearest school, Gonzales High School, is located 0.34 miles northeast of Fermin Lane and N Alta Road junction (where the proposed conveyance line starts).

3.8.1.7 Airports

No pubic use airports were identified within 2 miles of the project site. The Chualar NDB UAD 263, which is a Non-Directional Beacon (low frequency radio transmitter used as instrument approach for airports and offshore platforms) was identified near the southern boundary of the project site (ITWP site).

3.8.1.8 Fire Hazards and Emergency Response

The project site lies within the City of Gonzales incorporated area, which is within the Local Responsibility Area (LRA) for fire hazards (CAL FIRE 2008a). The entire City, including the project site, is within a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ). The project site falls within the response jurisdiction of the Gonzales Fire Department for wildfire hazards and emergency response.

The City of Gonzales and Monterey County have adopted Emergency Response Plans which include prearranged emergency response procedures and mutual aid agreements for emergency assistance within the Planning Area. Pre-designated emergency routes for evacuation for the City of Gonzales, as designated by the City of Gonzales General Plan (Coastal Plan 2018), are Highway 101, Alta Street (north and south), Gonzales River Road, Johnson Canyon Road, Fanoe Road, Gloria Road, Iverson Road, and Associated Lane.

3.8.2 Relevant Plans, Policies, and Ordinances

Several federal, state and local plans, policies, and regulations control the storage, use, handling, disposal, and transport of hazardous materials and waste in order to protect public health and the environment. Additional regulations exist to protect workers on the job, and still others serve to formulate emergency and evacuation procedures. The regulations applicable to the proposed project and the regulatory agencies that provide oversight and enforcement, are discussed in this section.

Federal

U.S. Environmental Protection Agency

Title 40 USC, Chapter 1, Subchapter I, Parts 260-265 – Solid Waste Disposal Act/ Federal Resource Conservation and Recovery Act of 1976

The Solid Waste Disposal Act, as amended and revised by the Resource Conservation and Recovery Act (RCRA), establishes requirements for the management of solid wastes (including hazardous wastes), landfills, USTs, and certain medical wastes. The statute also addresses program administration; implementation and delegation to the states; enforcement provisions and responsibilities; and research, training, and grant funding. Provisions are established for the generation, storage, treatment, and disposal of hazardous waste, including requirements addressing generator record keeping, labeling, shipping paper management, placarding, emergency response information, training, and security plans.

Title 42 U.S. Code of Federal Regulations, Chapter 116 – Emergency Planning and Community Right-to-Know Act

The Emergency Planning and Community Right-to-Know Act (EPCRA) provides for public access to information about chemical hazards. The EPCRA and its regulations included in Title 40 U.S.C. Parts 350-372 establish four types of reporting obligations for facilities storing or managing specified chemicals: emergency planning, emergency release notification, hazardous chemical storage reporting requirements, and toxic chemical release inventory. USEPA maintains a database, termed the Toxic Release Inventory, which includes information on reportable releases to the environment.

Title 15 USC, Chapter 53, Subchapter I, Section 2601 et seq. – Toxic Substances Control Act of 1976

The Toxic Substances Control Act (TSCA) of 1976 empowers USEPA to require reporting, record-keeping, and testing, as well as to place restrictions on the use and handling of chemical substances and mixtures. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint. Various sections of TSCA provide EPA the authority to require testing of chemicals by manufacturers, importers, or processors, maintain a toxic substance inventory, require reporting of importation and exportation of chemicals, and require recordkeeping of chemical use, manufacturing, import, export, and distribution.

Regional Screening Levels

The EPA provides regional screening levels (RSLs) for chemical contaminants to provide comparison values for residential and commercial/industrial exposures to soil, air, and tap water (drinking water). RSLs are available on the EPA's website and provide a screening level calculation tool to assist risk assessors, remediation project

managers, and others involved with risk assessment and decision-making. RSLs are also used when a site is initially investigated to determine if potentially significant levels of contamination are present to warrant further investigation. In California, the Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) incorporated the EPA RSLs into the HERO human health risk assessment. HERO created Human Health Risk Assessment (HHRA) Note 3, which incorporates HERO recommendations and DTSC-modified screening levels (DTSC-SLs) based on review of the EPA RSLs. The DTSC-SL should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

U.S. Department of Labor, Occupational Safety and Health Administration

Title 29 USC, Part 1926 et seq. – Safety and Health Regulations for Construction

These standards require employee training; personal protective equipment; safety equipment; and written procedures, programs, and plans for ensuring worker safety when working with hazardous materials or in hazardous work environments during construction activities, including renovations and demolition projects. These standards also provide rules for the removal and disposal of asbestos, lead, LBP, and other lead materials. Although intended primarily to protect worker health and safety, these requirements also guide general facility safety.

Title 29 USC, Part 1910 et seq. – Occupational Safety and Health Standards

Under this regulation, facilities that use, store, manufacture, handle, process, or move hazardous materials are required to conduct employee safety training; inventory safety equipment relevant to potential hazards; have knowledge on safety equipment use; prepare an illness prevention program; provide hazardous substance exposure warnings; prepare an emergency response plan; and prepare a fire prevention plan.

U.S. Department of Transportation

Title 49 USC, Part 172, Subchapter C – Shipping Papers

The Department of Transportation established standards for the transport of hazardous materials and hazardous wastes. The standards include requirements for labeling, packaging, and shipping hazardous materials and hazardous wastes, as well as training requirements for personnel completing shipping papers and manifests.

Federal Response Plan

The Federal Response Plan of 1999, as amended in 2003 (FEMA 2003) is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

State

California Unified Program for Management of Hazardous Waste and Materials

California Health and Safety Code (HSC), Division 20, Chapter 6.11, Sections 25404- 25404.9 Sections– Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Under the California Environmental Protection Agency (CalEPA), the Department of Toxic Substances Control (DTSC) and Enforcement and Emergency Response Program (EERP) administer the technical implementation of California's Unified Program, which consolidates the administration, permit, inspection, and enforcement activities of several environmental and emergency management programs at the local level (DTSC 2019). Certified Unified Program Agencies (CUPAs) implement the hazardous waste and materials standards. This program was established under the amendments to the California HSC made by SB 1082 in 1994. The programs that make up the Unified Program are:

- Aboveground Petroleum Storage Act (APSA) Program
- Area Plans for Hazardous Materials Emergencies
- California Accidental Release Prevention (CalARP) Program
- Hazardous Materials Release Response Plans and Inventories (Hazardous Materials Business Plans, or HMBPs)
- Hazardous Material Management Plan (HMMP) and Hazardous Material Inventory Statements (HMIS)
- Hazardous Waste Generator and On-site Hazardous Waste Treatment (Tiered Permitting) Program
- Underground Storage Tank Program

The CUPA for the City of Gonzales is the Monterey County Health Department.

Title 19 CCR, Chapter 2, Subchapter 3, Sections 2729-2734/California HSC Division 20, Chapter 6.95, Sections 25500–25520

This regulation requires the preparation of an HMBP by facility operators. The HMBP identifies the hazards, storage locations, and storage quantities for each hazardous chemical stored on-site. The HMBP is submitted to the CUPA for emergency planning purposes. The project site is currently subject to these requirements and there is an HMBP in place.

Hazardous Waste Management

Title 22 CCR, Division 4.5 – Environmental Health Standards for the Management of Hazardous Waste

In the State of California, the Department of Toxic Substances Control (DTSC) regulates hazardous wastes. These regulations establish requirements for the management and disposal of hazardous waste in accordance with the provisions of the California Hazardous Waste Control Act and federal RCRA. As with federal requirements, waste generators must determine if their wastes are hazardous according to specified characteristics or lists of wastes. Hazardous waste generators must obtain identification numbers; prepare manifests before transporting waste off-site; and use only permitted treatment, storage, and disposal facilities. Standards also include requirements for record keeping, reporting, packaging, and labeling. Additionally, while not a federal requirement, California requires that hazardous waste be transported by registered hazardous waste transporters.

Title 22 California HSC, Division 20, Chapter 6.5 – California Hazardous Waste Control Act of 1972

This legislation created the framework under which hazardous wastes must be managed in California. It provides for the development of a state hazardous waste program (regulated by DTSC) that administers and implements the provisions of the federal RCRA program. It also provides for the designation of California-only hazardous wastes and development of standards that are equal to or, in some cases, more stringent than, federal requirements. The CUPA is responsible for implementing some elements of the law at the local level.

Human Health Risk Assessment Note 3 –DTSC-Modified Screening Levels (DTSC-SLs)

HHRA Note Number 3 presents recommended screening levels (derived from the EPA RSLs using DTSC-modified exposure and toxicity factors) for constituents in soil, tap water, and ambient air. The DTSC-SL should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

Aboveground and Underground Petroleum Storage Tanks

Low-Threat Underground Storage Tank (UST) Case Closure Policy

This policy applies to petroleum UST sites subject to Chapter 6.7 of the Health and Safety Code. This policy establishes both general and media-specific criteria. If both criteria are satisfied, then the leaking UST case is generally considered to present a low threat to human health, safety and the environment. This policy recognizes, however, that even if all specified criteria in the policy are met, there may be unique attributes of the case or site-specific conditions that increase the risk associated with the residual petroleum constituents. In these cases, the regulatory agency overseeing corrective action at the site must identify the conditions that make case closure under the policy inappropriate. Regional Water Boards and local agencies have been directed to review all cases in the petroleum UST Cleanup Program using the framework provided in this policy.

Environmental Cleanup Levels

Environmental Screening Levels

Environmental Screening Levels (ESLs) provide conservative screening levels for over 100 chemicals found at sites with contaminated soil and groundwater. They are intended to help expedite the identification and evaluation of potential environmental concerns at contaminated sites. The ESLs are prepared by the staff of the San Francisco Bay Regional Water Quality Control Board. While ESLs are not intended to establish policy or regulation, they can be used as a conservative screening level for sites with contamination. Other agencies in California may elect to use the ESLs; in general, the ESLs could be used at any site in the State of California, provided all stakeholders agree (SFBRWQCB 2019). Dudek's recent experience indicates that regulatory agencies throughout California use ESLs as regulatory cleanup levels. The ESLs are not generally used at sites where the contamination is solely related to a leaking underground storage tank (LUST); those sites are instead subject to the Low-Threat Underground Storage Tank Closure Policy.

California Integrated Waste Management Board

Title 14 CCR, Division 7, Chapter 8.2 – Electronic Waste Recovery and Recycling Act of 2003

This regulation sets requirements regarding the use and disposal of hazardous substances in electronics. When discarded, the DTSC considers the following materials manufactured before 2006 to be hazardous waste: cathode ray tube devices, liquid crystal display (LCD) desktop monitors, laptop computers with LCD displays, LCD televisions, plasma televisions, and portable DVD Players with LCD screens.

California Department of Transportation/California Highway Patrol

Title 13 CCR, Division 2, Chapter 6

California regulates the transportation of hazardous waste originating or passing through the state. The California Highway Patrol (CHP) and the California Department of Transportation (Caltrans) have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. CHP enforces materials and hazardous waste labeling and packing regulations that prevent leakage and spills of material in transit and provides detailed information to cleanup crews in the event of an incident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of CHP. CHP conducts regular inspections of licensed transporters to ensure regulatory compliance. Caltrans has emergency chemical spill identification teams at locations throughout the state. Hazardous waste must be regularly removed from generating sites by licensed hazardous waste transporters. Transported materials must be accompanied by hazardous waste manifests.

Occupational Safety and Health

Title 8 CCR – Safety Orders

Under the California Occupational Safety and Health Act of 1973, the California Occupational Safety and Health Administration (CalOSHA) is responsible for ensuring safe and healthful working conditions for California workers. CalOSHA assumes primary responsibility for developing and enforcing workplace safety regulations in Title 8 of the CCR. CalOSHA hazardous substances regulations include requirements for safety training, availability of safety equipment, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. CalOSHA also enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances. The hazard communication program also requires that Material Safety Data Sheets be available to employees and that employee information and training programs be documented.

In Division 1, Chapter 4, Subchapter 4 – Construction Safety Orders of Title 8, construction safety orders are listed and include rules for demolition, excavation, explosives work, working around fumes and vapors, pile driving, vehicle and traffic control, crane operation, scaffolding, fall protection, and fire protection and prevention, among others.

California Building Standards Commission

Title 24 of the CCR – California Building Standards Code

The California Building Standards Code is a compilation of three types of building standards from three different sources:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions; and
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

Among other rules, the Code contains requirements regarding the storage and handling of hazardous materials. The Chief Building Official at the local government level (i.e., City of Gonzales) must inspect and verify compliance with these requirements prior to issuance of an occupancy permit.

California Forestry and Fire Protection

2010 Strategic Fire Plan for California

Public Resources Code Sections 4114 and 4130 authorize the State Board of Forestry to establish a fire plan that establishes the levels of statewide fire protection services for State Responsibility Area (SRA) lands. These levels of service recognize other fire protection resources at the federal and local level that collectively provide a regional and statewide emergency response capability. In addition, California's integrated mutual aid fire protection system provides fire protection services through automatic and mutual aid agreements for fire incidents across all ownerships. The California Fire Plan is the state's road map for reducing the risk of wildfire through planning and prevention to reduce firefighting costs and property losses, increase firefighter safety, and to contribute to ecosystem health.

California Emergency Services Act

Under the Emergency Services Act (California Government Code, Section 8550 et seq.), the State of California developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an integral part of the plan, which is administered by the Governor's Office of Emergency Services. The Office of Emergency Services coordinates the responses of other agencies, including the EPA, California Highway Patrol, Regional Water Quality Control Boards, air quality management districts, and county disaster response offices.

Local

City of Gonzales 2010 General Plan, Revised June 2018.

The City of Gonzales General Plan (General Plan) was completed in 2010 and updated in 2018 (Coastal Plans 2018).

Fire Hazards

The City of Gonzales Fire Department provides fire protection services to the City, which includes structural firefighting, medical emergencies, hazardous materials, grass firefighting, vehicle fires and accident response. As of the date the General Plan was prepared, the Fire Department had one paid professional fire engineer; the remaining staff was volunteer force. The City anticipates growth of the Fire Department as the City grows.

Emergency Preparedness

The City of Gonzales adopted an Emergency Operations Plan in March 2005 which include prearranged emergency response procedures and mutual aid agreements for emergency assistance within the Planning Area. Emergency routes for evacuation of City of Gonzales are Highway 101, Alta Street, Gonzales River Road, Johnson Canyon Road, Fanoe Road, Gloria Road, Iverson Road and Associated Lane. In 2007 the county of Monterey and city of Gonzales adopted multi-jurisdictional hazard mitigation plan (HMP) pursuant to the Federal Disaster Mitigation Act of 2000. The General Plan satisfies Government Code 8685.9.

Hazardous Materials

City is known to store hazardous materials and chemicals in various industries located within the City. Industries such as food processing plant, wineries, and other offices and households store chemicals such as chlorine, muriatic acid, sulfur dioxide, motor oil, swimming pool chemicals, and paints. Pesticide and herbicide use are also common on the agricultural lands surrounding the City. The plan states that the historical use of agricultural chemicals may persist in the surface and subsurface soils and in groundwater. The following hazardous materials policies and implementing actions pertain to the proposed project:

> *Policy HS-5.1:* Require all new construction and renovation to be designed and constructed to mitigate the effects of hazardous materials. This includes review of development proposals (HS-5.1.1); support of the County of Monterey Hazardous Waste Management Plan (HS-5.1.2) and state and county requirements (HS-5.1.3); separation of industrial and sensitive properties (schools, hospitals, residences) (HS-5.1.5); site-specific investigation of potential soil contamination as part of major plan development, including mitigation measures (HS-5.1.6); and siting of future schools, residences, and public spaces at least 1,000 feet downwind of hazardous material areas (HS-5.1.7).

The County of Monterey General Plan

Fire Hazards

The Monterey County Fire Department, and CAL FIRE provide fire protection in Gonzales and the unincorporated areas in and immediately surrounding the City. The Monterey County General Plan provides multiple policies under Goal S-4 that continue to provide effective and efficient fire protection and prevention services to Gonzales Area residents, including adequate roadways for emergency response, requiring all development to have automatic fire protection systems, and providing adequate water availability for fire suppression activities.

Emergency Preparedness

The County have adopted Emergency Response Plans which include prearranged emergency response procedures and mutual aid agreements for emergency assistance within the Planning Area. The County General Plan provides multiple policies under Goals S-5 that minimize the loss of life and property resulting from natural and human-

caused hazards, including development of multi-jurisdictional hazard mitigation plans and wildfire protection plans, coordination of emergency response with state and local jurisdictions, improving emergency preparation, and maintaining hazard maps and information.

3.8.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the project would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would it create a significant hazard to the public or the environment.
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

The project site is not located within 2 miles of a public use airport, nor does it fall within an airport land use plan. Therefore, item (e) was identified as having no impact in the Initial Study prepared for the project and circulated with the NOP and is not considered further in this EIR.

3.8.4 Impacts Analysis

3.8-1 The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction

Hazardous materials that may be used during construction activities of the proposed project include gasoline, diesel fuel, oil, lubricants, grease, welding gases (e.g., acetylene, oxygen, and argon), solvents, lubricants, and paints. These materials would be used and stored in designated construction staging areas within the boundaries of the proposed project site and would be transported, handled, and disposed of in accordance with all applicable federal, state, and local laws and regulations. The use of these materials for their intended purpose would not pose a significant risk to the public or environment. Hazardous wastes accumulated during project construction may include unused or off-specification paint and primer, paint thinner, solvents, and vehicle and equipment maintenance-related materials, many of which can be recycled. Hazardous waste that cannot be recycled would be

transported by a licensed hazardous waste hauler using a Uniform Hazardous Waste Manifest and disposed of at an appropriately permitted facility. The use of these substances is subject to applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public associated with hazardous materials. Potential impacts during the construction phase would be **less than significant**.

Operations

Operation of the proposed project would be similar to operation of the existing MWWTP, and would not be expected to create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials. Hazardous materials would be limited to use of common water treatment chemicals and commercially available substances, and quantities on site are not anticipated to be greater than reporting thresholds. Transportation, storage, and disposal of hazardous materials and hazardous wastes, if any, would be subject to applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public and the environment.

