

APPENDIX A

Memorandum of Understanding (MOU)

[Memorandum of Understanding and Agreement for Performance of Zoning Ordinance and Mitigation Measures as Environmental Restrictions (MOU) for the Antelope Valley Water Bank, April 17, 2007.]

PLANNING DEPARTMENT

TED JAMES, AICP, Director

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RESOURCE MANAGEMENT AGENCY

DAVID PRICE III, RMA DIRECTOR

Community & Economic Development Department

Engineering & Survey Services Department

Environmental Health Services Department

Planning Department

Roads Department

April 17, 2007

S.D. #2

Board of Supervisors
Kern County Administrative Center
1115 Truxtun Avenue
Bakersfield, CA 93301

Proposed Memorandum of Understanding and Agreement for Performance of Zoning Ordinance and Mitigation Measures as Environmental Restrictions (MOU) with the Van Dam Farms and Western Development and Storage, LLC for the Antelope Valley Water Bank by Western Development and Storage, LLC in Eastern Kern (Fiscal Impact: None)

On September 12, 2006 your Board approved requests for Specific Plan Amendments (SPA 13, Map 232, SPA 2, Map 233) and Alteration of the Boundaries of Agricultural Preserve No. 24 – Inclusion necessary for the construction and operation Antelope Valley Water Bank by Western Development and Storage, LLC. This project will develop a facility and related pipelines to store imported surface water underground beneath approximately 1,500 acres of agricultural land. Upon completion of construction the project could be owned and operated by a public agency.

The project was approved with a condition that was included to ensure that any public agency that might acquire and operate the completed water bank would be bound by all the requirements of the A (Exclusive Agriculture) Zoning Ordinance, the Final Environmental Impact Report and Mitigation Measure Monitoring Program regardless of any exemption a City, County or Special District could legally claim under State Law. This condition was satisfied on November 1, 2006 with the submittal to staff of fully executed originals of the attached MOU.

The attached MOU has been approved by the Planning Director for content and County Counsel as to form and has been executed by the property owners and project applicants.

Therefore, IT IS RECOMMENDED that your Board Approve the Memorandum of Understanding and Agreement and authorize the Chairman to sign.

Sincerely,

A handwritten signature in black ink, appearing to read "Ted James".

TED JAMES, AICP, Director
Kern County Planning Department

TJ:jb

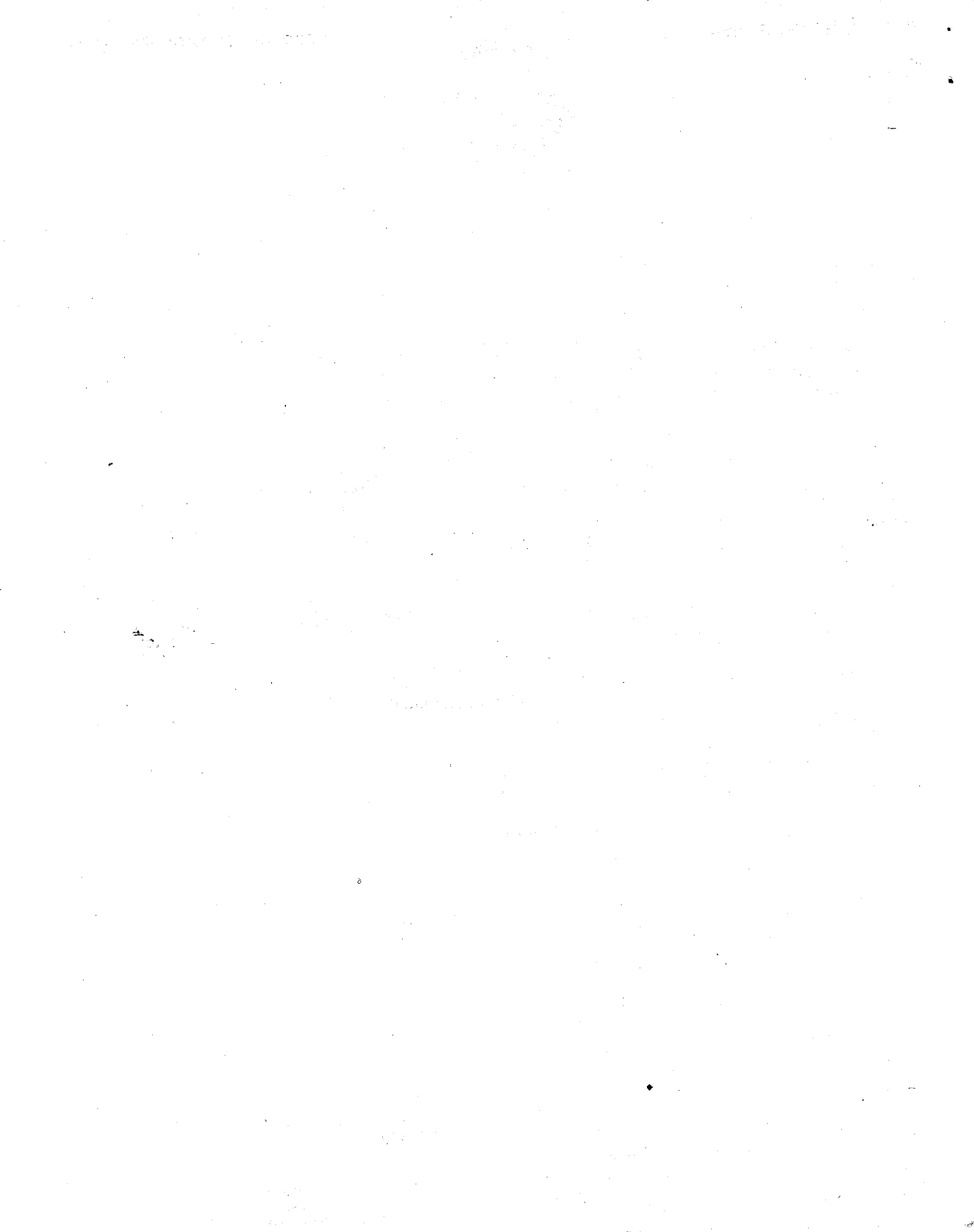
Attachment

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cc County Administrative Office
County Counsel
Van Dam Farms

Western Development and Storage, LLC

Young, Woolridge, LLP
Resource Management Agency
Grand Jury



MEMORANDUM
PERFORMANCE

*Attachment
MOU
Fav
copying*

MONITORING AND AGREEMENT
CEQA AND MITIGATION MEASURES
RESTRICTIONS
Western Development and Storage, LLC)

(Kern County, _____)

THIS AGREEMENT, made and entered into this _____ day of _____ 2007, by and between the COUNTY OF KERN, a political subdivision of the State of California (hereinafter "County") and, Delmar D. Van Dam and Gertrude J. Van Dam, Co-Trustees of the Van Dam Family Trust, 1996 dated September 27, 1996, Delmar D. Van Dam, Gertrude J. Van Dam, Craig Van Dam, Marta Van Dam, Dean Van Dam, Sherri Van Dam, Nick Van Dam, Janet Van Dam, Gary Van Dam, Debbie Van Dam, Van Dam Farms, and Western Development and Storage, an Oklahoma limited liability company ("Western Development and Storage, LLC") (hereinafter collectively referred to as "Property Owner-Operator").

WITNESSETH:

WHEREAS, in consideration of the COUNTY's September 12, 2006 approval of the Antelope Valley Water Bank Project ("Project") by Western Development and Storage, LLC which includes Specific Plan Amendment No.13, Map 232, Specific Plan Amendment No.2, Map 233, Alteration of Boundaries of Agricultural Preserve No. 24- Inclusion and in satisfaction of the condition of Project approval requiring a contractual mechanism to assure that all provisions of the zoning ordinance and CEQA mitigation measures, will be implemented, County and Property Owner-Operator now desire to enter into this Agreement;

NOW, THEREFORE, IT IS MUTUALLY AGREED between County and Property Owner-Operator as follows:

1. The Property Owner-Operator agrees to perform all mitigation measures that are contained in the Mitigation Measure Monitoring Program, attached hereto as Exhibit "A", as they relate to all or any activities related to the development of a water recharge and recovery project described in the above-referenced approvals, in the manner customarily required by the County for an ordinary property owner not subject to an MOU such as this one. The Property Owner-Operator obligations under this Agreement shall apply regardless of whether any other permits or entitlements are issued. These obligations shall be binding on all successors and assigns of

the property described in Exhibit "B" hereto and Property Owner-Operator agrees that they shall so obligate all successors, assigns, transferees, and lessees of such property. The provisions of all exhibits attached hereto are hereby incorporated in this Agreement by this reference as though fully set forth herein.

2. The Property Owner-Operator, successors, assigns, transferees, and lessees agrees to be bound by all the requirements of the A (Exclusive Agriculture) Zoning ordinance, the Final Environmental Impact Report, and the Mitigation Measure Monitoring Program (Exhibit A) regardless of any exemption under the California State Government Code.

3. All notices to Property Owner-Operator under this Agreement shall be deemed valid and effective five (5) calendar days following deposit in the United States mail, postage prepaid, by certified and/or registered mail, addressed to:

Van Dam Farms
7316 West D-8
Lancaster, CA 93536
Contact: Mr. Craig A. Van Dam

Western Development and Storage, LLC
5700 Wilshire Blvd., Suite 330
Los Angeles, CA 90036
Contact: Mr. Charles M. Stringer

All notices to County under this Agreement shall be deemed valid and effective when personally served upon the Department of Planning Director or upon deposit in the United States mail, postage prepaid, by certified and/or registered mail, addressed to the Director, Kern County Planning , 2700 "M" Street, Suite 100, Bakersfield, California 93301.

4. This Agreement represents the complete understanding between the parties with respect to matters set forth herein.

5. The persons executing this Agreement on behalf of the Property Owner-Operator warrant and represent that they have the authority to execute this Agreement on behalf of the Property Owner-Operator and warrant and represent that they have the authority to bind Property Owner-Operator to the performance of their obligations hereunder.

6. Failure by a party to insist upon the strict performance of any of the provisions of

this Agreement by the other party, or the failure by a party to exercise its rights upon the default of the other party, shall not constitute a waiver of such party's right to insist and demand strict compliance by the other party with the terms of this Agreement thereafter.

7. Time is of the essence in the performance of the provisions of this Agreement as to which time is an element. Further, the rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not be employed in interpreting this Agreement, all parties having been represented by counsel in the negotiation and preparation hereof.

8. The obligations of Property Owner-Operator, their successors, assigns, transferees, and lessees shall arise upon acquisition of any interest in real property in the Antelope Valley Water Bank Project site that will allow them to engage in any of the land uses allowed under Specific Plan Amendment No.13, Map 232; Specific Plan Amendment No.2, Map 233, Alteration of Boundaries of Agricultural Preserve No. 24- Inclusion.

9. In the event a water recharge and recovery project is not developed and implemented on the property described in Exhibit "B", the County and the Property Owner-Operator agree that neither this Agreement nor any of the requirements stated in the adopted Final Environmental Impact Report, and the adopted Mitigation Measure Monitoring Program (Exhibit A), are required to be performed.

10. This Agreement may be modified only by a writing signed by the parties in interest at the time of the modification.

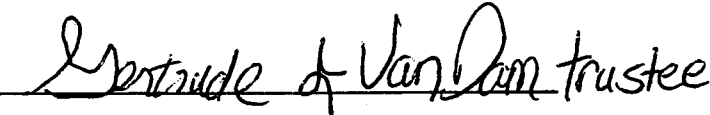
IN WITNESS WHEREOF, the parties hereto have duly caused this Agreement to be executed on the date hereinabove first written.

PROPERTY OWNER-OPERATOR

Delmar D. Van Dam and Gertrude J. Van Dam, Co-Trustees of the Van Dam Family Trust, 1996 dated September 27, 1996


By  Trustee

Delmar D. Van Dam, Trustee

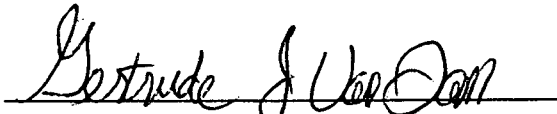
By  trustee

Gertrude J. Van Dam, Trustee

Delmar D. Van Dam and Gertrude J. Van Dam, husband and wife

By 

Delmar D. Van Dam, individually

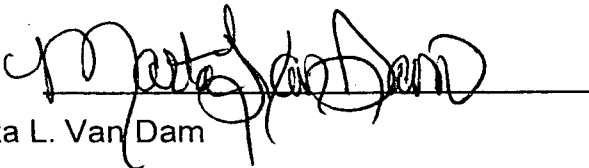
By 

Gertrude J. Van Dam, individually

Craig A. Van Dam and Marta L. Van Dam, husband and wife

By 

Craig A. Van Dam

By 

Marta L. Van Dam

Dean Van Dam and Sherri Van Dam, husband and wife

By 

Dean Van Dam

By Sherry Van Dam
Sherry Van Dam

Nick Van Dam and Janet Van Dam, husband and wife

By Nick Van Dam

Nick Van Dam

By Janet Van Dam
Janet Van Dam

Gary Van Dam and Debbie Van Dam, husband and wife

By Gary Van Dam
Gary Van Dam

By Debbie Van Dam
Debbie Van Dam

Western Development and Storage, LLC

By: D. Cole Frates
D. Cole Frates, President

COUNTY OF KERN

By _____
Chairman, Board of Supervisors

APPROVED AS TO CONTENT
Planning Department

By: Teel
Its: Director

APPROVED AS TO FORM:
Office of County Counsel

By: Bruce Duvall
Deputy

#143276

Mitigation Measure Monitoring Program

EXHIBIT "A"

Table 1-2. Mitigation Monitoring Program For Antelope Valley Water Bank Project Final Environmental Impact Report

Specific Plan Amendment No. 13, Map 232, Specific Plan Amendment No2, Map 233, Alteration of Ag Preserve No 24- Inclusion

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
4.1	Agricultural Resources					
4.1-1	<p>The Antelope Valley Water Bank monitoring committee will develop a monitoring procedure to discern whether recharge-induced shallow water tables are rising toward the root zones of adjacent farmlands and, if so, whether they would adversely affect crop production. If the monitoring committee concludes that crops may be (or have been) affected, the committee will require the owner/operator to constrain or adjust the locations of recharge operations to prevent the impact or to reimburse the affected farmer for the impact that has occurred.</p> <p>Justification: Saturated root zones in existing farmlands would adversely affect crop production in opposition to the prime agricultural land conservation policy of the Los Angeles County General Plan. Implementation of the above mitigation measure would avoid and/or compensate for this impact.</p>	<p>The Antelope Valley Water Bank monitoring committee shall provide a written report to the Kern County Planning Department and Kern County Environmental Health Services Department by December 31 of each calendar year after commencing operations. The owner/operator will constrain or adjust the locations of recharge operations to prevent the impact or to reimburse the affected farmer for the impact that has occurred</p>	<p>Kern County Planning Department</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
4.2	Air Quality					
4.2-1	<p>The following control measures for construction emissions of PM10 are recommended by the KCAPCD for land preparation and/or demolition. The following dust control measures will be implemented:</p> <ol style="list-style-type: none"> 1. All material excavated or graded will be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. Watering will occur a minimum of twice daily on unpaved/untreated roads and on disturbed areas with active operations. 2. All clearing, grading, earth moving and excavation activities will cease during periods when dust plumes of 20 percent or greater opacity affect public roads or occupied structures. 3. All material transported off site will be either sufficiently watered or securely covered to prevent excessive dust. 4. If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul trucks will be required to exit the site via an access point where a gravel pad or grizzly has been installed. 5. Areas disturbed by clearing, earth moving or excavation activities will be minimized at all times. 6. Stockpiles of dirt or other fine loose material will be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust. 	<p>MM 4.2-1 shall be included as notes on any and all grading permits. Following receipt of a grading permit, The owner/operator will implement these dust control measures during construction</p>	<p>Kern County Planning Department</p> <p>Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
7.	Where acceptable to the fire department, weed control will be accomplished by mowing instead of discing, thereby leaving the ground undisturbed and with a mulch covering. Justification: The Kern County General Plan includes fugitive dust control measures for discretionary projects as required by the KCAPCD. Implementation of the above PM10 dust control measures is required for compliance with established air quality control standards.					
4.2-2	During all grading and construction activities at least 10 percent of diesel engine-driven construction equipment on site shall be equipped with Tier 1 or Tier 2 as certified by CARB or with engines certified by the applicable air district (KCAPCD or AVAQMD) to provide equivalent benefits. At least 40 percent of the remaining diesel engine-driven construction equipment shall have diesel particulate filters and lean-NOx catalysts (or equivalent control devices). Justification: Although construction emissions do not exceed project-specific thresholds, additional mitigation is required to reduce the project's contribution to cumulative air impacts.	MM 4.2.2 shall be included as notes on any and all grading permits. Written evidence from the grading contractor of the type of equipment used on the site shall be submitted before commencement of grading activities	Kern County Planning Department Kern County Engineering and Survey Services			
4.2-3	The owner/operator will require that all diesel engines be shut off when not in use to reduce emissions from idling. Justification: Compliance with the California Air Resources Board diesel risk-reduction plan to reduce diesel PM10 emissions is required.	MM. 4.2-3 shall be included as a note on any and all grading permits. The owner/operator will ensure that all diesel engines be shut off when not in use	Kern County Planning Department Kern County Engineering and Survey Services			
4.2-4	To ensure compliance with Regulation 402 of the	Prior to issuance of any	Kern County			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>KCAPCD, the owner or operator will submit a fugitive dust plan to the KCAPCD prior to receiving a grading permit.</p> <p>Justification: Regulation 402 requires preparation of a fugitive dust plan.</p>	<p>and all grading permits, evidence of the submittal and approval of a fugitive dust plan shall be submitted to the Kern County Planning Department. All details of the plan shall be included on any grading or encroachment permits</p>	<p>Planning Department Kern County Air Pollution Control District Kern County Engineering and Survey Services</p>			
4.3	Biological Resources					
4.3-1	<p>Impacts on the Joshua Tree Woodland habitat shall be minimized to the extent possible during the design phase by making minor adjustments to the corridor width to avoid Joshua trees. A corridor plan shall be developed showing the location of all Joshua trees and, after review and recommendation by a qualified biologist, trees to be avoided are to be clearly identified.</p> <p>Justification: Joshua tree woodland is characterized as a Significant Ecological Area (SEA) by the County of Los Angeles. The Antelope Valley Areawide General Plan requires preservation of Antelope Valley's SEAs in as viable and natural condition as possible.</p>	<p>Prior to the issue of grading or encroachment permits, the owner/operator will hire a qualified biologist to review the corridor plan and recommend appropriate corridor width and placement to avoid Joshua trees within the project site. A copy of the written report and a map of locations of trees to be avoided shall be submitted for review. All details of the plan shall be included on any grading or encroachment permits.</p>	<p>Kern County Planning Department Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
4.3-2	<p>Joshua tree woodland habitat located in or adjacent to the construction corridor or site will be protected by placing orange construction barrier fencing or stakes and flags, including buffer zones where appropriate. The locations of these resources will be clearly identified on the construction drawings and marked in the field by the environmental monitor. Fencing or other barriers will remain in place until all construction and restoration work that involves heavy equipment is complete. Construction vehicles, equipment, or materials will not be parked or stored within the fenced area. No signs, ropes, cables, or other items will be attached to individual Joshua trees.</p> <p>Justification: Joshua tree woodland is characterized as a Significant Ecological Area (SEA) by the County of Los Angeles. The Antelope Valley Areawide General Plan requires preservation of Antelope Valley's SEAs in as viable and natural condition as possible.</p>	<p>MM 4.3-2 Prior to issuance of any and all grading permits that affect the Joshua woodlands. The owner/operator will hire a qualified biologist to survey the project site and mark where fencing and other barriers would be installed by the Contractor. Such requirements shall be included as notes on the grading plan.</p>	<p>Kern County Planning Department</p> <p>Kern County Engineering and Survey Services</p>			
4.3-3	<p>Prior to any work in or near ephemeral drainages, the applicant will apply to DFG for a streambed alteration agreement and to the Lahontan Regional Water Quality Control Board for a water quality certification or waiver and will abide by any measures that those agencies may impose.</p> <p>Justification: A DFG streambed alteration agreement is required prior to any construction work in or near ephemeral drainages.</p>	<p>MM. 4.3-3 Prior to issue of any and all grading permits identified in or near ephemeral drainages. The owner/operator will obtain a streambed alteration agreement from DFG and a water quality certification from Lahontan Regional Water Quality Control Board (RWQCB). Prior to commencement of</p>	<p>Kern County Planning Department Department of Fish and Game</p> <p>Lahontan Regional Water Quality Control Board</p> <p>Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
		grading activities a copy of the DFG permit shall be submitted to the Kern County Planning Department for inclusion into the case file and implementation, where applicable, in Kern County. be included as notes on the grading plan.				
4.3-4	<p>If construction activities occur during the Swainson's hawk nesting season (March 1-September 15), the Project will provide a qualified biologist to conduct preconstruction surveys to locate all active nest sites within 0.5 mile of the construction area.</p> <p>If occupied Swainson's hawk nests are found, the Project, in consultation with DFG, shall establish a buffer zone around active Swainson's hawk nests in the vicinity of the Project area. The buffer zone shall be marked with specific identifiable flagging or fencing. Construction activities shall be restricted from the buffer around the active nests until after chicks have fledged.</p> <p>Whenever construction occurs within 0.25 mile of an active nest, a biological monitor shall observe the</p>	<p>Prior to issuance of a grading permit, the owner/operator will hire a qualified biologist to conduct the survey. A copy of the survey results and recommendations shall be submitted to the Kern County Planning Department. Appropriate notes shall be included on the grading plan.</p>	<p>Kern County Planning Department</p> <p>Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>nesting hawks for stressed/detrimental behavior that threatens nest success. If there appears to be a threat to nesting success resulting from construction activity within the 0.25-mile buffer, work shall be halted until the hawk's behavior normalizes. The most obvious and dangerous "detrimental behavior" occurs when the hawk is scared off the nest. If that occurs (even momentarily), construction shall stop immediately within 0.25 mile of the nest for at least 1 hour after the hawk returns to the nest and her behavior appears to normalize. When construction resumes, if the hawk is scared off the nest a second time, construction will be prohibited within that 0.25-mile zone until having consulted with DFG to discuss further options. Other stressors/detrimental behaviors that the monitor shall look for include the hawk being off the eggs while still on the nest (e.g., circling/walking around the nest and calling). The biological monitor shall also watch for signs that the hawks are paying attention to construction instead of behaving normally (e.g., sitting calmly on the nest, watching out for or scaring away potential predators).</p> <p>Justification: Project impacts to special-status species and their habitats would be mitigated through implementation of established DFG survey and avoidance measures.</p>	<p>The following shall be included as note on all grading permits. The owner/operator will hire a qualified biologist to monitor the nesting hawks, determine threats to nesting success and if warranted consult with the DFG to identify options for disturbance avoidance. The name and contact information for the biological monitor shall be submitted to the Planning Department before commencement of construction activities.</p>				
4.3-5	<p>Preconstruction surveys shall be conducted by a qualified biologist within the work area and a 250-foot buffer to locate active burrowing owl burrows. The Project will provide a qualified biologist to conduct these preconstruction surveys for active burrows according to DFG guidelines. The preconstruction surveys will include a nesting season survey and a wintering season survey the season immediately</p>	<p>MM. 4.3-5 Prior to issuance of any and all grading permits The owner/operator will hire a qualified biologist to conduct the survey, and provide copies of the study</p>	<p>Kern County Planning Department Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>preceding construction. If no burrowing owls are detected, no further mitigation is required.</p> <p>Justification: Project impacts to special-status species and their habitats would be mitigated through implementation of established DFG survey and avoidance measures.</p>	<p>results to the Kern County Planning Department Requirements shall be included as notes on the grading plan</p>				
4.3-6	<p>If burrowing owls are detected within 250 feet of proposed construction within the Project area, the following measures will be implemented.</p> <ul style="list-style-type: none"> • Occupied burrows will not be disturbed during the nesting season (February 1–August 31). • When destruction of occupied burrows is unavoidable during the non-nesting season (September 1–January 31), unsuitable burrows will be enhanced (enlarged or cleared of debris). <p>If owls must be moved away from the Project area, passive relocation techniques (e.g., installing one-way doors at burrow entrances) will be used instead of trapping. At least 1 week will be necessary to accomplish passive relocation and allow owls to acclimate to alternate burrows.</p> <ul style="list-style-type: none"> • If avoidance is the preferred method of dealing with potential impacts, no disturbance should occur within 160 feet of occupied burrows during the non-breeding season (September 1–January 31) or within 250 feet during the breeding season. <p>Justification: Project impacts to special-status species and their habitats would be mitigated through implementation of established DFG survey and avoidance measures.</p>	<p>MM. 4.3-6 Prior to issuance of any and all grading permits The owner/operator will hire a qualified biologist to determine and implement the best avoidance/relocation measures. and provide copies of the study results to the Kern County Planning Department and Requirements shall be included as notes on the grading plan</p>	<p>Kern County Planning Department</p> <p>Kern County Engineering and Survey Services</p>			
4.3-7	<p>A qualified biologist shall conduct preconstruction</p>	<p>MM. 4.3-7 Prior to</p>	<p>Kern County</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
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	<p>surveys each construction year to locate all active nest sites within 0.25 mile of the Project area.</p> <p>Direct disturbance, including activities in the immediate vicinity of active nests, shall be avoided during the breeding season (March through August) where feasible. No-disturbance buffers shall be established around each active nest to avoid disturbing nesting birds where feasible. The size and configuration of buffers shall be based on the proximity of active nests to construction, existing disturbance levels, topography, the sensitivity of the species, and other factors, and shall be established through coordination with DFG representatives on a case-by-case basis. Where it is determined to be infeasible to schedule construction to avoid constructing within 300 feet of an active nest, the Project shall monitor nest status to determine whether construction is disturbing nesting activities. If it is determined by a qualified biologist that the construction is adversely affecting nesting activities, construction within 300 feet shall cease pending completion of nesting activities.</p> <p>Justification: Project impacts to special-status species and their habitats would be mitigated through implementation of established DFG survey and avoidance measures.</p>	<p>issuance of any and all grading permits The owner/operator will hire a qualified biologist to conduct the survey, coordinate with DFG and implement the approved avoidance measure. copies of the study results to the Kern County Planning Department and Requirements shall be included as notes on the grading plan</p>	<p>Planning Department</p> <p>Kern County Engineering and Survey Services</p>			
4.4	Cultural Resources					
4.4-1	<p>Prior ground disturbance of the areas of the Project, identified on Figure 4.4-1 as not fully evaluated, a cultural resource survey and a written report shall be prepared. The report shall include findings and recommendations, if any, for further work to ensure protection of any discoveries. The report shall be</p>	<p>MM. 4.4-1 Prior to issuance of any and all grading permits The owner/operator will hire a qualified cultural resource analyst to</p>	<p>Kern County Planning Department</p> <p>Los Angeles County Planning Department</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>submitted to the Kern County Planning Department, the Los Angeles County Planning Department, and the tribes identified by the Native American Heritage Commission for SB 18 consultation. All recommendations shall be incorporated into grading and construction plans.</p> <p>Justification: Section 15064.5 of the State CEQA Guidelines gives the criteria and procedures for determining significant historical resources and the potential effects of a project on such resources.</p>	<p>conduct the survey and write the report. A copy of the report shall be provided to the Kern County Planning Department, LA County Planning Department and Native American Heritage Commission. Any Requirements shall be included as notes on the grading plan</p>	<p>Department Native American Heritage Commission Kern County Engineering and Survey Services</p>			
4.4-2	<p>A certified archaeologist shall monitor all Project-related initial ground-disturbing activities along the proposed Phase 2 delivery pipeline alignment between Avenue A and Avenue D. All discoveries shall be documented, and a report of findings prepared and submitted to the Los Angeles County Planning Department and the tribes identified by the Native American Heritage Commission for SB 18 consultation. Archaeological deposits shall be further evaluated for significance according to California Register criteria. Recovery of significant archaeological deposits shall occur using standard archaeological techniques, including but not limited to, manual or mechanical excavations, monitoring, soils testing, photography, mapping, or drawing to adequately recover the scientifically consequential information from and about the archaeological resource. An adequate sample of cultural materials shall be recovered. The applicant shall arrange for permanent curation of artifacts and documents in a repository consistent with the National Park Service guidelines for the curation of archaeological</p>	<p>The owner/operator will hire a qualified archaeologist to monitor initial ground disturbing activities, document all discoveries, prepare a report of findings, recover and archive cultural materials as detailed in the MM 4.4-2. A copy of the final report and any correspondence with the LA County Planning Department shall be submitted to the Kern County Planning Department.</p>	<p>Kern County Planning Department Los Angeles County Planning Department Native American Heritage Commission Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
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	collections (36CFR79). Justification: Section 15064.5 9a)(3) of the State CEQA Guidelines provides protection for paleontologic resources by requiring that they be identified and mitigated as historical resources under CEQA.					
4.4-3	<p>If buried cultural resources are uncovered during construction, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource.</p> <p>In the event of an accidental discovery of any human remains in a location other than a dedicated cemetery, the steps and procedures specified in Health and Safety Code 7050.5, State CEQA Guidelines 15064.5(e), and Public Resources Code 5097.98 shall be implemented.</p> <p>Justification: According to CEQA, archaeological sites known to contain human remains shall be treated in accordance with the provisions of State Health and Safety Code Section 7050.5." The protection of human remains is also ensured by California Public Resources Codes, Sections 5097.94, 5097.98 and 5097.99.</p>	MM. 4.4-3 shall be included as a note on any and all grading permits The owner/operator will hire a qualified archaeologist to visit the sites of discovery and appropriately process significant archaeological resources	<p>Kern County Planning Department</p> <p>Kern County Engineering and Survey Services</p>			
4.4.4	A qualified paleontologic monitor shall monitor excavation in areas identified as likely to contain paleontologic resources. These areas are defined as all areas within the proposed Project area where planned excavation would exceed depths of 5 feet. The drilling of wells is excluded from this provision, because mechanical drilling does not allow for fossil recovery. This monitoring shall be required along the proposed alignment of the Phase 2 delivery pipeline as well as	MM. 4.4-4 shall be included as a note on any and all grading permits The owner/operator will hire a qualified paleontologic monitor to monitor excavations in areas identified as	<p>Kern County Planning Department</p> <p>Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>areas within the recharge and recovery basins that would involve ground disturbance to a depth below 5 feet. The qualified paleontologic monitor shall retain the option to reduce monitoring if, in his or her professional opinion, sediments being monitored are previously disturbed. Monitoring may also be reduced if the potentially fossiliferous units, previously described, are not found to be present or, if present, are determined by qualified paleontologic personnel to have low potential to contain fossil resources.</p> <p>The monitor shall be equipped to salvage fossils and samples of sediments as they are unearthed to avoid construction delays and shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Because the older Quaternary deposits yield small fossils specimens likely to go unnoticed during typical large scale paleontological monitoring, matrix samples shall be collected and processed to determine the potential for small fossils to be recovered prior to substantial excavations in those sediments. If this sampling indicates these units do possess small fossils, a matrix sample of up to 6,000 pounds shall be collected at various locations, to be specified by the paleontologist, within the construction area. These matrix samples shall also be processed for small fossils.</p> <p>Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments, to recover small invertebrates and vertebrates. Specimens shall be curated into a professional, accredited museum repository with permanent retrievable storage.</p> <p>A report of findings, with an appended itemized</p>	<p>likely to contain paleontologic resources, and as needed salvage and preserve any resources that may be encountered.</p>				

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>inventory of specimens, shall be prepared. The report and inventory, when submitted to the Kern County Planning Department and Los Angeles County Planning Department, will signify completion of the program to mitigate impacts to paleontologic resources.</p> <p>Justification: Section 15064.5 9a)(3) of the State CEQA Guidelines provides protection for paleontologic resources by requiring that they be identified and mitigated as historical resources under CEQA.</p>					
4.5	Geology and Soils					
4.5-1	<p>Topsoil materials will be stripped from most areas to be graded, temporarily stockpiled, and reapplied as a top-dressing once final grade is attained.</p> <p>Temporary stockpiles will be watered to prevent topsoil loss from wind erosion.</p> <p>For soils having little organic matter in the surface layer and little evidence of soil profile development (i.e., similar texture between surface soil and substrate at depth), this measure will not need to be applied because it would provide little or no benefit. This determination will be made during preparation of a SWPPP.</p> <p>Justification: Salvage and reapplication of topsoil during construction is a standard condition of Stormwater Pollution Prevention Plans (SWPPPs) required for grading permits.</p>	<p>Prior to issuance of a grading permit, The owner/operator will prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). Requirements shall be included as notes on the grading plan</p>	<p>Kern County Planning Department</p> <p>Kern County Engineering and Survey Services</p>			
4.5-2	<p>To control water and wind erosion during construction of the Project, the owner/operator will prepare a Stormwater Pollution Prevention Plan (SWPPP) in</p>	<p>Prior to issuance of a grading permit The owner/operator will</p>	<p>Lahontan Regional Water Quality Control</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Construction Permit. The Lahontan Regional Water Quality Control Board will administer the SWPPP. The SWPPP will prescribe temporary Best Management Practices (BMPs) to control wind and water erosion during and shortly after construction of the Project and permanent BMPs to control erosion and sedimentation once construction is complete. An erosion-control plan shall be prepared and submitted in conjunction with the application for a grading permit from Kern County Engineering and Survey Services Department. The SWPPP shall include:</p> <ul style="list-style-type: none"> • areas where top-dressing will be applied after final grading and location and maintenance of temporary stockpiles, • where and how ephemeral watercourses will be protected from soil erosion and sedimentation; • whether nutrients in post-grading soils in basin bottoms should be supplemented to counter effects of soil disturbance to ensure that agricultural uses in them can continue, so that soils continue to be protected from erosive wind and water; • whether and where berms and pipeline backfill should be artificially revegetated (e.g., hydroseeded) to ensure protection of soils against wind and water; and what performance standards are appropriate for plant cover in this environment to ensure soil protection, including a plant and seed list. • Justification: The National Pollutant Discharge Elimination System (NPDES) General Construction Permit applies to projects that disturb more than 1 acre and requires the preparation and 	<p>prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). Appropriate requirements shall be included as notes on the grading plan</p>	<p>Board Kern County Engineering and Survey Services Department Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	implementation of a SWPPP.					
4.6	Hazards and Hazardous Materials					
4.6-1	<p>Prior to any construction activities, the applicant shall develop and implement a Spill Prevention Control and Countermeasures Plan (SPCCP) to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The plan and methods shall be in conformance with all state and federal water quality regulations.</p> <p>The applicable agency, Kern County Environmental Health Services Department and Los Angeles County Environmental Health Services, shall review the SPCCP before the onset of construction activities. The applicant shall provide for routine inspection of the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained and further ensure that contractors are notified immediately if there is a noncompliance issue and will require compliance.</p> <p>The federal reportable spill quantity for petroleum products, as defined in EPA's CFR (40 CFR 110), is any oil spill that 1) violates applicable water quality standards, 2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or 3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.</p> <p>If a spill is reportable, the contractor's superintendent shall notify the applicant who shall inform the applicable County agency and arrange for the appropriate safety and cleanup crews to ensure the spill</p>	<p>Prior to issuance of a grading permit The owner/operator will prepare and implement a Spill Prevention Control and Countermeasures Plan (SPCCP). Appropriate requirements shall be included as notes on the grading plan</p>	<p>Kern County Environmental Health Services Department</p> <p>Regional Water Quality Control Board</p> <p>Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>prevention plan is followed. A written description of reportable releases must be submitted to the Regional Water Quality Control Board and the applicable County agencies. This submittal must include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.</p> <p>If a spill has occurred, the applicant shall coordinate with responsible regulatory agencies to implement measures to control and abate contamination.</p> <p>Justification: If hazardous materials spills could occur within the project area, development and implementation of a Spill Prevention Control and Countermeasures Plan (SPCCP) is required for compliance with state and federal hazardous waste control regulations.</p>					

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
4.6-2	<p>Prior to application of water to the recharge basins, the Project owner/operator will notify Skyotee Ranch Airport and the Flight Safety Office for the R-2508 Air Complex of anticipated recharge operations.</p> <p>Justification: Recharge activities could result in attracting birds that could be a strike hazard for low-level military flights from Edwards Air Force Base and for private aircraft flying into/out from Skyotee Ranch Airport. Notification of these facilities is required to avoid strike incidents.</p>	<p>The owner/operator will monitor bird activity during recharge activities and notify Skyotee Ranch Airport and the Flight Safety Office for the R-2508 Air Complex if a potential flight hazard develops. Copies of any such correspondence shall be submitted to the Kern County Planning Department</p>	<p>Kern County Planning Department</p>			
4.6-3	<p>Whenever water is present in the recharge basins, the Project operator will monitor the basins for bird activity. Monitoring will be particularly important during initial application of water because prey animals fleeing the advancing water could attract predatory bird species. Additionally, the Project operator will maintain routine coordination with the local Audubon Society chapters in Bakersfield and Ridgecrest regarding when and where bird migration activity should be expected during periods of recharge activity.</p> <p>If large birds (e.g., geese, gulls, pelicans) or large flocks of small birds (e.g., starlings, blackbirds) are observed, the Skyotee Ranch Airport and the Flight Safety Office for the R-2508 Air Complex will be notified of the potential hazard immediately.</p> <p>Justification: Recharge activities could result in attracting birds that could be a strike hazard for low-level military flights from Edwards Air Force Base and for private aircraft flying into/out from Skyotee Ranch</p>	<p>The owner/operator will monitor bird activity during recharge activities and notify Skyotee Ranch Airport and the Flight Safety Office for the R-2508 Air Complex if a potential flight hazard develops. Copies of any such correspondence shall be submitted to the Kern County Planning Department</p>	<p>Kern County Planning Department</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	Airport. Notification of these facilities of the presence of birds in the area is required to avoid bird-aircraft strike incidents.					
4.6-4	<p>If flocks of large birds (e.g., geese, gulls, pelicans) or large flocks of small birds (e.g., starlings, blackbirds) are observed, the Applicant or the Project operator will harass the birds through legal means to discourage use of the recharge basins, such as use of pyrotechnic equipment or depredation permitted by the California Department of Fish and Game (DFG).</p> <p>Justification: Harassment of birds in the recharge basin area may be necessary to prevent bird-aircraft strike incidents.</p>	<p>Prior to operation the owner/operator and after consultation with the DFG, the owner/operator shall provide in writing to the Kern County Planning Department a list of the approved methods they will be using</p>	<p>Kern County Planning Department</p>			
4.6-5	<p>Prior to the issuance of a grading permit, the applicant shall enter into an agreement with an existing or new Mosquito Abatement District. The agreement will consist of a Project-specific mosquito abatement program that would allow the existing or new Mosquito Abatement District to access the Project site and would also include quantitative abatement thresholds and financial compensation requirements for Mosquito Abatement District activities, if necessary. The agreement shall be to the satisfaction of the Kern County Environmental Health Services Department.</p> <p>The Mosquito Abatement District would monitor mosquito larvae production in the recharge basins, drainages, and distribution. Larvae populations would be tracked using methods and thresholds approved by the Mosquito Abatement District, and suppression measures would be employed when thresholds are exceeded.</p> <p>Justification: Transmission of mosquito-borne</p>	<p>Prior to the issuance of a grading permit, written evidence of compliance with MM 4.6-5 shall be submitted to the Planning Department</p>	<p>Kern County Environmental Health Services Department Kern County Planning Department</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	diseases resulting from favorable breeding conditions created by a project is a recognized potential hazard.					

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
4.7	Hydrology and Water Quality					
4.7-1	<p>To reduce or eliminate construction-related water quality effects, before onset of any construction activities, the owner/operator or its contractor will obtain coverage under the NPDES General Construction Permit. The owner/operator will be responsible for ensuring that construction activities comply with the conditions in this permit, which will require development of a SWPPP, implementation of BMPs identified in the SWPPP, and monitoring to ensure that effects on water quality are minimized.</p> <p>As part of this process, the owner/operator will implement erosion and sediment control BMPs in areas with potential to drain to surface water. These BMPs will be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented as part of this mitigation measure may include, but are not limited to, the following measures.</p> <ul style="list-style-type: none"> • Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas. • Drainage facilities in downstream offsite areas will be protected from sediment using BMPs acceptable to the Lahontan Regional Water Quality Control Board. <p>The owner/operator or its agent will perform routine inspections of the construction area to verify that the BMPs specified in the SWPPP are properly implemented and maintained. The owner/operator will</p>	<p>Prior to the commencement of grading activities, The owner/operator will obtain coverage under the NPDES General Construction Permit and ensure that construction activities comply with the conditions in this permit. Appropriate notes shall be included on any applicable grading permits.</p>	<p>Lahontan Regional Water Quality Control Board.</p> <p>Kern County Planning Department</p> <p>Kern County Engineering and Survey Services</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>notify its contractors immediately if there is a noncompliance issue and will require compliance.</p> <p>Justification: The National Pollutant Discharge Elimination System (NPDES) General Construction Permit applies to projects that disturb more than 1 acre and requires the preparation and implementation of a SWPPP.</p>					
4.7-2	<p>Prior to any construction activities, the applicant shall develop and implement a Spill Prevention Control and Countermeasures Plan (SPCCP) to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The plan and methods shall be in conformance with all state and federal water quality regulations.</p> <p>The applicable agency, Kern County Environmental Health Services Department and Los Angeles County Environmental Health Services, shall review the SPCCP before the onset of construction activities. The applicant shall provide for routine inspection of the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained and further ensure that contractors are notified immediately if there is a noncompliance issue and will require compliance.</p> <p>The federal reportable spill quantity for petroleum products, as defined in EPA's CFR (40 CFR 110), is any oil spill that 1) violates applicable water quality standards, 2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or 3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining</p>	<p>Prior to issuance of a grading permit The owner/operator will prepare and implement a Spill Prevention Control and Countermeasures Plan (SPCCP). Appropriate requirements shall be included as notes on the grading plan</p>	<p>Kern County Environmental Health Services Department</p> <p>Los Angeles County Environmental Health Service Department</p> <p>Regional Water Quality Control Board</p> <p>Kern County Engineering and Survey Services Department</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>shorelines.</p> <p>If a spill is reportable, the contractor's superintendent shall notify the applicant who shall inform the applicable County agency and arrange for the appropriate safety and cleanup crews to ensure the spill prevention plan is followed. A written description of reportable releases must be submitted to the Regional Water Quality Control Board and the applicable County agencies. This submittal must include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.</p> <p>If a spill has occurred, the applicant shall coordinate with responsible regulatory agencies to implement measures to control and abate contamination.</p> <p>Justification: If hazardous materials spills could occur within the project area, development and implementation of a Spill Prevention Control and Countermeasures Plan (SPCCP) is required for compliance with state and federal hazardous waste control regulations.</p>					
4.7-3	<p>A monitoring committee shall be formed to monitor the impact of operations on groundwater levels and quality and to ensure that adjacent landowners are protected. The monitoring committee would be responsible for development of a detailed monitoring and operational constraints plan and would ensure that it is implemented. The plan shall include the following:</p> <ul style="list-style-type: none"> • monitoring recovery operations to ensure that 10 	<p>Prior to operation evidence of the formation of the monitoring committee shall be submitted to the Kern County Planning Department.</p> <p>The Antelope Valley Water Bank monitoring</p>	<p>Kern County Planning Department</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>percent of the stored water is left behind to help alleviate overdraft;</p> <ul style="list-style-type: none"> • monitoring water quality in recovered water and in groundwater flowing away from the Project to ensure that water quality remains appropriate for designated beneficial uses; • during recharge operations, monitoring water levels in perimeter wells, and shutting down recharge operations in the event that offsite water levels rise to within 20 feet of the ground surface; and • during recovery operations, monitoring water levels in offsite wells and adjusting operations, providing compensation, or providing an alternate source of water in the event that water levels drop to unacceptable levels in offsite wells as a consequence of operations. • Composition of the monitoring committee shall include the following representatives: <ul style="list-style-type: none"> - the owner/operator, - the Rosamond Community Service District, - the Antelope Valley State Water Project Contractors Association (a joint powers authority including AVEK, Palmdale Water District, and Littlerock Creek Irrigation District), - neighboring landowners and/or other selected representatives, and - Kern and Los Angeles County representatives. <p>The monitoring committee would meet monthly during recharge/recovery periods and semiannually during other periods when the Project is not in operation. Any reports generated by or on behalf of the Monitoring</p>	<p>Water Bank monitoring committee shall provide a written report to the Kern County Planning Department and Kern County Environmental Health Services Department by December 31 of each calendar year after commencing recharge and recovery activities of their plans, recommendations and actions.</p>				

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>Committee will be provided to the Lahontan Regional Water Quality Control Board.</p> <p>Justification: Monitoring of groundwater levels and quality is required to ensure that operations do not adversely affect nearby property owners and for compliance with antidegradation requirements of the Clean Water Act and Porter-Cologne Water Quality Control Act..</p>					
4.7-4	<p>Prior to receiving a grading permit, proposals to construct berms, levees, or other facilities along the northern (upslope) boundary of any of the recharge basins shall be presented to the Kern County Engineering and Survey Services Department for review and approval</p> <p>Justification: Project facilities cannot redirect stormwater.</p>	<p>Prior to issuance of a grading permit, written approval of the plan from Engineering and Survey Services (ESS) shall be submitted to Kern County Planning. Specific designs and location, as approved by ESS, shall be reflected on any applicable grading plan.</p>	<p>Kern County Engineering and Survey Services Department</p> <p>Kern County Planning Department</p>			
4.7-5	<p>To ensure that the installation and operations of recovery wells do not adversely impact the quality of</p>	<p>Evidence of compliance shall be</p>	<p>Kern County Environmental</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	groundwater, all new recovery water wells shall be drilled under permit with the Kern County Environmental Health Services Department. Justification: Kern County requires permits for groundwater wells.	submitted to the Kern County Planning Department	Health Services Department Kern County Planning			
4.7-6	To ensure that Project operations do not adversely impact the quality of nearby residents' drinking water, the monitoring committee shall offer to sample and analyze water from domestic drinking water wells located within 1 mile of the recharge basins. In order to assess the results of these analyses, samples would need to be collected both before and after operations begin. The sampling and analysis protocols shall be defined in the monitoring and operational constraints plan. If analytical results reveal that Project operations may adversely affect a resident's drinking water well, then operations will be adjusted to prevent such effect or the owner of the well shall be provided compensation or an alternate source of water in the event that adverse effects do occur. Justification: Project operation could result in localized and temporary effect.	Prior To and During Recharge and Recovery Operations the Antelope Valley Water Bank monitoring committee shall provide a written report to the Kern County Planning Department and Kern County Environmental Health Services Department on any actions taken regarding affected drinking water wells of adjacent property owners	Kern County Planning Department			
4.10	Noise					

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
4.10-1	<p>If residences are present within the threshold distances determined above, the construction contractor will employ noise-reducing construction practices so that noise from construction does not exceed Kern County noise-level standards at adjacent residences. Measures to be implemented may include the following:</p> <ul style="list-style-type: none"> • providing construction equipment with sound-control devices no less effective than those provided on the original equipment (no equipment will have an unmuffled exhaust); • restricting construction to beyond 2,800 feet from residences during nighttime hours (10 p.m. to 7 a.m.) and beyond 1,200 feet at all other times; and • in the event that construction activities occur close to sensitive noise receptors, implementing appropriate additional noise mitigation measures, including but not limited to: <ul style="list-style-type: none"> – changing the location of stationary construction equipment, – shutting off idling equipment, – rescheduling construction activity, – notifying adjacent residents in advance of construction work, and – installing acoustic barriers around stationary construction noise sources. <p>Justification: Compliance with noise level standards of the Kern County General Plan and Willow Springs Specific Plan is required</p>	<p>Prior to issuance of grading permits, the owner/operator will determine if there is any residences that could be affected, identify and employ noise-reducing construction practices so that noise from construction does not exceed Kern County noise-level standards at adjacent residences. The list of selected measures shall be submitted to the Planning Department and Environmental Health Services Department for review and approval. Implementation of the approved measures shall be through notes on the grading plan.</p>	<p>Kern County Planning Department</p> <p>Kern County Environmental Health Services</p>			
4.10-2	<p>If sensitive noise receptors are present within the threshold distances cited above, the drilling contractor will employ noise-reducing construction practices so that noise from drilling does not exceed Kern County</p>	<p>The owner/operator will employ noise-reducing construction practices so that noise</p>	<p>Kern County Planning Department</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>noise-level standards at adjacent residences. Measures to be implemented may include the following:</p> <ul style="list-style-type: none"> • restricting well drilling to beyond 1,800 feet from residences during nighttime hours (10 p.m. to 7 a.m.), and 700 feet during daytime hours; or • using sound attenuation enclosures around noise-generating elements of the drilling operation. <p>Justification: Compliance with noise level standards of the Kern County General Plan and Willow Springs Specific Plan is required</p>	<p>from drilling does not exceed Kern County noise-level standards at adjacent residences.</p>				
4.10-3	<p>If wells are to be located within the distance and noise thresholds cited above for residences, the owner/operator will employ noise reducing practices so that noise from well operations does not exceed Kern County noise-level standards at adjacent residences. Measures to be implemented may include:</p> <ul style="list-style-type: none"> • restricting well installations to beyond 1,600 feet from residences, where feasible; • using electric pumps when feasible where well installations are within 1,600 feet of residences; and • using sound attenuation enclosures designed to achieve noise reductions sufficient to comply with Kern County standards for noise-generating elements of the well operation when no other feasible control method is available. <p>Justification: Compliance with noise level standards of the Kern County General Plan and Willow Springs Specific Plan is required</p>	<p>During Recovery Operations The owner/operator will employ noise-reducing practices so that noise from well operations does not exceed Kern County noise-level standards</p>	<p>Kern County Planning Department</p>			
4.10-4	<p>If the noise and distance thresholds cited above are to be exceeded, the owner/operator will employ noise-</p>	<p>During Recovery Operations The</p>	<p>Kern County Planning</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>reducing practices so that noise from lift station operations does not exceed Kern County noise-level standards at adjacent residences. Measures to be implemented may include:</p> <ul style="list-style-type: none"> • restricting lift station installations to beyond 2,800 feet from residences, where feasible; • using electric pumps where lift station installations are within 2,800 feet of residences; and • using sound attenuation enclosures designed to achieve noise reductions sufficient to comply with Kern County standards for noise-generating elements of the lift station operation when no other feasible control method is available. <p>Justification: Compliance with noise level standards of the Kern County General Plan and Willow Springs Specific Plan is required</p>	<p>owner/operator will employ noise-reducing practices so that noise from lift station operations does not exceed Kern County noise-level standards at adjacent residences.</p>	<p>Department</p>			
4.12	TRANSPORTATION AND TRAFFIC					
4.12-1	<p>The owner/operator will require the construction contractor to prepare and implement a traffic safety plan before the onset of the construction phase of the Project. The traffic safety plan shall be reviewed and approved by the Kern County Roads Department for affected roads in Kern County and the Los Angeles County Public Works Department for affected roads in Los Angeles County. The plan shall address:</p> <ul style="list-style-type: none"> • appropriate vehicle size and speed, • travel routes, • detour or lane-closure plans, • flagperson requirements, • locations of turnouts to be constructed, • coordination with law enforcement and fire control 	<p>Prior to Construction The owner/operator will prepare and implement a traffic safety plan before the onset of the construction. Copies of the plan shall be reviewed and approved by the applicable transportation agency. In the case of Avenue A, both counties shall review the plan.</p>	<p>Kern County Roads Department Los Angeles County Public Works Department</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>agencies,</p> <ul style="list-style-type: none"> • coordination with California Department of Transportation personnel (for work affecting state road rights-of-way), • emergency access to ensure public safety, and • traffic and speed limit signs. <p>Justification: The project does not propose any changes to existing roads that would constitute a traffic hazard. However, heavy equipment traffic could create conditions that would be incompatible with general purpose traffic in the area. A traffic safety plan is therefore required.</p>					
4.12-2	<p>Before beginning construction activities, the applicant or the construction contractor shall contact local emergency-response agencies (Kern County and Los Angeles County Sheriff and Fire Departments) to provide information on the timing and location of any traffic control measures required to complete the Project. Emergency-response agencies would be notified of any change to traffic control measures as the construction phases proceed, so that emergency-response providers can modify their response routes to ensure that response time would not be affected.</p> <p>Justification: The project does not propose any changes to existing roads that would constitute a traffic hazard. However, heavy equipment traffic could cause minor delays.</p>	<p>Prior to Construction</p> <p>The owner/operator shall contact local emergency-response agencies (Kern County and Los Angeles County Sheriff and Fire Departments) to provide information on the timing and location of any traffic control measures required to complete the Project. Written evidence of compliance with this MM shall be submitted to the Kern County Planning Department</p>	<p>Kern County and Los Angeles County Sheriff and Fire Departments</p> <p>Kern County Planning</p>			
4.12-3	<p>Prior to issuance of a grading permit, the applicant shall submit a plot plan detailing the location of</p>	<p>Prior to issuance of a grading permit, the</p>	<p>Kern County Planning</p>			

No.	Mitigation Measure	Implementation	Responsible Monitoring Agency	Steps to Compliance		
				Initials	Date	Remarks
	<p>buildings to be used for operational staff. The plan shall have a minimum of 10 parking spaces and shall comply with Chapter 19.82 (Off-Street Parking) of the Kern County Zoning Ordinance.</p> <p>Justification: Chapter 19.82 (Off-Street Parking) of the Kern County Zoning Ordinance requires adequate parking for operational staff.</p>	<p>applicant shall submit a plot plan detailing the location of buildings to be used for operational staff. The plan shall have a minimum of 10 parking spaces and shall comply with Chapter 19.82 (Off-Street Parking) of the Kern County Zoning Ordinance.</p>	<p>Department</p>			

PROPERTY DESCRIPTION

EXHIBIT "B"

COUNTY

ASSESSOR PARCEL NUMBER (APN)

Kern
Kern
Kern
Kern
Kern
Kern
Kern
Kern
Kern

APN 261-196-09
APN 359-041-01
APN 359-041-12
APN 261-196-11
APN 359-041-11
APN 359-041-17
APN 359-041-18
APN 261-196-04
APN 261-196-02
APN 261-196-03

EXHIBIT "B"

(1 of 1)



APPENDIX B

Air Quality and GHG Assessment

Prepared by

Illingworth & Rodkin

June 2018

WILLOW SPRINGS WATER BANK *PROJECT*
CONSTRUCTION AND OPERATIONAL
EMISSIONS ASSESSMENT

Antelope Valley, California

May 24, 2018

Prepared for:

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Project: 18-042

Introduction

This report computes air pollutant and greenhouse gas emissions associated with the Antelope Valley Water Bank project in Kern County, the Mojave Desert Air Basin and Antelope Valley. The project is located within the Antelope Valley that lies within the Mojave Desert Air Basin. The project would require truck traffic for deliveries of materials that would originate in the Mojave Desert Air Quality Management District and the Kern County Air Pollution Control District.

Methodology

Calculations, methodology, and assumptions used to estimate the air pollutant emissions from construction and operation of the proposed project are described below. The primary categories of emission sources assessed were:

- Off-Road Construction equipment exhaust and fugitive dust;
- On road delivery vehicle exhaust and fugitive dust, which and
- Operation emissions from operating and maintaining the proposed facilities.

The analysis is based on the following likely phases of project construction; 2019 Construction Phase; 2020 Construction Phase: 2021 Construction Phase: 2011 Construction Phase: and Operations, these phases are described in detail below.

The CalEEMod version 2016 3.1 and EMFAC2017 version 1.0.7 models were utilized to calculate vehicle exhaust emissions. Fugitive dust (PM10 and PM2.5). Construction (but not operation) of the project would not result in exceedance of emissions significance thresholds for PM10, NOX, and ROG. Air emissions calculations were also performed for both before and after the incorporation of use of emission reducing measures typically required by Kern County for NOX (use of off-road equipment with Tier I or Tier II engines) and PM10 (watering program for dust control).

Thresholds of Significance

Kern County Air Pollution Control District

Projects that produce emissions that exceed the following thresholds shall be considered significant for a project level and/or cumulatively for impacts to air quality. The following thresholds are defined for purposes of determining cumulative effects as the baseline for "considerable". Projects located in the Kern County Air Pollution Control District (KCAPCD) will be subject to the following significance thresholds specified.

- conflict with or obstruct implementation of the applicable air quality plan;
- violate any air quality standard as adopted in (c)i, (c)ii, or as established by EPA or air district or contribute substantially to an existing or projected air quality violation; or

- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Specifically, if implementation of the project would exceed any of the following adopted thresholds
 - Kern County Air Pollution Control District:

Operational and Area Sources

- Reactive Organic Gases (ROG) 25 tons per year.
- Oxides of Nitrogen (NOx) 25 tons per year.
- Particulate Matter (PM10) 15 tons per year.

Stationary Sources - determined by District Rules

- 25 tons per year.
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Antelope Valley Air Quality Management District

Antelope Valley Air Quality Management District (AVAQMD) has CEQA thresholds similar to KCAPCD. AVAQMD considers a project to have a significant impact if it:

- Generates total emissions (direct and indirect) exceeding the following thresholds:
 - CO 100 tons per year;
 - VOCs 25 tons per year;
 - NOx 25 tons per year;
 - SOx 25 tons per year;
 - particulate matter (PM10) 15 tons per year; and/or
- generates a violation of any ambient air quality standard when added to the local background; and/or,
- does not conform with the applicable attainment or maintenance plan(s); and/or
- exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 1 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 0.1.

Equipment and Vehicle Exhaust Emissions

The unmitigated annual emissions for the total off-road equipment exhaust are shown in Table 1, and the daily emissions are shown in Table 2. The results for daily emissions provide the total maximum emissions that would occur if all pieces of equipment were used on the same day. This is a conservative estimate and, therefore, represents a worst-case scenario. In actuality, it is not likely that all equipment would be working at the same time, and, therefore, emissions would likely be lower than this worst-case scenario. As shown in Table 1 and 2 there would be no exceedance of the thresholds of significance established by Antelope Valley APCD or the Eastern Kern County APCD.

Off-Road Equipment

For the purpose of this project, off-road equipment is defined as equipment powered by an EPA-defined non-road engine. The types of off-road equipment that would be used in the project and

the worst-case scenario for the quantity, activity, and horsepower are shown in Table 3 through 5. The off-road equipment exhaust emissions were calculated using CalEEMod using the projected equipment activity and construction schedules. CalEEMod also provided emissions associated with worker travel. Travel associated with trucks delivering materials including vendor truck trips were computed separately using the EMFAC2017 model.

On-Road Vehicles and Trucks

CalEEMod was used for project construction personnel commuting to the project site and EMFAC 2017 was used to generate emission factors that were applied to the estimated delivery vehicle miles traveled for the project and operational emissions. The following assumptions were made:

- Construction works would travel 25 miles one way or 50 miles round-trip.
- Concrete and concrete blocks required for turnout at the aqueduct and booster pump stations would be trucked from near Mojave (30 miles one way or 60 miles round-trip).
- Equipment and materials required for Turnout and booster pump stations would be trucked from near Bakersfield (70 miles one way or 140 miles round-trip).
- Materials required for pipeline production would be trucked from near Adelanto (80 miles one way or 160 miles round-trip).
- Two on-site Staff personnel would travel 50 miles per day 250 days per year or 12,500 miles per year each;
- Berm Maintenance staff (2 persons) would travel 50 miles per day 250 days per year or 12,500 miles per year each.

Fugitive Dust

Fugitive dust emissions were computed for ground disturbance, excavation and re entrained dust from vehicle travel on roadways. These emissions are for PM10 and PM2.5. Emissions are computed for PM10 and the fraction (0.21) of those emissions were considered PM2.5.

Ground Disturbance

Emission associated with ground disturbance were computed in two ways: (1) general construction disturbances and (2) soil handling from cut and fill operations. Emissions from general construction disturbances are computed based on the amount of daily disturbance using emission factors developed by the Midwest Research Institute (MRI) ¹ that is based on an emission factor of 0.12 tons PM10 per acre disturbed per month. Emissions were corrected for seasonal rainfall and application of control measures. Cut and fill emissions were computed using an emissions factor of 0.0006 pounds per ton of material handled, assuming a soil density of 1.3 tons per cubic yard².

¹ MRI Report, South Coast AQMD Project No. 95040, March 1996, Level 2 Analysis Procedure.

² EPA, AP-42, Section 13.2.4., 11/06.

Re entrained roadway dust emissions for truck travel were computed based on an emission factor of 0.0077 pounds per mile travelled³, assuming an average vehicle weight of 25 tons (35 tons loaded and 15 tons unloaded) and a silt loading of 0.1 grams per square meter of roadway.

Construction Impact Assessment Methods

Construction of the Project would generate off road equipment exhaust emissions of Reactive Organic Gas (ROG), Nitrogen Oxide (NOx), Carbon Monoxide (CO), oxides of sulfur (SOx), Particulate Matter less than 10 microns (PM10), Particulate Matter less than 2.5 microns (PM2.5, and Greenhouse Gass Emissions (CO2e). Construction-related emissions also would include fugitive PM10 dust from site grading and excavation and exhaust emissions resulting from worker commute trips and vendor supply deliveries. Emissions from off-road construction equipment and worker commute trips are estimated based on the California Emissions Estimator Model (CalEEMod) and vendor delivery emissions are estimated using the California Air Resources Board (CARB) Emission Factors (EMFAC2017).

The Project is proposed to be constructed over a four-year period.

1. **2019 Construction Phase** - would involve construction the partial construction of the 84-inch supply pipeline from the California Aqueduct (Los Angeles County portion); a turnout at the California Aqueduct in Los Angeles County; a 48-inch pipeline from the Los Angeles Aqueduct; a partial construction of a booster pump station (on pipeline to Los Angeles Aqueduct); 7 recovery wells in the southwest well field; and a collection pipeline for the southwest wellfield. This work would be accomplished in two counties (Los Angeles and Kern Counties) located in the Mojave Desert Air Basin and covered by two air districts (Eastern Kern Air Pollution Control District and Antelope Valley Air Quality Management District).
2. **2020 Construction Phase** - would involve completion of the construction of the 84-inch supply pipeline from the California Aqueduct (Kern County portion); completion of the construction of the booster pump station (on pipeline to Los Angeles Aqueduct); Construction of a booster pump station at Gaskell and 165th Avenue, a Regulating Reservoir, Regulating Reservoir on Pipeline Los Angeles Aqueduct, partial construction of a recharge basin, ten (10) Recovery Wells (Southwest Wellfield Remainder), and a collection pipeline for the southwest wellfield. This work would be accomplished in Kern County only located in the Mojave Desert Air Basin and covered by the Eastern Kern Air Pollution Control District.
3. **2021 Construction Phase** - would involve completion of the construction of the recharge basin; construction of twenty-eight (28) recovery wells for the Central well field; and a collection pipeline for the Central Wellfield. This work would be accomplished in Kern County only located in the Mojave Desert Air Basin and covered by the Eastern Kern Air Pollution Control District.

³ EPA, AP-42, Section 13.2.1, March 2006, updated 9/2008.

2022 Construction Phase - would involve construction of twenty-six (26) recovery wells (west); a collection pipeline from the twenty-six (26) wells; a connecting pipeline to SNIP (Los Angeles County segments); and a connecting pipeline to SNIP (Kern County segments). This work would be accomplished in two counties (Los Angeles and Kern Counties) located in the Mojave Desert Air Basin and covered by two air districts (Eastern Kern Air Pollution Control District and Antelope Valley Air Quality Management District).

Tables 3 through 5 show the construction phases by year, duration of each phase, equipment needs and daily hours of use for the equipment. Table 6 shows the assumptions used to calculate the on-road fugitive dust and vehicle exhaust emissions, Table 7 shows the assumptions used to calculate the operational emissions for the project.

Operational Emissions

The operation of the facility, once completed, will consist of two on-site staff members conducting maintenance and a berm maintenance crew consisting of a staff of two. Emissions would be minimal.

