

Environmental Checklist Form

Project title: Twentynine Palms Wastewater Reclamation Project Phase 1	
Lead agency name and address: City of Twentynine Palms 6136 Adobe Road Twentynine Palms, CA 92277	
Contact person and phone number: Keith Gardner, Planning Department 760-367-6799 x 1008 kgardner@29palms.org	
Project location: Area is generally bounded by Amboy Road to the north, Bagdad Highway to the east, Baseline Road to the south, and Morongo Road to the west	
Project sponsor's name and address: City of Twentynine Palms 6136 Adobe Road Twentynine Palms, CA 92277	
Existing General Plan designation: Various	Existing Zoning: Various

1. INTRODUCTION

The purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to assess impacts resulting from the construction and operation of the Twentynine Palms Centralized Wastewater Collection System and Treatment Plant Project described below.

This document has been prepared pursuant to the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Sections 15000 et seq) and is consistent with the CEQA-Plus requirements of the State Water Resources Control Board (SWRCB) for Environmental Review and Federal Coordination. The City of Twentynine Palms will serve as the lead agency for CEQA purposes.

The additional CEQA-Plus Federal Cross-Cutters Analyses (CEQA-Plus) are discussed in each section, where applicable, of the IS/MND. CEQA-Plus addresses requirements of per the SWRCB Clean Water State Revolving Fund (SRF) Program Evaluation for Environmental Review and Federal Coordination. The SWRCB acts as the “federal clearinghouse” for review of the document by federal agencies due to federal dollars being assigned to the project though the Environmental Protection Agency-funded SRF program.

1.1. Purpose and Need

Wastewater generated in the City of Twentynine Palms is treated primarily by individual septic systems and by several small, decentralized package treatment plants for newer residential and commercial developments. These decentralized systems are often expensive to construct, inefficient to maintain, have frequent compliance issues, and are a deterrent for new development. The City has determined that the best long-term solution is to construct a new wastewater collection (sewer) system to convey City wastewater flows to a centralized City-owned wastewater treatment plant (WWTP) known as the Wastewater Reclamation Project (Project). The purpose of this document is to analyze the impacts associated with construction and operation of Phase 1 of the Project.

1.2. Project Description

The City of Twentynine Palms is located in San Bernardino County approximately 35 miles northeast of the City of Palm Springs in the high desert region of southern California (see Exhibit 1). As previously discussed, the city currently relies solely on septic tanks for wastewater disposal, aside from ten privately owned, development specific, advanced water treatment plants. Drinking water for the city is supplied by the Twentynine Palms Water District (TPWD), who's service area includes the City and is approximately 86.8 square miles. A map showing the TPWD service area and City limits is shown in Exhibit 2.

Phase 1 of the proposed Wastewater Reclamation Project is centrally located within City limits and is generally bounded by Amboy Road to the north, Bagdad Highway to the east, Baseline Road to the south, and Morongo Road to the west (see Exhibit 3). The Project consists of a sewer collection system and a wastewater treatment plant (WWTP). The collection system and the WWTP will be constructed concurrently and are planned to be completed by the end of 2026. The expected lifecycle of the project is 50 years for the collection system, and 20 years for the WWTP.

Sewer Collection System

Development of the Phase 1 sewer collection system considered the existing package wastewater treatment plants located within the project area and used existing or planned right-of-way corridors. The proposed Project's wastewater collection and conveyance system for Phase A through E consists of approximately 142,090 linear feet, or 26.9 miles of gravity sewer lines, 1,428 service laterals, and 485 manholes (see Table 1). The collection system is designed to carry 0.55 MGD of initial flow to the WWTP with planned discharge into a non-potable basin. Most pipeline alignments are proposed within existing rights-of-way, with the exception of lateral connections that will extend several meters onto various properties. Some easements will need to be obtained for some of the proposed sewer alignments for construction and maintenance purposes.

Phase 1D includes a lift station to be located at the north side of Luckie Park (APN 0623-162-01), along Two Mile Road as shown on Exhibit 5. The lift station will collect wastewater from the Phase 1D tributary area and will pump that wastewater, via a 3,340-foot force main, to a gravity trunk sewer in the adjacent Phase 1C tributary area. The park

is owned by the City and would not require purchasing additional property. The preliminary layout includes a small duplex submersible pump station with a 6-ft inside diameter wet well, a valve vault, a meter vault, electrical cabinets with a shade structure, an emergency standby generator, a slab for a future odor control tank if needed, a perimeter wall or fence, and a short driveway for service vehicles (see Exhibit 6).

Table 1
Proposed Wastewater Collection System: Phase 1A through 1E

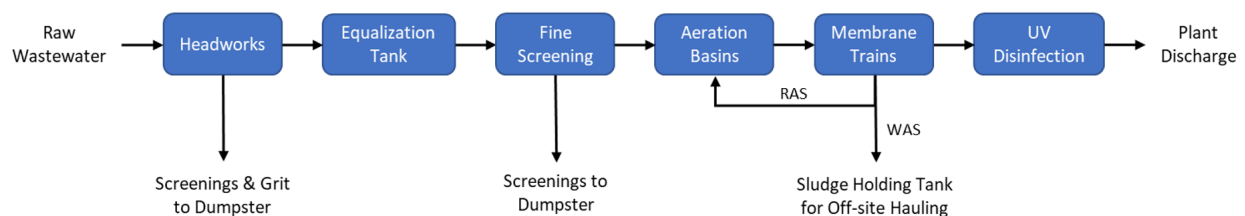
Phase	Gravity Sewer Lines – Linear Feet (LF)						Manholes – Quantity		Service Laterals - Quantity	Lift Station - Quantity
	Dual 4" Force Main	8" <15' deep; >15' deep	10" <15' deep; >15' deep	12" <15' deep; >15' deep	15" <15' deep; >15' deep	18" >15' deep	48"	60"		
1A	--	39,980; 9,260	1,930; 1,560	540; 4,310	--; 2,310	860	204	8	651	--
1B	--	11,120; 1,090	--	--	--	--	44	--	105	--
1C	--	19,090; 2,280	1,330; --	2,890; --	1,270; --	--	89	--	264	--
1D	3,340	13,760; 1,350	--	--	--	--	48	--	75	1
1E	--	20,030; 7,130	--	--	--	--	90	2	333	--
TOTALS	3,340	125,090	4,820	7,740	3,580	860	475	10	1,428	1

Quantities provided by NV5, February 2023.

Wastewater Treatment

A centralized WWTP is the best long-term solution for treating the City's wastewater and protecting the local groundwater supply, the only source of water for the community. The proposed site for the WWTP is a 4.43-acre parcel (APN 0623-171-11) located east of Desert Knoll Avenue and south of Buena Vista Drive/the San Bernardino County flood control channel. The WWTP will be accessed via a service road intersecting at Desert Knoll Drive and Gorgonio Drive. The Project proposes a centralized WWTP with the secondary/tertiary process using membrane bioreactor (MBR) system and UV disinfection as shown schematically in Figure 1.

Figure 1: WWTP Schematic, Advanced Tertiary Treatment and UV Disinfection



Source: SRF Application Technical Package T1 – Project Report (Carollo 2023)

Effluent discharge from the WWTP will eventually be transported to an off-site location, however the City has not formally selected a site and these improvements will likely occur

during a later Phase. Nonetheless, this IS/MND analyzes impacts associated with both a temporary (short-term) and future permanent effluent discharge pipelines, as well as a preliminary location for the temporary discharge site. The temporary discharge pipeline will extend north from the WWTP along Buena Vista Drive/Utah Trail then east along Amboy Road to the discharge location at the northeast corner of Amboy Road and Bagdad Highway (APN: 062-209-102). The discharge site is expected to require 1 acre of disturbance. The permanent discharge pipeline will extend south from the WWTP along Desert Knoll Ave, east on Pinon Drive, south on Utah Trail and end at Baseline Road. A discharge site as not been selected for this location. The temporary and permanent discharge pipelines are approximately 2.84 miles and 1.82 miles in length, respectively.

1.2.1. Wastewater Treatment Process Technology Alternatives

The SRF Application Technical Package T1 – Project Report (Carollo 2023) analyzed three project alternatives, including the proposed Project. The design criteria for the alternatives analysis includes identification of low point locations, ideal discharge locations, and high population density areas for placement of a centralized WWTP to optimize gravity flow and minimize long term operational costs. Design criteria including surface conditions, subsurface conditions, and location were used to evaluate potential groundwater recharge sites. Additionally, relocating and rephasing the collection system design was evaluated based on discharge locations, topography, and population density. Design criteria for WWTP considered process/equipment reliability and redundancy as well as available footprint to accommodate required processes.

Collection System

The following alternatives were evaluated to address long-term collection system needs for the TPWD.

1. No Action: The No Action alternative does not include any design or construction of a new collection system or centralized treatment facility. The existing individual septic tanks and decentralized package treatment plants would continue to be used for wastewater disposal until they impacted the groundwater quality.
2. Wastewater Treatment System: The initial Wastewater Treatment System alternative included design and construction of a centralized wastewater collection system and treatment facilities and evaluated the potential for a joint-use plant with the MCGACC. The alternative includes 5 phases with an assumed location of a WWTP or lift station by the existing TPWD Fluoride Removal Water Treatment Plant and well.
3. Collection System Re-phasing (Project): The Collection System Re-phasing alternative relocated the WWTP location to south of the drainage channel in the region of Buena Vista and Desert Knoll. The alternative includes 27 miles of new pipeline to carry 0.55 MGD of initial flow and a WWTP with planned discharge into a non-potable basin.

Alternative 1 was eliminated from consideration because it is not a long-term solution and will lead to the degradation of the groundwater. Alternative 2 had the WWTP located near a well. This was not considered a viable alternative because of the proximity of the main

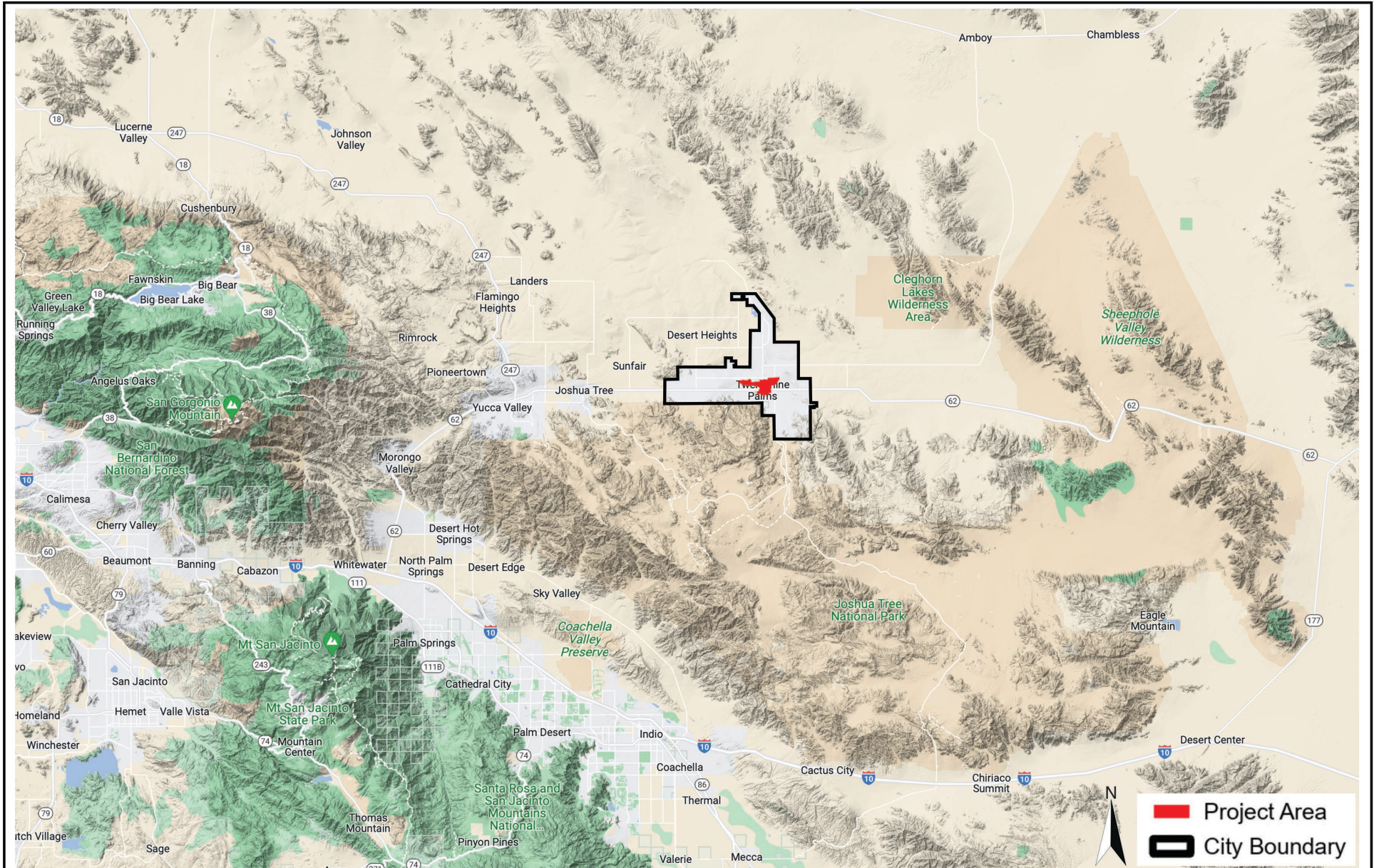
well producing drinking water to the potential wastewater effluent discharge, as well as the locations placement within the floodway. The location of the WWTP was optimized from Alternative 2 to Alternative 3 to meet long term effluent needs for recycled water and the layout of the collection system was adjusted to minimize pumping costs with a primarily gravity flow system.

Wastewater Treatment Facility

The following alternatives were evaluated to address long-term treatment facility needs for the TPWD.

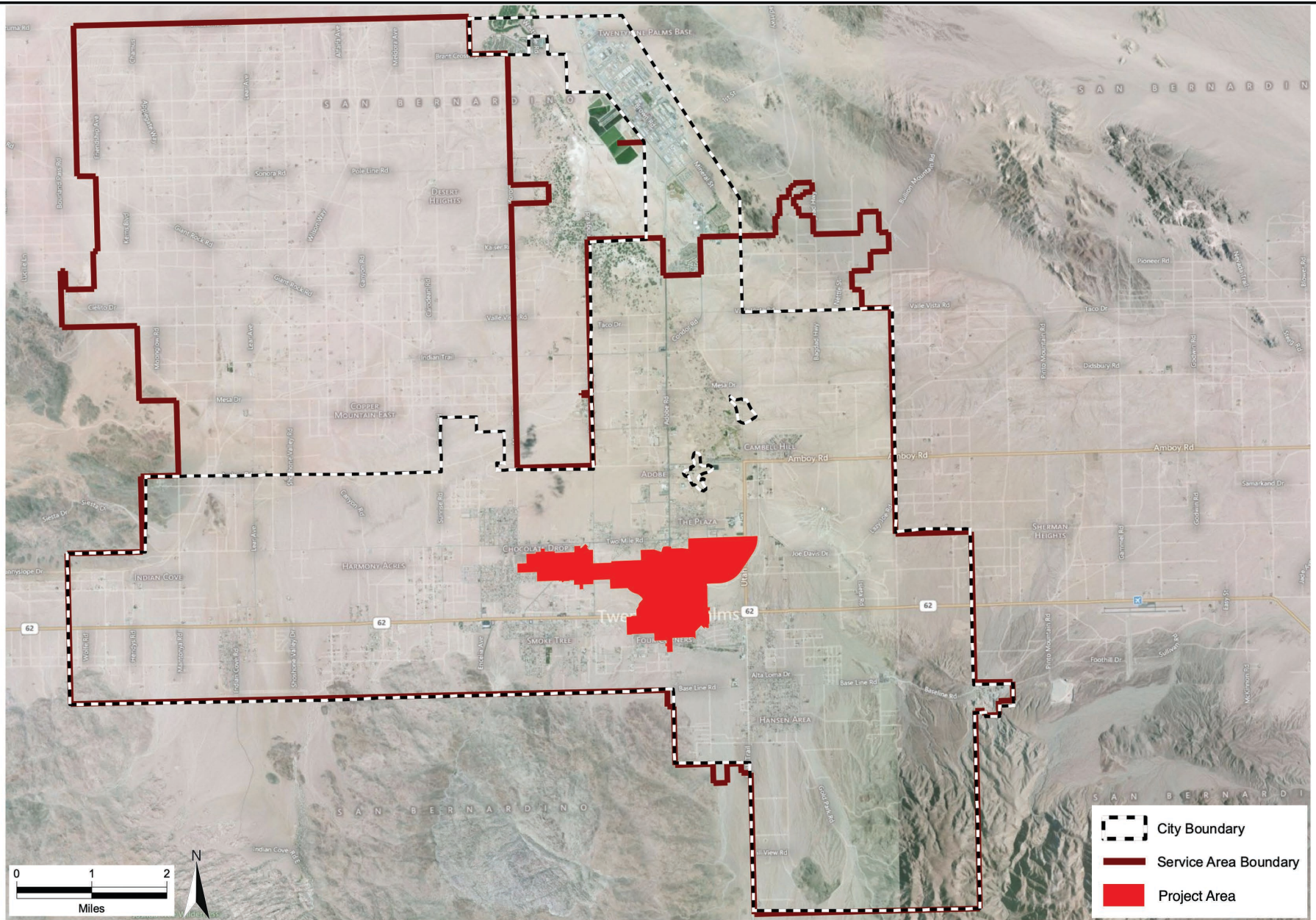
1. No Action: The No Action alternative does not include any design or construction of a centralized treatment facility. The existing individual septic tanks and decentralized package treatment plants would continue to be used for wastewater disposal until they impacted the groundwater quality.
2. Conventional Tertiary Treatment and Disinfection: The Conventional Tertiary Treatment and Disinfection alternative includes design and construction of a centralized WWTP with the secondary/tertiary process using conventional activated sludge process, tertiary filters, and chlorine contact tanks. Plant effluent will meet the requirements for “Disinfected tertiary recycled water” in California Title 22 Code of Regulations.
3. Advanced Tertiary Treatment and Disinfection: The Advanced Tertiary Treatment and Disinfection alternative includes design and construction of a centralized WWTP with the secondary/tertiary process using membrane bioreactor (MBR) system and UV disinfection. Plant effluent will meet the requirements for “Disinfected tertiary recycled water” in California Title 22 Code of Regulations.

Alternative 1 was eliminated from consideration because it is not a long-term solution and will lead to the degradation of the groundwater. Alternatives 2 and 3 are capable of reliably producing the target effluent at relatively comparable life cycle costs. Alternative 3, however, occupies less footprint, produces a higher quality effluent, and is more suitable to be coupled with a future advanced water purification facility for a potential indirect or direct potable reuse (IPR/DPR) application.