Proper handling, transportation, and disposal in accordance with federal, state, and local regulations would reduce significant risk to public or the environment through routine transport, use and disposal of hazardous materials. Impacts would be **less than significant.**

3.8-2 The project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Construction

During demolition and construction, grading and excavation would be required. A natural gas pipeline is located along the right-of-way of the railroad and N Alta Road. The proposed water conveyance line would begin south of the junction of the N Alta Road and Union Pacific railroad, and therefore construction would not impact the natural gas pipeline or the railroad. As discussed in Section 3.8.1.4, there is a former junkyard located hydraulically upgradient of the proposed project site, and there is a potential that contaminated soil, groundwater, and soil vapor are present on the project site due to this junkyard. The site is shown on Figure 3.8-1. Additionally, the proposed project site has historically been used for agricultural purposes, which has likely resulted in elevated concentrations of pesticide- and herbicide-related chemicals in shallow soils. While these contaminants, the junkyard-related contamination and agricultural-related contamination, may not be a direct threat to human health or the environment in their current state, construction and disturbance of soil, groundwater, or soil vapor could potentially release hazardous materials. This impact would be **potentially significant**.

In accordance with HS-5.1.6 of the City of Gonzales General Plan, site-specific investigation of potential soil contamination is required as part of major development plan review and approval. The investigation report shall include measures necessary to mitigate any environmental hazards to a less than significant level (Coastal Plan 2018). Groundwater and soil vapor should also be investigated to evaluate potential impacts related to the upgradient junkyard. To avoid upset and accident conditions by disturbance and release of contaminated media, a subsurface investigation should be conducted.

As discussed Impact 3.8-1, hazardous materials required during construction and hazardous wastes generated during construction would be used and stored in designated construction staging areas within the boundaries of the proposed project site and would be transported, handled, and disposed of in accordance with all applicable federal, state, and local laws and regulations. Quantities of these construction materials are not anticipated to be

such that a significant release could occur. Any potential hazardous materials would be handled in accordance with federal, state, and local requirements.

Operations

Once operational, the proposed project would not be expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Hazardous materials would be limited to use of common water treatment chemicals which are currently used at the existing MWWTP, and would not be stored in such quantities that an upset or accident condition (or a reportable quantity) would occur. Transportation and dispensing would be conducted by licensed vendors. The use, transportation, and storage of these substances is subject to applicable federal, state, and local health and safety laws and regulations that are intended to minimize health risk to the public associated with hazardous materials, thereby reducing the potential for future upset or accident conditions related to further release of hazardous environmental contamination during IWRF operation. Operational impacts would be **less than significant.**

3.8-3 The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

As discussed in Section 3.8.1.6, there are no current or proposed schools located within 0.25 miles of the proposed project. Additionally, the City of Gonzales General Plan includes implementing actions HS-5.1.5 and HS-5.1.7, which require separation of sensitive receptors, such as schools, from industrial facilities or facilities that will have significant quantities of hazardous materials. While operation of the proposed project is not anticipated to have significant quantities of hazardous materials, this measure further protects emission of hazardous materials, substances or wastes within 0.25 miles of an existing or proposed school. **No impacts** would occur.

3.8-4 The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

As discussed in Section 3.8.1.3, the proposed project site is not located on a Cortese List database (compiled pursuant to Government Code Section 65962.5). Nearby Cortese List sites and other hazardous material release sites were identified within 1 mile of the proposed project site, but are at such a distance or have a limited extent of contamination such that they do not impact the environmental condition of the proposed project site. As the project would not be located on a Cortese List site or other documented hazardous material release site. **No impacts** would occur.

3.8-5 The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The proposed project conveyance line runs along the Fermin Lane right-of-way, which transects private agricultural land south of the GABIP until reaching the IWRF. This road is not a pre-designated evacuation route as defined by Monterey County, and therefore construction of the proposed project along this right-of-way is not anticipated to impede emergency evacuation routes or procedures. Once operational, there would be no impacts which would interfere with an emergency evacuation, as features along roadways would be subsurface. Impacts would be **less than significant.**

3.8-6. The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

The project site is not located on or near a VHFHSZ, as defined by CAL FIRE (see Section 3.8.1.8). The project would not expose people or structures to significant risk due to wildland fires; **no impact** would occur.

3.8.5 Mitigation Measures

The following mitigation measures would be implemented to reduce all impacts described in Section 3.8.4 to levels below significance.

MM-HAZ-1 **Subsurface Investigation.** Prior to construction, a subsurface investigation shall be performed in order to determine if there are impacts to soil, soil vapor and groundwater at the project site and if the potential impacts would result in human health risks. Soils will be sampled and analyzed for pesticide- and herbicide-related contaminants. In addition, soils, groundwater, and soil vapor will be sampled and analyzed for contaminants of concern associated with the upgradient junkyard, including but not limited to petroleum hydrocarbons and volatile organic compounds. In accordance with the City of Gonzales General Plan HS 5.1.6, the results of the investigation will be submitted to the City of Gonzales as part of the development plan review, along with measures necessary to mitigate any environmental hazards to a less-than-significant level. Recommended mitigation shall be implemented prior to construction and operation of the proposed project.

3.8.6 Level of Significance After Mitigation

Prior to construction activities, a subsurface investigation would be conducted, the results of which would be submitted to the City of Gonzales and would be used to identify potential environmental hazards and proposed mitigation. Hazards, if any, would be mitigated as recommended in the subsurface investigation report to eliminate environmental hazards or reduce them to a less-than-significant level (**MM-HAZ-1**). With implementation of the recommended mitigation, impacts related to foreseeable upset and accident conditions would be **less than significant.**

3.8.7 Cumulative Impacts

Because cumulative projects would be fully regulated, thus reducing potential for public safety risks, cumulative impacts associated with exposure to hazards and hazardous materials would be less than significant. Through mitigation and compliance with regulatory requirements, the construction or operation of the proposed project itself would not create significant human or environmental health or safety risks that could combine with other project impacts from the near-term MWWTP expansion or the Gonzales Microgrid Project to create a significant and cumulatively considerable impact. For these reasons, the proposed project would not result in cumulatively considerable impacts related to hazards and hazardous materials.

3.8.8 References

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3.9 Hydrology and Water Quality

This section describes the existing hydrology, stormwater flow, and water quality conditions of the Industrial Wastewater Reclamation Facility (IWRF) and wastewater conveyance line as part of the IW Conveyance and IW Reclamation Facility Project (proposed project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to the implementation of the proposed Project.

Public comments on the Notice of Preparation and Initial Study (Appendix A) were received from the California Department of Fish and Wildlife (CDFW), regarding water quality. CDFW is concerned that without mitigation, activities associated with the project could result in pollution of the Waters of the State from stormwater runoff or construction-related erosion. CDFW is concerned that construction activities in wetland areas have the potential to impact downstream waters, including erosion, scour, and changes in stream morphology. In addition, CDFW requires an entity to notify CDFW prior to commencement of activity that could substantially divert or obstruct the natural flow of any water body; substantially change the bed, bank, or channel of any water body; or deposit debris or waste material that could pass into any water body, including streams that are ephemeral or intermittent.

The analysis of the proposed project impacts related to hydrology and water quality is partly based on information provided in the following technical reports:

- *Geotechnical Investigation, Gonzales Industrial Wastewater Recycling Facility, Gonzales, California*, prepared by Pacific Crest Engineering Inc., dated March 2, 2020 (Appendix F);
- *Draft City of Gonzales Wastewater Treatment Plant Hydrogeological Study*, prepared by Dudek, dated May 2019 (Appendix G); and
- *City of Gonzales Industrial Wastewater Recycling Facility, Draft Preliminary Engineering Report,* prepared by Wallace Group, dated February 2020.

3.9.1 Existing Conditions

Regional Watershed

The proposed project is located within the Salinas River Watershed, which is the largest watershed in the Central Coast of California, draining approximately 4,240 square miles of land in Monterey and San Luis Obispo counties. Originating in the Los Padres National Forest, the headwaters of the Salinas River begin in the Santa Lucia and La Panza Mountain Ranges and flow approximately 184 river miles north-northwest through the Salinas Valley and into the Monterey Bay near Castroville (**Figure 3.9-1, Salinas River Watershed**) (MCWRA 2019). Several tributaries enter the River along this length, including Pancho Rico Creek, Santa Rita Creek, Reliz Creek, Chalone Creek, San Lorenzo Creek, the Arroyo Seco River, the Nacimiento River, and the San Antonio River. The Nacimiento and San Antonio Rivers are by far the largest tributaries, encompassing watersheds of about 330 square miles. Dams owned and operated by the Monterey County Water Resources Agency (MCWRA) control flow volumes in both rivers (County of Monterey 2008). The Salinas River and its tributaries are part of the Salinas Hydrologic Unit 309 (Salinas River HU) (Central Coast RWQCB 2019).

The Central Coast Regional Water Quality Control Board (RWQCB) has divided the urbanized portions of the Central Coast Region into ten Watershed Management Zones, based on common key watershed processes and receiving water type (creek, marine, nearshore waters, lake, etc.). Based on the Central Coast RWQCB *Post-Construction*

Stormwater Management Requirements for Development Projects in the Central Coast Region (Central Coast RWQCB 2013), the project site is located within Water Management Zone 4.

Agriculture is the primary land use within the Salinas River Watershed. Grazing and pasture lands, as well as dryland farming, have historically been the dominant land use within the Salinas Valley. However, in recent years, large areas of land have been converted to vineyards and urban areas. Urban development is primarily concentrated along a corridor of the Salinas River. Additional land uses within the watershed include two military facilities, extraction of mineral and oil resources, public lands, and open space (Central Coast RWQCB 1999).

Topography and Drainage

The proposed IWRF site is located immediately north of the existing municipal wastewater treatment plant (MWWTP) and the proposed wastewater conveyance line corridor extends 10,700 feet along Femin Lane and Short Road, as shown on Figure 2-2, Project Location, in Chapter 2, Project Description. The IWRF portion of the project site is located on agricultural land while the proposed wastewater conveyance line is located within roadway rights-of-way adjacent to actively tilled agricultural land. Femin is unpaved south of the Union Pacific Railroad (south of N. Alta Road). In addition, the project site near the MWWTP is comprised of partially developed agricultural land, consisting of row crops and open fields. The topography of the project site consists of a gentle slope gradient to the southwest, ranging in elevation from 130 feet above mean sea level (amsl) along Femin Lane, to approximately 100 feet amsl near the existing MWWTP (Figure 2-1, Regional Map).

The drainage system in the City of Gonzales (City) collects flows from areas west of Highway 101 and discharges it at multiple locations within the Gonzales Slough, which is a northwest-trending drainage that traverses the City (City of Gonzales 2010). Runoff along Femin Lane occurs as sheet flow into unpaved, shallow, agricultural ditches on either side of the roads. These flows likely run off into the neighboring agricultural fields or are infiltrated into the underlying sediments. Lastly, stormwater flows within the agricultural land near the MWWTP infiltrates into the underlying, permeable soil or is conveyed into earthen channels adjacent to the partially developed land.

Surface Water Quality

In accordance with State policy for water quality control, the Central Coast RWQCB, among various other agencies, regulates water quality within the Salinas River Hydrologic Unit (HU). The project site is located within the Salinas River HU, from Chualar to the Nacimiento River. Water quality objectives, plans, and policies for the surface waters within this region are established in the Water Quality Control Plan for the Central Coastal Basin (Basin Plan). This Basin Plan has identified existing and potential beneficial uses supported by key water drainages within the Salinas River HU (Central Coast RWQCB 2019). The existing and proposed beneficial uses of the Salinas River HU are shown in **Table 3.9-1, Beneficial Uses**.

SOURCE: MCWRA 2019

FIGURE 3.9-1

Salinas River Watershed

City of Gonzales Separate Industrial Water Recycling Facility

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Table 3.9-1. Beneficial Uses

Salinas Hydrologic Unit Waterbody Names	MUN	AGR	PROC	IND	GWR	REC1	REC2	WILD	COLD	WARM	MIGR	SPWN	BIOL	RARE	EST	FRSH	NAV	POW	COMM	AQUA	SAL	SHELL
Pancho Rico Creek	X	X			X	X	X	X		X		X							X			
Santa Rita Creek (309)	X	X		X	X	X	X	X	X	X	X	X		X					X			
Reliz Creek	X	X			X	X	X	X	X		X	X							X			
Chalone Creek	X	X			X	X	X	X		X		X							X			
Arroyo Seco River	X	X		X	X	X	X	X	X	X	X	X		X					X			
San Lorenzo Creek	X	X			X	X	X	X		X		X							X			
Salinas River Lagoon (North)						X	X	X	X	X	X	X	X	X	X				X			X
Salinas River, downstream of Spreckels Gage	X	X				X	X	X	X	X	X					X			X			
Salinas River, Spreckels Gage-Chualar	X	X	X	X	X	X	X	X	X	X	X								X			
Salinas River, Chualar-Nacimiento River	X	X	X	X	X	X	X	X	X	X	X	X		X					X			
Nacimiento Reservoir	X	X			X	X	X	X	X	X		X		X		X	X		X			
Nacimiento River, downstream of Reservoir	X	X		X	X	X	X	X	X	X	X	X		X					X			
San Antonio River, downstream from Reservoir	X	X		X	X	X	X	X		X	X	X		X					X			
San Antonio Reservoir	X	X			X	X	X	X	X	X		X		X		X	X	X	X			

Source: Central Coast RWQCB 2019

Legend:

MUN	Municipal and Domestic Supply
AGR	Agricultural Supply
PROC	Industrial Process Supply
IND	Industrial Service Supply
GWR	Groundwater Recharge
FRSH	Fresh Water Replenishment
NAV	Navigation
POW	Hydropower Generation
REC-1	Water Contact Recreation
REC-2	Non-Contact Water Recreation
COMM	Commercial and Sport Fishing
AQUA	Aquaculture
WARM	Warm Fresh Water Habitat
COLD	Cold Fresh Water Habitat
SAL	Inland Saline Water Habitat
EST	Estuarine Habitat
MAR	Marine Habitat
WILD	Wildlife Habitat
BIOL	Preservation of Biological Habitats of Special Significance
RARE	Rare, Threatened, or Endangered Species
MIGR	Migration of Aquatic Organism
SPWN	Spawning, Reproduction, and/or Early Development
SHELL	Shellfish Harvesting

Surface Water Quality Impairment and Total Maximum Daily Loads

Receiving water quality in the Salinas River Watershed is threatened by urbanization, stormwater runoff, and legacy pollutants. Stream channels have been altered for flood control purposes, riparian forests have been converted to urban land uses, and impervious surfaces have been constructed, limiting the opportunities for stormwater infiltration and increasing peak rates of runoff. Stormwater runoff may convey trash, sediments, nutrients, pesticides, and metals directly into receiving waters. According to the Monterey County Water Resources Agency, agricultural areas and practices are the principal sources of water quality impairments within the Watershed (MCWRA 2019).

Land use activities that cause erosion have also increased the delivery of toxic substances into local waterways. Water quality impairment, as defined in the Clean Water Act (CWA) Section 303(d), for the Salinas River Watershed are identified in **Table 3.9-2, Water Quality Impairments**. These impaired bodies are listed as Category 5 in the SWRCB Integrated Report. Category 5 water bodies include water segments where water quality standards are not met and a Total Maximum Daily Load (TMDL) is required, but not yet completed for at least one of the pollutants being listed for the segment (SWRCB 2017). Waters in the County are impaired with a wide variety of point-source (e.g., industrial process water discharges, cleanup sites, sewer system overflows) and nonpoint-source (e.g., agricultural runoff, urban runoff/storm sewers, construction/land development) pollutants.

Domestic and industrial wastewater from the existing Gonzales MWWTP, which has a permitted capacity of 1.3 million gallons per day, is treated biologically and physically in oxidation ponds and infiltration basins. Additional biological and physical treatment occurs within the soil column below the facility. Wastewater disposal occurs by percolation and evaporation within the ponds and infiltration basins, in accordance with Central Coast RWQCB Waste Discharge Requirements Order No. R3-2006-0005. Discharge of treated wastewater to areas other than the designated disposal ponds, including the adjacent Salinas River, is prohibited (Central Coast RWQCB 2006; Dudek 2018).

Sedimentation/siltation (e.g., high turbidity) has been included as a water quality impairment under CWA Section 303(d). Erosion, sediment transport, and sedimentation are natural fluvial processes and are only considered a water quality issue when anthropogenic (i.e., originating from human activity) activities cause excessively high erosion and turbidity beyond natural background levels (i.e., to the degree that they cause the loss or impairment of beneficial uses). In earthen-engineered channels, urbanization and channelization have increased the quantity of sediment transported and sediment buildup in maintained flood control facilities. However, such sediment buildup is managed through routine maintenance and natural processes. Sedimentation basins capture sediment-laden runoff from upstream sources and filter out sediment loads in surface runoff, thus decreasing the turbidity of stormwater flows downstream. Generally, issues related to increased surface water flow and sedimentation include increased stream erosion, which has threatened homes, utilities, and other structures; impacts to biological species and habitats; and loss of channel hydraulic capacity.

Table 3.9-2. Water Quality Impairments

Water Body	2014 and 2016 303(d) List of Water Quality Impairments (Included under SWRCB Integrated Report Category 5)
Pancho Rico Creek	None listed
Santa Rita Creek (309)	Ammonia; Escherichia coli (E.coli); Fecal Coliform; Nitrate; Oxygen, Dissolved, Sodium, Turbidity
Reliz Creek	None listed
Chalone Creek	None listed

Table 3.9-2. Water Quality Impairments

Water Body	2014 and 2016 303(d) List of Water Quality Impairments (Included under SWRCB Integrated Report Category 5)
Arroyo Seco River	None listed
San Lorenzo Creek	Boron; Chloride; Escherichia coli (E. coli); Fecal Coliform; Sodium; Specific Conductivity; pH
Salinas River Lagoon (North)	Chlorpyrifos; DDE (dichlorodiphenyldichloroethylene); Nutrients; Temperature, Water; Toxicity; pH
Salinas River, downstream of Spreckels Gage	None listed
Salinas River, Spreckels Gage-Chualar	None listed
Salinas River, Chualar-Nacimiento River	None listed
Nacimiento Reservoir	Mercury
Nacimiento River, downstream of Reservoir	Fecal Coliform; Temperature, Water; Toxicity; Turbidity; pH
San Antonio River, downstream from Reservoir	None listed
San Antonio Reservoir	Mercury

Source: SWRCB 2017

Groundwater

The project site is underlain by the Salinas Valley Groundwater Basin, which is the largest coastal groundwater basin in Central California, covering approximately 1,500 square miles and extending about 110 miles inland to the southeast from Monterey Bay. The Basin is bound on the north by the Pajaro Valley Groundwater Basin, the Pacific Ocean and the Santa Lucia and Sierra De Salinas Ranges to the west, the Gabilan and Diablo Ranges to the east, and the Carrizo Plain Groundwater Basin to the south (DWR 2015; SVBGSA 2020).