Table 1 - Unmitigated Annual Emissions

Unmitigated Construction an Operations Emissions (Annual)								
Period	Source	Pollutants (tons/Year)						
		CO	ROG	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO2e ¹
Construction Phase 2019	Fugitive Dust	--	--	--	--	4.714	1.862	--
	Off-Road Equipment Exhaust	8.159	1.251	12.076	0.017	0.18	0.168	1,393
	On-Road Vehicle Exhaust	0.07	0.013	0.446	--	0.011	0.01	105
	Total	8.229	1.264	12.522	0.017	4.905	2.04	1498.4392
Construction Phase 2020	Fugitive Dust	--	--	--	--	1.53	0.724	--
	Off-Road Equipment Exhaust	10.603	1.478	13.013	0.021	0.569	0.626	1,636
	On-Road Vehicle Exhaust	0.014	0.003	0.089	--	0.002	0.002	23
	Total	10.617	1.481	13.102	0.021	2.101	1.352	1659
Construction Phase 2021	Fugitive Dust	--	--	--	--	1.919	0.731	--
	Off-Road Equipment Exhaust	8.879	1.237	11.61	0.022	0.547	0.815	1,776
	On-Road Vehicle Exhaust	0.014	0.002	0.097	--	0.002	0.002	31
	Total	8.893	1.239	11.707	0.022	2.468	1.548	1807
Construction Phase 2022	Fugitive Dust	--	--	--	--	1.964	0.848	--
	Off-Road Equipment Exhaust	7.765	0.498	3.598	0.13	0.496	0.407	1,213
	On-Road Vehicle Exhaust	0.015	0.002	0.097	--	0.002	0.002	31
	Total	7.78	0.5	3.695	0.13	2.462	1.257	1244
Operations	Fugitive Dust	--	--	--	--			--
	Off-Road Equipment Exhaust							
	On-Road Vehicle Exhaust	0.037	0.003	0.112	--	0.0007	0.0006	20
	Total	0.0372528	0.003088	0.111558	0	0.0006752	0.0006446	20
	KCAPMD CEQA		25	25	27	15		
	Antelope Valley APCD CEQA	100	25	25	25	15	12	100,000
	Exceed Threshold 2019 ?	No	No	No	No	No	No	No
	Exceed Threshold 2020 ?	No	No	No	No	No	No	No
	Exceed Threshold 2021 ?	No	No	No	No	No	No	No
	Exceed Threshold 2022 ?	No	No	No	No	No	No	No
	Exceed Threshold Operations ?	No	No	No	No	No	No	No

¹ - Metric Tonne

Table 2 - Unmitigated Daily Emissions

Unmitigated Construction an Operations Emissions Daily)								
Period	Source	Pollutants (lb/day)						
		CO	ROG	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO2e
Construction Phase 2019	Fugitives Dust	--	--	--	--	37.712	14.896	--
	Off-Road Equipment Exhaust	65.272	10.008	96.608	0.136	1.44	1.344	11,148
	On-Road Vehicle Exhaust	0.56	0.104	3.568	--	0.088	0.08	840
	Total	65.832	10.112	100.176	0.136	1.528	1.424	11,988
Construction Phase 2020	Fugitive Dust	--	--	--	--	12.24	5.792	--
	Off-Road Equipment Exhaust	84.824	11.824	104.104	0.168	4.552	5.008	13,088
	On-Road Vehicle Exhaust	0.112	0.024	0.712	--	0.016	0.016	184
	Total	84.936	11.848	104.816	0.168	4.568	5.024	13,272
Construction Phase 2021	Fugitive Dust	--	--	--	--	15.352	5.848	--
	Off-Road Equipment Exhaust	71.032	9.896	92.88	0.176	4.376	6.52	14,208
	On-Road Vehicle Exhaust	0.112	0.016	0.776	--	0.016	0.016	248
	Total	71.144	9.912	93.656	0.176	4.392	6.536	14,456
Construction Phase 2022	Fugitive Dust	--	--	--	--	15.712	6.784	--
	Off-Road Equipment Exhaust	62.12	3.984	28.784	1.04	3.968	3.256	9,704
	On-Road Vehicle Exhaust	0.12	0.016	0.776	--	0.016	0.016	248
	Total	62.24	4	29.56	1.04	3.984	3.272	9,952
Operations	Fugitive Dust	--	--	--	--			--
	Off-Road Equipment Exhaust	--	--	--	--	--	--	--
	On-Road Vehicle Exhaust	0.2980223	0.0247039	0.8924642	--	0.0054012	0.0051568	160
	Total	0.2980223	0.0247039	0.8924642	0	0.0054012	0.0051568	160
	KCAPMD CEQA		137	137				
	Antelope Valley APCD CEQA	548	137	137	137	82	65	548,000
	Exceed Threshold 2019 ?	No	No	No	No	No	No	No
	Exceed Threshold 2020 ?	No	No	No	No	No	No	No
	Exceed Threshold 2021 ?	No	No	No	No	No	No	No
	Exceed Threshold 2022 ?	No	No	No	No	No	No	No
	Exceed Threshold Operations ?	No	No	No	No	No	No	No

Table 3 – Construction Schedule for 2019

2019									
Equipment	Estimated Horsepower	Quantity	Days per Piece of Equipment	Duration of Use (Hrs/Day)	Equipment	Estimated Horsepower	Quantity	Days per Piece of Equipment	Duration of Use (Hrs/Day)
84" Supply Pipeline from CA Aqueduct (Part 1 of 2)					Booster Pump Station (on Pipeline to LA Aqueduct) (Part 1 of 1)				
Crane	190	1	235	2	Crane	190	1	250	6
Hydraulic Excavator	180	1	235	6	Hydraulic Excavator	180	1	250	6
Grader	174	1	235	6	Grader	174	1	250	6
Off-Highway Truck	479	1	235	4	Off-Highway Truck	479	1	250	4
Water Trucks	200	2	235	4	Water Truck	200	1	250	4
Belly Scraper	313	1	235	4	Belly Scraper	313	1	250	4
Wheeled Loaders	165	2	235	8	Wheeled Loaders	165	1	250	8
Skip Loader	88	1	235	3	Roller	114	1	250	3
Backhoe	108	1	235	3	Backhoes	108	2	250	5
Turnout at CA Aqueduct					Skip Loader	88	1	250	1
Crane	190	1	195	6	Recovery Wells (7) Southwest Wellfield (per Flatiron)				
Hydraulic Excavator	180	1	195	6	Drill Rig	500	1	35	24
Backhoe	108	1	195	5	Hydraulic Excavator	180	1	175	6
Roller Compactor	114	1	195	4	Grader	174	1	175	6
Wheeled Loader	165	1	195	6	Off-Highway Truck	479	1	175	4
Water Truck	200	1	195	4	Roller	114	1	175	1
48" Pipeline from LA Aqueduct					Skip Loader	88	1	175	1
Crane	190	1	75	2	Wheeled Loader	313	1	175	1
Hydraulic Excavator	180	1	75	6	Water Truck	200	1	175	1
Grader	174	1	75	6	Test Pump	300	1	18	24
Off-Highway Truck	479	1	75	4	Collection Pipeline for Southwest Wellfield (Flatiron)				
Water Trucks	200	2	75	4	Crane	190	1	55	2
Belly Scraper	313	1	75	4	Hydraulic Excavator	180	1	55	6
Wheeled Loaders	165	2	75	8	Grader	174	1	55	6
Skip Loader	88	1	75	3	Off-Highway Truck	479	1	55	4
Backhoe	108	1	75	3	Water Trucks	200	2	55	4
					Belly Scraper	313	1	55	4
					Wheeled Loaders	165	2	55	8
					Skip Loader	88	1	55	3
					Backhoe	108	1	55	3

Table 4 Construction Schedule for 2020

2020									
Equipment	Estimated Horsepower	Quantity	Days per Piece of Equipment	Duration of Use (Hrs/Day)	Equipment	Estimated Horsepower	Quantity	Days per Piece of Equipment	Duration of Use (Hrs/Day)
84" Supply Pipeline from CA Aqueduct (Part 2 of 2)					Booster Pump Station (on Pipeline from LA Aqueduct)(Part 2of2)				
Crane	190	1	90	2	Crane	190	1	250	6
Hydraulic Excavator	180	1	90	6	Hydraulic Excavator	180	1	250	6
Grader	174	1	90	6	Grader	174	1	250	6
Off-Highway Truck	479	1	90	4	Off-Highway Truck	479	1	250	4
Water Trucks	200	2	90	4	Water Truck	200	1	250	4
Belly Scraper	313	1	90	4	Belly Scraper	313	1	250	4
Wheeled Loaders	165	2	90	8	Wheeled Loaders	165	1	250	8
Skip Loader	88	1	90	3	Roller	114	1	250	3
Backhoe	108	1	90	3	Backhoes	108	2	250	5
Booster Pump Station at Gaskell/165th					Skip Loader	88	1	250	1
Crane	190	1	250	6	Regulating Reservoir on Pipeline LA Aqueduct				
Hydraulic Excavator	180	1	250	6	Loader/Backhoe	108	3	65	8
Grader	174	1	250	6	Recharge Basins (Part 1of 2)				
Off-Highway Truck	479	1	250	4	Loader/Backhoe	108	4	250	8
Water Truck	200	1	250	4	Recovery Wells (10) (Southwest Wellfield Remainder)				
Belly Scraper	313	1	250	4	Drill Rig	500	1	50	24
Wheeled Loaders	165	1	250	8	Hydraulic Excavator	180	1	250	6
Roller	114	1	250	3	Grader	174	1	250	6
Backhoes	108	2	250	5	Off-Highway Truck	479	1	250	4
Skip Loader	88	1	250	1	Roller	114	1	250	1
Regulating Reservoir					Skip Loader	88	1	250	1
Loaders/Backhoe	108	3	125	8	Wheeled Loader	313	1	250	1
					Water Truck	200	1	250	1
					Test Pump	300	1	25	24
					Collection Pipeline for Southwest Wellfield				
					Crane	190	1	55	2
					Hydraulic Excavator	180	1	55	6
					Grader	174	1	55	6
					Off-Highway Truck	479	1	55	4
					Water Trucks	200	2	55	4
					Belly Scraper	313	1	55	4
					Wheeled Loaders	165	2	55	8
					Skip Loader	88	1	55	3
					Backhoe	108	1	55	3

Table 5 Construction Schedule for 2022 and 2023

2022					2023				
Equipment	Estimated Horsepower	Quantity	Days per Piece of Equipment	Duration of Use (Hrs/Day)	Equipment	Estimated Horsepower	Quantity	Days per Piece of Equipment	Duration of Use (Hrs/Day)
Recovery Wells (26) West					Recharge Basins (Part 2 of 2)				
Drill Rig	500	3	47	24	Loader/Backhoe	108	4	250	8
Hydraulic Excavator	180	3	217	6	Recovery Wells (28) Central Wellfield				
Grader	174	3	217	6	Drill Rig	500	3	47	24
Off-Highway Truck	479	3	217	4	Hydraulic Excavator	180	3	235	6
Small Roller Compactor	114	3	217	1	Grader	174	3	235	6
Skip Loader	88	3	217	1	Off-Highway Truck	479	3	235	4
Wheeled Loader	313	3	217	1	Small Roller Compactor	114	3	235	1
Water Truck	200	3	217	1	Skip Loader	88	3	235	1
Test Pump	300	3	65	24	Wheeled Loader	313	3	235	1
Collection Pipeline from 26 wells					Water Truck	200	3	235	1
Crane	190	1	200	2	Test Pump	300	1	70	24
Hydraulic Excavator	180	1	200	6	Collection Pipeline for Central Wellfield				
Grader	174	1	200	6	Crane	190	1	200	2
Off-Highway Truck	479	1	200	4	Hydraulic Excavator	180	1	200	6
Water Trucks	200	2	200	4	Grader	174	1	200	6
Belly Scraper	313	1	200	4	Off-Highway Truck	479	1	200	4
Wheeled Loaders	165	2	200	8	Water Trucks	200	2	200	4
Skip Loader	88	1	200	3	Belly Scraper	313	1	200	4
Backhoe	108	1	200	3	Wheeled Loaders	165	2	200	8
Connecting Pipeline to SNIP (LA County Segments)					Skip Loader	88	1	200	3
Crane	190	1	53	2	Backhoe	108	1	200	3
Hydraulic Excavator	180	1	53	6					
Grader	174	1	53	6					
Off-Highway Truck	479	1	53	4					
Water Trucks	200	2	53	4					
Belly Scraper	313	1	53	4					
Wheeled Loaders	165	2	53	8					
Skip Loader	88	1	53	3					
Backhoe	108	1	53	3					
Connecting Pipeline to SNIP (Kern County Segments)									
Crane	190	1	35	2					
Hydraulic Excavator	180	1	35	6					
Grader	174	1	35	6					
Off-Highway Truck	479	1	35	4					
Water Trucks	200	2	35	4					
Belly Scraper	313	1	35	4					
Wheeled Loaders	165	2	75	8					
Skip Loader	88	1	75	3					
Backhoe	108	1	75	3					

Table 6 – Construction Deliveries 2019-2022

Project Element - 2019		Quantity	Equipment/ Materials	Deliveries per Unit*	Total Deliveries	Origin of Material	One-Way Distance
Recovery Wells	7 wells		Casing/Equip ment, etc.	6 per well	42	Bakersfield	70
Piping							
84-inch transmission (72% of Total)	6.7 miles		Pipe	120 per mile	804	Adelanto	80
48-inch transmission (LA Aqueduct #2)	2.0 miles		Pipe	30 per mile	60	Adelanto	80
Collection pipe (avg. 20-inch dia.)	4.0 miles		Pipe	5 per mile	20	Adelanto	80
Turnout at CA Aqueduct	1 turnout		Concrete and Block	7	7	Mojave	30
			Equipment & Components	5	5	Bakersfield	70
Booster Pump Station (LA Pipeline)(half)	1/2 pump station		Concrete and Block	10/station	5	Mojave	30
			Equipment & Components	12/station	6	Bakersfield	70
Project Element - 2020		Quantity	Equipment/ Materials	Deliveries per Unit*	Total Deliveries	Origin of Material	One-Way Distance (miles)
Recovery Wells	10 wells		Casing/Equip ment, etc.	6 per well	60	Bakersfield	70
Piping							
84-inch transmission (23% of total)	2.545 miles		Pipe	120 per mile	112	Adelanto	80
Collection Pipes (avg. 20-inch dia.)	4.0 miles		Pipe	5 per mile	20	Adelanto	80
Booster Pump Station (LA Pipeline)(half)	1/2 pump station		Concrete and Block	10/station	5	Mojave	30
			Equipment & Components	12/station	6	Bakersfield	70
Booster Pump Station (Gaskell/165th)	1 pump station		Concrete and Block	10 total	10	Mojave	30
			Equipment & Components	12 total	12	Bakersfield	70
Project Element - 2021		Quantity	Equipment/ Materials	Deliveries per Unit*	Total Deliveries	Origin of Material	One-Way Distance (miles)
Recovery Wells	28 wells		Casing/Equip ment, etc.	6 per well	168	Bakersfield	70
Piping							
Collection Pipes (avg. 20-inch dia.)	15.0 miles		Pipe	5 per mile	75	Adelanto	80
- 2022Project Element		Quantity	Equipment/ Materials	Deliveries per Unit*	Total Deliveries	Origin of Material	One-Way Distance (miles)
Recovery Wells	26 wells		Casing/Equip ment, etc.	6 per well	156	Bakersfield	70
Piping							
48-inch transmission (SNIP)	2.5 miles		Pipe	30 per mile	75	Adelanto	80
Collection Pipes (avg. 20-inch dia.)	15.0 miles		Pipe	5 per mile	75	Adelanto	80

Table 7 – Annual Operations

Maintenance Operations			
On-Site Staff	2	On-site travel in 250 hp pickup truck	50 miles per day/250 days per year
Berm Maintenance Crew	2	On-site travel in 250 hp pickup truck	50 miles per day/20 days per year

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MEMO

Date: June 28, 2018

To: **Bert Verrips**
bverrips@aol.com

From: James A. Reyff
Illingworth & Rodkin, Inc.
1 Willowbrook Court, Suite 120
Petaluma, CA 94954

RE: **Willow Springs Water Bank – Antelope Valley, CA**

SUBJECT: **GHG Modeling** Job#18-042

This memo provides an estimate of construction emissions associated with the 2006 “Approved” project. This analysis is based upon the information provided in Section 4.2 of the Antelope Valley Water Bank Project DEIR (April 2006). The DEIR predicted air pollutant emissions but did not compute greenhouse gas (GHG) emissions. That analysis was conducted prior to the development of the CalEEMod model.

Construction of the 2006 Approved Project would occur in two phases. For purposes of comparisons, we are assuming that this construction would be conducted in a similar timeframe as the modified project. Primary Assumptions used in the modeling are as follows:

Phase 1 = 1,612 acres, 942,442 cubic yards of excavation moved on site (less than 1 mile), 4 worker trips per day at 30 miles per trip. Construction duration = 6 months. Total emission = 3,083 metric tons (mt)

Phase 2 = 161.5 acres, 341,300 cubic yards of excavation moved on site (less than 1 mile), default worker trips per day at 30 miles per trip, 42 vendor trips per day (to import pipe). Construction duration = 6 months. Total emission = 1,850 mt

Amortizing over 30 years, construction emissions are 164 mt/year.

Operational emissions associated with the “Approved Project” were computed separately. However, those computations did not include operational emissions. Operational air pollutant emissions in the DEIR did not include vehicle travel. Given the nature of the project, a small amount of traffic would be generated for maintenance purposes. The amount of emissions is expected to be similar to the Modified project, which is 20 mt per year.

Comparison of GHG Emissions between Approved Project and Modified Project

Emission Source	Annual GHG Emissions (Metric Tons CO ₂ e/year)		Difference with Modified Project	
	Approved Project	Modified Project	MT CO ₂ e	Percent
Construction Emissions*	164	207		
Operational Emissions (wells)	50,755	38,290		
Operational Emissions (vehicle exhaust)	20*	20		
Total	50,939	38,517	-12,422	-24.4%
AVAQMD Significance Threshold	100,000	100,000	NA	NA
Exceeds AVAQMD threshold?	No	No		
EKAPCD Significance Threshold	25,000	25,000		
Exceeds EKAPCD threshold?	Yes	Yes		
EKAPCD Required GHG Reduction for Less-than-Significant Impact?				-20%
Modified Project Meets GHG Emissions Reduction Requirement for Less-than-Significant Impact?				Yes

* Total construction emissions of 6208.44 MT CO₂e are amortized over 30 years, so the contribution to annual emissions is 1/30th of the total construction emissions that occur over the 4-year construction period.

Source: Illingworth & Rodkin 2018

Attachment: CalEEMod Model Output

GHG Summary

GHG emissions for the proposed 2018 project and the 2006 project were computed assuming that the emission for the maintenance and operation of the projects, excluding the pumping operations, were the same. Emissions were calculated for the operations for both the 2018 project and the 2006 project using CalEEMod. The primary differences in emissions between the two projects would be associated with the amount of water pumped and the fuel or electricity used to power the pumps. The annual planned water extraction rate increases from 100,000 acre-feet per year under the 2006 plan, to 225,000 acre-feet under the modified plan. The original plan assumed the use of propane-fueled pumps, while the current plan is to use electric pumps. Tables 1 and 2 present a summary of the emissions and data used in the computations. The following assumptions and calculations were used to compute GHG emissions associated with the extraction/pumping of water:

Electric pumps (2018):

1. Westland's Water District average electrical consumption of 740 kWhr/per acre-feet (AF) of pumped groundwater was used;
2. For the modified project 225,000 AF of water would be pumped;
3. The average emission rate for power generation for Southern California Edison is 507 pounds of CO₂ per kWhr produced;

Calculations –

- $740\text{kWhr/AF} * 225000\text{ AF} = 166,500,000\text{ kWhr}$;
- $166,500,000\text{kWhr} * 0.001\text{ kWhr}$;
- $166500\text{ MWhr} * 507\text{ lbs./MWhr} = 84,415,500\text{ lbs. CO}_2$;
- $84,415,500\text{ lbs. CO}_2 * 0.000453592\text{ Lbs./Metric Ton (MT)}$;
- 38,290 Metric Tons of CO₂. annually

Propane-fueled pumps (2006).

1. Westland's Water District average electrical consumption of 740 kWhr/per acre-feet of pumped groundwater was used;
2. The 2006 planned project assumed 100,000 AF of water to be pumped;
3. Assumed 8.36875 kWhr/gallon of propane (energy per gallon of propane calculated by reducing the engine efficiency of a gas engine to compensate for propane efficiency);
4. Assumed 12.65453 lbs.CO₂ per gallon of propane (from EPA AP-42);

Calculations –

- $740\text{kWhr/acre-foot} * 100000\text{ AF} = 74,000,000\text{ kWhr}$
- $* 8.36875\text{ kWhr/gallon}$ (to convert to Megawatt/hr.), 8,842,420 gallons
- $8,842,420\text{ gallons} * 12.65453\text{ lbs. CO}_2/\text{gallon} = 111,896,666\text{ lbs. CO}_2$
- $111,896,666\text{ lbs. CO}_2 * 0.000453592\text{ Lbs./MT}$
- 50,755 Metric Tons of CO₂ annually.

Table 1

2006 Plan	
740	kWhr/acre foot
100,000	Acre feet
74,000,000	kWhr
8.36875	kWhr/gallon
8,842,420	Gallons
12.65453	Lbs./CO2/Gallon
111,896,666	Lbs.
0.000453592	Lbs./MT
50,755	MT

Table 2

2018 Plan	
740	kWhr/acre foot
225000	Acre feet
166,500,000	kWhr
0.001	kWhr to MWhr
166,500	MWhr
507	Lbs. CO2/MWhr
84,415,500	Lbs. CO2
0.000453592	Lbs./MT
38,290	MT

Emissions with maintenance and operations and pump energy usage of the projects were added together. CO2 emissions for the 2006 plan project would be 50,775 Metric Tons and the modified 2018 plan CO2 emissions would be 38,310 Metric Tons. The current 2018 modified plan would result in 12,465 Metric Tons less CO₂ emissions when compared to the 2006 plan.

Antelope Valley Water Supply 2006 Phase 1 - Mojave Desert Air Basin, Annual

**Antelope Valley Water Supply 2006 Phase 1
Mojave Desert Air Basin, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1,612.00	Acre	1,612.00	70,218,720.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	7			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	507	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - So. Cal Edison

Land Use -

Construction Phase - 6-month schedule

Off-road Equipment - Based on 2006 study

Grading - move material one mile

Demolition -

Trips and VMT - move material on-site

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	15,500.00	132.00

tblConstructionPhase	PhaseEndDate	6/27/2018	12/28/2018
tblGrading	MaterialExported	0.00	942,442.00
tblGrading	MaterialImported	0.00	942,442.00
tblOffRoadEquipment	HorsePower	78.00	124.00
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.50	0.44
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	507
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripNumber	235,611.00	235,610.00
tblTripsAndVMT	VendorTripLength	6.60	30.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripNumber	38.00	4.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

2018	0.9910	23.6718	4.6571	0.0325	1.9951	0.3133	2.3083	0.9341	0.2886	1.2227	0.0000	3,063.6894	3,063.6894	0.7539	0.0000	3,082.5376
Maximum	0.9910	23.6718	4.6571	0.0325	1.9951	0.3133	2.3083	0.9341	0.2886	1.2227	0.0000	3,063.6894	3,063.6894	0.7539	0.0000	3,082.5376

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.9910	23.6718	4.6571	0.0325	1.9951	0.3133	2.3083	0.9341	0.2886	1.2227	0.0000	3,063.6888	3,063.6888	0.7539	0.0000	3,082.5370
Maximum	0.9910	23.6718	4.6571	0.0325	1.9951	0.3133	2.3083	0.9341	0.2886	1.2227	0.0000	3,063.6888	3,063.6888	0.7539	0.0000	3,082.5370

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-28-2018	9-27-2018	12.4212	12.4212
2	9-28-2018	9-30-2018	0.4050	0.4050
		Highest	12.4212	12.4212

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/28/2018	12/28/2018	5	132	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 396

Acres of Paving: 1612

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	1	8.00	231	0.29
Grading	Trenchers	3		124	0.44
Grading	Excavators	0	8.00	158	0.38
Grading	Rubber Tired Dozers	4	8.00	247	0.40
Grading	Graders	4	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Scrapers	1	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	15	4.00	2.00	235,610.00	30.00	30.00	0.50	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2018

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					

Fugitive Dust					1.9322	0.0000	1.9322	0.9166	0.0000	0.9166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5933	6.9285	2.7146	5.8000e-003		0.3032	0.3032		0.2790	0.2790	0.0000	529.7417	529.7417	0.1649	0.0000	533.8646
Total	0.5933	6.9285	2.7146	5.8000e-003	1.9322	0.3032	2.2355	0.9166	0.2790	1.1956	0.0000	529.7417	529.7417	0.1649	0.0000	533.8646

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.3932	16.7042	1.9073	0.0265	0.0533	9.5900e-003	0.0629	0.0149	9.1700e-003	0.0240	0.0000	2,517.0924	2,517.0924	0.5884	0.0000	2,531.8018
Vendor	1.4600e-003	0.0362	9.4400e-003	1.2000e-004	3.6100e-003	4.4000e-004	4.0500e-003	1.0400e-003	4.2000e-004	1.4600e-003	0.0000	11.5098	11.5098	4.3000e-004	0.0000	11.5205
Worker	2.9800e-003	2.9400e-003	0.0258	6.0000e-005	5.9100e-003	4.0000e-005	5.9500e-003	1.5700e-003	4.0000e-005	1.6000e-003	0.0000	5.3455	5.3455	2.1000e-004	0.0000	5.3507
Total	0.3977	16.7433	1.9425	0.0267	0.0628	0.0101	0.0729	0.0175	9.6300e-003	0.0271	0.0000	2,533.9477	2,533.9477	0.5890	0.0000	2,548.6731

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9322	0.0000	1.9322	0.9166	0.0000	0.9166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5933	6.9285	2.7146	5.8000e-003		0.3032	0.3032		0.2790	0.2790	0.0000	529.7411	529.7411	0.1649	0.0000	533.8639
Total	0.5933	6.9285	2.7146	5.8000e-003	1.9322	0.3032	2.2355	0.9166	0.2790	1.1956	0.0000	529.7411	529.7411	0.1649	0.0000	533.8639

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.3932	16.7042	1.9073	0.0265	0.0533	9.5900e-003	0.0629	0.0149	9.1700e-003	0.0240	0.0000	2,517.0924	2,517.0924	0.5884	0.0000	2,531.8018
Vendor	1.4600e-003	0.0362	9.4400e-003	1.2000e-004	3.6100e-003	4.4000e-004	4.0500e-003	1.0400e-003	4.2000e-004	1.4600e-003	0.0000	11.5098	11.5098	4.3000e-004	0.0000	11.5205
Worker	2.9800e-003	2.9400e-003	0.0258	6.0000e-005	5.9100e-003	4.0000e-005	5.9500e-003	1.5700e-003	4.0000e-005	1.6000e-003	0.0000	5.3455	5.3455	2.1000e-004	0.0000	5.3507
Total	0.3977	16.7433	1.9425	0.0267	0.0628	0.0101	0.0729	0.0175	9.6300e-003	0.0271	0.0000	2,533.9477	2,533.9477	0.5890	0.0000	2,548.6731

Antelope Valley Water Supply 2006 Phase 2 - Mojave Desert Air Basin, Annual

**Antelope Valley Water Supply 2006 Phase 2
Mojave Desert Air Basin, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	161.50	Acre	161.50	7,034,940.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	7			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	507	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - So. Cal Edison

Land Use -

Construction Phase - 161-day schedule

Off-road Equipment - Based on 2006 study

Grading - move material one mile

Demolition -

Trips and VMT - move material on-site, pipe hauling is vendor

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	116.00

tblConstructionPhase	PhaseEndDate	9/3/2020	12/6/2019
tblGrading	MaterialExported	0.00	341,300.00
tblGrading	MaterialImported	0.00	341,300.00
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	507
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	VendorTripLength	6.60	30.00
tblTripsAndVMT	VendorTripNumber	0.00	42.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	WorkerTripLength	16.80	30.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.8120	13.6531	4.4901	0.0198	1.7743	0.3355	2.1098	0.8344	0.3089	1.1433	0.0000	1,839.2112	1,839.2112	0.4220	0.0000	1,849.7606
Maximum	0.8120	13.6531	4.4901	0.0198	1.7743	0.3355	2.1098	0.8344	0.3089	1.1433	0.0000	1,839.2112	1,839.2112	0.4220	0.0000	1,849.7606

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.8120	13.6531	4.4901	0.0198	1.7743	0.3355	2.1098	0.8344	0.3089	1.1433	0.0000	1,839.2104	1,839.2104	0.4220	0.0000	1,849.7599
Maximum	0.8120	13.6531	4.4901	0.0198	1.7743	0.3355	2.1098	0.8344	0.3089	1.1433	0.0000	1,839.2104	1,839.2104	0.4220	0.0000	1,849.7599

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-28-2019	9-27-2019	8.2392	8.2392
2	9-28-2019	9-30-2019	0.2687	0.2687
		Highest	8.2392	8.2392

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/28/2019	12/6/2019	5	116	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 348

Acres of Paving: 161.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	1	8.00	231	0.29
Grading	Trenchers	3	8.00	78	0.50
Grading	Excavators	4	8.00	158	0.38
Grading	Rubber Tired Dozers	4	8.00	247	0.40
Grading	Graders	4	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Scrapers	1	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	19	48.00	42.00	85,325.00	30.00	30.00	0.50	LD_Mix	HHDT	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6296	0.0000	1.6296	0.7952	0.0000	0.7952	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6304	7.0012	3.5057	6.8800e-003		0.3295	0.3295		0.3031	0.3031	0.0000	618.0180	618.0180	0.1955	0.0000	622.9064

Total	0.6304	7.0012	3.5057	6.8800e-003	1.6296	0.3295	1.9591	0.7952	0.3031	1.0983	0.0000	618.0180	618.0180	0.1955	0.0000	622.9064
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1341	5.8354	0.6432	9.5200e-003	0.0193	2.9900e-003	0.0223	5.3800e-003	2.8600e-003	8.2400e-003	0.0000	905.5803	905.5803	0.2117	0.0000	910.8714
Vendor	0.0190	0.7894	0.1018	2.7400e-003	0.0630	2.6300e-003	0.0657	0.0173	2.5200e-003	0.0198	0.0000	260.9951	260.9951	0.0129	0.0000	261.3167
Worker	0.0284	0.0271	0.2394	6.0000e-004	0.0623	4.0000e-004	0.0627	0.0165	3.7000e-004	0.0169	0.0000	54.6178	54.6178	1.9300e-003	0.0000	54.6661
Total	0.1815	6.6519	0.9844	0.0129	0.1446	6.0200e-003	0.1507	0.0392	5.7500e-003	0.0450	0.0000	1,221.1931	1,221.1931	0.2264	0.0000	1,226.8543

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6296	0.0000	1.6296	0.7952	0.0000	0.7952	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6304	7.0012	3.5057	6.8800e-003		0.3295	0.3295		0.3031	0.3031	0.0000	618.0173	618.0173	0.1955	0.0000	622.9056
Total	0.6304	7.0012	3.5057	6.8800e-003	1.6296	0.3295	1.9591	0.7952	0.3031	1.0983	0.0000	618.0173	618.0173	0.1955	0.0000	622.9056

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1341	5.8354	0.6432	9.5200e-003	0.0193	2.9900e-003	0.0223	5.3800e-003	2.8600e-003	8.2400e-003	0.0000	905.5803	905.5803	0.2117	0.0000	910.8714
Vendor	0.0190	0.7894	0.1018	2.7400e-003	0.0630	2.6300e-003	0.0657	0.0173	2.5200e-003	0.0198	0.0000	260.9951	260.9951	0.0129	0.0000	261.3167
Worker	0.0284	0.0271	0.2394	6.0000e-004	0.0623	4.0000e-004	0.0627	0.0165	3.7000e-004	0.0169	0.0000	54.6178	54.6178	1.9300e-003	0.0000	54.6661
Total	0.1815	6.6519	0.9844	0.0129	0.1446	6.0200e-003	0.1507	0.0392	5.7500e-003	0.0450	0.0000	1,221.1931	1,221.1931	0.2264	0.0000	1,226.8543

CalEEMod Data

WSWB - 84" Supply Pipeline LA County - Los Angeles-Mojave Desert County, Annual

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	125.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Construction Phase - owner supplied data
- Off-road Equipment - Owner supplied data
- Grading - owner supplied data
- Trips and VMT - owner supplied data
- Construction Off-road Equipment Mitigation - owner supplied data

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0

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tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	310.00	235.00
tblGrading	AcresOfGrading	205.63	125.00
tblLandUse	LotAcreage	0.00	125.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	367.00	313.00

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tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	LoadFactor	0.36	0.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	25.00	30.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	1.3720	0.4852
2	4-1-2019	6-30-2019	1.4848	0.5240
3	7-1-2019	9-30-2019	1.5011	0.5298
		Highest	1.5011	0.5298

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/7/2019	11/29/2019	5	235	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 125

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	1	2.00	190	0.29
Grading	Excavators	1	6.00	180	0.38
Grading	Graders	1	6.00	174	0.41
Grading	Off-Highway Trucks	1	4.00	479	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	165	0.40
Grading	Scrapers	1	4.00	313	0.48
Grading	Skid Steer Loaders	1	3.00	88	0.37
Grading	Tractors/Loaders/Backhoes	1	3.00	108	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	10	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7739	0.0000	0.7739	0.3961	0.0000	0.3961	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4631	4.8569	2.8884	5.5000e-003		0.2326	0.2326		0.2140	0.2140	0.0000	493.8713	493.8713	0.1563	0.0000	497.7777
Total	0.4631	4.8569	2.8884	5.5000e-003	0.7739	0.2326	1.0065	0.3961	0.2140	0.6101	0.0000	493.8713	493.8713	0.1563	0.0000	497.7777

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0273	0.0241	0.2594	6.9000e-004	0.0657	5.6000e-004	0.0662	0.0174	5.2000e-004	0.0180	0.0000	62.6204	62.6204	2.1100e-003	0.0000	62.6732
Total	0.0273	0.0241	0.2594	6.9000e-004	0.0657	5.6000e-004	0.0662	0.0174	5.2000e-004	0.0180	0.0000	62.6204	62.6204	2.1100e-003	0.0000	62.6732

WSWB - 84" Supply Pipeline LA County - Los Angeles-Mojave Desert County, Annual

3.2 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7739	0.0000	0.7739	0.3961	0.0000	0.3961	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1885	1.6579	3.1884	5.5000e-003		0.0765	0.0765		0.0710	0.0710	0.0000	493.8707	493.8707	0.1563	0.0000	497.7771
Total	0.1885	1.6579	3.1884	5.5000e-003	0.7739	0.0765	0.8504	0.3961	0.0710	0.4671	0.0000	493.8707	493.8707	0.1563	0.0000	497.7771

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0273	0.0241	0.2594	6.9000e-004	0.0657	5.6000e-004	0.0662	0.0174	5.2000e-004	0.0180	0.0000	62.6204	62.6204	2.1100e-003	0.0000	62.6732
Total	0.0273	0.0241	0.2594	6.9000e-004	0.0657	5.6000e-004	0.0662	0.0174	5.2000e-004	0.0180	0.0000	62.6204	62.6204	2.1100e-003	0.0000	62.6732

4.0 Operational Detail - Mobile

WSWB - 84" Supply Pipeline LA County - Los Angeles-Mojave Desert County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - 84" Supply Pipeline LA County - Los Angeles-Mojave Desert County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - 84" Supply Pipeline LA County - Los Angeles-Mojave Desert County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

WSWB - Recovery Wella (7) Southwest Wellfield
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Off-road Equipment - Owner Supplied Data

Construction Off-road Equipment Mitigation - Owner supplied Data

WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	175.00
tblGrading	AcresOfGrading	437.50	0.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	402.00	479.00

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tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	80.00	114.00
tblOffRoadEquipment	HorsePower	203.00	313.00
tblOffRoadEquipment	LoadFactor	0.38	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	20.00	10.00
tblVehicleEF	HHD	1.15	0.48
tblVehicleEF	HHD	7.1590e-003	0.09
tblVehicleEF	HHD	0.07	0.07

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tblVehicleEF	HHD	2.07	1.63
tblVehicleEF	HHD	0.54	1.06
tblVehicleEF	HHD	1.05	3.33
tblVehicleEF	HHD	6,322.44	4,465.78
tblVehicleEF	HHD	1,484.64	1,572.96
tblVehicleEF	HHD	3.36	10.75
tblVehicleEF	HHD	0.15	0.03
tblVehicleEF	HHD	17.27	14.30
tblVehicleEF	HHD	1.68	2.12
tblVehicleEF	HHD	20.47	19.50
tblVehicleEF	HHD	3.1930e-003	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.7610e-003	6.2960e-003
tblVehicleEF	HHD	1.9000e-005	9.1000e-005
tblVehicleEF	HHD	3.0550e-003	9.6000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9570e-003	8.8400e-003
tblVehicleEF	HHD	5.5120e-003	6.0240e-003
tblVehicleEF	HHD	1.7000e-005	8.3000e-005
tblVehicleEF	HHD	4.6000e-005	1.0300e-004
tblVehicleEF	HHD	1.4970e-003	4.5010e-003
tblVehicleEF	HHD	0.56	0.41
tblVehicleEF	HHD	2.4000e-005	7.8000e-005
tblVehicleEF	HHD	0.08	0.09
tblVehicleEF	HHD	1.0100e-004	3.7200e-004
tblVehicleEF	HHD	0.02	0.08

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tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	5.1000e-005	1.6200e-004
tblVehicleEF	HHD	4.6000e-005	1.0300e-004
tblVehicleEF	HHD	1.4970e-003	4.5010e-003
tblVehicleEF	HHD	0.64	0.49
tblVehicleEF	HHD	2.4000e-005	7.8000e-005
tblVehicleEF	HHD	0.09	0.20
tblVehicleEF	HHD	1.0100e-004	3.7200e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	1.08	0.45
tblVehicleEF	HHD	7.1690e-003	0.09
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.51	1.19
tblVehicleEF	HHD	0.54	1.07
tblVehicleEF	HHD	0.98	3.16
tblVehicleEF	HHD	6,698.06	4,731.10
tblVehicleEF	HHD	1,484.64	1,572.96
tblVehicleEF	HHD	3.36	10.75
tblVehicleEF	HHD	0.15	0.03
tblVehicleEF	HHD	17.82	14.76
tblVehicleEF	HHD	1.59	2.01
tblVehicleEF	HHD	20.46	19.49
tblVehicleEF	HHD	2.6930e-003	8.4600e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.7610e-003	6.2960e-003

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tblVehicleEF	HHD	1.9000e-005	9.1000e-005
tblVehicleEF	HHD	2.5760e-003	8.0940e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9570e-003	8.8400e-003
tblVehicleEF	HHD	5.5120e-003	6.0240e-003
tblVehicleEF	HHD	1.7000e-005	8.3000e-005
tblVehicleEF	HHD	1.1100e-004	1.5600e-004
tblVehicleEF	HHD	1.7120e-003	4.6140e-003
tblVehicleEF	HHD	0.53	0.39
tblVehicleEF	HHD	4.9000e-005	1.1200e-004
tblVehicleEF	HHD	0.08	0.09
tblVehicleEF	HHD	1.0100e-004	3.6000e-004
tblVehicleEF	HHD	0.02	0.07
tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	5.0000e-005	1.5900e-004
tblVehicleEF	HHD	1.1100e-004	1.5600e-004
tblVehicleEF	HHD	1.7120e-003	4.6140e-003
tblVehicleEF	HHD	0.60	0.46
tblVehicleEF	HHD	4.9000e-005	1.1200e-004
tblVehicleEF	HHD	0.09	0.20
tblVehicleEF	HHD	1.0100e-004	3.6000e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	1.24	0.52
tblVehicleEF	HHD	7.1490e-003	0.09
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	2.85	2.25

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tblVehicleEF	HHD	0.53	1.06
tblVehicleEF	HHD	1.14	3.36
tblVehicleEF	HHD	5,803.72	4,099.40
tblVehicleEF	HHD	1,484.64	1,572.96
tblVehicleEF	HHD	3.36	10.75
tblVehicleEF	HHD	0.15	0.03
tblVehicleEF	HHD	16.50	13.67
tblVehicleEF	HHD	1.70	2.09
tblVehicleEF	HHD	20.47	19.50
tblVehicleEF	HHD	3.8850e-003	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.7610e-003	6.2960e-003
tblVehicleEF	HHD	1.9000e-005	9.1000e-005
tblVehicleEF	HHD	3.7170e-003	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9570e-003	8.8400e-003
tblVehicleEF	HHD	5.5120e-003	6.0240e-003
tblVehicleEF	HHD	1.7000e-005	8.3000e-005
tblVehicleEF	HHD	1.9000e-005	1.0000e-004
tblVehicleEF	HHD	1.5040e-003	4.7840e-003
tblVehicleEF	HHD	0.60	0.45
tblVehicleEF	HHD	1.1000e-005	7.6000e-005
tblVehicleEF	HHD	0.08	0.09
tblVehicleEF	HHD	1.1100e-004	4.0500e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	0.06	0.04

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tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	5.2000e-005	1.6300e-004
tblVehicleEF	HHD	1.9000e-005	1.0000e-004
tblVehicleEF	HHD	1.5040e-003	4.7840e-003
tblVehicleEF	HHD	0.69	0.53
tblVehicleEF	HHD	1.1000e-005	7.6000e-005
tblVehicleEF	HHD	0.09	0.20
tblVehicleEF	HHD	1.1100e-004	4.0500e-004
tblVehicleEF	HHD	0.03	0.08
tblVehicleEF	LDA	3.5290e-003	4.8310e-003
tblVehicleEF	LDA	4.2340e-003	4.7360e-003
tblVehicleEF	LDA	0.48	0.61
tblVehicleEF	LDA	0.98	1.04
tblVehicleEF	LDA	253.99	263.16
tblVehicleEF	LDA	54.03	54.94
tblVehicleEF	LDA	0.49	0.55
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	1.7460e-003	2.1170e-003
tblVehicleEF	LDA	2.2760e-003	2.2400e-003
tblVehicleEF	LDA	1.6080e-003	1.9520e-003
tblVehicleEF	LDA	2.0930e-003	2.0590e-003
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	8.8660e-003	0.01
tblVehicleEF	LDA	0.03	0.04

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tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	2.5420e-003	2.6360e-003
tblVehicleEF	LDA	5.5700e-004	5.6700e-004
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.06	0.07
tblVehicleEF	LDA	4.1110e-003	5.1340e-003
tblVehicleEF	LDA	3.4750e-003	4.2110e-003
tblVehicleEF	LDA	0.61	0.67
tblVehicleEF	LDA	0.81	0.89
tblVehicleEF	LDA	281.53	275.40
tblVehicleEF	LDA	54.03	54.94
tblVehicleEF	LDA	0.49	0.55
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	1.7460e-003	2.1170e-003
tblVehicleEF	LDA	2.2760e-003	2.2400e-003
tblVehicleEF	LDA	1.6080e-003	1.9520e-003
tblVehicleEF	LDA	2.0930e-003	2.0590e-003
tblVehicleEF	LDA	0.10	0.06
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.04

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tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	2.8190e-003	2.7590e-003
tblVehicleEF	LDA	5.5400e-004	5.6400e-004
tblVehicleEF	LDA	0.10	0.06
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	3.3100e-003	4.7330e-003
tblVehicleEF	LDA	4.8610e-003	4.8460e-003
tblVehicleEF	LDA	0.44	0.59
tblVehicleEF	LDA	1.16	1.08
tblVehicleEF	LDA	243.62	258.68
tblVehicleEF	LDA	54.03	54.94
tblVehicleEF	LDA	0.49	0.55
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	1.7460e-003	2.1170e-003
tblVehicleEF	LDA	2.2760e-003	2.2400e-003
tblVehicleEF	LDA	1.6080e-003	1.9520e-003
tblVehicleEF	LDA	2.0930e-003	2.0590e-003
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	8.3230e-003	0.01
tblVehicleEF	LDA	0.04	0.04

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tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	2.4380e-003	2.5910e-003
tblVehicleEF	LDA	5.6000e-004	5.6700e-004
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDT1	9.3220e-003	0.01
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	1.08	1.52
tblVehicleEF	LDT1	2.63	2.49
tblVehicleEF	LDT1	319.04	330.49
tblVehicleEF	LDT1	67.92	67.47
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.11	0.14
tblVehicleEF	LDT1	0.15	0.14
tblVehicleEF	LDT1	2.4730e-003	3.3520e-003
tblVehicleEF	LDT1	3.2370e-003	3.2790e-003
tblVehicleEF	LDT1	2.2780e-003	3.0870e-003
tblVehicleEF	LDT1	2.9770e-003	3.0150e-003
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.26	0.25
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.18	0.16

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tblVehicleEF	LDT1	0.18	0.17
tblVehicleEF	LDT1	3.2020e-003	3.3240e-003
tblVehicleEF	LDT1	7.2500e-004	7.1800e-004
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.26	0.25
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.18	0.16
tblVehicleEF	LDT1	0.19	0.18
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	1.34	1.65
tblVehicleEF	LDT1	2.17	2.11
tblVehicleEF	LDT1	352.24	344.92
tblVehicleEF	LDT1	67.92	67.47
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.11	0.12
tblVehicleEF	LDT1	0.14	0.13
tblVehicleEF	LDT1	2.4730e-003	3.3520e-003
tblVehicleEF	LDT1	3.2370e-003	3.2790e-003
tblVehicleEF	LDT1	2.2780e-003	3.0870e-003
tblVehicleEF	LDT1	2.9770e-003	3.0150e-003
tblVehicleEF	LDT1	0.39	0.19
tblVehicleEF	LDT1	0.34	0.26
tblVehicleEF	LDT1	0.22	0.14
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.18	0.15

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tblVehicleEF	LDT1	0.15	0.15
tblVehicleEF	LDT1	3.5380e-003	3.4700e-003
tblVehicleEF	LDT1	7.1700e-004	7.1200e-004
tblVehicleEF	LDT1	0.39	0.19
tblVehicleEF	LDT1	0.34	0.26
tblVehicleEF	LDT1	0.22	0.14
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	8.8080e-003	0.01
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	1.00	1.47
tblVehicleEF	LDT1	3.13	2.57
tblVehicleEF	LDT1	306.55	325.20
tblVehicleEF	LDT1	67.92	67.47
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.17	0.15
tblVehicleEF	LDT1	2.4730e-003	3.3520e-003
tblVehicleEF	LDT1	3.2370e-003	3.2790e-003
tblVehicleEF	LDT1	2.2780e-003	3.0870e-003
tblVehicleEF	LDT1	2.9770e-003	3.0150e-003
tblVehicleEF	LDT1	0.06	0.12
tblVehicleEF	LDT1	0.27	0.28
tblVehicleEF	LDT1	0.04	0.10
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.21	0.19

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tblVehicleEF	LDT1	0.21	0.17
tblVehicleEF	LDT1	3.0760e-003	3.2700e-003
tblVehicleEF	LDT1	7.3400e-004	7.1900e-004
tblVehicleEF	LDT1	0.06	0.12
tblVehicleEF	LDT1	0.27	0.28
tblVehicleEF	LDT1	0.04	0.10
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.21	0.19
tblVehicleEF	LDT1	0.23	0.19
tblVehicleEF	LDT2	5.7270e-003	6.6130e-003
tblVehicleEF	LDT2	6.8700e-003	5.6850e-003
tblVehicleEF	LDT2	0.69	0.79
tblVehicleEF	LDT2	1.46	1.23
tblVehicleEF	LDT2	363.40	368.32
tblVehicleEF	LDT2	76.98	75.43
tblVehicleEF	LDT2	0.17	0.21
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	1.8120e-003	2.1490e-003
tblVehicleEF	LDT2	2.3940e-003	2.3760e-003
tblVehicleEF	LDT2	1.6670e-003	1.9770e-003
tblVehicleEF	LDT2	2.2010e-003	2.1840e-003
tblVehicleEF	LDT2	0.06	0.04
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.08	0.06

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tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	3.6380e-003	3.6890e-003
tblVehicleEF	LDT2	7.9400e-004	7.7500e-004
tblVehicleEF	LDT2	0.06	0.04
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	6.6460e-003	7.0150e-003
tblVehicleEF	LDT2	5.6210e-003	5.0630e-003
tblVehicleEF	LDT2	0.87	0.87
tblVehicleEF	LDT2	1.20	1.06
tblVehicleEF	LDT2	401.73	384.82
tblVehicleEF	LDT2	76.98	75.43
tblVehicleEF	LDT2	0.17	0.21
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	1.8120e-003	2.1490e-003
tblVehicleEF	LDT2	2.3940e-003	2.3760e-003
tblVehicleEF	LDT2	1.6670e-003	1.9770e-003
tblVehicleEF	LDT2	2.2010e-003	2.1840e-003
tblVehicleEF	LDT2	0.16	0.07
tblVehicleEF	LDT2	0.14	0.10
tblVehicleEF	LDT2	0.11	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.06

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tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	4.0240e-003	3.8550e-003
tblVehicleEF	LDT2	7.9000e-004	7.7200e-004
tblVehicleEF	LDT2	0.16	0.07
tblVehicleEF	LDT2	0.14	0.10
tblVehicleEF	LDT2	0.11	0.06
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	5.3840e-003	6.4820e-003
tblVehicleEF	LDT2	7.8250e-003	5.8190e-003
tblVehicleEF	LDT2	0.63	0.76
tblVehicleEF	LDT2	1.71	1.27
tblVehicleEF	LDT2	348.99	362.26
tblVehicleEF	LDT2	76.98	75.43
tblVehicleEF	LDT2	0.17	0.21
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	0.12	0.09
tblVehicleEF	LDT2	1.8120e-003	2.1490e-003
tblVehicleEF	LDT2	2.3940e-003	2.3760e-003
tblVehicleEF	LDT2	1.6670e-003	1.9770e-003
tblVehicleEF	LDT2	2.2010e-003	2.1840e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.12	0.10
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.09	0.07

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tblVehicleEF	LDT2	0.11	0.08
tblVehicleEF	LDT2	3.4940e-003	3.6280e-003
tblVehicleEF	LDT2	7.9900e-004	7.7500e-004
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.12	0.10
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.09	0.07
tblVehicleEF	LDT2	0.12	0.09
tblVehicleEF	LHD1	4.5990e-003	5.2860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	1.17	0.75
tblVehicleEF	LHD1	2.17	2.58
tblVehicleEF	LHD1	9.44	8.94
tblVehicleEF	LHD1	682.68	595.21
tblVehicleEF	LHD1	27.24	32.17
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	1.95	0.86
tblVehicleEF	LHD1	0.88	0.95
tblVehicleEF	LHD1	1.0850e-003	8.3300e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	8.8370e-003
tblVehicleEF	LHD1	7.5700e-004	9.4800e-004
tblVehicleEF	LHD1	1.0380e-003	7.9700e-004

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tblVehicleEF	LHD1	2.5850e-003	2.5350e-003
tblVehicleEF	LHD1	0.02	8.4300e-003
tblVehicleEF	LHD1	6.9600e-004	8.7200e-004
tblVehicleEF	LHD1	3.3700e-003	2.9730e-003
tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.4740e-003	1.8290e-003
tblVehicleEF	LHD1	0.15	0.06
tblVehicleEF	LHD1	0.32	0.30
tblVehicleEF	LHD1	0.22	0.24
tblVehicleEF	LHD1	9.4000e-005	9.0000e-005
tblVehicleEF	LHD1	6.6790e-003	5.8400e-003
tblVehicleEF	LHD1	3.1300e-004	3.7000e-004
tblVehicleEF	LHD1	3.3700e-003	2.9730e-003
tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.4740e-003	1.8290e-003
tblVehicleEF	LHD1	0.18	0.07
tblVehicleEF	LHD1	0.32	0.30
tblVehicleEF	LHD1	0.24	0.27
tblVehicleEF	LHD1	4.5990e-003	5.2860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	1.19	0.76
tblVehicleEF	LHD1	2.01	2.46
tblVehicleEF	LHD1	9.44	8.94

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tblVehicleEF	LHD1	682.68	595.21
tblVehicleEF	LHD1	27.24	32.17
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	1.84	0.81
tblVehicleEF	LHD1	0.83	0.91
tblVehicleEF	LHD1	1.0850e-003	8.3300e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	8.8370e-003
tblVehicleEF	LHD1	7.5700e-004	9.4800e-004
tblVehicleEF	LHD1	1.0380e-003	7.9700e-004
tblVehicleEF	LHD1	2.5850e-003	2.5350e-003
tblVehicleEF	LHD1	0.02	8.4300e-003
tblVehicleEF	LHD1	6.9600e-004	8.7200e-004
tblVehicleEF	LHD1	8.2630e-003	4.4450e-003
tblVehicleEF	LHD1	0.11	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.1080e-003	2.5600e-003
tblVehicleEF	LHD1	0.15	0.06
tblVehicleEF	LHD1	0.32	0.29
tblVehicleEF	LHD1	0.20	0.23
tblVehicleEF	LHD1	9.4000e-005	9.0000e-005
tblVehicleEF	LHD1	6.6800e-003	5.8400e-003
tblVehicleEF	LHD1	3.1000e-004	3.6700e-004
tblVehicleEF	LHD1	8.2630e-003	4.4450e-003
tblVehicleEF	LHD1	0.11	0.10
tblVehicleEF	LHD1	0.02	0.02

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tblVehicleEF	LHD1	3.1080e-003	2.5600e-003
tblVehicleEF	LHD1	0.18	0.08
tblVehicleEF	LHD1	0.32	0.29
tblVehicleEF	LHD1	0.22	0.26
tblVehicleEF	LHD1	4.5990e-003	5.2860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	1.16	0.74
tblVehicleEF	LHD1	2.31	2.59
tblVehicleEF	LHD1	9.44	8.94
tblVehicleEF	LHD1	682.68	595.21
tblVehicleEF	LHD1	27.24	32.17
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	1.98	0.85
tblVehicleEF	LHD1	0.92	0.95
tblVehicleEF	LHD1	1.0850e-003	8.3300e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	8.8370e-003
tblVehicleEF	LHD1	7.5700e-004	9.4800e-004
tblVehicleEF	LHD1	1.0380e-003	7.9700e-004
tblVehicleEF	LHD1	2.5850e-003	2.5350e-003
tblVehicleEF	LHD1	0.02	8.4300e-003
tblVehicleEF	LHD1	6.9600e-004	8.7200e-004
tblVehicleEF	LHD1	1.6680e-003	3.1110e-003
tblVehicleEF	LHD1	0.10	0.11

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tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.3900e-004	1.7990e-003
tblVehicleEF	LHD1	0.15	0.06
tblVehicleEF	LHD1	0.35	0.32
tblVehicleEF	LHD1	0.23	0.25
tblVehicleEF	LHD1	9.4000e-005	9.0000e-005
tblVehicleEF	LHD1	6.6790e-003	5.8400e-003
tblVehicleEF	LHD1	3.1600e-004	3.7000e-004
tblVehicleEF	LHD1	1.6680e-003	3.1110e-003
tblVehicleEF	LHD1	0.10	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.3900e-004	1.7990e-003
tblVehicleEF	LHD1	0.18	0.07
tblVehicleEF	LHD1	0.35	0.32
tblVehicleEF	LHD1	0.25	0.27
tblVehicleEF	LHD2	3.4110e-003	3.7460e-003
tblVehicleEF	LHD2	8.5210e-003	3.7700e-003
tblVehicleEF	LHD2	7.0990e-003	7.4580e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.69	0.31
tblVehicleEF	LHD2	1.08	1.26
tblVehicleEF	LHD2	14.47	13.57
tblVehicleEF	LHD2	721.53	610.80
tblVehicleEF	LHD2	23.65	26.97
tblVehicleEF	LHD2	5.5720e-003	6.2270e-003
tblVehicleEF	LHD2	0.12	0.09
tblVehicleEF	LHD2	1.32	0.55

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tblVehicleEF	LHD2	0.49	0.50
tblVehicleEF	LHD2	1.3030e-003	1.1440e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	8.4330e-003
tblVehicleEF	LHD2	3.2900e-004	4.4100e-004
tblVehicleEF	LHD2	1.2460e-003	1.0950e-003
tblVehicleEF	LHD2	2.6950e-003	2.6630e-003
tblVehicleEF	LHD2	0.02	8.0540e-003
tblVehicleEF	LHD2	3.0200e-004	4.0500e-004
tblVehicleEF	LHD2	1.3310e-003	1.0290e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	6.3200e-004	6.8900e-004
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	1.4100e-004	1.3300e-004
tblVehicleEF	LHD2	7.0140e-003	5.9490e-003
tblVehicleEF	LHD2	2.5600e-004	2.9200e-004
tblVehicleEF	LHD2	1.3310e-003	1.0290e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.3200e-004	6.8900e-004
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	3.4110e-003	3.7460e-003

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tblVehicleEF	LHD2	8.6240e-003	3.8180e-003
tblVehicleEF	LHD2	6.7310e-003	7.2080e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.70	0.31
tblVehicleEF	LHD2	1.01	1.20
tblVehicleEF	LHD2	14.47	13.57
tblVehicleEF	LHD2	721.53	610.80
tblVehicleEF	LHD2	23.65	26.97
tblVehicleEF	LHD2	5.5720e-003	6.2270e-003
tblVehicleEF	LHD2	0.12	0.09
tblVehicleEF	LHD2	1.25	0.52
tblVehicleEF	LHD2	0.47	0.49
tblVehicleEF	LHD2	1.3030e-003	1.1440e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	8.4330e-003
tblVehicleEF	LHD2	3.2900e-004	4.4100e-004
tblVehicleEF	LHD2	1.2460e-003	1.0950e-003
tblVehicleEF	LHD2	2.6950e-003	2.6630e-003
tblVehicleEF	LHD2	0.02	8.0540e-003
tblVehicleEF	LHD2	3.0200e-004	4.0500e-004
tblVehicleEF	LHD2	3.2320e-003	1.5320e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.2900e-003	9.5700e-004
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.09	0.10

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tblVehicleEF	LHD2	1.4100e-004	1.3300e-004
tblVehicleEF	LHD2	7.0140e-003	5.9490e-003
tblVehicleEF	LHD2	2.5500e-004	2.9100e-004
tblVehicleEF	LHD2	3.2320e-003	1.5320e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.2900e-003	9.5700e-004
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	3.4110e-003	3.7460e-003
tblVehicleEF	LHD2	8.4280e-003	3.7580e-003
tblVehicleEF	LHD2	7.4650e-003	7.5080e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.69	0.31
tblVehicleEF	LHD2	1.16	1.27
tblVehicleEF	LHD2	14.47	13.57
tblVehicleEF	LHD2	721.53	610.80
tblVehicleEF	LHD2	23.65	26.97
tblVehicleEF	LHD2	5.5720e-003	6.2270e-003
tblVehicleEF	LHD2	0.12	0.09
tblVehicleEF	LHD2	1.34	0.54
tblVehicleEF	LHD2	0.52	0.51
tblVehicleEF	LHD2	1.3030e-003	1.1440e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	8.4330e-003
tblVehicleEF	LHD2	3.2900e-004	4.4100e-004

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tblVehicleEF	LHD2	1.2460e-003	1.0950e-003
tblVehicleEF	LHD2	2.6950e-003	2.6630e-003
tblVehicleEF	LHD2	0.02	8.0540e-003
tblVehicleEF	LHD2	3.0200e-004	4.0500e-004
tblVehicleEF	LHD2	5.6700e-004	1.0410e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	2.9200e-004	6.6600e-004
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	1.4100e-004	1.3300e-004
tblVehicleEF	LHD2	7.0140e-003	5.9490e-003
tblVehicleEF	LHD2	2.5800e-004	2.9200e-004
tblVehicleEF	LHD2	5.6700e-004	1.0410e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.9200e-004	6.6600e-004
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	MCY	0.47	0.54
tblVehicleEF	MCY	0.16	0.15
tblVehicleEF	MCY	22.07	18.72
tblVehicleEF	MCY	10.05	9.68
tblVehicleEF	MCY	180.02	189.29
tblVehicleEF	MCY	46.22	44.13

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tblVehicleEF	MCY	5.7600e-003	5.1840e-003
tblVehicleEF	MCY	1.19	1.13
tblVehicleEF	MCY	0.31	0.31
tblVehicleEF	MCY	2.0850e-003	2.4730e-003
tblVehicleEF	MCY	3.6110e-003	3.6800e-003
tblVehicleEF	MCY	1.9500e-003	2.3100e-003
tblVehicleEF	MCY	3.4040e-003	3.4590e-003
tblVehicleEF	MCY	1.58	1.06
tblVehicleEF	MCY	0.89	0.62
tblVehicleEF	MCY	0.85	0.64
tblVehicleEF	MCY	2.41	2.58
tblVehicleEF	MCY	0.53	0.58
tblVehicleEF	MCY	2.18	2.04
tblVehicleEF	MCY	2.2310e-003	2.2780e-003
tblVehicleEF	MCY	6.9100e-004	6.5900e-004
tblVehicleEF	MCY	1.58	1.06
tblVehicleEF	MCY	0.89	0.62
tblVehicleEF	MCY	0.85	0.64
tblVehicleEF	MCY	2.97	3.22
tblVehicleEF	MCY	0.53	0.58
tblVehicleEF	MCY	2.37	2.22
tblVehicleEF	MCY	0.46	0.53
tblVehicleEF	MCY	0.14	0.13
tblVehicleEF	MCY	22.54	18.05
tblVehicleEF	MCY	9.14	8.84
tblVehicleEF	MCY	180.02	189.29
tblVehicleEF	MCY	46.22	44.13

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tblVehicleEF	MCY	5.7600e-003	5.1840e-003
tblVehicleEF	MCY	1.02	0.99
tblVehicleEF	MCY	0.29	0.29
tblVehicleEF	MCY	2.0850e-003	2.4730e-003
tblVehicleEF	MCY	3.6110e-003	3.6800e-003
tblVehicleEF	MCY	1.9500e-003	2.3100e-003
tblVehicleEF	MCY	3.4040e-003	3.4590e-003
tblVehicleEF	MCY	4.21	1.72
tblVehicleEF	MCY	1.43	0.68
tblVehicleEF	MCY	2.26	1.06
tblVehicleEF	MCY	2.36	2.52
tblVehicleEF	MCY	0.52	0.54
tblVehicleEF	MCY	1.86	1.82
tblVehicleEF	MCY	2.2360e-003	2.2650e-003
tblVehicleEF	MCY	6.6600e-004	6.3900e-004
tblVehicleEF	MCY	4.21	1.72
tblVehicleEF	MCY	1.43	0.68
tblVehicleEF	MCY	2.26	1.06
tblVehicleEF	MCY	2.91	3.15
tblVehicleEF	MCY	0.52	0.54
tblVehicleEF	MCY	2.02	1.98
tblVehicleEF	MCY	0.48	0.54
tblVehicleEF	MCY	0.18	0.15
tblVehicleEF	MCY	23.05	18.82
tblVehicleEF	MCY	11.24	9.83
tblVehicleEF	MCY	180.02	189.29
tblVehicleEF	MCY	46.22	44.13

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tblVehicleEF	MCY	5.7600e-003	5.1840e-003
tblVehicleEF	MCY	1.26	1.10
tblVehicleEF	MCY	0.33	0.31
tblVehicleEF	MCY	2.0850e-003	2.4730e-003
tblVehicleEF	MCY	3.6110e-003	3.6800e-003
tblVehicleEF	MCY	1.9500e-003	2.3100e-003
tblVehicleEF	MCY	3.4040e-003	3.4590e-003
tblVehicleEF	MCY	0.72	1.15
tblVehicleEF	MCY	0.96	0.80
tblVehicleEF	MCY	0.29	0.61
tblVehicleEF	MCY	2.49	2.59
tblVehicleEF	MCY	0.61	0.67
tblVehicleEF	MCY	2.49	2.08
tblVehicleEF	MCY	2.2490e-003	2.2800e-003
tblVehicleEF	MCY	7.2000e-004	6.6300e-004
tblVehicleEF	MCY	0.72	1.15
tblVehicleEF	MCY	0.96	0.80
tblVehicleEF	MCY	0.29	0.61
tblVehicleEF	MCY	3.07	3.23
tblVehicleEF	MCY	0.61	0.67
tblVehicleEF	MCY	2.71	2.26
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	1.07	1.21
tblVehicleEF	MDV	2.72	2.22
tblVehicleEF	MDV	508.30	495.22
tblVehicleEF	MDV	106.72	99.91

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tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.13	0.13
tblVehicleEF	MDV	0.25	0.19
tblVehicleEF	MDV	1.7380e-003	2.2990e-003
tblVehicleEF	MDV	2.2340e-003	2.4650e-003
tblVehicleEF	MDV	1.6020e-003	2.1190e-003
tblVehicleEF	MDV	2.0540e-003	2.2660e-003
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.08	0.07
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	5.0880e-003	4.9590e-003
tblVehicleEF	MDV	1.1150e-003	1.0380e-003
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.08	0.07
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	1.35	1.32
tblVehicleEF	MDV	2.26	1.90
tblVehicleEF	MDV	560.43	516.89
tblVehicleEF	MDV	106.72	99.91

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tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.13	0.11
tblVehicleEF	MDV	0.23	0.18
tblVehicleEF	MDV	1.7380e-003	2.2990e-003
tblVehicleEF	MDV	2.2340e-003	2.4650e-003
tblVehicleEF	MDV	1.6020e-003	2.1190e-003
tblVehicleEF	MDV	2.0540e-003	2.2660e-003
tblVehicleEF	MDV	0.25	0.10
tblVehicleEF	MDV	0.22	0.15
tblVehicleEF	MDV	0.17	0.09
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.17	0.15
tblVehicleEF	MDV	5.6130e-003	5.1770e-003
tblVehicleEF	MDV	1.1060e-003	1.0320e-003
tblVehicleEF	MDV	0.25	0.10
tblVehicleEF	MDV	0.22	0.15
tblVehicleEF	MDV	0.17	0.09
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.18	0.16
tblVehicleEF	MDV	9.7230e-003	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	0.98	1.17
tblVehicleEF	MDV	3.23	2.29
tblVehicleEF	MDV	488.62	487.26
tblVehicleEF	MDV	106.72	99.91

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tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.27	0.20
tblVehicleEF	MDV	1.7380e-003	2.2990e-003
tblVehicleEF	MDV	2.2340e-003	2.4650e-003
tblVehicleEF	MDV	1.6020e-003	2.1190e-003
tblVehicleEF	MDV	2.0540e-003	2.2660e-003
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.19	0.16
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.23	0.17
tblVehicleEF	MDV	4.8900e-003	4.8790e-003
tblVehicleEF	MDV	1.1240e-003	1.0390e-003
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.19	0.16
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.26	0.19
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.42	1.76
tblVehicleEF	MH	5.67	5.23
tblVehicleEF	MH	1,223.13	1,125.05
tblVehicleEF	MH	56.87	59.88

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tblVehicleEF	MH	7.5900e-004	8.6200e-004
tblVehicleEF	MH	1.72	1.00
tblVehicleEF	MH	0.83	0.75
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	1.0630e-003	1.0430e-003
tblVehicleEF	MH	3.2490e-003	3.2050e-003
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	9.7700e-004	9.5900e-004
tblVehicleEF	MH	1.34	0.84
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.39	0.36
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.33	0.30
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.6800e-004	6.9000e-004
tblVehicleEF	MH	1.34	0.84
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.39	0.36
tblVehicleEF	MH	0.16	0.10
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.36	0.33
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.51	1.81
tblVehicleEF	MH	5.09	4.92

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tblVehicleEF	MH	1,223.13	1,125.05
tblVehicleEF	MH	56.87	59.88
tblVehicleEF	MH	7.5900e-004	8.6200e-004
tblVehicleEF	MH	1.60	0.92
tblVehicleEF	MH	0.78	0.71
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	1.0630e-003	1.0430e-003
tblVehicleEF	MH	3.2490e-003	3.2050e-003
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	9.7700e-004	9.5900e-004
tblVehicleEF	MH	3.28	1.24
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.84	0.51
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.30	0.29
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.5800e-004	6.8400e-004
tblVehicleEF	MH	3.28	1.24
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.84	0.51
tblVehicleEF	MH	0.16	0.10
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.33	0.31
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.03	0.02

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tblVehicleEF	MH	2.36	1.75
tblVehicleEF	MH	6.11	5.28
tblVehicleEF	MH	1,223.13	1,125.05
tblVehicleEF	MH	56.87	59.88
tblVehicleEF	MH	7.5900e-004	8.6200e-004
tblVehicleEF	MH	1.76	0.98
tblVehicleEF	MH	0.86	0.75
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	1.0630e-003	1.0430e-003
tblVehicleEF	MH	3.2490e-003	3.2050e-003
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	9.7700e-004	9.5900e-004
tblVehicleEF	MH	0.78	0.95
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.25	0.37
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.34	0.30
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7500e-004	6.9000e-004
tblVehicleEF	MH	0.78	0.95
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.25	0.37
tblVehicleEF	MH	0.15	0.10
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.38	0.33

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tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1760e-003	3.8910e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.29	0.36
tblVehicleEF	MHD	0.34	0.32
tblVehicleEF	MHD	4.63	5.63
tblVehicleEF	MHD	167.15	130.55
tblVehicleEF	MHD	1,193.03	1,141.08
tblVehicleEF	MHD	46.19	62.84
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.47	0.35
tblVehicleEF	MHD	1.17	0.76
tblVehicleEF	MHD	12.92	9.98
tblVehicleEF	MHD	1.5100e-004	1.0200e-004
tblVehicleEF	MHD	3.2340e-003	2.8420e-003
tblVehicleEF	MHD	7.0000e-004	8.1400e-004
tblVehicleEF	MHD	1.4400e-004	9.7000e-005
tblVehicleEF	MHD	3.0890e-003	2.7140e-003
tblVehicleEF	MHD	6.4400e-004	7.4900e-004
tblVehicleEF	MHD	1.2980e-003	1.0540e-003
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	5.6600e-004	7.0500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.28	0.34
tblVehicleEF	MHD	1.6040e-003	1.2580e-003

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tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.4300e-004	7.2700e-004
tblVehicleEF	MHD	1.2980e-003	1.0540e-003
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	5.6600e-004	7.0500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.30	0.38
tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	4.2500e-003	3.9490e-003
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.20	0.26
tblVehicleEF	MHD	0.35	0.32
tblVehicleEF	MHD	4.31	5.34
tblVehicleEF	MHD	177.16	138.27
tblVehicleEF	MHD	1,193.03	1,141.08
tblVehicleEF	MHD	46.19	62.84
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.48	0.36
tblVehicleEF	MHD	1.11	0.71
tblVehicleEF	MHD	12.89	9.94
tblVehicleEF	MHD	1.2700e-004	8.6000e-005
tblVehicleEF	MHD	3.2340e-003	2.8420e-003
tblVehicleEF	MHD	7.0000e-004	8.1400e-004
tblVehicleEF	MHD	1.2200e-004	8.2000e-005
tblVehicleEF	MHD	3.0890e-003	2.7140e-003

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tblVehicleEF	MHD	6.4400e-004	7.4900e-004
tblVehicleEF	MHD	3.2300e-003	1.5770e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.2320e-003	9.9000e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.26	0.33
tblVehicleEF	MHD	1.6990e-003	1.3310e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.3700e-004	7.2200e-004
tblVehicleEF	MHD	3.2300e-003	1.5770e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.2320e-003	9.9000e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.29	0.36
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1090e-003	3.8750e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.38	0.50
tblVehicleEF	MHD	0.34	0.32
tblVehicleEF	MHD	4.98	5.68
tblVehicleEF	MHD	153.55	119.87
tblVehicleEF	MHD	1,193.03	1,141.08
tblVehicleEF	MHD	46.19	62.84

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tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.45	0.33
tblVehicleEF	MHD	1.19	0.74
tblVehicleEF	MHD	12.96	9.99
tblVehicleEF	MHD	1.8400e-004	1.2400e-004
tblVehicleEF	MHD	3.2340e-003	2.8420e-003
tblVehicleEF	MHD	7.0000e-004	8.1400e-004
tblVehicleEF	MHD	1.7600e-004	1.1800e-004
tblVehicleEF	MHD	3.0890e-003	2.7140e-003
tblVehicleEF	MHD	6.4400e-004	7.4900e-004
tblVehicleEF	MHD	5.3100e-004	1.0750e-003
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.4500e-004	6.8500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.29	0.35
tblVehicleEF	MHD	1.4750e-003	1.1580e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.4900e-004	7.2800e-004
tblVehicleEF	MHD	5.3100e-004	1.0750e-003
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	2.4500e-004	6.8500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.32	0.38

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tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	9.5700e-003	6.0280e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.25
tblVehicleEF	OBUS	0.60	0.45
tblVehicleEF	OBUS	5.59	5.18
tblVehicleEF	OBUS	82.95	101.82
tblVehicleEF	OBUS	1,297.22	1,246.68
tblVehicleEF	OBUS	69.48	67.80
tblVehicleEF	OBUS	1.6120e-003	2.5460e-003
tblVehicleEF	OBUS	0.17	0.22
tblVehicleEF	OBUS	0.74	0.69
tblVehicleEF	OBUS	2.14	2.52
tblVehicleEF	OBUS	1.5000e-005	2.0000e-005
tblVehicleEF	OBUS	2.3050e-003	2.6330e-003
tblVehicleEF	OBUS	8.5700e-004	8.2900e-004
tblVehicleEF	OBUS	1.5000e-005	1.9000e-005
tblVehicleEF	OBUS	2.1800e-003	2.5030e-003
tblVehicleEF	OBUS	7.8800e-004	7.6200e-004
tblVehicleEF	OBUS	2.1290e-003	1.4160e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	7.4300e-004	7.6700e-004
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.35	0.32
tblVehicleEF	OBUS	8.0400e-004	9.8300e-004