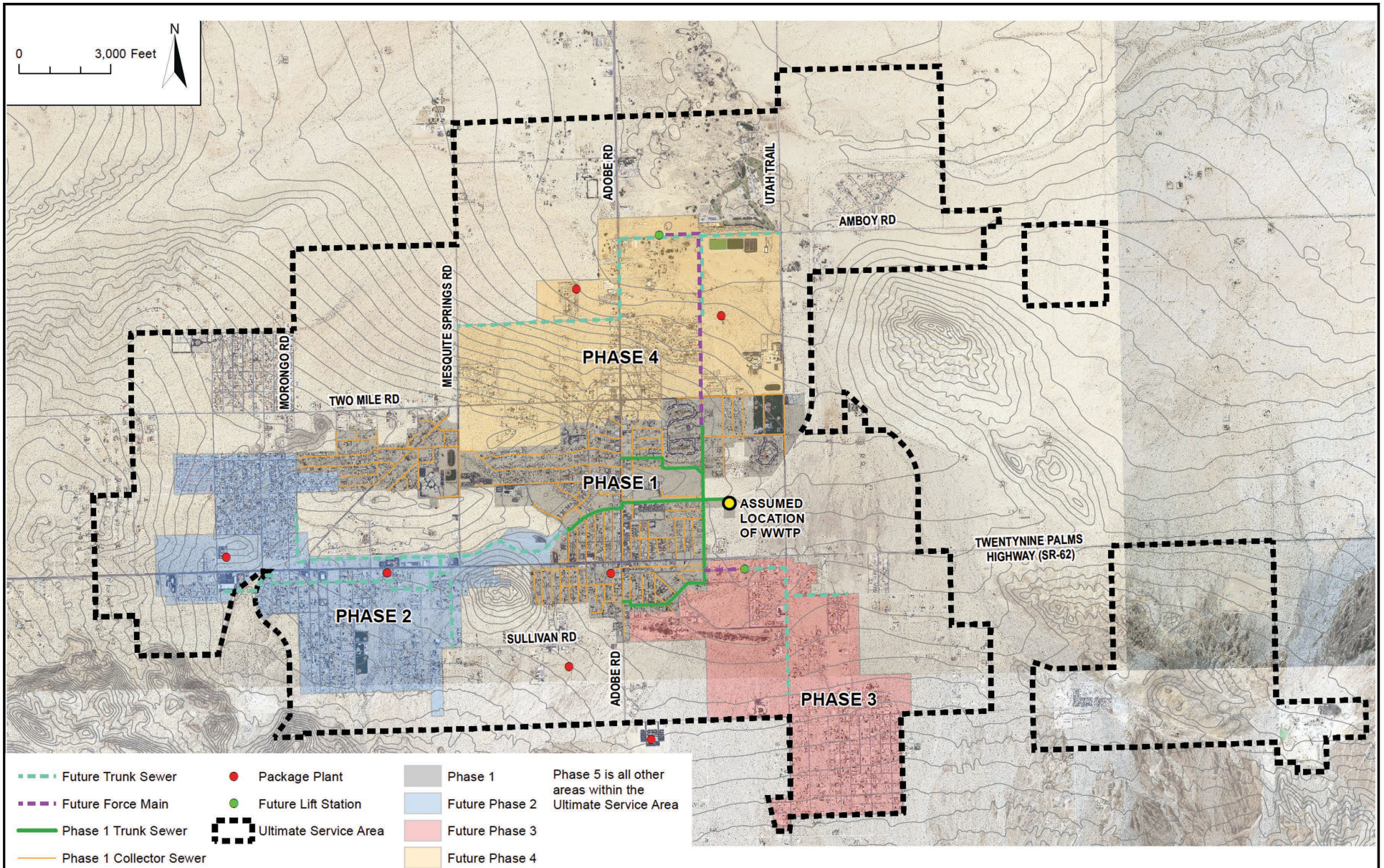


Source: NV5, 03.2023; Google Maps, 2022

03.09.23

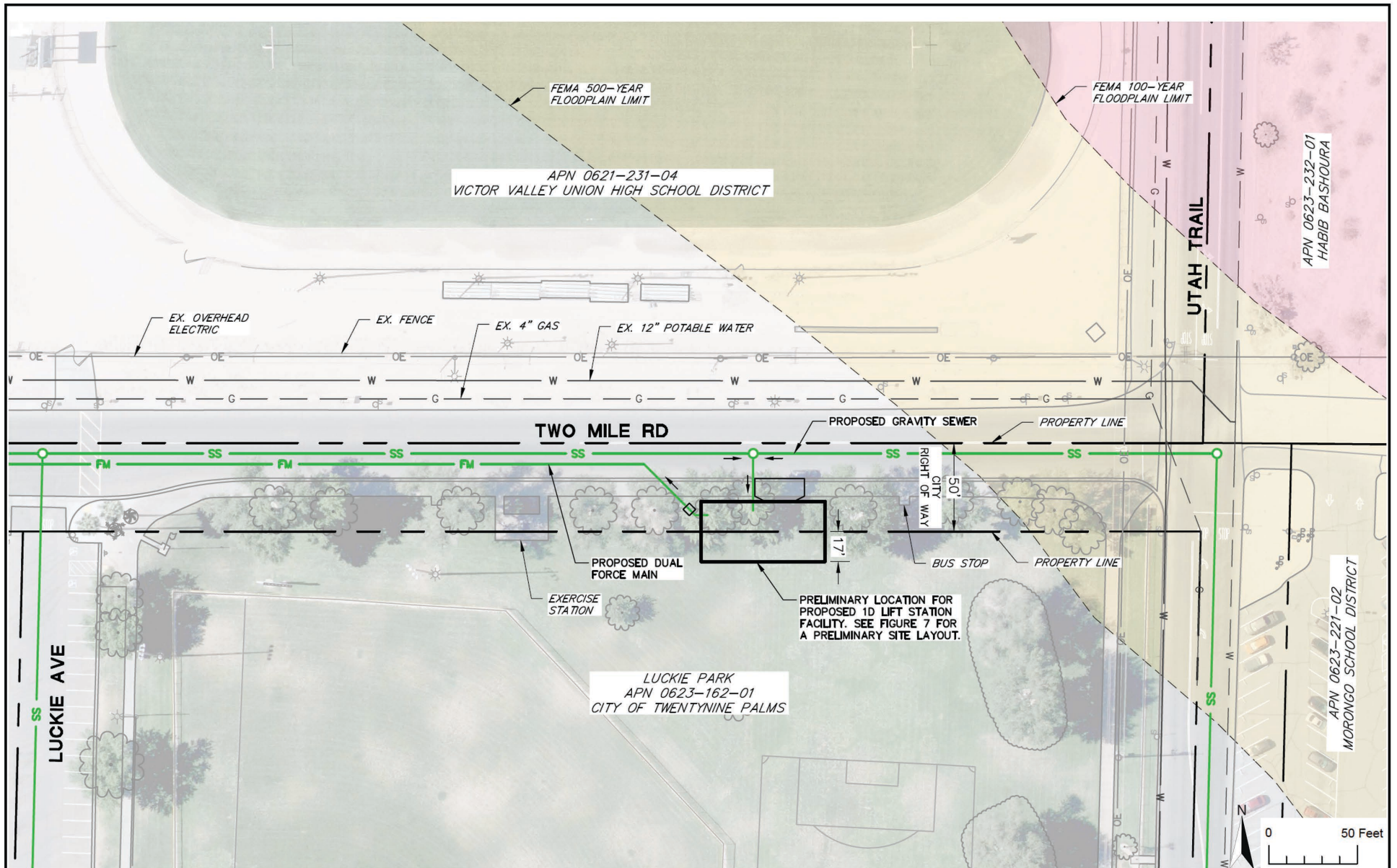


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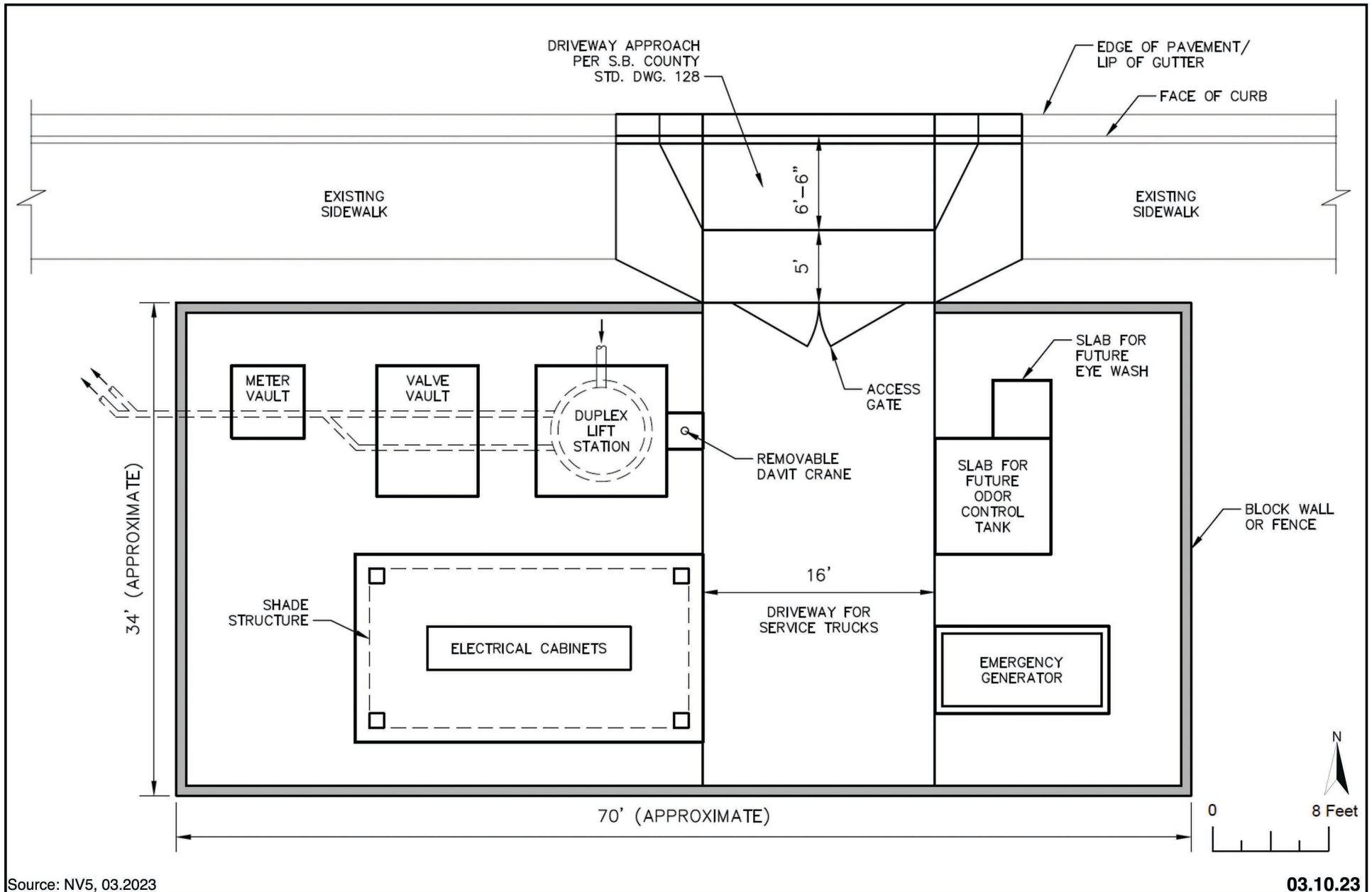
Source: NV5, 03.2023

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Source: NV5, 03.2023

03.10.23



1.3. Project Alternatives: CEQA-Plus

An alternatives analysis was provided in the State Revolving Fund (SRF) Application Technical Package Project Report that examined alternative treatment technologies. Ultimately the City has decided to move forward with the proposed Project (Alternative 3) because it occupies less footprint, produces a higher quality effluent, and is more suitable to be coupled with a future advanced water purification facility for a potential indirect or direct potable reuse (IPR/DPR) application. No further alternative analysis is required.

1.4. Other Public Agency Approvals

Additional subsequent approvals and other permits that may be required from both local, regional, state and federal agencies include:

- Colorado River Regional Water Quality Control Board
- Mojave Desert Air Quality Management District
- Environmental Protection Agency
- California Department of Transportation (encroachment permits and easements)
- Army Corp of Engineers (404 Nationwide Permit)
- Department of Drinking Water Quality

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry Resources	<input type="checkbox"/>	Air Quality
<input type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Energy
<input type="checkbox"/>	Geology /Soils	<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards & Hazardous Materials
<input type="checkbox"/>	Hydrology / Water Quality	<input type="checkbox"/>	Land Use / Planning	<input type="checkbox"/>	Mineral Resources
<input type="checkbox"/>	Noise	<input type="checkbox"/>	Population / Housing	<input type="checkbox"/>	Public Services
<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation	<input type="checkbox"/>	Tribal Cultural Resources
<input type="checkbox"/>	Utilities / Service Systems	<input type="checkbox"/>	Wildfire	<input type="checkbox"/>	Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Kat ECA

3/20/23

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Sources: City of Twentynine Palms Development Code; Google Earth; City of Twentynine Palms General Plan.

Environmental Setting

The City of Twentynine Palms is located in the Morongo Basin which forms the southwestern corner of the Mojave Desert. In the basin, Joshua Tree National Park lies to the south of the City and the Marine Corps Ground Air Combat Center to the north. The Mojave Desert is separated from the Sonoran Desert to the south by the Little San Bernardino and Eagle Mountains, which are extensions of the Transverse Range. The western Mojave Desert is a flat, sparsely vegetated region interspersed with mountain ranges and dry lakes.

The Project conveyance pipelines would be located within street rights-of-way in areas that consist of a mix of residential, commercial, industrial, public use and vacant lands. The WWTP site is located on a vacant parcel approximately 0.15 miles east and 0.15 north of residential development.

Discussion of Impacts

- a) **Less Than Significant Impact.** A significant impact would occur if the Proposed Project would have a substantial adverse effect on a scenic vista. A scenic vista is generally defined as a public view of highly valued visual and scenic resources exhibiting a unique or unusual feature, such as mountains, hillsides, bodies of water and/or urban skylines. An impact on a scenic vista would occur if the bulk or design of a structure or development permanently diminishes the quality of the valued view.

The City of Twentynine Palms is situated in the Mojave Desert north of Joshua Tree National Park. Views within the Project area include the desert floor with distant mountain views in all directions that are partially obstructed by intervening development.

Collection System

Construction of the conveyance pipelines will occur within roadways and may temporarily disrupt views. However, the pipelines would be installed below grade and within the roadway right-of-way through trenching and directional drilling. Construction effects along the pipeline route would be temporary, and all areas would be returned to pre-project conditions upon completion of construction. The localized and temporary disruption of long-distance views associated with construction activities would not be considered a substantial, adverse effect on long-distance views in the area.

The lift station consists of a 2,380 square foot enclosed equipment area adjacent to the sidewalk along Two Mile Road that will be screened by either a block wall or fence, which will minimize visual impacts (see Exhibit 6 for preliminary lift station layout). Lift station structure heights would not exceed 15 feet above ground surface and will be similar in scale to existing and future mechanical/equipment storage areas.

Due to these factors, the project would result in a less than significant impact and would not have a substantial adverse effect on a scenic vista. No mitigation measures are required.

WWTP

The WWTP will consist of various storage and treatment tanks, pump stations, and a maintenance and operations building of no more than 5,000 square feet. The localized and temporary disruption of long-distance views associated with construction activities would not be considered a substantial, adverse effect on long-distance views in the area, as it will be temporary. WWTP structure heights would not exceed 1-story, or 25 feet above ground surface, and will be similar in scale to existing and future surrounding uses. Equipment will be housed in an enclosed structure(s) located 0.15 miles from the nearest residences and roadways, which will minimize visual impacts (see Exhibit x for a conceptual WWTP layout).

Due to these factors, the project would result in a less than significant impact and would not have a substantial adverse effect on a scenic vista. No mitigation measures are required.

- b) No Impact.** In the City's General Plan, there are several roadway segments designated as "Scenic Highways" in the project vicinity including portions of Twentynine Palms Highway, National Park Drive, Utah Trail, and Amboy Road (General Plan Figure CI-9). According to the California Department of Transportation, Twentynine Palms Highway (State Highway 62) is an "eligible State Scenic Highway," however it is not a formally designated State scenic highway.

Collection System

There are several sewer lines proposed along a locally designated scenic highway, including Twentynine Palms Highway, Utah Trail, Amboy Road and National Park Drive. Project pipelines will primarily occur within existing roadway rights-of-way and all areas would be returned to pre-project conditions upon completion of construction. The pipelines would not impede any scenic vistas or disrupt any larger scenic views within a State scenic highway. No impacts would occur.

The lift station is located adjacent to the sidewalk along Two Mile Road that will be screened by either a block wall or fence. Construction of the lift station may require the relocation of existing trees, however Two Mile Road is not considered a scenic highway. The lift station would not impede any scenic vistas or disrupt any larger scenic views within a State scenic highway. No impacts would occur.

WWTP

The proposed site for the WWTP is currently vacant, and there are no significant trees, historic buildings or rock outcroppings located on either site. The WWTP would not impede any scenic vistas or disrupt any larger scenic views within a State scenic highway. No impacts would occur.

- c) **Less than Significant Impact.** The project area consists of a mix of non-urbanized and urbanized areas. As discussed above, the Project may temporarily degrade the existing visual character or quality of the site during construction.

Collection System

The pipelines would be installed within the roadway rights-of-way adjacent to residential, commercial, industrial, and vacant lands. As a result, project construction may temporarily hinder views for travelers along roadways during construction activities. However, upon completion of construction, all disturbed areas along the pipeline route would be returned to pre-project conditions. As a result, the pipeline component would not substantially degrade the existing visual character or quality of the area and would not be considered to conflict with zoning or other regulations related to the protection of views along roads.

To minimize visual impacts of the lift station, all equipment will be housed in an enclosed structure and screened from public view consistent with surrounding existing and future uses. The Project would not conflict with applicable zoning or regulations regarding scenic quality and would be subject to City review requirements. Therefore, impacts to the visual character of the surrounding area or impacts to public views are considered less than significant.

WWTP

The proposed WWTP consists of storage and treatment tanks, pump stations, and a maintenance and operations building. To minimize visual impacts, all equipment will be housed in an enclosed structure and screened from public view consistent with surrounding existing and future uses. The Project would not conflict with applicable zoning or regulations regarding scenic quality and would be subject to City review requirements. Therefore, impacts to the visual character of the surrounding area or impacts to public views are considered less than significant.

- d) **Less Than Significant Impact.** Buildout of the proposed project will result in the development of a sewer collection system consisting of a WWTP and approximately 27 miles of conveyance pipelines.

Collection System

The pipelines will be located underground withing existing roadway rights-of-way and will not generate light. There will be no impacts regarding lighting.

Lighting will be generated by the lift station for security lighting and occasional service vehicle traffic. As required by the City Development Code, Section 19.78, lighting for the proposed project will be subject to the city's lighting standards, which require proper shielding of light sources and prohibit light spillage on adjacent properties. A lighting plan will be submitted and approved prior to development, and all required conditions of approval would be applied to the proposed project. Added light from vehicles would be limited, given limited nighttime activity at the site, and would be consistent with traffic lighting expected on and adjacent to City roadways. Compliance with City lighting standards will ensure that lighting impacts associated with the proposed project, specifically the lift station, will be less than significant.

WWTP

Lighting will be generated by the WWTP for security lighting, landscape lighting, and automobile traffic. As required by the City Development Code, Section 19.78, lighting for the proposed project will be subject to the city's lighting standards, which require proper shielding of light sources and prohibit light spillage on adjacent properties. A lighting plan will be submitted and approved prior to development, and all required conditions of approval would be applied to the proposed project. Added light from vehicles would be limited, given limited nighttime activity at the site, and would be consistent with traffic lighting expected on and adjacent to City roadways. Compliance with City lighting standards will ensure that lighting impacts associated with the proposed project, specifically the WWTP, will be less than significant.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. -- Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Sources: Farmland Mapping and Monitoring Program, CA Dept. of Conservation; General Plan Land Use Map; Google Earth.

Environmental Setting

Agricultural production is generally not active in the Morongo Basin, nor in the City of Twentynine Palms. Commercial farming has not occurred in the City for decades, likely due to its arid environment. Neither the General Plan nor the Development Code contain agricultural or forestry designations or districts, but in certain districts agricultural and related uses are allowed with a Conditional/Administrative Use Permit or other restrictions.

Discussion of Impacts

- a) **No Impact.** According to the California Department of Conservation, the City and its surrounding communities were not mapped in the Farmland Mapping and Monitoring Program (FMMP). The Project is not proposed on lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, according to the California Dept. of Conservation, nor is it used for agricultural purposes. The area of impact occurs mostly within roadway rights-of-way and vacant lands zoned for urban uses. The proposed project will not result in any changes to lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the California Dept. of Conservation, nor to lands used for agricultural purposes, and no impact will occur.
- b) **No Impact.** The Project is not proposed on lands under a current Williamson Act contract, under a Farmland Security Zone contract, or within an agricultural preserve. Therefore, Project implementation would not result in conflicts with existing agricultural zoning. The proposed Project will have no impact on lands designated for agricultural use.
- c-d) **No Impact.** The Project is not proposed on lands zoned as either forest land or timberland. All Project components (collection system and WWTP) are located within existing roadway rights-of-way or vacant lands zoned for urban uses. The Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. There would be no impact.
- e) **No Impact.** As discussed above, the City does not have any agricultural or forest land, nor any land in active agricultural or timberland production uses. The development of the proposed Project will not impact any agricultural or forest land. Given the absence of active farmlands in the City, there would be no indirect impact, due to the location or nature, on conversion of Farmland to non-agricultural use. Given the absence of forest land in the City, the proposed Project would have no indirect impact on conversion of forest land to non-forest use.

Mitigation Measures: None required.

Monitoring: None required.

CEQA-PLUS

U.S. Forest Service, Bureau of Land Management, and Other Federal Land

The Project area does not contain any forested lands and is not zoned for forest land, timberland, or timberland zoned for Timberland Production. The proposed Project will not be located on USFS, BLM, or any other federally managed land.

Farmland Protection Policy

According to the California Department of Conservation, the City and its surrounding communities were not mapped in the Farmland Mapping and Monitoring Program (FMMP). The Project is not proposed on lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, according to the California Dept. of Conservation, nor is it used for agricultural purposes. The area of impact occurs mostly within roadway rights-of-way and vacant lands zoned for urban uses. The proposed Project will not result in any changes to lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the California Dept. of Conservation, nor to lands used for agricultural purposes.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) 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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Sources: City of Twentynine Palms General Plan; MDAQMD 2020 CEQA and Federal Conformity Guidelines; CalEEMod Version 2020.4.0; project materials.

Environmental Setting

The City of Twentynine Palms, including the project site, lies within the Mojave Desert Air Basin (MDAB), and is under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). MDAQMD is geographically the second largest of the 35 air districts in the State of California. All development within the City is subject to MDAQMD's 2020 "California Environmental Quality Act (CEQA) and Federal Conformity Guidelines." MDAQMD operates and maintains 13 regional air quality monitoring stations in different cities throughout its jurisdiction. The nearest monitoring station to the Project Area is located in Twentynine Palms, on Adobe Road.

Criteria air pollutants are contaminants for which state and federal air quality standards (California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS)) have been established. MDAQMD is in nonattainment for ozone (O₃) and inhalable particulate matter less than 10 microns in size (PM₁₀) under the California and National Ambient Air Quality Standards (CAAQS and NAAQS, respectively). As a result, MDAQMD has adopted federal attainment plans for ozone and PM₁₀ under the Federal Clean Air Act. Ambient air quality in the MDAQMD, including the Project area, does not exceed state and federal standards for carbon monoxide, nitrogen dioxides, particulate matter less than 2.5 microns in size, sulfur dioxide, lead, sulfates, hydrogen sulfide, or visibility reducing particles.

The Project will contribute to an incremental increase in regional ozone and PM₁₀ emissions primarily during construction. The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to project air quality emissions that will be generated by the proposed Project (Appendix A) and are discussed below.