The Salinas Valley Groundwater Basin is predominately recharged through the Salinas River, which infiltrates into the underlying sediments before being extracted for use through groundwater pumping. Groundwater is the primary source of water for both agricultural and urban purposes within the Salinas Valley. Therefore, the Salinas Valley Basin serves as a critical reservoir for seasonal water storage, filled by wet season flows and depleted during the dry season when the agricultural water supply-demand is greatest. The groundwater reservoir also provides critical storage during multi-year droughts, providing water supply when surface water resources are depleted (MCWRA 2019). Given the regional significance of the Salinas Valley Groundwater Basin, the California Department of Water Resources (DWR) has classified the Basin as a Designated Groundwater Basin. As such, any development within the Basin is required to conform to the Designated Groundwater Basin stormwater requirements stipulated in the Central Coast RWQCB Post Construction document (Central Coast RWQCB 2013).

For management purposes, the Salinas Valley Groundwater Basin has been divided into eight subbasins that consist of the 180/400-Foot Aquifer, East Side Aquifer, Forebay Aquifer, Upper Valley Aquifer, Paso Robles Area, Seaside Area, Langley Area, and the Corral de Tierra Area (DWR 2015). The project site overlies the 180/400-Foot Aquifer (SVBGSA 2020).

The 180/400-Foot Aquifer Subbasin consists of three primary freshwater-bearing units — the 180-Foot, the 400-Foot, and the 900-Foot Aquifers. These aquifers are named for the average depth beneath the ground surface of each aquifer. The 180/400-Foot Aquifer Subbasin is comprised of Tertiary- to Quaternary-age terrestrial and marine sediments, consisting of interconnected sand, gravel, and clay lenses up to 20,000 feet thick. The 180-Foot Aquifer is a confined unit up to 150 feet thick and is only present in this Subbasin. The 180-Foot Aquifer is separated from the 400 Foot Aquifer by a zone of discontinuous aquifers and aquitards, ranging in thickness from 10 to 70 feet. An aquitard is a clay-rich, relatively impermeable geologic layer that generally precludes upward or downward movement of groundwater. Aquifers are generally separated by aquitards. Recharge of the Subbasin is primarily from underflow originating in the upper valley areas, as the impermeable nature of the aquitard above the 180-Foot Aquifer limits percolation from precipitation, irrigation, and streamflow (DWR 2015).

Depth to Groundwater

Subsurface explorations of the project site, conducted as part of a site-specific geotechnical investigation (Appendix F), determined that groundwater levels ranged from 11.4 to 23.1 feet below ground surface (bgs) beneath the proposed IWRF site, while explorations along Short Road, Gonzales River Road, and Puente Del Monte did not encounter groundwater to the maximum depth explored (10 to 15 feet bgs). As such, it is generally assumed that groundwater depths would increase with distance from the Salinas River. However, actual groundwater levels within the project site may vary depending upon variances in rainfall, runoff, irrigation, and other changes compared to the time of measurement (Appendix F).

Groundwater Gradient/Flow Direction

The groundwater gradient and flow direction beneath the existing MWWTP was calculated using groundwater elevation data from on-site monitoring wells. Based on available water quality data from March 1997 to March 2019, the mean groundwater flow direction beneath the MWWTP flows due north (Appendix G). In addition, the mean direction for the months of March and December (winter) were compared to that of June and September (summer) to identify potential seasonal trends. The mean direction for winter months was slightly north-northwest, and the mean direction and magnitude for summer months was north-northeast. The average difference in direction was only 14 degrees. No monitoring wells are present on the proposed project site; however, given the proximity of the site to the MWWTP, groundwater flow direction are assumed to be similar.

Groundwater Quality

The Waste Discharge Requirements (WDRs) (Order R3-2006-0005; See Section 3.9.2, Relevant Plans, Policies, and Ordinances below) established for the existing MWWTP include groundwater limits for total dissolved solids, sodium, chloride, sulfate, boron, and nitrate (Appendix G). The WDRs include quarterly and annual reporting, as well as salt reduction efforts and spill prevention. The City complies with reporting requirements dictated by the WDRs (Dudek 2018), and no Cease and Desist Orders have been issued for the facility by the Central Coast RWQCB.

Six groundwater monitoring wells (MW-1 through MW-6) are located at the existing MWWTP facility. These wells are used to measure groundwater levels and groundwater quality. Available historical water quality data for the six monitoring wells from March 1997 to March 2019 were evaluated to identify if the current MWWTP operations result in adverse effects on the local groundwater quality. In general, the concentrations of constituents detected in groundwater were highest in monitoring wells MW-1, MW-2, MW-4, and MW-5, located downgradient (north) of the MWWTP, and the lowest concentrations were detected in wells MW-3 and MW-6, located upgradient (south) of the MWWTP.

Nitrate concentrations exceeding the limit established in Order R3-2006-0005 of 10 milligrams per liter (mg/L) for the Salinas Valley 180-Foot Aquifer were detected in all the monitoring wells, except for MW-2. However, nitrate concentrations in groundwater do not appear to directly correlate with MWWTP nitrate concentrations, as nitrate concentrations in MWWTP effluent and Ponds 7 and 8 have historically been less than 10 mg/L. A composting facility immediately south of the project site may be source of the nitrate concentrations in groundwater. In addition, concentrations of boron and chloride were detected in groundwater at concentrations slightly above the limits established in Order R3-2006-0005 (Appendix G, City of Gonzales 2020). Potential trends in groundwater quality with respect to changes in Salinas River streamflow and the volume of MWWTP flow discharged to the ponds were also evaluated. No apparent relationship exists between streamflow and MWWTP flow discharged to the ponds and groundwater nitrate concentrations. Groundwater nitrate concentrations do not appear to follow any distinct trend, with sporadic spikes during both the wet and dry season and independent of the volume of MWWTP water (Appendix F).

Flood Hazards

The Salinas River and Valley have a long history of flooding because of the broad valley topography and hydrologic characteristic of the area. As agricultural and urban development in the floodplain has increased over time, the adverse effects of flooding have grown. Nacimiento Dam and San Antonio Dam were completed in 1957 and 1967, respectively, with a combined goal of flood control and water resources management in the Salinas Valley (MCWRA 2021). While the construction of these dams increased flood protection along the Salinas River, flooding has continued to cause significant damage and economic impacts on the region. Significant floods occurred in the following years:

- March 1911: Large storm event that destroyed over 2,000 acres of farmland.
- January and February 1969: Two floods each caused Monterey County to be declared a disaster area.
- February 1978: A series of storms caused extensive beachfront and coastal damage.
- March 1983: "El Niño" storms brought an extremely unusual series of high tides, storm surges, and storm waves along the coast, and heavy rains causing extensive flooding and erosion in the valley.
- March 1995: A significant winter storm brought devastating flooding and extensive damage throughout the County, including loss of life.
- February 1998: A series of "El Niño" winter storms caused flooding that impacted agricultural lands and the City of Salinas. Several communities were evacuated, and Monterey County was declared a disaster area. (MCWRA 2019).

Given the shallow channel morphology and broad floodplain of the Salinas River, urban and agricultural development along the River is at the highest risk of flooding. Flood risk and historical flood damage tend to be highest at the northern end of the valley within the communities of Gonzales, Chualar, and Salinas (MCWRA 2019).

The Federal Emergency Management Agency (FEMA) has prepared Flood Insurance Rate Maps (FIRMs) for most of Salinas Valley. These maps delineate the areas of known special flood hazards and associated applicable risks to the community. According to FEMA Flood Map #06053C0600G, effective April 2, 2009, and Flood Map #06053C0414G, effective April 2, 2009, the proposed IWRF portion of the project site, as well as a small portion of Short Road, is located within Special Flood Hazard Area (SFHA) Zone A, Without Base Flood Elevation (BFE) (**Figure 3.9-2, 100-Year Flood Hazard Zone**). The remainder of the site, which includes the majority of Short Road, Gonzales River Road, and all of Puente Del Monte Avenue, is in Zone X (Unshaded), Area of Minimal Flood Hazard (FEMA 2009a, 2009b). SFHAs are defined as an area that would be inundated by the flood event having a 1-percent chance of being equal to or exceeded in any given year. The 1-percent annual chance flood is also referred to as

the base flood or 100-year flood. Zone X (unshaded) is part of an area of minimal flood hazard, which is outside the SFHA and higher than the elevation of the 0.2 percent annual chance flood (500-year flood) (FEMA 2019a). As the proposed IWRF is located within a SFHA, there is potential for on-site flooding.

Dam Inundation

Dams can fail for a multitude of reasons, including overtopping caused by floods that exceed the capacity of the dam, structural failure of materials used in dam construction, movement and/or failure of the foundation supporting the dam, settlement and cracking of concrete or embankment dams, piping and internal erosion of soils in embankment dams, and inadequate maintenance and upkeep (FEMA 2019b).

Three major dams and reservoirs, as well as several small dams, are in and within the vicinity of Monterey County. The four largest dams in the vicinity include the Nacimiento Dam, San Antonio Dam, and Los Padres Dam. San Antonio Dam and Los Padres Dam are located within Monterey County, while Nacimiento Dam is located in San Luis Obispo County near the Monterey County boundary. According to the Division of Safety of Dams of the DWR, the San Antonio Dam and Nacimiento Dam have been classified as an "Extremely High" downstream hazard potential (MCWRA 2020). In the unlikely event of a full dam breach, Embankment Failure Inundation Maps prepared by the MCWRA indicate that the San Antonio Dam would inundate the IWRF site with up to 10 to 15 feet of water, while the Nacimiento Dam would inundate the project site with up to 15 to 20 feet of water (**Figure 3.9-3, Nacimiento Dam Failure Inundation**) (MCWRA 2017, 2018).

Water Supply

The City of Gonzales is the purveyor of potable water to residents, businesses, and industrial facilities in the city. Surface water supplies are not available, as such, all municipal water is supplied by three active wells which pump water from the 400-foot basin (City of Gonzales 2020). As of 2008, the average daily demand for water in the City was 1.0 million gallons per day (MGD). The City has capacity to store 7.0 million gallons of water. Approximately 66% of the total water produced was used for residential purposes, approximately 9% for commercial and institutional uses (commercial, school and city facilities, and hydrants), and approximately 25% for industrial uses (including fruit and vegetable processing and packaging) (City of Gonzales 2018).

SOURCE: Bing Maps 2020, FEMA 2009

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0 750 1,500 Feet

FIGURE 3.9-2

100-Year Flood Hazard Area

City of Gonzales Separate Industrial Water Recycling Facility

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In accordance with the Sustainable Groundwater Management Act (SGMA), the DWR has classified the 180/400-Foot Aquifer Subbasin as having a high priority regarding completion of a Groundwater Sustainability Plan (GSP) (DWR 2019). Accordingly, a GSP has been prepared by the Salinas Valley Basin Groundwater Sustainability Agency. The intent of the GSP is to outline how the SVBGSA and its partner GSAs will achieve groundwater sustainably in the subbasin in 20 years, as well as maintain sustainability for an additional 30 years. To achieve this goal, the Salinas Valley Basin Groundwater Sustainability Agency, in partnership with other regional agencies, actively monitors and budgets the extraction rate of the subbasin (SVBGSA 2020).

Planned development in the City of Gonzales will be supplied with groundwater from city wells. The Water Master Plan for the Sphere of Influence prepared by Kimley-Horn and presented to the Gonzales City Council in February 2020 states that at buildout of the City and SOI Area, the City will need storage of 10.1 MG which is an additional 3.1 MG above current storage capacity. The Water Master Plan states the need for two new wells (1,500 gallons per minute each) to provide the supply for City and SOI build-out (City of Gonzales 2019).

3.9.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to the enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the CWA (33 USC 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States. The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

Section 402 of the Clean Water Act (National Pollutant Discharge Elimination System)

The CWA was amended in 1972 to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a NPDES Permit. The NPDES permit program, as authorized by Section 402 of the CWA, was established to control water pollution by regulating point sources that discharge pollutants into waters of the United States (33 USC 1342). In the State of California, the U.S Environmental Protection Agency (EPA) has authorized the SWRCB with permitting authority to implement the NPDES Program.

Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing NPDES Program to address stormwater discharges from construction sites that disturb land equal to or greater than 1.0 acre and less than 5.0 acres (small construction activity). The regulations also require that stormwater discharges from small Municipal Separate Storm Sewer Systems (MS4) be regulated by a NPDES General Permit for Stormwater Discharges Associated with Construction Activity, Order No. 99-08-DWQ. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which describes Best Management Practices (BMPs) the discharger would use to protect stormwater runoff. The SWPPP must contain a visual monitoring program, a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Routine inspection of all BMPs is required under the provisions of the Construction General

Permit. On September 2, 2009, the SWRCB issued a new NPDES General Permit for Stormwater Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002), which became effective July 1, 2010.

Rivers and Harbors Act, Section 10

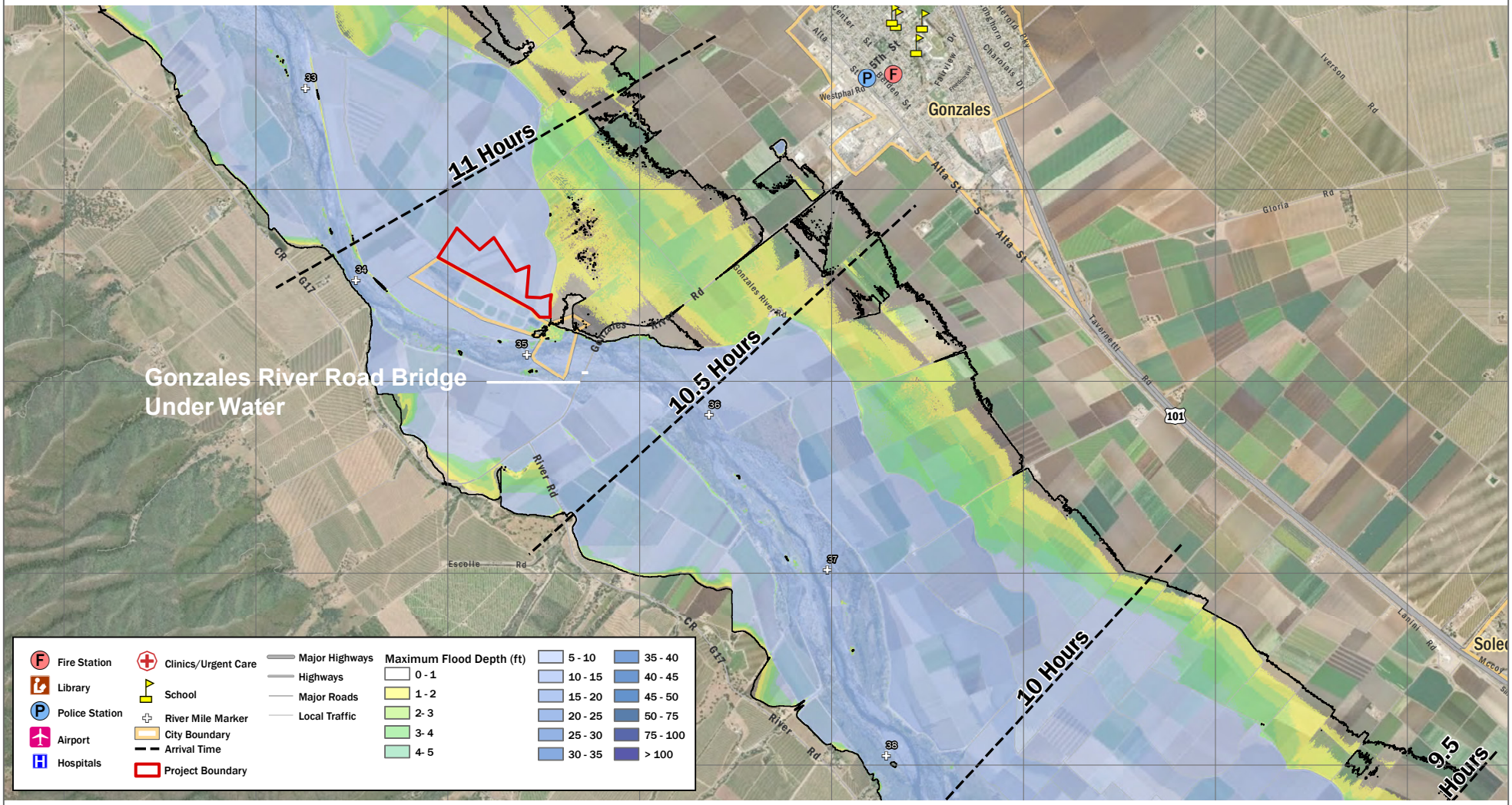
Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, rechannelization, or any other modification of a navigable water of the United States, and applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction.

The proposed project would involve the installation of a new gravity sewer line and the construction of the IWRF, designed to treat wastewater produced by the Gonzales Agricultural Business Industrial Park (GABIP) separately from the existing MWWTP. Implementation of the project would not result in the introduction of permanent structures that would alter or impair the navigable waters of the nearby Salinas River. Furthermore, as previously discussed, treated effluent would not be discharged into the Salinas River, but rather be infiltrated by effluent percolation beds into the underlying sediments. As such, the proposed project would abide by the River and Harbors Act requirements.

National Flood Insurance Program

The National Flood Insurance Act of 1968 established the National Flood Insurance Program in order to provide flood insurance within communities that were willing to adopt floodplain management programs to mitigate future flood losses. The act also required the identification of all floodplain areas within the United States and the establishment of flood-risk zones within those areas. FEMA is the primary agency responsible for administering programs and coordinating with communities to establish effective floodplain management standards. FEMA is responsible for preparing Flood Insurance Rate Maps that delineate the areas of known special flood hazards and their risk applicable to the community. The program encourages the adoption and enforcement by local communities of floodplain management ordinances that reduce flood risks.

As previously discussed, the proposed IWRF portion of the project site is located within SFHA Zone A, Without BFEs (Figure 3.9-2, 100-Year Flood Hazard Zone). The remainder of the site, which includes the majority of Short Road, Gonzales River Road, and all of Puente Del Monte Avenue, is in Zone X (Unshaded), Area of Minimal Flood Hazard. In addition, the San Antonio Dam and Nacimiento Dam have been classified as an “Extremely High” downstream hazard potential (MCWRA 2020). In the unlikely event of a full dam breach, Embankment Failure Inundation Maps prepared by the MCWRA indicate that the San Antonio Dam would inundate the IWRF site with up to 10 to 15 feet of water, while the Nacimiento Dam would inundate the project site with up to 15 to 20 feet of water (**Figure 3.9-3, Nacimiento Dam Failure Inundation**).