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tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9300e-004	7.6900e-004
tblVehicleEF	OBUS	2.1290e-003	1.4160e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	7.4300e-004	7.6700e-004
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.38	0.35
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	9.8510e-003	6.1370e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.24	0.24
tblVehicleEF	OBUS	0.61	0.45
tblVehicleEF	OBUS	5.08	4.89
tblVehicleEF	OBUS	86.87	106.89
tblVehicleEF	OBUS	1,297.22	1,246.68
tblVehicleEF	OBUS	69.48	67.80
tblVehicleEF	OBUS	1.6120e-003	2.5460e-003
tblVehicleEF	OBUS	0.17	0.22
tblVehicleEF	OBUS	0.69	0.64
tblVehicleEF	OBUS	2.09	2.49
tblVehicleEF	OBUS	1.3000e-005	1.7000e-005
tblVehicleEF	OBUS	2.3050e-003	2.6330e-003
tblVehicleEF	OBUS	8.5700e-004	8.2900e-004
tblVehicleEF	OBUS	1.2000e-005	1.6000e-005
tblVehicleEF	OBUS	2.1800e-003	2.5030e-003

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tblVehicleEF	OBUS	7.8800e-004	7.6200e-004
tblVehicleEF	OBUS	5.1600e-003	2.0710e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	1.5310e-003	1.0770e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.32	0.31
tblVehicleEF	OBUS	8.4100e-004	1.0320e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8400e-004	7.6400e-004
tblVehicleEF	OBUS	5.1600e-003	2.0710e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.5310e-003	1.0770e-003
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.35	0.34
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	9.3440e-003	5.9990e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.26
tblVehicleEF	OBUS	0.59	0.45
tblVehicleEF	OBUS	6.10	5.23
tblVehicleEF	OBUS	77.54	94.83
tblVehicleEF	OBUS	1,297.22	1,246.68
tblVehicleEF	OBUS	69.48	67.80

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tblVehicleEF	OBUS	1.6120e-003	2.5460e-003
tblVehicleEF	OBUS	0.16	0.21
tblVehicleEF	OBUS	0.75	0.68
tblVehicleEF	OBUS	2.20	2.53
tblVehicleEF	OBUS	1.9000e-005	2.4000e-005
tblVehicleEF	OBUS	2.3050e-003	2.6330e-003
tblVehicleEF	OBUS	8.5700e-004	8.2900e-004
tblVehicleEF	OBUS	1.8000e-005	2.3000e-005
tblVehicleEF	OBUS	2.1800e-003	2.5030e-003
tblVehicleEF	OBUS	7.8800e-004	7.6200e-004
tblVehicleEF	OBUS	9.7600e-004	1.4400e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	4.1200e-004	7.4400e-004
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.37	0.33
tblVehicleEF	OBUS	7.5200e-004	9.1700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0100e-004	7.7000e-004
tblVehicleEF	OBUS	9.7600e-004	1.4400e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	4.1200e-004	7.4400e-004
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.40	0.36

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tblVehicleEF	SBUS	0.83	0.84
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.08	0.06
tblVehicleEF	SBUS	5.55	8.28
tblVehicleEF	SBUS	0.89	0.67
tblVehicleEF	SBUS	6.23	7.16
tblVehicleEF	SBUS	1,257.80	1,105.31
tblVehicleEF	SBUS	1,116.29	1,070.53
tblVehicleEF	SBUS	36.73	56.44
tblVehicleEF	SBUS	9.1200e-004	6.9200e-004
tblVehicleEF	SBUS	11.18	8.50
tblVehicleEF	SBUS	4.37	3.81
tblVehicleEF	SBUS	15.17	11.84
tblVehicleEF	SBUS	0.01	8.1160e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.7400e-004	8.5300e-004
tblVehicleEF	SBUS	0.01	7.7650e-003
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.2800e-004	7.8400e-004
tblVehicleEF	SBUS	4.8340e-003	3.3720e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.66	0.99
tblVehicleEF	SBUS	1.5450e-003	1.8240e-003
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	0.01	0.01

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tblVehicleEF	SBUS	0.32	0.38
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.7500e-004	6.8800e-004
tblVehicleEF	SBUS	4.8340e-003	3.3720e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.94	1.43
tblVehicleEF	SBUS	1.5450e-003	1.8240e-003
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.35	0.41
tblVehicleEF	SBUS	0.83	0.84
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.06	0.05
tblVehicleEF	SBUS	5.41	8.18
tblVehicleEF	SBUS	0.91	0.68
tblVehicleEF	SBUS	4.04	5.81
tblVehicleEF	SBUS	1,321.77	1,154.44
tblVehicleEF	SBUS	1,116.29	1,070.53
tblVehicleEF	SBUS	36.73	56.44
tblVehicleEF	SBUS	9.1200e-004	6.9200e-004
tblVehicleEF	SBUS	11.54	8.77
tblVehicleEF	SBUS	4.13	3.59
tblVehicleEF	SBUS	15.13	11.81
tblVehicleEF	SBUS	9.0880e-003	6.8420e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02

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tblVehicleEF	SBUS	5.7400e-004	8.5300e-004
tblVehicleEF	SBUS	8.6950e-003	6.5460e-003
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.2800e-004	7.8400e-004
tblVehicleEF	SBUS	0.01	4.9610e-003
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	0.65	0.98
tblVehicleEF	SBUS	3.2470e-003	2.5750e-003
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.25	0.34
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.3800e-004	6.6600e-004
tblVehicleEF	SBUS	0.01	4.9610e-003
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	0.94	1.42
tblVehicleEF	SBUS	3.2470e-003	2.5750e-003
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.27	0.37
tblVehicleEF	SBUS	0.83	0.84
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	SBUS	5.75	8.43
tblVehicleEF	SBUS	0.87	0.66

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tblVehicleEF	SBUS	8.38	7.40
tblVehicleEF	SBUS	1,169.47	1,037.46
tblVehicleEF	SBUS	1,116.29	1,070.53
tblVehicleEF	SBUS	36.73	56.44
tblVehicleEF	SBUS	9.1200e-004	6.9200e-004
tblVehicleEF	SBUS	10.69	8.13
tblVehicleEF	SBUS	4.44	3.74
tblVehicleEF	SBUS	15.21	11.85
tblVehicleEF	SBUS	0.01	9.8760e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.7400e-004	8.5300e-004
tblVehicleEF	SBUS	0.01	9.4480e-003
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.2800e-004	7.8400e-004
tblVehicleEF	SBUS	2.0720e-003	3.3940e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.66	0.99
tblVehicleEF	SBUS	8.3300e-004	1.7490e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.38	0.39
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.1100e-004	6.9200e-004
tblVehicleEF	SBUS	2.0720e-003	3.3940e-003

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tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.95	1.43
tblVehicleEF	SBUS	8.3300e-004	1.7490e-003
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.41	0.42
tblVehicleEF	UBUS	1.31	2.44
tblVehicleEF	UBUS	0.06	0.05
tblVehicleEF	UBUS	6.73	10.68
tblVehicleEF	UBUS	10.64	8.84
tblVehicleEF	UBUS	1,909.36	1,951.45
tblVehicleEF	UBUS	122.42	100.38
tblVehicleEF	UBUS	1.6100e-003	2.1330e-003
tblVehicleEF	UBUS	5.17	9.33
tblVehicleEF	UBUS	13.90	15.09
tblVehicleEF	UBUS	0.55	0.60
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.1450e-003	1.1360e-003
tblVehicleEF	UBUS	0.23	0.26
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.0530e-003	1.0450e-003
tblVehicleEF	UBUS	6.4620e-003	4.1100e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	2.6210e-003	2.4100e-003
tblVehicleEF	UBUS	0.45	0.79
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.83	0.68

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tblVehicleEF	UBUS	0.01	9.8060e-003
tblVehicleEF	UBUS	1.4160e-003	1.1630e-003
tblVehicleEF	UBUS	6.4620e-003	4.1100e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	2.6210e-003	2.4100e-003
tblVehicleEF	UBUS	1.81	3.32
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.91	0.75
tblVehicleEF	UBUS	1.31	2.44
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	6.78	10.72
tblVehicleEF	UBUS	8.63	7.66
tblVehicleEF	UBUS	1,909.36	1,951.45
tblVehicleEF	UBUS	122.42	100.38
tblVehicleEF	UBUS	1.6100e-003	2.1330e-003
tblVehicleEF	UBUS	4.87	8.79
tblVehicleEF	UBUS	13.81	15.04
tblVehicleEF	UBUS	0.55	0.60
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.1450e-003	1.1360e-003
tblVehicleEF	UBUS	0.23	0.26
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.0530e-003	1.0450e-003
tblVehicleEF	UBUS	0.02	5.8640e-003
tblVehicleEF	UBUS	0.10	0.07
tblVehicleEF	UBUS	5.7470e-003	3.3120e-003
tblVehicleEF	UBUS	0.45	0.80

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tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.73	0.63
tblVehicleEF	UBUS	0.01	9.8070e-003
tblVehicleEF	UBUS	1.3820e-003	1.1430e-003
tblVehicleEF	UBUS	0.02	5.8640e-003
tblVehicleEF	UBUS	0.10	0.07
tblVehicleEF	UBUS	5.7470e-003	3.3120e-003
tblVehicleEF	UBUS	1.82	3.33
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.80	0.69
tblVehicleEF	UBUS	1.31	2.44
tblVehicleEF	UBUS	0.07	0.05
tblVehicleEF	UBUS	6.67	10.66
tblVehicleEF	UBUS	12.77	9.05
tblVehicleEF	UBUS	1,909.36	1,951.45
tblVehicleEF	UBUS	122.42	100.38
tblVehicleEF	UBUS	1.6100e-003	2.1330e-003
tblVehicleEF	UBUS	5.27	9.15
tblVehicleEF	UBUS	13.99	15.10
tblVehicleEF	UBUS	0.55	0.60
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.1450e-003	1.1360e-003
tblVehicleEF	UBUS	0.23	0.26
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.0530e-003	1.0450e-003
tblVehicleEF	UBUS	2.8220e-003	4.6290e-003
tblVehicleEF	UBUS	0.08	0.08

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tblVehicleEF	UBUS	1.3490e-003	2.5090e-003
tblVehicleEF	UBUS	0.44	0.79
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.93	0.70
tblVehicleEF	UBUS	0.01	9.8060e-003
tblVehicleEF	UBUS	1.4530e-003	1.1670e-003
tblVehicleEF	UBUS	2.8220e-003	4.6290e-003
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	1.3490e-003	2.5090e-003
tblVehicleEF	UBUS	1.80	3.31
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.01	0.76
tblVehicleTrips	CC_TL	6.60	7.30
tblVehicleTrips	CNW_TL	6.60	7.30
tblVehicleTrips	CW_TL	14.70	9.50
tblWater	ElectricityIntensityFactorToSupply	2,117.00	9,727.00

2.0 Emissions Summary

WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	0.1901	0.0710
2	4-1-2019	6-30-2019	0.4940	0.1844
3	7-1-2019	9-30-2019	0.4995	0.1864
		Highest	0.4995	0.1864

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/25/2019	10/25/2019	5	175	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Rubber Tired Loaders	1	1.00	313	0.36
Grading	Excavators	1	6.00	180	0.38
Grading	Graders	1	6.00	174	0.41
Grading	Off-Highway Trucks	1	4.00	479	0.40
Grading	Rollers	1	1.00	114	0.48
Grading	Skid Steer Loaders	1	1.00	88	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	10.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5269	0.0000	0.5269	0.2896	0.0000	0.2896	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1163	1.2008	0.7060	1.7100e-003		0.0539	0.0539		0.0495	0.0495	0.0000	153.1609	153.1609	0.0485	0.0000	154.3723
Total	0.1163	1.2008	0.7060	1.7100e-003	0.5269	0.0539	0.5808	0.2896	0.0495	0.3392	0.0000	153.1609	153.1609	0.0485	0.0000	154.3723

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1900e-003	5.5600e-003	0.0525	1.7000e-004	0.0163	1.1000e-004	0.0164	4.3300e-003	1.0000e-004	4.4300e-003	0.0000	15.2160	15.2160	4.1000e-004	0.0000	15.2264
Total	7.1900e-003	5.5600e-003	0.0525	1.7000e-004	0.0163	1.1000e-004	0.0164	4.3300e-003	1.0000e-004	4.4300e-003	0.0000	15.2160	15.2160	4.1000e-004	0.0000	15.2264

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3.2 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5269	0.0000	0.5269	0.2896	0.0000	0.2896	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0502	0.4332	0.8563	1.7100e-003		0.0195	0.0195		0.0181	0.0181	0.0000	153.1607	153.1607	0.0485	0.0000	154.3722
Total	0.0502	0.4332	0.8563	1.7100e-003	0.5269	0.0195	0.5465	0.2896	0.0181	0.3078	0.0000	153.1607	153.1607	0.0485	0.0000	154.3722

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1900e-003	5.5600e-003	0.0525	1.7000e-004	0.0163	1.1000e-004	0.0164	4.3300e-003	1.0000e-004	4.4300e-003	0.0000	15.2160	15.2160	4.1000e-004	0.0000	15.2264
Total	7.1900e-003	5.5600e-003	0.0525	1.7000e-004	0.0163	1.1000e-004	0.0164	4.3300e-003	1.0000e-004	4.4300e-003	0.0000	15.2160	15.2160	4.1000e-004	0.0000	15.2264

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Recovery Wella (7) Southwest Wellfield - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

WSWB - Recovery Well Pump Testing
Kern-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - owner Supplied Data
- Construction Phase - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Grading -
- Construction Off-road Equipment Mitigation -

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	12/31/2018	9/18/2019
tblConstructionPhase	PhaseStartDate	1/1/2019	8/26/2019
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
3	7-1-2019	9-30-2019	0.1581	0.1581
		Highest	0.1581	0.1581

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Trenching	8/26/2019	9/18/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Pumps	1	24.00	300	0.50
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

3.2 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0205	0.1438	0.1214	2.0000e-004		8.2400e-003	8.2400e-003		7.9600e-003	7.9600e-003	0.0000	16.4765	16.4765	3.1700e-003	0.0000	16.5557
Total	0.0205	0.1438	0.1214	2.0000e-004		8.2400e-003	8.2400e-003		7.9600e-003	7.9600e-003	0.0000	16.4765	16.4765	3.1700e-003	0.0000	16.5557

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6000e-004	7.1000e-004	6.8200e-003	2.0000e-005	2.0300e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.9044	1.9044	5.0000e-005	0.0000	1.9057
Total	9.6000e-004	7.1000e-004	6.8200e-003	2.0000e-005	2.0300e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.9044	1.9044	5.0000e-005	0.0000	1.9057

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

3.2 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0205	0.1438	0.1214	2.0000e-004		8.2400e-003	8.2400e-003		7.9600e-003	7.9600e-003	0.0000	16.4765	16.4765	3.1700e-003	0.0000	16.5556
Total	0.0205	0.1438	0.1214	2.0000e-004		8.2400e-003	8.2400e-003		7.9600e-003	7.9600e-003	0.0000	16.4765	16.4765	3.1700e-003	0.0000	16.5556

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6000e-004	7.1000e-004	6.8200e-003	2.0000e-005	2.0300e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.9044	1.9044	5.0000e-005	0.0000	1.9057
Total	9.6000e-004	7.1000e-004	6.8200e-003	2.0000e-005	2.0300e-003	1.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.9044	1.9044	5.0000e-005	0.0000	1.9057

4.0 Operational Detail - Mobile

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Recovery Well Pump Testing - Kern-Mojave Desert County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

WSWB - 48-inch Pipeline LA County - Los Angeles-Mojave Desert County, Annual

WSWB - 48-inch Pipeline LA County
Los Angeles-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	37.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	7			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Construction Off-road Equipment Mitigation - Owner Supplied Data

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0

WSWB - 48-inch Pipeline LA County - Los Angeles-Mojave Desert County, Annual

tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblGrading	AcresOfGrading	65.63	187.50
tblLandUse	LotAcreage	0.00	37.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	HorsePower	97.00	1,087.00
tblOffRoadEquipment	HorsePower	231.00	190.00

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tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.41	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblProjectCharacteristics	OperationalYear	2018	2021
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	25.00	30.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-7-2019	4-6-2019	1.4135	0.5171
2	4-7-2019	7-6-2019	0.2040	0.0745
		Highest	1.4135	0.5171

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/7/2019	4/19/2019	5	75	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	1	2.00	190	0.38
Grading	Excavators	1	6.00	180	0.41
Grading	Graders	1	6.00	174	0.40
Grading	Off-Highway Trucks	1	4.00	479	0.48
Grading	Rubber Tired Loaders	2	8.00	165	0.36
Grading	Scrapers	1	4.00	313	0.37
Grading	Skid Steer Loaders	1	3.00	88	0.37
Grading	Tractors/Loaders/Backhoes	1	3.00	1087	0.37
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	10	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3253	0.0000	0.3253	0.1349	0.0000	0.1349	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1421	1.4899	0.8556	1.7100e-003		0.0701	0.0701		0.0645	0.0645	0.0000	153.4527	153.4527	0.0486	0.0000	154.6664
Total	0.1421	1.4899	0.8556	1.7100e-003	0.3253	0.0701	0.3954	0.1349	0.0645	0.1994	0.0000	153.4527	153.4527	0.0486	0.0000	154.6664

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.7300e-003	7.7000e-003	0.0828	2.2000e-004	0.0210	1.8000e-004	0.0211	5.5700e-003	1.7000e-004	5.7300e-003	0.0000	19.9853	19.9853	6.7000e-004	0.0000	20.0021
Total	8.7300e-003	7.7000e-003	0.0828	2.2000e-004	0.0210	1.8000e-004	0.0211	5.5700e-003	1.7000e-004	5.7300e-003	0.0000	19.9853	19.9853	6.7000e-004	0.0000	20.0021

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3.2 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3253	0.0000	0.3253	0.1349	0.0000	0.1349	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0596	0.5266	0.9673	1.7100e-003		0.0244	0.0244		0.0226	0.0226	0.0000	153.4525	153.4525	0.0486	0.0000	154.6663
Total	0.0596	0.5266	0.9673	1.7100e-003	0.3253	0.0244	0.3496	0.1349	0.0226	0.1575	0.0000	153.4525	153.4525	0.0486	0.0000	154.6663

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.7300e-003	7.7000e-003	0.0828	2.2000e-004	0.0210	1.8000e-004	0.0211	5.5700e-003	1.7000e-004	5.7300e-003	0.0000	19.9853	19.9853	6.7000e-004	0.0000	20.0021
Total	8.7300e-003	7.7000e-003	0.0828	2.2000e-004	0.0210	1.8000e-004	0.0211	5.5700e-003	1.7000e-004	5.7300e-003	0.0000	19.9853	19.9853	6.7000e-004	0.0000	20.0021

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

WSWB - 48-inch Pipeline LA County - Los Angeles-Mojave Desert County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - 48-inch Pipeline LA County - Los Angeles-Mojave Desert County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - 48-inch Pipeline LA County - Los Angeles-Mojave Desert County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - 48-inch Pipeline LA County - Los Angeles-Mojave Desert County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - 48-inch Pipeline LA County - Los Angeles-Mojave Desert County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WSWB - Recovery Well Drilling - Kern-Mojave Desert County, Annual

WSWB - Recovery Well Drilling
Kern-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - owner Supplied Data
- Construction Phase - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Grading -
- Construction Off-road Equipment Mitigation -

WSWB - Recovery Well Drilling - Kern-Mojave Desert County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	12/31/2018	8/16/2019
tblConstructionPhase	PhaseStartDate	1/1/2019	7/1/2019
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblProjectCharacteristics	OperationalYear	2018	2021
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

WSWB - Recovery Well Drilling - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
3	7-1-2019	9-30-2019	0.3096	0.3096
		Highest	0.3096	0.3096

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Trenching	7/1/2019	8/16/2019	5	35	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Bore/Drill Rigs	1	24.00	500	0.50
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0398	0.2797	0.2360	3.9000e-004		0.0160	0.0160		0.0155	0.0155	0.0000	32.0376	32.0376	6.1600e-003	0.0000	32.1916
Total	0.0398	0.2797	0.2360	3.9000e-004		0.0160	0.0160		0.0155	0.0155	0.0000	32.0376	32.0376	6.1600e-003	0.0000	32.1916

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	1.3800e-003	0.0133	4.0000e-005	3.9500e-003	3.0000e-005	3.9700e-003	1.0500e-003	3.0000e-005	1.0700e-003	0.0000	3.7030	3.7030	1.0000e-004	0.0000	3.7056
Total	1.8600e-003	1.3800e-003	0.0133	4.0000e-005	3.9500e-003	3.0000e-005	3.9700e-003	1.0500e-003	3.0000e-005	1.0700e-003	0.0000	3.7030	3.7030	1.0000e-004	0.0000	3.7056

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3.2 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0398	0.2797	0.2360	3.9000e-004		0.0160	0.0160		0.0155	0.0155	0.0000	32.0376	32.0376	6.1600e-003	0.0000	32.1915
Total	0.0398	0.2797	0.2360	3.9000e-004		0.0160	0.0160		0.0155	0.0155	0.0000	32.0376	32.0376	6.1600e-003	0.0000	32.1915

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	1.3800e-003	0.0133	4.0000e-005	3.9500e-003	3.0000e-005	3.9700e-003	1.0500e-003	3.0000e-005	1.0700e-003	0.0000	3.7030	3.7030	1.0000e-004	0.0000	3.7056
Total	1.8600e-003	1.3800e-003	0.0133	4.0000e-005	3.9500e-003	3.0000e-005	3.9700e-003	1.0500e-003	3.0000e-005	1.0700e-003	0.0000	3.7030	3.7030	1.0000e-004	0.0000	3.7056

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.478390	0.030777	0.167800	0.120556	0.019513	0.006321	0.020235	0.145317	0.001626	0.001724	0.005916	0.000950	0.000877

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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WSWB - Collection Pipeline for Southwest Wellfield
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Off-road Equipment - owner supplied data

Construction Off-road Equipment Mitigation - Owner Supplied Data

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	55.00
tblGrading	AcresOfGrading	137.50	59.00
tblGrading	MaterialExported	0.00	23,516.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	158.00	180.00

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tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.41	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	OffRoadEquipmentType	Graders	Excavators
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Scrapers
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Cranes
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	70.00

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tblTripsAndVMT	HaulingTripNumber	2,940.00	20.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	20.00	30.00
tblVehicleEF	HHD	1.15	0.48
tblVehicleEF	HHD	7.1590e-003	0.09
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	2.07	1.63
tblVehicleEF	HHD	0.54	1.06
tblVehicleEF	HHD	1.05	3.33
tblVehicleEF	HHD	6,322.44	4,465.78
tblVehicleEF	HHD	1,484.64	1,572.96
tblVehicleEF	HHD	3.36	10.75
tblVehicleEF	HHD	0.15	0.03
tblVehicleEF	HHD	17.27	14.30
tblVehicleEF	HHD	1.68	2.12
tblVehicleEF	HHD	20.47	19.50
tblVehicleEF	HHD	3.1930e-003	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.7610e-003	6.2960e-003
tblVehicleEF	HHD	1.9000e-005	9.1000e-005
tblVehicleEF	HHD	3.0550e-003	9.6000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9570e-003	8.8400e-003
tblVehicleEF	HHD	5.5120e-003	6.0240e-003
tblVehicleEF	HHD	1.7000e-005	8.3000e-005

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tblVehicleEF	HHD	4.6000e-005	1.0300e-004
tblVehicleEF	HHD	1.4970e-003	4.5010e-003
tblVehicleEF	HHD	0.56	0.41
tblVehicleEF	HHD	2.4000e-005	7.8000e-005
tblVehicleEF	HHD	0.08	0.09
tblVehicleEF	HHD	1.0100e-004	3.7200e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	5.1000e-005	1.6200e-004
tblVehicleEF	HHD	4.6000e-005	1.0300e-004
tblVehicleEF	HHD	1.4970e-003	4.5010e-003
tblVehicleEF	HHD	0.64	0.49
tblVehicleEF	HHD	2.4000e-005	7.8000e-005
tblVehicleEF	HHD	0.09	0.20
tblVehicleEF	HHD	1.0100e-004	3.7200e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	1.08	0.45
tblVehicleEF	HHD	7.1690e-003	0.09
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.51	1.19
tblVehicleEF	HHD	0.54	1.07
tblVehicleEF	HHD	0.98	3.16
tblVehicleEF	HHD	6,698.06	4,731.10
tblVehicleEF	HHD	1,484.64	1,572.96
tblVehicleEF	HHD	3.36	10.75
tblVehicleEF	HHD	0.15	0.03

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tblVehicleEF	HHD	17.82	14.76
tblVehicleEF	HHD	1.59	2.01
tblVehicleEF	HHD	20.46	19.49
tblVehicleEF	HHD	2.6930e-003	8.4600e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.7610e-003	6.2960e-003
tblVehicleEF	HHD	1.9000e-005	9.1000e-005
tblVehicleEF	HHD	2.5760e-003	8.0940e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9570e-003	8.8400e-003
tblVehicleEF	HHD	5.5120e-003	6.0240e-003
tblVehicleEF	HHD	1.7000e-005	8.3000e-005
tblVehicleEF	HHD	1.1100e-004	1.5600e-004
tblVehicleEF	HHD	1.7120e-003	4.6140e-003
tblVehicleEF	HHD	0.53	0.39
tblVehicleEF	HHD	4.9000e-005	1.1200e-004
tblVehicleEF	HHD	0.08	0.09
tblVehicleEF	HHD	1.0100e-004	3.6000e-004
tblVehicleEF	HHD	0.02	0.07
tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	5.0000e-005	1.5900e-004
tblVehicleEF	HHD	1.1100e-004	1.5600e-004
tblVehicleEF	HHD	1.7120e-003	4.6140e-003
tblVehicleEF	HHD	0.60	0.46
tblVehicleEF	HHD	4.9000e-005	1.1200e-004

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tblVehicleEF	HHD	0.09	0.20
tblVehicleEF	HHD	1.0100e-004	3.6000e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	1.24	0.52
tblVehicleEF	HHD	7.1490e-003	0.09
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	2.85	2.25
tblVehicleEF	HHD	0.53	1.06
tblVehicleEF	HHD	1.14	3.36
tblVehicleEF	HHD	5,803.72	4,099.40
tblVehicleEF	HHD	1,484.64	1,572.96
tblVehicleEF	HHD	3.36	10.75
tblVehicleEF	HHD	0.15	0.03
tblVehicleEF	HHD	16.50	13.67
tblVehicleEF	HHD	1.70	2.09
tblVehicleEF	HHD	20.47	19.50
tblVehicleEF	HHD	3.8850e-003	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.7610e-003	6.2960e-003
tblVehicleEF	HHD	1.9000e-005	9.1000e-005
tblVehicleEF	HHD	3.7170e-003	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9570e-003	8.8400e-003
tblVehicleEF	HHD	5.5120e-003	6.0240e-003
tblVehicleEF	HHD	1.7000e-005	8.3000e-005
tblVehicleEF	HHD	1.9000e-005	1.0000e-004

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tblVehicleEF	HHD	1.5040e-003	4.7840e-003
tblVehicleEF	HHD	0.60	0.45
tblVehicleEF	HHD	1.1000e-005	7.6000e-005
tblVehicleEF	HHD	0.08	0.09
tblVehicleEF	HHD	1.1100e-004	4.0500e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	5.2000e-005	1.6300e-004
tblVehicleEF	HHD	1.9000e-005	1.0000e-004
tblVehicleEF	HHD	1.5040e-003	4.7840e-003
tblVehicleEF	HHD	0.69	0.53
tblVehicleEF	HHD	1.1000e-005	7.6000e-005
tblVehicleEF	HHD	0.09	0.20
tblVehicleEF	HHD	1.1100e-004	4.0500e-004
tblVehicleEF	HHD	0.03	0.08
tblVehicleEF	LDA	3.5290e-003	4.8310e-003
tblVehicleEF	LDA	4.2340e-003	4.7360e-003
tblVehicleEF	LDA	0.48	0.61
tblVehicleEF	LDA	0.98	1.04
tblVehicleEF	LDA	253.99	263.16
tblVehicleEF	LDA	54.03	54.94
tblVehicleEF	LDA	0.49	0.55
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	1.7460e-003	2.1170e-003
tblVehicleEF	LDA	2.2760e-003	2.2400e-003

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tblVehicleEF	LDA	1.6080e-003	1.9520e-003
tblVehicleEF	LDA	2.0930e-003	2.0590e-003
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	8.8660e-003	0.01
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	2.5420e-003	2.6360e-003
tblVehicleEF	LDA	5.5700e-004	5.6700e-004
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.06	0.07
tblVehicleEF	LDA	4.1110e-003	5.1340e-003
tblVehicleEF	LDA	3.4750e-003	4.2110e-003
tblVehicleEF	LDA	0.61	0.67
tblVehicleEF	LDA	0.81	0.89
tblVehicleEF	LDA	281.53	275.40
tblVehicleEF	LDA	54.03	54.94
tblVehicleEF	LDA	0.49	0.55
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	1.7460e-003	2.1170e-003
tblVehicleEF	LDA	2.2760e-003	2.2400e-003

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tblVehicleEF	LDA	1.6080e-003	1.9520e-003
tblVehicleEF	LDA	2.0930e-003	2.0590e-003
tblVehicleEF	LDA	0.10	0.06
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	2.8190e-003	2.7590e-003
tblVehicleEF	LDA	5.5400e-004	5.6400e-004
tblVehicleEF	LDA	0.10	0.06
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	3.3100e-003	4.7330e-003
tblVehicleEF	LDA	4.8610e-003	4.8460e-003
tblVehicleEF	LDA	0.44	0.59
tblVehicleEF	LDA	1.16	1.08
tblVehicleEF	LDA	243.62	258.68
tblVehicleEF	LDA	54.03	54.94
tblVehicleEF	LDA	0.49	0.55
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	1.7460e-003	2.1170e-003
tblVehicleEF	LDA	2.2760e-003	2.2400e-003

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tblVehicleEF	LDA	1.6080e-003	1.9520e-003
tblVehicleEF	LDA	2.0930e-003	2.0590e-003
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	8.3230e-003	0.01
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	2.4380e-003	2.5910e-003
tblVehicleEF	LDA	5.6000e-004	5.6700e-004
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDT1	9.3220e-003	0.01
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	1.08	1.52
tblVehicleEF	LDT1	2.63	2.49
tblVehicleEF	LDT1	319.04	330.49
tblVehicleEF	LDT1	67.92	67.47
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.11	0.14
tblVehicleEF	LDT1	0.15	0.14
tblVehicleEF	LDT1	2.4730e-003	3.3520e-003
tblVehicleEF	LDT1	3.2370e-003	3.2790e-003

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tblVehicleEF	LDT1	2.2780e-003	3.0870e-003
tblVehicleEF	LDT1	2.9770e-003	3.0150e-003
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.26	0.25
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.18	0.16
tblVehicleEF	LDT1	0.18	0.17
tblVehicleEF	LDT1	3.2020e-003	3.3240e-003
tblVehicleEF	LDT1	7.2500e-004	7.1800e-004
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.26	0.25
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.18	0.16
tblVehicleEF	LDT1	0.19	0.18
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	1.34	1.65
tblVehicleEF	LDT1	2.17	2.11
tblVehicleEF	LDT1	352.24	344.92
tblVehicleEF	LDT1	67.92	67.47
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.11	0.12
tblVehicleEF	LDT1	0.14	0.13
tblVehicleEF	LDT1	2.4730e-003	3.3520e-003
tblVehicleEF	LDT1	3.2370e-003	3.2790e-003

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tblVehicleEF	LDT1	2.2780e-003	3.0870e-003
tblVehicleEF	LDT1	2.9770e-003	3.0150e-003
tblVehicleEF	LDT1	0.39	0.19
tblVehicleEF	LDT1	0.34	0.26
tblVehicleEF	LDT1	0.22	0.14
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.15	0.15
tblVehicleEF	LDT1	3.5380e-003	3.4700e-003
tblVehicleEF	LDT1	7.1700e-004	7.1200e-004
tblVehicleEF	LDT1	0.39	0.19
tblVehicleEF	LDT1	0.34	0.26
tblVehicleEF	LDT1	0.22	0.14
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	8.8080e-003	0.01
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	1.00	1.47
tblVehicleEF	LDT1	3.13	2.57
tblVehicleEF	LDT1	306.55	325.20
tblVehicleEF	LDT1	67.92	67.47
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.17	0.15
tblVehicleEF	LDT1	2.4730e-003	3.3520e-003
tblVehicleEF	LDT1	3.2370e-003	3.2790e-003

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tblVehicleEF	LDT1	2.2780e-003	3.0870e-003
tblVehicleEF	LDT1	2.9770e-003	3.0150e-003
tblVehicleEF	LDT1	0.06	0.12
tblVehicleEF	LDT1	0.27	0.28
tblVehicleEF	LDT1	0.04	0.10
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.21	0.19
tblVehicleEF	LDT1	0.21	0.17
tblVehicleEF	LDT1	3.0760e-003	3.2700e-003
tblVehicleEF	LDT1	7.3400e-004	7.1900e-004
tblVehicleEF	LDT1	0.06	0.12
tblVehicleEF	LDT1	0.27	0.28
tblVehicleEF	LDT1	0.04	0.10
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.21	0.19
tblVehicleEF	LDT1	0.23	0.19
tblVehicleEF	LDT2	5.7270e-003	6.6130e-003
tblVehicleEF	LDT2	6.8700e-003	5.6850e-003
tblVehicleEF	LDT2	0.69	0.79
tblVehicleEF	LDT2	1.46	1.23
tblVehicleEF	LDT2	363.40	368.32
tblVehicleEF	LDT2	76.98	75.43
tblVehicleEF	LDT2	0.17	0.21
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	1.8120e-003	2.1490e-003
tblVehicleEF	LDT2	2.3940e-003	2.3760e-003

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tblVehicleEF	LDT2	1.6670e-003	1.9770e-003
tblVehicleEF	LDT2	2.2010e-003	2.1840e-003
tblVehicleEF	LDT2	0.06	0.04
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	3.6380e-003	3.6890e-003
tblVehicleEF	LDT2	7.9400e-004	7.7500e-004
tblVehicleEF	LDT2	0.06	0.04
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	6.6460e-003	7.0150e-003
tblVehicleEF	LDT2	5.6210e-003	5.0630e-003
tblVehicleEF	LDT2	0.87	0.87
tblVehicleEF	LDT2	1.20	1.06
tblVehicleEF	LDT2	401.73	384.82
tblVehicleEF	LDT2	76.98	75.43
tblVehicleEF	LDT2	0.17	0.21
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	1.8120e-003	2.1490e-003
tblVehicleEF	LDT2	2.3940e-003	2.3760e-003

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tblVehicleEF	LDT2	1.6670e-003	1.9770e-003
tblVehicleEF	LDT2	2.2010e-003	2.1840e-003
tblVehicleEF	LDT2	0.16	0.07
tblVehicleEF	LDT2	0.14	0.10
tblVehicleEF	LDT2	0.11	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	4.0240e-003	3.8550e-003
tblVehicleEF	LDT2	7.9000e-004	7.7200e-004
tblVehicleEF	LDT2	0.16	0.07
tblVehicleEF	LDT2	0.14	0.10
tblVehicleEF	LDT2	0.11	0.06
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	5.3840e-003	6.4820e-003
tblVehicleEF	LDT2	7.8250e-003	5.8190e-003
tblVehicleEF	LDT2	0.63	0.76
tblVehicleEF	LDT2	1.71	1.27
tblVehicleEF	LDT2	348.99	362.26
tblVehicleEF	LDT2	76.98	75.43
tblVehicleEF	LDT2	0.17	0.21
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	0.12	0.09
tblVehicleEF	LDT2	1.8120e-003	2.1490e-003
tblVehicleEF	LDT2	2.3940e-003	2.3760e-003

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tblVehicleEF	LDT2	1.6670e-003	1.9770e-003
tblVehicleEF	LDT2	2.2010e-003	2.1840e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.12	0.10
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.09	0.07
tblVehicleEF	LDT2	0.11	0.08
tblVehicleEF	LDT2	3.4940e-003	3.6280e-003
tblVehicleEF	LDT2	7.9900e-004	7.7500e-004
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.12	0.10
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.09	0.07
tblVehicleEF	LDT2	0.12	0.09
tblVehicleEF	LHD1	4.5990e-003	5.2860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	1.17	0.75
tblVehicleEF	LHD1	2.17	2.58
tblVehicleEF	LHD1	9.44	8.94
tblVehicleEF	LHD1	682.68	595.21
tblVehicleEF	LHD1	27.24	32.17
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.10	0.07

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tblVehicleEF	LHD1	1.95	0.86
tblVehicleEF	LHD1	0.88	0.95
tblVehicleEF	LHD1	1.0850e-003	8.3300e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	8.8370e-003
tblVehicleEF	LHD1	7.5700e-004	9.4800e-004
tblVehicleEF	LHD1	1.0380e-003	7.9700e-004
tblVehicleEF	LHD1	2.5850e-003	2.5350e-003
tblVehicleEF	LHD1	0.02	8.4300e-003
tblVehicleEF	LHD1	6.9600e-004	8.7200e-004
tblVehicleEF	LHD1	3.3700e-003	2.9730e-003
tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.4740e-003	1.8290e-003
tblVehicleEF	LHD1	0.15	0.06
tblVehicleEF	LHD1	0.32	0.30
tblVehicleEF	LHD1	0.22	0.24
tblVehicleEF	LHD1	9.4000e-005	9.0000e-005
tblVehicleEF	LHD1	6.6790e-003	5.8400e-003
tblVehicleEF	LHD1	3.1300e-004	3.7000e-004
tblVehicleEF	LHD1	3.3700e-003	2.9730e-003
tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.4740e-003	1.8290e-003
tblVehicleEF	LHD1	0.18	0.07
tblVehicleEF	LHD1	0.32	0.30
tblVehicleEF	LHD1	0.24	0.27

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tblVehicleEF	LHD1	4.5990e-003	5.2860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	1.19	0.76
tblVehicleEF	LHD1	2.01	2.46
tblVehicleEF	LHD1	9.44	8.94
tblVehicleEF	LHD1	682.68	595.21
tblVehicleEF	LHD1	27.24	32.17
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	1.84	0.81
tblVehicleEF	LHD1	0.83	0.91
tblVehicleEF	LHD1	1.0850e-003	8.3300e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	8.8370e-003
tblVehicleEF	LHD1	7.5700e-004	9.4800e-004
tblVehicleEF	LHD1	1.0380e-003	7.9700e-004
tblVehicleEF	LHD1	2.5850e-003	2.5350e-003
tblVehicleEF	LHD1	0.02	8.4300e-003
tblVehicleEF	LHD1	6.9600e-004	8.7200e-004
tblVehicleEF	LHD1	8.2630e-003	4.4450e-003
tblVehicleEF	LHD1	0.11	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.1080e-003	2.5600e-003
tblVehicleEF	LHD1	0.15	0.06
tblVehicleEF	LHD1	0.32	0.29

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tblVehicleEF	LHD1	0.20	0.23
tblVehicleEF	LHD1	9.4000e-005	9.0000e-005
tblVehicleEF	LHD1	6.6800e-003	5.8400e-003
tblVehicleEF	LHD1	3.1000e-004	3.6700e-004
tblVehicleEF	LHD1	8.2630e-003	4.4450e-003
tblVehicleEF	LHD1	0.11	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.1080e-003	2.5600e-003
tblVehicleEF	LHD1	0.18	0.08
tblVehicleEF	LHD1	0.32	0.29
tblVehicleEF	LHD1	0.22	0.26
tblVehicleEF	LHD1	4.5990e-003	5.2860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	1.16	0.74
tblVehicleEF	LHD1	2.31	2.59
tblVehicleEF	LHD1	9.44	8.94
tblVehicleEF	LHD1	682.68	595.21
tblVehicleEF	LHD1	27.24	32.17
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	1.98	0.85
tblVehicleEF	LHD1	0.92	0.95
tblVehicleEF	LHD1	1.0850e-003	8.3300e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	8.8370e-003

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tblVehicleEF	LHD1	7.5700e-004	9.4800e-004
tblVehicleEF	LHD1	1.0380e-003	7.9700e-004
tblVehicleEF	LHD1	2.5850e-003	2.5350e-003
tblVehicleEF	LHD1	0.02	8.4300e-003
tblVehicleEF	LHD1	6.9600e-004	8.7200e-004
tblVehicleEF	LHD1	1.6680e-003	3.1110e-003
tblVehicleEF	LHD1	0.10	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.3900e-004	1.7990e-003
tblVehicleEF	LHD1	0.15	0.06
tblVehicleEF	LHD1	0.35	0.32
tblVehicleEF	LHD1	0.23	0.25
tblVehicleEF	LHD1	9.4000e-005	9.0000e-005
tblVehicleEF	LHD1	6.6790e-003	5.8400e-003
tblVehicleEF	LHD1	3.1600e-004	3.7000e-004
tblVehicleEF	LHD1	1.6680e-003	3.1110e-003
tblVehicleEF	LHD1	0.10	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.3900e-004	1.7990e-003
tblVehicleEF	LHD1	0.18	0.07
tblVehicleEF	LHD1	0.35	0.32
tblVehicleEF	LHD1	0.25	0.27
tblVehicleEF	LHD2	3.4110e-003	3.7460e-003
tblVehicleEF	LHD2	8.5210e-003	3.7700e-003
tblVehicleEF	LHD2	7.0990e-003	7.4580e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.69	0.31

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tblVehicleEF	LHD2	1.08	1.26
tblVehicleEF	LHD2	14.47	13.57
tblVehicleEF	LHD2	721.53	610.80
tblVehicleEF	LHD2	23.65	26.97
tblVehicleEF	LHD2	5.5720e-003	6.2270e-003
tblVehicleEF	LHD2	0.12	0.09
tblVehicleEF	LHD2	1.32	0.55
tblVehicleEF	LHD2	0.49	0.50
tblVehicleEF	LHD2	1.3030e-003	1.1440e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	8.4330e-003
tblVehicleEF	LHD2	3.2900e-004	4.4100e-004
tblVehicleEF	LHD2	1.2460e-003	1.0950e-003
tblVehicleEF	LHD2	2.6950e-003	2.6630e-003
tblVehicleEF	LHD2	0.02	8.0540e-003
tblVehicleEF	LHD2	3.0200e-004	4.0500e-004
tblVehicleEF	LHD2	1.3310e-003	1.0290e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	6.3200e-004	6.8900e-004
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	1.4100e-004	1.3300e-004
tblVehicleEF	LHD2	7.0140e-003	5.9490e-003
tblVehicleEF	LHD2	2.5600e-004	2.9200e-004
tblVehicleEF	LHD2	1.3310e-003	1.0290e-003

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tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.3200e-004	6.8900e-004
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	3.4110e-003	3.7460e-003
tblVehicleEF	LHD2	8.6240e-003	3.8180e-003
tblVehicleEF	LHD2	6.7310e-003	7.2080e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.70	0.31
tblVehicleEF	LHD2	1.01	1.20
tblVehicleEF	LHD2	14.47	13.57
tblVehicleEF	LHD2	721.53	610.80
tblVehicleEF	LHD2	23.65	26.97
tblVehicleEF	LHD2	5.5720e-003	6.2270e-003
tblVehicleEF	LHD2	0.12	0.09
tblVehicleEF	LHD2	1.25	0.52
tblVehicleEF	LHD2	0.47	0.49
tblVehicleEF	LHD2	1.3030e-003	1.1440e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	8.4330e-003
tblVehicleEF	LHD2	3.2900e-004	4.4100e-004
tblVehicleEF	LHD2	1.2460e-003	1.0950e-003
tblVehicleEF	LHD2	2.6950e-003	2.6630e-003
tblVehicleEF	LHD2	0.02	8.0540e-003
tblVehicleEF	LHD2	3.0200e-004	4.0500e-004

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tblVehicleEF	LHD2	3.2320e-003	1.5320e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.2900e-003	9.5700e-004
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.09	0.10
tblVehicleEF	LHD2	1.4100e-004	1.3300e-004
tblVehicleEF	LHD2	7.0140e-003	5.9490e-003
tblVehicleEF	LHD2	2.5500e-004	2.9100e-004
tblVehicleEF	LHD2	3.2320e-003	1.5320e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.2900e-003	9.5700e-004
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	3.4110e-003	3.7460e-003
tblVehicleEF	LHD2	8.4280e-003	3.7580e-003
tblVehicleEF	LHD2	7.4650e-003	7.5080e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.69	0.31
tblVehicleEF	LHD2	1.16	1.27
tblVehicleEF	LHD2	14.47	13.57
tblVehicleEF	LHD2	721.53	610.80
tblVehicleEF	LHD2	23.65	26.97
tblVehicleEF	LHD2	5.5720e-003	6.2270e-003

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tblVehicleEF	LHD2	0.12	0.09
tblVehicleEF	LHD2	1.34	0.54
tblVehicleEF	LHD2	0.52	0.51
tblVehicleEF	LHD2	1.3030e-003	1.1440e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	8.4330e-003
tblVehicleEF	LHD2	3.2900e-004	4.4100e-004
tblVehicleEF	LHD2	1.2460e-003	1.0950e-003
tblVehicleEF	LHD2	2.6950e-003	2.6630e-003
tblVehicleEF	LHD2	0.02	8.0540e-003
tblVehicleEF	LHD2	3.0200e-004	4.0500e-004
tblVehicleEF	LHD2	5.6700e-004	1.0410e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	2.9200e-004	6.6600e-004
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	1.4100e-004	1.3300e-004
tblVehicleEF	LHD2	7.0140e-003	5.9490e-003
tblVehicleEF	LHD2	2.5800e-004	2.9200e-004
tblVehicleEF	LHD2	5.6700e-004	1.0410e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.9200e-004	6.6600e-004
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	0.10	0.08

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tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	MCY	0.47	0.54
tblVehicleEF	MCY	0.16	0.15
tblVehicleEF	MCY	22.07	18.72
tblVehicleEF	MCY	10.05	9.68
tblVehicleEF	MCY	180.02	189.29
tblVehicleEF	MCY	46.22	44.13
tblVehicleEF	MCY	5.7600e-003	5.1840e-003
tblVehicleEF	MCY	1.19	1.13
tblVehicleEF	MCY	0.31	0.31
tblVehicleEF	MCY	2.0850e-003	2.4730e-003
tblVehicleEF	MCY	3.6110e-003	3.6800e-003
tblVehicleEF	MCY	1.9500e-003	2.3100e-003
tblVehicleEF	MCY	3.4040e-003	3.4590e-003
tblVehicleEF	MCY	1.58	1.06
tblVehicleEF	MCY	0.89	0.62
tblVehicleEF	MCY	0.85	0.64
tblVehicleEF	MCY	2.41	2.58
tblVehicleEF	MCY	0.53	0.58
tblVehicleEF	MCY	2.18	2.04
tblVehicleEF	MCY	2.2310e-003	2.2780e-003
tblVehicleEF	MCY	6.9100e-004	6.5900e-004
tblVehicleEF	MCY	1.58	1.06
tblVehicleEF	MCY	0.89	0.62
tblVehicleEF	MCY	0.85	0.64
tblVehicleEF	MCY	2.97	3.22
tblVehicleEF	MCY	0.53	0.58

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tblVehicleEF	MCY	2.37	2.22
tblVehicleEF	MCY	0.46	0.53
tblVehicleEF	MCY	0.14	0.13
tblVehicleEF	MCY	22.54	18.05
tblVehicleEF	MCY	9.14	8.84
tblVehicleEF	MCY	180.02	189.29
tblVehicleEF	MCY	46.22	44.13
tblVehicleEF	MCY	5.7600e-003	5.1840e-003
tblVehicleEF	MCY	1.02	0.99
tblVehicleEF	MCY	0.29	0.29
tblVehicleEF	MCY	2.0850e-003	2.4730e-003
tblVehicleEF	MCY	3.6110e-003	3.6800e-003
tblVehicleEF	MCY	1.9500e-003	2.3100e-003
tblVehicleEF	MCY	3.4040e-003	3.4590e-003
tblVehicleEF	MCY	4.21	1.72
tblVehicleEF	MCY	1.43	0.68
tblVehicleEF	MCY	2.26	1.06
tblVehicleEF	MCY	2.36	2.52
tblVehicleEF	MCY	0.52	0.54
tblVehicleEF	MCY	1.86	1.82
tblVehicleEF	MCY	2.2360e-003	2.2650e-003
tblVehicleEF	MCY	6.6600e-004	6.3900e-004
tblVehicleEF	MCY	4.21	1.72
tblVehicleEF	MCY	1.43	0.68
tblVehicleEF	MCY	2.26	1.06
tblVehicleEF	MCY	2.91	3.15
tblVehicleEF	MCY	0.52	0.54

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tblVehicleEF	MCY	2.02	1.98
tblVehicleEF	MCY	0.48	0.54
tblVehicleEF	MCY	0.18	0.15
tblVehicleEF	MCY	23.05	18.82
tblVehicleEF	MCY	11.24	9.83
tblVehicleEF	MCY	180.02	189.29
tblVehicleEF	MCY	46.22	44.13
tblVehicleEF	MCY	5.7600e-003	5.1840e-003
tblVehicleEF	MCY	1.26	1.10
tblVehicleEF	MCY	0.33	0.31
tblVehicleEF	MCY	2.0850e-003	2.4730e-003
tblVehicleEF	MCY	3.6110e-003	3.6800e-003
tblVehicleEF	MCY	1.9500e-003	2.3100e-003
tblVehicleEF	MCY	3.4040e-003	3.4590e-003
tblVehicleEF	MCY	0.72	1.15
tblVehicleEF	MCY	0.96	0.80
tblVehicleEF	MCY	0.29	0.61
tblVehicleEF	MCY	2.49	2.59
tblVehicleEF	MCY	0.61	0.67
tblVehicleEF	MCY	2.49	2.08
tblVehicleEF	MCY	2.2490e-003	2.2800e-003
tblVehicleEF	MCY	7.2000e-004	6.6300e-004
tblVehicleEF	MCY	0.72	1.15
tblVehicleEF	MCY	0.96	0.80
tblVehicleEF	MCY	0.29	0.61
tblVehicleEF	MCY	3.07	3.23
tblVehicleEF	MCY	0.61	0.67

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tblVehicleEF	MCY	2.71	2.26
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	1.07	1.21
tblVehicleEF	MDV	2.72	2.22
tblVehicleEF	MDV	508.30	495.22
tblVehicleEF	MDV	106.72	99.91
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.13	0.13
tblVehicleEF	MDV	0.25	0.19
tblVehicleEF	MDV	1.7380e-003	2.2990e-003
tblVehicleEF	MDV	2.2340e-003	2.4650e-003
tblVehicleEF	MDV	1.6020e-003	2.1190e-003
tblVehicleEF	MDV	2.0540e-003	2.2660e-003
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.08	0.07
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	5.0880e-003	4.9590e-003
tblVehicleEF	MDV	1.1150e-003	1.0380e-003
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.08	0.07
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.13	0.09

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tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	1.35	1.32
tblVehicleEF	MDV	2.26	1.90
tblVehicleEF	MDV	560.43	516.89
tblVehicleEF	MDV	106.72	99.91
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.13	0.11
tblVehicleEF	MDV	0.23	0.18
tblVehicleEF	MDV	1.7380e-003	2.2990e-003
tblVehicleEF	MDV	2.2340e-003	2.4650e-003
tblVehicleEF	MDV	1.6020e-003	2.1190e-003
tblVehicleEF	MDV	2.0540e-003	2.2660e-003
tblVehicleEF	MDV	0.25	0.10
tblVehicleEF	MDV	0.22	0.15
tblVehicleEF	MDV	0.17	0.09
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.17	0.15
tblVehicleEF	MDV	5.6130e-003	5.1770e-003
tblVehicleEF	MDV	1.1060e-003	1.0320e-003
tblVehicleEF	MDV	0.25	0.10
tblVehicleEF	MDV	0.22	0.15
tblVehicleEF	MDV	0.17	0.09
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.12	0.08

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tblVehicleEF	MDV	0.18	0.16
tblVehicleEF	MDV	9.7230e-003	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	0.98	1.17
tblVehicleEF	MDV	3.23	2.29
tblVehicleEF	MDV	488.62	487.26
tblVehicleEF	MDV	106.72	99.91
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.27	0.20
tblVehicleEF	MDV	1.7380e-003	2.2990e-003
tblVehicleEF	MDV	2.2340e-003	2.4650e-003
tblVehicleEF	MDV	1.6020e-003	2.1190e-003
tblVehicleEF	MDV	2.0540e-003	2.2660e-003
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.19	0.16
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.23	0.17
tblVehicleEF	MDV	4.8900e-003	4.8790e-003
tblVehicleEF	MDV	1.1240e-003	1.0390e-003
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.19	0.16
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.15	0.10

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tblVehicleEF	MDV	0.26	0.19
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.42	1.76
tblVehicleEF	MH	5.67	5.23
tblVehicleEF	MH	1,223.13	1,125.05
tblVehicleEF	MH	56.87	59.88
tblVehicleEF	MH	7.5900e-004	8.6200e-004
tblVehicleEF	MH	1.72	1.00
tblVehicleEF	MH	0.83	0.75
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	1.0630e-003	1.0430e-003
tblVehicleEF	MH	3.2490e-003	3.2050e-003
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	9.7700e-004	9.5900e-004
tblVehicleEF	MH	1.34	0.84
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.39	0.36
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.33	0.30
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.6800e-004	6.9000e-004
tblVehicleEF	MH	1.34	0.84
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.39	0.36

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tblVehicleEF	MH	0.16	0.10
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.36	0.33
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.51	1.81
tblVehicleEF	MH	5.09	4.92
tblVehicleEF	MH	1,223.13	1,125.05
tblVehicleEF	MH	56.87	59.88
tblVehicleEF	MH	7.5900e-004	8.6200e-004
tblVehicleEF	MH	1.60	0.92
tblVehicleEF	MH	0.78	0.71
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	1.0630e-003	1.0430e-003
tblVehicleEF	MH	3.2490e-003	3.2050e-003
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	9.7700e-004	9.5900e-004
tblVehicleEF	MH	3.28	1.24
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.84	0.51
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.30	0.29
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.5800e-004	6.8400e-004
tblVehicleEF	MH	3.28	1.24

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tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.84	0.51
tblVehicleEF	MH	0.16	0.10
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.33	0.31
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	2.36	1.75
tblVehicleEF	MH	6.11	5.28
tblVehicleEF	MH	1,223.13	1,125.05
tblVehicleEF	MH	56.87	59.88
tblVehicleEF	MH	7.5900e-004	8.6200e-004
tblVehicleEF	MH	1.76	0.98
tblVehicleEF	MH	0.86	0.75
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	1.0630e-003	1.0430e-003
tblVehicleEF	MH	3.2490e-003	3.2050e-003
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	9.7700e-004	9.5900e-004
tblVehicleEF	MH	0.78	0.95
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.25	0.37
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.34	0.30
tblVehicleEF	MH	0.01	0.01

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tblVehicleEF	MH	6.7500e-004	6.9000e-004
tblVehicleEF	MH	0.78	0.95
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.25	0.37
tblVehicleEF	MH	0.15	0.10
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.38	0.33
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1760e-003	3.8910e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.29	0.36
tblVehicleEF	MHD	0.34	0.32
tblVehicleEF	MHD	4.63	5.63
tblVehicleEF	MHD	167.15	130.55
tblVehicleEF	MHD	1,193.03	1,141.08
tblVehicleEF	MHD	46.19	62.84
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.47	0.35
tblVehicleEF	MHD	1.17	0.76
tblVehicleEF	MHD	12.92	9.98
tblVehicleEF	MHD	1.5100e-004	1.0200e-004
tblVehicleEF	MHD	3.2340e-003	2.8420e-003
tblVehicleEF	MHD	7.0000e-004	8.1400e-004
tblVehicleEF	MHD	1.4400e-004	9.7000e-005
tblVehicleEF	MHD	3.0890e-003	2.7140e-003
tblVehicleEF	MHD	6.4400e-004	7.4900e-004
tblVehicleEF	MHD	1.2980e-003	1.0540e-003

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tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	5.6600e-004	7.0500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.28	0.34
tblVehicleEF	MHD	1.6040e-003	1.2580e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.4300e-004	7.2700e-004
tblVehicleEF	MHD	1.2980e-003	1.0540e-003
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	5.6600e-004	7.0500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.30	0.38
tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	4.2500e-003	3.9490e-003
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.20	0.26
tblVehicleEF	MHD	0.35	0.32
tblVehicleEF	MHD	4.31	5.34
tblVehicleEF	MHD	177.16	138.27
tblVehicleEF	MHD	1,193.03	1,141.08
tblVehicleEF	MHD	46.19	62.84
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.48	0.36

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tblVehicleEF	MHD	1.11	0.71
tblVehicleEF	MHD	12.89	9.94
tblVehicleEF	MHD	1.2700e-004	8.6000e-005
tblVehicleEF	MHD	3.2340e-003	2.8420e-003
tblVehicleEF	MHD	7.0000e-004	8.1400e-004
tblVehicleEF	MHD	1.2200e-004	8.2000e-005
tblVehicleEF	MHD	3.0890e-003	2.7140e-003
tblVehicleEF	MHD	6.4400e-004	7.4900e-004
tblVehicleEF	MHD	3.2300e-003	1.5770e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.2320e-003	9.9000e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.26	0.33
tblVehicleEF	MHD	1.6990e-003	1.3310e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.3700e-004	7.2200e-004
tblVehicleEF	MHD	3.2300e-003	1.5770e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	1.2320e-003	9.9000e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.29	0.36
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1090e-003	3.8750e-003

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tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.38	0.50
tblVehicleEF	MHD	0.34	0.32
tblVehicleEF	MHD	4.98	5.68
tblVehicleEF	MHD	153.55	119.87
tblVehicleEF	MHD	1,193.03	1,141.08
tblVehicleEF	MHD	46.19	62.84
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.45	0.33
tblVehicleEF	MHD	1.19	0.74
tblVehicleEF	MHD	12.96	9.99
tblVehicleEF	MHD	1.8400e-004	1.2400e-004
tblVehicleEF	MHD	3.2340e-003	2.8420e-003
tblVehicleEF	MHD	7.0000e-004	8.1400e-004
tblVehicleEF	MHD	1.7600e-004	1.1800e-004
tblVehicleEF	MHD	3.0890e-003	2.7140e-003
tblVehicleEF	MHD	6.4400e-004	7.4900e-004
tblVehicleEF	MHD	5.3100e-004	1.0750e-003
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.4500e-004	6.8500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.29	0.35
tblVehicleEF	MHD	1.4750e-003	1.1580e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.4900e-004	7.2800e-004

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tblVehicleEF	MHD	5.3100e-004	1.0750e-003
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	2.4500e-004	6.8500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.32	0.38
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	9.5700e-003	6.0280e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.25
tblVehicleEF	OBUS	0.60	0.45
tblVehicleEF	OBUS	5.59	5.18
tblVehicleEF	OBUS	82.95	101.82
tblVehicleEF	OBUS	1,297.22	1,246.68
tblVehicleEF	OBUS	69.48	67.80
tblVehicleEF	OBUS	1.6120e-003	2.5460e-003
tblVehicleEF	OBUS	0.17	0.22
tblVehicleEF	OBUS	0.74	0.69
tblVehicleEF	OBUS	2.14	2.52
tblVehicleEF	OBUS	1.5000e-005	2.0000e-005
tblVehicleEF	OBUS	2.3050e-003	2.6330e-003
tblVehicleEF	OBUS	8.5700e-004	8.2900e-004
tblVehicleEF	OBUS	1.5000e-005	1.9000e-005
tblVehicleEF	OBUS	2.1800e-003	2.5030e-003
tblVehicleEF	OBUS	7.8800e-004	7.6200e-004
tblVehicleEF	OBUS	2.1290e-003	1.4160e-003

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tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	7.4300e-004	7.6700e-004
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.35	0.32
tblVehicleEF	OBUS	8.0400e-004	9.8300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9300e-004	7.6900e-004
tblVehicleEF	OBUS	2.1290e-003	1.4160e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	7.4300e-004	7.6700e-004
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.38	0.35
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	9.8510e-003	6.1370e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.24	0.24
tblVehicleEF	OBUS	0.61	0.45
tblVehicleEF	OBUS	5.08	4.89
tblVehicleEF	OBUS	86.87	106.89
tblVehicleEF	OBUS	1,297.22	1,246.68
tblVehicleEF	OBUS	69.48	67.80
tblVehicleEF	OBUS	1.6120e-003	2.5460e-003
tblVehicleEF	OBUS	0.17	0.22

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tblVehicleEF	OBUS	0.69	0.64
tblVehicleEF	OBUS	2.09	2.49
tblVehicleEF	OBUS	1.3000e-005	1.7000e-005
tblVehicleEF	OBUS	2.3050e-003	2.6330e-003
tblVehicleEF	OBUS	8.5700e-004	8.2900e-004
tblVehicleEF	OBUS	1.2000e-005	1.6000e-005
tblVehicleEF	OBUS	2.1800e-003	2.5030e-003
tblVehicleEF	OBUS	7.8800e-004	7.6200e-004
tblVehicleEF	OBUS	5.1600e-003	2.0710e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	1.5310e-003	1.0770e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.32	0.31
tblVehicleEF	OBUS	8.4100e-004	1.0320e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8400e-004	7.6400e-004
tblVehicleEF	OBUS	5.1600e-003	2.0710e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.5310e-003	1.0770e-003
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.35	0.34
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	9.3440e-003	5.9990e-003

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tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.26
tblVehicleEF	OBUS	0.59	0.45
tblVehicleEF	OBUS	6.10	5.23
tblVehicleEF	OBUS	77.54	94.83
tblVehicleEF	OBUS	1,297.22	1,246.68
tblVehicleEF	OBUS	69.48	67.80
tblVehicleEF	OBUS	1.6120e-003	2.5460e-003
tblVehicleEF	OBUS	0.16	0.21
tblVehicleEF	OBUS	0.75	0.68
tblVehicleEF	OBUS	2.20	2.53
tblVehicleEF	OBUS	1.9000e-005	2.4000e-005
tblVehicleEF	OBUS	2.3050e-003	2.6330e-003
tblVehicleEF	OBUS	8.5700e-004	8.2900e-004
tblVehicleEF	OBUS	1.8000e-005	2.3000e-005
tblVehicleEF	OBUS	2.1800e-003	2.5030e-003
tblVehicleEF	OBUS	7.8800e-004	7.6200e-004
tblVehicleEF	OBUS	9.7600e-004	1.4400e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	4.1200e-004	7.4400e-004
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.37	0.33
tblVehicleEF	OBUS	7.5200e-004	9.1700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0100e-004	7.7000e-004

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tblVehicleEF	OBUS	9.7600e-004	1.4400e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	4.1200e-004	7.4400e-004
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.40	0.36
tblVehicleEF	SBUS	0.83	0.84
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.08	0.06
tblVehicleEF	SBUS	5.55	8.28
tblVehicleEF	SBUS	0.89	0.67
tblVehicleEF	SBUS	6.23	7.16
tblVehicleEF	SBUS	1,257.80	1,105.31
tblVehicleEF	SBUS	1,116.29	1,070.53
tblVehicleEF	SBUS	36.73	56.44
tblVehicleEF	SBUS	9.1200e-004	6.9200e-004
tblVehicleEF	SBUS	11.18	8.50
tblVehicleEF	SBUS	4.37	3.81
tblVehicleEF	SBUS	15.17	11.84
tblVehicleEF	SBUS	0.01	8.1160e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.7400e-004	8.5300e-004
tblVehicleEF	SBUS	0.01	7.7650e-003
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.02	0.02

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tblVehicleEF	SBUS	5.2800e-004	7.8400e-004
tblVehicleEF	SBUS	4.8340e-003	3.3720e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.66	0.99
tblVehicleEF	SBUS	1.5450e-003	1.8240e-003
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.32	0.38
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.7500e-004	6.8800e-004
tblVehicleEF	SBUS	4.8340e-003	3.3720e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.94	1.43
tblVehicleEF	SBUS	1.5450e-003	1.8240e-003
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.35	0.41
tblVehicleEF	SBUS	0.83	0.84
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.06	0.05
tblVehicleEF	SBUS	5.41	8.18
tblVehicleEF	SBUS	0.91	0.68
tblVehicleEF	SBUS	4.04	5.81
tblVehicleEF	SBUS	1,321.77	1,154.44
tblVehicleEF	SBUS	1,116.29	1,070.53
tblVehicleEF	SBUS	36.73	56.44

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tblVehicleEF	SBUS	9.1200e-004	6.9200e-004
tblVehicleEF	SBUS	11.54	8.77
tblVehicleEF	SBUS	4.13	3.59
tblVehicleEF	SBUS	15.13	11.81
tblVehicleEF	SBUS	9.0880e-003	6.8420e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.7400e-004	8.5300e-004
tblVehicleEF	SBUS	8.6950e-003	6.5460e-003
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.2800e-004	7.8400e-004
tblVehicleEF	SBUS	0.01	4.9610e-003
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	0.65	0.98
tblVehicleEF	SBUS	3.2470e-003	2.5750e-003
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.25	0.34
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.3800e-004	6.6600e-004
tblVehicleEF	SBUS	0.01	4.9610e-003
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	0.94	1.42
tblVehicleEF	SBUS	3.2470e-003	2.5750e-003
tblVehicleEF	SBUS	0.14	0.12

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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.27	0.37
tblVehicleEF	SBUS	0.83	0.84
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	SBUS	5.75	8.43
tblVehicleEF	SBUS	0.87	0.66
tblVehicleEF	SBUS	8.38	7.40
tblVehicleEF	SBUS	1,169.47	1,037.46
tblVehicleEF	SBUS	1,116.29	1,070.53
tblVehicleEF	SBUS	36.73	56.44
tblVehicleEF	SBUS	9.1200e-004	6.9200e-004
tblVehicleEF	SBUS	10.69	8.13
tblVehicleEF	SBUS	4.44	3.74
tblVehicleEF	SBUS	15.21	11.85
tblVehicleEF	SBUS	0.01	9.8760e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.7400e-004	8.5300e-004
tblVehicleEF	SBUS	0.01	9.4480e-003
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.2800e-004	7.8400e-004
tblVehicleEF	SBUS	2.0720e-003	3.3940e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.66	0.99
tblVehicleEF	SBUS	8.3300e-004	1.7490e-003

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tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.38	0.39
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.1100e-004	6.9200e-004
tblVehicleEF	SBUS	2.0720e-003	3.3940e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.95	1.43
tblVehicleEF	SBUS	8.3300e-004	1.7490e-003
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.41	0.42
tblVehicleEF	UBUS	1.31	2.44
tblVehicleEF	UBUS	0.06	0.05
tblVehicleEF	UBUS	6.73	10.68
tblVehicleEF	UBUS	10.64	8.84
tblVehicleEF	UBUS	1,909.36	1,951.45
tblVehicleEF	UBUS	122.42	100.38
tblVehicleEF	UBUS	1.6100e-003	2.1330e-003
tblVehicleEF	UBUS	5.17	9.33
tblVehicleEF	UBUS	13.90	15.09
tblVehicleEF	UBUS	0.55	0.60
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.1450e-003	1.1360e-003
tblVehicleEF	UBUS	0.23	0.26
tblVehicleEF	UBUS	0.07	0.12

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

tblVehicleEF	UBUS	1.0530e-003	1.0450e-003
tblVehicleEF	UBUS	6.4620e-003	4.1100e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	2.6210e-003	2.4100e-003
tblVehicleEF	UBUS	0.45	0.79
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.83	0.68
tblVehicleEF	UBUS	0.01	9.8060e-003
tblVehicleEF	UBUS	1.4160e-003	1.1630e-003
tblVehicleEF	UBUS	6.4620e-003	4.1100e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	2.6210e-003	2.4100e-003
tblVehicleEF	UBUS	1.81	3.32
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.91	0.75
tblVehicleEF	UBUS	1.31	2.44
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	6.78	10.72
tblVehicleEF	UBUS	8.63	7.66
tblVehicleEF	UBUS	1,909.36	1,951.45
tblVehicleEF	UBUS	122.42	100.38
tblVehicleEF	UBUS	1.6100e-003	2.1330e-003
tblVehicleEF	UBUS	4.87	8.79
tblVehicleEF	UBUS	13.81	15.04
tblVehicleEF	UBUS	0.55	0.60
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.1450e-003	1.1360e-003

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

tblVehicleEF	UBUS	0.23	0.26
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.0530e-003	1.0450e-003
tblVehicleEF	UBUS	0.02	5.8640e-003
tblVehicleEF	UBUS	0.10	0.07
tblVehicleEF	UBUS	5.7470e-003	3.3120e-003
tblVehicleEF	UBUS	0.45	0.80
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.73	0.63
tblVehicleEF	UBUS	0.01	9.8070e-003
tblVehicleEF	UBUS	1.3820e-003	1.1430e-003
tblVehicleEF	UBUS	0.02	5.8640e-003
tblVehicleEF	UBUS	0.10	0.07
tblVehicleEF	UBUS	5.7470e-003	3.3120e-003
tblVehicleEF	UBUS	1.82	3.33
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.80	0.69
tblVehicleEF	UBUS	1.31	2.44
tblVehicleEF	UBUS	0.07	0.05
tblVehicleEF	UBUS	6.67	10.66
tblVehicleEF	UBUS	12.77	9.05
tblVehicleEF	UBUS	1,909.36	1,951.45
tblVehicleEF	UBUS	122.42	100.38
tblVehicleEF	UBUS	1.6100e-003	2.1330e-003
tblVehicleEF	UBUS	5.27	9.15
tblVehicleEF	UBUS	13.99	15.10
tblVehicleEF	UBUS	0.55	0.60