Discussion of Impacts

- a) **No Impact.** According to MDAQMD's 2020 CEQA and Federal Conformity Guidelines, a project is considered non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable District rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast. An example of a non-conforming project would be one that increases the gross number of dwelling units, increases the number of trips, and/or increases the overall vehicle miles traveled in an affected area relative to the applicable land use plan.

Collection System

The pipeline improvements and lift station will not conflict with any land use plan by virtue of their underground nature and location within, or in proximity to, existing roadway rights-of-way. Since the collection system will not in and of itself result in any changes to the existing land use patterns in the Project area, the proposed Project does not conflict with any land use plans. Additionally, the Project will serve the existing and anticipated growth in the City of Twentynine Palms, enabling the planned land uses in the General Plan.

WWTP

The WWTP Site is designated Multi-Family Residential (RM). The proposed WWTP is considered a "utility and service use," which is an allowable use with an Administrative Use Permit (AUP). Since the proposed Project consists of public utility improvements that in and of themselves will not result in any changes to the existing land use patterns in the Project area, nor will they induce unplanned population growth, the Project does not conflict with or obstruct implementation of the AQMP.

As demonstrated below, the Project will not generate emissions that exceed thresholds for criteria pollutants including pollutants for which the District is in nonattainment. The proposed Project will also be subject to rules and guidelines set forth by MDAQMD including best management practices and preparation of a dust control plan during construction. There will be no impacts regarding conformity with applicable air quality plans and guidelines.

- b) **Less Than Significant Impact.** A significant impact could occur if the Project would make a considerable cumulative contribution to federal or State non-attainment pollutants. The Mojave Desert portion of the MDAB is classified as a

“non-attainment” area for ozone and PM₁₀. Cumulative air quality impacts are evaluated on a regional scale (rather than a neighborhood scale or city scale, for example) given the dispersing nature of pollutant emissions and aggregate impacts from surrounding jurisdictions and air management districts. Any development project or activity resulting in emissions of PM₁₀, ozone, or ozone precursors will contribute, to some degree, to regional non-attainment designations of ozone and PM₁₀.

Currently MDAQMD’s approach to assessing cumulative impacts is based on the MDAQMD Attainment Plan forecasts for attainment of ambient air quality standards in accordance with the requirements of the California Clean Air Act (CCAA), which consider the regional forecasted future regional growth. Therefore, if all projects are individually consistent with the growth assumptions within MDAQMD’s Attainment Plan, and criteria pollutant emissions do not exceed MDAQMD’s recommended regional thresholds of significance, future development would not impede the attainment of ambient air quality standards. As indicated under response III.a), above, the proposed Project is not directly growth-inducing and will not change or disrupt land use patterns. Instead, the Project will serve the existing and anticipated growth in the City, enabling the planned land uses in the General Plan. Therefore, the Project is expected to be consistent with the growth assumptions within the MDAQMD’s Attainment Plan.

CalEEMod Version 2020.4.0 was used to project criteria pollutant emissions that will be generated by the proposed Project (Appendix A). The model applies inherent default values for various land uses, including trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data is available, such data was input into the model. Project-specific information input into the model was derived from the project description at the beginning of this document and from supplemental information provided by the Project engineer related to the size of proposed structures and equipment, area of grading and site preparation, area of paving, and length of construction period.

Criteria air pollutants will be released during both the construction and operation phases of the proposed Project, as shown in Tables 2 and 3. Table 2 summarizes short-term construction-related emissions, and Table 3 summarizes ongoing emissions generated during operation. The proposed WWTP construction activities overlap with the construction activities for the installation of the pipelines, therefore the following analysis for both Project components are evaluated together.

Construction Emissions

Short-term emissions of air quality pollutants will occur during grading, pipeline installation, paving, WWTP building construction, and export of excess dirt/soil material. Sources of construction-related emissions include the operation of construction equipment, soils/materials exports, as well as vehicles transporting workers to and from the Project site. For purposes of analysis, it is assumed that construction will occur over an 2-year period starting January 2025 and ending December 2026.

As shown in Table 2, emissions generated by construction activities will not exceed MDAQMD thresholds for any criteria pollutant during construction. The data reflect average daily unmitigated emissions over the 2-year construction period, including summer and winter weather conditions. It was assumed that the total disturbance area would be approximately 25.5 acres including the 4.4-acre WWTP, 1 acre temporary effluent discharge site, 0.1 acre lift station, and 20 acres for pipeline installation¹. Technical grading plans have not yet been prepared for the Project; however, the analysis assumes a net export of 3,000 cubic yards of dirt/soil materials that will be displaced by the proposed pipelines. Applicable standard requirements and best management practices include, but are not limited to, the implementation of a dust control and management plan in conformance with MDAQMD Rule 403. Given that criteria pollutant thresholds will not be exceeded, and standard best management practices will be applied during construction, impacts will be less than significant.

Table 2						
Maximum Daily Construction-Related Emissions Summary (pounds per day)						
Construction Emissions¹	CO	NO_x	ROG	SO₂	PM₁₀	PM_{2.5}
Daily Maximum	74.84	55.38	42.13	0.18	11.30	5.18
MDAQMD Thresholds	548.00	137.00	137.00	137.00	82.00	65.00
Exceeds?	No	No	No	No	No	No
Emission Source: CalEEMod model, version 2020.4.0.						

Operational Emissions

Operational emissions are ongoing emissions that will occur over the life of the project. They include area source emissions, emissions from energy demand (electricity), and mobile source (vehicle) emissions. Table 3 provides a summary of projected emissions during operation of the proposed project at build out. The WWTP will be operated by 3-5 employees daily and is forecast to generate approximately 15 daily vehicle trips, with 3 trips during the AM peak hour and 3 trips during the PM peak hour (see Section XVIII Transportation and Traffic). As shown below, operational emissions will not exceed MDAQMD thresholds of significance for any criteria pollutants for operations. Impacts related to operational emissions will be less than significant.

Table 3						
Maximum Daily Operational-Related Emissions Summary (pounds per day)						
Operational Emissions¹	CO	NO_x	ROG	SO₂	PM₁₀	PM_{2.5}
Daily Maximum	0.87	0.16	0.73	0.00	0.20	0.05
MDAQMD Thresholds	548.00	137.00	137.00	137.00	82.00	65.00
Exceeds?	No	No	No	No	No	No
Emission Source: CalEEMod model, version 2020.4.0.						

¹ Project proposes approximately 32.15 miles of pipeline, including the collection system, force main, and effluent discharge pipelines. Assuming a 5-foot-wide trenching area: 169,752 ft x 5 ft = 848,760 sf, or 19.48 acres, rounded up to 20 acres.

Conclusion

As shown above, both construction and operation of the proposed Project will result in criteria emissions below the MDAQMD significance thresholds, and neither would violate any air quality standard or contribute substantially to an existing or projected air quality violation. As indicated under response III.a), above, the proposed Project is not directly growth-inducing and will not change or disrupt land use patterns. Instead, the Project will serve the existing and anticipated growth in the City, enabling the planned land uses in the General Plan. Therefore, the project is expected to be consistent with the growth assumptions within the MDAQMD's Attainment Plan. Overall, impacts related to construction and operation will be less than significant and are not cumulatively considerable from a non-attainment standpoint.

- c) **Less Than Significant Impact.** A project would have a significant impact if the proposed project would expose sensitive receptors to substantial concentrations of criteria air pollutants or toxic air contaminants (TACs) including asbestos, diesel particulate matter (diesel PM) from construction equipment and vehicle traffic, and fugitive dust from construction activity. According to the MDAQMD CEQA and Federal Conformity Guidelines, residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated:

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

The closest sensitive receptors to the WWTP operation and maintenance facility, where many system maintenance activities are performed and where maintenance vehicles enter and exit the lot, are single family residences 0.15 miles (792 feet) west and south of the WWTP site.

In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no safe level of exposure. Therefore, USEPA and CARB regulate Hazardous Air Pollutants and TACs, respectively, through statutes and regulations that generally require the use of the Maximum Available Control Technology (MACT) or best available control technology (BACT) for toxics and to limit emissions. These statutes and regulations, in conjunction with additional rules set forth by the MDAQMD, establish the regulatory framework for TACs.

Construction activities associated with the proposed Project would take place over a period of 2-years, although the level of activity would vary both temporally and spatially. The construction emissions were found to be less than significant, as

indicated above in Response III.b), above. Therefore, the proposed improvements (collection system and WWTP) will not expose sensitive receptors to substantial pollutant concentrations and impacts are considered less than significant.

After construction is completed and the WWTP is operating, there would be operational traffic associated with worker commute, chemical deliveries, and biosolids removal. Approximately 3-5 workers could be working at one time at the facility, resulting in an estimated 15 employee commutes. There will be additional but less frequent monthly truck trips associated with chemical deliveries, and removal of biosolids that would be hauled offsite. Emissions from this small number of vehicle trips were found to be less than significant, as indicated above in Response III.b), above. Applicable WWTP equipment such as emergency generators would be subject to permit requirements of MDAQMD and/or CARB, which require new or modified emission units be equipped with the current BACT for all subject air contaminants. Therefore, diesel particulate emissions from project operational emissions are not expected to increase health risk at the nearest receptors; and, therefore, would be less than significant.

As demonstrated above, the proposed project would not generate construction or operational emissions that exceed the MDAQMD's recommended regional thresholds of significance. Therefore, impacts to sensitive receptors will be less than significant.

- d) Less Than Significant Impact.** In general, typical land use development that pose potential odor problems include wastewater treatment plants, refineries, landfills, composting facilities and transfer stations. The occurrence and severity of odor impacts depend on such factors as the nature, frequency, and intensity of the source, wind speed and direction, and the sensitivity of the receptors. While offensive odors rarely cause physical harm, they can be unpleasant and raise public concern.

The proposed Project includes a wastewater collection system and treatment plant and has the potential to generate objectionable odors. Short-term odors associated with paving and construction activities could be generated; however, any such odors would be localized and quickly disperse below detectable levels as distance from the construction site increases.

The pipelines will not generate long-term odors, as they will be sealed and located underground.

The Project would not result in uncontrolled sources of odor during operations. Although the specific technology has not yet been chosen, the proposed WWTP is required to include odor control technology to capture and treat foul air produced by raw wastewater before it is exhausted from channels and tanks. Typically, odor control technology would be installed to minimize wet-well turbulence; that includes collection of odors in scrubbers or biofilters or the addition of odor control chemicals to the sewer upstream of the pump station. Chemicals typically used for odor control include chlorine, hydrogen peroxide, metal salts (ferrous chloride and

ferric sulfate), oxygen, air, and potassium permanganate. In addition, much of the WWTP operation will be housed in an enclosed structure, which will further minimize the release of odors and limit the impacts to surrounding sensitive receptors. Application of standard odor control technology will ensure potential impacts associated with odor are remain less than significant.

Mitigation Measures: None required.

Monitoring: None required.

CEQA-Plus

Clean Air Act

Name of Air Basin: Mojave Desert Air Basin

Local Air District: Mojave Desert Air Quality Management District

Pollutant	Federal Status ¹ (Attainment, Nonattainment, Maintenance, or Unclassified)	Nonattainment Rates ¹ (Marginal, Moderate, Serious, Severe, or Extreme)	Threshold of Significance ² (Tons/Year)	Estimated Construction Emissions (Tons/Year)	Estimated Operation Emissions (Tons/Year)
Ozone (O3)	Nonattainment	Severe-15	25	N/A	N/A
Carbon Monoxide (CO)	Attainment	N/A	100	6.36	0.09
Oxides of Nitrogen (NOx)	Attainment	N/A	100	5.32	0.02
Reactive Organic Gases (ROG)	N/A	N/A	N/A	0.98	0.12
Volatile Organic Compounds (VOC)	N/A	N/A	50	N/A	N/A
Lead (Pb)	Attainment	N/A	25	N/A	N/A
PM _{2.5}	Attainment /Unclassified	N/A	N/A	0.70	0.006
PM ₁₀	Nonattainment	Serious	70	1.31	0.02
Sulfur Dioxide (SO ₂)	Attainment	N/A	100	0.01	0.0002

1. Federal criteria pollutant status and nonattainment rate, if applicable, per EPA Green Book.

2. Federal de minimis thresholds per Code of Federal Regulations Title 40, part 93.153.

General Conformity: Is the Project subject to a General Conformity determination?

No- As shown in the above table, the Project is in an attainment or unclassified area for all federal criteria pollutants, and/or the project emissions are below the federal de minimis levels. The project is not subject to General Conformity determination. An air quality assessment was prepared using the California Emissions Estimator Model (CalEEMod) program to quantify Project-related emissions.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (General Plan)			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Sources: Wastewater Collection System, Phases A through E Biological Resources Assessment, prepared by Wood Environment & Infrastructure Solutions, Inc. February 2023; Wastewater Collection System, Phases 1 & 2 Results of Sensitive Plant Surveys, prepared by Wood Environment & Infrastructure Solutions, Inc. July 20, 2022; Wastewater Collection System, Phases 1 & 2 Desert Tortoise Focused Survey, prepared by Wood Environment & Infrastructure Solutions, Inc. May 12, 2022; Google Earth; City of Twentynine Palms General Plan; Wastewater Collection System, Phases 1 & 2 Burrowing Owl Focused Survey, prepared by Wood Environment & Infrastructure Solutions, Inc. July 21, 2022; Wastewater Collection System Delineation of Jurisdictional Water, prepared by Wood Environment & Infrastructure Solutions, Inc. February 2023; City of Twentynine Palms General Plan Update Draft Environmental Impact Report (2010).

Environmental Setting

The City of Twentynine Palms is located within the Mojave Desert biome in a portion of the western Mojave Desert in San Bernardino County, California. The City participates in the West Mojave Plan, which serves as a habitat conservation plan for both public and private entities in the West Mojave Desert in California. It encompasses approximately 9.4 million acres of land that include deserts throughout San Bernardino, Kern, Inyo, and Los Angeles Counties. Portions of the plan include requiring focused surveys for Special Status Species, burrowing owl, and sensitive plants where suitable habitat is present.

The following analysis on potential impacts to biological resources associated with the proposed development is based on the following project-specific biological resources assessments and a jurisdictional delineation prepared by Wood Environment & Infrastructure Solutions, Inc (Appendix C, D, E, F and G):

- Biological Resources Assessment, 2022 and 2023 documents (Appendix B)
- Sensitive Plant Survey (Appendix C)
- Desert Tortoise Focused Survey (Appendix D)
- Burrowing Owl Focused Survey (Appendix E)
- Delineation of Jurisdictional Waters, 2022 and 2023 documents (Appendix F)

Discussion of local species and environmental setting is provided below:

Discussion of Impacts

- a) **Less Than Significant Impact with Mitigation Incorporated.** Multiple biological surveys were conducted for a previous iteration of the Project to evaluate the suitability of existing habitat onsite to support special status biological resources. The first field reconnaissance surveys were conducted by Wood biologists on March 22 and 28, 2022, the second round of surveys were conducted from December 12-15, 2022. Much of the proposed Project area was previously studied in March, therefore little reconnaissance was needed to survey the new Project areas in December. The surveys included a 50-foot buffer on either side of the proposed pipelines, and a 25-foot buffer on either side of the collector lines.

Much of the Project alignment consists of paved and unpaved roads surrounded by residential, commercial, and public land uses that will be served by the proposed system. The remaining natural habitat is a patchwork of varying sizes of undeveloped vacant lots, including the WWTP and off-site effluent discharge sites, and lands, most of which show signs of anthropogenic disturbance such as off-road vehicle tracks, vegetation removal, and trash dumping.

The dominant vegetation community present throughout the Project area is Creosote Bush Scrub dominated by creosote bush and various co-dominants. A major flood control channel originating from Fortynine Palms Canyon to the southwest runs through the Project area, as well as other unnamed drainages mapped as "Desert Wash Systems." Where plants have not been removed by the flood control agencies, they are vegetated with species such as smoke tree and catclaw.

Sensitive Plant and Vegetation Species

In addition to the March and December field surveys, additional focused surveys were conducted in the areas identified as being suitable for rare plants. The focused surveys were conducted from April 5-12, 2022 and from June 13-15, 2022. Literature search results found that 20 special-status plant species are known to be in the Project area. Two do not occur: the Joshua tree (not detected) and Robison's monardella (no suitable habitat). Two are present: Alverson's foxtail cactus and Utah vine milkweed (observed during April focused survey). The remaining 16 species were not found by the April focused survey. No special status vegetation communities were detected.

Although the two species detected are not state or federally listed as threatened or endangered, impacts could be considered significant if not mitigated. Mitigation Measure BIO-1 states these species (Alverson's foxtail cactus and Utah vine milkweed) should be avoided and a workers environmental awareness program (WEAP) should be implemented to educate the construction crew of special status species, and biological monitoring should be conducted near their populations. If unavoidable, these species should be transplanted and/or have seeds and/or the topsoil around the plants (which contains the seed bank) collected with guidance from the CDFW.

Desert Tortoise

The Mojave population segment of the desert tortoise is federally, and state listed as threatened by the USFW and CDFW. Wood biologists conducted desert tortoise focused surveys daily from April 5-11, 2022, following USFWS protocol for linear projects. Although there is no desert tortoise critical habitat designated in the Project area, suitable habitat is present 1 mile to the south and there is potential for desert tortoise to enter the project area in the future. For these reasons, Mitigation Measures BIO-1 and BIO-3 set forth mitigation and minimization measures to ensure any potential impacts to the desert tortoise are avoided which include implementation of a Worker Environmental Awareness Program (WEAP) and biological monitoring prior to and during construction.

Special Status Invertebrates

There is a minimal possibility that two special status insects could occur onsite: the monarch butterfly (federal candidate for ESA listing) and Robert's rhopalamma bee (state ranked Critically Imperiled). Nonetheless, preconstruction surveys shall be conducted by qualified biologist to monitor for special status species, including the two invertebrate species listed herein. (Mitigation Measure BIO-1 and BIO-2)

Special Status Reptiles

One special status reptile has marginal habitat occurring in proximity to the Project area: the red diamond rattlesnake. Like the desert tortoise, a qualified biologist shall monitor construction when occurring adjacent to suitable habitat, such as undeveloped lands, to ensure the species does not enter the work area and that they are not disturbed if present. (Mitigation Measure BIO-1 and BIO-2)

Special Status Bats

Three special status bats have the potential to occur in the Project area: pallid bat, spotted bat, and western yellow bat. Mitigation Measure BIO-1 and BIO-2 requires a workers education program and requires a qualified biologist be present during construction when a potential roost site may be disturbed or removed, especially large trees and palms. If the bats are present and impact is unavoidable, CDFW shall be consulted.

Special Status Burrowing Mammals

Two special status burrowing mammal species have the potential to occur in the Project area: American badger and pallid San Diego pocket mouse. It is recommended that a qualified biologist monitor construction when occurring adjacent to suitable undeveloped lands to ensure that American badger potential burrows are not present, and that burrows and badgers are not impacted if they are present. If the American badger is present and impact is unavoidable, CDFW shall be consulted.

The pallid San Diego pocket mouse is nocturnal and only positively detectable through focused trapping surveys. However, a focused survey is not required. Instead, preconstruction surveys shall be conducted to determine if suitable burrowing habitat is present and impacts to those areas should be avoided. If the pallid San Diego pocket mouse is present and impact is unavoidable, CDFW shall be consulted. (Mitigation Measure BIO-1 and BIO-2).

Migratory Bird Treaty Act and State Fish and Game Code

Native bird species may nest on or adjacent to the Project area and therefore could be directly or indirectly impacted. Potential special status species include Costa's hummingbird, Cooper's hawk, loggerhead shrike, black-tailed gnatcatcher, vermilion flycatcher, and LeConte's thrasher. To avoid impacting nesting birds, avoidance of disturbance during the nesting season (generally February 1st through August 31st) is recommended. If avoidance of the nesting season is not feasible, a pre-construction survey for nesting birds will be required to avoid impacts to any active nests within the project site, as provided in Mitigation Measure BIO-4 below.

Burrowing Owl

Burrowing owl is a state species of special concern and take of this species is prohibited under the Migratory Bird Treaty Act (MBTA). Results of literature review found the nearest known record of burrowing owl is approximately five miles northeast of the Project area. Burrowing owl habitat was observed during the March 22 and 28, 2022 surveys, which triggered a series of focused burrowing owl surveys. A burrow survey was conducted from April 5-12, 2022, and four focused surveys were conducted on April 11 and 12, May 4 and 27, and July 6, 2022. The focused surveys did not detect signs of burrowing owls, however suitable habitat is present. Therefore, although burrowing owls were not observed, preconstruction take avoidance surveys are required no less than 14 days prior to initiating ground disturbance activities (Mitigation Measure BIO-5).

With implementation of the mitigation measures (BIO-1 through BIO-5), project impacts to special status or sensitive species are expected to be less than significant.

- b) **No Impact.** The dominant vegetation community in the Project area is Mojave creosote bush scrub. A major flood control channel originating from Fortynine Palms Canyon to the southwest runs through the Project area, as well as other unnamed drainages mapped as “Desert Wash Systems.” No riparian indicator species or other hydric vegetation were observed during the site survey. All soils observed were coarse sand and rock. There will be no impacts to riparian habitat.
- c) **Less Than Significant Impact with Mitigation Incorporated.** A jurisdictional delineation was conducted for the proposed Project in April and December 2022. Five ephemeral drainages were observed within mostly unvegetated earthen channels (see Figure IV-1). The main flood control channel (Drainage 1, D1) is an engineered earthen trapezoid with little to no sign of an ordinary high-water mark (OHWM) due to routine maintenance of the channel with heavy equipment. The top of bank width (CDFW) ranges between 65 to 73 feet and the bottom of the channel (RWQCB) ranges between 10-14 feet. The depth of D1 varies from 6 to 15 feet with no hydric soil indicators. Therefore, it was determined that wetlands were not present within D1.