SOURCE: MCWRA 2018

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FIGURE 3.9-3

Nacimiento Dam Failure Inundation

City of Gonzales Separate Industrial Water Recycling Facility

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Floodplain Management: Executive Orders 11988, 12148, and 13690

Executive Orders (EOs) 11988, 12148, and 13690 encompass a set of requirements to ensure that federal agencies act to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities. Before acting, each agency is required to determine whether the project would occur in a designated floodplain. If an agency determines or proposes to conduct, support, or allow a project to be developed in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains. The project design and construction should take natural systems, ecosystem processes, and nature-based approaches into consideration when planning to construct within a floodplain whenever possible.

Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing those policies. Pursuant to the Code of Federal Regulations, state antidegradation policies and implementation methods shall, at a minimum, protect and maintain (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the State finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

State

Section 303 of the Clean Water Act (Beneficial Uses and Water Quality Objectives)

The Central Coast RWQCB is responsible for the protection of the beneficial uses of waterways within their jurisdiction, which includes the project site. The Central Coast RWQCB uses its planning, permitting, and enforcement authority to meet its responsibilities adopted in the Basin Plan to implement plans, policies, and provisions for water quality management.

In accordance with state policy for water quality control, the Central Coast RWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan for the Central Coast has identified existing and potential beneficial uses supported by key surface water drainages throughout its jurisdiction. Under CWA Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The Central Coast RWQCB has developed total maximum daily loads for select reaches of water bodies.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill (AB) 1739, Senate Bill 1168, and Senate Bill 1319—collectively known as SGMA, which requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, DWR provides on-going support to local agencies through guidance, financial assistance, and technical assistance..

As previously discussed, the DWR has classified the 180/400-Foot Aquifer Subbasin as having a high priority regarding completion of a GSP (DWR 2019). Accordingly, a GSP has been prepared by the Salinas Valley Basin Groundwater Sustainability Agency. The intent of the GSP is to outline how the Salinas Valley Basin Groundwater Sustainability Agency and its partner GSAs will achieve groundwater sustainably in the subbasin in 20 years, as well as maintain sustainability for an additional 30 years. To achieve this goal, the Salinas Valley Basin Groundwater Sustainability Agency, in partnership with other regional agencies, actively monitors and budgets the extraction rate of the subbasin (SVBGSA 2020).

California Porter-Cologne Water Quality Control Act

Since 1973, the California SWRCB and its nine RWQCBs have been delegated the responsibility of administering permitted discharge into the waters of California. The Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.; 23 CCR Chapters 3 and 15) provides a comprehensive water quality management system for the protection of California waters. Under the act, "any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State" must file a report of the discharge with the appropriate RWQCB. Pursuant to the act, the RWQCB may then prescribe "waste discharge requirements" that add conditions related to control of the discharge. The Porter-Cologne Water Quality Control Act defines "waste" broadly, and the term has been applied to a diverse array of materials, including non-point source pollution. When regulating discharges that are included in the federal CWA, the State essentially treats Waste Discharge Requirements and NPDES as a single permitting vehicle. In April 1991, the SWRCB and other state environmental agencies were incorporated into the EPA.

The RWQCB regulates urban runoff discharges under the NPDES permit regulations. NPDES permitting requirements cover runoff discharged from point (e.g., industrial outfall discharges) and non-point (e.g., stormwater runoff) sources. The RWQCB implements the NPDES Program by issuing construction and industrial discharge permits.

Under the NPDES permit regulations, BMPs are required as part of a SWPPP. The EPA defines BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the United States." BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage (40 CFR 122.2).

California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High-Quality Water in California, was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the Federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the state (e.g., isolated wetlands and groundwater), not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual basin plans, such high quality shall be maintained, and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of such water resources.

California Toxics Rule

The EPA has established water quality criteria for certain toxic substances via the California Toxics Rule. The California Toxics Rule established acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water,

such as inland surface waters and enclosed bays and estuaries, that are designated by each RWQCB as having beneficial uses protective of aquatic life or human health.

Assembly Bill 3030 – Groundwater Management Act

In 1992, AB 3030 was passed, which increased the number of local agencies authorized to develop a groundwater management plan and set forth a common framework for management by local agencies throughout California. These agencies could possess the same authority as a water replenishment district to "fix and collect fees and assessments for groundwater management" (California Water Code Section 10754), provided they receive a majority of votes in favor of the proposal in a local election (California Water Code Section 10754.3). The Groundwater Management Act has been superseded by SGMA, and as previously discussed, a GSP has been prepared by the Salinas Valley Basin Groundwater Sustainability Agency.

Regional

Watershed Water Quality Management

The County of Monterey, with relevant cities in the Monterey Bay Peninsula (not including the City of Gonzales), are participating members of the Monterey Regional Storm Water Management Program (MRSWMP). Participating members collaborate on projects and other permit-related activities to satisfy several individual Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit requirements. The Phase II Small MS4 General Permit is a National Pollution Discharge Elimination System (NPDES) permit that was established under the Clean Water Act of 1972. This program would apply to construction of the proposed wastewater conveyance line, which is in County jurisdiction.

Salinas River Long-Term Management Plan

The Salinas River Long-Term Management Plan (LTMP) is a multi-benefit management program that addresses needs related to MCWRA facilities and operations, as well as related issues such as flood risk reduction, water supply, water quality, natural resource conservation, threatened and endangered species management, and federal, and state Endangered Species Acts compliance. The primary goals of the LTMP are as follows.

- Identify long-term solutions for the management of the Salinas River that include flood reduction, water resource management, stream maintenance, and habitat management for threatened and endangered species.
- Investigate the Salinas River Lagoon for the potential of reducing flooding and improving habitat conditions.
- Identify potential improvements to steelhead migration in the Salinas River, utilizing management efforts and anticipated future projects.
- Develop the framework for implementing the LTMP that meets a variety of multi-benefit management goals, including implementation of the forthcoming groundwater sustainability plans for the Salinas Valley.
- Document the historical conditions in the Salinas River Watershed in Monterey County.
- Describe the existing conditions in the Salinas River Watershed in Monterey County, including the physical, biological, and chemical changes in the system over time and, to the extent possible, the sources driving those changes.

Local

Waste Discharge Requirements Order No. R3-2006-005

On March 24, 2006, the Central Coast RWQCB authorized the expansion and improvement of the City of Gonzales MWWTP. Order No. R3-2006-005 revised the MWWTP treatment capacity outlined in the Discharger's May 19, 1998, *Final Report Evaluation of Wastewater Treatment Facility* treatment capacity limit of 0.763 MGD to the design improvement of 3.0 MGD. As part of the requirements outlined in the Waste Discharge Requirements, the City must submit annual monitoring reports as well as abide by the pollutant, operation, and water quality specifications established by the Central Coast RWQCB (Central Coast RWQCB 2006).

General Waste Discharge Requirements Order No. R3-2004-0066

On July 9, 2004, the Central Coast RWQCB authorized the enactment of General WDR Order No. R3-2004-0066, establishing discharge requirements of fruit and vegetable processing waste. Similar to WDR Order No. R3-2006-005, General WDR Order No. R3-2004-0066 outlines annual monitoring report requirements as well as establishes the pollutant, operation, and water quality specifications established by the Central Coast RWQCB (Central Coast RWQCB 2004). The City intends to use General WDR No. R3-2004-0066 as a means of regulating the new IWRF.

MS4 General Permit Requirements

Stormwater runoff in the City is subject to Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit requirements. The Phase II NPDES Program is intended to address potential adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. The environmental problems associated with discharges from MS4s in urbanized areas and discharges resulting from construction activities are outlined in the Program. The Phase II NPDES Program contains six program elements designed to educate the public and prevent the regional degradation of water quality. The six program elements include: (1) Public Education and Outreach; (2) Public Participation/Involvement; (3) Illicit Discharge Detection and Elimination; (4) Construction Site Runoff Control; (5) Post-Construction Runoff Control; and (6) Pollution Prevention/Good Housekeeping (MRSWMP 2011). These requirements would apply to proposed IWRF operations.

Central Coast Post-Construction Stormwater Management Requirements

In July 2013, the Central Coast RWQCB adopted Resolution No. R3-2013-0032, with more stringent Post Construction Requirements. Participating members collaborate on projects and other Permit-related activities to satisfy several individual Phase II MS4 General Permit requirements. These requirements apply to designated Watershed Management Zones, including the City of Gonzales and proposed project site, that create or replace 2,500 square feet or more of impervious area and require low impact development techniques to enhance water infiltration into soil. The Post Construction Requirements emphasize protection and restoration of watersheds to promote sustainable relationships required for a watershed to be considered healthy. These requirements would apply to proposed IWRF operations.

City of Gonzales General Plan

The Community Health and Safety Element of the City of Gonzales General Plan, contains goals and policies that address flooding as well as water quality. In addition, the Community Facilities and Services chapter of the General

Plan contains goals and policies related to runoff, water quality, and water supply management. Goals and policies related to hydrology and water quality in the General Plan include the following:

Flood Hazards

Goal HS-2. Reduced risk of personal injury, loss of life, and damage to property resulting from floods.

Policy HS-2.1 Flood Safety.

Require all new construction and renovation to be designed and constructed to mitigate the effects of flood hazards.

Implementing Action HS-2.1.1–Flood Damage Prevention.

Require new development to take all necessary steps to mitigate its on- and off-site stormwater drainage effects, consistent with city regulations, state law, and best management practices.

Implementing Action HS-2.1.2—Flood Hazard Analysis.

Require proponents of new development to prepare comprehensive drainage studies to fully document on- and off-site drainage conditions and downstream impacts and provide appropriate mitigation.

Implementing Action HS-2.1.5—Public Awareness of Flood Hazards.

Promote greater public awareness of flood hazards throughout the planning area by making available up-to-date maps of flood plain boundaries and enforcing flood plain development restrictions.

Policy HS-2.2 Existing Storm Water Drainage System.

Support the maintenance and improvement of the existing stormwater drainage system to ensure the unobstructed flow of stormwater and to prevent future flood damage to the City.

Water Quality

Goal HS-7: Clean, healthy water for the residents of Gonzales.

Policy HS-7.1. Water Quality in New Construction and Redevelopment.

Require all new construction and renovation to be designed and constructed to protect water quality.

Implementing Action HS-7.1.1. Protect City Wells.

Protect the quality of water obtained from City wells.

Implementing Action HS-7.1.3. Best Management Practices.

Require the use of source and treatment control BMPs to trap or remove potential pollutants from urban runoff before they reach the Gonzales Slough and other sensitive habitat or natural areas.

Implementing Action HS-7.1.6. Maintain Water Quality During Construction.

Maintain adequate regulatory controls to minimize sediment flow from construction sites and other sources to the Gonzales Slough and other drainage courses.

Wastewater Recycling

Implementing Action FS-2.1.5. Wastewater Recycling.

Develop the capacity to recycle wastewater at the Gonzales Wastewater Treatment Plan and/or employ other conservation measures and best practices to meet the demand for water supply in the City.

Drainage

Goal FS-4. Reduce the impacts of new development and redevelopment on the quantity and quality of stormwater runoff to the maximum extent practicable.

Policy FS-4.1. Meet Demand for New Drainage Facilities.

Meet the demand for new drainage facilities in a timely, cost-effective manner by requiring, at a minimum, the retention of the 10-year 24-hour storm event.

Implementing Action FS.4.1.4. Best Management Practices.

Require the use source and treatment control BMPs to trap or remove potential pollutants from urban runoff before they reach the Gonzales Slough and other sensitive habitat or natural areas.

Implementing Action FS-4.1.5. NPDES II.

Apply NPDES II water quality protection requirements to new development in the Planning Area.

Implementing Action FS-4.1.8. SWPPP.

Ensure all developers and contractors comply with stormwater pollution prevention practices.

Gonzales City Code, Floodplain Management

The purpose of Gonzales City Code, Title 14 Flood Control, Chapter 14.04 Floodplain Management is to promote the public health, safety, and general welfare, and minimize public and private losses due to flood conditions in specific areas, by legally enforceable regulations applied uniformly throughout the community to all publicly and privately-owned land, within flood-prone or flood-related erosion areas. This ordinance includes:

4.04.040 Methods of Reducing Flood Losses

In order to accomplish its purposes, this chapter includes regulations to:

A. Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;

B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
C. Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
D. Control filling, grading, dredging, and other development which may increase flood damage; and
E. Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters, or which may increase flood hazards in other areas. (Ord. 2009-56, 2-17-2009)

3.9.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts on hydrology and water quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hydrology and water quality would occur if the proposed project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the Basin.
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    a. result in substantial erosion or siltation on- or off-site;
    b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site;
    c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    d. impede or redirect flood flows.
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.9.4 Impacts Analysis

3.9-1. The project could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

Construction

The proposed project includes an IWRF and associated wastewater conveyance line. The proposed IWRF would be located on 54 acres north of the existing MWWTP, as shown in Figure 2-4, IWRF Site Plan. The proposed industrial wastewater conveyance line would consist of approximately 10,700 linear feet of a 21–inch new underground sewer pipe located mainly within an existing City sewer easement within County street rights-of-way, which would parallel the existing wastewater conveyance line that currently conveys wastewater flows to the MWWTP. Similar to the existing wastewater conveyance line, the proposed industrial wastewater conveyance line would convey flows by gravity to the proposed IWRF. The proposed IWRF site currently overlies City and County jurisdictions; however, the 5-acre County

portion of the site would be annexed by the City as part of the project. The proposed wastewater conveyance line corridor is within County jurisdiction and would remain within County jurisdiction following construction.

The analysis of potential impacts of construction activities, construction materials, and non-stormwater runoff on water quality during the site clearing, and construction phase focuses primarily on sediment and certain non-sediment-related pollutants. Construction-related activities that primarily result in sediment releases are related to exposing previously stabilized soils to potential erosion by rainfall/runoff and wind. Environmental factors that affect erosion include topography, soil, and rainfall characteristics. Erosion and sedimentation affect water quality and interferes with photosynthesis; oxygen exchange; and the respiration, growth, and reproduction of aquatic species. Additionally, other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported to downstream drainages, including the Salinas River, which could contribute to the degradation of water quality. Furthermore, during grading and temporary stockpiling of soil, there is the potential for soil migration off-site via wind (see Section 3.2, Air Quality, for further discussion of construction generated air quality impacts).

Non-sediment-related pollutants that are also of concern during construction include construction materials (e.g., paint, stucco); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants. Because the proposed wastewater conveyance line would be within County jurisdiction, construction would be subject to requirements of the MRSWMP. This program requires the County to implement an Erosion Control Plan (ECP) to reduce pollutant discharges at work sites from flowing into storm drains and polluting neighborhood creeks, rivers, and the ocean through the implementation of construction-related BMPs. The ECP is required prior to permit issuance for building, grading, or land clearing activities, and may be incorporated into other required plans, provided it is identified as such (County of Monterey 2020).

In addition, because the proposed IWRF and wastewater conveyance line would disturb greater than 1.0 acre, grading and construction would comply with the provisions of the *NPDES General Permit for Storm Water Associated with Construction Activities* (Order No. 2009-0009-DWQ, NPDES No. CAS000002), also known as the Construction General Permit. The City would be required to submit a Notice of Intent to the Central Coast RWQCB in order to obtain approval to complete construction activities under the Construction General Permit. This Permit would include a number of design, management, and monitoring requirements for the protection of water quality and the reduction of construction phase impacts related to stormwater (and some non-stormwater) discharges. Permit requirements would include the preparation of a SWPPP, implementation and monitoring of BMPs, implementation of best available technology for toxic and non-conventional pollutants, implementation of best conventional technology for conventional pollutants, and periodic submittal of performance summaries and reports to the Central Coast RWQCB. The SWPPP would include reference to the major construction areas, materials staging areas, and haul roads. Typical BMPs that could be incorporated into the SWPPP to protect water quality include the following:

- Diverting off-site runoff away from the construction site
- Vegetating landscaped/vegetated swale areas as soon as feasible following grading activities
- Placing perimeter straw wattles to prevent off-site transport of sediment
- Using drop inlet protection (filters and sandbags or straw wattles), with sandbag check dams within paved areas
- Regular watering of exposed soils to control dust during demolition and construction
- Implementing specifications for demolition/construction waste handling and disposal
- Using contained equipment wash-out and vehicle maintenance areas
- Maintaining erosion and sedimentation control measures throughout the construction period
- Stabilizing construction entrances to avoid trucks from imprinting soil and debris onto adjoining roadways
- Training, including for subcontractors, on general site housekeeping

Incorporation of required BMPs for materials and waste storage and handling, and equipment and vehicle maintenance and fueling would reduce the potential discharge of polluted runoff from construction sites, consistent with the State NPDES General Construction Permit. In addition, grading and construction at the IWRF site would be completed in accordance with Gonzales City Code, Chapter 10.28, Storm Water Quality Management and Discharge Control, which includes implementation of pre- and post-construction BMPs, consistent with a SWPPP. Compliance with existing regulations would prevent violation of water quality standards and minimize the potential for contributing sources of polluted runoff. Therefore, impacts to water quality from demolition and construction activities associated with the proposed project would be **less than significant**.

Operation

As previously discussed, the project site currently consists of active farmland and roadways. Implementation of the project would result in the installation of approximately 10,700 feet of a 21–inch gravity sewer pipe located within an existing easement along Femin Lane, and development of the IWRF, which would be designed to treat wastewater from the GABIP separate from the City's existing MWWTP. The IWRF is designed to be installed in two phases, with Phase I having a wastewater treatment capacity of 2.0 MGD, and Phase II with a treatment capacity of 4.0 MGD. The proposed IWRF would be located north of the existing MWWTP and would include the installation of a headworks with influent screening to remove trash and debris; an influent flow meter; an influent lift station; a 2-stage flow equalization basin to buffer flow to the ponds system; deep-operated aerated pond systems to introduce oxygen into wastewater; and effluent percolation beds to dispose of treated effluent. A solids management area would be set aside for accumulated biosolids, sludge, and debris from the influent screening. The proposed IWRF would comprise a total of approximately 54 acres.

The City would use its existing General WDR Order No. R3-2004-0066 as a means of regulating the proposed IWRF facility. The pre-treatment standards and limits would be established to ensure the quality of effluent wastewater treated at the IWRF protects the beneficial uses of local surface water and groundwater. The Central Coast RWQCB would require that the IWRF be designed in order to meet the existing regional Basin Plan Water Quality Objectives, with careful consideration of achieving a nitrate-nitrogen effluent limitation of 10 mg/L or less. In addition, the effluent would be expected to meet all other federal and state drinking water standards (City of Gonzales 2020). **Table 3.9-3, Anticipated Waste Discharge Requirements** for IWRF, below, summarizes the anticipated effluent quality parameters for the proposed IWRF, consistent with the regional Basin Plan.