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.1450e-003	1.1360e-003
tblVehicleEF	UBUS	0.23	0.26
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.0530e-003	1.0450e-003
tblVehicleEF	UBUS	2.8220e-003	4.6290e-003
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	1.3490e-003	2.5090e-003
tblVehicleEF	UBUS	0.44	0.79
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.93	0.70
tblVehicleEF	UBUS	0.01	9.8060e-003
tblVehicleEF	UBUS	1.4530e-003	1.1670e-003
tblVehicleEF	UBUS	2.8220e-003	4.6290e-003
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	1.3490e-003	2.5090e-003
tblVehicleEF	UBUS	1.80	3.31
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.01	0.76
tblVehicleTrips	CC_TL	6.60	7.30
tblVehicleTrips	CNW_TL	6.60	7.30
tblVehicleTrips	CW_TL	14.70	9.50
tblWater	ElectricityIntensityFactorToSupply	2,117.00	9,727.00

2.0 Emissions Summary

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	4-1-2019	6-30-2019	0.8609	0.2954
		Highest	0.8609	0.2954

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2019	6/14/2019	5	55	

Acres of Grading (Site Preparation Phase): 0

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

Acres of Grading (Grading Phase): 59

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Rubber Tired Loaders	2	8.00	165	0.36
Grading	Skid Steer Loaders	1	3.00	88	0.37
Grading	Tractors/Loaders/Backhoes	1	3.00	108	0.37
Grading	Cranes	1	2.00	190	0.38
Grading	Excavators	1	6.00	180	0.41
Grading	Graders	1	6.00	174	0.40
Grading	Off-Highway Trucks	1	4.00	479	0.48
Grading	Scrapers	1	4.00	313	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	30.00	0.00	20.00	25.00	0.00	70.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1986	0.0000	0.1986	0.0947	0.0000	0.0947	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0758	0.7883	0.5368	1.0500e-003		0.0371	0.0371		0.0341	0.0341	0.0000	94.7464	94.7464	0.0300	0.0000	95.4958
Total	0.0758	0.7883	0.5368	1.0500e-003	0.1986	0.0371	0.2357	0.0947	0.0341	0.1288	0.0000	94.7464	94.7464	0.0300	0.0000	95.4958

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4000e-004	7.5500e-003	1.1800e-003	2.0000e-005	6.0000e-004	4.0000e-005	6.4000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.3697	2.3697	6.0000e-005	0.0000	2.3711
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7800e-003	5.2400e-003	0.0495	1.6000e-004	0.0154	1.0000e-004	0.0155	4.0800e-003	1.0000e-004	4.1800e-003	0.0000	14.3466	14.3466	3.9000e-004	0.0000	14.3563
Total	7.0200e-003	0.0128	0.0507	1.8000e-004	0.0160	1.4000e-004	0.0161	4.2500e-003	1.3000e-004	4.3800e-003	0.0000	16.7162	16.7162	4.5000e-004	0.0000	16.7274

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

3.2 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1986	0.0000	0.1986	0.0947	0.0000	0.0947	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0290	0.2546	0.6066	1.0500e-003		0.0110	0.0110		0.0103	0.0103	0.0000	94.7463	94.7463	0.0300	0.0000	95.4957
Total	0.0290	0.2546	0.6066	1.0500e-003	0.1986	0.0110	0.2097	0.0947	0.0103	0.1049	0.0000	94.7463	94.7463	0.0300	0.0000	95.4957

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4000e-004	7.5500e-003	1.1800e-003	2.0000e-005	6.0000e-004	4.0000e-005	6.4000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.3697	2.3697	6.0000e-005	0.0000	2.3711
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7800e-003	5.2400e-003	0.0495	1.6000e-004	0.0154	1.0000e-004	0.0155	4.0800e-003	1.0000e-004	4.1800e-003	0.0000	14.3466	14.3466	3.9000e-004	0.0000	14.3563
Total	7.0200e-003	0.0128	0.0507	1.8000e-004	0.0160	1.4000e-004	0.0161	4.2500e-003	1.3000e-004	4.3800e-003	0.0000	16.7162	16.7162	4.5000e-004	0.0000	16.7274

4.0 Operational Detail - Mobile

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Collection Pipeline for Southwest Wellfield - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WSWB - Turnout at Aqueduct - Los Angeles-South Coast County, Annual

WSWB - Turnout at Aqueduct
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	2.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Construction Off-road Equipment Mitigation - Owner Supplied Data

WSWB - Turnout at Aqueduct - Los Angeles-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	250
tblAreaCoating	Area_EF_Nonresidential_Interior	100	250
tblAreaCoating	Area_EF_Parking	100	250
tblAreaCoating	Area_EF_Residential_Exterior	50	250
tblAreaCoating	Area_EF_Residential_Interior	50	250
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	4.00	195.00
tblConsumerProducts	ROG_EF	1.98E-05	2.14E-05
tblGrading	AcresOfGrading	97.50	2.00
tblLandscapeEquipment	NumberSummerDays	250	180
tblLandUse	LotAcreage	0.00	2.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	80.00	114.00
tblOffRoadEquipment	LoadFactor	0.29	0.38

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tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	UsageHours	7.00	5.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	7.90	0.00
tblTripsAndVMT	WorkerTripLength	19.80	25.00
tblTripsAndVMT	WorkerTripNumber	18.00	30.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	0.4803	0.0510
2	4-1-2019	6-30-2019	0.4840	0.0500
3	7-1-2019	9-30-2019	0.4893	0.0506
		Highest	0.4893	0.0510

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2019	9/30/2019	5	195	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 2

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	1	6.00	190	0.38
Grading	Excavators	1	6.00	180	0.41
Grading	Rubber Tired Loaders	1	6.00	165	0.36
Grading	Rollers	1	4.00	114	0.37
Grading	Tractors/Loaders/Backhoes	1	5.00	108	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5882	0.0000	0.5882	0.3229	0.0000	0.3229	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1196	1.2926	0.8322	1.6800e-003		0.0634	0.0634		0.0584	0.0584	0.0000	150.8243	150.8243	0.0477	0.0000	152.0173
Total	0.1196	1.2926	0.8322	1.6800e-003	0.5882	0.0634	0.6516	0.3229	0.0584	0.3812	0.0000	150.8243	150.8243	0.0477	0.0000	152.0173

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0227	0.0200	0.2152	5.8000e-004	0.0545	4.7000e-004	0.0550	0.0145	4.3000e-004	0.0149	0.0000	51.9616	51.9616	1.7500e-003	0.0000	52.0054
Total	0.0227	0.0200	0.2152	5.8000e-004	0.0545	4.7000e-004	0.0550	0.0145	4.3000e-004	0.0149	0.0000	51.9616	51.9616	1.7500e-003	0.0000	52.0054

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3.2 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5882	0.0000	0.5882	0.3229	0.0000	0.3229	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0207	0.0895	0.9908	1.6800e-003		2.7500e-003	2.7500e-003		2.7500e-003	2.7500e-003	0.0000	150.8241	150.8241	0.0477	0.0000	152.0171
Total	0.0207	0.0895	0.9908	1.6800e-003	0.5882	2.7500e-003	0.5910	0.3229	2.7500e-003	0.3256	0.0000	150.8241	150.8241	0.0477	0.0000	152.0171

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0227	0.0200	0.2152	5.8000e-004	0.0545	4.7000e-004	0.0550	0.0145	4.3000e-004	0.0149	0.0000	51.9616	51.9616	1.7500e-003	0.0000	52.0054
Total	0.0227	0.0200	0.2152	5.8000e-004	0.0545	4.7000e-004	0.0550	0.0145	4.3000e-004	0.0149	0.0000	51.9616	51.9616	1.7500e-003	0.0000	52.0054

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	18.50	10.10	7.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

WSWB - Booster Pump Station - Kern-San Joaquin County, Annual

WSWB - Booster Pump Station
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Off-road Equipment - Owner Supplied Data

Construction Off-road Equipment Mitigation - owner Supplied Data

WSWB - Booster Pump Station - Kern-San Joaquin County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	125.00
tblGrading	AcresOfGrading	312.50	1.00
tblGrading	MaterialExported	0.00	463.00

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tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	80.00	114.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.41	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	OffRoadEquipmentType	Graders	Excavators
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Scrapers
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Cranes
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading

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tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	58.00	11.00
tblTripsAndVMT	VendorTripLength	6.60	2.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	20.00	30.00
tblVehicleEF	HHD	1.15	0.48
tblVehicleEF	HHD	7.1590e-003	0.09
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	2.07	1.63
tblVehicleEF	HHD	0.54	1.06
tblVehicleEF	HHD	1.05	3.33
tblVehicleEF	HHD	6,322.44	4,465.78
tblVehicleEF	HHD	1,484.64	1,572.96
tblVehicleEF	HHD	3.36	10.75
tblVehicleEF	HHD	0.15	0.03
tblVehicleEF	HHD	17.27	14.30
tblVehicleEF	HHD	1.68	2.12
tblVehicleEF	HHD	20.47	19.50
tblVehicleEF	HHD	3.1930e-003	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.7610e-003	6.2960e-003

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tblVehicleEF	HHD	1.9000e-005	9.1000e-005
tblVehicleEF	HHD	3.0550e-003	9.6000e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9570e-003	8.8400e-003
tblVehicleEF	HHD	5.5120e-003	6.0240e-003
tblVehicleEF	HHD	1.7000e-005	8.3000e-005
tblVehicleEF	HHD	4.6000e-005	1.0300e-004
tblVehicleEF	HHD	1.4970e-003	4.5010e-003
tblVehicleEF	HHD	0.56	0.41
tblVehicleEF	HHD	2.4000e-005	7.8000e-005
tblVehicleEF	HHD	0.08	0.09
tblVehicleEF	HHD	1.0100e-004	3.7200e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	5.1000e-005	1.6200e-004
tblVehicleEF	HHD	4.6000e-005	1.0300e-004
tblVehicleEF	HHD	1.4970e-003	4.5010e-003
tblVehicleEF	HHD	0.64	0.49
tblVehicleEF	HHD	2.4000e-005	7.8000e-005
tblVehicleEF	HHD	0.09	0.20
tblVehicleEF	HHD	1.0100e-004	3.7200e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	1.08	0.45
tblVehicleEF	HHD	7.1690e-003	0.09
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.51	1.19

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tblVehicleEF	HHD	0.54	1.07
tblVehicleEF	HHD	0.98	3.16
tblVehicleEF	HHD	6,698.06	4,731.10
tblVehicleEF	HHD	1,484.64	1,572.96
tblVehicleEF	HHD	3.36	10.75
tblVehicleEF	HHD	0.15	0.03
tblVehicleEF	HHD	17.82	14.76
tblVehicleEF	HHD	1.59	2.01
tblVehicleEF	HHD	20.46	19.49
tblVehicleEF	HHD	2.6930e-003	8.4600e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.7610e-003	6.2960e-003
tblVehicleEF	HHD	1.9000e-005	9.1000e-005
tblVehicleEF	HHD	2.5760e-003	8.0940e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9570e-003	8.8400e-003
tblVehicleEF	HHD	5.5120e-003	6.0240e-003
tblVehicleEF	HHD	1.7000e-005	8.3000e-005
tblVehicleEF	HHD	1.1100e-004	1.5600e-004
tblVehicleEF	HHD	1.7120e-003	4.6140e-003
tblVehicleEF	HHD	0.53	0.39
tblVehicleEF	HHD	4.9000e-005	1.1200e-004
tblVehicleEF	HHD	0.08	0.09
tblVehicleEF	HHD	1.0100e-004	3.6000e-004
tblVehicleEF	HHD	0.02	0.07
tblVehicleEF	HHD	0.06	0.04

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tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	5.0000e-005	1.5900e-004
tblVehicleEF	HHD	1.1100e-004	1.5600e-004
tblVehicleEF	HHD	1.7120e-003	4.6140e-003
tblVehicleEF	HHD	0.60	0.46
tblVehicleEF	HHD	4.9000e-005	1.1200e-004
tblVehicleEF	HHD	0.09	0.20
tblVehicleEF	HHD	1.0100e-004	3.6000e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	1.24	0.52
tblVehicleEF	HHD	7.1490e-003	0.09
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	2.85	2.25
tblVehicleEF	HHD	0.53	1.06
tblVehicleEF	HHD	1.14	3.36
tblVehicleEF	HHD	5,803.72	4,099.40
tblVehicleEF	HHD	1,484.64	1,572.96
tblVehicleEF	HHD	3.36	10.75
tblVehicleEF	HHD	0.15	0.03
tblVehicleEF	HHD	16.50	13.67
tblVehicleEF	HHD	1.70	2.09
tblVehicleEF	HHD	20.47	19.50
tblVehicleEF	HHD	3.8850e-003	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.7610e-003	6.2960e-003
tblVehicleEF	HHD	1.9000e-005	9.1000e-005

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tblVehicleEF	HHD	3.7170e-003	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9570e-003	8.8400e-003
tblVehicleEF	HHD	5.5120e-003	6.0240e-003
tblVehicleEF	HHD	1.7000e-005	8.3000e-005
tblVehicleEF	HHD	1.9000e-005	1.0000e-004
tblVehicleEF	HHD	1.5040e-003	4.7840e-003
tblVehicleEF	HHD	0.60	0.45
tblVehicleEF	HHD	1.1000e-005	7.6000e-005
tblVehicleEF	HHD	0.08	0.09
tblVehicleEF	HHD	1.1100e-004	4.0500e-004
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	0.06	0.04
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	5.2000e-005	1.6300e-004
tblVehicleEF	HHD	1.9000e-005	1.0000e-004
tblVehicleEF	HHD	1.5040e-003	4.7840e-003
tblVehicleEF	HHD	0.69	0.53
tblVehicleEF	HHD	1.1000e-005	7.6000e-005
tblVehicleEF	HHD	0.09	0.20
tblVehicleEF	HHD	1.1100e-004	4.0500e-004
tblVehicleEF	HHD	0.03	0.08
tblVehicleEF	LDA	3.5290e-003	4.8310e-003
tblVehicleEF	LDA	4.2340e-003	4.7360e-003
tblVehicleEF	LDA	0.48	0.61
tblVehicleEF	LDA	0.98	1.04
tblVehicleEF	LDA	253.99	263.16

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tblVehicleEF	LDA	54.03	54.94
tblVehicleEF	LDA	0.49	0.55
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	1.7460e-003	2.1170e-003
tblVehicleEF	LDA	2.2760e-003	2.2400e-003
tblVehicleEF	LDA	1.6080e-003	1.9520e-003
tblVehicleEF	LDA	2.0930e-003	2.0590e-003
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	8.8660e-003	0.01
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	2.5420e-003	2.6360e-003
tblVehicleEF	LDA	5.5700e-004	5.6700e-004
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.06	0.07
tblVehicleEF	LDA	4.1110e-003	5.1340e-003
tblVehicleEF	LDA	3.4750e-003	4.2110e-003
tblVehicleEF	LDA	0.61	0.67
tblVehicleEF	LDA	0.81	0.89
tblVehicleEF	LDA	281.53	275.40

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tblVehicleEF	LDA	54.03	54.94
tblVehicleEF	LDA	0.49	0.55
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	1.7460e-003	2.1170e-003
tblVehicleEF	LDA	2.2760e-003	2.2400e-003
tblVehicleEF	LDA	1.6080e-003	1.9520e-003
tblVehicleEF	LDA	2.0930e-003	2.0590e-003
tblVehicleEF	LDA	0.10	0.06
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	2.8190e-003	2.7590e-003
tblVehicleEF	LDA	5.5400e-004	5.6400e-004
tblVehicleEF	LDA	0.10	0.06
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	3.3100e-003	4.7330e-003
tblVehicleEF	LDA	4.8610e-003	4.8460e-003
tblVehicleEF	LDA	0.44	0.59
tblVehicleEF	LDA	1.16	1.08
tblVehicleEF	LDA	243.62	258.68

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tblVehicleEF	LDA	54.03	54.94
tblVehicleEF	LDA	0.49	0.55
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	1.7460e-003	2.1170e-003
tblVehicleEF	LDA	2.2760e-003	2.2400e-003
tblVehicleEF	LDA	1.6080e-003	1.9520e-003
tblVehicleEF	LDA	2.0930e-003	2.0590e-003
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	8.3230e-003	0.01
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	2.4380e-003	2.5910e-003
tblVehicleEF	LDA	5.6000e-004	5.6700e-004
tblVehicleEF	LDA	0.02	0.04
tblVehicleEF	LDA	0.08	0.10
tblVehicleEF	LDA	0.01	0.03
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDT1	9.3220e-003	0.01
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	1.08	1.52
tblVehicleEF	LDT1	2.63	2.49
tblVehicleEF	LDT1	319.04	330.49

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tblVehicleEF	LDT1	67.92	67.47
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.11	0.14
tblVehicleEF	LDT1	0.15	0.14
tblVehicleEF	LDT1	2.4730e-003	3.3520e-003
tblVehicleEF	LDT1	3.2370e-003	3.2790e-003
tblVehicleEF	LDT1	2.2780e-003	3.0870e-003
tblVehicleEF	LDT1	2.9770e-003	3.0150e-003
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.26	0.25
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.18	0.16
tblVehicleEF	LDT1	0.18	0.17
tblVehicleEF	LDT1	3.2020e-003	3.3240e-003
tblVehicleEF	LDT1	7.2500e-004	7.1800e-004
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.26	0.25
tblVehicleEF	LDT1	0.10	0.10
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.18	0.16
tblVehicleEF	LDT1	0.19	0.18
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	1.34	1.65
tblVehicleEF	LDT1	2.17	2.11
tblVehicleEF	LDT1	352.24	344.92

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tblVehicleEF	LDT1	67.92	67.47
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.11	0.12
tblVehicleEF	LDT1	0.14	0.13
tblVehicleEF	LDT1	2.4730e-003	3.3520e-003
tblVehicleEF	LDT1	3.2370e-003	3.2790e-003
tblVehicleEF	LDT1	2.2780e-003	3.0870e-003
tblVehicleEF	LDT1	2.9770e-003	3.0150e-003
tblVehicleEF	LDT1	0.39	0.19
tblVehicleEF	LDT1	0.34	0.26
tblVehicleEF	LDT1	0.22	0.14
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.15	0.15
tblVehicleEF	LDT1	3.5380e-003	3.4700e-003
tblVehicleEF	LDT1	7.1700e-004	7.1200e-004
tblVehicleEF	LDT1	0.39	0.19
tblVehicleEF	LDT1	0.34	0.26
tblVehicleEF	LDT1	0.22	0.14
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	8.8080e-003	0.01
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	1.00	1.47
tblVehicleEF	LDT1	3.13	2.57
tblVehicleEF	LDT1	306.55	325.20

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tblVehicleEF	LDT1	67.92	67.47
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.17	0.15
tblVehicleEF	LDT1	2.4730e-003	3.3520e-003
tblVehicleEF	LDT1	3.2370e-003	3.2790e-003
tblVehicleEF	LDT1	2.2780e-003	3.0870e-003
tblVehicleEF	LDT1	2.9770e-003	3.0150e-003
tblVehicleEF	LDT1	0.06	0.12
tblVehicleEF	LDT1	0.27	0.28
tblVehicleEF	LDT1	0.04	0.10
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.21	0.19
tblVehicleEF	LDT1	0.21	0.17
tblVehicleEF	LDT1	3.0760e-003	3.2700e-003
tblVehicleEF	LDT1	7.3400e-004	7.1900e-004
tblVehicleEF	LDT1	0.06	0.12
tblVehicleEF	LDT1	0.27	0.28
tblVehicleEF	LDT1	0.04	0.10
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.21	0.19
tblVehicleEF	LDT1	0.23	0.19
tblVehicleEF	LDT2	5.7270e-003	6.6130e-003
tblVehicleEF	LDT2	6.8700e-003	5.6850e-003
tblVehicleEF	LDT2	0.69	0.79
tblVehicleEF	LDT2	1.46	1.23
tblVehicleEF	LDT2	363.40	368.32

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tblVehicleEF	LDT2	76.98	75.43
tblVehicleEF	LDT2	0.17	0.21
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	1.8120e-003	2.1490e-003
tblVehicleEF	LDT2	2.3940e-003	2.3760e-003
tblVehicleEF	LDT2	1.6670e-003	1.9770e-003
tblVehicleEF	LDT2	2.2010e-003	2.1840e-003
tblVehicleEF	LDT2	0.06	0.04
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	3.6380e-003	3.6890e-003
tblVehicleEF	LDT2	7.9400e-004	7.7500e-004
tblVehicleEF	LDT2	0.06	0.04
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	6.6460e-003	7.0150e-003
tblVehicleEF	LDT2	5.6210e-003	5.0630e-003
tblVehicleEF	LDT2	0.87	0.87
tblVehicleEF	LDT2	1.20	1.06
tblVehicleEF	LDT2	401.73	384.82

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tblVehicleEF	LDT2	76.98	75.43
tblVehicleEF	LDT2	0.17	0.21
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.11	0.09
tblVehicleEF	LDT2	1.8120e-003	2.1490e-003
tblVehicleEF	LDT2	2.3940e-003	2.3760e-003
tblVehicleEF	LDT2	1.6670e-003	1.9770e-003
tblVehicleEF	LDT2	2.2010e-003	2.1840e-003
tblVehicleEF	LDT2	0.16	0.07
tblVehicleEF	LDT2	0.14	0.10
tblVehicleEF	LDT2	0.11	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	4.0240e-003	3.8550e-003
tblVehicleEF	LDT2	7.9000e-004	7.7200e-004
tblVehicleEF	LDT2	0.16	0.07
tblVehicleEF	LDT2	0.14	0.10
tblVehicleEF	LDT2	0.11	0.06
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	5.3840e-003	6.4820e-003
tblVehicleEF	LDT2	7.8250e-003	5.8190e-003
tblVehicleEF	LDT2	0.63	0.76
tblVehicleEF	LDT2	1.71	1.27
tblVehicleEF	LDT2	348.99	362.26

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tblVehicleEF	LDT2	76.98	75.43
tblVehicleEF	LDT2	0.17	0.21
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	0.12	0.09
tblVehicleEF	LDT2	1.8120e-003	2.1490e-003
tblVehicleEF	LDT2	2.3940e-003	2.3760e-003
tblVehicleEF	LDT2	1.6670e-003	1.9770e-003
tblVehicleEF	LDT2	2.2010e-003	2.1840e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.12	0.10
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.09	0.07
tblVehicleEF	LDT2	0.11	0.08
tblVehicleEF	LDT2	3.4940e-003	3.6280e-003
tblVehicleEF	LDT2	7.9900e-004	7.7500e-004
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.12	0.10
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.09	0.07
tblVehicleEF	LDT2	0.12	0.09
tblVehicleEF	LHD1	4.5990e-003	5.2860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	1.17	0.75

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tblVehicleEF	LHD1	2.17	2.58
tblVehicleEF	LHD1	9.44	8.94
tblVehicleEF	LHD1	682.68	595.21
tblVehicleEF	LHD1	27.24	32.17
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	1.95	0.86
tblVehicleEF	LHD1	0.88	0.95
tblVehicleEF	LHD1	1.0850e-003	8.3300e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	8.8370e-003
tblVehicleEF	LHD1	7.5700e-004	9.4800e-004
tblVehicleEF	LHD1	1.0380e-003	7.9700e-004
tblVehicleEF	LHD1	2.5850e-003	2.5350e-003
tblVehicleEF	LHD1	0.02	8.4300e-003
tblVehicleEF	LHD1	6.9600e-004	8.7200e-004
tblVehicleEF	LHD1	3.3700e-003	2.9730e-003
tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.4740e-003	1.8290e-003
tblVehicleEF	LHD1	0.15	0.06
tblVehicleEF	LHD1	0.32	0.30
tblVehicleEF	LHD1	0.22	0.24
tblVehicleEF	LHD1	9.4000e-005	9.0000e-005
tblVehicleEF	LHD1	6.6790e-003	5.8400e-003
tblVehicleEF	LHD1	3.1300e-004	3.7000e-004
tblVehicleEF	LHD1	3.3700e-003	2.9730e-003

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tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.4740e-003	1.8290e-003
tblVehicleEF	LHD1	0.18	0.07
tblVehicleEF	LHD1	0.32	0.30
tblVehicleEF	LHD1	0.24	0.27
tblVehicleEF	LHD1	4.5990e-003	5.2860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	1.19	0.76
tblVehicleEF	LHD1	2.01	2.46
tblVehicleEF	LHD1	9.44	8.94
tblVehicleEF	LHD1	682.68	595.21
tblVehicleEF	LHD1	27.24	32.17
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	1.84	0.81
tblVehicleEF	LHD1	0.83	0.91
tblVehicleEF	LHD1	1.0850e-003	8.3300e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	8.8370e-003
tblVehicleEF	LHD1	7.5700e-004	9.4800e-004
tblVehicleEF	LHD1	1.0380e-003	7.9700e-004
tblVehicleEF	LHD1	2.5850e-003	2.5350e-003
tblVehicleEF	LHD1	0.02	8.4300e-003
tblVehicleEF	LHD1	6.9600e-004	8.7200e-004

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tblVehicleEF	LHD1	8.2630e-003	4.4450e-003
tblVehicleEF	LHD1	0.11	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.1080e-003	2.5600e-003
tblVehicleEF	LHD1	0.15	0.06
tblVehicleEF	LHD1	0.32	0.29
tblVehicleEF	LHD1	0.20	0.23
tblVehicleEF	LHD1	9.4000e-005	9.0000e-005
tblVehicleEF	LHD1	6.6800e-003	5.8400e-003
tblVehicleEF	LHD1	3.1000e-004	3.6700e-004
tblVehicleEF	LHD1	8.2630e-003	4.4450e-003
tblVehicleEF	LHD1	0.11	0.10
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.1080e-003	2.5600e-003
tblVehicleEF	LHD1	0.18	0.08
tblVehicleEF	LHD1	0.32	0.29
tblVehicleEF	LHD1	0.22	0.26
tblVehicleEF	LHD1	4.5990e-003	5.2860e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.14	0.15
tblVehicleEF	LHD1	1.16	0.74
tblVehicleEF	LHD1	2.31	2.59
tblVehicleEF	LHD1	9.44	8.94
tblVehicleEF	LHD1	682.68	595.21
tblVehicleEF	LHD1	27.24	32.17
tblVehicleEF	LHD1	0.02	0.02

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tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	1.98	0.85
tblVehicleEF	LHD1	0.92	0.95
tblVehicleEF	LHD1	1.0850e-003	8.3300e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	8.8370e-003
tblVehicleEF	LHD1	7.5700e-004	9.4800e-004
tblVehicleEF	LHD1	1.0380e-003	7.9700e-004
tblVehicleEF	LHD1	2.5850e-003	2.5350e-003
tblVehicleEF	LHD1	0.02	8.4300e-003
tblVehicleEF	LHD1	6.9600e-004	8.7200e-004
tblVehicleEF	LHD1	1.6680e-003	3.1110e-003
tblVehicleEF	LHD1	0.10	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.3900e-004	1.7990e-003
tblVehicleEF	LHD1	0.15	0.06
tblVehicleEF	LHD1	0.35	0.32
tblVehicleEF	LHD1	0.23	0.25
tblVehicleEF	LHD1	9.4000e-005	9.0000e-005
tblVehicleEF	LHD1	6.6790e-003	5.8400e-003
tblVehicleEF	LHD1	3.1600e-004	3.7000e-004
tblVehicleEF	LHD1	1.6680e-003	3.1110e-003
tblVehicleEF	LHD1	0.10	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.3900e-004	1.7990e-003
tblVehicleEF	LHD1	0.18	0.07
tblVehicleEF	LHD1	0.35	0.32

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tblVehicleEF	LHD1	0.25	0.27
tblVehicleEF	LHD2	3.4110e-003	3.7460e-003
tblVehicleEF	LHD2	8.5210e-003	3.7700e-003
tblVehicleEF	LHD2	7.0990e-003	7.4580e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.69	0.31
tblVehicleEF	LHD2	1.08	1.26
tblVehicleEF	LHD2	14.47	13.57
tblVehicleEF	LHD2	721.53	610.80
tblVehicleEF	LHD2	23.65	26.97
tblVehicleEF	LHD2	5.5720e-003	6.2270e-003
tblVehicleEF	LHD2	0.12	0.09
tblVehicleEF	LHD2	1.32	0.55
tblVehicleEF	LHD2	0.49	0.50
tblVehicleEF	LHD2	1.3030e-003	1.1440e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	8.4330e-003
tblVehicleEF	LHD2	3.2900e-004	4.4100e-004
tblVehicleEF	LHD2	1.2460e-003	1.0950e-003
tblVehicleEF	LHD2	2.6950e-003	2.6630e-003
tblVehicleEF	LHD2	0.02	8.0540e-003
tblVehicleEF	LHD2	3.0200e-004	4.0500e-004
tblVehicleEF	LHD2	1.3310e-003	1.0290e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	6.3200e-004	6.8900e-004
tblVehicleEF	LHD2	0.12	0.04

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tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	1.4100e-004	1.3300e-004
tblVehicleEF	LHD2	7.0140e-003	5.9490e-003
tblVehicleEF	LHD2	2.5600e-004	2.9200e-004
tblVehicleEF	LHD2	1.3310e-003	1.0290e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.3200e-004	6.8900e-004
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	3.4110e-003	3.7460e-003
tblVehicleEF	LHD2	8.6240e-003	3.8180e-003
tblVehicleEF	LHD2	6.7310e-003	7.2080e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.70	0.31
tblVehicleEF	LHD2	1.01	1.20
tblVehicleEF	LHD2	14.47	13.57
tblVehicleEF	LHD2	721.53	610.80
tblVehicleEF	LHD2	23.65	26.97
tblVehicleEF	LHD2	5.5720e-003	6.2270e-003
tblVehicleEF	LHD2	0.12	0.09
tblVehicleEF	LHD2	1.25	0.52
tblVehicleEF	LHD2	0.47	0.49
tblVehicleEF	LHD2	1.3030e-003	1.1440e-003
tblVehicleEF	LHD2	0.01	0.01

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tblVehicleEF	LHD2	0.02	8.4330e-003
tblVehicleEF	LHD2	3.2900e-004	4.4100e-004
tblVehicleEF	LHD2	1.2460e-003	1.0950e-003
tblVehicleEF	LHD2	2.6950e-003	2.6630e-003
tblVehicleEF	LHD2	0.02	8.0540e-003
tblVehicleEF	LHD2	3.0200e-004	4.0500e-004
tblVehicleEF	LHD2	3.2320e-003	1.5320e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.2900e-003	9.5700e-004
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.09	0.10
tblVehicleEF	LHD2	1.4100e-004	1.3300e-004
tblVehicleEF	LHD2	7.0140e-003	5.9490e-003
tblVehicleEF	LHD2	2.5500e-004	2.9100e-004
tblVehicleEF	LHD2	3.2320e-003	1.5320e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.2900e-003	9.5700e-004
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	0.09	0.07
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	3.4110e-003	3.7460e-003
tblVehicleEF	LHD2	8.4280e-003	3.7580e-003
tblVehicleEF	LHD2	7.4650e-003	7.5080e-003
tblVehicleEF	LHD2	0.12	0.13

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tblVehicleEF	LHD2	0.69	0.31
tblVehicleEF	LHD2	1.16	1.27
tblVehicleEF	LHD2	14.47	13.57
tblVehicleEF	LHD2	721.53	610.80
tblVehicleEF	LHD2	23.65	26.97
tblVehicleEF	LHD2	5.5720e-003	6.2270e-003
tblVehicleEF	LHD2	0.12	0.09
tblVehicleEF	LHD2	1.34	0.54
tblVehicleEF	LHD2	0.52	0.51
tblVehicleEF	LHD2	1.3030e-003	1.1440e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	8.4330e-003
tblVehicleEF	LHD2	3.2900e-004	4.4100e-004
tblVehicleEF	LHD2	1.2460e-003	1.0950e-003
tblVehicleEF	LHD2	2.6950e-003	2.6630e-003
tblVehicleEF	LHD2	0.02	8.0540e-003
tblVehicleEF	LHD2	3.0200e-004	4.0500e-004
tblVehicleEF	LHD2	5.6700e-004	1.0410e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	2.9200e-004	6.6600e-004
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	1.4100e-004	1.3300e-004
tblVehicleEF	LHD2	7.0140e-003	5.9490e-003
tblVehicleEF	LHD2	2.5800e-004	2.9200e-004

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tblVehicleEF	LHD2	5.6700e-004	1.0410e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.9200e-004	6.6600e-004
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	MCY	0.47	0.54
tblVehicleEF	MCY	0.16	0.15
tblVehicleEF	MCY	22.07	18.72
tblVehicleEF	MCY	10.05	9.68
tblVehicleEF	MCY	180.02	189.29
tblVehicleEF	MCY	46.22	44.13
tblVehicleEF	MCY	5.7600e-003	5.1840e-003
tblVehicleEF	MCY	1.19	1.13
tblVehicleEF	MCY	0.31	0.31
tblVehicleEF	MCY	2.0850e-003	2.4730e-003
tblVehicleEF	MCY	3.6110e-003	3.6800e-003
tblVehicleEF	MCY	1.9500e-003	2.3100e-003
tblVehicleEF	MCY	3.4040e-003	3.4590e-003
tblVehicleEF	MCY	1.58	1.06
tblVehicleEF	MCY	0.89	0.62
tblVehicleEF	MCY	0.85	0.64
tblVehicleEF	MCY	2.41	2.58
tblVehicleEF	MCY	0.53	0.58
tblVehicleEF	MCY	2.18	2.04
tblVehicleEF	MCY	2.2310e-003	2.2780e-003

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tblVehicleEF	MCY	6.9100e-004	6.5900e-004
tblVehicleEF	MCY	1.58	1.06
tblVehicleEF	MCY	0.89	0.62
tblVehicleEF	MCY	0.85	0.64
tblVehicleEF	MCY	2.97	3.22
tblVehicleEF	MCY	0.53	0.58
tblVehicleEF	MCY	2.37	2.22
tblVehicleEF	MCY	0.46	0.53
tblVehicleEF	MCY	0.14	0.13
tblVehicleEF	MCY	22.54	18.05
tblVehicleEF	MCY	9.14	8.84
tblVehicleEF	MCY	180.02	189.29
tblVehicleEF	MCY	46.22	44.13
tblVehicleEF	MCY	5.7600e-003	5.1840e-003
tblVehicleEF	MCY	1.02	0.99
tblVehicleEF	MCY	0.29	0.29
tblVehicleEF	MCY	2.0850e-003	2.4730e-003
tblVehicleEF	MCY	3.6110e-003	3.6800e-003
tblVehicleEF	MCY	1.9500e-003	2.3100e-003
tblVehicleEF	MCY	3.4040e-003	3.4590e-003
tblVehicleEF	MCY	4.21	1.72
tblVehicleEF	MCY	1.43	0.68
tblVehicleEF	MCY	2.26	1.06
tblVehicleEF	MCY	2.36	2.52
tblVehicleEF	MCY	0.52	0.54
tblVehicleEF	MCY	1.86	1.82
tblVehicleEF	MCY	2.2360e-003	2.2650e-003

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tblVehicleEF	MCY	6.6600e-004	6.3900e-004
tblVehicleEF	MCY	4.21	1.72
tblVehicleEF	MCY	1.43	0.68
tblVehicleEF	MCY	2.26	1.06
tblVehicleEF	MCY	2.91	3.15
tblVehicleEF	MCY	0.52	0.54
tblVehicleEF	MCY	2.02	1.98
tblVehicleEF	MCY	0.48	0.54
tblVehicleEF	MCY	0.18	0.15
tblVehicleEF	MCY	23.05	18.82
tblVehicleEF	MCY	11.24	9.83
tblVehicleEF	MCY	180.02	189.29
tblVehicleEF	MCY	46.22	44.13
tblVehicleEF	MCY	5.7600e-003	5.1840e-003
tblVehicleEF	MCY	1.26	1.10
tblVehicleEF	MCY	0.33	0.31
tblVehicleEF	MCY	2.0850e-003	2.4730e-003
tblVehicleEF	MCY	3.6110e-003	3.6800e-003
tblVehicleEF	MCY	1.9500e-003	2.3100e-003
tblVehicleEF	MCY	3.4040e-003	3.4590e-003
tblVehicleEF	MCY	0.72	1.15
tblVehicleEF	MCY	0.96	0.80
tblVehicleEF	MCY	0.29	0.61
tblVehicleEF	MCY	2.49	2.59
tblVehicleEF	MCY	0.61	0.67
tblVehicleEF	MCY	2.49	2.08
tblVehicleEF	MCY	2.2490e-003	2.2800e-003

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tblVehicleEF	MCY	7.2000e-004	6.6300e-004
tblVehicleEF	MCY	0.72	1.15
tblVehicleEF	MCY	0.96	0.80
tblVehicleEF	MCY	0.29	0.61
tblVehicleEF	MCY	3.07	3.23
tblVehicleEF	MCY	0.61	0.67
tblVehicleEF	MCY	2.71	2.26
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	1.07	1.21
tblVehicleEF	MDV	2.72	2.22
tblVehicleEF	MDV	508.30	495.22
tblVehicleEF	MDV	106.72	99.91
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.13	0.13
tblVehicleEF	MDV	0.25	0.19
tblVehicleEF	MDV	1.7380e-003	2.2990e-003
tblVehicleEF	MDV	2.2340e-003	2.4650e-003
tblVehicleEF	MDV	1.6020e-003	2.1190e-003
tblVehicleEF	MDV	2.0540e-003	2.2660e-003
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.08	0.07
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	5.0880e-003	4.9590e-003

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tblVehicleEF	MDV	1.1150e-003	1.0380e-003
tblVehicleEF	MDV	0.10	0.06
tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.08	0.07
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	1.35	1.32
tblVehicleEF	MDV	2.26	1.90
tblVehicleEF	MDV	560.43	516.89
tblVehicleEF	MDV	106.72	99.91
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.13	0.11
tblVehicleEF	MDV	0.23	0.18
tblVehicleEF	MDV	1.7380e-003	2.2990e-003
tblVehicleEF	MDV	2.2340e-003	2.4650e-003
tblVehicleEF	MDV	1.6020e-003	2.1190e-003
tblVehicleEF	MDV	2.0540e-003	2.2660e-003
tblVehicleEF	MDV	0.25	0.10
tblVehicleEF	MDV	0.22	0.15
tblVehicleEF	MDV	0.17	0.09
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.17	0.15
tblVehicleEF	MDV	5.6130e-003	5.1770e-003

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tblVehicleEF	MDV	1.1060e-003	1.0320e-003
tblVehicleEF	MDV	0.25	0.10
tblVehicleEF	MDV	0.22	0.15
tblVehicleEF	MDV	0.17	0.09
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.18	0.16
tblVehicleEF	MDV	9.7230e-003	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	0.98	1.17
tblVehicleEF	MDV	3.23	2.29
tblVehicleEF	MDV	488.62	487.26
tblVehicleEF	MDV	106.72	99.91
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.27	0.20
tblVehicleEF	MDV	1.7380e-003	2.2990e-003
tblVehicleEF	MDV	2.2340e-003	2.4650e-003
tblVehicleEF	MDV	1.6020e-003	2.1190e-003
tblVehicleEF	MDV	2.0540e-003	2.2660e-003
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.19	0.16
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.23	0.17
tblVehicleEF	MDV	4.8900e-003	4.8790e-003

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tblVehicleEF	MDV	1.1240e-003	1.0390e-003
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.19	0.16
tblVehicleEF	MDV	0.04	0.06
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.15	0.10
tblVehicleEF	MDV	0.26	0.19
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.42	1.76
tblVehicleEF	MH	5.67	5.23
tblVehicleEF	MH	1,223.13	1,125.05
tblVehicleEF	MH	56.87	59.88
tblVehicleEF	MH	7.5900e-004	8.6200e-004
tblVehicleEF	MH	1.72	1.00
tblVehicleEF	MH	0.83	0.75
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	1.0630e-003	1.0430e-003
tblVehicleEF	MH	3.2490e-003	3.2050e-003
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	9.7700e-004	9.5900e-004
tblVehicleEF	MH	1.34	0.84
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.39	0.36
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	0.02

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tblVehicleEF	MH	0.33	0.30
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.6800e-004	6.9000e-004
tblVehicleEF	MH	1.34	0.84
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.39	0.36
tblVehicleEF	MH	0.16	0.10
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.36	0.33
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.51	1.81
tblVehicleEF	MH	5.09	4.92
tblVehicleEF	MH	1,223.13	1,125.05
tblVehicleEF	MH	56.87	59.88
tblVehicleEF	MH	7.5900e-004	8.6200e-004
tblVehicleEF	MH	1.60	0.92
tblVehicleEF	MH	0.78	0.71
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	1.0630e-003	1.0430e-003
tblVehicleEF	MH	3.2490e-003	3.2050e-003
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	9.7700e-004	9.5900e-004
tblVehicleEF	MH	3.28	1.24
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.84	0.51

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tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.30	0.29
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.5800e-004	6.8400e-004
tblVehicleEF	MH	3.28	1.24
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.84	0.51
tblVehicleEF	MH	0.16	0.10
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.33	0.31
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	2.36	1.75
tblVehicleEF	MH	6.11	5.28
tblVehicleEF	MH	1,223.13	1,125.05
tblVehicleEF	MH	56.87	59.88
tblVehicleEF	MH	7.5900e-004	8.6200e-004
tblVehicleEF	MH	1.76	0.98
tblVehicleEF	MH	0.86	0.75
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	1.0630e-003	1.0430e-003
tblVehicleEF	MH	3.2490e-003	3.2050e-003
tblVehicleEF	MH	0.04	0.02
tblVehicleEF	MH	9.7700e-004	9.5900e-004
tblVehicleEF	MH	0.78	0.95

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tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.25	0.37
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.34	0.30
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7500e-004	6.9000e-004
tblVehicleEF	MH	0.78	0.95
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.25	0.37
tblVehicleEF	MH	0.15	0.10
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.38	0.33
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1760e-003	3.8910e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.29	0.36
tblVehicleEF	MHD	0.34	0.32
tblVehicleEF	MHD	4.63	5.63
tblVehicleEF	MHD	167.15	130.55
tblVehicleEF	MHD	1,193.03	1,141.08
tblVehicleEF	MHD	46.19	62.84
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.47	0.35
tblVehicleEF	MHD	1.17	0.76
tblVehicleEF	MHD	12.92	9.98
tblVehicleEF	MHD	1.5100e-004	1.0200e-004

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tblVehicleEF	MHD	3.2340e-003	2.8420e-003
tblVehicleEF	MHD	7.0000e-004	8.1400e-004
tblVehicleEF	MHD	1.4400e-004	9.7000e-005
tblVehicleEF	MHD	3.0890e-003	2.7140e-003
tblVehicleEF	MHD	6.4400e-004	7.4900e-004
tblVehicleEF	MHD	1.2980e-003	1.0540e-003
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	5.6600e-004	7.0500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.28	0.34
tblVehicleEF	MHD	1.6040e-003	1.2580e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.4300e-004	7.2700e-004
tblVehicleEF	MHD	1.2980e-003	1.0540e-003
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	5.6600e-004	7.0500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.30	0.38
tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	4.2500e-003	3.9490e-003
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.20	0.26
tblVehicleEF	MHD	0.35	0.32

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tblVehicleEF	MHD	4.31	5.34
tblVehicleEF	MHD	177.16	138.27
tblVehicleEF	MHD	1,193.03	1,141.08
tblVehicleEF	MHD	46.19	62.84
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.48	0.36
tblVehicleEF	MHD	1.11	0.71
tblVehicleEF	MHD	12.89	9.94
tblVehicleEF	MHD	1.2700e-004	8.6000e-005
tblVehicleEF	MHD	3.2340e-003	2.8420e-003
tblVehicleEF	MHD	7.0000e-004	8.1400e-004
tblVehicleEF	MHD	1.2200e-004	8.2000e-005
tblVehicleEF	MHD	3.0890e-003	2.7140e-003
tblVehicleEF	MHD	6.4400e-004	7.4900e-004
tblVehicleEF	MHD	3.2300e-003	1.5770e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.2320e-003	9.9000e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.26	0.33
tblVehicleEF	MHD	1.6990e-003	1.3310e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.3700e-004	7.2200e-004
tblVehicleEF	MHD	3.2300e-003	1.5770e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.03	0.03

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tblVehicleEF	MHD	1.2320e-003	9.9000e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.29	0.36
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1090e-003	3.8750e-003
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	0.38	0.50
tblVehicleEF	MHD	0.34	0.32
tblVehicleEF	MHD	4.98	5.68
tblVehicleEF	MHD	153.55	119.87
tblVehicleEF	MHD	1,193.03	1,141.08
tblVehicleEF	MHD	46.19	62.84
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.45	0.33
tblVehicleEF	MHD	1.19	0.74
tblVehicleEF	MHD	12.96	9.99
tblVehicleEF	MHD	1.8400e-004	1.2400e-004
tblVehicleEF	MHD	3.2340e-003	2.8420e-003
tblVehicleEF	MHD	7.0000e-004	8.1400e-004
tblVehicleEF	MHD	1.7600e-004	1.1800e-004
tblVehicleEF	MHD	3.0890e-003	2.7140e-003
tblVehicleEF	MHD	6.4400e-004	7.4900e-004
tblVehicleEF	MHD	5.3100e-004	1.0750e-003
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.4500e-004	6.8500e-004

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tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.29	0.35
tblVehicleEF	MHD	1.4750e-003	1.1580e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.4900e-004	7.2800e-004
tblVehicleEF	MHD	5.3100e-004	1.0750e-003
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	2.4500e-004	6.8500e-004
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	0.32	0.38
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	9.5700e-003	6.0280e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.25
tblVehicleEF	OBUS	0.60	0.45
tblVehicleEF	OBUS	5.59	5.18
tblVehicleEF	OBUS	82.95	101.82
tblVehicleEF	OBUS	1,297.22	1,246.68
tblVehicleEF	OBUS	69.48	67.80
tblVehicleEF	OBUS	1.6120e-003	2.5460e-003
tblVehicleEF	OBUS	0.17	0.22
tblVehicleEF	OBUS	0.74	0.69
tblVehicleEF	OBUS	2.14	2.52
tblVehicleEF	OBUS	1.5000e-005	2.0000e-005

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tblVehicleEF	OBUS	2.3050e-003	2.6330e-003
tblVehicleEF	OBUS	8.5700e-004	8.2900e-004
tblVehicleEF	OBUS	1.5000e-005	1.9000e-005
tblVehicleEF	OBUS	2.1800e-003	2.5030e-003
tblVehicleEF	OBUS	7.8800e-004	7.6200e-004
tblVehicleEF	OBUS	2.1290e-003	1.4160e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	7.4300e-004	7.6700e-004
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.35	0.32
tblVehicleEF	OBUS	8.0400e-004	9.8300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9300e-004	7.6900e-004
tblVehicleEF	OBUS	2.1290e-003	1.4160e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	7.4300e-004	7.6700e-004
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.38	0.35
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	9.8510e-003	6.1370e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.24	0.24
tblVehicleEF	OBUS	0.61	0.45

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tblVehicleEF	OBUS	5.08	4.89
tblVehicleEF	OBUS	86.87	106.89
tblVehicleEF	OBUS	1,297.22	1,246.68
tblVehicleEF	OBUS	69.48	67.80
tblVehicleEF	OBUS	1.6120e-003	2.5460e-003
tblVehicleEF	OBUS	0.17	0.22
tblVehicleEF	OBUS	0.69	0.64
tblVehicleEF	OBUS	2.09	2.49
tblVehicleEF	OBUS	1.3000e-005	1.7000e-005
tblVehicleEF	OBUS	2.3050e-003	2.6330e-003
tblVehicleEF	OBUS	8.5700e-004	8.2900e-004
tblVehicleEF	OBUS	1.2000e-005	1.6000e-005
tblVehicleEF	OBUS	2.1800e-003	2.5030e-003
tblVehicleEF	OBUS	7.8800e-004	7.6200e-004
tblVehicleEF	OBUS	5.1600e-003	2.0710e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	1.5310e-003	1.0770e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.32	0.31
tblVehicleEF	OBUS	8.4100e-004	1.0320e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8400e-004	7.6400e-004
tblVehicleEF	OBUS	5.1600e-003	2.0710e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05

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tblVehicleEF	OBUS	1.5310e-003	1.0770e-003
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.35	0.34
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	9.3440e-003	5.9990e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.25	0.26
tblVehicleEF	OBUS	0.59	0.45
tblVehicleEF	OBUS	6.10	5.23
tblVehicleEF	OBUS	77.54	94.83
tblVehicleEF	OBUS	1,297.22	1,246.68
tblVehicleEF	OBUS	69.48	67.80
tblVehicleEF	OBUS	1.6120e-003	2.5460e-003
tblVehicleEF	OBUS	0.16	0.21
tblVehicleEF	OBUS	0.75	0.68
tblVehicleEF	OBUS	2.20	2.53
tblVehicleEF	OBUS	1.9000e-005	2.4000e-005
tblVehicleEF	OBUS	2.3050e-003	2.6330e-003
tblVehicleEF	OBUS	8.5700e-004	8.2900e-004
tblVehicleEF	OBUS	1.8000e-005	2.3000e-005
tblVehicleEF	OBUS	2.1800e-003	2.5030e-003
tblVehicleEF	OBUS	7.8800e-004	7.6200e-004
tblVehicleEF	OBUS	9.7600e-004	1.4400e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	4.1200e-004	7.4400e-004

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tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.37	0.33
tblVehicleEF	OBUS	7.5200e-004	9.1700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0100e-004	7.7000e-004
tblVehicleEF	OBUS	9.7600e-004	1.4400e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	4.1200e-004	7.4400e-004
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.40	0.36
tblVehicleEF	SBUS	0.83	0.84
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.08	0.06
tblVehicleEF	SBUS	5.55	8.28
tblVehicleEF	SBUS	0.89	0.67
tblVehicleEF	SBUS	6.23	7.16
tblVehicleEF	SBUS	1,257.80	1,105.31
tblVehicleEF	SBUS	1,116.29	1,070.53
tblVehicleEF	SBUS	36.73	56.44
tblVehicleEF	SBUS	9.1200e-004	6.9200e-004
tblVehicleEF	SBUS	11.18	8.50
tblVehicleEF	SBUS	4.37	3.81
tblVehicleEF	SBUS	15.17	11.84
tblVehicleEF	SBUS	0.01	8.1160e-003

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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.7400e-004	8.5300e-004
tblVehicleEF	SBUS	0.01	7.7650e-003
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.2800e-004	7.8400e-004
tblVehicleEF	SBUS	4.8340e-003	3.3720e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.66	0.99
tblVehicleEF	SBUS	1.5450e-003	1.8240e-003
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.32	0.38
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.7500e-004	6.8800e-004
tblVehicleEF	SBUS	4.8340e-003	3.3720e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.94	1.43
tblVehicleEF	SBUS	1.5450e-003	1.8240e-003
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.35	0.41
tblVehicleEF	SBUS	0.83	0.84
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.06	0.05

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tblVehicleEF	SBUS	5.41	8.18
tblVehicleEF	SBUS	0.91	0.68
tblVehicleEF	SBUS	4.04	5.81
tblVehicleEF	SBUS	1,321.77	1,154.44
tblVehicleEF	SBUS	1,116.29	1,070.53
tblVehicleEF	SBUS	36.73	56.44
tblVehicleEF	SBUS	9.1200e-004	6.9200e-004
tblVehicleEF	SBUS	11.54	8.77
tblVehicleEF	SBUS	4.13	3.59
tblVehicleEF	SBUS	15.13	11.81
tblVehicleEF	SBUS	9.0880e-003	6.8420e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.7400e-004	8.5300e-004
tblVehicleEF	SBUS	8.6950e-003	6.5460e-003
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.2800e-004	7.8400e-004
tblVehicleEF	SBUS	0.01	4.9610e-003
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	0.65	0.98
tblVehicleEF	SBUS	3.2470e-003	2.5750e-003
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.25	0.34
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01

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tblVehicleEF	SBUS	4.3800e-004	6.6600e-004
tblVehicleEF	SBUS	0.01	4.9610e-003
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	0.94	1.42
tblVehicleEF	SBUS	3.2470e-003	2.5750e-003
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.27	0.37
tblVehicleEF	SBUS	0.83	0.84
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	SBUS	5.75	8.43
tblVehicleEF	SBUS	0.87	0.66
tblVehicleEF	SBUS	8.38	7.40
tblVehicleEF	SBUS	1,169.47	1,037.46
tblVehicleEF	SBUS	1,116.29	1,070.53
tblVehicleEF	SBUS	36.73	56.44
tblVehicleEF	SBUS	9.1200e-004	6.9200e-004
tblVehicleEF	SBUS	10.69	8.13
tblVehicleEF	SBUS	4.44	3.74
tblVehicleEF	SBUS	15.21	11.85
tblVehicleEF	SBUS	0.01	9.8760e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.7400e-004	8.5300e-004
tblVehicleEF	SBUS	0.01	9.4480e-003
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003

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tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	5.2800e-004	7.8400e-004
tblVehicleEF	SBUS	2.0720e-003	3.3940e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.66	0.99
tblVehicleEF	SBUS	8.3300e-004	1.7490e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.38	0.39
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.1100e-004	6.9200e-004
tblVehicleEF	SBUS	2.0720e-003	3.3940e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.95	1.43
tblVehicleEF	SBUS	8.3300e-004	1.7490e-003
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.41	0.42
tblVehicleEF	UBUS	1.31	2.44
tblVehicleEF	UBUS	0.06	0.05
tblVehicleEF	UBUS	6.73	10.68
tblVehicleEF	UBUS	10.64	8.84
tblVehicleEF	UBUS	1,909.36	1,951.45
tblVehicleEF	UBUS	122.42	100.38
tblVehicleEF	UBUS	1.6100e-003	2.1330e-003
tblVehicleEF	UBUS	5.17	9.33

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tblVehicleEF	UBUS	13.90	15.09
tblVehicleEF	UBUS	0.55	0.60
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.1450e-003	1.1360e-003
tblVehicleEF	UBUS	0.23	0.26
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.0530e-003	1.0450e-003
tblVehicleEF	UBUS	6.4620e-003	4.1100e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	2.6210e-003	2.4100e-003
tblVehicleEF	UBUS	0.45	0.79
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.83	0.68
tblVehicleEF	UBUS	0.01	9.8060e-003
tblVehicleEF	UBUS	1.4160e-003	1.1630e-003
tblVehicleEF	UBUS	6.4620e-003	4.1100e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	2.6210e-003	2.4100e-003
tblVehicleEF	UBUS	1.81	3.32
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.91	0.75
tblVehicleEF	UBUS	1.31	2.44
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	6.78	10.72
tblVehicleEF	UBUS	8.63	7.66
tblVehicleEF	UBUS	1,909.36	1,951.45
tblVehicleEF	UBUS	122.42	100.38

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tblVehicleEF	UBUS	1.6100e-003	2.1330e-003
tblVehicleEF	UBUS	4.87	8.79
tblVehicleEF	UBUS	13.81	15.04
tblVehicleEF	UBUS	0.55	0.60
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.1450e-003	1.1360e-003
tblVehicleEF	UBUS	0.23	0.26
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.0530e-003	1.0450e-003
tblVehicleEF	UBUS	0.02	5.8640e-003
tblVehicleEF	UBUS	0.10	0.07
tblVehicleEF	UBUS	5.7470e-003	3.3120e-003
tblVehicleEF	UBUS	0.45	0.80
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.73	0.63
tblVehicleEF	UBUS	0.01	9.8070e-003
tblVehicleEF	UBUS	1.3820e-003	1.1430e-003
tblVehicleEF	UBUS	0.02	5.8640e-003
tblVehicleEF	UBUS	0.10	0.07
tblVehicleEF	UBUS	5.7470e-003	3.3120e-003
tblVehicleEF	UBUS	1.82	3.33
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.80	0.69
tblVehicleEF	UBUS	1.31	2.44
tblVehicleEF	UBUS	0.07	0.05
tblVehicleEF	UBUS	6.67	10.66
tblVehicleEF	UBUS	12.77	9.05

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tblVehicleEF	UBUS	1,909.36	1,951.45
tblVehicleEF	UBUS	122.42	100.38
tblVehicleEF	UBUS	1.6100e-003	2.1330e-003
tblVehicleEF	UBUS	5.27	9.15
tblVehicleEF	UBUS	13.99	15.10
tblVehicleEF	UBUS	0.55	0.60
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.1450e-003	1.1360e-003
tblVehicleEF	UBUS	0.23	0.26
tblVehicleEF	UBUS	0.07	0.12
tblVehicleEF	UBUS	1.0530e-003	1.0450e-003
tblVehicleEF	UBUS	2.8220e-003	4.6290e-003
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	1.3490e-003	2.5090e-003
tblVehicleEF	UBUS	0.44	0.79
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.93	0.70
tblVehicleEF	UBUS	0.01	9.8060e-003
tblVehicleEF	UBUS	1.4530e-003	1.1670e-003
tblVehicleEF	UBUS	2.8220e-003	4.6290e-003
tblVehicleEF	UBUS	0.08	0.08
tblVehicleEF	UBUS	1.3490e-003	2.5090e-003
tblVehicleEF	UBUS	1.80	3.31
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.01	0.76
tblVehicleTrips	CC_TL	6.60	7.30
tblVehicleTrips	CNW_TL	6.60	7.30

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tblVehicleTrips	CW_TL	14.70	9.50
tblWater	ElectricityIntensityFactorToSupply	2,117.00	9,727.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	0.7258	0.1921
2	4-1-2019	6-30-2019	1.1185	0.2953
3	7-1-2019	9-30-2019	0.3073	0.0811
		Highest	1.1185	0.2953

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/1/2019	7/25/2019	5	125	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 1

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Rubber Tired Loaders	1	8.00	165	0.36
Grading	Rollers	1	3.00	114	0.38
Grading	Tractors/Loaders/Backhoes	2	5.00	108	0.37
Grading	Skid Steer Loaders	1	1.00	88	0.37
Grading	Cranes	1	6.00	190	0.38
Grading	Excavators	1	6.00	180	0.41
Grading	Graders	1	6.00	174	0.40
Grading	Off-Highway Trucks	1	4.00	479	0.48
Grading	Scrapers	1	4.00	313	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	30.00	1.00	11.00	25.00	2.00	50.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3769	0.0000	0.3769	0.2070	0.0000	0.2070	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1823	1.9320	1.2481	2.5000e-003		0.0920	0.0920		0.0847	0.0847	0.0000	224.8045	224.8045	0.0711	0.0000	226.5827
Total	0.1823	1.9320	1.2481	2.5000e-003	0.3769	0.0920	0.4690	0.2070	0.0847	0.2916	0.0000	224.8045	224.8045	0.0711	0.0000	226.5827

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	3.1400e-003	4.8000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9526	0.9526	3.0000e-005	0.0000	0.9533
Vendor	1.7000e-004	5.5700e-003	1.1000e-003	1.0000e-005	1.2000e-004	2.0000e-005	1.4000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.8036	0.8036	1.4000e-004	0.0000	0.8071
Worker	0.0154	0.0119	0.1124	3.6000e-004	0.0350	2.4000e-004	0.0352	9.2800e-003	2.2000e-004	9.5000e-003	0.0000	32.6058	32.6058	8.8000e-004	0.0000	32.6279
Total	0.0157	0.0206	0.1140	3.8000e-004	0.0353	2.7000e-004	0.0356	9.3800e-003	2.5000e-004	9.6300e-003	0.0000	34.3620	34.3620	1.0500e-003	0.0000	34.3883

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3.2 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3769	0.0000	0.3769	0.2070	0.0000	0.2070	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0564	0.4748	1.3973	2.5000e-003		0.0197	0.0197		0.0184	0.0184	0.0000	224.8042	224.8042	0.0711	0.0000	226.5824
Total	0.0564	0.4748	1.3973	2.5000e-003	0.3769	0.0197	0.3967	0.2070	0.0184	0.2253	0.0000	224.8042	224.8042	0.0711	0.0000	226.5824

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	3.1400e-003	4.8000e-004	1.0000e-005	2.4000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9526	0.9526	3.0000e-005	0.0000	0.9533
Vendor	1.7000e-004	5.5700e-003	1.1000e-003	1.0000e-005	1.2000e-004	2.0000e-005	1.4000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.8036	0.8036	1.4000e-004	0.0000	0.8071
Worker	0.0154	0.0119	0.1124	3.6000e-004	0.0350	2.4000e-004	0.0352	9.2800e-003	2.2000e-004	9.5000e-003	0.0000	32.6058	32.6058	8.8000e-004	0.0000	32.6279
Total	0.0157	0.0206	0.1140	3.8000e-004	0.0353	2.7000e-004	0.0356	9.3800e-003	2.5000e-004	9.6300e-003	0.0000	34.3620	34.3620	1.0500e-003	0.0000	34.3883

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Booster Pump Station - Kern-San Joaquin County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

WSWB - Booster Pump Station - Kern-San Joaquin County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - Booster Pump Station - Kern-San Joaquin County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Booster Pump Station - Kern-San Joaquin County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Booster Pump Station - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

84" Pipeline From CA Aqueduct (Part 2 of 2)
Kern-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - owner supplied data

Off-road Equipment - owner supplied data

Trips and VMT - Owner supplied data

Construction Off-road Equipment Mitigation - owner supplied data

Off-road Equipment - owner supplied data

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	LoadFactor	0.29	0.73
tblOffRoadEquipment	LoadFactor	0.38	0.40

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

tblProjectCharacteristics	OperationalYear	2018	2022
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00

2.0 Emissions Summary

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1288	1.2165	0.9482	2.0300e-003	0.0252	0.0564	0.0816	6.6800e-003	0.0519	0.0586	0.0000	178.6718	178.6718	0.0510	0.0000	179.9466
Maximum	0.1288	1.2165	0.9482	2.0300e-003	0.0252	0.0564	0.0816	6.6800e-003	0.0519	0.0586	0.0000	178.6718	178.6718	0.0510	0.0000	179.9466

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0706	1.5126	1.2343	2.0800e-003	0.0252	0.0427	0.0679	6.6800e-003	0.0424	0.0491	0.0000	183.7982	183.7982	0.0527	0.0000	185.1144
Maximum	0.0706	1.5126	1.2343	2.0800e-003	0.0252	0.0427	0.0679	6.6800e-003	0.0424	0.0491	0.0000	183.7982	183.7982	0.0527	0.0000	185.1144

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	45.21	-24.34	-30.17	-2.46	0.00	24.25	16.76	0.00	18.33	16.23	0.00	-2.87	-2.87	-3.26	0.00	-2.87

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.9727	1.1445
2	4-6-2020	7-5-2020	0.3524	0.4147
		Highest	0.9727	1.1445

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Trenching	1/6/2020	5/8/2020	5	90	

Acres of Grading (Site Preparation Phase): 0

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Cranes	1	2.00	190	0.29
	Excavators	1	6.00	180	0.38
	Graders	1	6.00	174	0.41
	Off-Highway Trucks	1	4.00	479	0.38
	Rubber Tired Loaders	2	8.00	165	0.36
	Scrapers	1	4.00	313	0.48
	Skid Steer Loaders	1	3.00	88	0.37
	Tractors/Loaders/Backhoes	1	3.00	108	0.37
Grading	Cranes	1	2.00	190	0.73
Grading	Excavators	1	6.00	180	0.40
Grading	Graders	1	6.00	174	0.37
Grading	Off-Highway Trucks	1	4.00	479	0.48
Grading	Skid Steer Loaders	1	4.00	88	0.36
Grading	Rubber Tired Loaders	2	8.00	165	0.37
Grading	Tractors/Loaders/Backhoes	1	3.00	108	0.37
Grading	Scrapers	1	3.00	313	0.45

Trips and VMT

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1187	1.2090	0.8760	1.7700e-003		0.0562	0.0562		0.0517	0.0517	0.0000	155.9455	155.9455	0.0504	0.0000	157.2064
Total	0.1187	1.2090	0.8760	1.7700e-003		0.0562	0.0562		0.0517	0.0517	0.0000	155.9455	155.9455	0.0504	0.0000	157.2064

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

3.2 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	7.5400e-003	0.0722	2.5000e-004	0.0252	1.7000e-004	0.0253	6.6800e-003	1.5000e-004	6.8400e-003	0.0000	22.7263	22.7263	5.5000e-004	0.0000	22.7402
Total	0.0101	7.5400e-003	0.0722	2.5000e-004	0.0252	1.7000e-004	0.0253	6.6800e-003	1.5000e-004	6.8400e-003	0.0000	22.7263	22.7263	5.5000e-004	0.0000	22.7402

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0605	1.5051	1.1621	1.8300e-003		0.0426	0.0426		0.0422	0.0422	0.0000	161.0719	161.0719	0.0521	0.0000	162.3742
Total	0.0605	1.5051	1.1621	1.8300e-003		0.0426	0.0426		0.0422	0.0422	0.0000	161.0719	161.0719	0.0521	0.0000	162.3742

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

3.2 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	7.5400e-003	0.0722	2.5000e-004	0.0252	1.7000e-004	0.0253	6.6800e-003	1.5000e-004	6.8400e-003	0.0000	22.7263	22.7263	5.5000e-004	0.0000	22.7402
Total	0.0101	7.5400e-003	0.0722	2.5000e-004	0.0252	1.7000e-004	0.0253	6.6800e-003	1.5000e-004	6.8400e-003	0.0000	22.7263	22.7263	5.5000e-004	0.0000	22.7402

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.483371	0.030380	0.169336	0.116038	0.018013	0.005928	0.019788	0.146278	0.001620	0.001664	0.005839	0.000931	0.000816

5.0 Energy Detail

Historical Energy Use: N

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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84" Pipeline From CA Aqueduct (Part 2 of 2) - Kern-Mojave Desert County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

2020 Rugulating Reservoir on Pipeline from LA Aqueduct - Kern-Mojave Desert County, Annual

**2020 Rugulating Reservoir on Pipeline from LA Aqueduct
Kern-Mojave Desert County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.87	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Owner defined data

Construction Phase - Owner Defined Data

Off-road Equipment - Owner Defined Data

Trips and VMT - Owner Defined Data

Construction Off-road Equipment Mitigation - Owner Defined Data

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Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	2.00	65.00
tblConstructionPhase	PhaseEndDate	2/4/2020	5/1/2020
tblLandUse	LotAcreage	0.00	0.87
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00
tblTripsAndVMT	WorkerTripNumber	13.00	6.00

2.0 Emissions Summary

2020 Regulating Reservoir on Pipeline from LA Aqueduct - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-3-2020	5-2-2020	0.4163	0.5053
		Highest	0.4163	0.5053

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

2020 Regulating Reservoir on Pipeline from LA Aqueduct - Kern-Mojave Desert County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/3/2020	5/1/2020	5	65	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	108	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	5	6.00	0.00	0.00	30.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

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3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0245	0.0000	0.0245	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0407	0.3818	0.3841	5.8000e-004		0.0232	0.0232		0.0218	0.0218	0.0000	50.1429	50.1429	0.0117	0.0000	50.4348
Total	0.0407	0.3818	0.3841	5.8000e-004	0.0245	0.0232	0.0476	0.0135	0.0218	0.0353	0.0000	50.1429	50.1429	0.0117	0.0000	50.4348

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7100e-003	1.2900e-003	0.0123	4.0000e-005	4.3600e-003	3.0000e-005	4.3900e-003	1.1600e-003	3.0000e-005	1.1800e-003	0.0000	3.9312	3.9312	1.0000e-004	0.0000	3.9336
Total	1.7100e-003	1.2900e-003	0.0123	4.0000e-005	4.3600e-003	3.0000e-005	4.3900e-003	1.1600e-003	3.0000e-005	1.1800e-003	0.0000	3.9312	3.9312	1.0000e-004	0.0000	3.9336

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3.2 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0245	0.0000	0.0245	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0338	0.4796	0.3908	5.8000e-004		0.0219	0.0219		0.0217	0.0217	0.0000	50.1429	50.1429	0.0117	0.0000	50.4347
Total	0.0338	0.4796	0.3908	5.8000e-004	0.0245	0.0219	0.0464	0.0135	0.0217	0.0352	0.0000	50.1429	50.1429	0.0117	0.0000	50.4347

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7100e-003	1.2900e-003	0.0123	4.0000e-005	4.3600e-003	3.0000e-005	4.3900e-003	1.1600e-003	3.0000e-005	1.1800e-003	0.0000	3.9312	3.9312	1.0000e-004	0.0000	3.9336
Total	1.7100e-003	1.2900e-003	0.0123	4.0000e-005	4.3600e-003	3.0000e-005	4.3900e-003	1.1600e-003	3.0000e-005	1.1800e-003	0.0000	3.9312	3.9312	1.0000e-004	0.0000	3.9336

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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2020 Regulating Reservoir on Pipeline from LA Aqueduct - Kern-Mojave Desert County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

WSWB - Recovery Wells (10) Southwest Wellfield Remainder
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Off-road Equipment - owner supplied data

Construction Off-road Equipment Mitigation - owner supplied data

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	2.00	250.00
tblConstructionPhase	PhaseEndDate	9/4/2020	12/18/2020
tblGrading	AcresOfGrading	93.75	0.75
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	203.00	313.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	402.00	479.00

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

tblOffRoadEquipment	HorsePower	80.00	114.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	LoadFactor	0.36	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	20.00	10.00