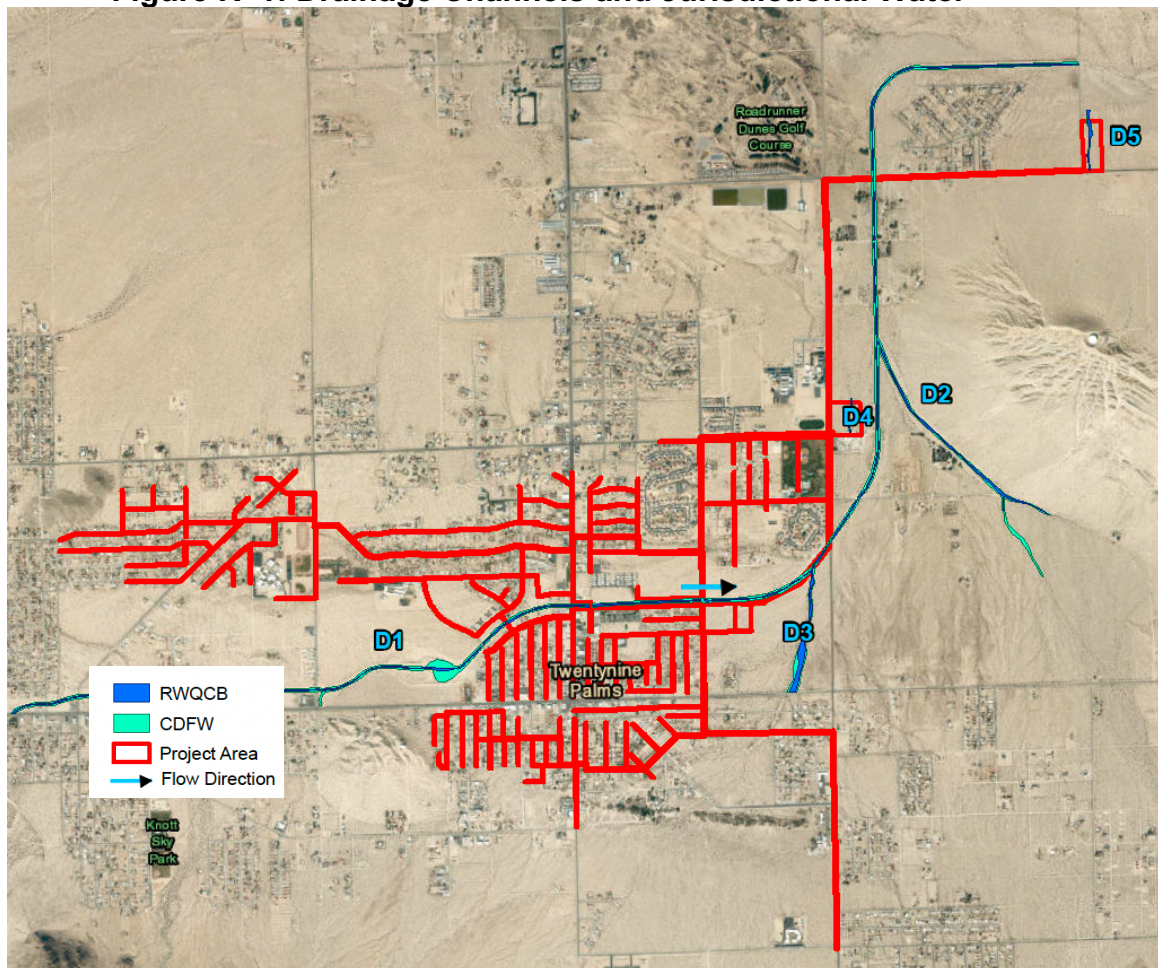
Drainage 2 (D2) is a partially earthen engineered channel that flows into D1 east of the Project area, not within the Project footprint, and is fed by dry braided washes from the southeast. Drainage 3 (D3) is a partially engineered drainage that flows from the south under SR 62 and ends at D1; however, D3 is not within the Project footprint. Drainage 4 (D4) is a small, braided channel flowing south to north at the previously assumed location of the lift station that is no longer part of the Project. D5 is a small, braided channel flowing north from Amboy Road into the desert at the future effluent discharge location. Due to the drainages terminating in an isolated dry lake and having no commerce nexus or federal nexus, it was determined that D1-D5 should not be considered to have any USACE jurisdiction.

Table 4
Summary of Jurisdictional Areas in the Survey Area

Drainage ID /Survey Area	Watershed	Waters of the US Length (feet)	Waters of the US (acre)	RWQCB Length (Feet)	RWQCB (acre)	CDFW Length (Feet)	CDFW (acre)	Cowardin Class	Class of Aquatic Resource
D1	Forty-nine Palms	0	0	32,012	13.57	32,012	58.57	R4SBJx	non-section10-non wetland
D2	Forty-nine Palms	0	0	5,598	2.81	5,598	9.57	R4SBJ	non-section10-non wetland
D3	Forty-nine Palms	0	0	2,558	0.15	2558	6.60	R4SBJx	non-section10-non wetland
D4	Forty-nine Palms	0	0	622	3.75	622	0.27	R4SBJ	non-section10-non wetland
D5	Forty-nine Palms	0	0	783	0.85	783	1.21	R4SBJ	non-section10-non wetland
Total		0	0	41,573	21.13	41,573	76.22		

Source: Table 2 of Delineation of Jurisdictional Waters (Appendix F).

Figure IV-1: Drainage Channels and Jurisdictional Water



Source: Figure 5, Delineation of Jurisdictional Waters (Appendix F).

All drainages are ephemeral and terminate in an isolated dry lake. The Environmental Protection Agency (EPA) and the Department of the Army finalized a rule defining the scope of waters protected under the Clean Water Act on December 30, 2022. Due to the drainages terminating in an isolated dry lake and having no commerce nexus or federal nexus, it was determined that D1-D5 should not be considered to have any USACE jurisdiction. The USACE and EPA reserve the ultimate authority in making the final jurisdictional determination of WOTUS.

Based on the delineation, all drainages meet the requirements for California Department of Fish and Wildlife (CDFW) and Regional Water Quality Control Board (RWQCB) jurisdiction as Waters of the State of California (WSC); however, D2, D3 and D4 are not within the Project footprint and will not be impacted. The sewer collection system will be installed under the drainage utilizing the jack and bore method and will therefore be avoiding impacts to jurisdictional drainages. The construction designs have not been finalized so calculating project related impacts will need to be postponed until a more complete design of the WWTP. If the Project requires permanent impact to the jurisdictional drainages, it will need authorization from USACE, RWQCB, and CDFW. In the event the proposed Project will have temporary and or permanent impact to jurisdictional drainages, Mitigation Measure

BIO-6 outlines the regulatory steps for the City to obtain authorization from the USACE, RWQCB and CDFW. With the implementation of this mitigation measure, impacts to waters of the State will be less than significant.

- d) **Less Than Significant Impact.** Much of the Project area is surrounded by the urban development that will be served by the proposed Project. The remaining area is a patchwork of varying sizes of undeveloped vacant lots, most of which show signs of anthropogenic disturbance, such as mechanical disturbance or soil, vegetation removal, off road vehicle tracks, and trash dumping. Nevertheless, the undeveloped lands provide potential wildlife corridors.

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. Fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. The City’s General Plan provides a map of the Joshua Tree-Twentynine Palms Connection, which is a migratory corridor and ecological transition zone between the Mojave and Sonoran Desert eco-regions. The linkage connects areas of open space in Joshua Tree National Park and the Marine Base. The connection includes 307,807 acres, of which approximately 71 percent currently receives some level of conservation protection. Generally, four linkages occur across the City: two in the west, one in the north, and one in the east. The majority of the City is outside the connection area (General Plan Exhibit CO-3). The Project area is not designated as or near any wildlife linkage areas.

Collection System

Project pipelines will primarily occur within existing roadway rights-of-way and all areas would be returned to pre-project conditions upon completion of construction. The pipelines would not impede an existing migratory corridor. The lift station is proposed along the northern boundary of Luckie Park adjacent to Two Mile Road, and will not impede an existing migratory corridor.

WWTP

The vacant lands proposed for the WWTP may serve as a minor wildlife movement pathway; however, development of the site would not create an isolated “island” of wildlife habitat as the site is immediately adjacent to a flood control channel and lands to the east, south, and west will remain vacant. These lands are also designated for future multi-family residential development, and are not designated wildlife corridors. The WWTP would not impede an existing migratory corridor.

Overall, less than significant impacts are expected as a result of the project regarding wildlife corridors and nursery sites.

- e-f) **No Impact.** The City of Twentynine Palms General Plan establishes goals and policies to ensure that natural resources including the pallid bat, pallid San Diego pocket mouse, and desert tortoise are protected. The San Bernardino County General Plan designates portions of the City’s Sphere of Influence (SOI) as in the RC (Resource Conservation) land use zoning district. The County’s General Plan also includes a Biotic Resources (BR) Overlay to identify areas that include habitat for sensitive species.

Development of the proposed Project will occur within the City of Twentynine Palms (not SOI) and will follow mitigation measures specified in the project-specific biological report specifically relating to the species identified in the General Plan; therefore, it will have no impact on the overlay districts nor any conflict with City or county regulations and plans.

Mitigation Measures:

BIO-1 Worker Education: Implementation of a Worker Environmental Awareness Program (WEAP) shall be required to educate the construction crew of potential special status species present on the project site.

BIO-2 Biological Monitoring

Per recommendations set forth in the Project-specific biological studies, biological monitoring is required for the following species and under the following conditions:

- *Special Status Plants:* A qualified biological monitor shall be present during construction when Project improvements occur near the Alverson's foxtail cactus and Utah vine milkweed populations. If impacts cannot be avoided, these species should be transplanted and/or have seeds and/or the topsoil around the plants (which contains the seed bank) collected with guidance from the CDFW. A workers environmental awareness program (WEAP) should be implemented to educate the construction crew of special status species.
- *Special Status Invertebrates:* Preconstruction surveys shall be conducted by qualified biologists to monitor for the monarch butterfly (federal candidate for ESA listing) and Robert's rhopalemma bee (state ranked Critically Imperiled).
- *Special Status Reptile:* A qualified biologist shall monitor construction when occurring adjacent to suitable habitat for the red diamond rattlesnake, such as undeveloped lands, to ensure the species does not enter the work area and that they are not disturbed if present.
- *Special Status Bats:* A qualified biologist be present during construction when potential roost sites for the pallid bat, spotted bat, or western yellow bat may be disturbed or removed, especially large trees and palms. If the bats are present and impact is unavoidable, CDFW shall be consulted.
- *Special Status Burrowing Mammals:* A qualified biological monitor shall be present during construction when occurring adjacent to suitable undeveloped lands to ensure that American badger and pallid San Diego pocket mouse potential burrows aren't present, and that burrows and the species aren't impacted. If either species is present and impact is unavoidable, CDFW shall be consulted.

BIO-3 Desert Tortoise Mitigation and Minimization: The following measures shall ensure that any potential impacts to the desert tortoise are avoided:

- 1) Implementation of a Worker Environmental Awareness Program (WEAP) to educate the construction crew of potential special status species present on the project site.

- 2) Construction and maintenance personnel would be required to inspect for desert tortoises under vehicles prior to moving the vehicle. If a desert tortoise is found beneath a vehicle it would not be moved until the desert tortoise had left on its own accord. All desert tortoise observations would be reported to a qualified biologist and the wildlife agencies.
- 3) A qualified biologist should monitor construction when it is occurring adjacent to undeveloped lands to ensure that tortoises do not enter the work area and that they are not disturbed if present.
- 4) Any open trenches adjacent to habitat should be monitored by a qualified biologist daily. If left overnight or at any time when not monitored, they should be fenced and/or covered to prevent entry by desert tortoises. Exit ramps should be present within open trenches.

BIO-4 If ground disturbing construction activities are to occur during the MBTA nesting cycle (February 1-August 31), a nesting bird survey should be conducted by a qualified biologist no more than three days prior to such activity. If active nests are found, impact avoidance measures would be put in place around the nest until the young have fledged, and would also apply to offsite nests which may be indirectly impacted.

BIO-5 Burrowing Owl: A preconstruction take avoidance survey shall be conducted by a qualified biologist no less than 14 days prior to initiating ground disturbance activities using the recommended methods described in the Project-specific biological resource assessments. If burrowing owl are found during a take avoidance survey and impacts are unavoidable, the 2012 CDFG guidelines will need to be followed and consultation with the CDFW may be required.

BIO-6 In the event the proposed Project will require ground disturbing activities in jurisdictional drainages, the following authorizations shall be secured:

- USACE: The USACE and EPA reserve the ultimate authority in making the final jurisdictional determination of WOTUS. The two most common types of permits issued by USACE under Section 404 of the CWA to authorize the discharge or dredged or fill material into WOTUS are: a nation-wide permit (NWP) or an individual permit (IP).
- CDFW: A 1602 Streambed Alteration Agreement is required for all activities that alter streams and their associated riparian habitat (absent on the subject property). The City shall obtain a Streambed Alteration Agreement by submitting a copy of this Initial Study in addition to the formal application materials and fee.
- RWQCB: The Project area is located in the Colorado RWQCB (Region 7). The RWQCB regulates impacts on WSC under the Porter Cologne Water Quality Control Act through issuance of a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements, depending upon the level of impact and properties of the waterway. The project proponent would need to obtain a Section 401 Water Quality Certification by submitting a copy of this Initial Study in addition to the formal application materials and fee.

Monitoring:

BIO-A Prior to the issuance of any permit to allow ground disturbance on the site, the City will receive and file all technical surveys and permits in the project file.

Responsible Parties: Project biologist, Planning Department, City Engineer.

CEQA-Plus

Coastal Barriers Resources Act

The Project area approximately 100 miles inland from the Pacific Ocean. It is not within or near the Coastal Barrier Resources System or adjacent wetlands, marshes, or inlets.

Coastal Zone Management Act

The Project area is approximately 100 miles inland from the Pacific Ocean and is not within or near the coastal zone.

Endangered Species Act (ESA)

The project-specific biological resources assessments are provided with this Initial Study. (Attachments C-F) With mitigation measures, the biological resources assessments concluded that the proposed project will not significantly impact any federally listed species or designated critical habitat. See Response IV.a, above, for details about special status species and mitigation measures.

Fish and Wildlife Coordination Act (FWCA)

The Project will not impact any bodies of water and will not require compliance with the FWCA.

Magnuson-Stevens Fishery Conservation and Management Act

The project site is approximately 100 miles inland from the Pacific Ocean and does not contain essential fish habitat, as designated by the National Marine Fisheries Service.

Marine Mammal Protection Act

The project site is approximately 100 miles inland from the Pacific Ocean and does not contain marine life. The project will not impact marine mammals.

Migratory Bird Treaty Act

Native bird species may nest on or adjacent to the Project area and therefore could be directly or indirectly impacted. Potential special status species include Costa's hummingbird, Cooper's hawk, loggerhead shrike, black-tailed gnatcatcher, vermilion flycatcher, and LeConte's thrasher. To avoid impacting nesting birds, avoidance of disturbance during the nesting season (generally February 1st through August 31st) is

recommended. If avoidance of the nesting season is not feasible, a pre-construction survey for nesting birds will be required to avoid impacts to any active nests within the project site, as provided in Mitigation Measure BIO-3 above.

Protection of Wetlands

There are no riparian habitats or wetlands located on the site; therefore, no impact is expected on riparian species or habitat, wetlands or other sensitive natural communities, including marshes or vernal pools or through direct removal, filling, or hydrological interruption of a natural drainage are anticipated.

Rivers and Harbors Act, Section 10

The Project does not propose the construction of structures or any other regulated activities in, under, or over navigable waters of the United States, and therefore does not require a Section 10 Permit from the USACE. In the event the proposed Project will have temporary and or permanent impact to jurisdictional drainages, Mitigation Measure BIO-5 outlines the regulatory steps for the city to obtain authorization from the USACE, RWQCB and CDFW.

Wild and Scenic Rivers Act

The Project area is generally located within the Southern Mojave-Salton Sea Subregion. It is more specifically located within the Mojave hydrologic area within the southern Mojave hydrologic unit and within the Fortynine Palms/Canyon-Shorts Lake Watershed (Hydrologic Unit Code 1810010021). The proposed Project will not adversely impact the flow of groundwater or groundwater quality; rather it may serve to improve groundwater quality by retiring some existing on-site septic tanks, to sewer pipelines that collect and transports wastewater to a centralized wastewater treatment plant. The construction phase of the project will require the use of water to facilitate soil consolidation and compaction, and to minimize fugitive dust emissions. This will be done using best management practices (BMP) to assure that groundwater is not contaminated. The project contractor will ensure that adequate construction BMPs are implemented for the project and satisfy local, state, and federal standards. The project will not violate any water quality standards or waste discharge requirements.

Wilderness Act

The project is not located within a designated National Wilderness Preservation System.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Source: Twentynine Palms General Plan (2012); Identification and Evaluation of Historic Properties for the Centralized Wastewater Collection System (Phase I) Feasibility Study, prepared by CRM TECH, August 2, 2022; Addendum to the Cultural Resource Survey Report, prepared by CRM TECH, January 23, 2023.

Environmental Setting

The City is located in the Mojave Desert. Archaeologists generally divide prehistory in the Mojave Desert region into five periods marked by changes in archaeological remains that date back to 12,000 years ago. The Lake Mojave period (ca. 8000-5500 B.C.), is associated with small mobile groups of hunters and gatherers who inhabited the Mojave Desert. These groups continued to inhabit the region during the Pinto Period (ca. 5500-2500 B.C.), and relied more on ground foods, small and large game animals, and the collection of plants. Distinct cultural changes occurred during the Newberry Period (ca. 1500 B.C.-500 A.D.), when small residential groups moved between select localities, established a geographically expansive land-use pattern and engaged in long-distance trade. The two ensuing periods, Saratoga (ca. 500-1200 A.D.) and Tecopa (ca. 1200-1770s A.D.), are characterized by seasonal group settlements near accessible food sources and the intensification of the use of plant foods, as evidenced by groundstone artifacts and the evolution of pottery.

The City is located in an area historically occupied by two Native American groups, the Serrano and the Chemehuevi. The Serrano's homeland was centered in the nearby San Bernardino Mountains but also included lowlands along both flanks of the mountain range. The Chemehuevi, a subgroup of the Southern Paiute, traditionally occupied the Mojave Desert east to the Colorado River. The Serrano settled mostly near where flowing water emerged from the mountains, while the Chemehuevi, with fewer people spread over a much wider area, cultivated, gathered, and hunted in the open deserts, but were also known for their agricultural practices. Members of each tribe gathered at important base camps or villages for annual ceremonies and tribal interaction with neighboring groups.

In the Twentynine Palms area, the Serrano and the Chemehuevi relied on the waters of a desert oasis located roughly a half-mile to the east of the Project location. The Serrano first settled in the oasis and named it *Maara*, "the place of little springs and much grass". The Chemehuevi began to settle around the oasis in the mid-19th century.

While European contact may have occurred as early as 1771 or 1772, direct European influence on Serrano and Chemehuevi lifeways did not begin until the mission system expanded to the edge of Serrano territory in the 1810s. By the early 20th century, the majority of the Serrano and Chemehuevi population was incorporated into the reservation system. Today, most Serrano descendants live on the San Manuel and the Morongo Indian Reservations, while the Chemehuevi are divided among the Chemehuevi, the Colorado River, and the Morongo Reservations.

Non-Native settlement first occurred in the Twentynine Palms area by the late 1800s, when prospectors sought their fortunes in nearby gold camps. The first pioneer homesteaders came in 1910, and a small community started to grow. In 1952, the U.S. Defense Department established a marine base north of the oasis for glider training, now known as the U.S. Marine Corps Air Ground Combat Center. The City of Twentynine Palms was incorporated March 23, 1987.

Because the project may involve federal funding administered by the State of California Water Resources Control Board (SWRCB), the project qualifies as a federal “undertaking,” which mandates compliance with Section 106 of the National Historic Preservation Act (NHPA) in a process known as CEQA-Plus. An Identification and Evaluation of Historic Properties report (Appendix G) has been prepared to provide the City, the SWCRB, and any other pertinent public agencies with the necessary information and analysis to determine whether the undertaking would have an adverse effect on any “historic properties,” as defined by 36 CFR 800.16(l), or “historical resources,” as defined by California PRC §5020.1(j), that may exist within or adjacent to the Area of Potential Effect (APE).

Discussion of Impacts

- a) **Less than Significant with Mitigation.** Between March and August 2022 and December 2022, CRM TECH performed a cultural resources survey on the APE for the proposed Project area to determine whether the project would cause a substantial adverse change to any “historical resources,” as defined by CEQA, or “historic property,” as defined by Section 106 of the NHPA, that may exist in or around the Project area. The study included historical and geoarchaeological background research, cultural resources records search, consultation with Native American representatives, and a systemic field survey.

The records search was conducted on March 10, 2022, at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System. According to SCCIC records, portions of the APE may have been included in various past cultural resources studies along the existing roadways or associated with development projects on adjacent properties, but most of the pipeline alignments had not been surveyed systematically for cultural resources prior to this Project, nor had the WWTP site. SCCIC records identified 12 cultural resources previously identified in close enough proximity to the APE to warrant field inspection. Among these are two prehistoric (i.e., Native American) archaeological sites, including a “pending” site, nine historic-period sites, and one site with both prehistoric and historical components.