Table 3.9-3. Anticipated Waste Discharge Requirements for IWRF

Parameter[1]	Effluent Limitation[2]
BOD5 (mg/L; lbs/acre/day)	45[3], 100[4]
TSS mg/L; lb./acre/day)	45[3], 100[4]
Boron	0.5
Chlorides	250
TDS	1,500
pH (pH Units)	6.5 – 8.3[4]
Sodium	250
Nitrate as N	10
Other Constituents	Primary and Secondary Drinking Standards[5]

Source: City of Gonzales 2020
Notes: BOD5 = Biochemical oxygen demand; lbs = pounds; TSS = Total Suspended Solids; TDS = total dissolved solids; pH = potential of hydrogen
1 All units expressed in mg/L unless otherwise indicated.
2 Basin Plan water quality objective for groundwater, unless otherwise indicated.

[3] Secondary treatment standards for facilities such as pond systems, that are "equivalent to secondary treatment standards", EPA NPDES Permit Writers' Manual. If other than a pond system is proposed, BOD and TSS limitations may be more stringent than listed.
[4] Fruit & Vegetable Order No. R3-2004-0066. Note, for BOD5, current limitations are expressed in pounds per acre per day.
[5] Effluent discharged from new IWRF should meet all other federal and state drinking water standards.

During storm events, pollutants from paved areas without proper stormwater controls and BMPs could be conveyed off-site before eventually being discharged into the Salinas River. Most pollutants flowing off-site in this manner would be dust, litter, and possibly residual petroleum products (e.g., motor oil, gasoline, diesel fuel). Certain metals, along with nutrients and pesticides from possible landscape areas, can also be present in stormwater runoff. Between periods of rainfall, surface pollutants tend to accumulate, and runoff from the first significant storm of the year ("first flush") would likely have the largest concentration of pollutants. Untreated runoff could be transported to the Salinas River, and could contribute to the degradation of water quality as well as impair established beneficial uses. As indicated in Table 3.9-2, Water Quality Impairments, the downstream Salinas River Lagoon is impaired with respect to chlorpyrifos, DDE, nutrients, water temperature, toxicity, and pH.

As previously discussed, the proposed IWRF site currently overlies City and County jurisdictions; however, the County portion would be annexed by the City as part of the project. The proposed wastewater conveyance line corridor is within County jurisdiction and would remain within County jurisdiction following construction. The City and County of Monterey are co-permittees under the County of Monterey MS4 Permit. The MS4 Permit requires the City and County to implement a Post-Construction Storm Water Management Program for all Regulated Projects, as defined in the Central Coast RWQCB *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region*. Regulated Projects are those that would result in or replace 2,500 square feet or more of impervious surfaces. As the project would result in the conversion of active farmland into a new wastewater treatment facility, is located within WMZ 4, and is underlain by a Designated Groundwater Basin, the project is subject to the "Special Circumstances" criteria of the Post-Construction Program. These Special Circumstances mandate projects to meet specific runoff retention requirements, using the LID Development Standards for Regulated Projects, for optimal management of watershed processes (Central Coast RWQCB 2013).

The Post-Construction Program sets limits of pollutants being discharged into waterways and requires all new development to incorporate structural and non-structural BMPs to improve water quality and reduce on- and off-site runoff potential. Special Circumstance Projects are required to retain and treat stormwater equal to the volume of runoff generated by the 85th percentile, 24-hour storm event. Water quality treatment would be achieved through the implementation of on-site LID features, listed in the order of preference: harvesting and use (most preferred), infiltration, evapotranspiration, biofiltration, and non-retention-based treatment systems (least preferred). Typical infiltration LID features include the incorporation of infiltration basins and vegetated swales. In addition, Special Circumstance Projects are additionally required to prevent off-site discharge from stormwater events generated by the 95th percentile 24-hour rainfall event. This is typically achieved through the optimization of on-site infiltration unless determined to be insufficient. If infiltration is determined not to be feasible or inadequate, the remaining volume of stormwater would be captured through storage, rainwater harvesting, and/or evapotranspiration techniques. Collectively, the implementation of LID and BMP features would reduce the potential for off-site erosion, capture pollutants entrained in stormwater, and ensure that stormwater is infiltrated to the greatest extent feasible (Central Coast RWQCB 2013).

As the proposed IWRF is still within the design-phase of project development, proposed Post-Construction Stormwater Management Requirements have not been incorporated into the project design. Therefore, absent appropriate controls, the proposed project could result in **potentially significant** impacts to surface water quality. Mitigation Measure **HYD-1a** would ensure that LID and BMP features would be incorporated into the project to ensure that the 85th percentile 24-hour rainfall event is retained on-site and treated. Similarly, measure **HYD-1b**

would ensure that the project would not discharge stormwater runoff up to the 95th percentile, 24-hour rain event. The implementation of measures HYD-1a and HYD-1b would ensure that the project is appropriately sized and designed not to violate any surface water quality and waste discharge standards. Moreover, the project would not result in the discharge of treated effluent into nearby waterways, such as the Salinas River, as treated wastewater would be infiltrated on-site by effluent percolation beds.

Groundwater Quality

As previously discussed, available groundwater quality data indicate that nitrate, boron, and chloride concentrations in excess of applicable water quality standards are present in groundwater immediately adjacent to the proposed IWRF. However, nitrate concentrations in groundwater do not appear to directly correlate with the City's existing MWWTP nitrate concentrations, as nitrate concentrations in MWWTP effluent and Ponds 7 and 8 have historically been less than 10 mg/L (Appendix G), which is the Basin Plan's water quality objective and anticipated WDR for nitrates. Based on these relatively low MWWTP effluent nitrate concentrations, elevated nitrate concentrations (i.e., greater than 10 mg/L) in groundwater beneath the existing MWWTP may be regional background concentrations for the project area and not solely a result of infiltration of effluent.

Regardless of the existing source of the elevated nitrate concentrations in groundwater, improper treatment of effluent at the IWRF could exacerbate groundwater contaminant levels, further degrading regional groundwater quality. The IWRF would be required to comply with WDRs established by the Central Coast RWQCB, which would be an amended version of General WDR Order No. R3-2004-0066, including groundwater limits for total dissolved solids, sodium, chloride, sulfate, boron, and nitrate. In order to meet these requirements, the IWRF would screen wastewater to remove trash and debris, then treat the effluent within a deep-operated aerated pond system, prior to infiltration. Based on the Preliminary Engineering Report for the proposed project, while the deep-aeration pond system would achieve some nitrogen removal, year-round the treatment plant would not be able to achieve nitrogen effluent levels consistently below the Basin Plan water quality objective of 10 mg/L nitrate-N (City of Gonzales 2020), in part likely due to regional background nitrate concentrations in the area. However, because the source of elevated nitrate concentrations in groundwater may be due in part to infiltration of wastewater at the existing MWWTP, operation of the proposed IWRF could potentially conflict with regional and local water quality standards, resulting in **potentially significant** groundwater quality impacts. Mitigation Measure **HYD-2** would ensure that groundwater monitoring wells are installed upgradient and downgradient of the proposed IWRF for quarterly or semi-annual monitoring (i.e., sampling and analysis).

3.9-2. The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the Basin.

Groundwater Recharge

The project is underlain by the 180/400-Foot Aquifer Groundwater Subbasin, which is part of the Salinas Valley Basin. Currently, the project site consists of partially developed, active farmland, and mostly impermeable roadways. Project development within the roadway rights-of-way would involve the trenching and installation of approximately 10,700 feet of 21-inch gravity sewer mains. Once installed, the wastewater conveyance lines would be paved over, resulting in little to no change in permeable surfaces. Conversely, the installation of the IWRF would result in a moderate increase in impermeable surfaces, which could impede groundwater recharge. However, implementation of the project would expand the wastewater treatment capacity for the City , specifically to treat wastewater from agricultural operations. Treated wastewater would be infiltrated by effluent percolation beds, ensuring that effluent is recycled back into the underlying sediments from where it was initially derived. Although

this impact would be **less than significant**, implementation of MM-HYD-1a and MM-HYD-1b would further ensure that LID and BMP features are incorporated into the project design such that on-site runoff is retained and infiltrated to the greatest extent feasible.

Groundwater Supply

Groundwater supply for the City is pumped from the 180/400-Foot Aquifer Subbasin. As previously discussed, the DWR has classified the 180/400-Foot Aquifer Subbasin as having a high priority in regard to enacting a GSP. Accordingly, the Salinas Valley Basin Groundwater Sustainability Agency has prepared a GSP for the Subbasin, which aims to achieve groundwater sustainably in the Subbasin in 20 years, as well as maintain sustainability for an additional 30 years. To achieve this goal, the SVBGSA, in partnership with relevant local agencies, actively monitors and budgets groundwater extraction rates to ensure that over-extraction would not occur.

Moreover, the proposed IWRF and sewer pipeline have been accounted for in the City's growth projections. The City estimates that an additional 6.10 MGD of production capacity would be needed to supply water for the planned growth of the City, including the proposed project (City of Gonzales 2018). Once developed, agricultural wastewater would be diverted and treated at the proposed IWRF, which would have an initial design capacity of 1.0 MGD. Municipal wastewater would continue to be treated at the existing MWWTP. Treated effluent at each facility would, to the greatest extent feasible, be infiltrated into the underlying Subbasin from where it was initially derived. Future phases of the IWRF may also include recycled water for non-potable use. This process would partially off-set the water demands of the City. As a result, the project would not substantially decrease groundwater supplies or impede the GSP established by the SVBGSA. Impacts would be considered **less than significant**.

3.9-3. The project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

a. result in substantial erosion or siltation on or off site;

Currently, runoff from the project site sheet flows into municipal storm drains, nearby unpaved land, and the Salinas River. Installation of the proposed sewer pipeline would involve trenching and installation of a gravity sewer line, mostly within existing roadway rights-of-way. Once installed, the roadways would be repaved to existing conditions resulting in little to no change in runoff rates. Conversely, development of the proposed IWRF would result in the conversion of farmland into a wastewater treatment facility, which would somewhat alter the internal drainage patterns and result in an increase in impervious surfaces. This increase in impervious surfaces could result in an increase of localized on- and off-site runoff into nearby unpaved land, nearby waterways, or into the municipal storm drains that would be **potentially significant**. The proposed project would be developed in accordance with MM-HYD-1a**,** which would ensure that LID BMP features are incorporated into the project to ensure that the 85th percentile 24-hour rainfall event is treated and retained on-site, and MM-HYD-1b**,** which would ensure that the project does not discharge stormwater runoff generated by the 95th percentile, 24-hour event.

b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or

Runoff occurs when there is more water than land can absorb. An increase in impermeable surfaces reduces the underlying soils' ability to absorb water, decreasing localized groundwater recharge rates and

increasing runoff volumes. As previously discussed in Impact 3.9-1, development of the proposed project would result in an increase in impervious surfaces, which could result in a **potentially significant** increase of localized on- and off-site runoff into nearby unpaved land, nearby waterways, or into the municipal storm drains. However, as previously discussed in Impact 3.9-1, the project would include mitigation measure HYD-1a, which would ensure that LID BMP features are incorporated into the project to ensure that the 85th percentile 24-hour rainfall event is treated and retained on-site, and MM-HYD-1b**,** which would ensure that the project does not discharge stormwater runoff generated by the 95th percentile, 24-hour event.

c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

The proposed project could result in additional sources of polluted runoff that would be **potentially significant**. As previously discussed under Impact 3.9-1, the proposed project would incorporate LID and BMP features, sized to accommodate the 85th percentile, 24-hour event. These features would be designed to reduce the potential incidental release of contaminants to the environment, such as oil, grease, nutrients, heavy metals, and certain pesticides, including legacy pesticides. Moreover, the solids management area of the IWRF would store and dispose of accumulated biosolids, sludge, and debris from the influent screening in accordance with all relevant County and municipal regulations related to water quality. As a result, with the implementation of MM-HYD-1a and MM-HYD-1b, the project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

3.9-4. The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.

Salinas River Flooding

According to FEMA Flood Map #06053C0600G, effective April 2, 2009, and Flood Map # 06053C0414G, effective April 2, 2009, the proposed IWRF site is located within SFHA Zone A, Without Base Flood Elevation (BFE). The proposed pipeline alignment on Femin Lane is in Zone X, Area of Minimal Flood Hazard. Because BFEs are not available for the 2009 FEMA map, Schaaf & Wheeler (2021) used 1972 FEMA 100-year BFEs to determine anticipated flood levels pre-construction and post-construction. In addition, because the 1972 FEMA study is dated, Schaaf & Wheeler used 1995 flood flows as a conservative estimate of future anticipated flood flows, as 1995 flooding was historically high in the project area. Based on this flood analysis, a protective flood control berm is recommended around the proposed IWRF, with 3 feet of freeboard above the 1995 flood levels (Schaaf & Wheeler 2021).

However, this protective flood control berm would also impede and redirect flood flows. The increase in flood levels in the vicinity of the project site as a result of constructing a flood control berm around the proposed IWRF would be less than 1.0 foot (see **Figure 3.9-4, Post Construction Flooding Increase**). Project related increased flood levels of greater than 1.0 foot as a result of new construction in the 100-year flood plain could trigger a FEMA map revision, at the discretion of FEMA. Because berm construction would result in less than a 1.0 foot rise in flood waters in the vicinity of the site, the project would not alter the existing drainage pattern of the area in a manner that would significantly impede or redirect 100-year (or historic 1995) flood flows. Impacts would be **less than significant.**

3.9-5. In flood hazard, tsunami, or seiche zones, the project would potentially risk release of pollutants due to project inundation.

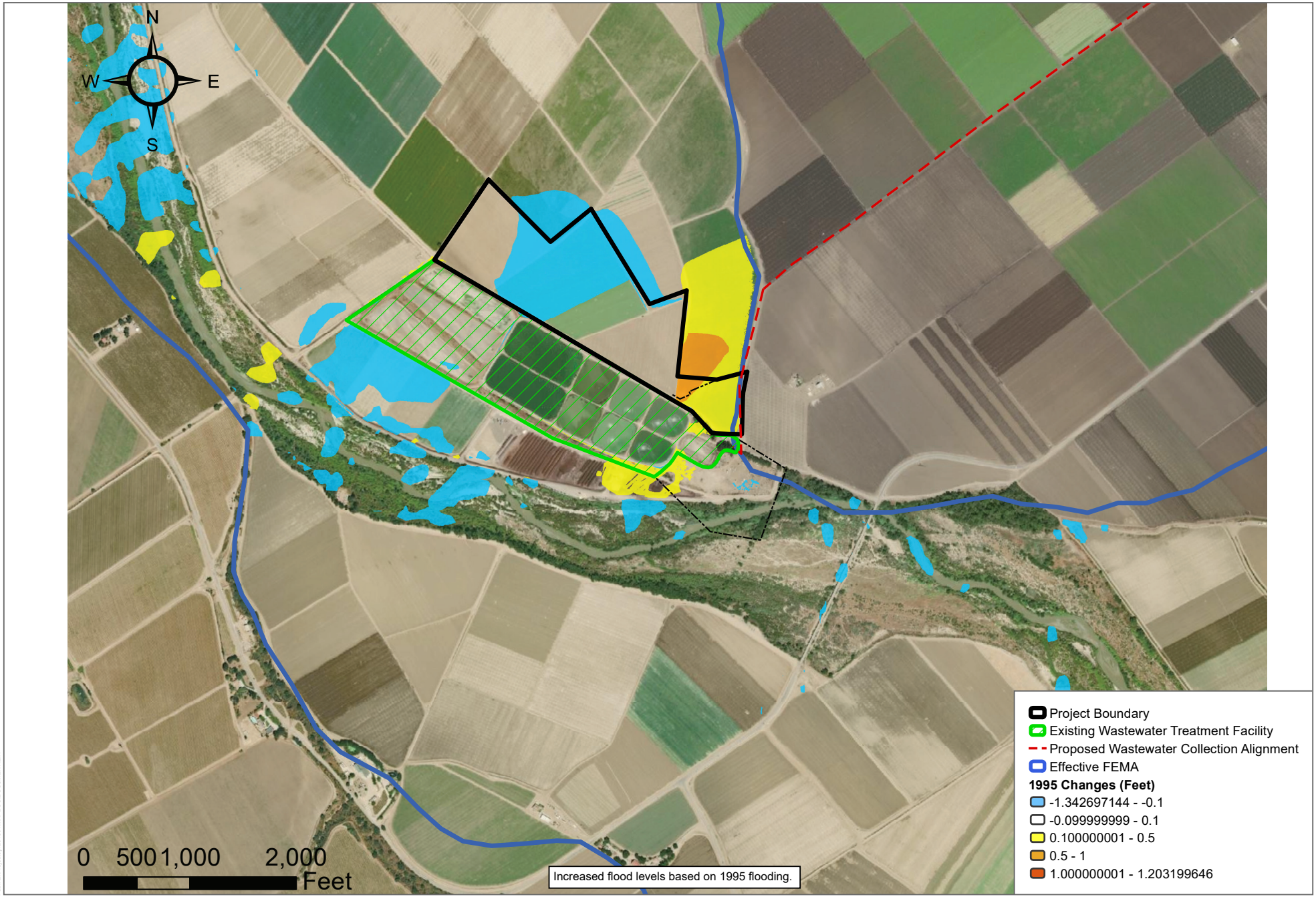
Dam Failure Inundation

As previously discussed, according to the Division of Safety of Dams of the DWR, the San Antonio Dam and Nacimiento Dam have been classified as an "Extremely High" downstream hazard potential. In the unlikely event of a full dam breach, Embankment Failure Inundation Maps prepared by the MCWRA indicate that the San Antonio Dam would inundate the IWRF site with up to 10 to 15 feet of water, while the Nacimiento Dam would inundate the project site with up to 15 to 20 feet of water (Figure 3.9-3, Nacimiento Dam Failure Inundation). In the event of inundation, potential on-site contaminants, including untreated wastewater, screened solid waste, and trash, could be released downstream and into the neighboring environment. This impact would be **potentially significant**. The feasibility and impact of potential mitigation measures are discussed below in Section 3.9.5.

3.9-6. The project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan.

As previously discussed, the project would comply with applicable water quality regulatory requirements, including implementation of a SWPPP, stormwater BMPs, and LID design, which would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Salinas River Watershed. In addition, with compliance with these regulatory requirements, the project would reduce potential water quality impairment of surface waters such that existing and potential beneficial uses of key surface water drainages downstream of the project site, including the Salinas River, would not be adversely impacted. As a result, with the exception of possible pollutant release as a result of flooding (Impact 4.9-5), the project would not conflict with or obstruct the Central Coast Basin Plan with respect to water quality.