2.0 Emissions Summary

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.8080	0.8958
2	4-6-2020	7-5-2020	0.8077	0.8956
3	7-6-2020	9-30-2020	0.7722	0.8562
		Highest	0.8080	0.8958

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/6/2020	12/18/2020	5	250	

Acres of Grading (Site Preparation Phase): 0

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Off-Highway Trucks	1	4.00	479	0.38
Grading	Rollers	1	1.00	114	0.38
Grading	Skid Steer Loaders	1	1.00	88	0.37
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Loaders	1	1.00	313	0.40
Grading	Excavators	1	6.00	180	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	10.00	0.00	0.00	25.00	0.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5650	0.0000	0.5650	0.3104	0.0000	0.3104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2764	2.8137	1.5992	3.5100e-003		0.1347	0.1347		0.1240	0.1240	0.0000	308.8216	308.8216	0.0999	0.0000	311.3186
Total	0.2764	2.8137	1.5992	3.5100e-003	0.5650	0.1347	0.6997	0.3104	0.1240	0.4343	0.0000	308.8216	308.8216	0.0999	0.0000	311.3186

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3600e-003	6.9800e-003	0.0669	2.3000e-004	0.0233	1.5000e-004	0.0235	6.1900e-003	1.4000e-004	6.3300e-003	0.0000	21.0429	21.0429	5.1000e-004	0.0000	21.0557
Total	9.3600e-003	6.9800e-003	0.0669	2.3000e-004	0.0233	1.5000e-004	0.0235	6.1900e-003	1.4000e-004	6.3300e-003	0.0000	21.0429	21.0429	5.1000e-004	0.0000	21.0557

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

3.2 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5650	0.0000	0.5650	0.3104	0.0000	0.3104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1929	3.2350	2.0501	3.5100e-003		0.1161	0.1161		0.1108	0.1108	0.0000	308.8212	308.8212	0.0999	0.0000	311.3182
Total	0.1929	3.2350	2.0501	3.5100e-003	0.5650	0.1161	0.6811	0.3104	0.1108	0.4212	0.0000	308.8212	308.8212	0.0999	0.0000	311.3182

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3600e-003	6.9800e-003	0.0669	2.3000e-004	0.0233	1.5000e-004	0.0235	6.1900e-003	1.4000e-004	6.3300e-003	0.0000	21.0429	21.0429	5.1000e-004	0.0000	21.0557
Total	9.3600e-003	6.9800e-003	0.0669	2.3000e-004	0.0233	1.5000e-004	0.0235	6.1900e-003	1.4000e-004	6.3300e-003	0.0000	21.0429	21.0429	5.1000e-004	0.0000	21.0557

4.0 Operational Detail - Mobile

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

WSWB - Collection Pipeline for Southwest wellfield DRILLING
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Off-road Equipment - Owner Supplied Data

Construction Off-road Equipment Mitigation - Owner Supplied Data

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	50.00
tblConstructionPhase	PhaseEndDate	4/16/2021	7/24/2020
tblConstructionPhase	PhaseStartDate	5/4/2020	5/18/2020
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	221.00	500.00
tblOffRoadEquipment	LoadFactor	0.50	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Bore/Drill Rigs
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00

2.0 Emissions Summary

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-4-2020	8-3-2020	0.7670	0.4784
		Highest	0.7670	0.4784

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/18/2020	7/24/2020	5	50	

Acres of Grading (Site Preparation Phase): 0

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

Acres of Grading (Grading Phase): 18.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Bore/Drill Rigs	1	24.00	500	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	10.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1229	0.0000	0.1229	0.0631	0.0000	0.0631	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0642	0.7220	0.4092	1.5300e-003		0.0280	0.0280		0.0258	0.0258	0.0000	134.6084	134.6084	0.0435	0.0000	135.6968
Total	0.0642	0.7220	0.4092	1.5300e-003	0.1229	0.0280	0.1509	0.0631	0.0258	0.0889	0.0000	134.6084	134.6084	0.0435	0.0000	135.6968

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8700e-003	1.4000e-003	0.0134	5.0000e-005	4.6600e-003	3.0000e-005	4.6900e-003	1.2400e-003	3.0000e-005	1.2700e-003	0.0000	4.2086	4.2086	1.0000e-004	0.0000	4.2111
Total	1.8700e-003	1.4000e-003	0.0134	5.0000e-005	4.6600e-003	3.0000e-005	4.6900e-003	1.2400e-003	3.0000e-005	1.2700e-003	0.0000	4.2086	4.2086	1.0000e-004	0.0000	4.2111

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

3.2 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1229	0.0000	0.1229	0.0631	0.0000	0.0631	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0484	0.4408	0.6997	1.5300e-003		0.0191	0.0191		0.0177	0.0177	0.0000	134.6083	134.6083	0.0435	0.0000	135.6967
Total	0.0484	0.4408	0.6997	1.5300e-003	0.1229	0.0191	0.1419	0.0631	0.0177	0.0808	0.0000	134.6083	134.6083	0.0435	0.0000	135.6967

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8700e-003	1.4000e-003	0.0134	5.0000e-005	4.6600e-003	3.0000e-005	4.6900e-003	1.2400e-003	3.0000e-005	1.2700e-003	0.0000	4.2086	4.2086	1.0000e-004	0.0000	4.2111
Total	1.8700e-003	1.4000e-003	0.0134	5.0000e-005	4.6600e-003	3.0000e-005	4.6900e-003	1.2400e-003	3.0000e-005	1.2700e-003	0.0000	4.2086	4.2086	1.0000e-004	0.0000	4.2111

4.0 Operational Detail - Mobile

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Collection Pipeline for Southwest wellfield DRILLING - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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**2020 recovery wells pupm testing only
Kern-Mojave Desert County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.87	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Owner defined data

Construction Phase - Owner Defined Data

Off-road Equipment - Owner Defined Data

Trips and VMT - Owner Defined Data

Construction Off-road Equipment Mitigation - Owner Defined Data

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Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblLandUse	LotAcreage	0.00	0.87
tblOffRoadEquipment	HorsePower	84.00	300.00
tblOffRoadEquipment	LoadFactor	0.74	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Pumps
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	30.00

2.0 Emissions Summary

2020 recovery wells pupm testing only - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2020	9-30-2020	0.0172	0.0329
		Highest	0.0172	0.0329

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Trenching	8/1/2020	8/4/2020	5	2	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Pumps	1	24.00	300	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	1	3.00	0.00	0.00	30.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

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3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1900e-003	0.0108	5.9700e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	3.0279	3.0279	1.0000e-004	0.0000	3.0303
Total	1.1900e-003	0.0108	5.9700e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	3.0279	3.0279	1.0000e-004	0.0000	3.0303

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	1.9000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0605	0.0605	0.0000	0.0000	0.0605
Total	3.0000e-005	2.0000e-005	1.9000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0605	0.0605	0.0000	0.0000	0.0605

2020 recovery wells pupm testing only - Kern-Mojave Desert County, Annual

3.2 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.0000e-004	0.0223	0.0153	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	3.0279	3.0279	1.0000e-004	0.0000	3.0303
Total	7.0000e-004	0.0223	0.0153	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	3.0279	3.0279	1.0000e-004	0.0000	3.0303

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	1.9000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0605	0.0605	0.0000	0.0000	0.0605
Total	3.0000e-005	2.0000e-005	1.9000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0605	0.0605	0.0000	0.0000	0.0605

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

2020 recovery wells pupm testing only - Kern-Mojave Desert County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

2020 recovery wells pupm testing only - Kern-Mojave Desert County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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2020 recovery wells pupm testing only - Kern-Mojave Desert County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

2020 Rugulating Reservoir at Gaskell/165th - Kern-Mojave Desert County, Annual

**2020 Rugulating Reservoir at Gaskell/165th
Kern-Mojave Desert County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Owner Defined Data

Off-road Equipment - Owner Defined Data

Trips and VMT - Owner Defined Data

Construction Off-road Equipment Mitigation - Owner Defined Data

2020 Rugulating Reservoir at Gaskell/165th - Kern-Mojave Desert County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	0.00	125.00
tblConstructionPhase	PhaseEndDate	2/2/2020	7/24/2020
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	13.00	6.00

2.0 Emissions Summary

2020 Rugulating Reservoir at Gaskell/165th - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-3-2020	5-2-2020	0.4205	0.5105
2	5-3-2020	8-2-2020	0.3877	0.4707
		Highest	0.4205	0.5105

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

2020 Rugulating Reservoir at Gaskell/165th - Kern-Mojave Desert County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/3/2020	7/24/2020	5	125	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	108	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	5	6.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

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3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0471	0.0000	0.0471	0.0259	0.0000	0.0259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0783	0.7342	0.7386	1.1100e-003		0.0445	0.0445		0.0419	0.0419	0.0000	96.4287	96.4287	0.0225	0.0000	96.9899
Total	0.0783	0.7342	0.7386	1.1100e-003	0.0471	0.0445	0.0916	0.0259	0.0419	0.0678	0.0000	96.4287	96.4287	0.0225	0.0000	96.9899

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8100e-003	2.0900e-003	0.0201	7.0000e-005	6.9900e-003	5.0000e-005	7.0400e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.3129	6.3129	1.5000e-004	0.0000	6.3167
Total	2.8100e-003	2.0900e-003	0.0201	7.0000e-005	6.9900e-003	5.0000e-005	7.0400e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.3129	6.3129	1.5000e-004	0.0000	6.3167

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3.2 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0471	0.0000	0.0471	0.0259	0.0000	0.0259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0650	0.9224	0.7516	1.1100e-003		0.0421	0.0421		0.0417	0.0417	0.0000	96.4286	96.4286	0.0225	0.0000	96.9898
Total	0.0650	0.9224	0.7516	1.1100e-003	0.0471	0.0421	0.0891	0.0259	0.0417	0.0676	0.0000	96.4286	96.4286	0.0225	0.0000	96.9898

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8100e-003	2.0900e-003	0.0201	7.0000e-005	6.9900e-003	5.0000e-005	7.0400e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.3129	6.3129	1.5000e-004	0.0000	6.3167
Total	2.8100e-003	2.0900e-003	0.0201	7.0000e-005	6.9900e-003	5.0000e-005	7.0400e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.3129	6.3129	1.5000e-004	0.0000	6.3167

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Owner Supplied Data
- Construction Phase - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Grading - Owner supplied data
- Trips and VMT - Owner Supplied Data
- Construction Off-road Equipment Mitigation - Owner Supplied Data

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	1.00	250.00
tblConstructionPhase	PhaseEndDate	6/23/2020	12/18/2020
tblConstructionPhase	PhaseStartDate	1/1/2020	1/6/2020
tblGrading	AcresOfGrading	0.88	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	158.00	180.00

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tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	80.00	114.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	LoadFactor	0.29	0.41
tblOffRoadEquipment	LoadFactor	0.41	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.40
tblOffRoadEquipment	OffRoadEquipmentType	Graders	Cranes
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Site Preparation

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tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	25.00	30.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	0.9562	0.1721
2	4-1-2020	6-30-2020	1.0109	0.1813
3	7-1-2020	9-30-2020	1.0221	0.1833
		Highest	1.0221	0.1833

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/6/2020	12/18/2020	5	250	

Acres of Grading (Site Preparation Phase): 1

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	1	6.00	180	0.40
Site Preparation	Off-Highway Trucks	1	4.00	479	0.38
Site Preparation	Scrapers	1	4.00	313	0.48
Site Preparation	Rubber Tired Loaders	1	8.00	165	0.36
Site Preparation	Rollers	1	3.00	114	0.38
Site Preparation	Tractors/Loaders/Backhoes	2	5.00	108	0.37
Site Preparation	Skid Steer Loaders	1	1.00	88	0.37
Site Preparation	Cranes	1	6.00	190	0.41
Site Preparation	Graders	1	6.00	174	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	10	30.00	0.00	0.00	25.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3348	3.5035	2.4240	4.9200e-003		0.1643	0.1643		0.1512	0.1512	0.0000	432.3993	432.3993	0.1399	0.0000	435.8954
Total	0.3348	3.5035	2.4240	4.9200e-003	5.3000e-004	0.1643	0.1648	6.0000e-005	0.1512	0.1512	0.0000	432.3993	432.3993	0.1399	0.0000	435.8954

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0281	0.0209	0.2006	7.0000e-004	0.0699	4.6000e-004	0.0704	0.0186	4.3000e-004	0.0190	0.0000	63.1287	63.1287	1.5400e-003	0.0000	63.1672
Total	0.0281	0.0209	0.2006	7.0000e-004	0.0699	4.6000e-004	0.0704	0.0186	4.3000e-004	0.0190	0.0000	63.1287	63.1287	1.5400e-003	0.0000	63.1672

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3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0871	0.5602	2.7911	4.9200e-003		0.0278	0.0278		0.0261	0.0261	0.0000	432.3988	432.3988	0.1399	0.0000	435.8949
Total	0.0871	0.5602	2.7911	4.9200e-003	5.3000e-004	0.0278	0.0283	6.0000e-005	0.0261	0.0262	0.0000	432.3988	432.3988	0.1399	0.0000	435.8949

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0281	0.0209	0.2006	7.0000e-004	0.0699	4.6000e-004	0.0704	0.0186	4.3000e-004	0.0190	0.0000	63.1287	63.1287	1.5400e-003	0.0000	63.1672
Total	0.0281	0.0209	0.2006	7.0000e-004	0.0699	4.6000e-004	0.0704	0.0186	4.3000e-004	0.0190	0.0000	63.1287	63.1287	1.5400e-003	0.0000	63.1672

4.0 Operational Detail - Mobile

2020 Regulating Reservoir at Gaslell/165th - Kern-Mojave Desert County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2)
Kern-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - owner supplied data

Land Use - Owner Supplied Data

Construction Phase - Owner Defined Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner supplied data

Off-road Equipment - owner supplied data

Construction Off-road Equipment Mitigation - owner supplied data

On-road Fugitive Dust -

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	125.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	187.00	174.00

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	80.00	114.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	LoadFactor	0.38	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.41	0.74
tblOffRoadEquipment	LoadFactor	0.48	0.45
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Forklifts	Excavators
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType	Generator Sets	Graders
tblOffRoadEquipment	OffRoadEquipmentType	Welders	Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	5.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	0.00	30.00

2.0 Emissions Summary

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	1.4307	1.4751
2	4-6-2020	7-5-2020	1.2885	1.3285
		Highest	1.4307	1.4751

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/6/2020	6/26/2020	5	125	

Acres of Grading (Site Preparation Phase): 0

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Graders	1	6.00	174	0.74
Building Construction	Scrapers	1	4.00	313	0.45
Building Construction	Rubber Tired Loaders	1	8.00	165	0.36
Building Construction	Rollers	1	3.00	114	0.38
Building Construction	Tractors/Loaders/Backhoes	2	5.00	108	0.37
Building Construction	Skid Steer Loaders	1	1.00	88	0.37
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	190	0.29
Building Construction	Excavators	1	6.00	180	0.20
Building Construction	Off-Highway Trucks	1	4.00	479	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	15	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2785	2.4463	1.9392	3.4100e-003		0.1253	0.1253		0.1175	0.1175	0.0000	291.9505	291.9505	0.0788	0.0000	293.9203
Total	0.2785	2.4463	1.9392	3.4100e-003		0.1253	0.1253		0.1175	0.1175	0.0000	291.9505	291.9505	0.0788	0.0000	293.9203

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

3.2 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0140	0.0105	0.1003	3.5000e-004	0.0350	2.3000e-004	0.0352	9.2800e-003	2.1000e-004	9.4900e-003	0.0000	31.5643	31.5643	7.7000e-004	0.0000	31.5836
Total	0.0140	0.0105	0.1003	3.5000e-004	0.0350	2.3000e-004	0.0352	9.2800e-003	2.1000e-004	9.4900e-003	0.0000	31.5643	31.5643	7.7000e-004	0.0000	31.5836

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1763	2.6338	2.1921	3.4100e-003		0.0920	0.0920		0.0916	0.0916	0.0000	291.9502	291.9502	0.0788	0.0000	293.9199
Total	0.1763	2.6338	2.1921	3.4100e-003		0.0920	0.0920		0.0916	0.0916	0.0000	291.9502	291.9502	0.0788	0.0000	293.9199

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

3.2 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0140	0.0105	0.1003	3.5000e-004	0.0350	2.3000e-004	0.0352	9.2800e-003	2.1000e-004	9.4900e-003	0.0000	31.5643	31.5643	7.7000e-004	0.0000	31.5836
Total	0.0140	0.0105	0.1003	3.5000e-004	0.0350	2.3000e-004	0.0352	9.2800e-003	2.1000e-004	9.4900e-003	0.0000	31.5643	31.5643	7.7000e-004	0.0000	31.5836

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

5.0 Energy Detail

Historical Energy Use: N

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Booster Pump Station (on Pipeline from LA Aqueduct) Part 2 of 2) - Kern-Mojave Desert County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

2020 Willow Springs water bank - Booster pump station at Gaskell - Kern-Mojave Desert County, Annual

**2020 Willow Springs water bank - Booster pump station at Gaskell
Kern-Mojave Desert County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Construction Off-road Equipment Mitigation - Owner Supplied Data

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	250.00
tblConstructionPhase	PhaseEndDate	1/5/2020	12/18/2020
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders

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tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	0.00
tblTripsAndVMT	WorkerTripLength	10.80	25.00
tblTripsAndVMT	WorkerTripNumber	0.00	30.00

2.0 Emissions Summary

2020 Willow Springs water bank - Booster pump station at Gaskell - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.5604	0.5641
2	4-6-2020	7-5-2020	0.5596	0.5633
3	7-6-2020	9-30-2020	0.5350	0.5386
		Highest	0.5604	0.5641

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/6/2020	12/18/2020	5	250	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Cranes	1	6.00	190	0.29
Architectural Coating	Excavators	1	6.00	180	0.38
Architectural Coating	Graders	1	6.00	174	0.41
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Architectural Coating	Off-Highway Trucks	1	4.00	479	0.38
Architectural Coating	Scrapers	1	4.00	313	0.48
Architectural Coating	Rubber Tired Loaders	1	8.00	165	0.36
Architectural Coating	Rollers	1	3.00	114	0.38
Architectural Coating	Tractors/Loaders/Backhoes	2	5.00	108	0.37
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Architectural Coating	Skid Steer Loaders	1	1.00	88	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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Use Cleaner Engines for Construction Equipment

Clean Paved Roads

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2538	1.8485	1.6485	2.7600e-003		0.0995	0.0995		0.0961	0.0961	0.0000	226.9277	226.9277	0.0421	0.0000	227.9808
Total	0.2538	1.8485	1.6485	2.7600e-003		0.0995	0.0995		0.0961	0.0961	0.0000	226.9277	226.9277	0.0421	0.0000	227.9808

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3.2 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0281	0.0209	0.2006	7.0000e-004	0.0699	4.6000e-004	0.0704	0.0186	4.3000e-004	0.0190	0.0000	63.1287	63.1287	1.5400e-003	0.0000	63.1672
Total	0.0281	0.0209	0.2006	7.0000e-004	0.0699	4.6000e-004	0.0704	0.0186	4.3000e-004	0.0190	0.0000	63.1287	63.1287	1.5400e-003	0.0000	63.1672

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2353	1.8814	1.6972	2.7600e-003		0.0932	0.0932		0.0913	0.0913	0.0000	226.9274	226.9274	0.0421	0.0000	227.9806
Total	0.2353	1.8814	1.6972	2.7600e-003		0.0932	0.0932		0.0913	0.0913	0.0000	226.9274	226.9274	0.0421	0.0000	227.9806

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3.2 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0281	0.0209	0.2006	7.0000e-004	0.0699	4.6000e-004	0.0704	0.0186	4.3000e-004	0.0190	0.0000	63.1287	63.1287	1.5400e-003	0.0000	63.1672
Total	0.0281	0.0209	0.2006	7.0000e-004	0.0699	4.6000e-004	0.0704	0.0186	4.3000e-004	0.0190	0.0000	63.1287	63.1287	1.5400e-003	0.0000	63.1672

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

2020 Willow Springs water bank - Booster pump station at Gaskell - Kern-Mojave Desert County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.458981	0.032799	0.163582	0.138021	0.025236	0.007869	0.021203	0.140312	0.001657	0.001960	0.006239	0.001026	0.001115

5.0 Energy Detail

Historical Energy Use: N

2020 Willow Springs water bank - Booster pump station at Gaskell - Kern-Mojave Desert County, Annual

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

2020 Willow Springs water bank - Booster pump station at Gaskell - Kern-Mojave Desert County, Annual

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

2020 Willow Springs water bank - Booster pump station at Gaskell - Kern-Mojave Desert County, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

2020 Willow Springs water bank - Booster pump station at Gaskell - Kern-Mojave Desert County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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2020 Willow Springs water bank - Booster pump station at Gaskell - Kern-Mojave Desert County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WSWB - Collection Pipeline for southwest wellfield - Kern-San Joaquin County, Annual

WSWB - Collection Pipeline for southwest wellfield
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	59.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Off-road Equipment - owner supplied data

Construction Off-road Equipment Mitigation - owner supplied data

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	110.00	55.00
tblConstructionPhase	PhaseEndDate	9/4/2020	6/19/2020
tblGrading	AcresOfGrading	48.13	275.00
tblLandUse	LotAcreage	0.00	59.00

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tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.41	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Cranes
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblOffRoadEquipment	UsageHours	8.00	6.00

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tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	25.00	30.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-6-2020	7-5-2020	1.1074	1.2277
		Highest	1.1074	1.2277

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/6/2020	6/19/2020	5	55	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 275

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	1	2.00	190	0.38
Grading	Off-Highway Trucks	1	4.00	479	0.48
Grading	Rubber Tired Loaders	2	8.00	165	0.36
Grading	Graders	1	6.00	174	0.40
Grading	Scrapers	1	4.00	313	0.37
Grading	Skid Steer Loaders	1	3.00	88	0.37
Grading	Tractors/Loaders/Backhoes	1	3.00	108	0.37
Grading	Excavators	1	6.00	180	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	10	30.00	0.00	0.00	25.00	0.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3114	0.0000	0.3114	0.1068	0.0000	0.1068	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1003	1.0256	0.6377	1.2900e-003		0.0487	0.0487		0.0448	0.0448	0.0000	113.3033	113.3033	0.0366	0.0000	114.2194
Total	0.1003	1.0256	0.6377	1.2900e-003	0.3114	0.0487	0.3601	0.1068	0.0448	0.1515	0.0000	113.3033	113.3033	0.0366	0.0000	114.2194

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1800e-003	4.6100e-003	0.0441	1.5000e-004	0.0154	1.0000e-004	0.0155	4.0800e-003	9.0000e-005	4.1800e-003	0.0000	13.8883	13.8883	3.4000e-004	0.0000	13.8968
Total	6.1800e-003	4.6100e-003	0.0441	1.5000e-004	0.0154	1.0000e-004	0.0155	4.0800e-003	9.0000e-005	4.1800e-003	0.0000	13.8883	13.8883	3.4000e-004	0.0000	13.8968

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3.2 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3114	0.0000	0.3114	0.1068	0.0000	0.1068	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0629	1.1866	0.7807	1.2900e-003		0.0390	0.0390		0.0377	0.0377	0.0000	113.3032	113.3032	0.0366	0.0000	114.2193
Total	0.0629	1.1866	0.7807	1.2900e-003	0.3114	0.0390	0.3504	0.1068	0.0377	0.1445	0.0000	113.3032	113.3032	0.0366	0.0000	114.2193

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1800e-003	4.6100e-003	0.0441	1.5000e-004	0.0154	1.0000e-004	0.0155	4.0800e-003	9.0000e-005	4.1800e-003	0.0000	13.8883	13.8883	3.4000e-004	0.0000	13.8968
Total	6.1800e-003	4.6100e-003	0.0441	1.5000e-004	0.0154	1.0000e-004	0.0155	4.0800e-003	9.0000e-005	4.1800e-003	0.0000	13.8883	13.8883	3.4000e-004	0.0000	13.8968

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

WSWB - Recovery Well Drilling 2021
Kern-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - Owner Supplied Data
- Land Use - owner Supplied Data
- Construction Phase - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Grading -
- Construction Off-road Equipment Mitigation -
- Trips and VMT - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	PhaseEndDate	3/19/2021	4/6/2021
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	221.00	500.00
tblOffRoadEquipment	LoadFactor	0.50	0.45
tblOffRoadEquipment	OffRoadEquipmentType	Welders	Bore/Drill Rigs
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00

2.0 Emissions Summary

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2021	4-30-2021	1.1115	0.9005
		Highest	1.1115	0.9005

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Trenching	2/1/2021	4/6/2021	5	47	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Bore/Drill Rigs	1	24.00	500	0.50
Building Construction	Bore/Drill Rigs	3	24.00	500	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	3	8.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0982	1.0245	0.8517	4.0800e-003		0.0343	0.0343		0.0315	0.0315	0.0000	357.7177	357.7177	0.1157	0.0000	360.6101
Total	0.0982	1.0245	0.8517	4.0800e-003		0.0343	0.0343		0.0315	0.0315	0.0000	357.7177	357.7177	0.1157	0.0000	360.6101

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-003	9.3000e-004	9.1700e-003	3.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.0544	3.0544	7.0000e-005	0.0000	3.0561
Total	1.3000e-003	9.3000e-004	9.1700e-003	3.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.0544	3.0544	7.0000e-005	0.0000	3.0561

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3.2 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0863	0.8230	1.1004	4.0800e-003		0.0274	0.0274		0.0253	0.0253	0.0000	357.7173	357.7173	0.1157	0.0000	360.6096
Total	0.0863	0.8230	1.1004	4.0800e-003		0.0274	0.0274		0.0253	0.0253	0.0000	357.7173	357.7173	0.1157	0.0000	360.6096

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-003	9.3000e-004	9.1700e-003	3.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.0544	3.0544	7.0000e-005	0.0000	3.0561
Total	1.3000e-003	9.3000e-004	9.1700e-003	3.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.0544	3.0544	7.0000e-005	0.0000	3.0561

4.0 Operational Detail - Mobile

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Recovery Well Drilling 2021 - Kern-Mojave Desert County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

WSWB - Recovery Wells (10) Southwest Wellfield Remainder
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Off-road Equipment - Owner Supplied Data

Construction Off-road Equipment Mitigation - User Supplied Data

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	235.00
tblConstructionPhase	PhaseEndDate	9/3/2021	11/26/2021
tblGrading	AcresOfGrading	264.38	0.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	HorsePower	158.00	180.00

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

tblOffRoadEquipment	HorsePower	80.00	114.00
tblOffRoadEquipment	HorsePower	203.00	313.00
tblOffRoadEquipment	LoadFactor	0.38	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	50.00	30.00
tblVehicleTrips	CC_TL	6.60	7.30
tblVehicleTrips	CNW_TL	6.60	7.30
tblVehicleTrips	CW_TL	14.70	9.50
tblWater	ElectricityIntensityFactorToSupply	2,117.00	9,727.00

2.0 Emissions Summary

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2021	4-3-2021	1.4977	0.4836
2	4-4-2021	7-3-2021	1.5136	0.4882
3	7-4-2021	9-30-2021	1.4803	0.4774
		Highest	1.5136	0.4882

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/4/2021	11/26/2021	5	235	

Acres of Grading (Site Preparation Phase): 0

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Rubber Tired Loaders	3	1.00	313	0.36
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Excavators	3	6.00	180	0.38
Grading	Graders	3	6.00	174	0.41
Grading	Off-Highway Trucks	3	4.00	479	0.40
Grading	Rollers	3	1.00	114	0.48
Grading	Skid Steer Loaders	3	1.00	88	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	20	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

3.2 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5307	0.0000	0.5307	0.2917	0.0000	0.2917	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5082	4.9213	3.2874	7.9400e-003		0.2279	0.2279		0.2097	0.2097	0.0000	697.9924	697.9924	0.2257	0.0000	703.6360
Total	0.5082	4.9213	3.2874	7.9400e-003	0.5307	0.2279	0.7586	0.2917	0.2097	0.5014	0.0000	697.9924	697.9924	0.2257	0.0000	703.6360

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0244	0.0175	0.1719	6.3000e-004	0.0657	4.2000e-004	0.0661	0.0175	3.9000e-004	0.0178	0.0000	57.2699	57.2699	1.2900e-003	0.0000	57.3021
Total	0.0244	0.0175	0.1719	6.3000e-004	0.0657	4.2000e-004	0.0661	0.0175	3.9000e-004	0.0178	0.0000	57.2699	57.2699	1.2900e-003	0.0000	57.3021

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

3.2 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5307	0.0000	0.5307	0.2917	0.0000	0.2917	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1956	1.5265	4.2755	7.9400e-003		0.0696	0.0696		0.0650	0.0650	0.0000	697.9916	697.9916	0.2257	0.0000	703.6352
Total	0.1956	1.5265	4.2755	7.9400e-003	0.5307	0.0696	0.6003	0.2917	0.0650	0.3567	0.0000	697.9916	697.9916	0.2257	0.0000	703.6352

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0244	0.0175	0.1719	6.3000e-004	0.0657	4.2000e-004	0.0661	0.0175	3.9000e-004	0.0178	0.0000	57.2699	57.2699	1.2900e-003	0.0000	57.3021
Total	0.0244	0.0175	0.1719	6.3000e-004	0.0657	4.2000e-004	0.0661	0.0175	3.9000e-004	0.0178	0.0000	57.2699	57.2699	1.2900e-003	0.0000	57.3021

4.0 Operational Detail - Mobile

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Recovery Wells (10) Southwest Wellfield Remainder - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WSWB - Recharge Basins (Part1 of 2) - Kern-Mojave Desert County, Annual

WSWB - Recharge Basins (Part1 of 2)
Kern-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.87	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Construction Off-road Equipment Mitigation - Owner Supplied Data

WSWB - Recharge Basins (Part1 of 2) - Kern-Mojave Desert County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	250.00
tblLandUse	LotAcreage	0.00	0.87
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	15.00	10.00

2.0 Emissions Summary

WSWB - Recharge Basins (Part 1 of 2) - Kern-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.5108	0.2051
2	4-6-2020	7-5-2020	0.5106	0.2049
3	7-6-2020	9-30-2020	0.4881	0.1959
		Highest	0.5108	0.2051

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Recharge Basins (Part1 of 2) - Kern-Mojave Desert County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/6/2020	12/18/2020	5	250	

Acres of Grading (Site Preparation Phase): 0

WSWB - Recharge Basins (Part1 of 2) - Kern-Mojave Desert County, Annual

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	4	8.00	108	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	10.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

WSWB - Recharge Basins (Part1 of 2) - Kern-Mojave Desert County, Annual

3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0941	0.0000	0.0941	0.0517	0.0000	0.0517	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1858	1.7613	1.7945	2.6400e-003		0.1076	0.1076		0.1009	0.1009	0.0000	230.8318	230.8318	0.0572	0.0000	232.2612
Total	0.1858	1.7613	1.7945	2.6400e-003	0.0941	0.1076	0.2017	0.0517	0.1009	0.1527	0.0000	230.8318	230.8318	0.0572	0.0000	232.2612

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3600e-003	6.9800e-003	0.0669	2.3000e-004	0.0233	1.5000e-004	0.0235	6.1900e-003	1.4000e-004	6.3300e-003	0.0000	21.0429	21.0429	5.1000e-004	0.0000	21.0557
Total	9.3600e-003	6.9800e-003	0.0669	2.3000e-004	0.0233	1.5000e-004	0.0235	6.1900e-003	1.4000e-004	6.3300e-003	0.0000	21.0429	21.0429	5.1000e-004	0.0000	21.0557

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3.2 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0941	0.0000	0.0941	0.0517	0.0000	0.0517	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0903	0.6810	1.8292	2.6400e-003		0.0363	0.0363		0.0356	0.0356	0.0000	230.8315	230.8315	0.0572	0.0000	232.2609
Total	0.0903	0.6810	1.8292	2.6400e-003	0.0941	0.0363	0.1304	0.0517	0.0356	0.0873	0.0000	230.8315	230.8315	0.0572	0.0000	232.2609

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3600e-003	6.9800e-003	0.0669	2.3000e-004	0.0233	1.5000e-004	0.0235	6.1900e-003	1.4000e-004	6.3300e-003	0.0000	21.0429	21.0429	5.1000e-004	0.0000	21.0557
Total	9.3600e-003	6.9800e-003	0.0669	2.3000e-004	0.0233	1.5000e-004	0.0235	6.1900e-003	1.4000e-004	6.3300e-003	0.0000	21.0429	21.0429	5.1000e-004	0.0000	21.0557

4.0 Operational Detail - Mobile

WSWB - Recharge Basins (Part1 of 2) - Kern-Mojave Desert County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Construction Off-road Equipment Mitigation - Owner Supplied Data

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	70.00
tblConstructionPhase	PhaseEndDate	6/11/2021	7/9/2021
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	84.00	300.00
tblOffRoadEquipment	LoadFactor	0.74	0.37
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	10.00	3.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-5-2021	7-4-2021	0.8472	0.5699
2	7-5-2021	9-30-2021	0.0466	0.0313
		Highest	0.8472	0.5699

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/5/2021	7/9/2021	5	70	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 26.25

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Pumps	1	24.00	300	0.37
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	3.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1720	0.0000	0.1720	0.0884	0.0000	0.0884	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0839	0.8272	0.4286	1.5200e-003		0.0326	0.0326		0.0308	0.0308	0.0000	149.3192	149.3192	0.0172	0.0000	149.7489
Total	0.0839	0.8272	0.4286	1.5200e-003	0.1720	0.0326	0.2046	0.0884	0.0308	0.1192	0.0000	149.3192	149.3192	0.0172	0.0000	149.7489

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	5.2000e-004	5.1200e-003	2.0000e-005	1.9600e-003	1.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.7059	1.7059	4.0000e-005	0.0000	1.7069
Total	7.3000e-004	5.2000e-004	5.1200e-003	2.0000e-005	1.9600e-003	1.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.7059	1.7059	4.0000e-005	0.0000	1.7069

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3.2 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1720	0.0000	0.1720	0.0884	0.0000	0.0884	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0574	0.5550	0.6738	1.5200e-003		0.0240	0.0240		0.0222	0.0222	0.0000	149.3190	149.3190	0.0172	0.0000	149.7487
Total	0.0574	0.5550	0.6738	1.5200e-003	0.1720	0.0240	0.1960	0.0884	0.0222	0.1106	0.0000	149.3190	149.3190	0.0172	0.0000	149.7487

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	5.2000e-004	5.1200e-003	2.0000e-005	1.9600e-003	1.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.7059	1.7059	4.0000e-005	0.0000	1.7069
Total	7.3000e-004	5.2000e-004	5.1200e-003	2.0000e-005	1.9600e-003	1.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.7059	1.7059	4.0000e-005	0.0000	1.7069

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Construction Off-road Equipment Mitigation - Owner Supplied Data

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	200.00
tblConstructionPhase	PhaseEndDate	7/23/2021	12/13/2021
tblConstructionPhase	PhaseStartDate	5/1/2021	3/9/2021
tblGrading	AcresOfGrading	175.00	0.75
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	187.00	174.00

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tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	LoadFactor	0.41	0.40
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.48	0.40
tblOffRoadEquipment	UsageHours	7.00	3.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	25.00	30.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2021	7-31-2021	1.1091	0.4123
2	8-1-2021	9-30-2021	0.7354	0.2734
		Highest	1.1091	0.4123

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/9/2021	12/13/2021	5	200	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	1	2.00	190	0.38
Grading	Excavators	1	6.00	180	0.41
Grading	Graders	1	6.00	174	0.40
Grading	Off-Highway Trucks	1	4.00	479	0.37
Grading	Rubber Tired Loaders	2	8.00	165	0.36
Grading	Scrapers	1	4.00	313	0.40
Grading	Skid Steer Loaders	1	3.00	88	0.37
Grading	Tractors/Loaders/Backhoes	1	3.00	108	0.37
Grading	Rubber Tired Dozers	1	6.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	10	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4521	0.0000	0.4521	0.2483	0.0000	0.2483	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3044	3.0348	2.1173	4.2800e-003		0.1437	0.1437		0.1322	0.1322	0.0000	376.4636	376.4636	0.1218	0.0000	379.5075
Total	0.3044	3.0348	2.1173	4.2800e-003	0.4521	0.1437	0.5957	0.2483	0.1322	0.3805	0.0000	376.4636	376.4636	0.1218	0.0000	379.5075

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0207	0.0149	0.1463	5.4000e-004	0.0559	3.6000e-004	0.0563	0.0149	3.3000e-004	0.0152	0.0000	48.7403	48.7403	1.1000e-003	0.0000	48.7678
Total	0.0207	0.0149	0.1463	5.4000e-004	0.0559	3.6000e-004	0.0563	0.0149	3.3000e-004	0.0152	0.0000	48.7403	48.7403	1.1000e-003	0.0000	48.7678

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3.2 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4521	0.0000	0.4521	0.2483	0.0000	0.2483	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1295	1.0890	2.4643	4.2800e-003		0.0504	0.0504		0.0468	0.0468	0.0000	376.4631	376.4631	0.1218	0.0000	379.5070
Total	0.1295	1.0890	2.4643	4.2800e-003	0.4521	0.0504	0.5024	0.2483	0.0468	0.2951	0.0000	376.4631	376.4631	0.1218	0.0000	379.5070

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0207	0.0149	0.1463	5.4000e-004	0.0559	3.6000e-004	0.0563	0.0149	3.3000e-004	0.0152	0.0000	48.7403	48.7403	1.1000e-003	0.0000	48.7678
Total	0.0207	0.0149	0.1463	5.4000e-004	0.0559	3.6000e-004	0.0563	0.0149	3.3000e-004	0.0152	0.0000	48.7403	48.7403	1.1000e-003	0.0000	48.7678

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

WSWB - Collection Pipeline for Central wellfield 2021 - Kern-San Joaquin County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

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Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Construction Off-road Equipment Mitigation - Owner Supplied Data

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	65.00
tblConstructionPhase	PhaseEndDate	6/6/2022	10/28/2022
tblConstructionPhase	PhaseStartDate	3/1/2022	8/1/2022
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	84.00	300.00
tblOffRoadEquipment	LoadFactor	0.74	0.37
tblProjectCharacteristics	OperationalYear	2018	2024
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	10.00	30.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	6-1-2022	8-31-2022	0.2516	0.1694
3	9-1-2022	9-30-2022	0.2435	0.1639
		Highest	0.2516	0.1694

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	8/1/2022	10/28/2022	5	65	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 24.38

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Pumps	1	24.00	300	0.37
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1597	0.0000	0.1597	0.0821	0.0000	0.0821	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0696	0.6581	0.3840	1.4100e-003		0.0252	0.0252		0.0239	0.0239	0.0000	138.6465	138.6465	0.0158	0.0000	139.0411
Total	0.0696	0.6581	0.3840	1.4100e-003	0.1597	0.0252	0.1849	0.0821	0.0239	0.1060	0.0000	138.6465	138.6465	0.0158	0.0000	139.0411

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2700e-003	4.3300e-003	0.0435	1.7000e-004	0.0182	1.1000e-004	0.0183	4.8300e-003	1.0000e-004	4.9300e-003	0.0000	15.2644	15.2644	3.2000e-004	0.0000	15.2724
Total	6.2700e-003	4.3300e-003	0.0435	1.7000e-004	0.0182	1.1000e-004	0.0183	4.8300e-003	1.0000e-004	4.9300e-003	0.0000	15.2644	15.2644	3.2000e-004	0.0000	15.2724

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3.2 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1597	0.0000	0.1597	0.0821	0.0000	0.0821	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0467	0.4398	0.6129	1.4100e-003		0.0183	0.0183		0.0170	0.0170	0.0000	138.6463	138.6463	0.0158	0.0000	139.0410
Total	0.0467	0.4398	0.6129	1.4100e-003	0.1597	0.0183	0.1781	0.0821	0.0170	0.0991	0.0000	138.6463	138.6463	0.0158	0.0000	139.0410

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2700e-003	4.3300e-003	0.0435	1.7000e-004	0.0182	1.1000e-004	0.0183	4.8300e-003	1.0000e-004	4.9300e-003	0.0000	15.2644	15.2644	3.2000e-004	0.0000	15.2724
Total	6.2700e-003	4.3300e-003	0.0435	1.7000e-004	0.0182	1.1000e-004	0.0183	4.8300e-003	1.0000e-004	4.9300e-003	0.0000	15.2644	15.2644	3.2000e-004	0.0000	15.2724

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.492592	0.029877	0.172571	0.108744	0.015451	0.005259	0.018880	0.146151	0.001599	0.001570	0.005698	0.000896	0.000711

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Collection Pipeline for Central wellfield 2022 TEST PUMP - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - Owner Supplied Data
- Land Use - Owner Supplied Data
- Construction Phase - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Trips and VMT - Owner Supplied Data
- Grading - Owner Supplied Data
- Energy Use -
- Construction Off-road Equipment Mitigation - Owner Supplied Data

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	47.00
tblConstructionPhase	PhaseEndDate	4/4/2022	3/9/2022
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	221.00	500.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblProjectCharacteristics	OperationalYear	2018	2024
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	15.00	8.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2022	4-3-2022	1.3641	0.6023
		Highest	1.3641	0.6023

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/4/2022	3/9/2022	5	47	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 17.63

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Bore/Drill Rigs	3	24.00	500	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	8.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1155	0.0000	0.1155	0.0594	0.0000	0.0594	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1263	1.2524	1.0787	4.8600e-003		0.0451	0.0451		0.0415	0.0415	0.0000	426.3173	426.3173	0.1379	0.0000	429.7643
Total	0.1263	1.2524	1.0787	4.8600e-003	0.1155	0.0451	0.1606	0.0594	0.0415	0.1009	0.0000	426.3173	426.3173	0.1379	0.0000	429.7643

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	8.3000e-004	8.3900e-003	3.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	2.9433	2.9433	6.0000e-005	0.0000	2.9448
Total	1.2100e-003	8.3000e-004	8.3900e-003	3.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	2.9433	2.9433	6.0000e-005	0.0000	2.9448

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3.2 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1155	0.0000	0.1155	0.0594	0.0000	0.0594	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0817	0.5258	2.2014	4.8600e-003		0.0197	0.0197		0.0187	0.0187	0.0000	426.3168	426.3168	0.1379	0.0000	429.7638
Total	0.0817	0.5258	2.2014	4.8600e-003	0.1155	0.0197	0.1351	0.0594	0.0187	0.0780	0.0000	426.3168	426.3168	0.1379	0.0000	429.7638

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	8.3000e-004	8.3900e-003	3.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	2.9433	2.9433	6.0000e-005	0.0000	2.9448
Total	1.2100e-003	8.3000e-004	8.3900e-003	3.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	2.9433	2.9433	6.0000e-005	0.0000	2.9448

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.492592	0.029877	0.172571	0.108744	0.015451	0.005259	0.018880	0.146151	0.001599	0.001570	0.005698	0.000896	0.000711

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

WSWB - Collection Pipeline for Central wellfield 2022 DRILLING ONLY - Kern-San Joaquin County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Collection Pipeline for Central wellfield 2022 DRILLING ONLY - Kern-San Joaquin County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Collection Pipeline for Central wellfield 2022 DRILLING ONLY - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WSWB - Recovery Wells (10) Southwest Wellfield Remainder 2022 - Kern-San Joaquin County, Annual

WSWB - Recovery Wells (10) Southwest Wellfield Remainder 2022
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Owner Supplied Data

Land Use - Owner Supplied Data

Construction Phase - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Off-road Equipment - Owner Supplied Data

Trips and VMT - Owner Supplied Data

Grading - Owner Supplied Data

Energy Use -

Construction Off-road Equipment Mitigation - User Supplied Data

WSWB - Recovery Wells (10) Southwest Wellfield Remainder 2022 - Kern-San Joaquin County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	217.00
tblConstructionPhase	PhaseEndDate	11/25/2022	11/4/2022
tblConstructionPhase	PhaseStartDate	1/3/2022	1/6/2022
tblGrading	AcresOfGrading	244.13	0.75
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	402.00	479.00

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tblOffRoadEquipment	HorsePower	80.00	114.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	HorsePower	203.00	313.00
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.41	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType	Graders	Excavators
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	50.00	30.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	1.1653	0.4011
2	4-3-2022	7-2-2022	1.2182	0.4188
3	7-3-2022	9-30-2022	1.2048	0.4142
		Highest	1.2182	0.4188

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/6/2022	11/4/2022	5	217	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Rollers	3	1.00	114	0.38
Grading	Excavators	3	6.00	180	0.41
Grading	Skid Steer Loaders	3	1.00	88	0.37
Grading	Rubber Tired Loaders	3	1.00	313	0.36
Grading	Graders	3	6.00	174	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Off-Highway Trucks	3	4.00	479	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	20	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4904	0.0000	0.4904	0.2694	0.0000	0.2694	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3952	3.6356	2.8314	7.1700e-003		0.1668	0.1668		0.1535	0.1535	0.0000	629.9365	629.9365	0.2037	0.0000	635.0299
Total	0.3952	3.6356	2.8314	7.1700e-003	0.4904	0.1668	0.6572	0.2694	0.1535	0.4229	0.0000	629.9365	629.9365	0.2037	0.0000	635.0299

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0209	0.0144	0.1452	5.6000e-004	0.0607	3.8000e-004	0.0611	0.0161	3.5000e-004	0.0165	0.0000	50.9597	50.9597	1.0600e-003	0.0000	50.9863
Total	0.0209	0.0144	0.1452	5.6000e-004	0.0607	3.8000e-004	0.0611	0.0161	3.5000e-004	0.0165	0.0000	50.9597	50.9597	1.0600e-003	0.0000	50.9863

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3.2 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4904	0.0000	0.4904	0.2694	0.0000	0.2694	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1594	1.2026	3.8094	7.1700e-003		0.0526	0.0526		0.0492	0.0492	0.0000	629.9358	629.9358	0.2037	0.0000	635.0291
Total	0.1594	1.2026	3.8094	7.1700e-003	0.4904	0.0526	0.5431	0.2694	0.0492	0.3186	0.0000	629.9358	629.9358	0.2037	0.0000	635.0291

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0209	0.0144	0.1452	5.6000e-004	0.0607	3.8000e-004	0.0611	0.0161	3.5000e-004	0.0165	0.0000	50.9597	50.9597	1.0600e-003	0.0000	50.9863
Total	0.0209	0.0144	0.1452	5.6000e-004	0.0607	3.8000e-004	0.0611	0.0161	3.5000e-004	0.0165	0.0000	50.9597	50.9597	1.0600e-003	0.0000	50.9863

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

WSWB - Recovery Wells (10) Southwest Wellfield Remainder 2022 - Kern-San Joaquin County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

WSWB - Recovery Wells (10) Southwest Wellfield Remainder 2022 - Kern-San Joaquin County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Recovery Wells (10) Southwest Wellfield Remainder 2022 - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

WSWB - Connecting Pipeline to SNIP 2022 - Kern-San Joaquin County, Annual

WSWB - Connecting Pipeline to SNIP 2022
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	18.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - Owner Supplied Data
- Land Use - Owner Supplied Data
- Construction Phase - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Trips and VMT - Owner Supplied Data
- Grading - Owner Supplied Data
- Energy Use -
- Construction Off-road Equipment Mitigation - Owner Supplied Data

WSWB - Connecting Pipeline to SNIP 2022 - Kern-San Joaquin County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	35.00
tblConstructionPhase	PhaseEndDate	7/15/2022	7/22/2022
tblGrading	AcresOfGrading	30.63	75.00
tblLandUse	LotAcreage	0.00	18.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	HorsePower	97.00	108.00

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tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.41	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.48
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Cranes
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	3.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	25.00	30.00

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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0538	0.4836	0.4011	9.1000e-004	0.1549	0.0225	0.1775	0.0648	0.0207	0.0855	0.0000	80.3436	80.3436	0.0235	0.0000	80.9311
Maximum	0.0538	0.4836	0.4011	9.1000e-004	0.1549	0.0225	0.1775	0.0648	0.0207	0.0855	0.0000	80.3436	80.3436	0.0235	0.0000	80.9311

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0538	0.4836	0.4011	9.1000e-004	0.1549	0.0225	0.1775	0.0648	0.0207	0.0855	0.0000	80.3436	80.3436	0.0235	0.0000	80.9310
Maximum	0.0538	0.4836	0.4011	9.1000e-004	0.1549	0.0225	0.1775	0.0648	0.0207	0.0855	0.0000	80.3436	80.3436	0.0235	0.0000	80.9310

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-6-2022	9-5-2022	0.5155	0.5155
		Highest	0.5155	0.5155

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/6/2022	7/22/2022	5	35	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	1	2.00	190	0.38
Grading	Off-Highway Trucks	1	4.00	479	0.48
Grading	Excavators	1	6.00	180	0.41
Grading	Rubber Tired Loaders	2	8.00	165	0.36
Grading	Graders	1	6.00	174	0.40
Grading	Skid Steer Loaders	1	3.00	88	0.37
Grading	Tractors/Loaders/Backhoes	1	3.00	108	0.37
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	4.00	313	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	10	30.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1452	0.0000	0.1452	0.0622	0.0000	0.0622	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0504	0.4813	0.3777	8.2000e-004		0.0225	0.0225		0.0207	0.0207	0.0000	72.1243	72.1243	0.0233	0.0000	72.7075
Total	0.0504	0.4813	0.3777	8.2000e-004	0.1452	0.0225	0.1676	0.0622	0.0207	0.0829	0.0000	72.1243	72.1243	0.0233	0.0000	72.7075

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3800e-003	2.3300e-003	0.0234	9.0000e-005	9.7900e-003	6.0000e-005	9.8500e-003	2.6000e-003	6.0000e-005	2.6500e-003	0.0000	8.2193	8.2193	1.7000e-004	0.0000	8.2236
Total	3.3800e-003	2.3300e-003	0.0234	9.0000e-005	9.7900e-003	6.0000e-005	9.8500e-003	2.6000e-003	6.0000e-005	2.6500e-003	0.0000	8.2193	8.2193	1.7000e-004	0.0000	8.2236

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3.2 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1452	0.0000	0.1452	0.0622	0.0000	0.0622	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0504	0.4813	0.3777	8.2000e-004		0.0225	0.0225		0.0207	0.0207	0.0000	72.1243	72.1243	0.0233	0.0000	72.7074
Total	0.0504	0.4813	0.3777	8.2000e-004	0.1452	0.0225	0.1676	0.0622	0.0207	0.0829	0.0000	72.1243	72.1243	0.0233	0.0000	72.7074

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3800e-003	2.3300e-003	0.0234	9.0000e-005	9.7900e-003	6.0000e-005	9.8500e-003	2.6000e-003	6.0000e-005	2.6500e-003	0.0000	8.2193	8.2193	1.7000e-004	0.0000	8.2236
Total	3.3800e-003	2.3300e-003	0.0234	9.0000e-005	9.7900e-003	6.0000e-005	9.8500e-003	2.6000e-003	6.0000e-005	2.6500e-003	0.0000	8.2193	8.2193	1.7000e-004	0.0000	8.2236

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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WSWB - Collection Pipeline for Central wellfield 2022
Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	7			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - Owner Supplied Data
- Land Use - Owner Supplied Data
- Construction Phase - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Off-road Equipment - Owner Supplied Data
- Trips and VMT - Owner Supplied Data
- Grading - Owner Supplied Data
- Energy Use -
- Construction Off-road Equipment Mitigation - Owner Supplied Data

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	250
tblAreaCoating	Area_EF_Nonresidential_Interior	150	250
tblAreaCoating	Area_EF_Parking	150	250
tblAreaCoating	Area_EF_Residential_Exterior	150	250
tblAreaCoating	Area_EF_Residential_Interior	150	250
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	2.00	200.00
tblConstructionPhase	PhaseEndDate	2/3/2023	12/16/2022
tblConstructionPhase	PhaseStartDate	5/2/2022	3/14/2022
tblGrading	AcresOfGrading	175.00	0.75
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	187.00	174.00

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tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	231.00	190.00
tblOffRoadEquipment	HorsePower	158.00	180.00
tblOffRoadEquipment	HorsePower	402.00	479.00
tblOffRoadEquipment	HorsePower	203.00	165.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	HorsePower	65.00	88.00
tblOffRoadEquipment	LoadFactor	0.41	0.40
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.48	0.40
tblOffRoadEquipment	UsageHours	7.00	3.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	25.00	23.00

2.0 Emissions Summary

WSWB - Collection Pipeline for Central wellfield 2022 - Kern-San Joaquin County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-2-2022	8-1-2022	0.9095	0.3466
2	8-2-2022	9-30-2022	0.5931	0.2260
		Highest	0.9095	0.3466

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WSWB - Collection Pipeline for Central wellfield 2022 - Kern-San Joaquin County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	3/14/2022	12/16/2022	5	200	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Cranes	1	2.00	190	0.38
Grading	Excavators	1	6.00	180	0.41
Grading	Graders	1	6.00	174	0.40
Grading	Off-Highway Trucks	1	4.00	479	0.37
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	165	0.36
Grading	Scrapers	1	4.00	313	0.40
Grading	Skid Steer Loaders	1	3.00	88	0.37
Grading	Tractors/Loaders/Backhoes	1	3.00	108	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	10	23.00	0.00	0.00	25.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

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3.2 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4521	0.0000	0.4521	0.2483	0.0000	0.2483	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2598	2.4827	2.0249	4.2900e-003		0.1162	0.1162		0.1069	0.1069	0.0000	376.5631	376.5631	0.1218	0.0000	379.6078
Total	0.2598	2.4827	2.0249	4.2900e-003	0.4521	0.1162	0.5682	0.2483	0.1069	0.3552	0.0000	376.5631	376.5631	0.1218	0.0000	379.6078

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0148	0.0102	0.1026	4.0000e-004	0.0429	2.7000e-004	0.0431	0.0114	2.5000e-004	0.0116	0.0000	36.0084	36.0084	7.5000e-004	0.0000	36.0272
Total	0.0148	0.0102	0.1026	4.0000e-004	0.0429	2.7000e-004	0.0431	0.0114	2.5000e-004	0.0116	0.0000	36.0084	36.0084	7.5000e-004	0.0000	36.0272

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3.2 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4521	0.0000	0.4521	0.2483	0.0000	0.2483	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1128	0.9165	2.4292	4.2900e-003		0.0408	0.0408		0.0380	0.0380	0.0000	376.5627	376.5627	0.1218	0.0000	379.6074
Total	0.1128	0.9165	2.4292	4.2900e-003	0.4521	0.0408	0.4929	0.2483	0.0380	0.2863	0.0000	376.5627	376.5627	0.1218	0.0000	379.6074

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0148	0.0102	0.1026	4.0000e-004	0.0429	2.7000e-004	0.0431	0.0114	2.5000e-004	0.0116	0.0000	36.0084	36.0084	7.5000e-004	0.0000	36.0272
Total	0.0148	0.0102	0.1026	4.0000e-004	0.0429	2.7000e-004	0.0431	0.0114	2.5000e-004	0.0116	0.0000	36.0084	36.0084	7.5000e-004	0.0000	36.0272

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.487920	0.030073	0.170877	0.112061	0.016651	0.005572	0.019337	0.146855	0.001612	0.001610	0.005760	0.000912	0.000759

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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WSWB - Collection Pipeline for Central wellfield 2022 - Kern-San Joaquin County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Fugitive Dust Calculations

Willow Springs Water Bank - Construction
Year 2019

Totals:	PM10 Controlled	1.71 tons
	PM2.5 Controlled	0.36 tons

			Area Fugitive Dust				Excavated Fugitive Dust				Re Entrained Roadway Dust				Entraind	Entraind	
	Days	Acres/day	Uncontrolled PM10 ¹ (tons)	Controlled PM10 (tons) ²	Uncontrolled PM2.5/day ³ (tons)	Controlled PM2.5 (tons) ³	Excavated Soil (cy)	tons	Uncontrolled PM10 (tons) ⁴	Controlled PM10 (tons) ²	Uncontrolled PM2.5 (tons) ³	Controlled PM2.5 ²	Deliveries	Distance	VMT	PM10 (tons) ⁵	PM2.5 (tons) ³
84" Supply Pipeline from CA Aqueduct (Part 1 of 2)	250	0.53	0.72	0.14	0.15	0.03	383144	1992349	0.60	0.12	0.13	0.03	804	80	128640	0.50	0.10
48-inch transmission (LA Aqueduct #2)	75	0.53	0.22	0.04	0.05	0.01	52694	274009	0.08	0.02	0.02	0.00	60	80	9600	0.04	0.01
Collection pipe (avg. 20-inch dia.)	55	1.1	0.33	0.07	0.07	0.01	23516	122283	0.04	0.01	0.01	0.00	20	80	3200	0.01	0.00
Turnout at CA Aqueduct	195	2	2.13	0.43	0.45	0.09	9380	48776	0.01	0.00	0.00	0.00	7	30	420	0.00	0.00
							0	0					5	70	700	0.00	0.00
Booster Pump Station (LA Pipeline)(half)	250	1	1.36	0.27	0.29	0.06	463	2408	0.00	0.00	0.00	0.00	5	30	300	0.00	0.00
							0	0					6	70	840	0.00	0.00
Recovery Wells (7) Southwest Well Field	175	0.2	0.19	0.04	0.04	0.01	0	0					42	70	5880	0.02	0.00
Totals			4.95	0.99	1.04	0.21			0.73	0.15	0.15	0.03				0.58	0.12

- Notes
- 1 Based on uncontrolled factor of 0.12 t/acre/month = 10.91 lbs/acre/day
 - 2 Control factor of 80%
 - 3 PM2.5 fraction of 0.21
 - 4 Emission factor of 0.0006lb/ton
 - 5 Emission factor of 0.0077 using average vehicle weight of 25 tons and silt loading of 0.1 g/m²

Willow Springs Water Bank - Construction

Year 2020

Totals:	PM10 Controlled	0.46 tons
	PM2.5 Controlled	0.10 tons

	Area Fugitive Dust		Excavated Fugitive Dust				Re Entrained Roadway Dust				Entraind Roadway Dust		Entraind Roadway Dust				
	Days	Acres/day	Uncontrolled PM10 ¹ (tons)	Controlled PM10 (tons) ²	Uncontrolled PM2.5/day ³ (tons)	Controlled PM2.5 (tons) ³	Excavated Soil (cy)	Uncontrolled tons	Uncontrolled PM10 (tons) ⁴	Controlled PM10 (tons) ²	Uncontrolled PM2.5 (tons) ³	Controlled PM2.5 ²	Deliveries	Distance	VMT	Entraind Roadway Dust PM10 (tons) ⁵	Entraind Roadway Dust PM2.5 (tons) ³
84" Supply Pipeline from CA Aqueduct (Part 1 of 2)	90	0.53	0.26	0.05	0.05	0.01	137198	713430	0.21	0.04	0.04	0.01	112	80	17920	0.07	0.01
Booster Pump Station at Gaskell/165 th	250	0.004	0.01	0.00	0.00	0.00	5600	29120	0.01	0.00	0.00	0.00	5	30	300	0.00	0.00
								0					6	70	840	0.00	0.00
Regulating Reservoir at Gaskell/165 th	125	0.014	0.01	0.00	0.00	0.00	7786.7	40491	0.01	0.00	0.00	0.00	10	30	600	0.00	0.00
								0					12	70	1680	0.01	0.00
Regulating Reservoir on Pipeline from LA Aqueduct	65	0.014	0.00	0.00	0.00	0.00	3893.3	20245	0.01	0.00	0.00	0.00			0	0.00	0.00
Recharge Basin	250	0.442	0.60	0.12	0.13	0.03	106667	554668	0.17	0.03	0.03	0.01	7	30	420	0.00	0.00
Booster Pump Station on pipeline from LA Aqueduct	125	0.014	0.01	0.00	0.00	0.00	463	2408	0.00	0.00	0.00	0.00	10	30	600	0.00	0.00
Recovery Wells (10) Southwest Wellfield	250	0.009	0.01	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	60	70	8400	0.03	0.01
Collection Pipeline for Southwest Wellfield	55	1.1	0.33	0.07	0.07	0.01	23516.3	122285					20	80	3200	0.01	0.00
Totals			1.23	0.25	0.26	0.05			0.41	0.08	0.09	0.02				0.13	0.03

Notes

- 1 Based on uncontrolled factor of 0.12 t/acre/month = 10.91 lbs/acre/day
- 2 Control factor of 80%
- 3 PM2.5 fraction of 0.21
- 4 Emission factor of 0.0006lb/ton
- 5 Emission factor of 0.0077 using average vehicle weight of 25 tons and silt loading of 0.1 g/m²

Willow Springs Water Bank - Construction

Year 2021

Totals:	PM10 Controlled	0.52 tons
	PM2.5 Controlled	0.11 tons

			Area Fugitive Dust				Excavated Fugitive Dust				Re Entrained Roadway Dust						
	Days	Acres/day	Uncontrolled PM10 ¹ (tons)	Controlled PM10 (tons) ²	Uncontrolled PM2.5/day ³ (tons)	Controlled PM2.5 (tons) ³	Excavated Soil (cy)	tons	Uncontrolled PM10 (tons) ⁴	Controlled PM10 (tons) ²	Uncontrolled PM2.5 (tons) ³	Controlled PM2.5 ²	Deliveries	Distance	VMT	Entraind Roadway Dust PM10 (tons) ⁵	Entraind Roadway Dust PM2.5 (tons) ³
Recharge Basin (Part 2of 2)	250	0.112	0.15	0.03	0.03	0.01	263346.5	1369402	0.41	0.08	0.09	0.02	0	0	0	0.00	0.00
Recovery wells (28) Centraal Wellfield	235	0.025524	0.03	0.01	0.01	0.00	0	0	0.00	0.00	0.00	0.00	168	70	23520	0.09	0.02
Collection Pipeline for Central Wellfield	200	1.1	1.20	0.24	0.25	0.05	88466.2	460024	0.14	0.03	0.03	0.01	75	80	12000	0.05	0.01
			0.00	0.00	0.00	0.00		0	0.00	0.00	0.00	0.00			0	0.00	0.00
			0.00	0.00	0.00	0.00		0	0.00	0.00	0.00	0.00			0	0.00	0.00
			0.00	0.00	0.00	0.00		0	0.00	0.00	0.00	0.00			0	0.00	0.00
Totals			1.39	0.28	0.29	0.06			0.55	0.11	0.12	0.02				0.14	0.03

Notes

- 1 Based on uncontrolled factor of 0.12 t/acre/month = 10.91 lbs/acre/day
- 2 Control facvtor of 80%
- 3 PM2.5 fraction of 0.21
- 4 Emission factor of 0.0006lb/ton
- 5 Emission factor of 0.0077 using average vehicle weight of 25 tons and silt loading of 0.1 g/m²

Willow Springs Water Bank - Construction

Year 2022

Totals:	PM10 Controlled	0.54 tons
	PM2.5 Controlled	0.11 tons

			Area Fugitive Dust				Excavated Fugitive Dust				Re Entrained Roadway Dust						
	Days	Acres/day	Uncontrolled PM10 ¹ (tons)	Controlled PM10 (tons) ²	Uncontrolled PM2.5/day ³ (tons)	Controlled PM2.5 (tons) ³	Excavated Soil (cy)	tons	Uncontrolled PM10 (tons) ⁴	Controlled PM10 (tons) ²	Uncontrolled PM2.5 (tons) ³	Controlled PM2.5 ²	Deliveries	Distance	VMT	Entraind Roadway Dust PM10 (tons) ⁵	Entraind Roadway Dust PM2.5 (tons) ³
Recovery Wells (26) West	217	0.027507	0.03	0.01	0.01	0.00	0	0	0.00	0.00	0.00	0.00	156	70	21840	0.08	0.02
Collection Pipeline from 26 wells	200	1.1	1.20	0.24	0.25	0.05	88466.2	460024	0.14	0.03	0.03	0.01	75	80	12000	0.05	0.01
Connecting Pipeline to SNIP (LA county segments)	88	0.51	0.24	0.05	0.05	0.01	39521	205509	0.06	0.01	0.01	0.00	75	80	12000	0.05	0.01
Connecting Pipeline to SNIP (Kern county segments)	35	0.51	0.10	0.02	0.02	0.00	26347	137004	0.04	0.01	0.01	0.00	0	0	0	0.00	0.00
			0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0	0	0	0.00	0.00
			0.00	0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0	0	0	0.00	0.00
Totals			1.57	0.31	0.33	0.07			0.24	0.05	0.05	0.01				0.18	0.04

Notes

- 1 Based on uncontrolled factor of 0.12 t/acre/month = 10.91 lbs/acre/day
- 2 Control facvtor of 80%
- 3 PM2.5 fraction of 0.21
- 4 Emission factor of 0.0006lb/ton, assuming 1.23 tons/cy and 4 drops per tons soil handler
- 5 Emission factor of 0.0077 using average vehicle weight of 25 tons and silt loading of 0.1 g/m²

CONSTRUCTION PHASE - SGF 12

MRI Level 2 Analysis (Refs 1, 3-7)

Acres Subject to Construction Disturbance Activities:	Acres	1	
Max Acres Subject to Construction Disturbance Activities on any day of this phase:		1.0	note (10)
Emissions Factor for PM10 Uncontrolled, tons/acre/month:		0.12	0.495867769 lbs/day
PM2.5 fraction of PM10 (per CARB CEIDARS Profiles):		0.21	
Activity Levels:			
Hrs/Day:		8	
Days/Wk:		5	
Days/Month: Applicant Data		22	
Phase Const Period, Months		1	
Phase Const Period, Days		22	
Wet Season Adjustment: (Per AP-42, Section 13.2.2, Figure 13.2.2-1, 12/03 or CalEEMod, Appendix D, Table 1.1.)			
Mean # days/year with rain >= 0.01 inch:		40	
Mean # months/yr with rain >= 0.01 inch:		1.33	
Adjusted Const Period, Months:		1.00	
Adjusted Const Period, Days:		22	

Controls for Fugitive Dust: Proposed watering cycle 3 times per day

3 watering cycles/8 hour construction shift yields a 68% reduction, use 68% for non-desert sites. (11)(12)
 Speed control of onsite const traffic to <15 mph yields a 40-70% reduction (use 50% control as conservative for site). (11)(12)

Calculated % control based on mitigations proposed:	84	% control
Conservative control % used for emissions estimates:	84	% control
	0.16	release fraction

Emissions: Controlled	PM10	PM2.5
tons/month	0.019	0.004
tons/period	0.019	0.004
Max lbs/day	1.745	0.367

Soil Handling Emissions (Cut and Fill): (2)

Total cu.yds of soil handled:	1000	Mean annual wind speed, mph: (8)	8.03
Total tons of soil handled:	5172.0	Avg. Soil moisture, %: (9)	5
Total days soil handled:	250	Avg. Soil density, tons/cu.yd:	1.3
Tons soil/day:	21	k factor for PM10:	0.35
Control Eff, watering, %	80	Number of Drops per ton:	4
Release Fraction:	0.2	Calc 1 wind	1.851
		Calc 2 moisture	3.607
Emissions: PM10 PM2.5		Calc 3 int	0.513
tons/period 0.000 0.000		Calc 4 PM10 lb/ton	0.0006
tons/month 0.000 0.000		PM2.5 fraction of PM10:	0.210
max lbs/day 0.002 0.000			

Emissions Totals: PM10 PM2.5
tons/period 0.019 0.004

Methodology References:

- (1) MRI Report, South Coast AQMD Project No. 95040, March 1996, Level 2 Analysis Procedure.
 MRI Report uncontrolled factor of 0.11 tons/acre/month is based on 168 hours per month of const activity
 For an activity rate of ~180 hrs/month, the adjusted EF would be 0.12 tons/acre/month (uncontrolled).
- (2) Soil Handling (Cut and Fill), EPA, AP-42, Section 13.2.4., 11/06.
- (3) URBEMIS, Version 9.2.4, User's Manual Appendix A, page A-6.
- (4) CARB Area Source Methodology, Section 7.7, 9/02.
- (5) WRAP Fugitive Dust Handbook, 9/06.
- (6) USEPA, AP-42, Section 13.2.3, 2/10.
- (7) Estimating PM Emissions from Construction Operations, USEPA, MRI, 9/99.
- (8) Wind speed data for Lemoore met station. Annual avg wind speed = 8.03 mph, % calms = 3.44%.
- (9) Soil Moisture; 5% assumed avg value
- (10) adjusted applicant value based on 7.5% of total acreage disturbed on any given day
- (11) SCAQMD CEQA Handbook 1993.
- (12) SCAQMD, Sample Construction Scenarios for Projects Less than Five Acres, Fugitive Dust Mitigations, February 2005.

OFFSITE PAVED ROAD FUGITIVE DUST EMISSIONS

(associated with delivery truck)

Average mileage for construction related vehicles:		NA	miles, roundtrip distance***
Avg weight of vehicular equipment on road:		25	tons (range 2 - 42 tons)
Road surface silt loading factor:		0.1	g/m2 (range 0.03 - 400 g/m2)
Particle size multiplier factors:	PM10	0.0022	lb/VMT
	PM2.5	0.00054	lb/VMT
C factors (brake and tire wear):	PM10	0.00047	lb/VMT
	PM2.5	0.00036	lb/VMT
Avg vehicle speed on road:		65	mph
Avg. Number of vehicles per day:		1	
Avg. Number of work days per month:		22	
	Total vehicles per month:	22	
Number of work months:		12	adjusted for precip events
	Total vehicles per const period:	264	

	PM10	
Calc 1	0.123	
Calc 2	26.662	
Calc 3	0.0077	lb/VMT

Emissions	PM10	PM2.5
lbs/period	0.00	0.00
tons/period	0.000	0.000

EPA, AP-42, Section 13.2.1, March 2006, updated 9/2008.