Field surveys were conducted to inspect the 12 cultural sites identified as lying partially within the APE or in proximity. Seven cultural sites were found to be well outside of the APE, or not within or immediately adjacent to the APE boundary and therefore required no further consideration. Two historic roadways were confirmed present in the APE, including Twentynine Palms Highway and Amboy Road. Two other sites, Oasis of Mara and “pending with lithic scatters,” were previously documented as lying across the APE but the presence or absence could not be confirmed solely on surface observations and is therefore further discussed below. One site, known as Chemehuevi Cemetery, is 25 feet outside of the APE; however, the San Manuel Band of Mission Indians informed CRM TECH that many unmarked burials might be present beyond the current boundaries of the cemetery and therefore remains a concern for this study. The California Historical Resources Information System considers the Chemehuevi Cemetery to be part of the Oasis of Mara and they will be treated as a single entity in this analysis. Also, as a result of the field survey, two previously undocumented prehistoric cultural resources were discovered and recorded within the APE and temporarily designated pending assignment of official identification numbers once the California Historical Resources Information System resumes normal operation. In all, six cultural resource sites were identified for further consideration and are further discussed below:

Site 36-002052 (CA-BR-2052/H; Oasis of Mara; Chemehuevi Cemetery): This site is centered on the famed Oasis of Mara, an officially designated Point of Historical Interest and, in Serrano legends the creation site of all Serrano people. The site extends more than a mile in a generally east-west direction near the southeastern end of the APE, with the northwestern extent of the established site boundaries crossing several segments of the proposed pipeline alignments along Adobe Road, Cottonwood Drive, Ocotillo Avenue, and Inn Avenue. Archaeological remains found on the site are extensive, including metates and metate fragments, surface deposits of lithic tools and fragments, midden soil, ceramic sherds, fire-affected rock, faunal remains and others. As mentioned before, the San Manuel Band of Mission Indians believes that many unmarked burials might be present beyond the current boundaries of the cemetery. This site is therefore considered a significant cultural resource and is considered a “historic property” under Section 106 and a “historical resource” under CEQA.

Site 36-010525 (CA-SBR-10523H; Twentynine Palms Highway): This site represents the entire length of State Route 62, including the segment across the Twentynine Palms area known as the Twentynine Palms Highway. The highway follows the general course of a mid-19th century trail and, later, wagon road, to which it can be considered an automobile-era successor. The highway is known to have been in place along its current route at least by the 1930s. While most of SR-62 remains today a two-lane road with soft shoulders and no curbs, the segment across downtown Twentynine Palms (and APE) has been significantly improved since 1970 and widened to four and five lanes and

flanked with curbs and sidewalks. Therefore, the site at this location (APE) is a modern reincarnation of the historical road. The study determined that this site is not eligible for listing in the NRHP or the CRHR.

Site 36-023919 (CA-SBR-15107H; Amboy Road): Like Twentynine Palms Highway, Amboy Road is the direct successor to an early wagon road used as early as the 1870s. It was improved by the County in the 1890s and turned into a public roadway; however, it was not paved until the early 1960s. The one-mile segment of Amboy Road that coincides with the project alignment remains a two-lane asphalt road with soft shoulders. The study determined that this site is not eligible for listing in the NRHP or the CRHR.

“Pending” Site P1021-3 (Lithic Scatters): Never formally recorded, this Site appears to consist of several localities around Twentynine Palms where lithic scatters were observed. The description of this site by the California Historical Resources Inventory states that “most are quarry site of porphyritic andesite; those in dunes are habitation sites.” Two of these locations lie partially across segments of the proposed pipeline alignments, one near the old Cones Field Airport site and the other along Utah Trail. No archaeological features or artifacts were observed during the field survey at either location. The significance of this site has not yet been established, however the primary concern in Section 106 and CEQA compliance is to determine whether any features or artifacts associated with the site are in fact located in the APE.

Site 3854-1 (Prehistoric Artifact Scatter): This site was discovered and recorded during the field survey of a previously proposed WWTP Site, which is no longer part of the Project. No further investigation required.

Isolate 3854-2 (Lithic Flake): This isolate was discovered during the field survey of a segment of the pipeline alignment that runs between Utah Trail and Desert Knoll Avenue. As an isolate, the site does not constitute a potential “historic property”/ “historical resource” and requires no further consideration.

Table 5 Summary of Findings on Cultural Resources within the APE				
Resource #	Description	Extant in APE	Evaluation	Recommendation
<i>Site 36-002052 (CA-BR-2052/H)</i>	Oasis of Mara	To be determined	Eligible for NRHP and CRHR	Monitoring and/or Extended Phase I excavations
<i>Site 36-010525 (CA-SBR-10523H)</i>	Twentynine Palms Highway	Yes	Not Eligible for NRHP and CRHR	None
<i>Site 36-023919 (CA-SBR-15107H)</i>	Amboy Road	Yes	Not Eligible for NRHP and CRHR	None
P1021-3	Lithic scatters	To be determined	Not evaluated	Monitoring and/or Extended Phase I excavations
3854-1	Prehistoric artifact scatter	Site no longer part of the Project		
3854-2	Lithic flake	Yes	Not Eligible for NRHP and CRHR	None

Impacts to the resources described above resulting from the Project's activities would be significant. For Site 36-002052 and Site P1021-2, two alternative research methods for further archaeological fieldwork are recommended:

- During future trenching operations for sewer line installation within the existing road pavement at these locations, archaeological and Native American monitoring should be required once the previously disturbed roadbeds, typically five to six feet in depth, are penetrated.
- For trenching operations outside the existing road pavement, the excavation of shovel test pits commonly known as an extended Phase 1 survey, should be undertaken to determine the sensitivity of the subsurface sediments for cultural remains.

If prehistoric cultural remains associated with Site 36-002052 or Site P1021-2 are discovered during the monitoring program or the extended Phase 1 survey, additional excavations using standard Phase II testing procedures will be required to evaluate the significance of the finds.

No further cultural resources investigations are recommended for Site 36-010525, Site 36-023919, and Isolate 3854-2.

The above recommendations are prescribed in Mitigation Measure CUL-1 to ensure potential impacts to "historic properties," as defined by 36 CFR 800.16(l), or "historical resources," as defined by California PRC §5020.1(j), are less than significant.

- b) **Less Than Significant Impact with Mitigation Incorporated.** On March 7, 2022, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the Commission's Sacred Lands File. NAHC reported unspecified Native American cultural resource(s) in the project vicinity. Following the NAHC's recommendations and previously established consultation protocol, CRM TECH contacted a total of 15 Native American representatives in the region in writing on May 9 and December 12, 2022 for additional information on potential Native American cultural resources in the project vicinity. Follow-up telephone solicitations were then carried out between May 25 and June 10, 2022. See Section XVIII Tribal Resources for further discussion of Tribal consultation.

As noted, the project area lies near the Oasis of Mara and the Chemehuevi Cemetery (Site 36-002052), which are designated as Points of Historical Interest by the State of California. The Oasis of Mara is one of the most important prehistoric sites in the Mojave Desert region with a long history of Native American activities throughout the prehistoric, protohistoric, and historic periods, including as the creation site in Serrano legends. The cemetery contains known burials of both Chemehuevi and Serrano tribal members, and human remains are always of the utmost cultural significance to the local Native American community. In light of the presence of these sites in close proximity to the project, the project area is considered to be highly sensitive for subsurface deposits of Native American

cultural remains. In addition to Mitigation Measure CUL-1, Mitigation Measure CUL-2 requires the presence of an approved Cultural Resource Monitor(s) during any ground disturbing activities to reduce any potential impacts to sensitive cultural and archaeological resources to less than significant levels.

- c) **Less Than Significant Impact with Mitigation Incorporated.** Given the project's close proximity to the Chemehuevi Cemetery and that unknown or unmarked burials may be located outside the current cemetery boundary, the project would have the potential to disturb human remains. Cultural resource monitoring as detailed in Mitigation Measures CUL-1 and CUL-2 should reveal the likelihood of the presence of human remains on the Project site and determine if additional steps should be taken to avoid and/or mitigate any potential impacts.

In addition, should human remains be found in the Project area during monitored ground disturbing activities, California law requires that all activity stop, that the coroner be notified to determine the nature of the remains and whether Native American consultation is needed. Compliance with requirements of law and incorporation of Mitigation Measures CUL-1 and CUL-2 will ensure any potential impact to human remains will be less than significant.

Mitigation Measures:

CUL-1 For Site 36-002052 and Site P1021-2, two alternative research methods for further archaeological fieldwork are recommended:

- During future trenching operations for sewer line installation within the existing road pavement at these locations, archaeological and Native American monitoring should be required once the previously disturbed roadbeds, typically five to six feet in depth, are penetrated.
- For trenching operations outside the existing road pavement, the excavation of shovel test puts commonly known as the extended Phase 1 survey, should be undertaken to determine the sensitivity of the subsurface sediments for cultural remains.

CUL-2 In order to assure that Tribal remains and resources are not impacted by the Project, the presence of an approved Cultural Resource Monitor(s) is required during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer.

Monitoring:

CUL-A Immediately prior to construction, the City shall prepare and implement a Phase II Archaeological Testing Program and Tribal Cultural Monitoring program in cooperation with consulting Tribes.

Responsible Parties: Project archaeologist, Consulting Tribes, Planning Department.

CEQA-Plus

Archaeological and Historic Preservation Act (AHPA)

The project construction will not cause an irreparable loss or damage of significant archaeological or historic resources or data through alteration of the terrain resulting from dam or reservoir construction. The project does not require compliance with the AHPA.

National Historic Preservation Act (NHPA)/Historic Sites Act

CRM TECH prepared an "Identification and Evaluation of Historic Properties" report for the Project area in August 2022, and an Addendum to the report in January 2023 (Appendix G). Please see Response V.a), above for full discussion of impacts.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
VI. ENERGY -- Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Source: Twentynine Palms General Plan (2012).

Environmental Setting

Nuclear energy, fossil fuels (e.g. oil, coal and natural gas) and renewable sources (e.g. wind, solar, geothermal and hydropower) are various sources of energy. The electrical energy to the City is provided by Southern California Edison (SCE). Natural gas service is provided to the City by Southern California Gas Company (SoCalGas). Natural gas is mainly utilized for water heaters and heating of homes, as well as a broad range of commercial and industrial equipment. In areas where natural gas is not available, propane gas, stored in on-property tanks, is also utilized. Both SCE and SoCalGas offer various programs and incentives for all users to help reduce energy consumption.

In 2002, California established a Renewable Portfolio Standard (RPS) that requires a retail seller of electricity to include in its resource portfolio a certain amount of electricity from renewable energy sources, such as wind, geothermal, small hydro, and solar energy. Senate Bill (SB) 100 was signed into law in September 2018, which requires utilities to procure 60 percent of their electricity from renewables by 2030 and sets as a State policy that State agencies and end-use retail customers receive 100 percent of energy from renewable and zero- carbon resources by 2045. To ensure retail sellers meet their RPS requirement, the California Public Utilities Commission (CPUC) is responsible for establishing enforcement procedures and imposing penalties for non-compliance with the program (CPUC, 2018).

The California Code of Regulations Title 24, California's energy efficiency standards for residential and non-residential buildings, was established by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and took effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 Title 24 standards. A further update is expected in 2023.

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development.

The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The most recent update to the CALGreen Code was adopted in 2019 and went into effect January 1, 2020.

Discussion of Impacts

a, b) Less Than Significant Impact. The proposed Project will utilize energy resources during both construction and operational activities. Construction related energy demand comes from operation of construction equipment and manufacturing of construction materials.

Temporary energy use in connection with project construction would entail consumption of diesel fuel and gasoline by construction equipment and by the transportation of earth moving equipment, construction materials, supplies, and construction personnel. Given the short construction period and implementation of State regulations regarding vehicle emission and fuels standards, such as the Low Carbon Fuel Standard and anti-idling regulations, energy use related to construction would not be wasteful or inefficient.

Pipelines

There will be no operational energy demand associated with the pipelines.

WWTP

According to the EPA,² energy use intensity (EUI) for wastewater treatment plants ranges from less than 5 to more than 50 kBtu/gallon per day (kBtu/GPD) across all wastewater treatment plants, with those at the 95th percentile using nine times the energy of those at the 5th percentile. According to the U.S. Department of Energy,³ municipal wastewater treatment plants are estimated to consume more than 30 terawatt-hours per year of electricity.

The structures proposed for the new WWTP site would be required to comply with Title 24 Building Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24, Part 6, of the California Code of Regulations), which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the Title 24 standards significantly reduces energy usage. It has generally been the presumption that compliance with Title 24 ensures that projects will not result in the inefficient, wasteful, and unnecessary consumption of energy.

² Energy Use in Wastewater Treatment Plants, Energy Star Portfolio Manager. US EPA January 2015. https://www.energystar.gov/sites/default/files/tools/DataTrends_Wastewater_20150129.pdf

³ Website. U.S. Department of Energy. Wastewater Infrastructure. <https://www.energy.gov/eere/slsc/wastewater-infrastructure>

In addition, the site will be served with an energy mix that complies with the California RPS. As proposed and in compliance with existing regulatory requirements, the proposed Project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during Project operation. The proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the proposed Project would result in a less than significant impact.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?		X		
ii) Strong seismic ground shaking?		X		
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X	
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Sources: Geotechnical Desktop Study, Proposed Wastewater Management System, prepared by NV5. June 2, 2021; Twentynine Palms General Plan Update (2012); City of Twentynine Palms General Plan Update Draft Environmental Impact Report (2010).

Environmental Setting

The City is located within a wedge-shaped fault block known as the “Mojave Block.” The Mojave Block is located at the junction of two district geomorphic provinces: the Eastern Transverse Ranges Province, a region of low to moderately high mountains that include Joshua Tree National Park, the Little San Bernardino Mountains, the Pinto Mountains, and several ranges to the southeast; and the Mojave Desert Province, an arid region of alluvial fans, expansive desert plains, dry lakebeds and scattered mountain ranges. The

Mojave Block is bounded by the Garlock Fault to the north, the San Andreas fault system to the west and southwest, and the southern Death Valley fault zone, Granite Mountains, and Packard Well faults to the east.

In the Twentynine Palms area, the trace of the Pinto Mountain Fault is recognized by a pressure ridge and divides into two splays. The northern splay of this fault is mostly buried by Quaternary valley fill but emerges where it joins the west splay of the Mesquite Lake Fault east of the City limits. The region is susceptible to a range of geologic hazards, including ground rupture, major ground shaking, slope instability, and collapsible and expansive soils.

Soils

The Project area is predominantly underlain by Quaternary-age relatively younger surficial sediments and older surficial sediments. These relatively younger surficial sediments are mapped as windblown sand (Qs), younger alluvium (Qa), and micaceous clay and silt (Qc). The older alluvial surficial sediments (Qoa) are described as older valley fill materials derived from mountains to the west and south. The project area is relatively flat and occurs at an elevation of about 1,750 feet above mean sea level.

A Geotechnical Desktop Study was prepared by NV5 for the Project on June 2, 2021. (Appendix H)

Discussion of Impacts

- a) i) **Less Than Significant with Mitigation Incorporated.** In the City of Twentynine Palms, two main faults and several secondary faults are identified by the State of California under the criteria of the Alquist-Priolo Act. The two main fault zones bisect the City: Pinto Mountain fault in a westerly direction and Mesquite Lake fault in a southeasterly direction. Secondary faults to these include several short traces both north and south of the main trace of the Pinto Mountain fault, and the Airfield and East Airfield faults to the east of the Mesquite Lake fault. All of these faults are potential sources of strong ground shaking and surface fault rupture.

Collection System

According to the Geotechnical Desktop Study prepared for the Project (Appendix H), the Pinto Mountain fault zone is located at the southern end of the Project area and trends in an east-west manner, and the Mesquite Lake Fault zone is located at the northeastern end of the Project area and trends in a southeast-northwest manner. Because the Project area is traversed by two major faults, the potential for ground-surface rupture and/or shallow round deformation occurring within the Project area due to a seismic event are a significant concern for the site development. The planned development of any structure within and/or in close proximity to one of the two fault zones should be avoided. In order to assure that structures and facilities are designed to mitigate for potential fault rupture hazards, a site-specific geotechnical study will be prepared as part of the preparation of grading and engineering plans, and the project will be designed and constructed following the recommendations in the study (Mitigation Measure GEO-1).

Southern portions of the proposed pipeline alignment appear to cross into known earthquake fault zones and are subject to potential rupture (Figure VII-1). Because of the flexibility in the type of pipe that is proposed (PVC), combined with incorporation of the recommendations from the site-specific geotechnical study (GEO-1), impacts to the conveyance pipelines resulting from surface rupture of a known fault are expected to be less than significant.

WWTP

The WWTP site not located on a known earthquake fault. The Uniform Building Code, California Building Code, and Unreinforced Masonry Law are the primary tools used by local agencies to ensure seismic safety in structures. The WWTP will include new, non-habitable structures built to current standards. Through incorporation of the seismic recommendations from the site-specific geotechnical study (GEO-1) and current building standards, impacts from rupture of a known earthquake fault are expected to be less than significant.

- ii) **Less Than Significant with Mitigation Incorporated.** The Project Area is located in a seismically active region where local and regional faults can produce severe ground shaking. The two main faults crossing the City, Pinto Mountain fault and Mesquite Lake fault, have the potential of generating earthquakes of up to 7.3 magnitude on the Richter scale. The Project proposes a wastewater collection system consisting of 27 miles of pipeline and WWTP.

Collection System

Although the pipelines and the lift station will be subject to seismic activity by virtue of being in a seismically active region, no habitable structures are proposed as part of the Project which would expose people to substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. The American Water Works Association, American Society of Testing Materials, technical specifications, detailed design drawings, along with local standards are the primary tools used by local agencies to ensure quality piping installation is achieved. Because of the innate flexibility in the type of pipe that is proposed (PVC), recommendations from the site-specific geotechnical study (GEO-1), and adherence to current building standards, the risk from the Project during strong ground shaking is less than significant.

WWTP

The WWTP will be required to be constructed in accordance with the most recent edition of the California Building Code (CBC) and City's Municipal Code Section 18.01.020 to provide collapse-resistant design. The Municipal Code includes modifications to the CBC adopted by the City in accordance with local geology. Compliance with the CBC and City regulations and recommendations from the site-specific geotechnical study (GEO-1) will ensure that project-related impacts associated with seismic ground shaking will be less than significant.

- iii) **Less Than Significant Impact with Mitigation Incorporated.** Earthquake shaking can cause several types of ground failure including liquefaction and related hazards, collapse and slope failure (see subsection (iv) below).

Liquefaction typically occurs within 50 feet of the ground surface, in areas where fine- to medium-grained sandy to silty soils and shallow groundwater occur together. Lateral spreading, a type of liquefaction-induced failure, is the lateral displacement of surficial blocks of soil atop a liquefied layer often described as shallow landslides.

According to the Geotechnical Desktop Study, the Project site is generally underlain at depth greater than 10 feet below ground surface (bgs) by medium dense to dense alluvium. The potential for liquefaction during a seismic event in these areas is considered low.

Collection System

Portions of the pipeline alignment are within and/or along the fault zones and playas to the south and southeast of the Project area may warrant soils testing to preclude the possibility of liquefiable subsurface materials. In order to assure that pipeline alignment is designed to mitigate for potential liquefaction hazards, a site-specific geotechnical study will be prepared as part of the preparation of grading and engineering plans, and the project will be designed and constructed following the recommendations in the study (Mitigation Measure GEO-1). Incorporation of the mitigation measure will ensure that impacts associated with ground failure including liquefaction will be reduced to less than significant levels.

WWTP

The proposed WWTP Site is not within known fault zones. Nonetheless, to assure that structures and facilities are designed to mitigate for potential liquefaction hazards, a site-specific geotechnical study will be prepared as part of the preparation of grading and engineering plans, and the WWTP will be designed and constructed following the recommendations in the study (Mitigation Measure GEO-1). Incorporation of the mitigation measure will ensure that impacts associated with ground failure including liquefaction will be reduced to less than significant levels.

iv) No Impact.

Collection System and WWTP

Landslides generally occur in loosely consolidated, wet soil and/or rocks on steep sloping terrain. The topography in the Project area displays a gently sloping valley floor with some moderate to shallow drainage change incisions. Therefore, the potential for deep-seated landsliding and slope instability within these geologic materials is considered low. The Project area is not located within a mapped area of the City with potential for earthquake induced slope failures (General Plan Exhibit SF-1).

The Project proposes a wastewater collection system and WWTP; however, no steep slopes are proposed. Any graded slopes will meet the minimum engineering standards as required in the Safety Element of the General Plan, and the City Engineer's standards. Compliance with these standard requirements will ensure that no impact associated with landslides would occur.

b) Less Than Significant Impact.

Collection System and WWTP

The dry, loose, sandy soils forming the alluvial fans occurring in the City are susceptible to erosion from high wind and flooding due to infrequent thunderstorms. This area is impacted, on average, by two to seven windstorm events per year. Grading and construction may require removal of the topsoil; however, project-related impacts are expected to be less than significant because the project will be required to implement measures to control fugitive dust (see Air Quality, Section III), which will minimize potential adverse impacts associated with wind erosion. At buildout, all pipeline areas will return to pre-construction conditions which include paving and/or soil stabilization.

For the WWTP and pipelines, the City requires the implementation of best management practices associated with stormwater flows. These standard requirements assure that erosion resulting from storm flows are controlled.