With respect to groundwater management, SGMA empowers local agencies to form GSAs to manage basins sustainably and requires those GSAs to adopt GSPs for crucial groundwater basins in California. A GSA has been established for the 180/400-Foot Aquifer Subbasin, as it is considered a high priority basin. As such, an extraction limit has been established for the Subbasin, reducing the potential for over-extraction. Therefore, the project would not conflict with or obstruct a sustainable groundwater management plan and impacts would be **less than significant**.



SOURCE: Schaaf and Wheeler 2020

FIGURE 3.9-4

Post Construction Flooding Increase

City of Gonzales Separate Industrial Water Recycling Facility

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3.9.5 Mitigation Measures

The following mitigation measures would be required for project development.

HYD-1a **Stormwater Quality.** Prior to issuance of grading permits, the City of Gonzales Public Works Department or their contractor shall prepare a Stormwater Management Plan (SMP) in accordance with the Central Coast Regional Water Quality Control Board (Central Coast RWQCB) *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region* (2013). The SMP shall demonstrate that post-construction Low Impact Development (LID) Best Management Practices (BMPs) are incorporated into the proposed project design and that these features are designed to effectively retain runoff generated by the 85th percentile, 24-hour storm event, as determined by local rainfall data. The LID BMPs shall also be designed to effectively reduce and/or eliminate water pollution caused by runoff flowing from the developed site. The Post-Construction Requirements that LID retention BMPs (harvesting and use, infiltration, and evapotranspiration) shall be used unless it can be demonstrated that those BMPs are infeasible. The project shall follow the LID hierarchy of infiltration, harvest and use, evapotranspiration, biofiltration, and non-retention-based treatment systems. These LID features shall be sized and designed in accordance with the specifications outlined in the *Post-Construction Stormwater Management Requirements* document.

HYD-1b **Runoff-Retention.** Prior to issuance of grading permits, the City of Gonzales Public Works Department or their contractor shall design the project to meet the runoff retention requirements of the Central Coast RWQCB *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region* (2013). The project shall be designed to prevent off-site discharge from events up to the 95th percentile 24-hour rainfall event, as determined from local rainfall data. Compliance shall be achieved by optimizing infiltration. If infiltration is infeasible or cannot achieve full compliance, the remaining runoff amount shall be retained on-site via storage, rainwater harvesting, and/or evapotranspiration. The City shall also delineate Drainage Management Areas (DMAs) to support a decentralized approach to stormwater management. Runoff retention specifications shall be sized and designed in accordance with the specifications outlined in the *Post-Construction Stormwater Management Requirements* document.

HYD-2 **Groundwater Monitoring Program.** Prior to issuance of grading permits, the City of Gonzales shall design a Groundwater Monitoring Program in accordance with the *City of Gonzales, Industrial Wastewater Recycling Facility, Draft, Preliminary Engineering Report* (City of Gonzales 2020). The monitoring program shall establish the baseline water quality to compare the water quality impacts of the project to the existing environment. Moreover, groundwater wells shall be installed upgradient and downgradient of the proposed Integrated Wastewater Treatment Plant (IWRF) as part of facility construction. At a minimum, two wells shall be installed upgradient of the proposed IWRF, and four in the downgradient direction, consistent with the Preliminary Engineering Report specifications. The wellheads shall be surveyed, and a groundwater contour map shall be prepared and updated on a semi-annual basis to determine groundwater gradient across the IWRF and direction of flow, which is known to change seasonally.

Based on sampling and analysis, groundwater quality data shall be submitted to the Central Coast RWQCB for review. In the event that water quality analyses are not in compliance with the Central

Coast Basin Plan Water Quality Objectives, and it can be determined that the proposed IWRF is contributing to elevated concentrations of contaminants (e.g., nitrates) in groundwater, the City of Gonzales shall coordinate with the RWQCB in potentially altering the wastewater treatment process in order to lower contaminant concentrations.

3.9.6 Level of Significance After Mitigation

Impact 3.9-1 would be potentially significant prior to implementation of mitigation measures. Implementation of MM-HYD-1a and MM-HYD-1b would ensure that the proposed IWRF would implement LID BMPs and be designed to reduce water contaminants and runoff to a less than significant level. MM-HYD-2 would ensure that a groundwater monitoring program is in place to actively monitor for groundwater contaminants and adjust IWRF processes, as applicable, to lower contaminant concentrations in groundwater. Impact 3.9-1 would be reduced to **less than significant**.

Impact 3.9-3 would be reduced to **less than significant** with implementation of measures HYD-1a and HYD-1b.

Impact 3.9-5 is potentially significant. In order to avoid impacts from a potential dam failure, the IWRF would need to be graded to a minimum of 2 feet above the maximum probable dam inundation depth of 20 feet for the Nacimiento Dam, as determined by the Embankment Failure Inundation Map prepared by the Monterey County Water Resource Agency (2018). Alternatively, drainage improvements, such as construction of a perimeter flood control berm, could be completed to remove the proposed IWRF from the floodplain. However, such measures are infeasible for the following reasons: raising the entire project site 22 feet above grade is not financially feasible. In addition, grading required to raise the proposed IWRF above the inundation zone or constructing a flood control berm of sufficient size to protect from dam failure inundation would impede or redirect flood flows adjacent to the project site, which subsequently could cause inadvertent changes to downstream river flow dynamics and thus, unknown downstream flooding impacts. Downstream flooding impacts are currently unknown, and the impact would be potentially significant. Therefore, potential water quality impacts related to dam failure inundation are considered **significant and unavoidable**.

3.9.7 Cumulative Analysis

Impact 3.9-7. The project and cumulative projects could result in degradation of water quality of the Salinas River or tributary streams to the Salinas River.

The cumulative setting for the proposed project includes the near-term MWWTP expansion from 1.3 MGD to 1.9 MGD, and the Gonzales Microgrid Project which would provide electric power service to customers in and adjacent to the GABIP and would export incidental power to the regional power grid. In the absence of compliance with applicable regulatory requirements, impacts from the near-term MWWTP expansion and the Gonzales Microgrid Project could combine to cause **potentially significant** cumulative water quality impacts due to sedimentation and pollution of the Salinas River. Cumulative development and redevelopment within the Salinas River watershed would potentially result in short-term erosion-related impacts during construction and long-term erosion related to denuded soil, improper drainage, and lack of erosion control features at each cumulative project site. Similarly, incidental spills of petroleum products and hazardous materials during construction at each cumulative project site could occur during construction, resulting in cumulative water quality impacts. However, short-term and long-term erosion BMPs and spill control BMPs would be employed at each site consistent with NPDES stormwater quality regulations, including the Construction General Permit and local MS4 permits, such that impacts would not be

cumulatively considerable. In addition, per the MRSWMP, cumulative projects on County land would be required to implement an ECP to reduce pollutant discharges at work sites from flowing into storm drains and polluting neighborhood creeks, rivers, and the Salinas River, through the implementation of construction-related BMPs. There are currently no other reasonably foreseeable projects in the unincorporated County within the Gonzales SOI that would contribute to cumulative impacts; nonetheless, for future projects the ECP would be required prior to permit issuance for building, grading, or land clearing activities, and may be incorporated into other required plans, provided it is identified as such (County of Monterey 2020).

Implementation of mitigation measures HYD-1a and HYD-1b would ensure that the project's contribution to cumulative impacts to surface water quality would be **less than significant**.

Impact 3.9-8. The project and cumulative projects could result in degradation of groundwater quality of the Salinas Valley Groundwater Basin.

In the absence of compliance with RWQCB requirements, cumulative projects could combine to cause **potentially significant** cumulative groundwater quality impacts. However, each of these projects would be required to comply with WDRs established by the Central Coast RWQCB, which would be an amended version of General WDR Order No. R3-2004-0066, including groundwater limits for total dissolved solids, sodium, chloride, sulfate, boron, and nitrate. Construction dewatering on individual project sites would be subject to permitting approval by the Central Coast RWQCB. Similar to the proposed project, cumulative projects with the potential for adversely impacting groundwater quality would be required monitor groundwater quality during operations, similar to mitigation measure HYD-2.

With implementation of mitigation measure HYD-2, the project's contribution to cumulative groundwater quality impacts would be **less than significant.**

Impact 3.9-9. The project and cumulative projects could result in a cumulative increase in stormwater runoff.

In the absence of compliance with applicable regulatory requirements, cumulative projects could combine to cause **potentially significant** stormwater runoff rates and volumes. Potential increased stormwater runoff from the near-term MWWTP expansion or the Gonzales Microgrid Project site could combine to cause flooding within downstream drainages and water bodies. However, construction projects more than 1.0 acre would require implementation of a SWPPP, thus reducing off-site runoff velocities during construction. While there are currently no other cumulative projects identified in the County within the City's SOI, cumulative projects in jurisdictions that are co-permittees under the County of Monterey MS4 Permit would be required to implement a Post-Construction Storm Water Management Program for all Regulated Projects, which requires all new development to incorporate structural and non-structural BMPs to reduce on- and off-site runoff potential. Collectively, the implementation of LID and BMP features would reduce the potential for increased runoff and associated off-site erosion and flooding, such that impacts would not be cumulatively considerable.

Implementation of mitigation measures HYD-1a and HYD-1b would ensure the project's contribution to cumulative stormwater runoff impacts would be **less than significant.**

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3.10 Land Use

This section describes the existing and planned land uses within and adjacent to the IW Conveyance and IW Reclamation Facility Project (proposed project) site, which consists of the proposed Industrial Wastewater Reclamation Facility (IWRF) and the proposed industrial wastewater conveyance line, as shown in Figure 2-2. The consistency of the proposed project with existing land use plans and policies is analyzed, and potential conflicts with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect are identified. land use and planning issues present in the project area and discusses applicable state, regional, and local regulations pertaining to land use and planning. There were no comments related to land use received in response to the Notice of Preparation (NOP, see Appendix A).

CEQA Guidelines Section 15125(d) provides that the environmental setting of an EIR must discuss "any inconsistencies between the proposed project and applicable general plans and regional plans. Such regional plans include, but are not limited to, the applicable air quality attainment or maintenance plan or State Implementation Plan, regional transportation plans, regional housing allocation plans…." Potential inconsistencies between the proposed project and planning documents specific to a particular environmental issue area, such as air quality or greenhouse gases, are addressed in that section of this EIR. The reader is referred to the various technical sections in Chapter 3 for a discussion of any potential physical/environmental effects and potential incompatibilities that may be considered in the determination of physical environmental impacts. This chapter evaluates land use consistency with the City of Gonzales 2010 General Plan, and Monterey County Local Agency Formation Commission (LAFCO) Policies and Procedures (adopted February 24, 2020).

3.10.1 Existing Setting

3.10.1.1 Existing Land Uses

As described in Chapter 2, Project Description, and shown on Figure 2-3, IWRF Location, the proposed IWRF would comprise a total of approximately 54 acres adjacent to the eastern boundary of the existing municipal wastewater treatment plant (MWWTP). Approximately 49 acres are within the City of Gonzales (City) limits and 5 acres are within Monterey County in the City's sphere of influence (SOI). The City's SOI was approved by the LAFCO of Monterey County in September 2014 (LAFCO of Monterey County 2014a)

The IWRF site within the City limits (Assessor's Parcel Numbers [APNs] 223-061-017, 223-061-020, 223-061-019, and 223-061-002) and within the City's SOI (APN 223-061-014) is designated as Public/Quasi Public in the Gonzales 2010 General Plan, but is currently not zoned (City of Gonzales 2010a, 2010b). The remaining parcel that is currently located in the City's SOI within unincorporated Monterey County (APN 223-061-014) is zoned and designated F/40 by the County (Farmlands with minimum building site of 40 acres) (Monterey County 2010, 2020). The entire IWRF site is currently used for the cultivation of row crops.

As shown in **Figure 2-2, Project Location**, the proposed industrial wastewater conveyance line would consist of approximately 10,700 linear feet of a 21- to 24–inch new underground sewer pipe located mainly within the public City street right-of-way or existing City sewer easements within County street rights-of-way, which would parallel the existing wastewater conveyance line that currently conveys wastewater flows to the MWWTP.

3.10.1.2 Surrounding Land Uses

Land uses surrounding the wastewater conveyance line alignment along Femin Lane and Short Road consist of light industrial businesses (e.g., irrigation systems supplier, welder) and active agricultural lands within the Gonzales Agricultural Business Industrial Park (GABIP). As described in Chapter 2, Project Description, land uses surrounding the proposed IWRF site consist of the existing MWWTP to the south; and active agricultural lands to the north, east, and south. There is also vacant land that was formerly used as an auto wrecking yard at the eastern boundary of the existing MWWTP, and a composting facility is located at the southern boundary of the existing MWWTP. The Salinas River is located west of the composting facility, about 0.2 miles south of the proposed IWRF.

The agricultural land uses surrounding the proposed wastewater conveyance line and IWRF, as well as the composting facility located adjacent to the existing MWWTP, are zoned and designated F/40 in unincorporated Monterey County (Monterey County 2010, 2020). The existing MWWTP and former auto wrecking yard are located within City limits and zoned Public Facilities (PF) and designated as Public/Quasi Public in the City's General Plan (City of Gonzales 2010c).

3.10.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations pertaining to land use and planning that would apply to the proposed project.

State

Although the State of California has no land use jurisdiction over the project site, the following state regulations pertaining to land use and planning would apply to the proposed project.

Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Act) establishes procedures for changes of organization within local government, including annexations to a City. The Act grants local agency formation commissions (LAFCOs) the power to act on local agency boundary changes in the interest of encouraging the orderly formation and development of local agencies. LAFCO involvement is intended to discourage urban sprawl, preserve open space and agricultural lands, and ensure the efficient provision of government services. LAFCO of Monterey County has discretionary approval over the City's request to annex the project site into the City limits and is a responsible agency under CEQA.

Local

The following local/regional regulations pertaining to land use and planning would apply to the proposed project.

2010 Monterey County General Plan and Zoning Ordinance

The proposed wastewater conveyance line would be located Gonzales public City street rights-of-way and existing City sewer easements within County street rights-of-way. The proposed IWRF is located primarily within City limits, and the 5-acre area within the City's SOI in unincorporated Monterey County would be annexed by the City as part of the proposed project. Because the proposed project is located within City limits, City sewer easements, and areas

under the City's SOI that would be annexed as part of the proposed project, the 2010 Monterey County General plan land use designations and Monterey County zoning ordinance do not apply to this project.

Local Agency Formation Commission (LAFCO) of Monterey County

The LAFCO of Monterey County is charged with reviewing proposals for the creation of new cities or special districts and the annexation of land to local jurisdictions. Approximately 5 acres of the total 54 acres of the IWRF site require annexation into the City. The City's SOI was approved by the LAFCO of Monterey County in September 2014 (LAFCO of Monterey County 2014a). Approval for the proposed annexation for this project would also be administered by the LAFCO of Monterey County as a Responsible Agency. The information provided in this EIR will be considered by the LAFCO of Monterey County in its review of the requested annexation.

The LAFCO has developed policies and procedures relating to spheres of influence and changes of organization and reorganization (LAFCO of Monterey County 2020). The following LAFCO policies and criteria related to land annexation pertain to the proposed project:

> *IV. Sphere of Influence Update, Amendment and Service Review*
>
> 2. LAFCO shall review Sphere of Influence determinations not less than every five years. If a local agency or the County desires amendment or revision of an adopted Sphere of Influence, the local agency by resolution may file such a request with the Executive Officer. The request shall state the nature of the proposed amendment and the reasons for the request, include a map of the proposed amendment, and contain additional data and information as may be required by the Executive Officer.
>
> 16. Except as allowed in Section VI (below) for Minor Sphere of Influence Amendments, as part of the package of LAFCO forms and procedures given to every applicant, LAFCO will screen each application for an annexation change to ensure that there is a current Sphere of Influence (within the last five years), or that the application includes a concurrent Sphere update for affirmation by LAFCO. If the screening process identifies that a Sphere update is needed, the application package already identifies the information needed for the four standard determinations by LAFCO, and informs the applicant of the City-County consultation process required by State law. This administrative procedure will result in a current Sphere of Influence for every annexation change. This procedure does not change or affect other LAFCO procedures and policies that encourage comprehensive Sphere updates with 20-year horizons, and the staggering of Sphere and annexation proposals.

The following LAFCO policies and criteria related to open space, agricultural land, and groundwater pertain to the proposed project:

> *IX. Open Space and Agricultural Land*
>
> 1. It is the policy of LAFCO to encourage and to seek to provide for planned, well-ordered, efficient urban development pattern while at the same time remaining cognizant of the need to give appropriate consideration to the preservation of open space and agricultural land within such patterns. (Section 56300.) Proposals for a change of organization or reorganization will be judged according to LAFCO's adopted Policy on Preservation of Open-Space and Agricultural Lands (Section E of this Policy Document).

X. Groundwater Standards

2. In considering a proposal which may significantly impact the groundwater basin, as documented by the Lead Agency pursuant to the California Environmental Quality Act (CEQA), LAFCO shall review the following information. This information can be submitted to LAFCO in an environmental document or as a part of the LAFCO application.

g. Evidence of consultation with the appropriate water agency. The agency shall be consulted at the earliest stage of the process, so that applicable recommendations can be included in the environmental document.

k. A description of how the proposal would contribute to any cumulative adverse impact on the groundwater basin.

Gonzales 2010 General Plan

The Land Use Element and Conservation and Open Space Element of the City of Gonzales 2010 General Plan provides policies and implementing actions applicable to land uses at and near the project site. These policies and implementing actions are presented below. The part of the proposed IWRF within the city limits is designated as Public/Quasi Public in the Gonzales 2010 General Plan (City of Gonzales 2010b).

Land Use Element

Policy LU-1.3 LAFCO Applications

Submit Sphere of Influence and annexation requests to LAFCO only for lands within the Urban Growth Boundary depicted on the Land Use Diagram. In addition, submit applications as may be required to facilitate the expansion of the wastewater treatment facility located on Gonzales River Road or other essential public utilities.

Implementing Action LU- 1.3.1 – Plans for Services.

Establish the timing of Sphere of Influence and annexation applications based on completion of plans for services, plans for public facilities, and financing plans that demonstrate compliance with LAFCO standards.

Implementing Action LU- 1.3.2 – Coordination with Monterey County.

Work with Monterey County to develop agreements per LAFCO policy on Sphere of Influence amendments and annexations.

Policy LU-8.3 Neighborhood-Compatible Design

Require developers to design new job centers in such a way that impacts on adjacent residential neighborhoods are reduced to the degree practicable.

Implementing Action LU- 8.2– Plan for Sewer and Water Expansion.

Ensure that adequate water and sewer capacity is available to support all areas designated for industrial development.