PM2.5 fraction of PM10 per CARB CEIDARs is 0.169

*** Note: avg roundtrip distance traveled by delivery or worker vehicles on freeways (I-5) and other State Routes in the project area.

Vehicles per day: worker + deliveries+staff support vehicles (averages)

EMFAC 2014 Data

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air Basin

Region: Mojave Desert

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	CalYr	VehClass	MdIYr	Speed	Fuel	VMT	ROG_ RUNEX	TOG_ RUNEX	CO_ RUNEX	NOx_ RUNEX	CO2_ RUNEX	PM10_ RUNEX	PM2_5_ RUNEX
Mojave Desert	2019	HHDT	Aggregated	5	GAS	15.9293	3.702114	5.355601	63.91593	6.601165	4204.001	0.004992	0.004602
Mojave Desert	2019	HHDT	Aggregated	5	DSL	5056.65	1.088658	1.453285	4.481467	20.70596	3476.025	0.042108	0.040286
Mojave Desert	2019	HHDT	Aggregated	10	GAS	47.2842	2.510398	3.640237	57.04676	5.889415	3560.353	0.003346	0.003083
Mojave Desert	2019	HHDT	Aggregated	10	DSL	14096.5	0.826186	1.085492	3.526286	16.56103	3028.305	0.035016	0.033502
Mojave Desert	2019	HHDT	Aggregated	15	GAS	80.161	1.594185	2.303819	51.43373	5.082157	2570.715	0.002172	0.002004
Mojave Desert	2019	HHDT	Aggregated	15	DSL	18967.6	0.572903	0.683003	2.44977	11.32205	2403.677	0.029166	0.027905
Mojave Desert	2019	HHDT	Aggregated	20	GAS	125.736	1.123546	1.623037	46.4837	4.6232	2077.654	0.00153	0.001412
Mojave Desert	2019	HHDT	Aggregated	20	DSL	45837.9	0.379256	0.439241	1.667248	7.733313	2059.618	0.032746	0.03133
Mojave Desert	2019	HHDT	Aggregated	25	GAS	272.846	0.852757	1.224736	43.22266	4.210074	1950.123	0.001231	0.001137
Mojave Desert	2019	HHDT	Aggregated	25	DSL	59013.3	0.274064	0.318196	1.251428	5.646476	1873.614	0.020576	0.019686
Mojave Desert	2019	HHDT	Aggregated	30	GAS	490.085	0.662045	0.952124	39.02892	3.900985	1855.475	0.00096	0.000887
Mojave Desert	2019	HHDT	Aggregated	30	DSL	101362	0.202264	0.233349	0.925498	4.539068	1749.917	0.018846	0.018031

Mojave Desert	2019	HHDT	Aggregated	35	GAS	611.31	0.555848	0.800536	36.01422	3.715605	1780.745	0.000791	0.00073
Mojave Desert	2019	HHDT	Aggregated	35	DSL	134717	0.148955	0.173969	0.687141	3.875485	1667.443	0.017413	0.01666
Mojave Desert	2019	HHDT	Aggregated	40	GAS	775.404	0.468287	0.672321	33.47983	3.499928	1717.335	0.000678	0.000626
Mojave Desert	2019	HHDT	Aggregated	40	DSL	153409	0.111094	0.12862	0.512003	3.408475	1583.345	0.016609	0.015891
Mojave Desert	2019	HHDT	Aggregated	45	GAS	787.517	0.456069	0.654509	31.12857	3.495955	1672.377	0.00069	0.000638
Mojave Desert	2019	HHDT	Aggregated	45	DSL	237391	0.082576	0.094895	0.382376	3.03445	1510.705	0.015692	0.015013
Mojave Desert	2019	HHDT	Aggregated	50	GAS	725.674	0.457852	0.656807	29.36702	3.501412	1647.621	0.000708	0.000655
Mojave Desert	2019	HHDT	Aggregated	50	DSL	240296	0.061772	0.070569	0.287688	2.757067	1449.642	0.015185	0.014528
Mojave Desert	2019	HHDT	Aggregated	55	GAS	648.875	0.478611	0.688771	28.06874	3.578288	1619.08	0.000711	0.000657
Mojave Desert	2019	HHDT	Aggregated	55	DSL	256696	0.047749	0.054359	0.220392	2.653207	1411.409	0.015309	0.014647
Mojave Desert	2019	HHDT	Aggregated	60	GAS	1120.46	0.515961	0.736684	27.23491	3.571988	1585.737	0.00086	0.000796
Mojave Desert	2019	HHDT	Aggregated	60	DSL	277440	0.041534	0.047283	0.192851	2.551327	1392.059	0.015236	0.014577
Mojave Desert	2019	HHDT	Aggregated	65	GAS	2119.4	0.618817	0.881865	28.04382	3.773933	1576.069	0.001058	0.000978
Mojave Desert	2019	HHDT	Aggregated	65	DSL	587078	0.04023	0.045799	0.190822	2.405098	1385.075	0.014673	0.014038
Mojave Desert	2019	HHDT	Aggregated	70	GAS	3193.61	0.716177	1.015467	31.02594	4.048297	1571.804	0.001222	0.001131
Mojave Desert	2019	HHDT	Aggregated	70	DSL	1736678	0.040221	0.045789	0.190536	2.417366	1385.366	0.014573	0.013943
Mojave Desert	2019	HHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2019	HHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	HHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	HHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	LDA	Aggregated	5	GAS	43190.1	0.11057	0.161111	1.659498	0.144626	964.9636	0.011993	0.011028
Mojave Desert	2019	LDA	Aggregated	5	DSL	417.018	0.258981	0.294833	3.459482	0.234994	700.4282	0.068789	0.065813
Mojave Desert	2019	LDA	Aggregated	10	GAS	48148.7	0.070418	0.102594	1.481292	0.123809	716.9175	0.007599	0.006987
Mojave Desert	2019	LDA	Aggregated	10	DSL	468.955	0.189673	0.21593	2.581109	0.219065	584.3891	0.049627	0.04748
Mojave Desert	2019	LDA	Aggregated	15	GAS	111068	0.047735	0.069539	1.323087	0.108024	551.4341	0.005061	0.004654
Mojave Desert	2019	LDA	Aggregated	15	DSL	1092.4	0.104145	0.118562	1.3169	0.181743	478.8506	0.03526	0.033734
Mojave Desert	2019	LDA	Aggregated	20	GAS	173354	0.033612	0.048958	1.191941	0.097401	438.8965	0.003569	0.003282
Mojave Desert	2019	LDA	Aggregated	20	DSL	1731.57	0.055492	0.063174	0.585916	0.164087	393.7716	0.027449	0.026262
Mojave Desert	2019	LDA	Aggregated	25	GAS	744708	0.025542	0.037199	1.0749	0.089026	362.748	0.002632	0.002421
Mojave Desert	2019	LDA	Aggregated	25	DSL	7405.88	0.03695	0.042065	0.372122	0.144539	327.2552	0.020554	0.019665
Mojave Desert	2019	LDA	Aggregated	30	GAS	1666415	0.01999	0.02911	0.968955	0.082118	310.8358	0.002054	0.001888
Mojave Desert	2019	LDA	Aggregated	30	DSL	16828.2	0.028716	0.032692	0.289956	0.13854	283.0476	0.016682	0.01596
Mojave Desert	2019	LDA	Aggregated	35	GAS	1696601	0.016765	0.02441	0.908317	0.078222	278.7958	0.001695	0.001559
Mojave Desert	2019	LDA	Aggregated	35	DSL	16842.3	0.024555	0.027954	0.242508	0.140413	255.6476	0.014989	0.01434

Mojave Desert	2019	LDA	Aggregated	40	GAS	2058931	0.014506	0.02112	0.837113	0.07444	258.5231	0.001472	0.001354
Mojave Desert	2019	LDA	Aggregated	40	DSL	20504.6	0.021621	0.024614	0.211998	0.142684	239.3746	0.013699	0.013107
Mojave Desert	2019	LDA	Aggregated	45	GAS	2915691	0.013388	0.019491	0.766809	0.073219	247.1375	0.001341	0.001233
Mojave Desert	2019	LDA	Aggregated	45	DSL	29193.7	0.018729	0.021322	0.186654	0.13431	229.9802	0.012217	0.011689
Mojave Desert	2019	LDA	Aggregated	50	GAS	2387090	0.012925	0.018814	0.719868	0.072641	246.923	0.001297	0.001193
Mojave Desert	2019	LDA	Aggregated	50	DSL	24711.5	0.017905	0.020383	0.179129	0.141271	231.585	0.011983	0.011464
Mojave Desert	2019	LDA	Aggregated	55	GAS	1646231	0.013123	0.0191	0.676466	0.073722	255.2939	0.00132	0.001214
Mojave Desert	2019	LDA	Aggregated	55	DSL	17238.3	0.017726	0.02018	0.1781	0.144911	242.5287	0.012167	0.01164
Mojave Desert	2019	LDA	Aggregated	60	GAS	1843114	0.013932	0.020278	0.641768	0.074949	275.5492	0.001409	0.001295
Mojave Desert	2019	LDA	Aggregated	60	DSL	18253.3	0.018575	0.021146	0.186364	0.141434	261.0361	0.013067	0.012501
Mojave Desert	2019	LDA	Aggregated	65	GAS	2712432	0.01586	0.023083	0.622636	0.078709	308.4069	0.001592	0.001464
Mojave Desert	2019	LDA	Aggregated	65	DSL	27184.9	0.020406	0.023231	0.212404	0.145004	293.5605	0.01443	0.013806
Mojave Desert	2019	LDA	Aggregated	70	GAS	3266057	0.017167	0.024983	0.609726	0.082585	327.8325	0.00173	0.001591
Mojave Desert	2019	LDA	Aggregated	70	DSL	33801.9	0.021841	0.024865	0.233918	0.150833	318.1305	0.015428	0.01476
Mojave Desert	2019	LDT1	Aggregated	5	GAS	2980.5	0.335176	0.484016	5.514372	0.501954	1145.31	0.022547	0.020739
Mojave Desert	2019	LDT1	Aggregated	5	DSL	3.19228	0.838973	0.955115	3.683079	0.935548	971.3902	0.70341	0.67298
Mojave Desert	2019	LDT1	Aggregated	10	GAS	3310.15	0.215385	0.310887	4.582152	0.409142	850.4642	0.014509	0.013345

Mojave Desert	2019	LDT1	Aggregated	10	DSL	3.50315	0.58129	0.66176	2.614768	0.970567	818.2871	0.490827	0.469594
Mojave Desert	2019	LDT1	Aggregated	15	GAS	7746.97	0.151319	0.218361	3.925007	0.347567	653.3551	0.009553	0.008788
Mojave Desert	2019	LDT1	Aggregated	15	DSL	8.21983	0.408814	0.465408	1.850088	0.976937	673.0702	0.343468	0.32861
Mojave Desert	2019	LDT1	Aggregated	20	GAS	12073.4	0.107862	0.15549	3.405141	0.303966	520.2578	0.006812	0.006266
Mojave Desert	2019	LDT1	Aggregated	20	DSL	13.0198	0.301648	0.343406	1.378283	1.011136	554.1344	0.263714	0.252306
Mojave Desert	2019	LDT1	Aggregated	25	GAS	53283.5	0.087828	0.12662	3.081294	0.283373	429.5426	0.00494	0.004545
Mojave Desert	2019	LDT1	Aggregated	25	DSL	58.0306	0.237991	0.270937	1.117087	1.018999	458.5479	0.197334	0.188797
Mojave Desert	2019	LDT1	Aggregated	30	GAS	120141	0.068755	0.099084	2.688403	0.255102	367.8341	0.003754	0.003453
Mojave Desert	2019	LDT1	Aggregated	30	DSL	129.767	0.193797	0.220625	0.946036	1.028075	394.356	0.159625	0.15272
Mojave Desert	2019	LDT1	Aggregated	35	GAS	122280	0.060694	0.087416	2.591666	0.252049	330.1292	0.003238	0.002979
Mojave Desert	2019	LDT1	Aggregated	35	DSL	134.362	0.173295	0.197285	0.889198	1.103425	356.8536	0.141992	0.13585
Mojave Desert	2019	LDT1	Aggregated	40	GAS	147816	0.051581	0.074271	2.347358	0.2368	305.9631	0.002791	0.002568
Mojave Desert	2019	LDT1	Aggregated	40	DSL	158.596	0.15572	0.177277	0.840125	1.139024	332.7712	0.129109	0.123524
Mojave Desert	2019	LDT1	Aggregated	45	GAS	213665	0.048687	0.070088	2.188835	0.237813	292.3995	0.002455	0.002259
Mojave Desert	2019	LDT1	Aggregated	45	DSL	231.732	0.14727	0.167657	0.843676	1.146215	317.883	0.117376	0.112298
Mojave Desert	2019	LDT1	Aggregated	50	GAS	175259	0.045645	0.065622	2.043152	0.232487	292.149	0.0023	0.002116
Mojave Desert	2019	LDT1	Aggregated	50	DSL	197.029	0.145727	0.165901	0.903377	1.171067	319.3723	0.118384	0.113262

Mojave Desert	2019	LDT1	Aggregated	55	GAS	121454	0.046131	0.066259	1.98247	0.24046	302.1082	0.002304	0.00212
Mojave Desert	2019	LDT1	Aggregated	55	DSL	139.826	0.152597	0.173722	1.025026	1.21091	334.1037	0.123928	0.118567
Mojave Desert	2019	LDT1	Aggregated	60	GAS	134746	0.049725	0.071487	2.009439	0.259933	325.9061	0.002532	0.00233
Mojave Desert	2019	LDT1	Aggregated	60	DSL	142.474	0.167217	0.190365	1.186277	1.28443	359.7928	0.13332	0.127552
Mojave Desert	2019	LDT1	Aggregated	65	GAS	199859	0.055662	0.079973	2.063836	0.28028	364.7519	0.002783	0.002561
Mojave Desert	2019	LDT1	Aggregated	65	DSL	216.286	0.191371	0.217864	1.494083	1.315864	403.8298	0.151634	0.145075
Mojave Desert	2019	LDT1	Aggregated	70	GAS	243419	0.058935	0.084599	2.085734	0.293619	387.9661	0.002919	0.002686
Mojave Desert	2019	LDT1	Aggregated	70	DSL	277.921	0.208117	0.236928	1.7345	1.317322	436.5294	0.165411	0.158255
Mojave Desert	2019	LDT2	Aggregated	5	GAS	11762.4	0.154168	0.223638	2.316735	0.259288	1294.245	0.01218	0.011201
Mojave Desert	2019	LDT2	Aggregated	5	DSL	17.4927	0.258	0.293716	2.164713	0.174808	863.2214	0.019109	0.018283
Mojave Desert	2019	LDT2	Aggregated	10	GAS	13157.8	0.099404	0.144147	2.051031	0.221265	961.3998	0.007741	0.007119
Mojave Desert	2019	LDT2	Aggregated	10	DSL	19.3891	0.192143	0.218742	1.614088	0.152031	725.8598	0.015043	0.014392
Mojave Desert	2019	LDT2	Aggregated	15	GAS	32042.8	0.068797	0.099759	1.830608	0.194394	739.1885	0.005171	0.004756
Mojave Desert	2019	LDT2	Aggregated	15	DSL	48.778	0.096334	0.10967	0.806313	0.109907	602.815	0.011637	0.011133
Mojave Desert	2019	LDT2	Aggregated	20	GAS	50459.1	0.049471	0.071706	1.656288	0.176031	589.1943	0.003658	0.003364
Mojave Desert	2019	LDT2	Aggregated	20	DSL	76.6753	0.040064	0.04561	0.329613	0.083235	495.166	0.009296	0.008894
Mojave Desert	2019	LDT2	Aggregated	25	GAS	231790	0.037929	0.054975	1.491209	0.161013	486.7934	0.002703	0.002486

Mojave Desert	2019	LDT2	Aggregated	25	DSL	370.867	0.025075	0.028546	0.204454	0.066933	416.5125	0.00767	0.007338
Mojave Desert	2019	LDT2	Aggregated	30	GAS	540149	0.03025	0.043842	1.354075	0.150096	417.5526	0.002116	0.001946
Mojave Desert	2019	LDT2	Aggregated	30	DSL	874.44	0.019108	0.021753	0.156028	0.058174	360.1819	0.0065	0.006219
Mojave Desert	2019	LDT2	Aggregated	35	GAS	536476	0.025128	0.036396	1.257715	0.141072	374.2089	0.001745	0.001605
Mojave Desert	2019	LDT2	Aggregated	35	DSL	870.241	0.015536	0.017687	0.127125	0.056701	325.3485	0.005882	0.005627
Mojave Desert	2019	LDT2	Aggregated	40	GAS	651312	0.021805	0.031577	1.159454	0.134548	346.9157	0.001517	0.001395
Mojave Desert	2019	LDT2	Aggregated	40	DSL	1047.4	0.013069	0.014879	0.107244	0.054656	303.3504	0.005382	0.005149
Mojave Desert	2019	LDT2	Aggregated	45	GAS	974590	0.020261	0.02934	1.072399	0.133754	332.027	0.001383	0.001272
Mojave Desert	2019	LDT2	Aggregated	45	DSL	1617.76	0.011411	0.012991	0.093633	0.049871	293.0582	0.005075	0.004855
Mojave Desert	2019	LDT2	Aggregated	50	GAS	820594	0.019986	0.028941	1.026632	0.136054	332.4368	0.00134	0.001232
Mojave Desert	2019	LDT2	Aggregated	50	DSL	1365.49	0.010117	0.011517	0.083999	0.046771	293.5821	0.004778	0.004572
Mojave Desert	2019	LDT2	Aggregated	55	GAS	574987	0.02038	0.029505	0.97678	0.139958	344.0114	0.001362	0.001253
Mojave Desert	2019	LDT2	Aggregated	55	DSL	963.81	0.009309	0.010598	0.078265	0.045304	307.1677	0.004683	0.004481
Mojave Desert	2019	LDT2	Aggregated	60	GAS	611617	0.020795	0.030088	0.909537	0.138548	369.8787	0.001449	0.001333
Mojave Desert	2019	LDT2	Aggregated	60	DSL	1012.38	0.009153	0.01042	0.078194	0.048593	332.2474	0.004816	0.004607
Mojave Desert	2019	LDT2	Aggregated	65	GAS	920557	0.023704	0.034296	0.899029	0.148229	414.4593	0.001634	0.001503
Mojave Desert	2019	LDT2	Aggregated	65	DSL	1539.32	0.009765	0.011117	0.08575	0.049132	373.5752	0.005242	0.005015

Mojave Desert	2019	LDT2	Aggregated	70	GAS	1151562	0.025994	0.037615	0.901197	0.15956	441.6789	0.001772	0.001629
Mojave Desert	2019	LDT2	Aggregated	70	DSL	1949.84	0.010522	0.011979	0.094407	0.049551	403.7267	0.005737	0.005489
Mojave Desert	2019	LHDT1	Aggregated	5	GAS	1889.99	0.498211	0.722676	5.811213	0.863234	1398.837	0.012355	0.011364
Mojave Desert	2019	LHDT1	Aggregated	5	DSL	1915.04	0.824531	0.938674	3.472808	3.812059	1288.643	0.137225	0.131289
Mojave Desert	2019	LHDT1	Aggregated	10	GAS	4550.11	0.329837	0.478458	4.575011	0.769006	1375.905	0.007924	0.007288
Mojave Desert	2019	LHDT1	Aggregated	10	DSL	5515.99	0.586073	0.667205	2.505288	3.980854	1083.543	0.097646	0.093422
Mojave Desert	2019	LHDT1	Aggregated	15	GAS	10977.4	0.228091	0.330725	3.73264	0.692192	955.8091	0.005325	0.004899
Mojave Desert	2019	LHDT1	Aggregated	15	DSL	12844.6	0.387524	0.441117	1.693064	4.115538	707.5852	0.07202	0.068904
Mojave Desert	2019	LHDT1	Aggregated	20	GAS	12740.8	0.165897	0.240415	3.155987	0.638468	829.8495	0.003782	0.003479
Mojave Desert	2019	LHDT1	Aggregated	20	DSL	14218.9	0.265349	0.302082	1.197668	4.268361	603.0637	0.055381	0.052985
Mojave Desert	2019	LHDT1	Aggregated	25	GAS	13791.9	0.121791	0.176098	2.635863	0.581944	760.5525	0.002736	0.002518
Mojave Desert	2019	LHDT1	Aggregated	25	DSL	18139.4	0.201157	0.229004	0.944159	4.341205	534.1624	0.043554	0.04167
Mojave Desert	2019	LHDT1	Aggregated	30	GAS	17144.1	0.095268	0.13746	2.293799	0.535488	690.1506	0.002115	0.001946
Mojave Desert	2019	LHDT1	Aggregated	30	DSL	20208.4	0.162959	0.185518	0.799235	4.412629	484.4104	0.035879	0.034327
Mojave Desert	2019	LHDT1	Aggregated	35	GAS	12831.4	0.078988	0.113642	2.062005	0.506376	690.0858	0.001729	0.001591
Mojave Desert	2019	LHDT1	Aggregated	35	DSL	15370.3	0.139164	0.158429	0.718335	4.531859	483.9784	0.031037	0.029694
Mojave Desert	2019	LHDT1	Aggregated	40	GAS	15778.8	0.068968	0.099025	1.904508	0.480513	687.4188	0.001488	0.00137

Mojave Desert	2019	LHDT1	Aggregated	40	DSL	18329.3	0.123362	0.140439	0.674899	4.601137	470.1075	0.027819	0.026615
Mojave Desert	2019	LHDT1	Aggregated	45	GAS	19090.2	0.062244	0.089471	1.779587	0.464681	684.1583	0.00134	0.001234
Mojave Desert	2019	LHDT1	Aggregated	45	DSL	22532.7	0.115089	0.131021	0.670001	4.703182	458.2699	0.026246	0.025111
Mojave Desert	2019	LHDT1	Aggregated	50	GAS	26277.2	0.063593	0.09167	1.847629	0.478809	721.5988	0.00134	0.001233
Mojave Desert	2019	LHDT1	Aggregated	50	DSL	32685.1	0.117813	0.134122	0.734574	5.082314	481.3172	0.026822	0.025661
Mojave Desert	2019	LHDT1	Aggregated	55	GAS	14126	0.064183	0.09235	1.869286	0.483746	760.2059	0.001346	0.001239
Mojave Desert	2019	LHDT1	Aggregated	55	DSL	22679.5	0.120895	0.137631	0.815598	5.232181	502.7407	0.027538	0.026347
Mojave Desert	2019	LHDT1	Aggregated	60	GAS	40253.6	0.065897	0.094804	1.915905	0.460084	771.2666	0.0014	0.001289
Mojave Desert	2019	LHDT1	Aggregated	60	DSL	32821.7	0.12449	0.141723	0.915874	5.089986	506.3515	0.028538	0.027303
Mojave Desert	2019	LHDT1	Aggregated	65	GAS	77675.1	0.075033	0.108027	2.169221	0.477979	781.7416	0.001575	0.00145
Mojave Desert	2019	LHDT1	Aggregated	65	DSL	72067.1	0.140939	0.160449	1.134934	5.242835	512.8864	0.032161	0.030769
Mojave Desert	2019	LHDT1	Aggregated	70	GAS	141997	0.082079	0.118214	2.365639	0.505064	774.3386	0.001698	0.001563
Mojave Desert	2019	LHDT1	Aggregated	70	DSL	209944	0.151653	0.172646	1.280951	5.306314	507.0172	0.03454	0.033046
Mojave Desert	2019	LHDT2	Aggregated	5	GAS	293.155	0.18633	0.267323	2.03931	0.426668	1475.537	0.007043	0.006481
Mojave Desert	2019	LHDT2	Aggregated	5	DSL	648.149	0.773725	0.880834	3.30386	2.672645	1347.963	0.095261	0.09114
Mojave Desert	2019	LHDT2	Aggregated	10	GAS	703.605	0.121825	0.174435	1.627353	0.373719	1531.65	0.00446	0.004104
Mojave Desert	2019	LHDT2	Aggregated	10	DSL	1859.98	0.559384	0.636822	2.41375	2.740761	1198.333	0.069647	0.066634

Mojave Desert	2019	LHDT2	Aggregated	15	GAS	1700.64	0.083725	0.119806	1.342623	0.334459	1077.414	0.002989	0.002751
Mojave Desert	2019	LHDT2	Aggregated	15	DSL	4336.88	0.337149	0.383822	1.485575	2.763965	797.6024	0.052428	0.05016
Mojave Desert	2019	LHDT2	Aggregated	20	GAS	1975.17	0.060523	0.086537	1.145168	0.306298	942.8988	0.002114	0.001946
Mojave Desert	2019	LHDT2	Aggregated	20	DSL	4807.64	0.203533	0.231709	0.930327	2.817824	680.2275	0.040895	0.039126
Mojave Desert	2019	LHDT2	Aggregated	25	GAS	2184.09	0.04534	0.065115	0.987433	0.290172	852.2466	0.001588	0.001461
Mojave Desert	2019	LHDT2	Aggregated	25	DSL	6243.97	0.149009	0.169637	0.704438	2.850705	605.0852	0.032583	0.031173
Mojave Desert	2019	LHDT2	Aggregated	30	GAS	2764.14	0.035493	0.051147	0.872853	0.272622	770.0883	0.00125	0.00115
Mojave Desert	2019	LHDT2	Aggregated	30	DSL	7119.28	0.120312	0.136967	0.59	2.909952	544.7413	0.027239	0.026061
Mojave Desert	2019	LHDT2	Aggregated	35	GAS	2093.21	0.02947	0.04267	0.796267	0.263979	769.8594	0.001043	0.000959
Mojave Desert	2019	LHDT2	Aggregated	35	DSL	5496.67	0.102175	0.116319	0.523377	2.989231	544.1528	0.023778	0.02275
Mojave Desert	2019	LHDT2	Aggregated	40	GAS	2606.84	0.025736	0.037405	0.740056	0.255305	752.1019	0.000912	0.000839
Mojave Desert	2019	LHDT2	Aggregated	40	DSL	6695.39	0.090399	0.102913	0.486962	3.051434	523.4618	0.021475	0.020546
Mojave Desert	2019	LHDT2	Aggregated	45	GAS	3198.55	0.023609	0.034239	0.696084	0.247314	734.3589	0.000829	0.000763
Mojave Desert	2019	LHDT2	Aggregated	45	DSL	8265.95	0.083825	0.095429	0.481119	3.139899	502.7447	0.020222	0.019347
Mojave Desert	2019	LHDT2	Aggregated	50	GAS	4328.52	0.023704	0.034153	0.699966	0.243148	765.8558	0.000799	0.000735
Mojave Desert	2019	LHDT2	Aggregated	50	DSL	11663.4	0.08357	0.095139	0.517167	3.349774	522.4062	0.020286	0.019408
Mojave Desert	2019	LHDT2	Aggregated	55	GAS	2354.11	0.0242	0.034975	0.701612	0.251052	800.5573	0.000818	0.000753

Mojave Desert	2019	LHDT2	Aggregated	55	DSL	8123.04	0.084645	0.096362	0.566453	3.442904	540.3879	0.020571	0.019681
Mojave Desert	2019	LHDT2	Aggregated	60	GAS	6830.12	0.025313	0.036662	0.711846	0.246119	808.7627	0.000876	0.000805
Mojave Desert	2019	LHDT2	Aggregated	60	DSL	12228	0.088672	0.100947	0.645578	3.445035	540.6049	0.021437	0.02051
Mojave Desert	2019	LHDT2	Aggregated	65	GAS	13233.3	0.029167	0.042223	0.790247	0.257078	816.7095	0.000992	0.000912
Mojave Desert	2019	LHDT2	Aggregated	65	DSL	26764.8	0.099435	0.1132	0.793919	3.541724	541.8889	0.023803	0.022773
Mojave Desert	2019	LHDT2	Aggregated	70	GAS	24266.4	0.032407	0.046903	0.861383	0.273585	800.3571	0.001078	0.000992
Mojave Desert	2019	LHDT2	Aggregated	70	DSL	77260.7	0.105642	0.120267	0.885368	3.549284	535.1081	0.025209	0.024118
Mojave Desert	2019	MCY	Aggregated	5	GAS	601.439	13.2165	16.04238	59.84074	1.520615	545.6586	0.009903	0.009301
Mojave Desert	2019	MCY	Aggregated	10	GAS	679.977	8.691898	10.52992	44.78835	1.389812	404.4051	0.006559	0.006163
Mojave Desert	2019	MCY	Aggregated	15	GAS	1678.81	5.9957	7.260037	34.82846	1.293765	311.5004	0.004527	0.004254
Mojave Desert	2019	MCY	Aggregated	20	GAS	2619.04	4.413318	5.331912	29.00052	1.235778	248.6289	0.003339	0.00314
Mojave Desert	2019	MCY	Aggregated	25	GAS	12126.7	3.362622	4.067542	24.45438	1.188766	206.6435	0.002523	0.002371
Mojave Desert	2019	MCY	Aggregated	30	GAS	28764	2.721387	3.288032	21.76829	1.161404	177.8091	0.002036	0.001914
Mojave Desert	2019	MCY	Aggregated	35	GAS	28053.1	2.304984	2.785157	19.96922	1.144203	158.9892	0.001732	0.001628
Mojave Desert	2019	MCY	Aggregated	40	GAS	34655.2	2.058157	2.484344	19.04364	1.139474	147.3566	0.001551	0.001458
Mojave Desert	2019	MCY	Aggregated	45	GAS	51731.6	1.929111	2.329492	18.81046	1.149198	141.9492	0.001438	0.001352
Mojave Desert	2019	MCY	Aggregated	50	GAS	42675	1.913667	2.306127	19.5752	1.168309	141.5433	0.001439	0.001354

Mojave Desert	2019	MCY	Aggregated	55	GAS	29411.1	1.987331	2.393232	21.16261	1.197998	146.6855	0.001497	0.001408
Mojave Desert	2019	MCY	Aggregated	60	GAS	33284.5	2.133712	2.574982	23.43537	1.223039	158.221	0.001589	0.001494
Mojave Desert	2019	MCY	Aggregated	65	GAS	48984.7	2.431035	2.933213	27.89382	1.263944	176.6655	0.001818	0.00171
Mojave Desert	2019	MCY	Aggregated	70	GAS	57964	2.677159	3.226314	31.64241	1.306245	189.1174	0.002003	0.001884
Mojave Desert	2019	MDV	Aggregated	5	GAS	8555.91	0.349606	0.484783	4.666709	0.486288	1739.859	0.012755	0.011747
Mojave Desert	2019	MDV	Aggregated	5	DSL	115.871	0.223275	0.254184	3.47851	0.174588	1066.583	0.033787	0.032326
Mojave Desert	2019	MDV	Aggregated	10	GAS	9542.55	0.222831	0.308146	3.866125	0.406762	1290.689	0.008111	0.007471
Mojave Desert	2019	MDV	Aggregated	10	DSL	131.32	0.164329	0.187078	2.603968	0.151281	906.2239	0.024398	0.023343
Mojave Desert	2019	MDV	Aggregated	15	GAS	22693.8	0.153737	0.212676	3.345334	0.362259	994.5254	0.005429	0.005001
Mojave Desert	2019	MDV	Aggregated	15	DSL	322.109	0.086125	0.098048	1.303753	0.114263	771.278	0.018959	0.018139
Mojave Desert	2019	MDV	Aggregated	20	GAS	35760.8	0.108858	0.150131	2.905359	0.321079	791.3227	0.003823	0.003522
Mojave Desert	2019	MDV	Aggregated	20	DSL	519.459	0.039155	0.044576	0.534999	0.087569	641.5628	0.014491	0.013864
Mojave Desert	2019	MDV	Aggregated	25	GAS	159548	0.086494	0.119418	2.677038	0.311353	657.1157	0.002864	0.002639
Mojave Desert	2019	MDV	Aggregated	25	DSL	2343.96	0.026897	0.03062	0.337058	0.079436	544.2712	0.012704	0.012154
Mojave Desert	2019	MDV	Aggregated	30	GAS	365295	0.067684	0.093471	2.385406	0.288252	563.6747	0.002232	0.002057
Mojave Desert	2019	MDV	Aggregated	30	DSL	5541.38	0.020843	0.023728	0.26027	0.073175	471.1896	0.010609	0.01015
Mojave Desert	2019	MDV	Aggregated	35	GAS	367325	0.059049	0.081191	2.271195	0.280388	505.896	0.001874	0.001726

Mojave Desert	2019	MDV	Aggregated	35	DSL	5400.11	0.017777	0.020238	0.212993	0.073175	426.9025	0.009795	0.009371
Mojave Desert	2019	MDV	Aggregated	40	GAS	444030	0.050899	0.069871	2.083044	0.265547	468.5812	0.001629	0.001501
Mojave Desert	2019	MDV	Aggregated	40	DSL	6575.07	0.015128	0.017223	0.180389	0.070754	399.1863	0.008781	0.008401
Mojave Desert	2019	MDV	Aggregated	45	GAS	649834	0.047846	0.06575	1.974463	0.270769	449.5016	0.00149	0.001373
Mojave Desert	2019	MDV	Aggregated	45	DSL	9829.45	0.013795	0.015705	0.160409	0.071201	385.2722	0.008495	0.008127
Mojave Desert	2019	MDV	Aggregated	50	GAS	545955	0.044994	0.061872	1.847126	0.263944	448.769	0.001414	0.001303
Mojave Desert	2019	MDV	Aggregated	50	DSL	8634.91	0.01225	0.013946	0.144474	0.067316	388.3299	0.007824	0.007486
Mojave Desert	2019	MDV	Aggregated	55	GAS	381989	0.045695	0.062778	1.788452	0.269921	464.1819	0.00143	0.001317
Mojave Desert	2019	MDV	Aggregated	55	DSL	6131.93	0.011713	0.013334	0.136056	0.066883	410.3799	0.007798	0.00746
Mojave Desert	2019	MDV	Aggregated	60	GAS	407145	0.051046	0.069759	1.861762	0.288081	501.334	0.001578	0.001454
Mojave Desert	2019	MDV	Aggregated	60	DSL	6072.04	0.013123	0.014939	0.143972	0.074441	441.9702	0.008982	0.008593
Mojave Desert	2019	MDV	Aggregated	65	GAS	609489	0.057529	0.078693	1.926886	0.306068	561.3476	0.001767	0.001628
Mojave Desert	2019	MDV	Aggregated	65	DSL	9271.83	0.014125	0.01608	0.157395	0.075386	497.1564	0.009776	0.009353
Mojave Desert	2019	MDV	Aggregated	70	GAS	758094	0.060705	0.083179	1.924623	0.317797	596.7063	0.001878	0.001731
Mojave Desert	2019	MDV	Aggregated	70	DSL	12064.8	0.014176	0.016139	0.162726	0.072882	537.0032	0.009889	0.009461
Mojave Desert	2019	MH	Aggregated	5	GAS	98.1651	1.028087	1.427916	17.65967	1.315203	3932.57	0.014425	0.01331
Mojave Desert	2019	MH	Aggregated	5	DSL	20.646	1.298633	1.478408	2.671098	17.79889	2106.213	0.494637	0.473239

Mojave Desert	2019	MH	Aggregated	10	GAS	390.113	0.709375	0.982753	13.61563	1.213132	3357.603	0.009599	0.00886
Mojave Desert	2019	MH	Aggregated	10	DSL	85.6609	0.987389	1.124077	2.208389	14.8804	1912.793	0.421899	0.403648
Mojave Desert	2019	MH	Aggregated	15	GAS	581.207	0.491864	0.680855	10.44899	1.098875	2314.082	0.006505	0.006005
Mojave Desert	2019	MH	Aggregated	15	DSL	133.286	0.507166	0.577374	1.463277	10.39592	1570.388	0.298228	0.285327
Mojave Desert	2019	MH	Aggregated	20	GAS	669.903	0.358569	0.495526	8.413991	1.023443	1626.998	0.004652	0.004295
Mojave Desert	2019	MH	Aggregated	20	DSL	152.209	0.229927	0.261757	0.975252	7.871719	1288.611	0.211727	0.202568
Mojave Desert	2019	MH	Aggregated	25	GAS	1208.75	0.274817	0.379456	7.051955	0.961321	1419.676	0.003481	0.003215
Mojave Desert	2019	MH	Aggregated	25	DSL	274.464	0.160329	0.182524	0.764577	6.96527	1155.065	0.171295	0.163885
Mojave Desert	2019	MH	Aggregated	30	GAS	1789.53	0.218789	0.301696	6.107142	0.910661	1304.317	0.002752	0.002542
Mojave Desert	2019	MH	Aggregated	30	DSL	417.389	0.129565	0.147501	0.645686	6.487289	1084.02	0.151073	0.144538
Mojave Desert	2019	MH	Aggregated	35	GAS	1976.57	0.187745	0.25856	5.629183	0.892777	1204.519	0.002323	0.002146
Mojave Desert	2019	MH	Aggregated	35	DSL	440.344	0.10783	0.122757	0.561492	6.192978	1025.362	0.141271	0.13516
Mojave Desert	2019	MH	Aggregated	40	GAS	2850.18	0.167891	0.231056	5.342504	0.876644	1120.581	0.002052	0.001896
Mojave Desert	2019	MH	Aggregated	40	DSL	672.005	0.09137	0.104018	0.491796	5.951792	978.5695	0.13752	0.131571
Mojave Desert	2019	MH	Aggregated	45	GAS	2945.17	0.161646	0.222196	5.393047	0.885555	1040.421	0.001941	0.001794
Mojave Desert	2019	MH	Aggregated	45	DSL	690.157	0.079491	0.090495	0.43294	5.699647	943.4959	0.139108	0.13309
Mojave Desert	2019	MH	Aggregated	50	GAS	2767.41	0.162166	0.22269	5.641944	0.90166	972.9058	0.001922	0.001776

Mojave Desert	2019	MH	Aggregated	50	DSL	691.19	0.074837	0.085197	0.402719	5.604898	920.8472	0.150731	0.144211
Mojave Desert	2019	MH	Aggregated	55	GAS	2219.98	0.171338	0.234941	6.205189	0.941538	946.4909	0.002005	0.001853
Mojave Desert	2019	MH	Aggregated	55	DSL	664.117	0.077268	0.087964	0.399578	5.680996	910.6221	0.173338	0.16584
Mojave Desert	2019	MH	Aggregated	60	GAS	5058.03	0.183908	0.2523	6.944715	0.938633	951.311	0.002159	0.001996
Mojave Desert	2019	MH	Aggregated	60	DSL	1323.91	0.081687	0.092995	0.395718	5.617793	911.6272	0.194727	0.186303
Mojave Desert	2019	MH	Aggregated	65	GAS	8768.18	0.212273	0.291421	8.388694	0.968781	968.0342	0.00246	0.002274
Mojave Desert	2019	MH	Aggregated	65	DSL	2379.69	0.09072	0.103279	0.407155	5.601956	924.5035	0.220586	0.211044
Mojave Desert	2019	MH	Aggregated	70	GAS	13228.1	0.239281	0.328344	9.666577	1.033378	997.9961	0.002688	0.002485
Mojave Desert	2019	MH	Aggregated	70	DSL	4031.58	0.107275	0.122126	0.445762	5.790851	949.7487	0.257523	0.246383
Mojave Desert	2019	MHDT	Aggregated	5	GAS	142.99	0.714158	1.038026	6.624184	1.301579	3819.9	0.008179	0.007523
Mojave Desert	2019	MHDT	Aggregated	5	DSL	676.15	1.391324	1.583917	2.557975	11.55042	2263.585	0.177659	0.169973
Mojave Desert	2019	MHDT	Aggregated	10	GAS	530.054	0.477251	0.692902	5.939176	1.159886	3259.19	0.00533	0.004903
Mojave Desert	2019	MHDT	Aggregated	10	DSL	2567.32	1.054094	1.200006	2.058203	9.403945	2017.68	0.152881	0.146267
Mojave Desert	2019	MHDT	Aggregated	15	GAS	828.573	0.314519	0.456725	4.969558	1.014744	2247.512	0.003506	0.003225
Mojave Desert	2019	MHDT	Aggregated	15	DSL	4139.45	0.585391	0.666423	1.380713	6.534421	1688.196	0.11491	0.109939
Mojave Desert	2019	MHDT	Aggregated	20	GAS	977.892	0.219774	0.319157	4.309878	0.91819	1580.329	0.002453	0.002257
Mojave Desert	2019	MHDT	Aggregated	20	DSL	5049.08	0.316932	0.360803	0.950205	4.732218	1459.805	0.088189	0.084374

Mojave Desert	2019	MHDT	Aggregated	25	GAS	1984.69	0.158494	0.230298	3.71171	0.821266	1381.95	0.001758	0.001617
Mojave Desert	2019	MHDT	Aggregated	25	DSL	9656.68	0.236404	0.269129	0.743418	3.794536	1337.53	0.076946	0.073618
Mojave Desert	2019	MHDT	Aggregated	30	GAS	3081.74	0.119772	0.174047	3.261806	0.748059	1270.463	0.001347	0.001239
Mojave Desert	2019	MHDT	Aggregated	30	DSL	14948.9	0.189971	0.216267	0.613156	3.282394	1259.278	0.071488	0.068396
Mojave Desert	2019	MHDT	Aggregated	35	GAS	3309.59	0.100585	0.146127	3.03948	0.717015	1172.467	0.001125	0.001035
Mojave Desert	2019	MHDT	Aggregated	35	DSL	16536.5	0.15397	0.175283	0.51605	2.947282	1196.907	0.069289	0.066292
Mojave Desert	2019	MHDT	Aggregated	40	GAS	4830.72	0.087379	0.126937	2.812475	0.685633	1090.897	0.000976	0.000898
Mojave Desert	2019	MHDT	Aggregated	40	DSL	26180.7	0.126825	0.14438	0.445748	2.710269	1145.889	0.070347	0.067304
Mojave Desert	2019	MHDT	Aggregated	45	GAS	5264.57	0.080501	0.116882	2.618906	0.659531	1014.661	0.000885	0.000814
Mojave Desert	2019	MHDT	Aggregated	45	DSL	23164.4	0.105716	0.12035	0.391229	2.544337	1104.039	0.072936	0.06978
Mojave Desert	2019	MHDT	Aggregated	50	GAS	5064.65	0.078527	0.113971	2.498912	0.65027	949.623	0.000854	0.000785
Mojave Desert	2019	MHDT	Aggregated	50	DSL	21285	0.092121	0.104873	0.356435	2.43268	1069.52	0.078775	0.075367
Mojave Desert	2019	MHDT	Aggregated	55	GAS	3821.79	0.083657	0.121342	2.529173	0.680225	922.9034	0.000895	0.000824
Mojave Desert	2019	MHDT	Aggregated	55	DSL	19677.8	0.085093	0.096872	0.337937	2.371094	1042.695	0.087631	0.08384
Mojave Desert	2019	MHDT	Aggregated	60	GAS	9874.54	0.084607	0.122769	2.364687	0.646798	929.9561	0.00092	0.000846
Mojave Desert	2019	MHDT	Aggregated	60	DSL	36705.9	0.083818	0.09542	0.334404	2.337675	1030.819	0.093256	0.089222
Mojave Desert	2019	MHDT	Aggregated	65	GAS	18553	0.095617	0.138782	2.41365	0.658622	948.1386	0.001024	0.000942

Mojave Desert	2019	MHDT	Aggregated	65	DSL	58659.5	0.082709	0.094158	0.329234	2.33558	1030.647	0.091565	0.087604
Mojave Desert	2019	MHDT	Aggregated	70	GAS	28431.5	0.110073	0.159782	2.632237	0.71549	978.3337	0.001127	0.001037
Mojave Desert	2019	MHDT	Aggregated	70	DSL	91062.1	0.080831	0.09202	0.320249	2.369565	1031.14	0.088697	0.08486
Mojave Desert	2019	MHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	MHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	MHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	MHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	OBUS	Aggregated	5	GAS	90.9307	0.41364	0.595413	3.488776	0.833046	3838.011	0.005637	0.005189
Mojave Desert	2019	OBUS	Aggregated	5	DSL	54.1743	0.815671	0.92858	2.612559	14.49151	2692.552	0.050405	0.048224
Mojave Desert	2019	OBUS	Aggregated	10	GAS	357.49	0.261976	0.374999	3.059863	0.71078	3278.667	0.003511	0.003233
Mojave Desert	2019	OBUS	Aggregated	10	DSL	219.261	0.647165	0.736748	2.097379	11.78869	2385.988	0.043776	0.041882
Mojave Desert	2019	OBUS	Aggregated	15	GAS	537.677	0.176202	0.252606	2.689153	0.632951	2259.016	0.002361	0.002174
Mojave Desert	2019	OBUS	Aggregated	15	DSL	328.751	0.428311	0.487599	1.446658	8.31957	1990.269	0.034032	0.032559
Mojave Desert	2019	OBUS	Aggregated	20	GAS	619.862	0.124871	0.179134	2.414873	0.578268	1587.76	0.001674	0.001541
Mojave Desert	2019	OBUS	Aggregated	20	DSL	396.126	0.299612	0.341085	1.059064	6.266074	1747.786	0.027708	0.026509
Mojave Desert	2019	OBUS	Aggregated	25	GAS	1188.23	0.090699	0.130815	2.130534	0.526347	1386.348	0.001225	0.001127
Mojave Desert	2019	OBUS	Aggregated	25	DSL	639.697	0.2198	0.250226	0.783123	5.124311	1602.792	0.024319	0.023267

Mojave Desert	2019	OBUS	Aggregated	30	GAS	1762.17	0.070824	0.102391	1.956399	0.494579	1272.923	0.000972	0.000894
Mojave Desert	2019	OBUS	Aggregated	30	DSL	948.516	0.165716	0.188655	0.59381	4.544467	1517.191	0.022194	0.021234
Mojave Desert	2019	OBUS	Aggregated	35	GAS	1918.12	0.059089	0.085272	1.819184	0.469362	1175.299	0.000804	0.00074
Mojave Desert	2019	OBUS	Aggregated	35	DSL	1086.95	0.12409	0.141267	0.447558	4.144087	1444.743	0.020526	0.019638
Mojave Desert	2019	OBUS	Aggregated	40	GAS	2769.39	0.051538	0.074413	1.692935	0.450703	1093.251	0.000701	0.000645
Mojave Desert	2019	OBUS	Aggregated	40	DSL	1712.23	0.093573	0.106526	0.340354	3.86997	1388.227	0.019398	0.018559
Mojave Desert	2019	OBUS	Aggregated	45	GAS	2985.66	0.04601	0.066454	1.535597	0.428315	1016.046	0.000631	0.000581
Mojave Desert	2019	OBUS	Aggregated	45	DSL	1386.56	0.070464	0.080218	0.258436	3.650503	1335.842	0.018614	0.017809
Mojave Desert	2019	OBUS	Aggregated	50	GAS	2867.89	0.043955	0.063461	1.42485	0.41802	950.6439	0.000604	0.000556
Mojave Desert	2019	OBUS	Aggregated	50	DSL	1350.15	0.055051	0.062672	0.204044	3.535329	1306.588	0.018555	0.017752
Mojave Desert	2019	OBUS	Aggregated	55	GAS	2247.35	0.045742	0.065705	1.379893	0.424002	924.8621	0.000616	0.000567
Mojave Desert	2019	OBUS	Aggregated	55	DSL	1587.45	0.044446	0.050598	0.166519	3.483609	1291.269	0.01907	0.018245
Mojave Desert	2019	OBUS	Aggregated	60	GAS	5455.17	0.046853	0.067823	1.262955	0.419652	930.0712	0.000655	0.000602
Mojave Desert	2019	OBUS	Aggregated	60	DSL	2191.84	0.038439	0.04376	0.142715	3.353465	1249.677	0.018749	0.017938
Mojave Desert	2019	OBUS	Aggregated	65	GAS	10001.2	0.051686	0.075175	1.183143	0.426197	947.4971	0.000728	0.000669
Mojave Desert	2019	OBUS	Aggregated	65	DSL	2352.19	0.037722	0.042943	0.139333	3.309501	1236.436	0.018482	0.017682
Mojave Desert	2019	OBUS	Aggregated	70	GAS	15674.2	0.056312	0.08191	1.186333	0.440119	978.3792	0.000768	0.000707

Mojave Desert	2019	OBUS	Aggregated	70	DSL	3893.87	0.039069	0.044478	0.145688	3.39061	1261.321	0.018985	0.018163
Mojave Desert	2019	OBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	OBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	OBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	OBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	SBUS	Aggregated	5	GAS	97.7357	0.459706	0.670801	3.428859	0.998646	1828.296	0.007253	0.006669
Mojave Desert	2019	SBUS	Aggregated	5	DSL	270.748	0.810975	0.923233	1.334745	19.27828	2330.101	0.151939	0.145366
Mojave Desert	2019	SBUS	Aggregated	10	GAS	342.559	0.289786	0.422855	3.128369	0.864678	1560.75	0.004564	0.004196
Mojave Desert	2019	SBUS	Aggregated	10	DSL	948.959	0.624321	0.710742	1.110142	15.73122	2093.67	0.125658	0.120223
Mojave Desert	2019	SBUS	Aggregated	15	GAS	685.117	0.192353	0.280681	2.856725	0.763464	1075.828	0.003029	0.002785
Mojave Desert	2019	SBUS	Aggregated	15	DSL	1897.92	0.349317	0.397671	0.786366	10.79821	1738.13	0.083618	0.080001
Mojave Desert	2019	SBUS	Aggregated	20	GAS	929.935	0.134723	0.196587	2.616229	0.684707	756.3969	0.002121	0.00195
Mojave Desert	2019	SBUS	Aggregated	20	DSL	2576.11	0.187068	0.212962	0.563131	8.17066	1470.486	0.054881	0.052507
Mojave Desert	2019	SBUS	Aggregated	25	GAS	1467.97	0.099493	0.14518	2.401236	0.624601	660.4951	0.001567	0.001441
Mojave Desert	2019	SBUS	Aggregated	25	DSL	4066.57	0.134449	0.153059	0.435039	7.41422	1333.28	0.043348	0.041473
Mojave Desert	2019	SBUS	Aggregated	30	GAS	1761.17	0.077516	0.113112	2.209934	0.578921	606.9681	0.001221	0.001123
Mojave Desert	2019	SBUS	Aggregated	30	DSL	4878.81	0.103902	0.118284	0.347356	7.040039	1252.336	0.036749	0.035159

Mojave Desert	2019	SBUS	Aggregated	35	GAS	1807.62	0.063617	0.092829	2.036358	0.54681	560.3787	0.001004	0.000923
Mojave Desert	2019	SBUS	Aggregated	35	DSL	5007.49	0.080933	0.092136	0.279431	6.785317	1186.99	0.032164	0.030773
Mojave Desert	2019	SBUS	Aggregated	40	GAS	1220.24	0.055111	0.080417	1.882565	0.52422	521.3498	0.000871	0.000801
Mojave Desert	2019	SBUS	Aggregated	40	DSL	3380.32	0.0645	0.073429	0.227798	6.615458	1134.536	0.029575	0.028296
Mojave Desert	2019	SBUS	Aggregated	45	GAS	585.442	0.050396	0.073538	1.746128	0.510084	484.4125	0.000797	0.000733
Mojave Desert	2019	SBUS	Aggregated	45	DSL	1621.8	0.053818	0.061268	0.189927	6.516567	1093.373	0.028979	0.027725
Mojave Desert	2019	SBUS	Aggregated	50	GAS	293.207	0.048754	0.071142	1.628405	0.501671	453.1453	0.000769	0.000707
Mojave Desert	2019	SBUS	Aggregated	50	DSL	812.245	0.048285	0.054968	0.163981	6.478436	1062.486	0.030382	0.029068
Mojave Desert	2019	SBUS	Aggregated	55	GAS	436.42	0.04914	0.071705	1.504249	0.513226	440.6553	0.000783	0.00072
Mojave Desert	2019	SBUS	Aggregated	55	DSL	1208.97	0.047431	0.053996	0.148636	6.519761	1041.201	0.033802	0.03234
Mojave Desert	2019	SBUS	Aggregated	60	GAS	242.888	0.052918	0.077218	1.410695	0.521039	443.3931	0.000842	0.000774
Mojave Desert	2019	SBUS	Aggregated	60	DSL	672.851	0.048745	0.055493	0.144422	6.54742	1033.728	0.036227	0.03466
Mojave Desert	2019	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	SBUS	Aggregated	70	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	SBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	SBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	SBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2019	SBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2019	UBUS	Aggregated	5	GAS	529.804	1.982914	2.875604	13.17602	2.461157	3879.802	0.006883	0.006338
Mojave Desert	2019	UBUS	Aggregated	5	DSL	715.651	3.453212	18.35539	36.74945	23.29415	3400.184	0.389764	0.372903
Mojave Desert	2019	UBUS	Aggregated	10	GAS	1691.94	1.310969	1.900527	10.75698	2.179338	3312.058	0.004432	0.004081
Mojave Desert	2019	UBUS	Aggregated	10	DSL	2279.94	2.627264	13.83684	29.18212	19.43225	3087.546	0.325346	0.311272
Mojave Desert	2019	UBUS	Aggregated	15	GAS	2951.53	0.916327	1.328047	9.12384	1.969314	2283	0.003015	0.002776
Mojave Desert	2019	UBUS	Aggregated	15	DSL	3982.53	1.367408	7.00759	17.43791	13.72703	2535.089	0.220585	0.211043
Mojave Desert	2019	UBUS	Aggregated	20	GAS	27597.5	0.679427	0.984459	8.021071	1.824214	1605.239	0.002169	0.001998
Mojave Desert	2019	UBUS	Aggregated	20	DSL	37359.6	0.632499	3.137974	10.23359	10.74382	2079.191	0.147488	0.141108
Mojave Desert	2019	UBUS	Aggregated	25	GAS	113.461	0.343487	0.498275	3.946328	1.002047	1397.168	0.001379	0.001269
Mojave Desert	2019	UBUS	Aggregated	25	DSL	140.649	0.345663	1.192576	5.521063	9.220861	1923.329	0.14068	0.134594
Mojave Desert	2019	UBUS	Aggregated	30	GAS	169.786	0.29201	0.423549	4.15524	1.097507	1283.429	0.001129	0.001039
Mojave Desert	2019	UBUS	Aggregated	30	DSL	229.553	0.292049	1.070337	4.923486	8.752145	1794.99	0.116925	0.111867
Mojave Desert	2019	UBUS	Aggregated	35	GAS	180.56	0.225624	0.327366	3.296227	0.934569	1184.205	0.000908	0.000835
Mojave Desert	2019	UBUS	Aggregated	35	DSL	239.266	0.227563	0.742561	3.888028	8.271843	1707.882	0.106656	0.102042
Mojave Desert	2019	UBUS	Aggregated	40	GAS	265.04	0.202265	0.293436	3.131063	0.917217	1101.671	0.000798	0.000734
Mojave Desert	2019	UBUS	Aggregated	40	DSL	352.967	0.194176	0.630773	3.42325	8.03817	1629.469	0.097419	0.093205

Mojave Desert	2019	UBUS	Aggregated	45	GAS	309.925	0.240728	0.348668	4.224737	1.214823	1025.732	0.000812	0.000747
Mojave Desert	2019	UBUS	Aggregated	45	DSL	417.296	0.204194	0.841061	3.87261	8.400083	1546.229	0.08337	0.079763
Mojave Desert	2019	UBUS	Aggregated	50	GAS	312.771	0.258647	0.374405	4.603153	1.337161	960.4136	0.000821	0.000756
Mojave Desert	2019	UBUS	Aggregated	50	DSL	420.202	0.207668	0.902983	3.923531	8.583189	1498.834	0.079321	0.07589
Mojave Desert	2019	UBUS	Aggregated	55	GAS	260.62	0.227447	0.328963	3.757165	1.136897	933.4651	0.000784	0.000722
Mojave Desert	2019	UBUS	Aggregated	55	DSL	320.535	0.203738	0.79148	3.435281	8.558937	1496.024	0.089348	0.085483
Mojave Desert	2019	UBUS	Aggregated	60	GAS	672.208	0.308416	0.446176	5.194357	1.517207	940.7191	0.000936	0.000862
Mojave Desert	2019	UBUS	Aggregated	60	DSL	886.237	0.253265	1.13562	4.200214	8.996281	1472.093	0.08543	0.081734
Mojave Desert	2019	UBUS	Aggregated	65	GAS	1143.54	0.433803	0.627808	6.694846	1.833701	959.4588	0.001173	0.001081
Mojave Desert	2019	UBUS	Aggregated	65	DSL	1599.1	0.31964	1.514096	4.965633	9.591735	1478.749	0.09143	0.087475
Mojave Desert	2019	UBUS	Aggregated	70	GAS	2192.92	0.520191	0.752708	7.471998	1.924735	990.3407	0.001334	0.001229
Mojave Desert	2019	UBUS	Aggregated	70	DSL	3048.95	0.395258	1.860242	5.63901	10.26652	1518.586	0.108465	0.103773

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air Basin

Region: Mojave Desert

Calendar Year: 2020

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	CalYr	VehClasses	MdlYr	Speed	Fuel	VMT	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	NOx_RUNEX	CO2_RUNEX	PM10_RUNEX	PM2_5_RUNEX
Mojave Desert	2020	HHDT	Aggregated	5	GAS	15.75172769	3.34892	4.86827	61.09437	6.364971	4154.243	0.005048	0.004647
Mojave Desert	2020	HHDT	Aggregated	5	DSL	5242.825847	1.04795	1.398061	4.492405	20.89704	3424.278	0.037743	0.03611
Mojave Desert	2020	HHDT	Aggregated	10	GAS	46.93111195	2.24827	3.271811	55.11085	5.63599	3517.767	0.003376	0.003107
Mojave Desert	2020	HHDT	Aggregated	10	DSL	14602.48857	0.79065	1.039428	3.518392	16.58679	2980.546	0.030929	0.029591
Mojave Desert	2020	HHDT	Aggregated	15	GAS	79.38476575	1.43223	2.080991	49.83015	4.883296	2540.174	0.002172	0.001999
Mojave Desert	2020	HHDT	Aggregated	15	DSL	19678.23275	0.54863	0.65439	2.430865	11.22369	2370.257	0.025721	0.024609
Mojave Desert	2020	HHDT	Aggregated	20	GAS	124.440108	1.00794	1.464308	45.21684	4.43888	2052.998	0.001527	0.001405
Mojave Desert	2020	HHDT	Aggregated	20	DSL	47483.78427	0.34852	0.404101	1.59139	7.351944	2031.416	0.021655	0.020718
Mojave Desert	2020	HHDT	Aggregated	25	GAS	271.239728	0.74872	1.085927	41.64345	4.020287	1926.733	0.001178	0.001085
Mojave Desert	2020	HHDT	Aggregated	25	DSL	61171.50014	0.2615	0.30376	1.232149	5.321181	1848.052	0.017927	0.017151
Mojave Desert	2020	HHDT	Aggregated	30	GAS	487.9621889	0.58411	0.846729	37.85214	3.722039	1833.216	0.00093	0.000856
Mojave Desert	2020	HHDT	Aggregated	30	DSL	105072.0304	0.1925	0.222162	0.908501	4.194703	1726.82	0.016393	0.015684

Mojave Desert	2020	HHDT	Aggregated	35	GAS	607.868431	0.49078	0.711994	35.00191	3.541157	1759.399	0.000768	0.000708
Mojave Desert	2020	HHDT	Aggregated	35	DSL	139589.1299	0.14148	0.165344	0.673155	3.528881	1645.444	0.015165	0.014509
Mojave Desert	2020	HHDT	Aggregated	40	GAS	769.947753	0.41372	0.599253	32.49566	3.342436	1696.838	0.000653	0.000602
Mojave Desert	2020	HHDT	Aggregated	40	DSL	158986.8585	0.10514	0.121771	0.499163	3.068144	1563.185	0.014386	0.013763
Mojave Desert	2020	HHDT	Aggregated	45	GAS	789.0881422	0.39553	0.572638	29.9699	3.303964	1652.127	0.000653	0.000602
Mojave Desert	2020	HHDT	Aggregated	45	DSL	246071.6469	0.07798	0.089628	0.371732	2.707062	1491.785	0.013647	0.013057
Mojave Desert	2020	HHDT	Aggregated	50	GAS	730.7635283	0.39269	0.568381	28.03812	3.287831	1627.56	0.000663	0.000611
Mojave Desert	2020	HHDT	Aggregated	50	DSL	249097.0182	0.05803	0.0663	0.278084	2.438852	1431.645	0.013143	0.012574
Mojave Desert	2020	HHDT	Aggregated	55	GAS	651.636821	0.41232	0.59801	26.72324	3.361342	1599.384	0.000672	0.000619
Mojave Desert	2020	HHDT	Aggregated	55	DSL	266200.6633	0.04468	0.050869	0.211926	2.348718	1394.609	0.01327	0.012696
Mojave Desert	2020	HHDT	Aggregated	60	GAS	1139.567779	0.43298	0.624779	25.17538	3.320465	1566.359	0.000782	0.000721
Mojave Desert	2020	HHDT	Aggregated	60	DSL	287771.4923	0.03855	0.04389	0.184159	2.246239	1375.38	0.013081	0.012515
Mojave Desert	2020	HHDT	Aggregated	65	GAS	2170.57497	0.50906	0.734398	24.96502	3.475847	1556.836	0.000939	0.000866
Mojave Desert	2020	HHDT	Aggregated	65	DSL	608666.4389	0.03721	0.042365	0.181855	2.094488	1367.658	0.0125	0.011959
Mojave Desert	2020	HHDT	Aggregated	70	GAS	3273.807034	0.5736	0.828263	26.24944	3.700997	1552.618	0.00104	0.000959
Mojave Desert	2020	HHDT	Aggregated	70	DSL	1800656.784	0.03737	0.042543	0.1822	2.110562	1368.029	0.012523	0.011982
Mojave Desert	2020	HHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2020	HHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	HHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	HHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	LDA	Aggregated	5	GAS	43848.86584	0.09949	0.145019	1.516899	0.13098	938.7015	0.011997	0.011031
Mojave Desert	2020	LDA	Aggregated	5	DSL	444.6631628	0.25064	0.285336	3.516421	0.218911	681.1351	0.059132	0.056574
Mojave Desert	2020	LDA	Aggregated	10	GAS	48901.94525	0.06325	0.092194	1.358167	0.11207	697.3843	0.007593	0.006982
Mojave Desert	2020	LDA	Aggregated	10	DSL	499.4630647	0.18419	0.209689	2.625857	0.201334	568.2666	0.043007	0.041147
Mojave Desert	2020	LDA	Aggregated	15	GAS	112873.3556	0.04277	0.06234	1.21628	0.097698	536.1937	0.005061	0.004654
Mojave Desert	2020	LDA	Aggregated	15	DSL	1163.126886	0.09952	0.113293	1.327686	0.163232	465.5632	0.030751	0.029421
Mojave Desert	2020	LDA	Aggregated	20	GAS	176347.0825	0.03007	0.043813	1.097018	0.088003	426.7426	0.003566	0.003279
Mojave Desert	2020	LDA	Aggregated	20	DSL	1840.543319	0.05127	0.058367	0.577402	0.143704	382.8065	0.024062	0.023021
Mojave Desert	2020	LDA	Aggregated	25	GAS	757483.5617	0.0228	0.033216	0.990902	0.080378	352.5182	0.002635	0.002423
Mojave Desert	2020	LDA	Aggregated	25	DSL	7886.865344	0.03375	0.038422	0.362715	0.125038	318.1003	0.018075	0.017293
Mojave Desert	2020	LDA	Aggregated	30	GAS	1696417.061	0.01781	0.025941	0.893809	0.074074	301.9697	0.002057	0.001892
Mojave Desert	2020	LDA	Aggregated	30	DSL	17898.71011	0.02617	0.02979	0.281137	0.118765	275.0808	0.014733	0.014096
Mojave Desert	2020	LDA	Aggregated	35	GAS	1725688.727	0.01493	0.021751	0.837989	0.070521	270.8984	0.001696	0.001559
Mojave Desert	2020	LDA	Aggregated	35	DSL	17947.00596	0.02223	0.025303	0.233354	0.119417	248.4886	0.01323	0.012657

Mojave Desert	2020	LDA	Aggregated	40	GAS	2094197.03	0.01291	0.018801	0.77208	0.067056	251.1967	0.001472	0.001354
Mojave Desert	2020	LDA	Aggregated	40	DSL	21836.58891	0.01948	0.022172	0.20233	0.120647	232.6688	0.012097	0.011574
Mojave Desert	2020	LDA	Aggregated	45	GAS	2966931.432	0.0119	0.017328	0.707102	0.06592	240.0268	0.001344	0.001236
Mojave Desert	2020	LDA	Aggregated	45	DSL	31105.44132	0.01683	0.019155	0.176937	0.113145	223.5048	0.010798	0.010331
Mojave Desert	2020	LDA	Aggregated	50	GAS	2434483.193	0.01147	0.016709	0.662947	0.065318	239.7691	0.0013	0.001196
Mojave Desert	2020	LDA	Aggregated	50	DSL	26239.97441	0.01602	0.018233	0.16771	0.118535	225.0037	0.010596	0.010138
Mojave Desert	2020	LDA	Aggregated	55	GAS	1680415.867	0.01164	0.016957	0.621901	0.066237	247.8688	0.001324	0.001217
Mojave Desert	2020	LDA	Aggregated	55	DSL	18287.63619	0.01575	0.017935	0.164418	0.121211	235.6123	0.010731	0.010266
Mojave Desert	2020	LDA	Aggregated	60	GAS	1873957.312	0.01238	0.018025	0.588839	0.067377	267.6281	0.001413	0.001299
Mojave Desert	2020	LDA	Aggregated	60	DSL	19469.49919	0.01632	0.018579	0.169787	0.118004	253.7083	0.011407	0.010913
Mojave Desert	2020	LDA	Aggregated	65	GAS	2760238.588	0.01409	0.020516	0.569233	0.07071	299.4936	0.001598	0.001469
Mojave Desert	2020	LDA	Aggregated	65	DSL	28970.10336	0.01787	0.020338	0.19119	0.120909	285.285	0.012563	0.012019
Mojave Desert	2020	LDA	Aggregated	70	GAS	3331366.733	0.01524	0.022192	0.555809	0.074117	318.2843	0.001738	0.001598
Mojave Desert	2020	LDA	Aggregated	70	DSL	35917.83491	0.01914	0.02179	0.2092	0.12582	309.0793	0.013456	0.012874
Mojave Desert	2020	LDT1	Aggregated	5	GAS	2924.424343	0.29095	0.423807	4.898245	0.458439	1120.026	0.021425	0.019702
Mojave Desert	2020	LDT1	Aggregated	5	DSL	3.046674098	0.81446	0.927207	3.627126	0.899403	956.7828	0.674411	0.645237
Mojave Desert	2020	LDT1	Aggregated	10	GAS	3249.648204	0.18621	0.271266	4.100784	0.373071	831.638	0.013764	0.012657

Mojave Desert	2020	LDT1	Aggregated	10	DSL	3.346846819	0.56466	0.642829	2.5789	0.931262	805.7408	0.470137	0.449799
Mojave Desert	2020	LDT1	Aggregated	15	GAS	7620.524914	0.13	0.189345	3.517287	0.314919	638.4318	0.009041	0.008314
Mojave Desert	2020	LDT1	Aggregated	15	DSL	7.829330623	0.39414	0.4487	1.803677	0.932625	662.299	0.328102	0.313909
Mojave Desert	2020	LDT1	Aggregated	20	GAS	11892.24528	0.09203	0.134027	3.058175	0.274743	508.3208	0.006433	0.005916
Mojave Desert	2020	LDT1	Aggregated	20	DSL	12.3956998	0.28927	0.329317	1.328044	0.964146	545.2545	0.251882	0.240986
Mojave Desert	2020	LDT1	Aggregated	25	GAS	52563.33295	0.07463	0.108629	2.759487	0.254253	419.3197	0.004652	0.004278
Mojave Desert	2020	LDT1	Aggregated	25	DSL	54.96583847	0.22701	0.258437	1.069565	0.966425	450.8946	0.187893	0.179765
Mojave Desert	2020	LDT1	Aggregated	30	GAS	118748.4888	0.05802	0.08444	2.401301	0.227624	358.8783	0.003529	0.003245
Mojave Desert	2020	LDT1	Aggregated	30	DSL	122.7385529	0.18413	0.209618	0.90207	0.971023	387.4376	0.151379	0.14483
Mojave Desert	2020	LDT1	Aggregated	35	GAS	120667.2003	0.05126	0.074583	2.320464	0.225151	322.2086	0.003038	0.002794
Mojave Desert	2020	LDT1	Aggregated	35	DSL	127.0597169	0.16506	0.187911	0.848783	1.044724	350.8691	0.135152	0.129305
Mojave Desert	2020	LDT1	Aggregated	40	GAS	145872.4377	0.04342	0.063187	2.099739	0.211186	298.6102	0.002618	0.002408
Mojave Desert	2020	LDT1	Aggregated	40	DSL	150.1706709	0.14804	0.168531	0.800035	1.076822	327.0558	0.122684	0.117377
Mojave Desert	2020	LDT1	Aggregated	45	GAS	211266.3598	0.0408	0.059346	1.944799	0.210965	285.1719	0.002299	0.002115
Mojave Desert	2020	LDT1	Aggregated	45	DSL	218.6150366	0.13946	0.158764	0.800045	1.07864	312.2006	0.111089	0.106284
Mojave Desert	2020	LDT1	Aggregated	50	GAS	173843.566	0.03788	0.055083	1.802448	0.205394	284.8375	0.002152	0.001979
Mojave Desert	2020	LDT1	Aggregated	50	DSL	185.614771	0.13792	0.157013	0.85549	1.101989	313.6389	0.111934	0.107092