Overall impacts associated with soil erosion will be less than significant.

c) Less Than Significant Impact with Mitigation Incorporated.

The following discussion applies to both the collection system and WWTP.

Landslide

See response to VII.a.iv, above.

Lateral Spreading

Expansive soils have high shrink-swell potential that expand when wet and shrink when dry. This can result in damage to foundations and structures. Soils in the Project area consist of granular alluvium that is generally considered to have a low expansion potential. Before final design and the commencement of pipeline installment and WWTP construction, a design-level geotechnical investigation with recommendations will be prepared (GEO-1). Necessary recommendations will present geotechnical engineering conclusions and specific recommendations for site preparation, foundation design, site drainage, addressing expansive soils, and pavement design to achieve compliance with the California Building Code, which would reduce risk associated with expansive soils. Impacts would be less than significant.

Subsidence

Ground subsidence is mostly caused by human activities such as water or oil extraction by pumping. In the Twentynine Palms region, groundwater has been naturally recharged by infiltration of stormwater runoff that percolates into the alluvial sediments. During the last few decades, the rate of groundwater extraction has exceeded natural replenishment, resulting in declining water levels and overdraft of the groundwater supply in more densely populated areas. To remedy this condition, local artificial recharge has been developed; the closest recharge sites to Twentynine Palms are percolation ponds in the Yucca Valley-Joshua Tree area. Subsidence has not been studied or detected as of 2012.

It is anticipated that the City's allotted portion of the reclaimed water from the WWTP will be used for groundwater recharge in the future, which will result in a beneficial impact. The construction and operation of a groundwater recharge facility is planned for later Phases (Phase 4) and is not being analyzed at this time.

The City's General Plan adopted policies to support active recharge of groundwater basins, cooperation with water districts, and water conservation to help maintain groundwater levels and reduce the need to extract from them. Implementation of these City policies will reduce impacts associated with subsidence by maintaining adequate groundwater levels, thereby reducing the potential for subsidence. The General Plan EIR concludes that impacts associated with subsidence will be less than significant in the City, including the Project area.

Liquefaction

See response to VII.a.iii, above.

Collapse

Soil collapse (or hydroconsolidation) typically occurs in Holocene-age soils deposited in an arid or semi-arid environment. When saturated, collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively light loads. The Project area is predominantly underlain by Quaternary-age relatively younger surficial sediments and older surficial sediments. The younger alluvium sediments in the Twentynine Palms area may be susceptible to this hazard. General soil stabilization techniques can be applied to mitigate collapsible soil, including over-excavation and soil recompaction. As described above, a Project-specific geotechnical study will be prepared (Mitigation Measure GEO-1) as part of the project's engineering plans for both the pipeline alignment and WWTP. Implementation of project-specific recommendations in the study will ensure that impacts associated with collapse or collapsible soils will be reduced to less than significant levels.

- d) **Less Than Significant Impact with Mitigation Incorporated.** The majority of the Twentynine Palms area is underlain by silty sand, sand and gravel. Such soils typically have a low expansion potential, although pockets of fine-grained expansive soils may occur. The City administers CBC regulations including the requirement of soil testing to determine expansive characteristics for new development and mitigation of expansive conditions. The Project-specific geotechnical study will include soil testing and determine if additional measures are needed to mitigate soil conditions for both the pipeline alignment and WWTP (Mitigation Measure GEO-1). Implementation of project-specific recommendations will ensure that impacts associated with expansive soils will be less than significant.
- e) **No Impact.** The proposed Project does not propose installation or operation of a new septic systems. To the contrary, the implementation of the Project will reduce the use of septic systems, thereby also reducing the risk of groundwater contamination. The proposed wastewater collection system and WWTP will be designed to meet all applicable State and local codes and regulations. Compliance with these standard requirements will ensure that no impact would occur.

- f) **Less Than Significant Impact with Mitigation Incorporated.** According to the City's General Plan, San Bernardino County, in general, has an extensive record of fossil life starting in Jurassic time, 150 million years ago. Fossilized remains are expected to occur within areas containing finer-grained fluvial, lacustrine, or aeolian deposits. The Project area primarily consists of quaternary sedimentary deposits with windblown sand (Qs), alluvium (Qa), older alluvium (Qoa), and older gravel and sand deposits (Qog). Excavation and other earthmoving activities within surface and subsurface exposures of quaternary alluvium could disturb a unique paleontological resource. Mitigation Measure GEO-2 requires a paleontological survey before grading, consistent with General Plan Implementation Policy CO-2.10. Therefore, impacts to paleontological resources will be reduced to less than significant levels.

Mitigation Measures:

GEO-1 Prior to issuance of a grading permit, a Project-specific geotechnical study will be prepared by a professional geologist to address soil and geotechnical conditions, including but not limited to liquefaction and hydro-consolidation assessments, soil testing for expansive soils and other characteristics. Performance standards may include but are not limited to over-excavation and recompaction.

GEO-2 A field survey shall be conducted by a qualified paleontological professional before grading to determine the need for paleontological monitoring. If paleontological resources are discovered during Project development, qualified palaeontologic personnel shall prepare recovered specimens to a point of identification and permanent preservation. Appropriate specimens shall be identified and curated into the collections of the Division of Geological Sciences, San Bernardino County Museum, in accordance with the Museum's policies.

Monitoring:

GEO-A The Building and Safety Division and the City Engineer shall review and approve the Project geotechnical study and ensure that all recommendations therein are incorporated in the project design.

Responsible Parties: Project geotechnical engineer, Building and Safety Division, City Engineer.

GEO-B The City shall review and approve the pre-construction paleontology study prior to the issuance of grading permits, and implement monitoring if determined necessary.

Responsible Parties: Project paleontologist, Planning Department.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Sources: City of Twentynine Palm General Plan; San Bernardino County Regional Greenhouse Gas Reduction Plan (March 2021); MDAQMD CEQA and Federal Conformity Guidelines; CalEEMod Version 2020.4.0; project materials.

Environmental Setting

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. The principal GHGs contributing to the greenhouse effect are CO₂, methane (CH₄), nitrous oxide (N₂O), and fluorinated compounds. GHG sources include both natural and anthropogenic processes. Anthropogenic GHG emissions in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to an overall trend of unnatural warming of the earth's climate, known as global climate change or global warming.

State laws, such as Assembly Bill 32 (AB 32) and Senate Bill 32 (SB 32), require all cities to reduce greenhouse gas emissions to 1990 levels by the year 2020. SB 32 is the extension of AB 32 which requires the state to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030.

In 2021, SANBAG prepared a Regional Greenhouse Gas Inventory and Reduction Plan (March 2021) which included a greenhouse gas inventory and forecast for Twentynine Palms. The City participated in the plan development and set a goal to reduce its community GHG emissions to a level of 46% below 2008 GHG emissions level by 2030. The City is expected to meet and possibly exceed this goal with joint state and local efforts and reduction measures set forth by AB 32. In addition to the Regional Greenhouse Gas Inventory and Reduction Plan, the City's General Plan includes policies and measures to facilitate GHG emission reduction through encouraging alternative transportation, promoting renewable energy, and implementing energy efficient building technologies.

GHG Thresholds

According to the MDAQMD CEQA and Federal Conformity Guidelines, the annual threshold for greenhouse gases is 100,000 tons CO₂e annually, and 548,000 pounds daily. As described above in Section III, Air Quality, the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to quantify project air quality emission projections, including greenhouse gas emissions (Appendix A).

Discussion of Impacts

- a, b) Less Than Significant Impact.** The proposed project will generate GHG emissions during both construction and operation. As discussed in Section III. Air Quality, the proposed WWTP construction activities overlap with the construction activities for the installation of the pipelines, therefore the following analysis for both Project components are evaluated together.

Construction

Construction activities will result in short-term GHG emissions associated with operation of construction equipment, employee commute, material hauling, and other ground disturbing activities. The MDAQMD daily threshold for GHG emissions is 548,000 pounds per day. According to the CalEEMod outputs, daily construction-related GHG emissions would reach a maximum of 18,393.58 pounds per day, which is substantially below the established threshold. To determine if construction emissions will result in a cumulative considerable impact, buildout GHG emissions were amortized over a 30-year period and added to annual operational emissions to be compared to applicable GHG thresholds (see Table 6, below).

Operation

At buildout, there are five emission source categories that will be contributing either directly or indirectly to operational GHG emissions, including energy/electricity usage, water usage, solid waste disposal, area emissions (pavement and architectural coating off-gassing), and mobile sources. According to the CalEEMod outputs, daily operational GHG emissions would reach a maximum of 248.18 pounds per day, which is substantially below the established threshold of 548,000 pounds per day. As shown in Table 6, the project will emit a total of 116.61 tons per year which includes annual operational emissions and amortized construction emissions and is substantially below the established threshold of 100,000 tons per year.

Table 6 Projected GHG Emissions Summary (Metric Tons)	
Phase	CO₂e (MT/YR)
Construction (2022)	
Construction (2025 and 2026) Total	2,181.01
Operation	
Construction: 30 year amortized ¹	72.7
Annual Operation	43.91
Total Operation	116.61
MDAQMD Threshold	100,000.00
1. Buildout construction GHG emissions were amortized over 30 years then added to buildout operational GHG emissions. $2,181.01/30 = 72.70$	

Overall, the proposed project would be consistent with local, regional and statewide goals and policies aimed at reducing the generation of GHGs. The proposed project's GHG emissions would not constitute a cumulatively

considerable contribution, or conflict with an applicable plan, policy, or regulation for the purposes of reducing the emissions of greenhouse gasses. Impacts would be less than significant.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS --Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
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?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Source: Twentynine Palms General Plan Update (2012). Department of Toxic Substances Control, EnviroStor; Cortese List, accessed July 2022.

Environmental Setting

Products as diverse as gasoline, paint, solvents, household cleaning products, refrigerants, and radioactive substances are categorized as hazardous materials. The proper management of hazardous materials is a common concern for all communities. Beginning in the 1970s, governments at the federal, state, and local levels became increasingly concerned about the effects of hazardous materials on human health and the environment. Numerous laws and regulations were developed to investigate and mitigate these effects. As a result, the storage, use, generation, transport, and disposal of hazardous materials are highly regulated by federal, state, and local laws and regulations.

The San Bernardino County Fire Department's Hazardous Materials Division oversees and regulates businesses in the City that transport, store or use hazardous materials in larger quantities. The Department of Toxic Substances Control (DTSC) lists 16 large quantity users in the City, primarily businesses located on or near Highway 62. Sites associated with cleanup of hazardous materials in and near the City have been, and currently are those associated with the military installations at the Marine Corps base, north of the City.

Discussion of Impacts

a, b) Less Than Significant Impact. Construction activities for both the sewer collection system and WWTP may include the transport and storage of hazardous materials, such as fuels used for the construction equipment. The transportation of hazardous materials can result in accidental spills, leaks, toxic releases, fire, or explosion. The Project is not expected to create the need for a significant amount of hazardous materials being used for construction.

A number of federal and state agencies prescribe strict regulations for the safe transportation of hazardous materials. Hazardous material transport, storage, and response to upset or accidents are primarily subject to federal regulation by the U.S. Department of Transportation Office of Hazardous Materials Safety in accordance with Title 49 of the Code of Federal Regulations (CFR). California regulations applicable to hazardous material transport, storage, and response to upsets or accidents are codified in Title 13 (Motor Vehicles), Title 8 (Cal/OSHA), Title 22, Division 4.5 (Management of Hazardous Waste), Title 26 (Toxics), of the California Code of Regulations (CCR), and the Chapter 6.95 of the Health and Safety Code (Hazardous Materials Release Response Plans and Inventory).

Businesses and facilities that store hazardous materials are subject to the County's Hazardous Materials Business Plan (HMBP) program, which is regulated by the San Bernardino County Fire Department, Hazardous Materials Division and is the Local Certified Unified Program Agency (CUPA). The program requires the preparation of a document that provides an inventory of hazardous materials onsite, emergency plans and procedures in the event of an accidental release, and training for employees on safety procedures for handling hazardous materials and in the event of a release or threatened release. These plans are routine documents that are intended to disclose the presence of hazardous materials and provide information on what to do if materials are inadvertently released. The proposed Project, specifically the WWTP is subject to preparation of a HMBP.

In addition, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared and implemented for the Project. The SWPPP would describe any hazardous materials required for the project and would include best management practices for prevention of accidental spills as well as cleanup requirements for any accidental spills or releases of hazardous materials. Therefore, compliance with applicable laws and regulations would minimize the potential for the project to create a significant hazard to the public or the environment, and impacts would be less than significant.

- c) **No Impact.** There are 18 schools in the City of Twentynine Palms from pre-school through high school.

Collection System

There are several schools in areas along the proposed pipeline alignment, including the Twentynine Palms Elementary School, Twentynine Palms Junior High School, and Oasis Elementary School. The pipelines would be installed within existing rights-of-way and the affected areas returned to pre-construction conditions. Effluent will be conveyed via the underground pipelines, but hazardous materials would not be part of the allowable effluent, and all hazardous materials would be handled in accordance with applicable regulations during construction and operation of the proposed Project. Therefore, the impact is less than significant.

WWTP

There are no existing schools or known future school sites within one-quarter mile of the WWTP site. Therefore, impacts from hazardous emissions or handling of hazardous substances within one-quarter mile of an existing or proposed school would not occur.

- d) **No Impact.** Under Government Code Section 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC and SWRCB lists identified no open cases of hazardous waste violations in the Project area. Therefore, the sewer collection system and WWTP site are not on a parcel included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, this would not create a significant hazard to the public or to the environment and would have no impact.
- e) **No Impact.** From the Project area, the Twentynine Palms Airport is located approximately 4.5 miles east and the MCAGCC base airstrip is approximately 10.5 miles northwest. The Project is not located within the boundary of the airport's land use plan, nor is it affected by noise from airport or base activities. No safety hazard will result, nor will excessive noise be experienced by employees of the WWTP as a result of airport operations. No impact will occur.
- f) **No Impact.** The proposed Project is required to adhere to the standards set forth in the Uniform Fire Code, which identifies the design standards for emergency access during both the Project's construction and operational phases. A traffic control plan will be developed prior to the initiation of any construction activities to minimize disruption to existing traffic flow conditions along emergency access routes, particularly during pipeline construction. Adequate local and emergency access to adjacent uses is required to be provided at all times. The traffic control plan shall also be reviewed and approved by the Fire and Police departments so that construction does not create any hazards or interfere with any emergency response or evacuation plans. Adherence to City requirements regarding traffic control plans will ensure potential impacts to emergency access during construction will be less than significant.

Once operational, the proposed Project would not inhibit the ability of local roadways to continue to accommodate emergency response and evacuation activities. The proposed Project would not impair implementation of or physically interfere with an adopted Emergency Response Plan or Emergency Evacuation Plan. Therefore, the Project would have a less than significant impact.

- g) No Impact.** The General Plan identifies the project site as being in a Local Responsibility Area and a Moderate Fire Hazard Zone. The Project area is not located adjacent to forested areas, and the slopes of the mountains to the south of the project site do not support significant vegetation. The site is not in a High Severity Fire Zone, and will therefore not be impacted by wildfires.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) 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:				
(i) result in substantial erosion or siltation on- or off-site;			X	
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
(iii) 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			X	
(iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

Sources: Twentynine Palms General Plan; Amended Final Urban Water Management Plan for Twentynine Palms Water District (TPWD), December 2016; U.S. Department of the Navy and U.S. Marine Corps, 2015; Twentynine Palms Wastewater Master Plan (2014).

Environmental Setting

Domestic Water

Twentynine Palms Water District (TPWD) manages and distributes the local ground water supply in the City of Twentynine Palms and portions of the surrounding unincorporated areas of San Bernardino County. The District's water service area spans 87 square miles, maintaining 200 miles of pipeline and 17 million gallons of water storage capacity. The District's water supply source is 100 percent local groundwater extracted from four sub-basins south of the Pinto Mountain Fault, which are fed by rainfall in the Pinto Mountains.

The District overlays portions of the Indian Cove, Eastern and Fortynine Palms sub-basins of the Joshua Tree Basin, and part of the Twentynine Palms Valley Basin.

As an urban water supplier, TPWD is mandated to prepare an Urban Water Management Plan (UWMP) per the California Water Code, undertaking water supply planning over a 20-year period in five year increments by analyzing existing and projected water supply opportunities including recycled water for existing and future demands, in normal, single-dry and multiple-dry years, and implementing conservation and efficient use of urban water supplies.

State Water Code Section 10910(a) states that any city or county that determines that a “Project,” as defined in Water Code Section 10912, shall prepare a water supply assessment. The threshold defined by the Water Code is 500 dwelling units, 500,000 square feet of commercial development, or any project with a water demand in the equivalent of 500 dwelling units. The project water demand is analyzed below, and does not require the preparation of a water supply assessment.

Wastewater Treatment

The only Wastewater Treatment Plant (WWTP) in the region is located at the Marine Corps Air Ground Combat Center (MCAGCC). The facility treats all wastewater generated from the Mainside area of the MCAGCC. The City, including the Project area, does not have a sanitary sewer system and currently operates with septic tanks.

In 2014, the City prepared a Wastewater Master Plan to identify and describe the potential facilities that would be required for a centralized sewer collection system and wastewater treatment plant to replace the septic systems in use.

The City then prepared a Draft Wastewater Feasibility Study (Study) in 2022 to develop and evaluate a centralized sewer system and WWTP for a large portion of the City.⁴ The Study area encompasses approximately 12,800 acres and includes most residential, commercial, industrial and public land use areas within City limits, except for the Indian Cove and Desert Life neighborhoods and Sphere of Influence (SOI). The Study assumes buildout of the of the sewer system would occur in five phases due to the size of the service area and substantial capital cost. The preliminary phasing plan was based on many factors including the proposed sewer catchment basis, proximity to the proposed WWTP, eliminating package treatment plants, capturing dense areas with higher existing water use, and minimizing lift stations.

Re-phasing has occurred since completion of the Feasibility Study. The proposed Project is development of the new Phase 1 of the overall centralized wastewater collection system.

Flood Control/Drainages

The City, including the Project site, is located in the southern Mojave Desert. With an average precipitation of 5 inches per year, the area sees infrequent thunderstorms that can cause flooding in the City.

⁴ Wastewater Feasibility Study Draft Report, prepared by NV5. March 31, 2022.

Twentynine Palms Channel, the only major drainage structure in the City, was designed and constructed to protect the central business district and downtown area. The natural major drainages of Fortynine Palms Canyon, Twentynine Palms Wash, Indian Cove and Dog Wash, as well as small unnamed drainages in the Pinto Mountains can carry flash floods and impact downstream development in the City.

The San Bernardino County Flood Control District (SBFCD) is responsible for managing regional drainage within and in the vicinity of Twentynine Palms. The City works with SBFCD to manage local drainages in the City, which are divided between well-defined drainage courses (some have been channelized) and areas of wide sheet flow. Development that may alter the direction of flow onsite are conditioned per standard San Bernardino County practices to maintain the existing site drainage patterns at inlets and outlets.

The project site will be subject to City requirements relating to flood control. The City implements standard requirements for stormwater retention and participates in the National Pollution Discharge Elimination System (NPDES) to protect surface waters from pollution. Development projects must retain the 100-year storm flow onsite.

Water Quality

Water quality is regulated by multiple agencies, depending on the source. The TPWD implements the standards of the Regional Water Quality Control Board (RWQCB) in its distribution of domestic water.

Surface water quality in the region is largely under the influence of land uses that affect runoff, such as urban and industrial uses. Runoff from stormwater can transport pollutants that collect on the ground surface and affect water quality of receiving streams, rivers, and channels.

Description of Impact

- a) **Less Than Significant Impact.** All water providers are required to comply with Regional Water Quality Control Board (RWQCB) standards for the protection of water quality and local aquifers. The City and RWQCB impose requirements for surface water protection, including the preparation of site-specific Water Quality Management Plans for surface waters.

Collection System

The pipelines will be buried underground within paved roadways and the road shoulders. During construction however, there is potential for the exposure of construction-related pollutants to surface and ground waters. The Project is required to prepare a SWPPP and implement effective erosion control BMPs during construction. Operational activities of the pipeline will not impact surface or ground waters. Through implementation of existing regulations to control construction-related pollutants, impacts will be less than significant.

WWTP

During construction of the proposed improvements at the WWTP, there may be exposure of pollutants which may degrade water quality. The Project is required to prepare a SWPPP and implement effective erosion control BMPs. The SWPPP will describe stormwater and non-stormwater control measures that will be used to minimize the discharge of pollutants to the maximum extent practicable.

Effluent from the water treatment system will be contained in closed systems, and they are not expected to degrade groundwater quality. The RWQCB typically requires the effluent to meet certain concentration levels for certain parameters. Anticipated effluent discharge requirements are included in Draft Feasibility Study. Effluent discharge parameters will be dictated by the RWQCB Colorado River Region 7 once a treatment process is selected and discharge method/location are determined during design. Measuring these constituents assures that the treatment plant operates properly to remove necessary pollutants and protects the surface waters and groundwater that receive the effluent. The RWQCB Colorado River Region 7 Board will permit the WWTP and develop Waste Discharge Requirements (WDR) with specific effluent concentrations for parameter of concern. It will also be responsible for ongoing inspections, reporting and conformance checks.