Policy LU-9.2 Wastewater Treatment

Continue to operate the Gonzales Wastewater Treatment Plant and maintain opportunities for the eventual expansion of the plant. In addition, allow for the development of "package" treatment plants serving individual Specific Plan areas.

Implementing Action LU- 9.2.2 – Pre-Treatment for Industrial Uses

Adopt a wastewater treatment master plan that evaluates the feasibility of requiring industrial users to pre-treat wastewater as a means of increasing industrial treatment capacity and extending existing plant capacity to serve non-industrial uses.

Conservation and Open Space Element

Policy COS-4.1 Maintain Agricultural Economy

Maintain agriculture as the core of the local economy by conserving and protecting agricultural lands and operations within the planning area, and where agricultural land is planned for eventual urbanization, work to keep such land in production up until the time when the land is converted to urban use.

Implementing Action COS-4.1.2 – Agriculture as Interim Use.

Encourage agriculture as an interim land use on undeveloped properties in the General Plan growth area designated for future urban uses.

Implementing Action COS-4.1.4 – Protect Agricultural Operations.

Protect agricultural operations from interference from urban uses by:

(c) For properties on the perimeter of the City limits, require Specific Plan features that minimize potential conflicts with permanent agricultural operations. Less sensitive uses such as parking, roads, storage, and landscaping should be sited adjacent to the agricultural areas. Residential backyards should not directly abut areas planned for long term agriculture without proper mitigation measures to limit potential nuisances.

Community Facility and Services Element

Policy FS-1.1 Provision of Public Services

Provide public services and infrastructure in a manner that supports the Land Use Diagram, discourages premature development, minimizes adverse environmental and fiscal impacts, and maintains or improves current service levels

Implementing Action COS-1.1.5– Placement of Utilities and Drainage Facilities.

Wherever practical, locate sewer, water, and utilities within public road rights-of-way.

Policy FS-3.1 Meet New Demand for Sewer Capacity

Increase capacity of the Gonzales wastewater treatment plant commensurate with projected population and employment growth, increases in capacity should occur in a timely, cost-effective manner. Improvements should include expansion of existing capacity, expansion of effluent disposal facilities, and construction of new collection mains and a gradual transition to higher levels of treatment.

Implementing Action FS-3.1.4 – Upgrade Quality of Effluent

The city shall upgrade its wastewater treatment plant as it adds significant treatment capacity to accommodate new development within the Urban Growth Boundary; and in choosing its preferred treatment upgrade, the city shall choose a treatment method that improves wastewater effluent:, allows for the opportunity to recycle wastewater to meet the demand for water supply in the city; and requires less land area than would otherwise be the case if it expanded its existing facultative pond system.

Implementing Action FS-3.1.6 – Coordinate Plan for Services

Work with the Central Coast Regional Water Quality Control Board to increase the permitted discharge volume at the wastewater treatment plant and to expand and upgrade wastewater treatment facilities.

City of Gonzales Zoning Ordinance

The City's Zoning Ordinance contains site-specific zoning designations and associated development standards that serve to implement the goals and policies of the General Plan, most notably the Land Use Element. The Zoning Ordinance directly influences development by specifying the distances between buildings, the height of buildings, landscaping, parking, and other regulations that combine to create the desired urban environment. The City's zoning standards are found in Title 12 of the City's Municipal Code. The portion of the proposed project site within the City's boundary is currently not zoned (City of Gonzales 2010a).

3.10.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to land use would occur if the proposed project would:

1. Physically divide an established community.
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

As described in the Initial Study (Appendix A), the project would not physically divide an established community because the proposed wastewater line would be located underground, and the proposed IWRF is located in a rural area. These topics are not discussed further in this EIR.

3.10.4 Impact Analysis

3.10.4.1 Methods of Analysis

Section 15125(d) of the CEQA Guidelines, requires than an EIR shall discuss any inconsistencies with applicable general plans, specific plans, and regional plans as part of the environmental setting. Applicable land use plans and policies considered in this analysis are the City's 2010 General Plan and LAFCO of Monterey County Policies and Procedures (adopted February 24, 2020). The discussion in this chapter differs from the impact discussions of the other technical sections in Chapter 3 in that only general land use plan or policy consistency issues are discussed, as opposed to a discussion of the physical impacts on the environment that could occur with implementation of the proposed project. If an inconsistency is noted, the analysis then evaluates whether the inconsistency could result in an environmental effect that the policy or regulation is intended to avoid or mitigate.

Ultimately, it is within the City's decision makers' purview to decide if the proposed project is consistent with the General Plan and it is the LAFCO of Monterey County's purview to decide whether the proposed annexation is consistent with LAFCO policies and procedures.

3.10.4.2 Project Impacts

Impact 3.10-1. The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Consistency with LAFCO of Monterey County Policies and Procedures

As documented by the 2014 Municipal Service Review and Sphere of Influence Study (LAFCO of Monterey County 2014a), the City submitted a proposal for an SOI amendment to the LAFCO of Monterey County in July 2014. The proposal included the expansion of the City's SOI to include an approximately 5-acre parcel (APN 223-061-014) adjacent to the existing MWWTP. LAFCO approved this request on September 22, 2014. The annexation of this parcel will require LAFCO approval and determine consistency with LAFCO Policies and Procedures. LAFCO would ensure as part of its review that the annexation addresses avoidance or mitigation of environmental effects.

The annexation of the subject five acres will result in removal of five acres of productive agricultural land. Although the 2014 Memorandum of Agreement (MOA) that was signed by the County of Monterey and the City of Gonzales requires that parcels removed from agricultural production for urban uses be subject to a fee to be paid to a land preservation organization, the subject five acres is determined by the City to not be subject to this fee because, (1) prior to the 2014 MOA and its associated requirements for in-lieu payment related to the annexation of lands for urban uses, the subject five acres was considered and approved for annexation by LAFCO (in 2005) and without an impact fee required. The annexation of said five acres was then rescinded by LAFCO in early 2006 because of the lack of CEQA analysis specific to the subject five acres; (2) the subject five acres is a component of the City's master plan to provide wastewater treatment capacity to the industrial users and future annexation areas east of the City, and in that context the subject five acres should not be required to pay a mitigation fee, and (3) the five acres may be exempt from the agricultural mitigation fee based on the premise that some lands to be annexed will be exempt per the Gonzales Agricultural Land Mitigation Program. Therefore, the proposed annexation would not conflict with LAFCO policies and procedures adopted for the purpose of avoiding or mitigating an environmental effect.

Consistency with City of Gonzales 2010 General Plan

The propose IWRF would be consistent with the Public/Quasi Public designation in the Gonzales 2010 General Plan (City of Gonzales 2010b). Consistent with Policy LU-1.3, LAFCO Applications, and Implementing Action LU-1.3.2, Coordination with Monterey County, the City entered into an agreement with Monterey County in April 2014 that established the SOI adjacent to the existing MWWTP, and LAFCO approved the SOI in September 2014 (Monterey County 2014a, 2014b). As discussed above, the City would request LAFCO approval of the annexation of the SOI area adjacent to the existing MWWTP consistent with LAFCO of Monterey County Policies and Procedures (adopted February 24, 2020) and consistent with Policy LU-1.3, LAFCO Applications, and the associated Implementing Action LU-1.3.1, Plans for Services, of the City's General Plan.

The development of a new IWRF that would add treatment capacity to support anticipated growth of Gonzales Agricultural Business Industrial Park (GABIP) and would improve the quality of the wastewater effluent as required by the Central Coat Regional Water Quality Control Board. Therefore, the project is consistent with Policy FS-3.1, Meet New Demand for Sewer Capacity, and the associated Implementing Actions: FS-3.1.4, Upgrade Quality of Effluent, FS-3.1.6, Coordinate Plan for Services, and FS-3.1.7, Treatment Plant Expansion; Policy LU-8.3, Neighborhood-Compatible Design, and the associated Implementing Action LU-8.2, Plan for Sewer and Water Expansion; and Policy LU-9.2, Wastewater Treatment, and the associated Implementing Action LU-9.2.1, Land for Treatment Facility Expansion.

The proposed industrial wastewater conveyance line would be located inside existing City street rights-of-way, and an existing City easement within County road rights-of-way. This is consistent with Policy FS-1.1, Public Services, and the associated Implementing Action COS-1.1.5, Placement of Utilities and Drainage Facilities, which encourages the location of utilities within public road rights-of-way wherever practical.

The proposed project would support the expansion of the GABIP which consists of agriculture processing businesses. The expansion of the GABIP would in turn support Policy COS-4.1, Maintain Agricultural Economy. The IWRF site is currently used for agriculture, and will remain in agricultural use until the development of the proposed project, consistent Implementing Action COS-4.1.2, Agriculture as an Interim Use, which encourages agriculture as an intermittent land use in areas designated for future urban uses. Furthermore, the wastewater treatment land use proposed at the IWRF site is not a sensitive use, and therefore is consistent with Implementing Action COS-4.1.4, Protect Agricultural Operations, which requires less sensitive land uses to be located adjacent to agricultural areas.

For the reasons described above, the proposed project would be consistent with the City's 2010 General Plan policies and implementing actions related to avoding or mitigating an environmental effect.

Consistency with City of Gonzales Zoning Ordinance

As described in Section 3.10.1, Existing Setting, if the project is approved and the LAFCO of Monterey County approves the request to annex the SOI area into the City, the City will assign a Public Facility (PF) zoning designation to annexed area. Additionally, the 49-acre area currently not zoned but within City limits would also be zoned Public Facility (PF). The proposed IWRF would be a public facility consistent with this zoning designation, and would not conflict with the City of Gonzales Zoning Ordinance.

Summary

The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, this impact would be **less than significant**.

3.10.5 Mitigation Measures

No significant impacts would occur; therefore, no mitigation is required.

3.10.6 Level of Significance After Mitigation

Impacts related to land use and planning as a result of the proposed project would be **less than significant** without mitigation.

3.10.7 Cumulative Analysis

The consistency analysis for applicable land use goals and policies is not an additive effect (unless one or more projects would amend a local plan, which is not the case for the proposed project or the cumulative projects). Therefore, there would be no cumulative impacts related to land use consistency.

3.10.8 References

City of Gonzales. 2010a. Zoning Map. Adopted February 2010. Accessed June 19, 2020. Available at: https://gonzalesca.gov/sites/default/files/2019-12/Gonzales_Zoning_Map_11x17_20120306%204-2012.pdf

City of Gonzales. 2010b. City of Gonzales 2010 General Plan Land Use Diagram. Accessed June 19, 2020. Available at: https://gonzalesca.gov/sites/default/files/2019-03/Land%20Use%20Map.pdf

City of Gonzales. 2018. Gonzales 2010 General Plan EIR. SCH #2009121017. Adopted January 2011. Last Amended June 2018. Available at: https://gonzalesca.gov/government/information-center/general-plan.

LAFCO of Monterey County (Local Agency Formation Commission of Monterey County). 2014a. 2014 Municipal Service Review and Sphere of Influence Study, City of Gonzales. Adopted by the Commission on September 22, 2014.

LAFCO of Monterey County. 2014b. Memorandum of Agreement, City of Gonzales and County of Monterey, Regarding Cooperation on Planning, Growth and Development Issues. Adopted April 2014.

LAFCO of Monterey County. 2020. Policies and Procedures Relating to Spheres of Influence and Changes of Organization and Reorganization. Adopted February 24, 2020.

Monterey County. 2010. 2010 Monterey County General Plan. October 26. Available at: https://www.co.monterey.ca.us/government/departments-i-z/resource-management-agency-rma-/planning/resources-documents/2010-general-plan.

Monterey County. 2020. “Lookup Zoning”. Accessed June 19, 2020. Available at: https://www.co.monterey.ca.us/government/departments-i-z/resource-management-agency/gis.

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4 Other CEQA Considerations

4.0 Introduction

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Environmental Impact Report (EIR) must also identify (1) significant environmental effects of the proposed project, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, (4) growth-inducing impacts of the proposed project, and (5) alternatives to the proposed project (evaluated in Chapter 5, Project Alternatives).

4.1 Significant Environmental Effects

Sections 3.1 through 3.10 of this EIR provide a comprehensive identification of the proposed project's significant environmental effects, feasible mitigation measures, and the level of significance with implementation of mitigation. Potentially significant impacts are also identified in the Executive Summary.

4.2 Significant and Unavoidable Environmental Impacts

Section 15126.2(c) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in the technical sections contained in Chapter 3, Environmental Analysis, of this Draft EIR. The following significant and unavoidable impacts have been identified:

- The project would result in significant direct and cumulative impacts related to the conversion of Prime Farmland and Farmland of Statewide Importance (Impacts 3.3-1 and 3.1-4, respectively).
- The project would result in a significant impact related to the potential for inundation due to the failure of uncertified levees and dams (Impact 3.9-4).

4.3 Significant Irreversible Environmental Impacts

Section 15126.2(d) of the CEQA Guidelines requires a discussion of any significant irreversible environmental change that would be caused by the proposed project. Generally, a project would result in significant irreversible changes if:

- The primary and secondary impacts would generally commit future generations to similar uses (such as highway improvement that provides access to a previously inaccessible area);
- The project would involve a large commitment of nonrenewable resources (CEQA Guidelines Section 15126.2(c));
- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project;
- The project would involve a large commitment of nonrenewable resources; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Implementation of the proposed project would result in the long-term commitment of resources of the project site to a developed land use. The development of the proposed project would result in the conversion of 54 acres of important farmland to a non-agricultural use. While a wastewater treatment plant can be decommissioned, given the construction and use of treatment ponds in the proposed facility, it is unlikely that the site would be returned to productive agricultural use in the foreseeable future.

Asphalt, and concrete would be used in construction along with fossil fuels. With respect to operational activities, the project would require ongoing use of energy. As noted in Section 3.5, the use of energy for the project would not be wasteful or inefficient. In addition, consistent with City policies, it is anticipated that the electricity sources for the proposed project, would continue to be increasingly supplied by renewable sources.

4.4 Growth Inducing Impacts

As required by Section 15126.2(e) of the CEQA Guidelines, an EIR must discuss "the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth…Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects." Also, the EIR must discuss "the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

Direct growth inducement would occur if a project involved construction of new housing, which would increase the local population. Indirect growth inducement would occur, for instance, if implementing a project resulted in:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., expansion of a wastewater treatment plant), or the establishment of policies or other precedents that directly or indirectly encourage additional growth (e.g., change in zoning or general plan update).

The State CEQA Guidelines do not distinguish between planned and unplanned growth for purposes of considering whether a project would foster additional growth. Therefore, for purposes of this EIR, to reach the conclusion that a project is growth inducing as defined by CEQA, the EIR must find that it would foster (i.e., promote, encourage, allow) additional growth in economic activity, population, or housing, regardless of whether the growth is already approved by and consistent with local plans.

The conclusion does not determine that induced growth is beneficial or detrimental, consistent with Section 15126.2(d) of the State CEQA Guidelines. If the analysis conducted for the EIR results in a determination that a project is growth-inducing, the next question is whether that growth may cause adverse effects on the environment. Environmental effects resulting from induced growth (i.e., growth-induced effects) fit the CEQA definition of "indirect" effects in Section 15358(a)(2) of the State CEQA Guidelines. These indirect or secondary effects of growth may result in significant environmental impacts. CEQA does not require that the EIR speculate unduly about the precise location and site-specific characteristics of significant, indirect effects caused by induced growth, but a

good-faith effort is required to disclose what is feasible to assess. Potential secondary effects of growth could include consequences – such as conversion of agricultural land to developed uses, increased demand on community and public services and infrastructure, increased traffic and noise, degradation of air and water quality, or degradation or loss of plant and wildlife habitat – that are the result of growth fostered by the project.

The decision to allow those projects that result from induced growth is the subject of separate discretionary processes by the lead agency responsible for considering such projects. Because the decision to allow growth is subject to separate discretionary decision making, and such decision making is itself subject to CEQA, the analysis of growth-inducing effects is not intended to determine site-specific environmental impacts and specific mitigation for the potentially induced growth. Rather, the discussion is intended to disclose the potential for environmental effects to occur more generally, such that decision makers are aware that additional environmental effects are a possibility if growth-inducing projects are approved. The decision of whether impacts do occur, their extent, and the ability to mitigate them is appropriately left to consideration by the agency responsible for approving such projects.

4.4.1 Components of Growth

The timing, magnitude, and location of land development and population growth in a community or region are based upon various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

4.4.2 Growth Inducement Potential

The proposed project would not involve the construction of housing and therefore would not directly induce growth. The proposed project would develop an Industrial Wastewater Reclamation Facility (IWRF) to treat wastewater from the Gonzales Agricultural Business Industrial Park (GABIP), as well as a wastewater conveyance line. As described in Chapter 2, Project Description, the City's existing wastewater treatment plant (MWWTP) has a permitted capacity of 1.3 MGD (maximum month flow).[1] The wastewater flows to the plant have been increasing annually, with average daily flow in 2018 reaching 0.97 MGD, and maximum month flow in 2016 reaching 0.85 MGD (Dudek 2018).[2] Approximately 65% of the entire plant flow is from industrial sources and agricultural processing facilities and half is from domestic sources (Wallace Group 2020). The proposed IWRF is designed with a treatment capacity of 1.0 MGD (maximum month flow), and with the capability to treat industrial wastewater flows with higher organic loading than domestic flows. The treatment of industrial wastewater flows at the proposed IWRF would allow the existing MWWTP to accommodate up to an additional 0.93 MGD of domestic wastewater flows.

The Gonzales 2010 General Plan designated land for residential growth sufficient to accommodate a total city population of 38,000 by the year 2050. The additional 0.93 MGD capacity in the existing MWWTP could theoretically accommodate a population increase of about 19,000 by the year 2040 (Wallace Group 2020), which is the population increase estimated for the City by the Association of Monterey Bay Area Government 2018 Regional Growth Forecast (AMBAG 2018), assuming that the existing MWWTP is maintained in good condition and upgraded, if necessary, to comply with any new Waste Discharge Requirements issued by the Central Coast Regional Water

[1] The average daily flow received at the wastewater treatment plant over the course of the peak month.
[2] The maximum month flow data for 2018 is not yet compiled.