Mojave Desert	2020	LDT1	Aggregated	55	GAS	120639.5526	0.03808	0.05535	1.735645	0.212015	294.4936	0.002155	0.001982
Mojave Desert	2020	LDT1	Aggregated	55	DSL	131.5554562	0.1444	0.164386	0.969862	1.139524	328.1334	0.117163	0.112095
Mojave Desert	2020	LDT1	Aggregated	60	GAS	133074.5393	0.04138	0.060181	1.756831	0.230367	317.8613	0.002372	0.002182
Mojave Desert	2020	LDT1	Aggregated	60	DSL	134.5025518	0.15793	0.179789	1.119952	1.206802	353.2661	0.125996	0.120545
Mojave Desert	2020	LDT1	Aggregated	65	GAS	197709.0459	0.04616	0.067107	1.782953	0.248059	355.6734	0.002608	0.002399
Mojave Desert	2020	LDT1	Aggregated	65	DSL	203.8776935	0.18065	0.205654	1.409341	1.235709	396.4938	0.143183	0.136989
Mojave Desert	2020	LDT1	Aggregated	70	GAS	241718.5681	0.04856	0.070573	1.782688	0.25914	378.1703	0.002736	0.002517
Mojave Desert	2020	LDT1	Aggregated	70	DSL	261.4011172	0.19655	0.223763	1.636785	1.237627	428.6712	0.15615	0.149395
Mojave Desert	2020	LDT2	Aggregated	5	GAS	11790.80864	0.1347	0.196387	2.046494	0.227257	1256.01	0.012139	0.011162
Mojave Desert	2020	LDT2	Aggregated	5	DSL	19.00347909	0.25801	0.293722	2.218856	0.169502	845.7726	0.017157	0.016414
Mojave Desert	2020	LDT2	Aggregated	10	GAS	13190.90334	0.08648	0.126085	1.821711	0.193781	932.9397	0.0077	0.00708
Mojave Desert	2020	LDT2	Aggregated	10	DSL	21.09982892	0.19233	0.218955	1.655606	0.146116	711.2395	0.013748	0.013153
Mojave Desert	2020	LDT2	Aggregated	15	GAS	32233.76994	0.05974	0.087093	1.635388	0.170234	717.3783	0.005144	0.00473
Mojave Desert	2020	LDT2	Aggregated	15	DSL	52.94891224	0.09593	0.109207	0.82332	0.104256	590.6417	0.010773	0.010307
Mojave Desert	2020	LDT2	Aggregated	20	GAS	50805.72008	0.04276	0.062328	1.482065	0.15392	571.8121	0.003631	0.003339
Mojave Desert	2020	LDT2	Aggregated	20	DSL	83.3539165	0.0394	0.044856	0.332948	0.077158	485.2247	0.008682	0.008306
Mojave Desert	2020	LDT2	Aggregated	25	GAS	234289.4842	0.0328	0.047797	1.340964	0.140955	472.5427	0.002687	0.002471

Mojave Desert	2020	LDT2	Aggregated	25	DSL	400.9128733	0.02447	0.027859	0.205351	0.06166	408.0707	0.007192	0.006881
Mojave Desert	2020	LDT2	Aggregated	30	GAS	547147.8315	0.02609	0.038028	1.219116	0.131264	405.3609	0.002103	0.001934
Mojave Desert	2020	LDT2	Aggregated	30	DSL	945.1766546	0.01861	0.021189	0.156416	0.053273	352.8914	0.006128	0.005863
Mojave Desert	2020	LDT2	Aggregated	35	GAS	542784.43	0.02164	0.031528	1.133127	0.12341	363.2835	0.001733	0.001594
Mojave Desert	2020	LDT2	Aggregated	35	DSL	939.3468371	0.01508	0.017166	0.126831	0.051146	318.7443	0.005548	0.005308
Mojave Desert	2020	LDT2	Aggregated	40	GAS	658770.1928	0.01874	0.0273	1.043758	0.117591	336.773	0.001506	0.001385
Mojave Desert	2020	LDT2	Aggregated	40	DSL	1131.772247	0.01264	0.014387	0.106456	0.048792	297.195	0.005076	0.004856
Mojave Desert	2020	LDT2	Aggregated	45	GAS	988775.8376	0.01741	0.025369	0.965899	0.116893	322.3839	0.001375	0.001264
Mojave Desert	2020	LDT2	Aggregated	45	DSL	1743.319376	0.01098	0.012498	0.092525	0.044598	287.0909	0.004774	0.004568
Mojave Desert	2020	LDT2	Aggregated	50	GAS	834324.1146	0.01713	0.024959	0.921301	0.118576	322.7822	0.00133	0.001223
Mojave Desert	2020	LDT2	Aggregated	50	DSL	1474.367086	0.00969	0.011037	0.082485	0.041736	287.6528	0.004493	0.004299
Mojave Desert	2020	LDT2	Aggregated	55	GAS	585303.1088	0.01745	0.025419	0.873297	0.121812	334.0267	0.001352	0.001243
Mojave Desert	2020	LDT2	Aggregated	55	DSL	1040.677281	0.00886	0.010085	0.076107	0.040284	300.9776	0.004381	0.004192
Mojave Desert	2020	LDT2	Aggregated	60	GAS	620008.0618	0.01783	0.025976	0.81095	0.120891	359.1316	0.001442	0.001326
Mojave Desert	2020	LDT2	Aggregated	60	DSL	1090.406276	0.00864	0.009832	0.07508	0.042658	325.4663	0.00446	0.004267
Mojave Desert	2020	LDT2	Aggregated	65	GAS	934648.1013	0.02034	0.029619	0.795994	0.129169	402.4491	0.001628	0.001497
Mojave Desert	2020	LDT2	Aggregated	65	DSL	1657.719718	0.00914	0.010403	0.081286	0.043177	365.9594	0.004809	0.004601

Mojave Desert	2020	LDT2	Aggregated	70	GAS	1172560.557	0.02228	0.032452	0.793246	0.138729	428.9059	0.001764	0.001622
Mojave Desert	2020	LDT2	Aggregated	70	DSL	2101.771828	0.00977	0.011127	0.088585	0.043683	395.5347	0.005225	0.004999
Mojave Desert	2020	LHDT1	Aggregated	5	GAS	1742.6307	0.46619	0.67781	5.409015	0.823708	1395.12	0.011931	0.010972
Mojave Desert	2020	LHDT1	Aggregated	5	DSL	1802.266699	0.82727	0.941789	3.511297	3.667342	1282.792	0.133197	0.127435
Mojave Desert	2020	LHDT1	Aggregated	10	GAS	4195.962423	0.30871	0.448799	4.269127	0.733412	1372.253	0.007647	0.007033
Mojave Desert	2020	LHDT1	Aggregated	10	DSL	5186.657019	0.58919	0.670756	2.537153	3.827114	1078.697	0.095064	0.090952
Mojave Desert	2020	LHDT1	Aggregated	15	GAS	10122.71287	0.21335	0.310092	3.485401	0.659992	953.2697	0.005137	0.004724
Mojave Desert	2020	LHDT1	Aggregated	15	DSL	12081.07396	0.38572	0.439117	1.695202	3.948862	704.4021	0.070232	0.067193
Mojave Desert	2020	LHDT1	Aggregated	20	GAS	11747.44149	0.15503	0.225275	2.94748	0.608626	827.645	0.003645	0.003352
Mojave Desert	2020	LHDT1	Aggregated	20	DSL	13378.52129	0.26086	0.296969	1.182981	4.089845	600.3366	0.054069	0.05173
Mojave Desert	2020	LHDT1	Aggregated	25	GAS	12719.16067	0.11335	0.164576	2.453574	0.555145	758.5094	0.002635	0.002424
Mojave Desert	2020	LHDT1	Aggregated	25	DSL	17147.36792	0.19658	0.223791	0.926332	4.141988	531.5353	0.042459	0.040622
Mojave Desert	2020	LHDT1	Aggregated	30	GAS	15805.12703	0.08829	0.128096	2.128548	0.510887	688.2783	0.002034	0.001871
Mojave Desert	2020	LHDT1	Aggregated	30	DSL	19190.81207	0.15867	0.180633	0.780675	4.192799	481.8327	0.034921	0.033411
Mojave Desert	2020	LHDT1	Aggregated	35	GAS	11818.72121	0.07276	0.105481	1.903744	0.483427	688.2077	0.001659	0.001526
Mojave Desert	2020	LHDT1	Aggregated	35	DSL	14652.56455	0.13514	0.153851	0.6993	4.294897	481.2829	0.030185	0.028879
Mojave Desert	2020	LHDT1	Aggregated	40	GAS	14528.98263	0.06326	0.091649	1.751197	0.458848	685.5361	0.001426	0.001312

Mojave Desert	2020	LHDT1	Aggregated	40	DSL	17561.804	0.11938	0.135905	0.654198	4.344656	467.3216	0.027003	0.025835
Mojave Desert	2020	LHDT1	Aggregated	45	GAS	17619.71413	0.0573	0.082982	1.640717	0.44332	682.2542	0.001286	0.001183
Mojave Desert	2020	LHDT1	Aggregated	45	DSL	21590.70196	0.11106	0.12643	0.647285	4.4316	455.4729	0.025431	0.024331
Mojave Desert	2020	LHDT1	Aggregated	50	GAS	24268.92046	0.0589	0.085364	1.711679	0.456256	719.6051	0.001287	0.001184
Mojave Desert	2020	LHDT1	Aggregated	50	DSL	31115.24549	0.1139	0.129667	0.711251	4.812143	478.6186	0.026034	0.024908
Mojave Desert	2020	LHDT1	Aggregated	55	GAS	13049.71916	0.05924	0.085795	1.721955	0.461209	758.0921	0.001292	0.001189
Mojave Desert	2020	LHDT1	Aggregated	55	DSL	21628.49936	0.11659	0.132734	0.787656	4.947445	499.8617	0.026667	0.025513
Mojave Desert	2020	LHDT1	Aggregated	60	GAS	37219.29963	0.06089	0.088129	1.763827	0.438563	769.0915	0.001345	0.001238
Mojave Desert	2020	LHDT1	Aggregated	60	DSL	31510.82778	0.11923	0.135734	0.877695	4.777156	503.0914	0.02745	0.026263
Mojave Desert	2020	LHDT1	Aggregated	65	GAS	71907.9822	0.06948	0.100569	1.997149	0.455701	779.5263	0.001515	0.001394
Mojave Desert	2020	LHDT1	Aggregated	65	DSL	69192.21994	0.13478	0.153438	1.085971	4.918056	509.5672	0.030862	0.029527
Mojave Desert	2020	LHDT1	Aggregated	70	GAS	131655.0212	0.0761	0.110164	2.178332	0.481802	772.136	0.001634	0.001504
Mojave Desert	2020	LHDT1	Aggregated	70	DSL	201711.6211	0.14489	0.164943	1.224572	4.9753	503.7243	0.033099	0.031667
Mojave Desert	2020	LHDT2	Aggregated	5	GAS	283.5393668	0.14976	0.218403	1.512104	0.380911	1466.554	0.006742	0.006199
Mojave Desert	2020	LHDT2	Aggregated	5	DSL	617.3520966	0.77475	0.881999	3.347863	2.49209	1337.903	0.090197	0.086295
Mojave Desert	2020	LHDT2	Aggregated	10	GAS	680.2741856	0.09693	0.141347	1.224104	0.332981	1522.348	0.004252	0.00391
Mojave Desert	2020	LHDT2	Aggregated	10	DSL	1769.701657	0.56166	0.639409	2.451287	2.548817	1189.485	0.066419	0.063546

Mojave Desert	2020	LHDT2	Aggregated	15	GAS	1644.489306	0.06634	0.096729	1.029203	0.297372	1070.863	0.002843	0.002614
Mojave Desert	2020	LHDT2	Aggregated	15	DSL	4127.880041	0.33358	0.379758	1.483903	2.556883	791.6886	0.05021	0.048038
Mojave Desert	2020	LHDT2	Aggregated	20	GAS	1910.306536	0.04771	0.069572	0.88926	0.271741	937.1605	0.002005	0.001844
Mojave Desert	2020	LHDT2	Aggregated	20	DSL	4577.894052	0.19683	0.224075	0.906666	2.596819	675.1658	0.039277	0.037578
Mojave Desert	2020	LHDT2	Aggregated	25	GAS	2116.368393	0.03647	0.053137	0.792885	0.257193	846.982	0.001513	0.001391
Mojave Desert	2020	LHDT2	Aggregated	25	DSL	5981.53895	0.14256	0.162294	0.678071	2.609249	600.2996	0.031252	0.0299
Mojave Desert	2020	LHDT2	Aggregated	30	GAS	2680.892304	0.029	0.042238	0.716383	0.241464	765.29	0.001196	0.0011
Mojave Desert	2020	LHDT2	Aggregated	30	DSL	6856.862696	0.11448	0.130324	0.563863	2.648174	540.202	0.026089	0.024961
Mojave Desert	2020	LHDT2	Aggregated	35	GAS	2033.633051	0.02454	0.035737	0.666403	0.233689	765.016	0.001002	0.000921
Mojave Desert	2020	LHDT2	Aggregated	35	DSL	5316.256782	0.0968	0.110197	0.497298	2.710094	539.485	0.022757	0.021772
Mojave Desert	2020	LHDT2	Aggregated	40	GAS	2535.097846	0.02178	0.031708	0.628483	0.225996	747.3367	0.00088	0.000809
Mojave Desert	2020	LHDT2	Aggregated	40	DSL	6510.754756	0.08518	0.096975	0.45948	2.753173	518.7929	0.0205	0.019613
Mojave Desert	2020	LHDT2	Aggregated	45	GAS	3106.099935	0.01993	0.02896	0.589385	0.218866	729.7045	0.0008	0.000736
Mojave Desert	2020	LHDT2	Aggregated	45	DSL	8044.316959	0.07863	0.089519	0.451358	2.82559	498.1595	0.019257	0.018424
Mojave Desert	2020	LHDT2	Aggregated	50	GAS	4196.201832	0.01945	0.028254	0.574306	0.214617	761.0539	0.000764	0.000703
Mojave Desert	2020	LHDT2	Aggregated	50	DSL	11269.46778	0.07842	0.089278	0.48558	3.031868	517.8921	0.019347	0.01851
Mojave Desert	2020	LHDT2	Aggregated	55	GAS	2284.99243	0.02013	0.02923	0.580177	0.221718	795.5044	0.000786	0.000723

Mojave Desert	2020	LHDT2	Aggregated	55	DSL	7866.117775	0.07904	0.089984	0.529067	3.109763	535.6445	0.019531	0.018686
Mojave Desert	2020	LHDT2	Aggregated	60	GAS	6622.1451	0.02141	0.031026	0.596786	0.217625	803.6243	0.000845	0.000777
Mojave Desert	2020	LHDT2	Aggregated	60	DSL	11930.68388	0.08207	0.09343	0.59682	3.085877	535.4982	0.020161	0.019289
Mojave Desert	2020	LHDT2	Aggregated	65	GAS	12832.72005	0.02463	0.03568	0.656564	0.227335	811.5186	0.000957	0.00088
Mojave Desert	2020	LHDT2	Aggregated	65	DSL	26128.44154	0.09175	0.104446	0.731617	3.169625	536.7374	0.022283	0.021319
Mojave Desert	2020	LHDT2	Aggregated	70	GAS	23557.58203	0.02732	0.039572	0.710835	0.241962	795.2668	0.001039	0.000956
Mojave Desert	2020	LHDT2	Aggregated	70	DSL	75553.49374	0.09724	0.110701	0.813892	3.17172	529.9761	0.023527	0.022509
Mojave Desert	2020	MCY	Aggregated	5	GAS	592.3088748	13.1421	16.02119	58.00609	1.539133	548.2158	0.010336	0.009695
Mojave Desert	2020	MCY	Aggregated	10	GAS	668.9469487	8.62834	10.49877	43.54215	1.402831	406.3065	0.00681	0.006392
Mojave Desert	2020	MCY	Aggregated	15	GAS	1652.86429	5.9432	7.228303	33.94938	1.302243	312.9586	0.004683	0.004395
Mojave Desert	2020	MCY	Aggregated	20	GAS	2577.37276	4.3666	5.299078	28.32287	1.240522	249.8	0.003437	0.003228
Mojave Desert	2020	MCY	Aggregated	25	GAS	11963.69953	3.32287	4.037614	23.91934	1.190389	207.6039	0.002595	0.002436
Mojave Desert	2020	MCY	Aggregated	30	GAS	28365.66656	2.68579	3.259769	21.3094	1.160449	178.6357	0.002086	0.001959
Mojave Desert	2020	MCY	Aggregated	35	GAS	27697.52112	2.27228	2.758243	19.54845	1.141031	159.7255	0.001773	0.001665
Mojave Desert	2020	MCY	Aggregated	40	GAS	34181.11379	2.02717	2.458217	18.63127	1.13454	148.0399	0.001583	0.001487
Mojave Desert	2020	MCY	Aggregated	45	GAS	51098.94143	1.89838	2.303007	18.37718	1.142739	142.6027	0.001467	0.001377
Mojave Desert	2020	MCY	Aggregated	50	GAS	42135.17361	1.88188	2.278313	19.08673	1.16054	142.2025	0.001461	0.001373

Mojave Desert	2020	MCY	Aggregated	55	GAS	29052.62702	1.95316	2.362983	20.58283	1.189226	147.3706	0.001517	0.001426
Mojave Desert	2020	MCY	Aggregated	60	GAS	32862.66694	2.09665	2.542097	22.7302	1.213851	158.9468	0.001617	0.001518
Mojave Desert	2020	MCY	Aggregated	65	GAS	48398.89804	2.38851	2.89538	26.97782	1.254415	177.477	0.001848	0.001735
Mojave Desert	2020	MCY	Aggregated	70	GAS	57336.32582	2.62922	3.183328	30.55823	1.296374	189.9933	0.002031	0.001908
Mojave Desert	2020	MDV	Aggregated	5	GAS	8296.844596	0.31516	0.439227	4.305061	0.440786	1700.915	0.012633	0.011631
Mojave Desert	2020	MDV	Aggregated	5	DSL	125.3924044	0.22268	0.253511	3.556707	0.170996	1044.043	0.030692	0.029364
Mojave Desert	2020	MDV	Aggregated	10	GAS	9255.568877	0.20024	0.278367	3.566227	0.368155	1261.495	0.008022	0.007387
Mojave Desert	2020	MDV	Aggregated	10	DSL	141.9239228	0.16426	0.186996	2.663037	0.147311	887.0804	0.022411	0.021441
Mojave Desert	2020	MDV	Aggregated	15	GAS	22081.78274	0.13791	0.191797	3.088746	0.328027	972.0137	0.005365	0.00494
Mojave Desert	2020	MDV	Aggregated	15	DSL	347.5605548	0.08528	0.097087	1.329038	0.109592	754.9427	0.017456	0.016701
Mojave Desert	2020	MDV	Aggregated	20	GAS	34819.44691	0.09735	0.134998	2.680665	0.290195	773.2231	0.003774	0.003475
Mojave Desert	2020	MDV	Aggregated	20	DSL	559.5548268	0.03809	0.043367	0.540905	0.08257	627.9491	0.013446	0.012865
Mojave Desert	2020	MDV	Aggregated	25	GAS	155949.8025	0.07743	0.107479	2.476583	0.282301	642.3334	0.002824	0.002601
Mojave Desert	2020	MDV	Aggregated	25	DSL	2525.678697	0.02575	0.029312	0.338497	0.073674	532.6925	0.011724	0.011216
Mojave Desert	2020	MDV	Aggregated	30	GAS	357885.9845	0.06043	0.08391	2.205024	0.260929	550.9068	0.002201	0.002027
Mojave Desert	2020	MDV	Aggregated	30	DSL	5959.326033	0.01987	0.022623	0.26062	0.067225	461.1662	0.009805	0.009381
Mojave Desert	2020	MDV	Aggregated	35	GAS	359349.9276	0.05279	0.073002	2.103424	0.254433	494.5838	0.001843	0.001698

Mojave Desert	2020	MDV	Aggregated	35	DSL	5819.76296	0.01686	0.019188	0.212357	0.066578	417.8108	0.009058	0.008666
Mojave Desert	2020	MDV	Aggregated	40	GAS	434380.9573	0.04541	0.062706	1.927304	0.240659	458.0435	0.001602	0.001476
Mojave Desert	2020	MDV	Aggregated	40	DSL	7081.567225	0.01429	0.016266	0.179129	0.063935	390.7015	0.008122	0.007771
Mojave Desert	2020	MDV	Aggregated	45	GAS	637835.0898	0.04268	0.058994	1.826985	0.245469	439.4516	0.001465	0.00135
Mojave Desert	2020	MDV	Aggregated	45	DSL	10580.94518	0.01292	0.01471	0.158282	0.063945	377.0655	0.007819	0.007481
Mojave Desert	2020	MDV	Aggregated	50	GAS	536864.2218	0.04004	0.055375	1.703814	0.238395	438.537	0.001392	0.001282
Mojave Desert	2020	MDV	Aggregated	50	DSL	9267.917312	0.01146	0.013047	0.141816	0.060337	380.0415	0.007218	0.006906
Mojave Desert	2020	MDV	Aggregated	55	GAS	376020.3899	0.04064	0.056151	1.646751	0.243514	453.5452	0.001408	0.001297
Mojave Desert	2020	MDV	Aggregated	55	DSL	6576.452507	0.01089	0.012398	0.132396	0.059753	401.608	0.007171	0.006861
Mojave Desert	2020	MDV	Aggregated	60	GAS	399334.2393	0.04548	0.06255	1.718141	0.261106	490.2	0.001551	0.001429
Mojave Desert	2020	MDV	Aggregated	60	DSL	6540.710154	0.012	0.013666	0.138078	0.065966	432.5758	0.008144	0.007792
Mojave Desert	2020	MDV	Aggregated	65	GAS	598780.1171	0.05126	0.070557	1.773922	0.277011	548.8262	0.001738	0.001601
Mojave Desert	2020	MDV	Aggregated	65	DSL	9979.342391	0.01287	0.014649	0.149568	0.066813	486.5645	0.00883	0.008448
Mojave Desert	2020	MDV	Aggregated	70	GAS	746986.1082	0.05403	0.074477	1.765528	0.286715	583.152	0.001852	0.001706
Mojave Desert	2020	MDV	Aggregated	70	DSL	12958.343	0.01294	0.014734	0.154215	0.064787	525.5153	0.00895	0.008562
Mojave Desert	2020	MH	Aggregated	5	GAS	90.79765976	0.88828	1.263687	14.95382	1.241944	3924.232	0.013256	0.01221
Mojave Desert	2020	MH	Aggregated	5	DSL	19.41564208	1.2831	1.460721	2.664878	17.44837	2102.379	0.471957	0.45154

Mojave Desert	2020	MH	Aggregated	10	GAS	360.0432555	0.60907	0.865674	11.57469	1.144761	3350.563	0.008774	0.008082
Mojave Desert	2020	MH	Aggregated	10	DSL	80.42792328	0.97519	1.110184	2.194602	14.60082	1909.382	0.403607	0.386147
Mojave Desert	2020	MH	Aggregated	15	GAS	537.1829393	0.42183	0.599099	8.948382	1.035193	2309.17	0.005929	0.005462
Mojave Desert	2020	MH	Aggregated	15	DSL	125.2543291	0.49958	0.568744	1.43837	10.19794	1567.551	0.286273	0.273889
Mojave Desert	2020	MH	Aggregated	20	GAS	619.6905803	0.30676	0.435139	7.240916	0.963081	1623.557	0.00423	0.003897
Mojave Desert	2020	MH	Aggregated	20	DSL	143.1477972	0.22577	0.257021	0.947033	7.698024	1286.266	0.204153	0.195322
Mojave Desert	2020	MH	Aggregated	25	GAS	1122.485734	0.23474	0.332596	6.088809	0.901646	1416.434	0.003158	0.00291
Mojave Desert	2020	MH	Aggregated	25	DSL	259.3192752	0.15704	0.178778	0.739028	6.76979	1152.801	0.1652	0.158054
Mojave Desert	2020	MH	Aggregated	30	GAS	1663.895342	0.18614	0.263527	5.274322	0.852418	1301.276	0.00249	0.002295
Mojave Desert	2020	MH	Aggregated	30	DSL	394.6945005	0.12685	0.144412	0.624271	6.283104	1081.874	0.146055	0.139737
Mojave Desert	2020	MH	Aggregated	35	GAS	1836.254905	0.15949	0.225624	4.865968	0.835729	1201.788	0.002098	0.001934
Mojave Desert	2020	MH	Aggregated	35	DSL	416.1939384	0.10559	0.120202	0.543725	5.985212	1023.357	0.137056	0.131127
Mojave Desert	2020	MH	Aggregated	40	GAS	2648.907365	0.14244	0.201404	4.613082	0.819891	1118.032	0.001849	0.001705
Mojave Desert	2020	MH	Aggregated	40	DSL	635.4675697	0.08945	0.101827	0.477095	5.73898	976.6487	0.133812	0.128023
Mojave Desert	2020	MH	Aggregated	45	GAS	2740.890197	0.13622	0.192565	4.621067	0.825348	1037.861	0.001741	0.001605
Mojave Desert	2020	MH	Aggregated	45	DSL	653.5649427	0.07773	0.088493	0.420644	5.479148	941.5753	0.135522	0.129659
Mojave Desert	2020	MH	Aggregated	50	GAS	2576.89282	0.13607	0.192294	4.800559	0.838727	970.4218	0.001718	0.001584

Mojave Desert	2020	MH	Aggregated	50	DSL	654.293581	0.07302	0.083126	0.392144	5.37967	918.9692	0.147034	0.140673
Mojave Desert	2020	MH	Aggregated	55	GAS	2063.692494	0.14353	0.202674	5.251317	0.876938	944.1617	0.00179	0.001651
Mojave Desert	2020	MH	Aggregated	55	DSL	627.1898007	0.07515	0.085557	0.390166	5.453918	908.8255	0.169414	0.162085
Mojave Desert	2020	MH	Aggregated	60	GAS	4716.914941	0.1534	0.216725	5.821449	0.870227	948.7279	0.001921	0.001771
Mojave Desert	2020	MH	Aggregated	60	DSL	1253.158907	0.07911	0.090064	0.386291	5.379195	909.7537	0.189888	0.181673
Mojave Desert	2020	MH	Aggregated	65	GAS	8203.187142	0.17692	0.250027	6.983605	0.895419	965.1991	0.002185	0.002014
Mojave Desert	2020	MH	Aggregated	65	DSL	2260.757762	0.0874	0.099497	0.396551	5.348216	922.4875	0.214197	0.204931
Mojave Desert	2020	MH	Aggregated	70	GAS	12410.28271	0.19991	0.282185	8.042322	0.955055	994.9792	0.00239	0.002203
Mojave Desert	2020	MH	Aggregated	70	DSL	3840.70299	0.10281	0.117043	0.432948	5.519184	947.5911	0.249244	0.238462
Mojave Desert	2020	MHDT	Aggregated	5	GAS	148.1434658	0.5738	0.837289	5.177274	1.072377	3796.062	0.007826	0.007196
Mojave Desert	2020	MHDT	Aggregated	5	DSL	695.0197898	0.81721	0.930327	1.956688	10.33456	2239.093	0.064444	0.061656
Mojave Desert	2020	MHDT	Aggregated	10	GAS	549.9792774	0.38022	0.554812	4.638525	0.951788	3238.7	0.00506	0.004652
Mojave Desert	2020	MHDT	Aggregated	10	DSL	2636.899781	0.6279	0.714821	1.560625	8.325224	1992.204	0.059772	0.057186
Mojave Desert	2020	MHDT	Aggregated	15	GAS	858.5582404	0.25121	0.366568	3.923724	0.834289	2233.453	0.003333	0.003064
Mojave Desert	2020	MHDT	Aggregated	15	DSL	4253.45519	0.36829	0.419274	1.03739	5.680088	1669.205	0.052369	0.050103
Mojave Desert	2020	MHDT	Aggregated	20	GAS	1013.288014	0.17565	0.256311	3.424481	0.7552	1570.47	0.002332	0.002144
Mojave Desert	2020	MHDT	Aggregated	20	DSL	5190.207364	0.21872	0.248997	0.713489	3.955296	1449.696	0.046605	0.044588

Mojave Desert	2020	MHDT	Aggregated	25	GAS	2045.130774	0.12763	0.186243	2.983641	0.679797	1373.426	0.001679	0.001544
Mojave Desert	2020	MHDT	Aggregated	25	DSL	9938.540808	0.16492	0.187748	0.547851	2.968321	1331.499	0.043414	0.041536
Mojave Desert	2020	MHDT	Aggregated	30	GAS	3170.125634	0.09666	0.141045	2.633736	0.62039	1262.671	0.00129	0.001186
Mojave Desert	2020	MHDT	Aggregated	30	DSL	15395.95771	0.13157	0.149787	0.441024	2.442492	1254.809	0.042325	0.040494
Mojave Desert	2020	MHDT	Aggregated	35	GAS	3410.613006	0.08093	0.118096	2.450065	0.593276	1165.253	0.001074	0.000988
Mojave Desert	2020	MHDT	Aggregated	35	DSL	17028.12488	0.10597	0.120639	0.363945	2.111837	1193.849	0.042896	0.041041
Mojave Desert	2020	MHDT	Aggregated	40	GAS	4976.798043	0.07031	0.102591	2.267676	0.567381	1084.193	0.000932	0.000857
Mojave Desert	2020	MHDT	Aggregated	40	DSL	26964.09565	0.08614	0.098069	0.308959	1.881864	1143.853	0.04494	0.042996
Mojave Desert	2020	MHDT	Aggregated	45	GAS	5397.065896	0.06478	0.094521	2.111666	0.54753	1008.468	0.000844	0.000776
Mojave Desert	2020	MHDT	Aggregated	45	DSL	23870.18765	0.06996	0.079641	0.267231	1.727573	1102.388	0.047345	0.045297
Mojave Desert	2020	MHDT	Aggregated	50	GAS	5179.998523	0.06313	0.092123	2.009239	0.54046	943.8466	0.000813	0.000748
Mojave Desert	2020	MHDT	Aggregated	50	DSL	21931.21468	0.05804	0.066077	0.239925	1.621077	1067.59	0.051331	0.04911
Mojave Desert	2020	MHDT	Aggregated	55	GAS	3919.219974	0.06691	0.097639	2.014499	0.563446	917.2487	0.000848	0.00078
Mojave Desert	2020	MHDT	Aggregated	55	DSL	20252.21871	0.04965	0.056518	0.224198	1.558124	1039.817	0.056891	0.05443
Mojave Desert	2020	MHDT	Aggregated	60	GAS	10058.06455	0.06808	0.099343	1.883626	0.539106	924.3486	0.000877	0.000806
Mojave Desert	2020	MHDT	Aggregated	60	DSL	37831.29508	0.04617	0.052563	0.218498	1.519124	1027.205	0.059794	0.057207
Mojave Desert	2020	MHDT	Aggregated	65	GAS	18818.72381	0.07725	0.112725	1.913748	0.551269	942.4878	0.000977	0.000899

Mojave Desert	2020	MHDT	Aggregated	65	DSL	60557.78635	0.04533	0.051601	0.214051	1.521495	1027.063	0.058315	0.055792
Mojave Desert	2020	MHDT	Aggregated	70	GAS	28815.44116	0.0891	0.130019	2.08059	0.599844	972.5214	0.001073	0.000987
Mojave Desert	2020	MHDT	Aggregated	70	DSL	93959.04484	0.04447	0.050621	0.208577	1.567375	1027.62	0.056481	0.054038
Mojave Desert	2020	MHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	MHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	MHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	MHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	OBUS	Aggregated	5	GAS	91.87492166	0.33767	0.492676	2.633619	0.717429	3814.231	0.005748	0.005285
Mojave Desert	2020	OBUS	Aggregated	5	DSL	56.76823034	0.74383	0.846798	2.566809	13.91401	2662.435	0.039106	0.037414
Mojave Desert	2020	OBUS	Aggregated	10	GAS	359.9180885	0.21006	0.306485	2.305382	0.613816	3258.325	0.003552	0.003266
Mojave Desert	2020	OBUS	Aggregated	10	DSL	229.8058636	0.59183	0.673758	2.058242	11.25205	2357.669	0.03439	0.032903
Mojave Desert	2020	OBUS	Aggregated	15	GAS	542.4758106	0.14181	0.206897	2.099208	0.545225	2245.014	0.002389	0.002197
Mojave Desert	2020	OBUS	Aggregated	15	DSL	344.6744758	0.39686	0.451791	1.419043	7.861628	1967.286	0.027689	0.026492
Mojave Desert	2020	OBUS	Aggregated	20	GAS	626.5072945	0.10054	0.146695	1.920167	0.497048	1577.922	0.001692	0.001556
Mojave Desert	2020	OBUS	Aggregated	20	DSL	415.1710254	0.28179	0.3208	1.039438	5.81554	1729.445	0.023458	0.022443
Mojave Desert	2020	OBUS	Aggregated	25	GAS	1201.053676	0.07472	0.109009	1.748352	0.453146	1377.808	0.001252	0.001151
Mojave Desert	2020	OBUS	Aggregated	25	DSL	670.4325489	0.20698	0.23563	0.767042	4.618143	1587.993	0.020927	0.020022

Mojave Desert	2020	OBUS	Aggregated	30	GAS	1787.550542	0.0586	0.085493	1.61728	0.424104	1265.089	0.000994	0.000914
Mojave Desert	2020	OBUS	Aggregated	30	DSL	993.7831087	0.15585	0.177423	0.579782	4.012334	1504.478	0.019306	0.018471
Mojave Desert	2020	OBUS	Aggregated	35	GAS	1945.694328	0.04854	0.070823	1.498006	0.402269	1168.057	0.000819	0.000753
Mojave Desert	2020	OBUS	Aggregated	35	DSL	1138.695531	0.11652	0.132648	0.435379	3.603318	1433.831	0.018004	0.017226
Mojave Desert	2020	OBUS	Aggregated	40	GAS	2811.486595	0.04238	0.061835	1.395208	0.385945	1086.518	0.000714	0.000657
Mojave Desert	2020	OBUS	Aggregated	40	DSL	1793.404148	0.08764	0.099768	0.329648	3.325707	1378.629	0.017102	0.016362
Mojave Desert	2020	OBUS	Aggregated	45	GAS	3024.319248	0.03803	0.055471	1.268975	0.367736	1009.803	0.000645	0.000593
Mojave Desert	2020	OBUS	Aggregated	45	DSL	1452.334395	0.06566	0.074743	0.248837	3.105334	1327.285	0.016417	0.015707
Mojave Desert	2020	OBUS	Aggregated	50	GAS	2900.878706	0.03636	0.05303	1.174525	0.359446	944.8106	0.000618	0.000569
Mojave Desert	2020	OBUS	Aggregated	50	DSL	1413.452135	0.05081	0.057849	0.194981	2.985414	1298.33	0.016302	0.015597
Mojave Desert	2020	OBUS	Aggregated	55	GAS	2269.666495	0.03716	0.054201	1.109888	0.364784	919.1756	0.000625	0.000575
Mojave Desert	2020	OBUS	Aggregated	55	DSL	1660.491324	0.04038	0.045968	0.157453	2.925824	1282.796	0.016619	0.0159
Mojave Desert	2020	OBUS	Aggregated	60	GAS	5515.008007	0.0392	0.057159	1.041344	0.361231	924.3788	0.000675	0.000621
Mojave Desert	2020	OBUS	Aggregated	60	DSL	2294.871842	0.03439	0.039148	0.133737	2.798455	1241.685	0.016201	0.0155
Mojave Desert	2020	OBUS	Aggregated	65	GAS	10096.18415	0.04421	0.064457	1.000246	0.368218	941.7221	0.000758	0.000697
Mojave Desert	2020	OBUS	Aggregated	65	DSL	2464.019737	0.0337	0.038362	0.130453	2.757354	1228.72	0.01595	0.01526
Mojave Desert	2020	OBUS	Aggregated	70	GAS	15753.4347	0.04864	0.070916	1.013379	0.383065	972.4426	0.000805	0.00074

Mojave Desert	2020	OBUS	Aggregated	70	DSL	4075.07635	0.035	0.03984	0.136627	2.833384	1253.097	0.016422	0.015712
Mojave Desert	2020	OBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	OBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	OBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	OBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	SBUS	Aggregated	5	GAS	101.7356316	0.38768	0.565708	2.883641	0.868378	1820.571	0.00651	0.005986
Mojave Desert	2020	SBUS	Aggregated	5	DSL	269.5248428	0.78231	0.890596	1.345005	18.4818	2316.811	0.140384	0.134311
Mojave Desert	2020	SBUS	Aggregated	10	GAS	356.5781743	0.24439	0.356606	2.630927	0.751887	1554.155	0.004096	0.003766
Mojave Desert	2020	SBUS	Aggregated	10	DSL	944.6707596	0.60252	0.685924	1.11504	15.06	2079.946	0.116134	0.111111
Mojave Desert	2020	SBUS	Aggregated	15	GAS	713.1563486	0.16222	0.236707	2.402477	0.663875	1071.282	0.002719	0.0025
Mojave Desert	2020	SBUS	Aggregated	15	DSL	1889.341519	0.33895	0.385864	0.78671	10.31776	1728.184	0.07739	0.074042
Mojave Desert	2020	SBUS	Aggregated	20	GAS	967.9937542	0.11362	0.165788	2.200222	0.595392	753.2008	0.001904	0.001751
Mojave Desert	2020	SBUS	Aggregated	20	DSL	2564.473826	0.1838	0.209244	0.561753	7.7659	1465.538	0.050921	0.048718
Mojave Desert	2020	SBUS	Aggregated	25	GAS	1528.043192	0.08391	0.122435	2.019416	0.543126	657.7043	0.001407	0.001293
Mojave Desert	2020	SBUS	Aggregated	25	DSL	4048.194272	0.13232	0.150632	0.432107	6.995831	1330.281	0.040277	0.038535
Mojave Desert	2020	SBUS	Aggregated	30	GAS	1833.250086	0.06537	0.095391	1.858533	0.503405	604.4034	0.001096	0.001008
Mojave Desert	2020	SBUS	Aggregated	30	DSL	4856.7688	0.10191	0.116021	0.34341	6.616072	1249.985	0.034201	0.032722

Mojave Desert	2020	SBUS	Aggregated	35	GAS	1881.600584	0.05365	0.078286	1.71256	0.475481	558.0109	0.000901	0.000829
Mojave Desert	2020	SBUS	Aggregated	35	DSL	4984.862173	0.07908	0.09003	0.275073	6.360298	1185.26	0.030011	0.028713
Mojave Desert	2020	SBUS	Aggregated	40	GAS	1270.179867	0.04648	0.067819	1.583224	0.455838	519.1468	0.000782	0.000719
Mojave Desert	2020	SBUS	Aggregated	40	DSL	3365.045496	0.06272	0.071403	0.223351	6.189637	1133.234	0.027688	0.02649
Mojave Desert	2020	SBUS	Aggregated	45	GAS	609.401725	0.0425	0.062017	1.468482	0.443545	482.3657	0.000715	0.000658
Mojave Desert	2020	SBUS	Aggregated	45	DSL	1614.467828	0.052	0.059196	0.185507	6.088313	1092.208	0.027226	0.026048
Mojave Desert	2020	SBUS	Aggregated	50	GAS	305.2068948	0.04112	0.059997	1.369475	0.43623	451.2306	0.00069	0.000635
Mojave Desert	2020	SBUS	Aggregated	50	DSL	808.5745284	0.04628	0.052692	0.159546	6.045429	1061.104	0.028632	0.027393
Mojave Desert	2020	SBUS	Aggregated	55	GAS	454.280959	0.04144	0.060472	1.265074	0.446274	438.7934	0.000703	0.000646
Mojave Desert	2020	SBUS	Aggregated	55	DSL	1203.511515	0.04509	0.05133	0.144032	6.077687	1039.202	0.031921	0.03054
Mojave Desert	2020	SBUS	Aggregated	60	GAS	252.8286878	0.04463	0.065121	1.186391	0.453068	441.5195	0.000755	0.000695
Mojave Desert	2020	SBUS	Aggregated	60	DSL	669.8106777	0.04616	0.052551	0.139658	6.100625	1031.284	0.034232	0.032752
Mojave Desert	2020	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	SBUS	Aggregated	70	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	SBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	SBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	SBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2020	SBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2020	UBUS	Aggregated	5	GAS	533.7415649	1.76909	2.578628	11.3991	2.248637	3862.629	0.006719	0.006179
Mojave Desert	2020	UBUS	Aggregated	5	DSL	692.7041586	3.16818	17.56507	36.90452	21.24947	3360.667	0.3507	0.335529
Mojave Desert	2020	UBUS	Aggregated	10	GAS	1704.490955	1.16917	1.704088	9.352344	1.991447	3297.398	0.004309	0.003963
Mojave Desert	2020	UBUS	Aggregated	10	DSL	2207.184161	2.4089	13.23345	29.14155	17.71681	3051.713	0.292583	0.279926
Mojave Desert	2020	UBUS	Aggregated	15	GAS	2973.46579	0.81701	1.190755	7.963633	1.799556	2272.894	0.002919	0.002685
Mojave Desert	2020	UBUS	Aggregated	15	DSL	3855.125573	1.25224	6.692174	17.13246	12.49841	2505.644	0.198164	0.189592
Mojave Desert	2020	UBUS	Aggregated	20	GAS	27793.06899	0.60579	0.882869	7.022698	1.667173	1598.144	0.002092	0.001924
Mojave Desert	2020	UBUS	Aggregated	20	DSL	36146.95504	0.57889	2.984867	9.811153	9.765263	2055.04	0.132292	0.126569
Mojave Desert	2020	UBUS	Aggregated	25	GAS	116.4139662	0.30137	0.439308	3.432018	0.918048	1390.626	0.00137	0.00126
Mojave Desert	2020	UBUS	Aggregated	25	DSL	138.9997577	0.31209	1.132824	5.254879	8.3475	1898.46	0.126567	0.121091
Mojave Desert	2020	UBUS	Aggregated	30	GAS	174.3068026	0.26049	0.379716	3.609125	1.000056	1277.373	0.001116	0.001026
Mojave Desert	2020	UBUS	Aggregated	30	DSL	225.3425689	0.26476	1.016646	4.673796	7.928645	1771.484	0.105404	0.100844
Mojave Desert	2020	UBUS	Aggregated	35	GAS	186.0104083	0.20103	0.293049	2.862101	0.853832	1178.578	0.000902	0.00083
Mojave Desert	2020	UBUS	Aggregated	35	DSL	235.879797	0.20586	0.707093	3.68662	7.483627	1684.965	0.096256	0.092092
Mojave Desert	2020	UBUS	Aggregated	40	GAS	273.0707871	0.18067	0.263365	2.717063	0.837883	1096.431	0.000791	0.000728
Mojave Desert	2020	UBUS	Aggregated	40	DSL	347.8628593	0.17569	0.600108	3.239779	7.267444	1607.59	0.087992	0.084185

Mojave Desert	2020	UBUS	Aggregated	45	GAS	315.6884322	0.21534	0.313815	3.672834	1.107569	1020.985	0.000785	0.000722
Mojave Desert	2020	UBUS	Aggregated	45	DSL	407.4041316	0.18552	0.793034	3.647353	7.595692	1527.084	0.075038	0.071792
Mojave Desert	2020	UBUS	Aggregated	50	GAS	316.9715094	0.23165	0.337544	4.002572	1.22073	956.0396	0.000787	0.000724
Mojave Desert	2020	UBUS	Aggregated	50	DSL	408.7539912	0.18894	0.84877	3.691225	7.761655	1480.878	0.071262	0.068179
Mojave Desert	2020	UBUS	Aggregated	55	GAS	265.0769365	0.20139	0.293412	3.233794	1.039743	929.1711	0.000755	0.000694
Mojave Desert	2020	UBUS	Aggregated	55	DSL	314.8670968	0.18397	0.735988	3.209624	7.705631	1478.301	0.08028	0.076807
Mojave Desert	2020	UBUS	Aggregated	60	GAS	677.1939007	0.27756	0.404407	4.493139	1.388912	936.5223	0.000888	0.000817
Mojave Desert	2020	UBUS	Aggregated	60	DSL	859.3606255	0.23038	1.059039	3.942512	8.123344	1455.135	0.076568	0.073255
Mojave Desert	2020	UBUS	Aggregated	65	GAS	1143.905764	0.39046	0.56894	5.797623	1.68207	955.3296	0.001102	0.001013
Mojave Desert	2020	UBUS	Aggregated	65	DSL	1536.300325	0.29312	1.41869	4.690428	8.706835	1461.68	0.082184	0.078628
Mojave Desert	2020	UBUS	Aggregated	70	GAS	2188.176991	0.46224	0.673482	6.444268	1.766115	986.1827	0.001245	0.001146
Mojave Desert	2020	UBUS	Aggregated	70	DSL	2924.683894	0.36352	1.741724	5.331082	9.34954	1501.435	0.098066	0.093824

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air Basin

Region: Mojave Desert

Calendar Year: 2021

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	CalYr	VehClass	MdlYr	Speed	Fuel	VMT	ROG_ RUNEX	TOG_ RUNEX	CO_ RUNEX	NOx_ RUNEX	CO2_ RUNEX	PM10_ RUNEX	PM2_5_ RUNEX
Mojave Desert	2021	HHDT	Aggregated	5	GAS	11.09470065	3.115607	4.546286	57.83822	6.141261	4097.755	0.005449	0.005011
Mojave Desert	2021	HHDT	Aggregated	5	DSL	5277.442287	1.012253	1.354755	4.482712	20.92678	3383.702	0.034744	0.033241
Mojave Desert	2021	HHDT	Aggregated	10	GAS	47.42680903	2.004273	2.92463	52.47745	5.344074	3476.843	0.003459	0.003181
Mojave Desert	2021	HHDT	Aggregated	10	DSL	14981.24903	0.754416	0.994053	3.479791	16.41363	2935.557	0.027795	0.026592
Mojave Desert	2021	HHDT	Aggregated	15	GAS	86.5776332	1.261327	1.840526	47.19914	4.624818	2511.473	0.0022	0.002023
Mojave Desert	2021	HHDT	Aggregated	15	DSL	20978.9284	0.520923	0.621118	2.383261	10.93941	2333.92	0.022951	0.021958
Mojave Desert	2021	HHDT	Aggregated	20	GAS	111.8813988	0.907596	1.324363	43.08481	4.228511	2028.244	0.001577	0.00145
Mojave Desert	2021	HHDT	Aggregated	20	DSL	48371.11768	0.333193	0.386615	1.563714	6.96223	2004.297	0.019214	0.018382
Mojave Desert	2021	HHDT	Aggregated	25	GAS	323.7631832	0.647406	0.944694	39.51141	3.780969	1906.478	0.001154	0.001061
Mojave Desert	2021	HHDT	Aggregated	25	DSL	66764.39636	0.247034	0.286859	1.199084	4.870884	1821.325	0.015803	0.015119
Mojave Desert	2021	HHDT	Aggregated	30	GAS	528.2552907	0.509895	0.744038	36.06958	3.506915	1812.751	0.00092	0.000846
Mojave Desert	2021	HHDT	Aggregated	30	DSL	111119.3448	0.181834	0.209883	0.88353	3.753236	1703.7	0.014463	0.013837

Mojave Desert	2021	HHDT	Aggregated	35	GAS	670.6474791	0.427826	0.624282	33.45128	3.32565	1739.902	0.000759	0.000698
Mojave Desert	2021	HHDT	Aggregated	35	DSL	147046.9982	0.133426	0.155988	0.653701	3.099571	1623.707	0.013371	0.012793
Mojave Desert	2021	HHDT	Aggregated	40	GAS	655.445511	0.37061	0.540794	30.85723	3.181312	1674.865	0.000669	0.000615
Mojave Desert	2021	HHDT	Aggregated	40	DSL	159047.3632	0.099172	0.114989	0.484333	2.662362	1544.148	0.012672	0.012124
Mojave Desert	2021	HHDT	Aggregated	45	GAS	856.0087442	0.341859	0.49884	28.55539	3.107243	1633.926	0.000634	0.000583
Mojave Desert	2021	HHDT	Aggregated	45	DSL	262648.9959	0.073115	0.084038	0.358492	2.312564	1473.738	0.011939	0.011422
Mojave Desert	2021	HHDT	Aggregated	50	GAS	712.8291368	0.342444	0.499693	26.70511	3.102178	1608.347	0.000648	0.000595
Mojave Desert	2021	HHDT	Aggregated	50	DSL	255836.9513	0.054194	0.061924	0.266962	2.059713	1414.932	0.01141	0.010917
Mojave Desert	2021	HHDT	Aggregated	55	GAS	870.6439312	0.357174	0.521187	25.26363	3.136116	1577.161	0.000673	0.000618
Mojave Desert	2021	HHDT	Aggregated	55	DSL	307393.5836	0.041339	0.047062	0.202008	1.966698	1377.831	0.011422	0.010927
Mojave Desert	2021	HHDT	Aggregated	60	GAS	949.4018436	0.369648	0.539389	23.53333	3.123266	1548.95	0.000739	0.00068
Mojave Desert	2021	HHDT	Aggregated	60	DSL	271532.7451	0.035791	0.040746	0.175366	1.9039	1360.536	0.011318	0.010829
Mojave Desert	2021	HHDT	Aggregated	65	GAS	2322.205947	0.431861	0.63017	22.99852	3.259741	1539.76	0.000877	0.000807
Mojave Desert	2021	HHDT	Aggregated	65	DSL	659187.8825	0.034195	0.038928	0.172216	1.726337	1351.447	0.010613	0.010154
Mojave Desert	2021	HHDT	Aggregated	70	GAS	3246.855448	0.488066	0.712184	23.86472	3.475119	1535.508	0.000972	0.000893
Mojave Desert	2021	HHDT	Aggregated	70	DSL	1818437.168	0.034359	0.039115	0.172606	1.742915	1351.873	0.010647	0.010186
Mojave Desert	2021	HHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2021	HHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	HHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	HHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	LDA	Aggregated	5	GAS	42401.87648	0.090451	0.131879	1.405068	0.119839	910.8361	0.011899	0.010941
Mojave Desert	2021	LDA	Aggregated	5	DSL	450.252414	0.230449	0.262351	3.447807	0.193193	661.91	0.050465	0.048282
Mojave Desert	2021	LDA	Aggregated	10	GAS	56998.7009	0.057669	0.084078	1.266147	0.101713	678.6357	0.007528	0.006922
Mojave Desert	2021	LDA	Aggregated	10	DSL	610.3582645	0.16992	0.193442	2.579057	0.176673	552.4978	0.036939	0.035341
Mojave Desert	2021	LDA	Aggregated	15	GAS	131415.6779	0.038795	0.056555	1.133878	0.089504	520.582	0.005014	0.00461
Mojave Desert	2021	LDA	Aggregated	15	DSL	1405.569041	0.091143	0.10376	1.294512	0.141796	452.4985	0.026833	0.025672
Mojave Desert	2021	LDA	Aggregated	20	GAS	179666.1997	0.027209	0.039662	1.020938	0.080514	413.8823	0.003532	0.003248
Mojave Desert	2021	LDA	Aggregated	20	DSL	1955.716665	0.045924	0.052281	0.554368	0.122751	372.0661	0.020854	0.019952
Mojave Desert	2021	LDA	Aggregated	25	GAS	838274.3323	0.020557	0.029963	0.92567	0.073244	342.3202	0.002611	0.002401
Mojave Desert	2021	LDA	Aggregated	25	DSL	9098.296116	0.030098	0.034265	0.345739	0.106652	309.3643	0.015777	0.015095
Mojave Desert	2021	LDA	Aggregated	30	GAS	1780541.072	0.016042	0.02338	0.835086	0.067436	293.0854	0.002039	0.001875
Mojave Desert	2021	LDA	Aggregated	30	DSL	19568.19573	0.023141	0.026345	0.266174	0.099964	267.3137	0.012776	0.012223
Mojave Desert	2021	LDA	Aggregated	35	GAS	1858063.47	0.013464	0.019621	0.784535	0.064095	263.2619	0.001679	0.001544
Mojave Desert	2021	LDA	Aggregated	35	DSL	20149.90834	0.019642	0.022361	0.220037	0.100432	241.5586	0.011516	0.011018

Mojave Desert	2021	LDA	Aggregated	40	GAS	2054063.868	0.011625	0.01694	0.718137	0.061128	243.3629	0.001457	0.00134
Mojave Desert	2021	LDA	Aggregated	40	DSL	22369.52362	0.016912	0.019253	0.188294	0.09913	225.8422	0.010351	0.009903
Mojave Desert	2021	LDA	Aggregated	45	GAS	3243769.371	0.010692	0.015579	0.66167	0.060057	232.9377	0.001332	0.001225
Mojave Desert	2021	LDA	Aggregated	45	DSL	35490.99953	0.014828	0.016881	0.165345	0.095288	217.3681	0.00942	0.009012
Mojave Desert	2021	LDA	Aggregated	50	GAS	2335317.459	0.010318	0.015033	0.619313	0.0593	232.7015	0.001288	0.001184
Mojave Desert	2021	LDA	Aggregated	50	DSL	26143.93038	0.013896	0.01582	0.154126	0.097702	218.4699	0.009117	0.008723
Mojave Desert	2021	LDA	Aggregated	55	GAS	2057110.352	0.010484	0.015275	0.581685	0.059965	241.0961	0.001309	0.001204
Mojave Desert	2021	LDA	Aggregated	55	DSL	22842.85139	0.013614	0.015499	0.148624	0.098268	228.2478	0.009256	0.008856
Mojave Desert	2021	LDA	Aggregated	60	GAS	1411276.037	0.011085	0.016151	0.546364	0.061538	259.1841	0.0014	0.001287
Mojave Desert	2021	LDA	Aggregated	60	DSL	15263.52395	0.014161	0.016121	0.15376	0.098154	246.5557	0.009862	0.009435
Mojave Desert	2021	LDA	Aggregated	65	GAS	2845839.496	0.012654	0.018436	0.528208	0.064238	290.5514	0.001584	0.001457
Mojave Desert	2021	LDA	Aggregated	65	DSL	31123.04083	0.01539	0.01752	0.171092	0.100113	277.2008	0.010784	0.010317
Mojave Desert	2021	LDA	Aggregated	70	GAS	3198576.454	0.01366	0.0199	0.513815	0.067195	308.6816	0.001723	0.001584
Mojave Desert	2021	LDA	Aggregated	70	DSL	35772.90599	0.016427	0.018702	0.185704	0.103833	300.1743	0.011514	0.011016
Mojave Desert	2021	LDT1	Aggregated	5	GAS	2758.975729	0.265092	0.386252	4.4555	0.419623	1088.707	0.020265	0.018635
Mojave Desert	2021	LDT1	Aggregated	5	DSL	2.792963754	0.786972	0.895915	3.574554	0.857722	938.3542	0.639475	0.611811
Mojave Desert	2021	LDT1	Aggregated	10	GAS	3693.645243	0.169159	0.246497	3.74039	0.336728	810.4754	0.012979	0.011935

Mojave Desert	2021	LDT1	Aggregated	10	DSL	3.702997426	0.545639	0.621173	2.545951	0.88419	790.31	0.446195	0.426892
Mojave Desert	2021	LDT1	Aggregated	15	GAS	8629.09378	0.119053	0.17345	3.251901	0.291047	621.0571	0.00866	0.007963
Mojave Desert	2021	LDT1	Aggregated	15	DSL	8.569576089	0.379778	0.432352	1.760364	0.894439	650.2264	0.313329	0.299775
Mojave Desert	2021	LDT1	Aggregated	20	GAS	11829.22474	0.083223	0.121233	2.792812	0.250581	493.7252	0.006077	0.005588
Mojave Desert	2021	LDT1	Aggregated	20	DSL	11.96332922	0.276179	0.314411	1.27861	0.91363	534.7478	0.239121	0.228776
Mojave Desert	2021	LDT1	Aggregated	25	GAS	56653.82218	0.066524	0.096874	2.506846	0.229126	407.6115	0.004405	0.004051
Mojave Desert	2021	LDT1	Aggregated	25	DSL	56.73463242	0.214019	0.243647	1.018999	0.913358	442.2015	0.177945	0.170247
Mojave Desert	2021	LDT1	Aggregated	30	GAS	121867.227	0.0516	0.075133	2.173124	0.204105	348.499	0.003321	0.003054
Mojave Desert	2021	LDT1	Aggregated	30	DSL	120.2962306	0.172019	0.195832	0.853556	0.908013	379.0789	0.141484	0.135363
Mojave Desert	2021	LDT1	Aggregated	35	GAS	126753.3696	0.045623	0.066414	2.106289	0.201937	313.3415	0.002862	0.002632
Mojave Desert	2021	LDT1	Aggregated	35	DSL	127.3807436	0.154865	0.176303	0.804213	0.982172	343.7508	0.127211	0.121708
Mojave Desert	2021	LDT1	Aggregated	40	GAS	140490.6193	0.038881	0.0566	1.896422	0.190204	289.4659	0.00244	0.002244
Mojave Desert	2021	LDT1	Aggregated	40	DSL	138.5207125	0.137921	0.157013	0.753505	0.999279	319.3953	0.113454	0.108546
Mojave Desert	2021	LDT1	Aggregated	45	GAS	225753.231	0.036115	0.052559	1.757551	0.189081	276.9086	0.002169	0.001995
Mojave Desert	2021	LDT1	Aggregated	45	DSL	223.7315033	0.130042	0.148044	0.756965	1.010305	305.8183	0.104183	0.099676
Mojave Desert	2021	LDT1	Aggregated	50	GAS	163632.3161	0.033544	0.048806	1.618855	0.182867	276.4766	0.002014	0.001852
Mojave Desert	2021	LDT1	Aggregated	50	DSL	165.9318591	0.128197	0.145943	0.802946	1.023422	306.5061	0.103836	0.099344

Mojave Desert	2021	LDT1	Aggregated	55	GAS	144330.7522	0.034332	0.049947	1.581295	0.192121	286.4716	0.002056	0.001891
Mojave Desert	2021	LDT1	Aggregated	55	DSL	145.8742491	0.134616	0.153252	0.905881	1.071204	320.1804	0.108288	0.103603
Mojave Desert	2021	LDT1	Aggregated	60	GAS	97879.3659	0.036775	0.053506	1.578357	0.208273	308.0481	0.002247	0.002066
Mojave Desert	2021	LDT1	Aggregated	60	DSL	94.18615095	0.146256	0.166503	1.050172	1.129061	345.5232	0.117129	0.112062
Mojave Desert	2021	LDT1	Aggregated	65	GAS	199598.8532	0.040842	0.059409	1.584157	0.221659	345.1677	0.002456	0.002259
Mojave Desert	2021	LDT1	Aggregated	65	DSL	195.6939385	0.166824	0.189918	1.317527	1.148652	387.574	0.132522	0.126789
Mojave Desert	2021	LDT1	Aggregated	70	GAS	227417.3042	0.042725	0.062132	1.566372	0.230532	366.8198	0.002576	0.002369
Mojave Desert	2021	LDT1	Aggregated	70	DSL	232.5354479	0.182306	0.207543	1.530704	1.152	419.1544	0.14504	0.138765
Mojave Desert	2021	LDT2	Aggregated	5	GAS	11446.72302	0.122475	0.178587	1.863196	0.202507	1211.568	0.012038	0.011069
Mojave Desert	2021	LDT2	Aggregated	5	DSL	19.79553029	0.258365	0.294131	2.273869	0.16514	824.2845	0.015606	0.014931
Mojave Desert	2021	LDT2	Aggregated	10	GAS	15457.00529	0.078924	0.115086	1.669653	0.17171	902.4614	0.007629	0.007014
Mojave Desert	2021	LDT2	Aggregated	10	DSL	26.53980093	0.192713	0.219391	1.697645	0.141049	693.1463	0.012686	0.012137
Mojave Desert	2021	LDT2	Aggregated	15	GAS	36940.39334	0.053669	0.078252	1.491541	0.15071	692.432	0.00509	0.00468
Mojave Desert	2021	LDT2	Aggregated	15	DSL	64.49164099	0.095807	0.109069	0.840304	0.100504	575.4632	0.010229	0.009786
Mojave Desert	2021	LDT2	Aggregated	20	GAS	51842.37686	0.0386	0.056277	1.355069	0.137117	551.7285	0.00359	0.003301
Mojave Desert	2021	LDT2	Aggregated	20	DSL	90.82076281	0.038928	0.044317	0.3372	0.072228	472.992	0.008216	0.007861
Mojave Desert	2021	LDT2	Aggregated	25	GAS	257672.465	0.029458	0.042941	1.229893	0.124997	456.6751	0.002658	0.002444

Mojave Desert	2021	LDT2	Aggregated	25	DSL	464.7490119	0.024054	0.027384	0.206938	0.057779	397.5452	0.00686	0.006563
Mojave Desert	2021	LDT2	Aggregated	30	GAS	575757.4192	0.023448	0.034179	1.119409	0.116508	391.7914	0.002078	0.001911
Mojave Desert	2021	LDT2	Aggregated	30	DSL	1049.205972	0.018266	0.020795	0.157401	0.049401	343.9008	0.005867	0.005613
Mojave Desert	2021	LDT2	Aggregated	35	GAS	583230.5594	0.01944	0.028333	1.041891	0.109334	351.3695	0.001712	0.001574
Mojave Desert	2021	LDT2	Aggregated	35	DSL	1063.08435	0.014765	0.016809	0.127174	0.046943	310.5545	0.005322	0.005092
Mojave Desert	2021	LDT2	Aggregated	40	GAS	655886.677	0.016891	0.024618	0.957074	0.104791	325.0578	0.001487	0.001367
Mojave Desert	2021	LDT2	Aggregated	40	DSL	1195.890189	0.012314	0.014019	0.106184	0.043572	289.7234	0.004849	0.00464
Mojave Desert	2021	LDT2	Aggregated	45	GAS	1080427.314	0.015631	0.022779	0.888986	0.103954	311.6946	0.001359	0.001249
Mojave Desert	2021	LDT2	Aggregated	45	DSL	2000.011064	0.010694	0.012174	0.092236	0.040743	279.7818	0.004581	0.004383
Mojave Desert	2021	LDT2	Aggregated	50	GAS	806806.77	0.015379	0.022411	0.845823	0.104991	312.2293	0.001313	0.001207
Mojave Desert	2021	LDT2	Aggregated	50	DSL	1500.679137	0.009382	0.010681	0.081543	0.037535	280.4085	0.004287	0.004101
Mojave Desert	2021	LDT2	Aggregated	55	GAS	705994.1945	0.015458	0.022524	0.793884	0.106134	323.2226	0.001333	0.001226
Mojave Desert	2021	LDT2	Aggregated	55	DSL	1315.407801	0.008586	0.009775	0.074976	0.03732	293.2617	0.004215	0.004032
Mojave Desert	2021	LDT2	Aggregated	60	GAS	465008.5341	0.015928	0.023209	0.737777	0.107447	346.3655	0.001426	0.001311
Mojave Desert	2021	LDT2	Aggregated	60	DSL	858.6069135	0.008294	0.009443	0.073182	0.038481	317.1119	0.004231	0.004048
Mojave Desert	2021	LDT2	Aggregated	65	GAS	966367.7913	0.018261	0.026607	0.724349	0.114362	389.0266	0.00161	0.00148
Mojave Desert	2021	LDT2	Aggregated	65	DSL	1799.114648	0.008726	0.009934	0.078466	0.038761	356.6389	0.00453	0.004334

Mojave Desert	2021	LDT2	Aggregated	70	GAS	1129023.795	0.019961	0.029082	0.718325	0.12241	414.6065	0.001745	0.001605
Mojave Desert	2021	LDT2	Aggregated	70	DSL	2120.630498	0.009206	0.010481	0.084118	0.039025	385.4822	0.004844	0.004634
Mojave Desert	2021	LHDT1	Aggregated	5	GAS	1502.209612	0.432557	0.631187	5.001582	0.785172	1391.071	0.011574	0.010642
Mojave Desert	2021	LHDT1	Aggregated	5	DSL	1617.136007	0.829713	0.944573	3.549514	3.532415	1277.109	0.129397	0.1238
Mojave Desert	2021	LHDT1	Aggregated	10	GAS	3946.94235	0.283886	0.414246	3.924141	0.694332	1368.221	0.007368	0.006774
Mojave Desert	2021	LHDT1	Aggregated	10	DSL	4907.594339	0.591214	0.673058	2.563961	3.661299	1073.49	0.092085	0.088101
Mojave Desert	2021	LHDT1	Aggregated	15	GAS	9540.391023	0.19593	0.285901	3.206673	0.624916	950.4656	0.004944	0.004546
Mojave Desert	2021	LHDT1	Aggregated	15	DSL	11488.04132	0.382751	0.435736	1.691783	3.767705	700.9548	0.068115	0.065169
Mojave Desert	2021	LHDT1	Aggregated	20	GAS	10608.40398	0.142985	0.208644	2.728349	0.577919	825.2288	0.003517	0.003234
Mojave Desert	2021	LHDT1	Aggregated	20	DSL	12398.63166	0.255833	0.291248	1.165426	3.909636	597.5238	0.052649	0.050371
Mojave Desert	2021	LHDT1	Aggregated	25	GAS	12711.3068	0.103719	0.151346	2.256239	0.524963	756.2646	0.002532	0.002328
Mojave Desert	2021	LHDT1	Aggregated	25	DSL	17011.78706	0.190667	0.217062	0.902065	3.916599	528.614	0.041068	0.039292
Mojave Desert	2021	LHDT1	Aggregated	30	GAS	15272.9259	0.080895	0.118042	1.962125	0.484034	686.2373	0.001957	0.001799
Mojave Desert	2021	LHDT1	Aggregated	30	DSL	18538.05371	0.153681	0.174955	0.758416	3.959934	479.1165	0.033813	0.03235
Mojave Desert	2021	LHDT1	Aggregated	35	GAS	11920.73	0.066841	0.097534	1.760015	0.457791	686.1719	0.001598	0.001469
Mojave Desert	2021	LHDT1	Aggregated	35	DSL	14755.30529	0.130379	0.148428	0.676227	4.03846	478.4165	0.02917	0.027908
Mojave Desert	2021	LHDT1	Aggregated	40	GAS	11203.4587	0.057425	0.083795	1.601278	0.435028	683.4707	0.001367	0.001257

Mojave Desert	2021	LHDT1	Aggregated	40	DSL	14070.8393	0.11513	0.131067	0.631389	4.088607	464.5516	0.02615	0.025019
Mojave Desert	2021	LHDT1	Aggregated	45	GAS	17939.93688	0.052399	0.076461	1.510243	0.42222	680.214	0.001239	0.001139
Mojave Desert	2021	LHDT1	Aggregated	45	DSL	23378.59023	0.106654	0.121418	0.622341	4.156483	452.6016	0.024522	0.023461
Mojave Desert	2021	LHDT1	Aggregated	50	GAS	21642.81215	0.053804	0.078511	1.571499	0.433182	717.4507	0.001237	0.001137
Mojave Desert	2021	LHDT1	Aggregated	50	DSL	28958.56149	0.109725	0.124915	0.685896	4.542438	475.8835	0.025191	0.024101
Mojave Desert	2021	LHDT1	Aggregated	55	GAS	20732.32734	0.052444	0.076527	1.529995	0.421294	755.7063	0.001218	0.00112
Mojave Desert	2021	LHDT1	Aggregated	55	DSL	26953.09332	0.110075	0.125313	0.744183	4.563253	496.4007	0.025379	0.024281
Mojave Desert	2021	LHDT1	Aggregated	60	GAS	25751.55901	0.055224	0.080583	1.599989	0.417648	766.762	0.001292	0.001188
Mojave Desert	2021	LHDT1	Aggregated	60	DSL	24224.62008	0.113732	0.129476	0.837405	4.469924	499.8229	0.026308	0.02517
Mojave Desert	2021	LHDT1	Aggregated	65	GAS	70852.98614	0.063027	0.091968	1.803585	0.432192	777.1455	0.001453	0.001336
Mojave Desert	2021	LHDT1	Aggregated	65	DSL	71436.57402	0.128148	0.145888	1.032497	4.589532	506.2081	0.029474	0.028199
Mojave Desert	2021	LHDT1	Aggregated	70	GAS	116753.5245	0.069166	0.100927	1.965629	0.457696	769.7714	0.001567	0.001441
Mojave Desert	2021	LHDT1	Aggregated	70	DSL	187912.4839	0.137663	0.15672	1.16359	4.642166	500.4043	0.031572	0.030207
Mojave Desert	2021	LHDT2	Aggregated	5	GAS	255.5523546	0.126454	0.184521	1.258916	0.336702	1457.876	0.006583	0.006053
Mojave Desert	2021	LHDT2	Aggregated	5	DSL	558.6829265	0.775116	0.882418	3.391875	2.319363	1328.258	0.085298	0.081608
Mojave Desert	2021	LHDT2	Aggregated	10	GAS	673.4552076	0.082225	0.119982	1.029205	0.295909	1513.101	0.004175	0.003839
Mojave Desert	2021	LHDT2	Aggregated	10	DSL	1697.939625	0.563041	0.640985	2.481963	2.351369	1180.303	0.062941	0.060218