The proposed Project will not adversely impact the flow of groundwater or groundwater quality; rather it may serve to improve groundwater quality by retiring some existing on-site septic tanks, to sewer pipelines that collect and transports wastewater to a centralized wastewater treatment plant. The Project will be required to comply with TPWD and RWQCB regulations to minimize the polluted load associated with urban activities. By complying with these standards, the proposed Project will not violate water quality standards or waste discharge requirements. The adherence to local, state and federal requirements will ensure that impacts associated with water quality standards are less than significant.

b) Less Than Significant Impact.

Collection System

The proposed pipelines will be installed underground beneath existing paved roads and road shoulders adjacent to paved roads. The lift station consists of a 2,500 square foot equipment enclosure that does not require a water source. Construction and operation of the proposed collection system will not decrease groundwater supplies or interfere with groundwater recharge and impacts are less than significant.

WWTP

The WWTP will require water for the onsite office building (restrooms etc.) and equipment maintenance and operations, and it is assumed that a drought tolerant landscape palette will be chosen for final design. Table 7 provides a conservative analysis of project water demand at buildout, which is approximately 3.12 acre feet per year.

In order to prevent overdrafting, the California Department of Water Resources (DWR) has recommended pumping limits for both the Fortynine Palms and Indian Cove subbasins, which results in an overall limited pumping capacity at 6,995 acre-feet per year (AFY). Existing pumping in 2015 (2,404 AFY) represents approximately 30 percent of the total pumping capacity. The total water demand of the proposed Project is 3.12 AFY. The project will increase pumping by approximately 0.12 percent over the 2015 baseline level, and will represent approximately 0.04 percent of the limited pumping capacity recommended by DWR. The amended 2015 UWMP demonstrates that the District has adequate supplies to meet demands during normal, single-dry, and multiple- dry years throughout the 20-year planning period. In addition, there is sufficient production capacity planned to meet projected future demands with the actions the TNWD is taking to maintain supply availability.

Table 7 Project Water Demand Projects				
Land Use	Area/Quantity	Water Demand Factor	Annual Water Demand (gallons/year)	Annual Water Demand (acre-feet/year)
WWTP O&M ¹	5,000 SF	35 gallons/SF/ year	175,000	0.53
Native Desert Landscaping ²	43,560 SF	0.053 gallons/SF/day	842,668	2.59
Total				3.12 AF/YR
1. Water demand factor for office use was derived from the American Water Works Association Commercial and Institutional End Uses of Water. 2. Assumes 20 percent of the WWTP site would be landscaped, or 1 acre, or 43,560 square feet. Water demand factors for irrigation use developed by ACI irrigation.				

It is anticipated that the City's allotted portion of the reclaimed water (treated wastewater) from the WWTP will be used for groundwater recharge. The assumed location for a temporary groundwater recharge facility is located at the northeast corner of Amboy Road and Bagdad Highway. The construction and operation of a groundwater recharge facility may occur during a later Phases However, the Project will eventually provide water for recharge of the water basin, helping to increase long term groundwater supply.

Water use at the WWTP is consistent with the land use designations in the area and would not increase in the rate of groundwater pumping or require the development of new well sites. Therefore, impacts to groundwater supplies or recharge are less than significant.

c i)- iv) Less Than Significant Impact.

Collection System

The proposed collection system area is shown on Flood Insurance Rate Map (FIRM) Number 06071C8195J. There are several flood zone designations in the Project area, including Zone X, A, AE and AO. The pipelines will be buried underground within paved roadways and the road shoulders. Some alignments

may cross ephemeral drainages in the Project area. The pipelines will be installed under the drainage utilizing the jack and bore method and will therefore be avoiding impacts to drainages. In the event the proposed Project will have temporary and or permanent impact to jurisdictional drainages, Mitigation Measure BIO-5, previously incorporated, outlines the regulatory steps for the city to obtain authorization from the RWQCB and CDFW. With the implementation of this mitigation measure, impacts to drainages will be less than significant.

Once constructed, the pipelines will have no effect on drainage patterns, as they will occur underground.

Through compliance with a construction SWPPP and Project design considerations to avoid drainage features, impacts from substantial erosion, siltation, flooding, exceeding the capacity of existing or planned stormwater drainage systems, and providing additional sources of polluted runoff will be less than significant.

WWTP

The San Bernardino County Flood Control District's flood control channel (Twentynine Palms Channel) lies just north of the WWTP site. Attributed to the channel are Federal Emergency Management Agency (FEMA) designated special flood hazard areas including a regulatory floodway and a 100-year floodplain.

The latest FEMA Flood Insurance Rate Map (FIRM) Number 06071C8195J shows the WWTP site within the FEMA 100-year floodplain designated as Zone AE in an area currently protected from the 1% annual chance or greater flood hazard by a levee system. The City works with SBFCD to manage local drainages in the City. The new WWTP facility will be required to comply with the City's requirements as they relate to stormwater retention, and the control of flooding. The Project would also be conditioned per standard San Bernardino County practices to maintain the existing site drainage patterns at inlets and outlets. The increase in impervious surfaces would be minimal, and would not result in a substantial increase in the rate or amount of surface runoff. These City and FEMA requirements assure that impacts associated with flooding would remain less than significant. Through compliance with a construction SWPPP, and regional and local floodplain management standards, impacts from substantial erosion, siltation, flooding, exceeding the capacity of existing or planned stormwater drainage systems, and providing additional sources of polluted runoff will be less than significant.

- d) **No Impact.** The Project is not located in the vicinity of a water body or a dam. The City is located inland and would not be subject to tsunami. No hazard from dam failure, tsunami or seiche is possible.

Collection System

Because the pipeline is buried underground and there is no water body, levee or dam in the region, there is no risk of release of pollutants during inundation.

WWTP

As discussed above, there are no water bodies or dams in the region, and there is therefore no risk of release of pollutants during inundation. Risks associated with pollutants within the flood zone are described above.

- e) **No Impact.** The proposed Project will be required to comply with all applicable water quality standards approved by the City and the Regional Water Quality Control Board for both construction activities and long-term operation of the WWTP. The proposed Project is consistent with land use designations and will not significantly increase water demand as addressed in the UWMP. Therefore, it will not conflict with a sustainable groundwater management plan. Adherence to the RWQCB and City's standard requirements related to water quality will ensure there will be no impact to a water quality control plan.

Mitigation Measures: None required.

Monitoring: None required.

CEQA-Plus

Safe Drinking Water Act/Sole Source Aquifer Protection

The project is not located within the boundaries of a sole source aquifer.

Floodplain Management: Executive Orders 11988, 12148, and 13960

The Project area is located in a flood hazard zone. Please see Response X.ci-iv, above, for full discussion of impacts.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X

Sources: Google Earth; City of Twentynine Palms General Plan; project materials.

Environmental Setting

The area studied in the Draft Feasibility Study encompasses approximately 20 square miles of land, of which 66 percent is designated for residential land use and the rest a mix of commercial and industrial uses. The WWTP site is designated Multi-Family Residential (RM).

Discussion of Impacts

a) No Impact.

Collection System

The sewer pipelines and lift station would be installed within existing roadway rights-of-ways or shoulders, and no change in land use above-ground will occur. Therefore, installation of the collection system will not divide a community. There will be no impact.

WWTP

The WWTP is proposed on currently vacant parcels the City owns or would acquire. The proposed project will not therefore result in the division of an existing community. No impact would occur.

b) No Impact.

Collection System

The pipeline installation and alignment will be developed consistent with the City's Development Code, Building Code and engineering standards. The proposed lift station is considered a "utility and service use," which is an allowable use with an Administrative Use Permit (AUP) in the RM land use designation. Therefore, the pipeline component will not conflict with any land use plan, policy or regulation of the City, and will not impact such plans.

WWTP

The proposed WWTP is considered a “utility and service use,” which is an allowable use with an Administrative Use Permit (AUP) in the RM land use designation. According to the General Plan, the construction of a centralized wastewater treatment plant would help the City achieve the vision and goals identified by the Downtown Economic Revitalization Specific Plan for the Downtown area, as it envisioned that a wastewater system would serve the commercial district in Downtown Twentynine Palms (General Plan Implementation Policies LU-8.4 and 8.5). A centralized wastewater system could also create additional economic development opportunities in the City through the development of a larger industrial base and employment center.

The WWTP will be developed consistent with the City’s General Plan, Development Code, Building Code and engineering standards. Development of the WWTP, therefore, will not conflict with any land use plan, policy or regulation of the City, and will not impact such plans.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Sources: Google Earth; City of Twentynine Palms General Plan.

Environmental Setting

The City is not identified as a mineral resource area of significance, although mining has occurred in and around the City in its history. The General Plan uses the State's mineral resource designations to determine the potential for mineral resources to exist in any given area.

Discussion of Impacts

a), b) No Impact.

Collection System and WWTP

The Project will primarily be located within existing roadway rights-of-ways or vacant lands designated for commercial uses in the General Plan. The Project area is not, nor has it been in the past, a mining site. There are no mines located in the vicinity of the Project. There will be no impact.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XIII. NOISE - Would the project result in:				
a) Generation of substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

Sources: Google Earth; City of Twentynine Palms General Plan.

Environmental Setting

The main sources of noise in an urban environment include road traffic, aircraft, railroads, construction, industry, noise in buildings, and consumer products. According to the United States Environmental Protection Agency (US EPA), in any city, the main sources of traffic noise are the motors and exhaust systems of autos, trucks, buses, and motorcycles. Temporary noise sources include landscape maintenance activities, home stereo systems, and barking dogs, and are governed by the provisions of the City Noise Ordinance (Chapter 19.74).

The City has established goals, policies, and programs to limit and reduce the effects of noise intrusion on sensitive land uses and set acceptable noise levels for varying types of land uses in its General Plan. The City uses the Community Noise Equivalent Level (CNEL) to guide acceptable noise levels in the community. The CNEL scale establishes acceptable noise levels for low density, single family homes at 50 to 60 dBA, and conditionally acceptable levels at 55 to 70 dBA. The CNEL scale represents an average of noise levels over a 24-hour period and is weighted for the quieter evening and nighttime periods.

The project area encompasses the central portion of the City that currently experiences a variety of noise levels, ranging from 55 CNEL in residential areas to 70 CNEL near major roadways.

Discussion of Impacts

- a) **Less Than Significant with Mitigation.** The existing wastewater management systems (septic tanks, package plants) do not generate significant noise levels. With development of the project, noise levels will increase during construction, and over the life of the project.

Temporary Construction Noise: Collection System and WWTP

The proposed project would result in the construction of a new wastewater treatment collection system (sewer pipelines and lift station) and a WWTP. Installation of the pipelines may involve trenching using a conventional cut and cover technique or a trenchless drilling technique where necessary to avoid sensitive drainages and roadway intersections if utilities are congested. The proposed pipeline would be installed within existing roadway rights-of-ways to the extent feasible. The trenching technique would include saw cutting of the pavement, trench excavation or boring, pipe installation, backfill operations, and re-surfacing to the original condition. Construction of the WWTP and O&M building would consist of site clearing and grading, excavation, construction of treatment buildings and installation of equipment, and site completion.

Construction would involve the use of a variety of heavy construction machinery such as backhoes, compactors, cranes, boring machines, excavators, haul trucks, pavers, and rollers. Sensitive receptors, specifically residences, are located throughout the planning area and in will be within 100 feet of pipeline installation in some areas. Heavy equipment can generate noise levels ranging from 70 to 90 dBA at a distance of 50 feet from the source. This equipment, however, will be mobile and will not create a source of constant noise at any one location. The operation of each piece of off-road equipment within Project construction areas would not be constant throughout the day, as equipment would be turned off when not in use. Over a typical workday, the equipment would be operating at different locations and all the equipment would not necessarily operate concurrently within the same location of the Project area.

The Municipal Code exempts construction activities from short-term, short-duration noise standards when they are conducted during permitted time frames. The Project would be required to comply with the City's Municipal Code construction hours, between 7 a.m. to 7 p.m. excluding Sundays and Federal holidays. From May through September, construction activities are allowed to begin at 6 a.m.

In conclusion, although the Project's construction could generate short term isolated increases in noise to surrounding sensitive receptors, these impacts would be less than significant. All construction activities associated with the proposed project would only occur within the construction exempt hours specified in the City's noise ordinance. Since project-related construction activities would be exempt from the City's noise ordinance, construction of the proposed project would not result in a violation of the City's Municipal Code. There would be less-than-significant impact with respect to exposure of persons to, or generation of, noise levels in excess of standards found in the local noise ordinance.

Operational Noise Impacts

Operation of the pipelines will have no impact on noise levels, as they will be underground and will not emit noise. The lift station consists of above ground equipment such as pumps and generators that will be housed in a screened enclosure, which will reduce noise levels. Operational activities associated with the proposed WWTP could result in the exposure of nearby off-site sensitive receptors to noise levels that could exceed local noise standards. Noise sources associated with the proposed Project include vehicular traffic from worker and truck trips and stationary sources such as pump stations, and emergency generators. Sensitive receptors, specifically residences, are located throughout the planning area. The nearest sensitive receptors to the WWTP are single family residences approximately 715 feet south of the site.

The WWTP will generate noise from the use of pumps that will circulate air to aeration equipment. Pumps, motors and compressors will be housed inside the new equipment building, shielding much of the noise. Stationary equipment such as air compressors can produce noise between 70-80 dBA. Shielding of the noise by the building's construction materials is expected to reduce exterior noise levels of the compressor and other equipment at the plant; however, specific design with regard to noise reduction is currently unknown. Therefore, there may be a potentially significant impact with respect to exposure of persons to, or generation of, noise levels in excess of standards found in the General Plan.

In order to assure that operational impacts would be less than significant, prior to final design of the proposed WWTP, the City must prepare an Operational Noise Reduction Plan demonstrating that the proposed facility would not expose the nearest sensitive receptors to noise levels that would exceed the City's daytime and nighttime noise standards. The Operational Noise Reduction Plan would be prepared by a qualified noise consultant. Once all noise reduction measures outlined in the Operational Noise Reduction Plan are implemented, the City would measure noise at the nearest sensitive receptor property line to validate the effectiveness of the measures and to demonstrate that operational noise levels are below the City's noise standards. Implementation of the Operational Noise Reduction Plan, as required by Mitigation Measure N-1, would reduce the Project's impact to a less than significant level.

- b) **Less Than Significant Impact.** Excessive vibration during construction occurs only when high vibration equipment (i.e., compactors, large dozers, or pile drivers) are operated. The proposed Project may require limited use of equipment with high vibration levels during construction, particularly for installation of the pipelines. Use of this equipment, however, would be infrequent and cease at completion of the improvements. Long-term operation of the proposed Project would not create ground borne vibration. Therefore, impacts would be less than significant.
- c) **No Impact.** The proposed project is located more than 4.5 miles west of the Twentynine Palms Airport, and well outside the noise contours of the airport. In addition, the WWTP is not a sensitive noise receptor. The airport will have no impact on noise levels at the proposed Project.

Mitigation Measures:

- N-1 Operational Noise Reduction Measures.** Prior to final design of the proposed WWTP, the City shall prepare an Operational Noise Reduction Plan demonstrating that the proposed WWTP will not expose the nearest sensitive receptor to noise levels that would exceed the City's daytime and nighttime noise standards. The operational noise reduction plan shall be prepared by a qualified noise consultant. Once all noise reduction measures outlined in the Operational Noise Reduction Plan are implemented, the City shall measure noise at the nearest sensitive receptor property line to validate the effectiveness of the measures and to demonstrate that operational noise levels are below the City's noise standards

Monitoring:

- N-A** The Building and Safety Division and the City Engineer shall review and approve the Project Operational Noise Reduction Plan and ensure that all recommendations therein are incorporated in the project design.
Responsible Parties: Project noise engineer, Building and Safety Division, City Engineer.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Sources: Google Earth; City of Twentynine Palms General Plan.

Environmental Setting

Per the 2020 U.S. Census, the total population in the City was 28,065, which includes the MCAGCC. The City's 2012 General Plan lists an ultimate buildout population of 103,275 for the entire City, including 22,500 for the MCAGCC and 80,775 for the remainder of the City. Using the same methodology as the 2012 General Plan, the Feasibility Study prepared for the Project estimated buildout population of the study area is approximately 66,100, approximately 82% of the City buildout population, excluding the MCAGCC.

Discussion of Impacts

a-b) No Impact. The Project would provide a centralized wastewater collection system and treatment plant. The project will not provide for sewer capacity beyond what is currently anticipated by the adopted Twentynine Palms General Plan and will not directly induce population growth. The WWTP sites are currently vacant, and no one will be displaced by their construction, nor will replacement housing be required. No impact will occur.

Mitigation Measures: None required.

Monitoring: None required.

CEQA-Plus

Environmental Justice

The proposed Project will not result in disproportionate adverse environmental justice, socio-economic, or safety impacts to a minority or low-income population. The Project will have a positive health benefit to existing and future residents of the area by replacing the existing onsite wastewater treatment systems (septic tanks and package plants) with new sewer pipelines and a centralized treatment plant, resulting in improved environmental conditions.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?				X
Parks?				X
Other public facilities?				X

Sources: City of Twentynine Palms General Plan; Google Earth Pro 7.3.2.5491; Online Resources; Project materials.

Environmental Setting

Fire Protection

The San Bernardino County Fire Department (SBCoFD) is responsible for fire protection within the City. SBCoFD operates 67 fire stations in 24 cities and covers approximately 19,278 square miles in the County. SBCoFD has a staff of about 1,017 county firefighting personnel and 654 fire suppression personnel available during each 24-hour period. The nearest fire station is Station# 44 at 6560 Adobe Road, located within the southern portion of the Project area.

Police Protection

The San Bernardino County Sheriff's Department is responsible for law enforcement in the City. A local police station operates out of City Hall at 6135 Adobe Road, within the Project area. The main police station is located at 6527 White Feather Road in Joshua Tree, approximately 12 miles west of the City.

Schools

The City and the Project area are located within the boundaries of the Morongo Unified School District (MUSD), which provides public school facilities to accommodate students. The MUSD currently operates eighteen schools within its district, which stretches beyond Twentynine Palms to Yucca Valley and Morongo Valley. There are a number of schools located in the planning area, including Twentynine Palms Elementary School, Twentynine Palms Junior High School, and Oasis Elementary School. There are no schools in proximity to the WWTP sites.

Parks

There are a total of four existing parks (i.e. Bucklin Park, Luckie Park, Knott's Sky Park, and Veteran's Park) in the City. Pioneer Park is planned, but not yet constructed. The City's other major recreational facilities include Theatre 29, the Senior Community Center, Parks and Recreation Community Services Building, and Parks and Recreation

Administration Building. Parks in the Project area include Luckie Park (Utah Trail and Two Mile Road), Veterans Memorial Park (Adobe Road), and Bucklin Park (both on Twentynine Palms Highway).

Discussion of Impacts

Fire Protection

Less Than Significant Impact. The wastewater collection pipelines are not expected to impact fire protection services. The WWTP is not expected to substantially increase fire incidents at the site. The WWTP will include only limited structures, and although an increase in activity has the potential to increase fire department calls, it is not expected that the increase will be significant. In addition, the development plans for the project will be reviewed by the Fire Department so that they meet Fire Code, access and circulation requirements to assure that the Department can reach all structures in the plant. Impacts associated with fire suppression are expected to be less than significant.

Police Protection

Less Than Significant Impact. The development of the proposed Project will marginally increase the need for police services. The WWTP is not expected to substantially increase police or emergency incidents at the site. The WWTP will include limited structures and only 3-5 employees on-site daily. The police department will review the Project's development plans to assure that they meet their standards for sight distances and safe operations. Impacts associated with police protection are expected to be less than significant.

Schools:

No Impact. The purpose of the proposed Project is to provide the City with a centralized waste collection system and treatment plant. Implementation of the proposed project will not result in an increase of student populations in the City. No new housing or population in the City would be required as a result of the proposed Project which would require additional educational facilities. No impact to schools will occur.

Parks

No Impact. The need for additional parkland is primarily based on an increase in population to an area. Given that the proposed Project would not increase the population of the City, the project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Therefore, the proposed Project would not require the construction or expansion of park and recreational facilities and would also not result in an increase in demand for parks and recreation facilities in the surrounding area. No impact to parks will occur.

Other Public Facilities

No Impact. The development of a centralized wastewater collection system and treatment plant will have no other impact on public facilities. The maintenance of the WWTP will marginally add to the City's operational expenses, but these costs will be offset by increased revenues from rate-payers and population growth over time. No impact to other public facilities will occur.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XVI. RECREATION --				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Sources: Google Earth; City of Twentynine Palms General Plan.

Environmental Setting

The City of Twentynine Palms has 175 acres of recreational opportunities made up of parks, special use areas and passive use areas provided by different sources including the City of Twentynine Palms, the Morongo School District and the Marine Corps Air Ground Combat Center. Parks in the project area include Luckie Park (Utah Trail and Two Mile Road), Veterans Memorial Park (Adobe Road), and Bucklin Park (both on Twentynine Palms Highway).

Discussion of Impacts

a, b) No Impact. The proposed Project does not propose to add significant new numbers of people that would require housing and ancillary recreation facilities; therefore the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The Project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. No impact would occur in this regard.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XVII. TRIBAL RESOURCES-- Would the project 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), or		X		
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		X		

Source: Twentynine Palms General Plan (2012); Historical/Archaeological Resources Survey Report - Pioneer Park Project, prepared by CRM TECH, October 25, 2020.

Environmental Setting

As discussed in the Section V, Cultural Resources, the Mojave Desert, including the City of Twentynine Palms have been home to the Serrano and the Chemehuevi Native Americans for centuries. Today, most Serrano descendants are affiliated with the San Manuel and the Morongo Indian Reservations, while the Chemehuevi are divided among the Chemehuevi, the Colorado River, and the Morongo Reservations.