Quality Control Board. The City's General Plan designates an additional 2,070,000 square feet (sf) of heavy industrial/manufacturing uses (the current amount of designated heavy industrial/manufacturing is 1,730,000 sf). To accommodate the expansion of both industrial and residential land uses, the City anticipates the need to expand wastewater treatment capacity by up to 4.7 MGD average daily flow by the year 2035 (Dudek 2018). Full buildout under the General Plan would require the City to expand wastewater treatment capacity to 6.0 MGD average daily flow, or more (Dudek 2018). With the implementation of the proposed project, the City's total wastewater treatment capacity at both the existing MWWTP and proposed IWRF would increase to 2.3 MGD, which would not provide sufficient wastewater treatment capacity to accommodate anticipated growth or full buildout under General Plan. As described in Chapter 2, Project Description, the IWRF site would accommodate future capacity expansion of up to 3.0 MGD by expanding the treatment ponds and replacing influent pumps (see Figure 2-5 IWRF Potential Buildout). This would provide a total wastewater treatment capacity of up to 5.8 MGD, which is sufficient to accommodate anticipated growth through 2035, but not sufficient to accommodate full buildout through the year 2050 under the General Plan. While the IWRF could potentially be expanded up to 4.0 MGD through an alternative treatment process, this is not included in the project as currently proposed. Although the proposed project would indirectly induce growth in the City by accommodating an increase in wastewater flows from the expansion of future industrial land uses at the IWRF, which would free up capacity at the existing MWWTP to accommodate increased wastewater flows from future residential development, the extent of potential induced growth would be below or within the levels of growth anticipated for both the proposed project and the potential 3.0 MGD expansion that would be facilitated by the development of the proposed project through the year 2035. The City also has long-term plans to expand the existing MWWTP for a capacity of 2.8 MGD, which would accommodate future buildout of the General Plan. Consequently, the proposed project would not induce unplanned growth.

It should be noted that the timing, magnitude, and location of land development and population growth in a community or region are based upon various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. The development of the proposed project is one factor out of numerous factors that would induce growth in the City. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

The proposed project would facilitate City growth that is anticipated within the General Plan, and would result in secondary impacts related to that level of development. The Gonzales 2010 General Plan is specifically intended to guide City growth, land use, infrastructure, and City services as well as implement policies to avoid and mitigate the environmental impacts of growth. The secondary effects of future industrial and residential growth were evaluated in the City's 2010 General Plan EIR (last amended 2018). The environmental effects associated with growth under the General Plan, which the proposed project would facilitate, are summarized below.

4.4.3 Secondary Effects of Growth

The Gonzales 2010 General Plan EIR (last amended 2018) identified that significant and unavoidable impacts would occur in the following environmental issues due to future buildout of the City:

- **Agricultural Resources**. The adoption of the Gonzales 2010 General Plan would provide the basis for development activity that would result in the conversion of protected farmland that includes Prime Farmland and Farmland of Statewide Importance.

- **Aesthetics**. The adoption of the Gonzales 2010 General Plan would provide the basis for development activity that could irreversibly degrade the visual character of the area of the Central Salinas Valley where the City is located. Additionally, future development would generate new sources of night time lighting that could result in light trespass, light pollution, and glare.
- **Utilities and Service System**. The adoption of the Gonzales 2010 General Plan would provide the basis for development activity that would require expanded water and wastewater treatment facilities.

The proposed project would not directly or indirectly induce growth beyond that anticipated by the adopted General Plan because the increase in wastewater treatment capacity would not support wastewater needs beyond those needed to support buildout under the General Plan. Consequently, development of the proposed project would not trigger environmental effects beyond what was disclosed under the City of Gonzales 2010 General Plan EIR (last amended 2018).

4.5 References

AMBAG (Association of Monterey Bay Area Governments). 2018. 2018 Regional Growth Forecast. Adopted June 13, 2018.

City of Gonzales. 2018. Gonzales 2010 General Plan EIR. SCH #2009121017. Adopted January 2011. Last Amended June 2018. Available at: https://gonzalesca.gov/government/information-center/general-plan.

Dudek. 2018. City of Gonzales Long Term Wastewater Management Plan. Revised Draft. August 2018.

Wallace Group. 2020. Draft Preliminary Engineering Report, City of Gonzales, Industrial Wastewater Recycling Facility. February.

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5 Alternatives

5.1 Introduction

The purpose of the alternatives evaluation in an Environmental Impact Report (EIR), as stated in Section 15126.6(c) of the California Environmental Quality Act (CEQA) Guidelines, is to ensure that "[t]he range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects" identified under the proposed project. Pursuant to CEQA Guidelines, Section 15126.6, an analysis of alternatives to the project is presented in this Draft EIR to provide the public and decision makers with a range of possible alternatives to consider. The CEQA Guidelines state that an EIR shall describe a reasonable range of alternatives that would avoid or substantially lessen any significant effects of the project, but need not consider every conceivable alternative. The CEQA Guidelines further state that "the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly" (CEQA Guidelines, Section 15126.6(b)). Therefore, an EIR must describe a range of reasonable alternatives to the proposed project (or to its location) that could feasibly attain most of the basic objectives of the project.

Alternatives in an EIR must be potentially feasible (CEQA Guidelines, Section 15126.6(a)). The feasibility of an alternative may be determined based on a variety of factors, including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control (CEQA Guidelines, Section 15126.6(f)(1)). Agency decision makers ultimately decide what is "actually feasible." (California Native Plant Society v. City of Santa Cruz (2009) 177 Cal. App. 4th 957, 981 (CNPS).) The concept of "feasibility" also encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project. (Sierra Club v. County of Napa (2004) 121 Cal.App.4th 1490, 1506-1509; CNPS, supra, 177 Cal. App. 4th at p. 1001; In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings (2008) 43 Cal.4th 1143, 1165, 1166.) Moreover, "'feasibility' under CEQA encompasses 'desirability' to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors." (City of Del Mar v. City of San Diego (1982) 133 Cal.App.3d 410, 417.)

An EIR need not evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project. The alternatives discussion is intended to focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives.

This chapter identifies the proposed project objectives, describes the project alternatives, and evaluates the comparative effects of the alternatives relative to the proposed project. As required under Section 15126.6(e) of the CEQA Guidelines, the environmentally superior alternative is identified and included at the end of this chapter.

5.2 Project Objectives

In determining what alternatives should be considered in the Draft EIR, the objectives of the project were considered, since attainment of a majority of the objectives is one of the bases for whether an alternative is considered feasible (see discussion above). The City identified the following project objectives:

1. Effectively treat agricultural industrial wastewater to protect groundwater quality.
2. Expand overall wastewater treatment capacity to 2.3 million gallons per day (MGD).
3. Construct a separate industrial wastewater collection system to increase capacity of the existing collection system.
4. Convey industrial wastewater flows from the GABIP to the treatment site while minimizing the need for additional right of way.
5. Minimize the environmental impacts of the collection system, conveyance, and treatment facility.
6. Minimize long-term costs to the City and its ratepayers.

5.3 Summary of Significant Environmental Impacts

As discussed in Chapter 3, the proposed project would result in several potentially significant environmental impacts. These impacts include agricultural resources, air quality (odor), biological resources, cultural resources, paleontological resources, and hydrology/water quality. Proposed mitigation measures would reduce these impacts to less than significant, with the exception of agricultural resources and dam inundation/water quality, which would be significant and unavoidable impacts.

5.4 Alternatives Considered but Dismissed

As described above, State CEQA Guidelines Section 15126.6(c) requires that the range of potential alternatives for the project include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR.

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decision-maker(s). (See Pub. Resources Code, § 21081(a)(3).) At the time of action on the project, the decision-maker(s) may consider evidence beyond that found in this EIR in addressing such determinations. The decision-maker(s), for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that basis provided that the decision-maker(s) adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence.

The EIR should also identify any alternatives that were considered by the lead agency but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination. The following alternatives were considered by the City but are not evaluated further in this Draft EIR.

5.4.1 Regionalization Alternative (Monterey One)

Regionalization refers to the process of conveying excess wastewater flows to a nearby facility for treatment. Conveyance to Monterey One Water wastewater treatment plant (WWTP) was identified as a potential alternative to address the City's wastewater capacity objectives.

Conveyance of excess wastewater flows to Monterey One Water WWTP in North Marina was presented as an option in a report prepared by V.W. Housen & Associates (2018). In this study, the City of Gonzales would abandon their municipal wastewater treatment plant (MWWTP) and replace it with a pump station and pipeline to deliver flow to Monterey One Water WWTP in North Marina. This alternative would avoid potentially significant impacts related to farmland conversion and dam inundation. The study found that the cost to construct new infrastructure to connect the City of Gonzales to the Monterey One Water WWTP is estimated to be on the order of $90-$110 million. The City would be required to obtain subsidies for a substantial portion of this cost in order for this alternative to be economically feasible. Furthermore, this alternative would require construction of approximately 21 miles of pipeline. The construction of a pipeline of this length would require the City to obtain new easements, and may involve potentially significant construction impacts associated with farmland and habitat. Depending on the existing public-rights-of way and ownership along the 21 miles of pipeline, obtaining the necessary easements may not be feasible. For these reasons, conveyance to the Monterey One Water WWTP was considered but rejected.

5.4.1 Regionalization Alternative (Soledad)

This alternative is similar in approach to Monterey One, but would direct excess wastewater flows to the Soledad WWTP (City of Gonzales 2019).

This alternative would retain the existing MWWTP, but flows generated from future development in the City's sphere of influence would be sent to the Soledad WWTP for treatment. The study found that the cost to construct new infrastructure to connect the City of Gonzales to the Monterey One Water WWTP is estimated to be on the order of $91 million, which is more than the proposed project, but not necessarily infeasible. Furthermore, this alternative would require construction of approximately 6.8 miles of force main, including a crossing of Highway 101 and the Union Pacific Railroad, and construction of a sewer lift station. This is three times the length of pipeline construction compared to the proposed project, with a commensurate increase in construction impacts. The construction of a pipeline of this length would require the City to obtain new easements and may involve potentially significant construction impacts associated with farmland and habitat. However, construction impacts on the proposed IWRF site would be avoided. This option would not allow for future use of recycled water (an agricultural benefit) and would limit future expansion of capacity to handle agricultural wastewater. For these reasons, conveyance to the Soledad WWTP was considered but rejected.

5.5 Project Alternatives

This section presents an evaluation of three alternatives to the proposed project, including:

1. No Project Alternative

2. Alignment 2 Alternative
3. MWWTP Expansion Alternative

For each alternative, a brief description is presented, followed by a discussion of the basis for selection of the alternative, the degree to which the alternative would meet project objectives, and the ways in which the alternative would avoid or reduce significant impacts of the project, or cause other new or increased impacts.

Table 5-1 compares the alternatives to the project in terms of their ability to reduce or avoid potentially significant impacts.

5.5.1 No Project Alternative

Description

As required by the CEQA Guidelines, an EIR's alternatives analysis must include consideration of the No Project Alternative. The "No Project" analysis discusses the existing conditions as well as what would reasonably be expected to occur in the foreseeable future if the project was not approved (Cal. Code Regs. tit. 14, § 15126.6 (e)(2) and (3)(A)).

Under the No Project Alternative, the IWRF would not be constructed. Combined domestic and industrial wastewater flows would continue to be treated at the existing WWTP. Total wastewater capacity would remain 1.3 MGD.

Impact Analysis

As shown in **Table -5-1**, all construction and "footprint" related impacts would be avoided (reduced to a less-than-significant level). These include agricultural resources, biological resources, cultural resources, paleontological resources, and hazards/hazardous materials. As the continued treatment of industrial wastewater at the WWTP may create the risk of plant violations (due to treatment capacity limitations), the air quality/odor impact would not be avoided. Similarly, while water quality impacts related to construction would be avoided, water quality impacts related to wastewater treatment would likely increase as the WWTP capacity is met or exceeded. The existing WWTP is located within a dam inundation zone, as the proposed project would be, so this impact would not be avoided.

Relationship to Project Objectives

The No Project Alternative would not achieve any of the project objectives.

5.5.2 Alignment 2 Alternative

Description

The Alignment 2 Alternative would construct an alternative pipeline alignment for the industrial wastewater collection system (City of Gonzales 2019). The proposed IWRF would be the same as in the proposed project. Alignment 2 would construct approximately 11,100 LF of new gravity sewer pipe. This alignment conveys flows starting near the intersection of Katherine Street and Puente Del Monte Avenue. The pipeline heads southeast on Puente Del Monte Avenue for approximately 1,400 LF before turning southerly onto Gonzales River Road. The pipeline alignment continues on Gonzales River Road for approximately 8,100 LF then turns west onto Short Road.

The proposed alignment conveys flow approximately 1,600 LF on Short Road before finally terminating at the IWRF site. The alignment is located mainly on paved public street ROW.

Alignment 2 conveys flows from a starting ground surface elevation of approximately 128 ft to a ground surface elevation of approximately 116 ft at the WWTP headworks. This 12 ft drop over approximately 11,100 LF results in an average slope of 0.0010 ft. or 0.1%. Typical minimum slopes for sewers 12-inches and larger are approximately 0.20% and so the proposed sewer will need to be installed at a depth in order to achieve the minimum slope.

Impact Analysis

Impacts related to construction of the pipeline would be similar to the proposed project, as shown in Table 5-1, below. Temporary impacts to farmland related to pipeline construction would be lessened; however, the permanent conversion of farmland at the IWRF site would remain significant. Consultation with Native American tribal representatives indicates that the southern end of Alignment 2 may be more sensitive for tribal cultural resources, due to its proximity to the Salinas River. The Alignment 2 Alternative would cause some temporary traffic delays during construction, as it would involve more construction on public roadways. However, temporary congestion is not considered a significant impact under CEQA as long as emergency access is maintained.

Relationship to Project Objectives

The Alignment 2 Alternative would achieve Objectives 1, 2, 3, 5, and 6. The alternative would partially achieve Objective 4, but to a lesser extent than the proposed project; additional right-of-way acquisition would be required for Alignment 2, as compared to the Femin Lane alignment in the proposed project which contains an existing City sewer easement.

5.5.3 MWWTP Expansion Alternative

Description

Under this alternative, the City's existing MWWTP would be expanded to 2.3 MGD capacity. In order to achieve the necessary capacity increase, the MWWTP would be converted and/or retrofitted to an extended aeration activated sludge treatment system. An extended aeration activated sludge treatment system provides a higher degree of organics and solids removal, has the ability to achieve nitrification and denitrification, does not require primary settling, and provides stable operations and consistent effluent quality. Two extended aeration activated sludge technologies could be implemented: a Biolac wave oxidation system and an oxidation ditch facility (City of Gonzales 2018). Expansion would require an upgrade of the headworks at the MWWTP, which would include replacing the grinders, grit removal system, and Parshall flume[1]. The existing influent pump station may also have to be upgraded.

Implementation of the MWWTP Expansion Alternative would require a parallel wastewater line to transmit GABIP flows, as the existing sewer line to the MWWTP would not have sufficient capacity.

Impact Analysis

Impacts related to construction would be similar to the proposed project. The "footprint" impacts related to the proposed IWRF site would be reduced. Agricultural impacts would be avoided. Impacts to biological resources,

[1] A Parshall flume is an open channel flow metering device, typically made out of fiberglass, that is used to measure the volume flow of wastewater.

cultural resources, paleontological resources, and hazards/hazardous materials would be reduced, but would not be avoided due to construction of the new wastewater pipeline. Water quality impacts related to construction would be substantially reduced, by limiting disturbance to an already develop area. However, the existing WWTP is located within a dam inundation zone, as the proposed project would be, so this impact would not be avoided.

Relationship to Project Objectives

The MWWTP Expansion would achieve most of the project objectives.

5.6 Comparison of Alternatives

Table 5-1 shows the potentially significant environmental effects of the proposed project, prior to implementation of mitigation measures, compared to the potential effects of the project alternatives. If a project alternative would have new or substantially greater impacts than the proposed project, this is also noted in the table.

Table 5-1. Comparison of Alternatives

Impact	Proposed Project	No Project Alternative	Alignment 2 Alternative	MWWTP Expansion Alternative
Agricultural Resources				
3.1-1. The project would convert Prime Farmland and Farmland of Statewide Importance (Farmland) to non-agricultural use.	PS	LTS-	PS	LTS-
Air Quality				
3.2-4. The proposed project could result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	PS	LTS-	PS	PS-
Biological Resources				
3.3-1. The proposed project could have a substantial adverse effect on a candidate, sensitive, or special-status species.	PS	LTS-	PS	PS-
Cultural Resources				
3.4-1. The Project may cause a substantial adverse change in the significance of a previously unidentified archeological resource.	PS	LTS-	PS	PS-
3.4-2. The project may disturb human remains interred outside of dedicated cemeteries.	PS	LTS-	PS	PS-
Geology, Soils and Paleontology				
3.6-3. The project could directly or indirectly destroy a unique paleontological resource or site.	PS	LTS-	PS	PS-

Table 5-1. Comparison of Alternatives

Impact	Proposed Project	No Project Alternative	Alignment 2 Alternative	MWWTP Expansion Alternative
Hazards, Hazardous Materials, and Wildfire				
3.8-2 The project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	PS	LTS-	PS	PS-
Hydrology and Water Quality				
3.9-1. The project could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	PS	PS-	PS	LTS-
3.9-3. The project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: a. result in substantial erosion or siltation on or off site; b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	PS	LTS-	PS	LTS-
3.9-5. In flood hazard, tsunami, or seiche zones, the project would potentially risk release of pollutants due to project inundation.	PS	PS	PS	PS

Notes: LTS Less than Significant; PS Potentially Significant (prior to mitigation); SU Significant and Unavoidable; + Increased Impact; - Decreased Impact

5.7 Environmentally Superior Alternative

CEQA Guidelines require that an EIR identify the environmental superior alternative (Section 15126.6 (e)(2)). If the environmentally superior alternative is the "No Project" Alternative, the EIR must identify an environmentally superior alternative from among the other alternatives.

The ”No Project” Alternative would avoid all impacts with the exception of odor and water quality. This would make it the environmentally superior alternative. Among the “build” alternatives, the Alignment 2 Alternative is not significantly different from the proposed project. The MWWTP Expansion Alternative would avoid the significant and unavoidable impact to farmland, and would reduce, but not avoid, impacts to water quality. Therefore, the MWWTP Expansion Alternative is considered the environmentally superior alternative.

5.8 References

City of Gonzales. 2019. Preliminary Design of New Separate Industrial Water Recycling Facility (IWRF) – Industrial Collection System. Prepared by Dudek. December 2019.

City of Gonzales. 2018. Long Term Wastewater Management Plan. Prepared by Dudek. Revised Draft. August 2018.

City of Gonzales. 2019. Existing City Plus Sphere of Influence Wastewater Master Plan. Prepared by Kimley Horn. June 2019.

V.W. Housen & Associates. 2018. Focused Wastewater Service Area Study Update for the Bolsa Knolls, Spreckels, Indian Springs Ranch, Las Palmas Ranch, Oak Hills, Chualar, Gonzales, and Toro Park Areas. March 2018.

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