The City and surrounding areas contain significant cultural resources to the Native American people which are considered non-renewable resources because they provide important information about the past and are of high cultural value to the tribes.

Discussion of Impacts

a, b) Less Than Significant with Mitigation Incorporated. The Project area lies in close proximity to the Oasis of Mara and the Chemehuevi Cemetery (Site 36-002052), which are designated as Points of Historical Interest by the State of California. The Oasis of Mara is one of the most important prehistoric sites in the Mojave Desert region with a long history of Native American activities throughout the prehistoric, protohistoric, and historic periods, including as the creation site in Serrano legends.

The cemetery contains known burials of both Chemehuevi and Serrano tribal members, and human remains are always of the utmost cultural significance to the local Native American community. Considering the presence of these sites in close proximity to the project, the project area is considered to be highly sensitive for subsurface deposits of Native American cultural remains.

On March 7, 2022, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the Commission's Sacred Lands File. NAHC reported unspecified Native American cultural resource(s) in the project vicinity. Following the NAHC's recommendations and previously established AB 52 consultation protocol, CRM TECH contacted a total of 15 Native American representatives in the region in writing on May 9, 2022, for additional information on potential Native American cultural resources in the project vicinity. Follow-up telephone solicitations were then carried out between May 25 and June 10, 2022. The 15 tribal representatives contacted during this study are listed below:

- Patricia Garcia-Plotkin, Tribal Historic Preservation Officer, Agua Caliente Band of Cahuilla Indians;
- Amanda Vance, Chairperson, Augustine Band of Cahuilla Mission Indians;
- Michael Mirelez, Director of Cultural Affairs, Cabazon Band of Mission Indians;
- Bobby Ray Esparza, Cultural Coordinator, Cahuilla Band of Indians;
- Bridget Sandate, Cultural Coordinator, Chemehuevi Indian Tribe;
- Ray Chapparosa, Chairperson, Los Coyotes Band of Cahuilla and Cupeño Indians;
- Ann Brierty, Tribal Historic Preservation Officer, Morongo Band of Mission Indians;
- Jill McCormick, Historic Preservation Officer, Quechan Tribe of the Fort Yuma Reservation;
- John Gomez, Jr., Cultural Resource Coordinator, Ramona Band of Cahuilla Indians;
- Jessica Mauck, Director of Cultural Resources, San Manuel Band of Mission Indians;
- Lovina Redner, Chairperson, Santa Rosa Band of Cahuilla Indians;
- Mark Cochrane, Co-Chairperson, Serrano Nation of Mission Indians;
- Joseph Ontiveros, Tribal Historic Preservation Officer, Soboba Band of Luiseño Indians;
- Alesia Reed, Cultural Chair/Acting Secretary, Torres Martinez Desert Cahuilla Indians;
- Sarah Bliss, Tribal Cultural Resources Manager, Twenty-Nine Palms Band of Mission Indians.

Six of the 15 tribes responded in writing, and three others provided their input by telephone (see Appendix G). Among them, the Los Coyotes Band, the Quechan Tribe, and the Santa Rosa Band had no comments regarding this undertaking, with the Quechan Tribe deferring to the tribes located in closer proximity. The Soboba Band, meanwhile, deferred specifically to the Twenty-Nine Palms Band. The Augustine Band stated that they were unaware of any specific cultural resources in or near the APE but requested to be notified of any resources discovered during the undertaking.

In their written response, the San Manuel Band described the project vicinity as “an incredibly sensitive space,” citing the presence of the Oasis of Mara and the Chemehuevi Cemetery nearby as well as many other tribal cultural resources known to exist south of the Mesquite Lake, west of Utah Trail, east of Morongo Road, and north of Baseline Road. Therefore, the tribe expressed “considerable concerns about how this project moves forward.”

Also referencing the proximity of the APE to the Oasis of Mara and the Chemehuevi Cemetery, the Agua Caliente Band requested Native American monitoring of all ground-disturbing activities associated with the undertaking and tribal review of all cultural resource documentation, as did the Morongo Band. Similarly, the Twenty-Nine Palms Band requested to monitor ground-disturbing activities in the area around the Chemehuevi Cemetery and further consultation with the lead agencies.

Consistent with the findings of the cultural resource study and potential concerns of the tribes, Mitigation Measure CUL-1 and CUL-2 (see Section V. Cultural Resources) requires a Phase II Archaeological Testing Program and the presence of an approved Cultural Resource Monitor(s) during any ground disturbing activities to reduce any potential impacts to Tribal Resources to less than significant levels.

In addition to the consultation undertaken by CRM Tech, the City has undertaken consultation as required under AB 52 and sent letters on August 18, 2022 to three tribes: Morongo Band of Mission Indians, San Manuel Band of Mission Indians, and Twentynine Palms Band of Mission Indians. No responses were received to date.

Mitigation Measures: See Section V.

Monitoring: See Section V.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XVIII. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?				X
c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?			X	

Sources: City of Twentynine Palms General Plan; Google Earth; Technical Advisory on Evaluating Transportation Impacts in CEQA, State of California Governor's Office of Planning and Research, December 2018; Traffic Study Policy, City Council adoption February 22, 2005; San Bernardino County Transit Authority City VMT Guidance Checklist, 2021.

Environmental Setting

The City's Circulation Plan classifies roadways into the following types: 6-Lane Expressway, Arterial, Secondary, and Collector. Those streets not shown on the Circulation Plan are either local or rural local streets and are classified as Non-General Plan streets and are mostly unimproved dirt roads. The General Plan (2012) established a LOS "C" minimum service standard for all new streets within the city.

Notable roadways in the project area include collector roadways (Samarkand Drive, El Paso Road, Joe Davis Drive), secondary roadways (Sullivan Road, Desert Knoll Avenue), arterial roadways (Two Mile Road), and expressways (Adobe Road, Twentynine Palms Highway, Amboy Road, and Utah Trail).

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018). The San Bernardino County Transit Authority (SBCTA) has adopted VMT screening guidance for local jurisdictions derived from OPRs Technical Advisory.

The project VMT analysis is based on OPR's Technical Advisory. The project trip generation rate is based on Institute of Transportation Engineers, Trip Generation Manual, 10th Edition. Land Use Code 110 (General Light Industrial) was used for the project trip generation analysis.

Discussion of Impacts

a) Less Than Significant Impact.

Collection System

Construction of the collection system may require temporary lane closures for installation of the wastewater pipelines. Improved sidewalks are sparse and scattered throughout the planning area, and there are no striped bike lanes; however, bicycles do use local roadways.

Traffic impacts during construction are temporary in nature and will cease upon completion of construction activities. A traffic control plan will be developed prior to the initiation of any construction activities to minimize disruption to existing traffic flow conditions along public roadways. The traffic control plan addresses details regarding road closures, provisions to maintain access to any adjacent properties, prior notices, adequate sign-posting, detours, and permitted hours of construction activity as determined appropriate by the City. Adequate local and emergency access to adjacent uses is required to be provided at all times. The traffic control plan shall also be reviewed and approved by the Fire and Police departments so that construction does not create any hazards or interfere with any emergency response or evacuation plans. Adherence to City requirements regarding traffic control plans will ensure potential impacts to the circulation system will be less than significant.

WWTP

The proposed Project will result in the development of a wastewater collection system and a 4.5-acre WWTP. A traffic control plan will also be required during construction activities. Once operational, the Project would not significantly increase traffic beyond current levels. The intersection in proximity to the WWTP Site 1, Twentynine Palms Highway and Desert Knoll Avenue is not signalized; it operates with stop signs controlling traffic entering from Desert Knoll Ave onto Twentynine Palms Highway. The WWTP will be operated by 3-5 employees daily and is forecast to generate approximately 15 daily vehicle trips, with 3 trips during the AM peak hour and 3 trips during the PM peak hour.⁵

The City's Traffic Study Policy (2005) established thresholds for requiring a traffic report. The proposed Project would need a traffic report if any of the following applies:

1. A project that could generate 50 directional trips during a peak hour or 500-749 trips during an average day.
2. If a new project's traffic will substantially affect an intersection or a roadway segment already identified as operating at an unacceptable level of service.
3. A project that may create a hazard to public safety.

⁵ ITE 10th Edition Trip Generation, Land Use Code 110 (General Light Industrial) at a rate of 3.05 daily trips per employee.

4. A project that will substantially change the off-site transportation system or connections to it.

The WWTP site will take access from Desert Knoll Ave and Gorgonio Drive. The Project will not create a hazard to public safety, or substantially change the off-site transportation system or connections to it. The Project is forecast to generate a maximum of 3 directional trips (AM and PM peak hour), which does not exceed the City threshold of 50 directional trips. Therefore, the project's traffic is not expected to substantially affect the project area intersections or roadway segments, which are not identified as operating at an unacceptable level of service.

The Project is not expected to conflict with a program, plan, ordinance or policy addressing the circulation system.

Alternative Transportation Planning

Morongo Basin Transit Authority (MBTA) provides transit service in the Morongo Basin, including the City of Twentynine Palms. Transit stops in the project area are primarily located along Twentynine Palms Highway and Adobe Road, with one bus stop located at the corner of Utah Trail and Two Mile Road. The bus stop nearest to the WWTP sites is located at the post office approximately 0.5 miles east on Gorgonio Drive. The Project will not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. No project-related impact is anticipated.

- b) **No Impact.** SB 743 requires amendments to the CEQA Guidelines (pre-2019) to provide an alternative to LOS for evaluating transportation impacts. Particularly within areas served by transit, those alternative criteria must “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” (Public Resources Code Section 21099(b)(1)) Measurements of transportation impacts may include “vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.” CEQA Guidelines were amended to require all lead agencies to adopt vehicle miles traveled (VMT) as a replacement for automobile delay-based level of service (LOS) for identifying transportation impacts. This statewide mandate went into effect July 1, 2020.

The SBCTA City VMT guidelines includes thresholds to screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing. In this case, the Project qualifies for Daily Trip Threshold exemption under the SBCTA guidelines, insofar as it will generate less than 110 trips per day. The Project is forecast to generate a total of 15 trips per day based on the number of employees, which is under the 110 trips per day threshold. Therefore, under the SBCTA guidelines, the project is not required to conduct VMT analysis, and is presumed to have no impact.

The Project consists of a wastewater collection system (pipelines) and WWTP, which are not expected to generate a potentially significant level of VMT or inconsistency with general plan land use and sustainability policies. The Project meets the SBCTA's Screening Threshold as a low-trip project. The project will not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

- c) **No Impact.** The Project will be developed in accordance with City design standards and will not create a substantial increase in hazards due to a design feature. Roadways will be returned to pre-project conditions after the installation of pipelines. The WWTP access points will be sited with adequate sight distances. The WWTP will be accessed on Desert Knoll Avenue and Gorgonio Drive, both of which operate at acceptable levels of service, thus reducing potential traffic delay and risks. No incompatible uses are proposed, and no project-related impact is anticipated.
- d) **Less than Significant Impact.** The proposed Project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. As discussed under Section XVII.c above, Project operation would not change any existing roads, including areas provided for emergency access. Prior to construction, both the Fire Department and Sheriff Department will review the Project site plan to ensure safety measures are addressed, including emergency access.

Project construction would involve temporary lane closures, which has the potential to impact access for emergency vehicles. However, required preparation of a traffic control plan would reduce impacts to less than significant levels. Impacts would be less than significant.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?		X		
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Source: Twentynine Palms General Plan.

Environmental Setting

Domestic Water (please also see Hydrology and Water Resources)

The proposed Project is located within the Twentynine Palms Water District (TPWD) boundaries for domestic water services. The District's water supply source is 100 percent groundwater produced from District-owned and operated wells. The District provides water service to approximately 6,800 households in their water service area (Twentynine Palms Water District 2015 Urban Water Management Plan).

Wastewater Treatment

The only Wastewater Treatment Plant (WWTP) in the region is located at the Marine Corps Air Ground Combat Center (MCAGCC). The City, including the Project area, does not have a sanitary sewer system and currently operates with septic tanks.

In 2014, the City prepared a Wastewater Master Plan to identify and describe the potential facilities that would be required for a centralized sewer collection system and wastewater treatment plant to replace the septic systems in use.

The City of Twentynine Palms prepared a Draft Wastewater Feasibility Study (Study) in 2022 to develop and evaluate a centralized sewer system and WWTP for a large portion of the City.⁶ The Study area encompasses approximately 12,800 acres and includes most residential, commercial, industrial and public land use areas within City limits, except for the Indian Cove and Desert Life neighborhoods and Sphere of Influence (SOI).

The Study assumes buildout of the of the sewer system would occur in five phases due to the size of the service area and substantial capital cost. The preliminary phasing plan was based on many factors including the proposed sewer catchment basis, proximity to the proposed WWTP, eliminating package treatment plants, capturing dense areas with higher existing water use, and minimizing lift stations.

Re-phasing has occurred since completion of the Feasibility Study. The proposed Project is development of Phase 1 of the overall centralized wastewater collection system .

Flood Control/Drainages

The San Bernardino County Flood Control District (SBFCD) is responsible for managing regional drainage within and in the vicinity of Twentynine Palms. The City works with SBFCD to manage local drainages in the City, which are divided between well-defined drainage courses (some have been channelized) and areas of wide sheet flow. Development that may alter the direction of flow onsite are conditioned per standard San Bernardino County practices to maintain the existing site drainage patterns at inlets and outlets.

Solid Waste

Burrtec Waste Industries provides solid waste pick up and disposal, as well as recycling services in the City. Solid waste disposal and landfill siting is handled by the County of San Bernardino, Solid Waste Management Division. The Project will utilize shared trash bins for waste removal.

Other Utilities

The electrical energy to the City is provided by Southern California Edison (SCE). Natural gas service is provided to the City by Southern California Gas Company (SoCalGas). Telephone service is provided by a number of companies, including both land lines and cellular services.

Discussion of Impacts

- a) **Less Than Significant with Mitigation Incorporated.** The Project proposes a centralized wastewater conveyance system and treatment plant, the environmental impacts of which are being evaluated herein.

The City works with SBFCD to manage local drainages in the City. The new WWTP facility will be required to comply with the City's requirements as they relate to stormwater retention, and the control of flooding. The Project would also be conditioned per standard San Bernardino County practices to maintain the existing

⁶ Wastewater Feasibility Study Draft Report, prepared by NV5. March 31, 2022.

site drainage patterns at inlets and outlets. The increase in impervious surfaces would be minimal and would not result in a substantial increase in the rate or amount of surface runoff.

Water use at the WWTP is consistent with the land use designations in the area and would not increase in the rate of groundwater pumping or require the development of new well sites. Therefore, impacts to groundwater supplies or recharge are less than significant.

The Project would not include expanded water, natural gas, electricity or telecommunications facilities.

The analysis included herein indicates that all environmental effects associated with the proposed Project will be less than significant with mitigation incorporated.

b) Less Than Significant Impact.

Collection System

This component of the Project would only require water during construction. The City has sufficient water supplies to serve these temporary needs. Prior to construction of the pipelines and lift station, all utilities will be field verified and potholed to assess the need for potential avoidance or relocation of water pipelines within existing street rights-of-way following coordination with TPWD. Because there are sufficient supplies to serve the Project, impacts will be less than significant.

WWTP

As described in Section X., Hydrology and Water Resources, the proposed Project will have a less than significant impact on water demand. The proposed Project would require a temporary increase in water for construction activities for the WWTP, the volume of which will not require new or expanded water supply entitlements. Post-construction staffing at the WWTP is expected to be 3-5 employees daily.

The California Department of Water Resources (DWR) has recommended pumping limits for both the Fortynine Palms and Indian Cove subbasins, which results in an overall limited pumping capacity at 6,995 acre- feet per year (AFY). Existing pumping in 2015 (2,404 AFY) represents approximately 30 percent of the total pumping capacity. The total water demand of the proposed project 3.12 AFY. The project will increase pumping by approximately 0.12 percent over the 2015 baseline level and will represent approximately 0.04 percent of the limited pumping capacity recommended by DWR. The amended 2015 UWMP demonstrates that the District has adequate supplies to meet demands during normal, single-dry, and multiple- dry years throughout the 20-year planning period. In addition, there is sufficient production capacity planned to meet projected future demands with the actions the TNWD is taking to maintain supply availability.

Water use at the WWTP is consistent with the land use designations in the area and would not increase in the rate of groundwater pumping or require the development of new well sites. Impacts will be less than significant.

c) No Impact.

Collection System

The pipelines and lift station in and of themselves will not generate wastewater, they will only carry wastewater generated by other uses; thus, there will be no impact to wastewater treatment providers.

WWTP

As described above, the City currently operates on septic systems. The Project proposes a centralized wastewater treatment system that will serve the majority of the City's wastewater needs. The Project has been designed with sufficient capacity to meet these needs. Overall, the Project will be a net benefit to wastewater services in the city. The environmental impacts associated with the construction and operation of this system are thoroughly evaluated in this document. There will be no significant environmental impact that cannot be mitigated, and the construction and operation of a WWTP will provide a positive benefit associated with groundwater protection and the decommissioning of septic tanks and package plants.

d, e) Less Than Significant Impact.

Collection System

Pipeline projects within roadways generate limited amounts of waste during construction, and the proposed pipelines and lift station are not anticipated to impair the waste reduction goals of the City, including recycling of construction waste. Burrtec is required to meet all local, regional, State and federal standards for solid waste disposal. Therefore, through compliance with existing regulations for construction waste, impacts to solid waste reduction goals is less than significant.

WWTP

Trash generated by the O&M building of the WWTP will be hauled to the Twentynine Palms Transfer Station, east of the City, and then transported to Landers Landfill, a regional landfill located approximately 30 miles northwest of the City. Additional capacity will result from either the expansion of the Landers Landfill or the regional landfill in Barstow, approximately 100 miles north of the City.

The collection and disposal of solid waste will conform to applicable federal, State, and local plans and regulations, including AB 939 (Integrated Waste Management Act) that local jurisdictions divert at least 50 percent of all solid waste. The proposed Project will adhere to all federal, State and local regulations related to solid waste during construction and operation. Therefore, the proposed Project would have a less than significant impact in terms of complying with federal, state, and local statutes and regulations related to solid waste.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

Sources: Twentynine Palms General Plan; Fire and Resources Assessment Program (FRAP) maps, California Department of Forestry and Fire Protection.

Environmental Setting

Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to be ignition resistant. A wildland-urban interface is an area where urban development is located in proximity to open space or “wildland” areas. The potential for wildland fires represents a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated fire severity zones.

The California Department of Forestry and Fire Protection (Cal Fire) has mapped areas of significant fire hazards in the state through its Fire and Resources Assessment Program (FRAP).

The General Plan identifies the project site as being in a Local Responsibility Area and a Moderate Fire Hazard Zone. The site is not located adjacent to forested areas, and the slopes of the mountains to the south of the project site do not support significant vegetation.

Discussion of Impacts

a)-d) No Impact. The Project area is not located adjacent to a state responsibility area or a very high fire hazard severity zone. Because the City, including the proposed Project area, is not at high risk for wildfire, it is also not at risk for spread of wildfire, or for slope instability, flooding or landslides. Finally, there is no need for installation or maintenance of infrastructure that could exacerbate fire risk. No impacts associated with wildfire will result from development of the proposed project.

Mitigation Measures: None required.

Monitoring: None required.

	Potentially Significant Impact	Less Than Significant w/ Mitigation	Less Than Significant Impact	No Impact
XXI MANDATORY FINDINGS OF SIGNIFICANCE --				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Discussion of Impacts

- a) **Less Than Significant Impact with Mitigation Incorporated.** As described above, the proposed Project has the potential to impact biological (special status species, migratory birds and jurisdictional waters) and cultural resources (archaeological and Tribal). The mitigation measures included in this document, however, will assure that the impacts associated with these resources are reduced to less than significant levels.
- b) **Less Than Significant Impact.** Where appropriate above, the proposed Project's impacts have been considered in relation to General Plan build out. Under those cumulative conditions, the project was found to have less than significant impacts. The proposed Project consists of a centralized wastewater treatment facility that the City has been actively planning for since 2014. The impacts associated with the Project, as mitigated, will be less than significant. When considered in the framework of General Plan build out, the Project is consistent with the build out plans envisioned in the General Plan, and a centralized wastewater system could also create additional economic development opportunities in the City through the development of a larger industrial base and employment center. Cumulative impacts are expected to be less than significant.

- c) **Less Than Significant Impact.** As described above, the project will not have significant impacts on human beings. Air quality and noise impacts will both be less than significant, and the project will generate only minimal additional vehicle trips. The Project would provide a net benefit to the community by reducing the City's dependence on septic systems and package plants.

According to the General Plan, the construction of a centralized wastewater treatment plant would help the City achieve the vision and goals identified by the Downtown Economic Revitalization Specific Plan for the Downtown area, as it envisioned that a wastewater system would serve the commercial district in Downtown Twentynine Palms (General Plan Implementation Policies LU-8.4 and 8.5).

APPENDICES

APPENDIX A: CalEEMod Outputs

APPENDIX B: Biological Resources Assessment

APPENDIX C: Phase 1 and 2 Results of Sensitive Plan Surveys

APPENDIX D: Phase 1 and 2 Desert Tortoise Focused Survey

APPENDIX E: Phase 1 and 2 Burrowing Owl Focused Survey

APPENDIX F: Delineation of Jurisdictional Waters

APPENDIX G: Historic Properties Reports 2023 and 2022

APPENDIX H: Geotechnical Desktop Study

Available on the City of Twentynine Palms Website:

www.ci.twentynine-palms.ca.us