Mojave Desert	2021	LHDT2	Aggregated	15	GAS	1631.620458	0.056142	0.081922	0.869121	0.264115	1064.349	0.002788	0.002564
Mojave Desert	2021	LHDT2	Aggregated	15	DSL	3982.445805	0.329269	0.37485	1.476882	2.344155	785.5149	0.047775	0.045708
Mojave Desert	2021	LHDT2	Aggregated	20	GAS	1810.266797	0.040244	0.058724	0.752522	0.24029	931.5322	0.001959	0.001801
Mojave Desert	2021	LHDT2	Aggregated	20	DSL	4292.939722	0.189826	0.216104	0.881052	2.378691	670.0811	0.037578	0.035952
Mojave Desert	2021	LHDT2	Aggregated	25	GAS	2235.531947	0.030839	0.045001	0.674856	0.228061	841.7271	0.001483	0.001364
Mojave Desert	2021	LHDT2	Aggregated	25	DSL	6044.110384	0.135495	0.154252	0.647518	2.35924	595.2349	0.029739	0.028453
Mojave Desert	2021	LHDT2	Aggregated	30	GAS	2733.921041	0.024453	0.035682	0.609108	0.213267	760.5542	0.001168	0.001074
Mojave Desert	2021	LHDT2	Aggregated	30	DSL	6730.821184	0.108392	0.123397	0.535819	2.387358	535.6058	0.024853	0.023778
Mojave Desert	2021	LHDT2	Aggregated	35	GAS	2169.369657	0.020772	0.030311	0.568948	0.205668	760.2521	0.000977	0.000899
Mojave Desert	2021	LHDT2	Aggregated	35	DSL	5447.299389	0.091171	0.103792	0.469219	2.43007	534.7391	0.021648	0.020711
Mojave Desert	2021	LHDT2	Aggregated	40	GAS	2066.869807	0.018192	0.026546	0.529165	0.198436	742.6932	0.000853	0.000784
Mojave Desert	2021	LHDT2	Aggregated	40	DSL	5282.684471	0.079986	0.091059	0.43214	2.469033	514.2613	0.01951	0.018666
Mojave Desert	2021	LHDT2	Aggregated	45	GAS	3331.791822	0.016649	0.024294	0.496647	0.193086	725.1537	0.000778	0.000715
Mojave Desert	2021	LHDT2	Aggregated	45	DSL	8862.3831	0.073415	0.083578	0.420792	2.521344	493.6551	0.018258	0.017468
Mojave Desert	2021	LHDT2	Aggregated	50	GAS	3930.608614	0.016137	0.023547	0.479675	0.188754	756.363	0.000741	0.000682
Mojave Desert	2021	LHDT2	Aggregated	50	DSL	10642.6275	0.073253	0.083393	0.453438	2.725108	513.4649	0.018385	0.017589
Mojave Desert	2021	LHDT2	Aggregated	55	GAS	3845.857547	0.016458	0.024016	0.4755	0.190479	790.465	0.00076	0.000699

Mojave Desert	2021	LHDT2	Aggregated	55	DSL	10065.02381	0.0727	0.082764	0.48575	2.749763	530.3579	0.018296	0.017504
Mojave Desert	2021	LHDT2	Aggregated	60	GAS	4811.663843	0.017581	0.025654	0.486112	0.191906	798.6056	0.000819	0.000753
Mojave Desert	2021	LHDT2	Aggregated	60	DSL	9324.109876	0.075586	0.08605	0.548248	2.745868	530.5767	0.018893	0.018076
Mojave Desert	2021	LHDT2	Aggregated	65	GAS	13271.1582	0.020189	0.02946	0.527117	0.199837	806.448	0.000926	0.000852
Mojave Desert	2021	LHDT2	Aggregated	65	DSL	27443.21701	0.084132	0.095779	0.669176	2.814395	531.7342	0.020766	0.019868
Mojave Desert	2021	LHDT2	Aggregated	70	GAS	21915.51861	0.022401	0.032687	0.566698	0.212975	790.2957	0.001006	0.000925
Mojave Desert	2021	LHDT2	Aggregated	70	DSL	71654.53925	0.088943	0.101256	0.742417	2.811611	525.0144	0.021856	0.02091
Mojave Desert	2021	MCY	Aggregated	5	GAS	564.9701326	13.0878	16.0173	56.43228	1.55851	550.5647	0.010708	0.010035
Mojave Desert	2021	MCY	Aggregated	10	GAS	768.4027542	8.547884	10.44138	42.24319	1.40837	407.9541	0.007026	0.006588
Mojave Desert	2021	MCY	Aggregated	15	GAS	1854.928046	5.898832	7.204874	33.14068	1.312389	314.3793	0.004829	0.004527
Mojave Desert	2021	MCY	Aggregated	20	GAS	2562.31574	4.331651	5.27764	27.77836	1.247511	250.8534	0.003526	0.003308
Mojave Desert	2021	MCY	Aggregated	25	GAS	12857.20987	3.289579	4.012807	23.46335	1.192156	208.4347	0.002665	0.0025
Mojave Desert	2021	MCY	Aggregated	30	GAS	29077.31585	2.654294	3.234624	20.90212	1.159552	179.3665	0.002135	0.002003
Mojave Desert	2021	MCY	Aggregated	35	GAS	29093.97726	2.241538	2.732133	19.15594	1.136894	160.3741	0.001813	0.001701
Mojave Desert	2021	MCY	Aggregated	40	GAS	33202.09836	1.999801	2.435537	18.26501	1.131024	148.674	0.001611	0.001512
Mojave Desert	2021	MCY	Aggregated	45	GAS	54038.86342	1.873286	2.281687	18.02023	1.137999	143.1619	0.001499	0.001406
Mojave Desert	2021	MCY	Aggregated	50	GAS	39595.15605	1.852035	2.251797	18.6345	1.152447	142.7989	0.001484	0.001393

Mojave Desert	2021	MCY	Aggregated	55	GAS	34668.44762	1.909208	2.322257	19.85029	1.174779	148.1392	0.00153	0.001436
Mojave Desert	2021	MCY	Aggregated	60	GAS	24026.75167	2.069259	2.519631	22.1747	1.210566	159.6111	0.001646	0.001544
Mojave Desert	2021	MCY	Aggregated	65	GAS	48611.45774	2.350506	2.86151	26.15404	1.245946	178.2041	0.00188	0.001764
Mojave Desert	2021	MCY	Aggregated	70	GAS	53768.8409	2.586872	3.145447	29.59292	1.28789	190.7799	0.002062	0.001935
Mojave Desert	2021	MDV	Aggregated	5	GAS	7756.328737	0.270688	0.383247	3.688359	0.397174	1652.546	0.01237	0.011383
Mojave Desert	2021	MDV	Aggregated	5	DSL	129.7834233	0.205996	0.234513	3.48436	0.152863	1017.165	0.027342	0.026159
Mojave Desert	2021	MDV	Aggregated	10	GAS	10442.75803	0.170145	0.240664	3.082841	0.325871	1228.073	0.007829	0.007204
Mojave Desert	2021	MDV	Aggregated	10	DSL	177.8865152	0.15197	0.173008	2.611825	0.131157	864.5166	0.019831	0.018974
Mojave Desert	2021	MDV	Aggregated	15	GAS	24567.30064	0.1187	0.167651	2.735764	0.295278	944.9474	0.005264	0.004845
Mojave Desert	2021	MDV	Aggregated	15	DSL	419.4774024	0.079033	0.089974	1.29733	0.098146	734.3556	0.015895	0.015207
Mojave Desert	2021	MDV	Aggregated	20	GAS	34309.56457	0.082489	0.116374	2.364712	0.25891	750.7407	0.003682	0.003389
Mojave Desert	2021	MDV	Aggregated	20	DSL	605.2406607	0.03498	0.039822	0.526963	0.073171	611.7163	0.012074	0.011552
Mojave Desert	2021	MDV	Aggregated	25	GAS	166226.1614	0.065763	0.092744	2.200529	0.250438	624.5802	0.002757	0.002538
Mojave Desert	2021	MDV	Aggregated	25	DSL	2935.347969	0.023508	0.026762	0.328494	0.065074	518.6503	0.010503	0.010049
Mojave Desert	2021	MDV	Aggregated	30	GAS	364225.1653	0.051421	0.072543	1.966995	0.231867	535.7577	0.002148	0.001977
Mojave Desert	2021	MDV	Aggregated	30	DSL	6602.721865	0.018161	0.020675	0.25294	0.059319	449.2533	0.00882	0.008439
Mojave Desert	2021	MDV	Aggregated	35	GAS	373687.818	0.044809	0.063011	1.879641	0.225567	481.4732	0.001796	0.001653

Mojave Desert	2021	MDV	Aggregated	35	DSL	6596.626151	0.015351	0.017477	0.205317	0.058537	406.8675	0.008145	0.007792
Mojave Desert	2021	MDV	Aggregated	40	GAS	416379.0858	0.038649	0.054317	1.720378	0.215421	445.2052	0.001559	0.001435
Mojave Desert	2021	MDV	Aggregated	40	DSL	7428.233007	0.013047	0.014853	0.173207	0.056279	380.8581	0.00735	0.007032
Mojave Desert	2021	MDV	Aggregated	45	GAS	676325.4156	0.03623	0.050896	1.626107	0.217816	427.433	0.001427	0.001313
Mojave Desert	2021	MDV	Aggregated	45	DSL	12200.29097	0.011722	0.013345	0.152194	0.056014	367.3239	0.007026	0.006722
Mojave Desert	2021	MDV	Aggregated	50	GAS	501758.1559	0.034062	0.047902	1.514263	0.211587	426.829	0.001357	0.001249
Mojave Desert	2021	MDV	Aggregated	50	DSL	9382.428963	0.010417	0.011859	0.136115	0.052952	370.3001	0.006513	0.006231
Mojave Desert	2021	MDV	Aggregated	55	GAS	439423.6562	0.035254	0.049482	1.480746	0.219323	442.4901	0.001388	0.001278
Mojave Desert	2021	MDV	Aggregated	55	DSL	8115.728004	0.010151	0.011556	0.127491	0.054228	390.5073	0.006674	0.006386
Mojave Desert	2021	MDV	Aggregated	60	GAS	290588.8022	0.038611	0.054006	1.496833	0.233666	476.1093	0.001513	0.001393
Mojave Desert	2021	MDV	Aggregated	60	DSL	5149.710903	0.010881	0.012387	0.13081	0.058149	421.2266	0.007352	0.007034
Mojave Desert	2021	MDV	Aggregated	65	GAS	599650.4704	0.043494	0.060906	1.523986	0.246323	533.9862	0.001694	0.00156
Mojave Desert	2021	MDV	Aggregated	65	DSL	10839.15844	0.011578	0.01318	0.140578	0.058561	473.994	0.007914	0.007572
Mojave Desert	2021	MDV	Aggregated	70	GAS	696861.7066	0.045794	0.064195	1.504431	0.254465	567.1649	0.001809	0.001665
Mojave Desert	2021	MDV	Aggregated	70	DSL	13044.16795	0.011648	0.01326	0.144646	0.056832	511.8714	0.008018	0.007671
Mojave Desert	2021	MH	Aggregated	5	GAS	71.40928314	0.778924	1.136604	12.9858	1.188259	3915.222	0.012449	0.011446
Mojave Desert	2021	MH	Aggregated	5	DSL	16.31073902	1.272034	1.448126	2.663616	17.12466	2098.926	0.452005	0.432451

Mojave Desert	2021	MH	Aggregated	10	GAS	334.4928368	0.522198	0.76199	9.875118	1.079629	3342.845	0.008091	0.00744
Mojave Desert	2021	MH	Aggregated	10	DSL	74.09160925	0.965754	1.099447	2.185335	14.32768	1906.106	0.387056	0.370312
Mojave Desert	2021	MH	Aggregated	15	GAS	518.2800138	0.358539	0.523179	7.630584	0.973093	2303.74	0.005431	0.004993
Mojave Desert	2021	MH	Aggregated	15	DSL	119.7145659	0.493434	0.561741	1.417142	10.00002	1564.73	0.275183	0.263279
Mojave Desert	2021	MH	Aggregated	20	GAS	539.9543447	0.262891	0.383609	6.281122	0.91143	1619.849	0.003895	0.003582
Mojave Desert	2021	MH	Aggregated	20	DSL	127.8795928	0.222841	0.25369	0.924434	7.537022	1284.06	0.197907	0.189346
Mojave Desert	2021	MH	Aggregated	25	GAS	1188.988125	0.19566	0.285506	5.163423	0.838854	1413.029	0.002855	0.002625
Mojave Desert	2021	MH	Aggregated	25	DSL	273.7011138	0.153951	0.175263	0.715271	6.570552	1150.499	0.159244	0.152355
Mojave Desert	2021	MH	Aggregated	30	GAS	1659.370033	0.155849	0.227415	4.5139	0.795068	1298.031	0.002257	0.002075
Mojave Desert	2021	MH	Aggregated	30	DSL	395.0612728	0.124348	0.141562	0.604254	6.077506	1079.705	0.141215	0.135106
Mojave Desert	2021	MH	Aggregated	35	GAS	1881.651782	0.133125	0.194255	4.162082	0.77671	1198.862	0.001894	0.001741
Mojave Desert	2021	MH	Aggregated	35	DSL	437.4884302	0.103512	0.117841	0.526884	5.772334	1021.314	0.132823	0.127077
Mojave Desert	2021	MH	Aggregated	40	GAS	2149.927538	0.120666	0.176075	4.007292	0.775174	1115.082	0.00169	0.001554
Mojave Desert	2021	MH	Aggregated	40	DSL	523.8398896	0.087762	0.099911	0.46295	5.520721	974.7327	0.130446	0.124803
Mojave Desert	2021	MH	Aggregated	45	GAS	2727.695841	0.113163	0.165127	3.929689	0.767879	1035.163	0.001566	0.00144
Mojave Desert	2021	MH	Aggregated	45	DSL	663.7846253	0.076123	0.086661	0.408769	5.264248	939.6405	0.131811	0.126109
Mojave Desert	2021	MH	Aggregated	50	GAS	2322.357309	0.113654	0.165843	4.091044	0.783089	967.7223	0.001551	0.001426

Mojave Desert	2021	MH	Aggregated	50	DSL	604.578138	0.071256	0.08112	0.381287	5.152757	917.0557	0.14311	0.13692
Mojave Desert	2021	MH	Aggregated	55	GAS	2649.648537	0.118411	0.172785	4.400135	0.803417	940.9132	0.001603	0.001474
Mojave Desert	2021	MH	Aggregated	55	DSL	729.2072999	0.072279	0.082285	0.375629	5.168735	906.744	0.163034	0.155982
Mojave Desert	2021	MH	Aggregated	60	GAS	3683.067344	0.127544	0.186112	4.894868	0.812979	946.1267	0.00173	0.001591
Mojave Desert	2021	MH	Aggregated	60	DSL	1058.196566	0.076762	0.087389	0.377426	5.154783	907.9143	0.185246	0.177233
Mojave Desert	2021	MH	Aggregated	65	GAS	7989.604986	0.146597	0.213914	5.807955	0.829103	962.1995	0.001957	0.001799
Mojave Desert	2021	MH	Aggregated	65	DSL	2207.883921	0.083839	0.095446	0.384248	5.091471	920.3782	0.206919	0.197968
Mojave Desert	2021	MH	Aggregated	70	GAS	11229.1735	0.165024	0.240803	6.639662	0.884085	991.7859	0.002136	0.001964
Mojave Desert	2021	MH	Aggregated	70	DSL	3550.485059	0.098078	0.111655	0.418251	5.244566	945.3389	0.239952	0.229572
Mojave Desert	2021	MHDT	Aggregated	5	GAS	125.5080343	0.467556	0.682256	4.24266	0.883612	3774.35	0.007692	0.007072
Mojave Desert	2021	MHDT	Aggregated	5	DSL	586.8552777	0.334745	0.381081	1.361081	9.413265	2212.448	0.017662	0.016898
Mojave Desert	2021	MHDT	Aggregated	10	GAS	573.7726675	0.302635	0.441604	3.667654	0.777083	3220.972	0.004903	0.004508
Mojave Desert	2021	MHDT	Aggregated	10	DSL	2608.111727	0.270525	0.307972	1.10459	7.38731	1963.794	0.015735	0.015054
Mojave Desert	2021	MHDT	Aggregated	15	GAS	935.6099692	0.199067	0.290478	3.098382	0.682305	2221.409	0.003224	0.002965
Mojave Desert	2021	MHDT	Aggregated	15	DSL	4472.998716	0.184376	0.209898	0.776814	4.798326	1648.214	0.012212	0.011683
Mojave Desert	2021	MHDT	Aggregated	20	GAS	973.5718102	0.141204	0.206045	2.753115	0.619767	1561.707	0.002271	0.002088
Mojave Desert	2021	MHDT	Aggregated	20	DSL	4906.587658	0.129637	0.147582	0.561631	3.113348	1439.42	0.01007	0.009634

Mojave Desert	2021	MHDT	Aggregated	25	GAS	2426.998137	0.100871	0.147191	2.371641	0.557815	1365.888	0.001628	0.001497
Mojave Desert	2021	MHDT	Aggregated	25	DSL	11965.0083	0.094044	0.107062	0.411527	2.096971	1325.995	0.008498	0.008131
Mojave Desert	2021	MHDT	Aggregated	30	GAS	3505.714782	0.077207	0.11266	2.116099	0.510799	1255.766	0.001256	0.001155
Mojave Desert	2021	MHDT	Aggregated	30	DSL	17116.20628	0.069585	0.079218	0.30463	1.599221	1251.311	0.007698	0.007365
Mojave Desert	2021	MHDT	Aggregated	35	GAS	3898.595357	0.064381	0.093945	1.964159	0.485923	1158.903	0.001043	0.000959
Mojave Desert	2021	MHDT	Aggregated	35	DSL	20159.10369	0.051499	0.058627	0.225759	1.303332	1192.133	0.007059	0.006754
Mojave Desert	2021	MHDT	Aggregated	40	GAS	4438.115766	0.056751	0.082811	1.833171	0.467965	1078.401	0.000908	0.000835
Mojave Desert	2021	MHDT	Aggregated	40	DSL	22517.4342	0.038452	0.043775	0.16809	1.128575	1143.516	0.006713	0.006423
Mojave Desert	2021	MHDT	Aggregated	45	GAS	5920.426567	0.051705	0.075448	1.698116	0.451806	1002.924	0.00082	0.000754
Mojave Desert	2021	MHDT	Aggregated	45	DSL	27248.34497	0.028719	0.032694	0.125287	1.004261	1102.439	0.006382	0.006106
Mojave Desert	2021	MHDT	Aggregated	50	GAS	5108.732166	0.050751	0.074055	1.622019	0.446917	938.7111	0.000791	0.000727
Mojave Desert	2021	MHDT	Aggregated	50	DSL	21717.38723	0.021864	0.024891	0.094504	0.93589	1067.337	0.006365	0.00609
Mojave Desert	2021	MHDT	Aggregated	55	GAS	5828.5621	0.05222	0.076199	1.575408	0.451393	912.9431	0.000808	0.000743
Mojave Desert	2021	MHDT	Aggregated	55	DSL	24996.5254	0.016856	0.01919	0.071936	0.881379	1038.199	0.006393	0.006116
Mojave Desert	2021	MHDT	Aggregated	60	GAS	8456.188207	0.054887	0.08009	1.518373	0.449113	919.1745	0.000857	0.000788
Mojave Desert	2021	MHDT	Aggregated	60	DSL	34404.15863	0.014852	0.016908	0.062865	0.853852	1024.818	0.006382	0.006106
Mojave Desert	2021	MHDT	Aggregated	65	GAS	19816.74106	0.062234	0.090811	1.530493	0.459348	937.3685	0.000953	0.000876

Mojave Desert	2021	MHDT	Aggregated	65	DSL	64059.15959	0.014865	0.016923	0.062879	0.868235	1024.659	0.006428	0.00615
Mojave Desert	2021	MHDT	Aggregated	70	GAS	28096.56653	0.071789	0.104755	1.656598	0.500065	967.2395	0.001043	0.000959
Mojave Desert	2021	MHDT	Aggregated	70	DSL	93480.0947	0.015285	0.017401	0.063985	0.930071	1025.189	0.00683	0.006534
Mojave Desert	2021	MHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	MHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	MHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	MHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	OBUS	Aggregated	5	GAS	78.43364949	0.283815	0.414142	2.213531	0.610695	3794.112	0.005927	0.00545
Mojave Desert	2021	OBUS	Aggregated	5	DSL	51.86624008	0.665918	0.758097	2.508182	13.32245	2628.486	0.027099	0.025926
Mojave Desert	2021	OBUS	Aggregated	10	GAS	364.4321346	0.179227	0.261528	1.963057	0.529767	3239.446	0.003721	0.003421
Mojave Desert	2021	OBUS	Aggregated	10	DSL	233.9952245	0.531215	0.604748	2.005459	10.65054	2323.765	0.024299	0.023248
Mojave Desert	2021	OBUS	Aggregated	15	GAS	571.7749746	0.121199	0.176853	1.788881	0.47215	2231.869	0.002503	0.002301
Mojave Desert	2021	OBUS	Aggregated	15	DSL	369.0196879	0.364902	0.415413	1.391598	7.345647	1944.783	0.020834	0.019932
Mojave Desert	2021	OBUS	Aggregated	20	GAS	594.2338928	0.085443	0.124678	1.624148	0.426893	1569.124	0.001758	0.001616
Mojave Desert	2021	OBUS	Aggregated	20	DSL	408.7246556	0.263021	0.299429	1.014491	5.261378	1708.016	0.018746	0.017935
Mojave Desert	2021	OBUS	Aggregated	25	GAS	1380.882995	0.064472	0.094078	1.50133	0.394789	1369.6	0.001314	0.001208
Mojave Desert	2021	OBUS	Aggregated	25	DSL	804.7770635	0.194163	0.221039	0.750093	4.016226	1573.36	0.017172	0.016429

Mojave Desert	2021	OBUS	Aggregated	30	GAS	1941.442732	0.050187	0.073233	1.377779	0.366381	1257.858	0.001035	0.000952
Mojave Desert	2021	OBUS	Aggregated	30	DSL	1102.143581	0.144759	0.164797	0.559926	3.3698	1486.704	0.015986	0.015294
Mojave Desert	2021	OBUS	Aggregated	35	GAS	2173.874871	0.04169	0.060834	1.279869	0.347399	1161.302	0.000854	0.000785
Mojave Desert	2021	OBUS	Aggregated	35	DSL	1314.495666	0.107122	0.12195	0.414993	2.944723	1413.395	0.014966	0.014319
Mojave Desert	2021	OBUS	Aggregated	40	GAS	2499.64487	0.03584	0.052297	1.17106	0.329997	1080.667	0.000736	0.000677
Mojave Desert	2021	OBUS	Aggregated	40	DSL	1568.372702	0.081685	0.092993	0.318678	2.714246	1371.327	0.014461	0.013836
Mojave Desert	2021	OBUS	Aggregated	45	GAS	3267.320384	0.0326	0.04757	1.08103	0.318373	1004.056	0.000672	0.000618
Mojave Desert	2021	OBUS	Aggregated	45	DSL	1689.473076	0.060515	0.068892	0.23764	2.491554	1319.003	0.013792	0.013195
Mojave Desert	2021	OBUS	Aggregated	50	GAS	2839.145897	0.031058	0.04532	0.995518	0.309766	939.579	0.000642	0.000591
Mojave Desert	2021	OBUS	Aggregated	50	DSL	1424.20321	0.046055	0.05243	0.183409	2.367868	1288.356	0.013523	0.012938
Mojave Desert	2021	OBUS	Aggregated	55	GAS	3251.325692	0.031538	0.04602	0.936542	0.310529	913.7883	0.000652	0.0006
Mojave Desert	2021	OBUS	Aggregated	55	DSL	1891.03444	0.035489	0.040401	0.144416	2.292835	1267.644	0.013473	0.01289
Mojave Desert	2021	OBUS	Aggregated	60	GAS	4632.25141	0.033487	0.048863	0.88455	0.312483	919.2709	0.000702	0.000645
Mojave Desert	2021	OBUS	Aggregated	60	DSL	2201.752838	0.029936	0.03408	0.122852	2.189353	1234.736	0.013051	0.012486
Mojave Desert	2021	OBUS	Aggregated	65	GAS	10590.02548	0.037983	0.055425	0.853762	0.318759	936.5104	0.00079	0.000726
Mojave Desert	2021	OBUS	Aggregated	65	DSL	2638.362416	0.029084	0.03311	0.118889	2.138087	1218.798	0.012755	0.012204
Mojave Desert	2021	OBUS	Aggregated	70	GAS	15277.44464	0.042358	0.061809	0.875034	0.333872	967.0921	0.00084	0.000773

Mojave Desert	2021	OBUS	Aggregated	70	DSL	4107.699953	0.030396	0.034603	0.124991	2.216089	1243.335	0.01321	0.012638
Mojave Desert	2021	OBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	OBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	OBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	OBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	SBUS	Aggregated	5	GAS	105.9513465	0.327093	0.477293	2.432936	0.751845	1813.605	0.006048	0.005561
Mojave Desert	2021	SBUS	Aggregated	5	DSL	268.3078014	0.752781	0.856984	1.354032	17.68617	2303.91	0.128872	0.123297
Mojave Desert	2021	SBUS	Aggregated	10	GAS	371.3540389	0.206189	0.30087	2.219709	0.650991	1548.208	0.003806	0.003499
Mojave Desert	2021	SBUS	Aggregated	10	DSL	940.4050919	0.580306	0.660634	1.119233	14.39285	2066.586	0.106709	0.102093
Mojave Desert	2021	SBUS	Aggregated	15	GAS	742.7080778	0.136863	0.19971	2.026966	0.57479	1067.183	0.002526	0.002323
Mojave Desert	2021	SBUS	Aggregated	15	DSL	1880.810184	0.328693	0.374192	0.787185	9.845347	1718.531	0.071345	0.068259
Mojave Desert	2021	SBUS	Aggregated	20	GAS	1008.10542	0.095858	0.139876	1.856323	0.515496	750.3189	0.001769	0.001626
Mojave Desert	2021	SBUS	Aggregated	20	DSL	2552.893926	0.180715	0.20573	0.561029	7.369283	1460.816	0.047188	0.045147
Mojave Desert	2021	SBUS	Aggregated	25	GAS	1591.362152	0.070792	0.103299	1.703778	0.470244	655.1877	0.001307	0.001202
Mojave Desert	2021	SBUS	Aggregated	25	DSL	4029.914621	0.130329	0.148369	0.429877	6.582697	1327.486	0.037442	0.035822
Mojave Desert	2021	SBUS	Aggregated	30	GAS	1909.216191	0.055155	0.080481	1.568043	0.435852	602.0908	0.001018	0.000936
Mojave Desert	2021	SBUS	Aggregated	30	DSL	4834.838025	0.100112	0.11397	0.34009	6.195314	1247.83	0.031888	0.030508

Mojave Desert	2021	SBUS	Aggregated	35	GAS	1959.570234	0.045265	0.06605	1.444893	0.411673	555.8758	0.000837	0.00077
Mojave Desert	2021	SBUS	Aggregated	35	DSL	4962.352991	0.077443	0.088163	0.271265	5.936991	1183.719	0.028084	0.026869
Mojave Desert	2021	SBUS	Aggregated	40	GAS	1322.813502	0.039213	0.057219	1.335777	0.394664	517.1604	0.000726	0.000668
Mojave Desert	2021	SBUS	Aggregated	40	DSL	3349.850609	0.06116	0.069626	0.219376	5.764422	1132.116	0.026011	0.024886
Mojave Desert	2021	SBUS	Aggregated	45	GAS	634.6540764	0.035859	0.052325	1.23897	0.38402	480.52	0.000665	0.000611
Mojave Desert	2021	SBUS	Aggregated	45	DSL	1607.177686	0.050391	0.057366	0.181476	5.659886	1091.223	0.025663	0.024553
Mojave Desert	2021	SBUS	Aggregated	50	GAS	317.8540394	0.03469	0.05062	1.15543	0.37769	449.504	0.000641	0.00059
Mojave Desert	2021	SBUS	Aggregated	50	DSL	804.9234042	0.044474	0.05063	0.155415	5.611771	1059.899	0.027043	0.025873
Mojave Desert	2021	SBUS	Aggregated	55	GAS	473.1054256	0.034966	0.051022	1.067379	0.386373	437.1144	0.000653	0.000601
Mojave Desert	2021	SBUS	Aggregated	55	DSL	1198.07705	0.042898	0.048836	0.139639	5.634764	1037.382	0.030165	0.028861
Mojave Desert	2021	SBUS	Aggregated	60	GAS	263.3053875	0.037654	0.054944	1.000985	0.392259	439.8302	0.000702	0.000645
Mojave Desert	2021	SBUS	Aggregated	60	DSL	666.7861427	0.043703	0.049753	0.135057	5.653011	1029.021	0.032344	0.030945
Mojave Desert	2021	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	SBUS	Aggregated	70	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	SBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	SBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	SBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2021	SBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2021	UBUS	Aggregated	5	GAS	534.5739682	1.64339	2.398031	10.4549	2.107843	3845.779	0.006759	0.006214
Mojave Desert	2021	UBUS	Aggregated	5	DSL	673.1989703	2.911668	16.84911	37.0954	19.49179	3325.017	0.317251	0.303526
Mojave Desert	2021	UBUS	Aggregated	10	GAS	1712.722053	1.08462	1.582676	8.571985	1.862632	3282.917	0.004324	0.003976
Mojave Desert	2021	UBUS	Aggregated	10	DSL	2153.376677	2.209435	12.65511	29.11337	16.23757	3019.802	0.264923	0.253463
Mojave Desert	2021	UBUS	Aggregated	15	GAS	2989.208691	0.758042	1.106134	7.304664	1.682496	2262.904	0.002924	0.002689
Mojave Desert	2021	UBUS	Aggregated	15	DSL	3762.725602	1.147819	6.389768	16.86695	11.44912	2479.424	0.179513	0.171747
Mojave Desert	2021	UBUS	Aggregated	20	GAS	27900.16224	0.562578	0.820913	6.450851	1.55928	1591.138	0.002091	0.001922
Mojave Desert	2021	UBUS	Aggregated	20	DSL	35224.48226	0.530871	2.840133	9.445837	8.940044	2033.529	0.119941	0.114752
Mojave Desert	2021	UBUS	Aggregated	25	GAS	133.5917808	0.274813	0.401007	3.051364	0.843395	1383.588	0.001394	0.001282
Mojave Desert	2021	UBUS	Aggregated	25	DSL	158.164123	0.270202	1.017407	4.840517	7.306493	1872.992	0.111828	0.106991
Mojave Desert	2021	UBUS	Aggregated	30	GAS	188.2296033	0.241342	0.352165	3.285779	0.931184	1271.391	0.001131	0.00104
Mojave Desert	2021	UBUS	Aggregated	30	DSL	235.4278129	0.235186	0.954904	4.386446	7.022809	1746.62	0.092711	0.0887
Mojave Desert	2021	UBUS	Aggregated	35	GAS	205.389997	0.187477	0.273566	2.614427	0.795574	1172.987	0.000918	0.000844
Mojave Desert	2021	UBUS	Aggregated	35	DSL	252.9993802	0.181103	0.662504	3.440704	6.578955	1659.989	0.084211	0.080568
Mojave Desert	2021	UBUS	Aggregated	40	GAS	247.7931567	0.169301	0.247044	2.625402	0.823155	1092.201	0.000801	0.000736
Mojave Desert	2021	UBUS	Aggregated	40	DSL	295.9203664	0.162469	0.627159	3.185099	6.535541	1581.26	0.075385	0.072124

Mojave Desert	2021	UBUS	Aggregated	45	GAS	346.6344109	0.199257	0.290756	3.323862	1.023589	1016.154	0.000788	0.000725
Mojave Desert	2021	UBUS	Aggregated	45	DSL	435.7546275	0.165613	0.732081	3.390382	6.785035	1508.791	0.067381	0.064466
Mojave Desert	2021	UBUS	Aggregated	50	GAS	308.455453	0.215341	0.314225	3.67838	1.142696	951.8793	0.000784	0.000721
Mojave Desert	2021	UBUS	Aggregated	50	DSL	383.4409541	0.172689	0.805621	3.494928	7.040025	1463.624	0.063775	0.061016
Mojave Desert	2021	UBUS	Aggregated	55	GAS	401.0637383	0.219908	0.32089	3.635444	1.15231	926.0179	0.000797	0.000733
Mojave Desert	2021	UBUS	Aggregated	55	DSL	484.9460066	0.181196	0.829471	3.419793	7.157017	1446.758	0.066397	0.063525
Mojave Desert	2021	UBUS	Aggregated	60	GAS	549.5249184	0.245596	0.358373	3.917453	1.246942	932.148	0.000868	0.000798
Mojave Desert	2021	UBUS	Aggregated	60	DSL	667.0716589	0.206243	0.951587	3.601589	7.335825	1444.017	0.070518	0.067468
Mojave Desert	2021	UBUS	Aggregated	65	GAS	1206.124905	0.365688	0.533611	5.344208	1.576933	951.2117	0.001088	0.001
Mojave Desert	2021	UBUS	Aggregated	65	DSL	1576.793456	0.270311	1.329553	4.438335	8.01497	1447.673	0.07535	0.07209
Mojave Desert	2021	UBUS	Aggregated	70	GAS	2089.776868	0.433399	0.632414	5.927757	1.657484	982.0474	0.001224	0.001125
Mojave Desert	2021	UBUS	Aggregated	70	DSL	2717.881307	0.335788	1.628801	5.040035	8.641304	1487.649	0.090309	0.086402

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air Basin

Region: Mojave Desert

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	CalYr	VehClass	MdYr	Speed	Fuel	VMT	ROG_ RUNEX	TOG_ RUNEX	CO_RUNE X	NOx_ RUNEX	CO2_ RUNEX	PM10_ RUNEX	PM2_5_ RUNEX
Mojave Desert	2022	HHDT	Aggregated	5	GAS	11.13536	2.831964	4.132396	56.38052	5.913725	4050.609	0.005731	0.005269
Mojave Desert	2022	HHDT	Aggregated	5	DSL	5476.258	0.967932	1.295407	4.434776	20.88916	3330.164	0.032022	0.030637
Mojave Desert	2022	HHDT	Aggregated	10	GAS	47.59559	1.816164	2.650142	51.15606	5.134898	3436.795	0.003633	0.00334
Mojave Desert	2022	HHDT	Aggregated	10	DSL	15489.16	0.716634	0.945825	3.42823	16.20638	2886.884	0.025145	0.024057
Mojave Desert	2022	HHDT	Aggregated	15	GAS	86.52158	1.157343	1.688792	46.31641	4.476316	2482.287	0.00233	0.002142
Mojave Desert	2022	HHDT	Aggregated	15	DSL	21695.89	0.495056	0.590799	2.337516	10.63371	2298.961	0.020532	0.019644
Mojave Desert	2022	HHDT	Aggregated	20	GAS	111.9846	0.827482	1.20746	42.18194	4.077302	2004.74	0.001663	0.001529
Mojave Desert	2022	HHDT	Aggregated	20	DSL	49839.95	0.317805	0.368962	1.538899	6.519302	1974.085	0.016717	0.015994
Mojave Desert	2022	HHDT	Aggregated	25	GAS	324.1887	0.590944	0.862303	38.72076	3.661217	1884.398	0.001211	0.001113
Mojave Desert	2022	HHDT	Aggregated	25	DSL	68776.14	0.233474	0.271317	1.169396	4.408442	1794.881	0.013665	0.013073
Mojave Desert	2022	HHDT	Aggregated	30	GAS	530.7172	0.466432	0.680617	35.44819	3.392872	1792.008	0.000966	0.000889
Mojave Desert	2022	HHDT	Aggregated	30	DSL	114452.9	0.171394	0.197938	0.859597	3.301322	1679.974	0.012424	0.011887

Mojave Desert	2022	HHDT	Aggregated	35	GAS	672.9536	0.390121	0.569264	32.81287	3.209988	1719.896	0.000797	0.000733
Mojave Desert	2022	HHDT	Aggregated	35	DSL	151378.5	0.125407	0.146764	0.634596	2.667226	1601.537	0.011393	0.0109
Mojave Desert	2022	HHDT	Aggregated	40	GAS	659.3382	0.337658	0.492709	30.28207	3.070407	1655.761	0.0007	0.000644
Mojave Desert	2022	HHDT	Aggregated	40	DSL	163772.3	0.092955	0.107856	0.468414	2.254962	1523.979	0.010702	0.010239
Mojave Desert	2022	HHDT	Aggregated	45	GAS	865.7321	0.310239	0.452701	28.01194	2.994761	1615.635	0.000658	0.000605
Mojave Desert	2022	HHDT	Aggregated	45	DSL	270423.5	0.068211	0.078431	0.34464	1.92451	1455.05	0.009918	0.009489
Mojave Desert	2022	HHDT	Aggregated	50	GAS	726.239	0.307294	0.448402	26.08458	2.974006	1590.839	0.000664	0.00061
Mojave Desert	2022	HHDT	Aggregated	50	DSL	263395.4	0.050285	0.057466	0.254613	1.688773	1397.343	0.009301	0.008898
Mojave Desert	2022	HHDT	Aggregated	55	GAS	888.4824	0.318974	0.465447	24.57306	2.997766	1560.096	0.000687	0.000631
Mojave Desert	2022	HHDT	Aggregated	55	DSL	316767.6	0.038232	0.043525	0.191021	1.614941	1361.135	0.009233	0.008834
Mojave Desert	2022	HHDT	Aggregated	60	GAS	975.4827	0.331382	0.483552	22.92924	2.997659	1532.817	0.000751	0.000691
Mojave Desert	2022	HHDT	Aggregated	60	DSL	279895.9	0.03298	0.037545	0.164746	1.557208	1344.023	0.009056	0.008665
Mojave Desert	2022	HHDT	Aggregated	65	GAS	2402.307	0.381709	0.55699	22.01616	3.112995	1524.308	0.000877	0.000806
Mojave Desert	2022	HHDT	Aggregated	65	DSL	678314.8	0.031276	0.035605	0.160942	1.369629	1334.247	0.008253	0.007896
Mojave Desert	2022	HHDT	Aggregated	70	GAS	3361.102	0.419882	0.61269	21.85015	3.287853	1520.031	0.000949	0.000872
Mojave Desert	2022	HHDT	Aggregated	70	DSL	1871564	0.031451	0.035805	0.161405	1.387266	1334.759	0.008306	0.007946
Mojave Desert	2022	HHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2022	HHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	HHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	HHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	LDA	Aggregated	5	GAS	42719.49	0.082667	0.120564	1.312975	0.110125	884.6092	0.011821	0.010869
Mojave Desert	2022	LDA	Aggregated	5	DSL	471.4525	0.211504	0.240783	3.378034	0.17095	643.6245	0.042919	0.041062
Mojave Desert	2022	LDA	Aggregated	10	GAS	57451.37	0.052656	0.076794	1.186206	0.093435	659.0643	0.007472	0.006871
Mojave Desert	2022	LDA	Aggregated	10	DSL	638.4804	0.156284	0.177919	2.52845	0.155325	537.1715	0.031575	0.030209
Mojave Desert	2022	LDA	Aggregated	15	GAS	132468.1	0.035367	0.051576	1.064603	0.082199	505.4906	0.004976	0.004575
Mojave Desert	2022	LDA	Aggregated	15	DSL	1471.117	0.082981	0.094468	1.261801	0.123061	439.9407	0.023044	0.022048
Mojave Desert	2022	LDA	Aggregated	20	GAS	181354.9	0.024764	0.036111	0.959535	0.073883	401.8284	0.003503	0.003221
Mojave Desert	2022	LDA	Aggregated	20	DSL	2043.97	0.041006	0.046682	0.533117	0.105041	361.6338	0.017961	0.017184
Mojave Desert	2022	LDA	Aggregated	25	GAS	846282.6	0.018673	0.027227	0.87149	0.067197	332.251	0.002591	0.002382
Mojave Desert	2022	LDA	Aggregated	25	DSL	9519.734	0.026687	0.030382	0.329892	0.090599	300.6824	0.01364	0.01305
Mojave Desert	2022	LDA	Aggregated	30	GAS	1799324	0.014545	0.021207	0.787036	0.061836	284.39	0.002023	0.00186
Mojave Desert	2022	LDA	Aggregated	30	DSL	20459.16	0.020499	0.023337	0.253041	0.08447	259.7513	0.011084	0.010604
Mojave Desert	2022	LDA	Aggregated	35	GAS	1876041	0.012205	0.017794	0.739199	0.058749	255.4918	0.001665	0.001531
Mojave Desert	2022	LDA	Aggregated	35	DSL	21092.5	0.017332	0.019731	0.208256	0.084537	234.7771	0.009987	0.009555

Mojave Desert	2022	LDA	Aggregated	40	GAS	2074371	0.010529	0.01535	0.676698	0.056005	236.1591	0.001445	0.001329
Mojave Desert	2022	LDA	Aggregated	40	DSL	23407.06	0.014893	0.016955	0.17736	0.083183	219.4869	0.008985	0.008597
Mojave Desert	2022	LDA	Aggregated	45	GAS	3277928	0.00967	0.014098	0.623451	0.054998	225.9956	0.001322	0.001215
Mojave Desert	2022	LDA	Aggregated	45	DSL	37143.48	0.013025	0.014829	0.154874	0.079759	211.2239	0.008177	0.007824
Mojave Desert	2022	LDA	Aggregated	50	GAS	2364384	0.009319	0.013584	0.583015	0.054254	225.7193	0.001278	0.001175
Mojave Desert	2022	LDA	Aggregated	50	DSL	27313.03	0.012165	0.013849	0.143129	0.08146	212.2076	0.007908	0.007566
Mojave Desert	2022	LDA	Aggregated	55	GAS	2081500	0.00947	0.013804	0.546732	0.05485	233.8705	0.001299	0.001194
Mojave Desert	2022	LDA	Aggregated	55	DSL	23882.54	0.01186	0.013502	0.13671	0.081824	221.7338	0.008009	0.007663
Mojave Desert	2022	LDA	Aggregated	60	GAS	1424643	0.010024	0.014611	0.512418	0.056312	251.4741	0.001389	0.001278
Mojave Desert	2022	LDA	Aggregated	60	DSL	15988.28	0.012309	0.014013	0.140351	0.081877	239.6413	0.008527	0.008158
Mojave Desert	2022	LDA	Aggregated	65	GAS	2875869	0.011436	0.016669	0.493675	0.05875	281.8638	0.001573	0.001446
Mojave Desert	2022	LDA	Aggregated	65	DSL	32580.67	0.013324	0.015168	0.154649	0.08336	269.3632	0.009293	0.008891
Mojave Desert	2022	LDA	Aggregated	70	GAS	3239060	0.012331	0.017973	0.478776	0.061401	299.397	0.001711	0.001573
Mojave Desert	2022	LDA	Aggregated	70	DSL	37391.86	0.014154	0.016114	0.166568	0.086182	291.5576	0.009881	0.009453
Mojave Desert	2022	LDT1	Aggregated	5	GAS	2720.182	0.24128	0.351712	4.05359	0.384587	1057.569	0.019364	0.017806
Mojave Desert	2022	LDT1	Aggregated	5	DSL	2.677441	0.761986	0.867471	3.526345	0.821567	920.0089	0.610092	0.5837
Mojave Desert	2022	LDT1	Aggregated	10	GAS	3644.172	0.154064	0.224591	3.425024	0.308537	787.2308	0.012393	0.011396

Mojave Desert	2022	LDT1	Aggregated	10	DSL	3.554456	0.529241	0.602506	2.516339	0.845266	774.6363	0.425618	0.407206
Mojave Desert	2022	LDT1	Aggregated	15	GAS	8520.644	0.107871	0.157232	2.974172	0.265703	602.9608	0.008251	0.007587
Mojave Desert	2022	LDT1	Aggregated	15	DSL	8.205569	0.364339	0.414776	1.716555	0.849941	636.8061	0.297497	0.284627
Mojave Desert	2022	LDT1	Aggregated	20	GAS	11706.48	0.075156	0.109538	2.554587	0.22821	479.1744	0.005782	0.005317
Mojave Desert	2022	LDT1	Aggregated	20	DSL	11.45156	0.263594	0.300085	1.229647	0.866627	523.613	0.227172	0.217345
Mojave Desert	2022	LDT1	Aggregated	25	GAS	56150.31	0.05953	0.086744	2.280373	0.207238	395.2752	0.004179	0.003843
Mojave Desert	2022	LDT1	Aggregated	25	DSL	54.04458	0.201639	0.229553	0.970674	0.859443	432.352	0.16744	0.160197
Mojave Desert	2022	LDT1	Aggregated	30	GAS	121059	0.045906	0.066888	1.971646	0.183674	337.7237	0.003148	0.002895
Mojave Desert	2022	LDT1	Aggregated	30	DSL	114.3795	0.160692	0.182937	0.80789	0.848762	370.079	0.132045	0.126333
Mojave Desert	2022	LDT1	Aggregated	35	GAS	125695.3	0.040613	0.059165	1.912233	0.181897	303.7776	0.002706	0.002489
Mojave Desert	2022	LDT1	Aggregated	35	DSL	121.106	0.14527	0.16538	0.762351	0.921208	335.9579	0.11936	0.114196
Mojave Desert	2022	LDT1	Aggregated	40	GAS	139409.6	0.034559	0.050346	1.720162	0.171024	280.5635	0.002308	0.002122
Mojave Desert	2022	LDT1	Aggregated	40	DSL	131.6805	0.128706	0.146524	0.711174	0.933949	311.8934	0.105962	0.101378
Mojave Desert	2022	LDT1	Aggregated	45	GAS	224397	0.031908	0.046475	1.584711	0.169197	268.257	0.002049	0.001884
Mojave Desert	2022	LDT1	Aggregated	45	DSL	212.1258	0.120595	0.137289	0.710959	0.939719	298.3781	0.096698	0.092515
Mojave Desert	2022	LDT1	Aggregated	50	GAS	163133.1	0.02947	0.042918	1.45066	0.162953	267.7183	0.001902	0.001749
Mojave Desert	2022	LDT1	Aggregated	50	DSL	157.2199	0.118931	0.135395	0.752534	0.950821	298.9589	0.096358	0.09219

Mojave Desert	2022	LDT1	Aggregated	55	GAS	143773.5	0.030165	0.043927	1.41094	0.171211	277.4195	0.001942	0.001785
Mojave Desert	2022	LDT1	Aggregated	55	DSL	138.1703	0.124701	0.141964	0.847698	0.995013	312.3227	0.100419	0.096075
Mojave Desert	2022	LDT1	Aggregated	60	GAS	97144.53	0.032464	0.047276	1.40676	0.186324	298.4464	0.002124	0.001953
Mojave Desert	2022	LDT1	Aggregated	60	DSL	89.29013	0.134594	0.153226	0.979095	1.046867	336.9234	0.108114	0.103437
Mojave Desert	2022	LDT1	Aggregated	65	GAS	198493.3	0.03591	0.052286	1.394896	0.197771	334.3073	0.002322	0.002136
Mojave Desert	2022	LDT1	Aggregated	65	DSL	185.3215	0.153453	0.174696	1.226669	1.063677	377.8543	0.122173	0.116888
Mojave Desert	2022	LDT1	Aggregated	70	GAS	226916.5	0.037377	0.054414	1.362795	0.204977	355.1436	0.002436	0.00224
Mojave Desert	2022	LDT1	Aggregated	70	DSL	220.0624	0.16848	0.191803	1.42755	1.06804	408.7677	0.134166	0.128362
Mojave Desert	2022	LDT2	Aggregated	5	GAS	11508.43	0.111577	0.162741	1.707524	0.181376	1168.144	0.011994	0.011029
Mojave Desert	2022	LDT2	Aggregated	5	DSL	20.9631	0.258808	0.294636	2.323144	0.162243	801.6597	0.014475	0.013849
Mojave Desert	2022	LDT2	Aggregated	10	GAS	15545.62	0.071773	0.104686	1.535731	0.153703	870.059	0.007593	0.006981
Mojave Desert	2022	LDT2	Aggregated	10	DSL	28.15172	0.193165	0.219906	1.735336	0.137795	674.1893	0.011955	0.011438
Mojave Desert	2022	LDT2	Aggregated	15	GAS	37204.99	0.048757	0.07111	1.376885	0.135054	667.7069	0.005062	0.004654
Mojave Desert	2022	LDT2	Aggregated	15	DSL	68.27304	0.095715	0.108965	0.856533	0.097105	559.6541	0.00973	0.009309
Mojave Desert	2022	LDT2	Aggregated	20	GAS	52317.94	0.034942	0.05096	1.251038	0.122657	532.0603	0.003565	0.003278
Mojave Desert	2022	LDT2	Aggregated	20	DSL	96.29713	0.038592	0.043935	0.341556	0.068713	460.0687	0.007877	0.007536
Mojave Desert	2022	LDT2	Aggregated	25	GAS	260647.2	0.026646	0.038856	1.13942	0.111198	440.5516	0.002638	0.002425

Mojave Desert	2022	LDT2	Aggregated	25	DSL	491.0287	0.023727	0.027012	0.208782	0.054602	386.6006	0.006597	0.006312
Mojave Desert	2022	LDT2	Aggregated	30	GAS	583641	0.021172	0.030872	1.038502	0.104327	378.037	0.002061	0.001895
Mojave Desert	2022	LDT2	Aggregated	30	DSL	1108.438	0.017998	0.02049	0.158624	0.046519	334.4352	0.005668	0.005422
Mojave Desert	2022	LDT2	Aggregated	35	GAS	590462.2	0.017546	0.025583	0.966515	0.097924	339.0056	0.001697	0.001561
Mojave Desert	2022	LDT2	Aggregated	35	DSL	1121.853	0.014511	0.01652	0.127762	0.043605	301.9881	0.005141	0.004919
Mojave Desert	2022	LDT2	Aggregated	40	GAS	664359.1	0.015241	0.022223	0.888179	0.093831	313.6422	0.001474	0.001355
Mojave Desert	2022	LDT2	Aggregated	40	DSL	1262.294	0.012078	0.01375	0.106407	0.040236	281.7308	0.004687	0.004485
Mojave Desert	2022	LDT2	Aggregated	45	GAS	1096352	0.01409	0.020542	0.824861	0.093042	300.8119	0.001347	0.001238
Mojave Desert	2022	LDT2	Aggregated	45	DSL	2108.648	0.010448	0.011894	0.092067	0.037554	272.0493	0.004417	0.004226
Mojave Desert	2022	LDT2	Aggregated	50	GAS	820547.5	0.013823	0.020153	0.78244	0.093724	301.3505	0.0013	0.001195
Mojave Desert	2022	LDT2	Aggregated	50	DSL	1584.559	0.009143	0.010409	0.081093	0.034587	272.6981	0.004132	0.003953
Mojave Desert	2022	LDT2	Aggregated	55	GAS	717661.2	0.013907	0.020275	0.732997	0.094746	311.9594	0.001321	0.001214
Mojave Desert	2022	LDT2	Aggregated	55	DSL	1387.751	0.008316	0.009467	0.073977	0.034126	285.1795	0.004038	0.003864
Mojave Desert	2022	LDT2	Aggregated	60	GAS	471318.6	0.014386	0.020972	0.680707	0.096127	334.271	0.001414	0.001301
Mojave Desert	2022	LDT2	Aggregated	60	DSL	904.3925	0.007997	0.009104	0.071673	0.034877	308.3192	0.004034	0.003859
Mojave Desert	2022	LDT2	Aggregated	65	GAS	981142.8	0.016481	0.024025	0.664434	0.102129	375.487	0.001597	0.001469
Mojave Desert	2022	LDT2	Aggregated	65	DSL	1895.515	0.008358	0.009515	0.0761	0.035175	346.7647	0.004283	0.004098

Mojave Desert	2022	LDT2	Aggregated	70	GAS	1149239	0.01797	0.026195	0.654452	0.109002	400.216	0.001731	0.001591
Mojave Desert	2022	LDT2	Aggregated	70	DSL	2236.928	0.008762	0.009975	0.08091	0.035486	374.8548	0.004548	0.004351
Mojave Desert	2022	LHDT1	Aggregated	5	GAS	1388.262	0.390277	0.569492	4.548043	0.737484	1386.535	0.011194	0.010292
Mojave Desert	2022	LHDT1	Aggregated	5	DSL	1521.931	0.829839	0.944717	3.574991	3.371058	1270.558	0.124485	0.119099
Mojave Desert	2022	LHDT1	Aggregated	10	GAS	3646.425	0.255897	0.373405	3.578104	0.651762	1363.765	0.007122	0.006549
Mojave Desert	2022	LHDT1	Aggregated	10	DSL	4620.106	0.592617	0.674655	2.586736	3.488744	1067.962	0.088819	0.084976
Mojave Desert	2022	LHDT1	Aggregated	15	GAS	8813.806	0.176433	0.257451	2.930157	0.586127	947.3703	0.004776	0.004392
Mojave Desert	2022	LHDT1	Aggregated	15	DSL	10819.25	0.379223	0.43172	1.684682	3.582222	697.3245	0.065815	0.062968
Mojave Desert	2022	LHDT1	Aggregated	20	GAS	9800.904	0.128622	0.187685	2.496752	0.54148	822.541	0.003395	0.003121
Mojave Desert	2022	LHDT1	Aggregated	20	DSL	11674.14	0.24971	0.284279	1.141857	3.713175	594.4405	0.050951	0.048747
Mojave Desert	2022	LHDT1	Aggregated	25	GAS	11739.26	0.093457	0.136372	2.071556	0.492416	753.8097	0.002449	0.002252
Mojave Desert	2022	LHDT1	Aggregated	25	DSL	16111.2	0.184742	0.210317	0.876585	3.69974	525.6681	0.039656	0.03794
Mojave Desert	2022	LHDT1	Aggregated	30	GAS	14103.64	0.072826	0.106267	1.802967	0.453833	684.0063	0.001894	0.001741
Mojave Desert	2022	LHDT1	Aggregated	30	DSL	17626.35	0.148358	0.168895	0.733656	3.725829	476.3038	0.032603	0.031193
Mojave Desert	2022	LHDT1	Aggregated	35	GAS	10994.98	0.06021	0.087859	1.619815	0.429484	683.9513	0.001549	0.001424
Mojave Desert	2022	LHDT1	Aggregated	35	DSL	14080.35	0.125489	0.142861	0.65165	3.788812	475.5096	0.0281	0.026884
Mojave Desert	2022	LHDT1	Aggregated	40	GAS	10339.91	0.051717	0.075465	1.473568	0.408029	681.2538	0.001325	0.001219

Mojave Desert	2022	LHDT1	Aggregated	40	DSL	13473.52	0.110434	0.125722	0.605844	3.823403	461.6226	0.025147	0.024059
Mojave Desert	2022	LHDT1	Aggregated	45	GAS	16587.94	0.04717	0.06883	1.387897	0.395694	677.9926	0.0012	0.001104
Mojave Desert	2022	LHDT1	Aggregated	45	DSL	22431.65	0.101967	0.116082	0.594771	3.877192	449.6734	0.023535	0.022517
Mojave Desert	2022	LHDT1	Aggregated	50	GAS	20034.62	0.048338	0.070534	1.43944	0.405108	715.0991	0.001195	0.001099
Mojave Desert	2022	LHDT1	Aggregated	50	DSL	27602	0.105053	0.119596	0.65663	4.259303	472.9917	0.024224	0.023176
Mojave Desert	2022	LHDT1	Aggregated	55	GAS	19210.79	0.047165	0.068823	1.400176	0.394296	753.2232	0.001179	0.001084
Mojave Desert	2022	LHDT1	Aggregated	55	DSL	25783.83	0.104924	0.119449	0.708988	4.263744	493.2598	0.02431	0.023258
Mojave Desert	2022	LHDT1	Aggregated	60	GAS	23867.51	0.049618	0.072403	1.460249	0.390849	764.2411	0.001251	0.00115
Mojave Desert	2022	LHDT1	Aggregated	60	DSL	23300.48	0.107803	0.122727	0.792793	4.153318	496.4684	0.02506	0.023976
Mojave Desert	2022	LHDT1	Aggregated	65	GAS	65767.31	0.056736	0.082789	1.643391	0.404717	774.5819	0.001406	0.001293
Mojave Desert	2022	LHDT1	Aggregated	65	DSL	68739.58	0.121234	0.138017	0.975523	4.26148	502.7922	0.028003	0.026792
Mojave Desert	2022	LHDT1	Aggregated	70	GAS	108538.2	0.062529	0.091242	1.793521	0.429231	767.227	0.001518	0.001395
Mojave Desert	2022	LHDT1	Aggregated	70	DSL	180991.6	0.130097	0.148107	1.098265	4.308635	497.0209	0.029955	0.028659
Mojave Desert	2022	LHDT2	Aggregated	5	GAS	248.9683	0.106591	0.155537	1.065604	0.296185	1449.175	0.006515	0.00599
Mojave Desert	2022	LHDT2	Aggregated	5	DSL	533.5844	0.774233	0.881412	3.420189	2.130395	1317.725	0.079629	0.076184
Mojave Desert	2022	LHDT2	Aggregated	10	GAS	656.228	0.069153	0.100909	0.873113	0.260027	1504.062	0.004127	0.003794
Mojave Desert	2022	LHDT2	Aggregated	10	DSL	1622.193	0.563969	0.642042	2.507859	2.150815	1170.926	0.059192	0.056631

Mojave Desert	2022	LHDT2	Aggregated	15	GAS	1589.988	0.04715	0.068801	0.739229	0.231891	1057.987	0.002754	0.002532
Mojave Desert	2022	LHDT2	Aggregated	15	DSL	3806.532	0.324615	0.369553	1.466616	2.130808	779.2531	0.04515	0.043197
Mojave Desert	2022	LHDT2	Aggregated	20	GAS	1763.956	0.033779	0.04929	0.641696	0.210853	925.9675	0.001933	0.001778
Mojave Desert	2022	LHDT2	Aggregated	20	DSL	4102.17	0.182245	0.207473	0.850855	2.153618	664.7506	0.035643	0.034101
Mojave Desert	2022	LHDT2	Aggregated	25	GAS	2181.156	0.025704	0.037508	0.573261	0.19951	836.6528	0.00146	0.001342
Mojave Desert	2022	LHDT2	Aggregated	25	DSL	5814.963	0.128474	0.146259	0.616543	2.118704	590.2895	0.028175	0.026956
Mojave Desert	2022	LHDT2	Aggregated	30	GAS	2667.875	0.020313	0.029641	0.517094	0.18624	755.9533	0.001148	0.001056
Mojave Desert	2022	LHDT2	Aggregated	30	DSL	6503.421	0.102234	0.116387	0.50657	2.132526	531.0361	0.023539	0.022521
Mojave Desert	2022	LHDT2	Aggregated	35	GAS	2118.644	0.017134	0.025002	0.480865	0.17906	755.6318	0.000959	0.000881
Mojave Desert	2022	LHDT2	Aggregated	35	DSL	5282.013	0.08559	0.097438	0.44076	2.161875	530.1015	0.020497	0.01961
Mojave Desert	2022	LHDT2	Aggregated	40	GAS	2018.689	0.014988	0.021871	0.446901	0.172598	738.1657	0.000836	0.000769
Mojave Desert	2022	LHDT2	Aggregated	40	DSL	5140.668	0.07471	0.085052	0.403115	2.187687	509.722	0.018444	0.017646
Mojave Desert	2022	LHDT2	Aggregated	45	GAS	3253.144	0.013767	0.020089	0.420151	0.168106	720.7308	0.000763	0.000702
Mojave Desert	2022	LHDT2	Aggregated	45	DSL	8644.758	0.068217	0.077661	0.389853	2.22761	489.2417	0.017219	0.016474
Mojave Desert	2022	LHDT2	Aggregated	50	GAS	3834.384	0.01343	0.019597	0.407013	0.164702	751.7749	0.000729	0.00067
Mojave Desert	2022	LHDT2	Aggregated	50	DSL	10313.51	0.067961	0.077369	0.419561	2.421388	509.004	0.017347	0.016597
Mojave Desert	2022	LHDT2	Aggregated	55	GAS	3752.762	0.013683	0.019967	0.401927	0.166098	785.6455	0.000747	0.000687

Mojave Desert	2022	LHDT2	Aggregated	55	DSL	9793.294	0.066975	0.076247	0.445864	2.433182	525.6569	0.017163	0.016421
Mojave Desert	2022	LHDT2	Aggregated	60	GAS	4693.6	0.014612	0.021322	0.409223	0.167288	793.7256	0.000805	0.00074
Mojave Desert	2022	LHDT2	Aggregated	60	DSL	9121.222	0.069127	0.078696	0.498924	2.416066	525.752	0.017592	0.016831
Mojave Desert	2022	LHDT2	Aggregated	65	GAS	12950.02	0.016832	0.024562	0.442452	0.174429	801.5194	0.000911	0.000837
Mojave Desert	2022	LHDT2	Aggregated	65	DSL	26871.94	0.076648	0.087258	0.60648	2.474167	526.8801	0.019238	0.018406
Mojave Desert	2022	LHDT2	Aggregated	70	GAS	21409.04	0.018716	0.02731	0.474443	0.186091	785.4657	0.000989	0.000909
Mojave Desert	2022	LHDT2	Aggregated	70	DSL	70297.83	0.080828	0.092017	0.671103	2.468698	520.2047	0.020185	0.019312
Mojave Desert	2022	MCY	Aggregated	5	GAS	557.9805	13.02689	15.99918	54.91479	1.573857	552.6665	0.011086	0.010381
Mojave Desert	2022	MCY	Aggregated	10	GAS	758.0444	8.497017	10.41703	41.2132	1.419251	409.5347	0.007248	0.00679
Mojave Desert	2022	MCY	Aggregated	15	GAS	1832.089	5.855601	7.178299	32.41369	1.319395	315.5779	0.004971	0.004657
Mojave Desert	2022	MCY	Aggregated	20	GAS	2529.776	4.292465	5.249726	27.2085	1.251468	251.8311	0.003615	0.003389
Mojave Desert	2022	MCY	Aggregated	25	GAS	12723.73	3.257133	3.988171	23.02327	1.193489	209.2226	0.002731	0.002559
Mojave Desert	2022	MCY	Aggregated	30	GAS	28777.09	2.625199	3.21136	20.52411	1.158761	180.0463	0.002183	0.002046
Mojave Desert	2022	MCY	Aggregated	35	GAS	28817.83	2.215142	2.710296	18.81346	1.134309	160.9741	0.001852	0.001735
Mojave Desert	2022	MCY	Aggregated	40	GAS	32872.68	1.974569	2.414107	17.92737	1.126962	149.2314	0.001643	0.00154
Mojave Desert	2022	MCY	Aggregated	45	GAS	53572.14	1.848376	2.260073	17.66701	1.132713	143.6932	0.001527	0.001431
Mojave Desert	2022	MCY	Aggregated	50	GAS	39244.86	1.826011	2.228911	18.23191	1.146017	143.342	0.001508	0.001414

Mojave Desert	2022	MCY	Aggregated	55	GAS	34378.69	1.881804	2.29794	19.38116	1.167679	148.6961	0.001554	0.001457
Mojave Desert	2022	MCY	Aggregated	60	GAS	23810.64	2.03921	2.492753	21.60219	1.203072	160.1958	0.001675	0.001569
Mojave Desert	2022	MCY	Aggregated	65	GAS	48210.78	2.316289	2.830896	25.41271	1.238207	178.8601	0.001911	0.001791
Mojave Desert	2022	MCY	Aggregated	70	GAS	53378.19	2.547838	3.110261	28.70577	1.279789	191.4958	0.002091	0.001961
Mojave Desert	2022	MDV	Aggregated	5	GAS	7548.758	0.221573	0.322697	3.000217	0.354173	1602.451	0.012125	0.01115
Mojave Desert	2022	MDV	Aggregated	5	DSL	137.1206	0.192063	0.218652	3.420366	0.138151	988.741	0.024693	0.023625
Mojave Desert	2022	MDV	Aggregated	10	GAS	10167.66	0.138366	0.201505	2.58014	0.288953	1190.385	0.007663	0.007047
Mojave Desert	2022	MDV	Aggregated	10	DSL	187.7194	0.141826	0.16146	2.563932	0.118412	840.3185	0.017972	0.017195
Mojave Desert	2022	MDV	Aggregated	15	GAS	23963.61	0.096141	0.139983	2.328144	0.261698	916.3155	0.005143	0.00473
Mojave Desert	2022	MDV	Aggregated	15	DSL	442.8351	0.073578	0.083764	1.272443	0.088343	713.8976	0.014387	0.013764
Mojave Desert	2022	MDV	Aggregated	20	GAS	33526.59	0.06629	0.096513	2.036232	0.228153	727.6766	0.003596	0.003307
Mojave Desert	2022	MDV	Aggregated	20	DSL	637.8796	0.032415	0.036902	0.514829	0.065631	594.6143	0.010964	0.01049
Mojave Desert	2022	MDV	Aggregated	25	GAS	162946.4	0.052973	0.077107	1.910149	0.221085	605.8497	0.002689	0.002473
Mojave Desert	2022	MDV	Aggregated	25	DSL	3096.537	0.021662	0.024661	0.320143	0.058154	504.2622	0.009504	0.009093
Mojave Desert	2022	MDV	Aggregated	30	GAS	358030	0.041437	0.06031	1.716614	0.204234	519.6936	0.002094	0.001926
Mojave Desert	2022	MDV	Aggregated	30	DSL	6958	0.016709	0.019022	0.246247	0.052868	436.8223	0.007978	0.007633
Mojave Desert	2022	MDV	Aggregated	35	GAS	366681.5	0.035733	0.051996	1.637647	0.198128	467.1558	0.001746	0.001605

Mojave Desert	2022	MDV	Aggregated	35	DSL	6961.224	0.014093	0.016044	0.199399	0.052025	395.604	0.007372	0.007053
Mojave Desert	2022	MDV	Aggregated	40	GAS	408952.8	0.030729	0.04471	1.49613	0.18875	431.9589	0.001514	0.001393
Mojave Desert	2022	MDV	Aggregated	40	DSL	7834.58	0.011953	0.013607	0.167871	0.049895	370.3324	0.006647	0.00636
Mojave Desert	2022	MDV	Aggregated	45	GAS	665844.8	0.028785	0.041875	1.406581	0.190845	414.8123	0.001386	0.001275
Mojave Desert	2022	MDV	Aggregated	45	DSL	12869.62	0.010708	0.01219	0.147082	0.049583	357.1952	0.006345	0.00607
Mojave Desert	2022	MDV	Aggregated	50	GAS	495100.9	0.027105	0.039433	1.301633	0.184946	414.043	0.00132	0.001214
Mojave Desert	2022	MDV	Aggregated	50	DSL	9880.118	0.00951	0.010827	0.13115	0.046826	360.0556	0.005886	0.005631
Mojave Desert	2022	MDV	Aggregated	55	GAS	433406.2	0.027878	0.040551	1.25228	0.19162	429.3244	0.001349	0.001241
Mojave Desert	2022	MDV	Aggregated	55	DSL	8552.753	0.009228	0.010506	0.122135	0.04788	379.718	0.006017	0.005756
Mojave Desert	2022	MDV	Aggregated	60	GAS	285796.2	0.030219	0.043944	1.230593	0.204297	462.1963	0.001466	0.001348
Mojave Desert	2022	MDV	Aggregated	60	DSL	5435.729	0.009826	0.011186	0.124381	0.051211	409.6584	0.006592	0.006307
Mojave Desert	2022	MDV	Aggregated	65	GAS	590944	0.034183	0.049708	1.220654	0.215556	518.3249	0.001644	0.001512
Mojave Desert	2022	MDV	Aggregated	65	DSL	11435.82	0.010438	0.011883	0.132957	0.051591	460.9562	0.007086	0.00678
Mojave Desert	2022	MDV	Aggregated	70	GAS	688665.6	0.036048	0.052424	1.187088	0.22265	550.2887	0.00176	0.001619
Mojave Desert	2022	MDV	Aggregated	70	DSL	13747.61	0.010517	0.011973	0.136543	0.050138	497.7248	0.007191	0.00688
Mojave Desert	2022	MH	Aggregated	5	GAS	66.07243	0.695579	1.014988	11.44571	1.108231	3905.131	0.011843	0.010889
Mojave Desert	2022	MH	Aggregated	5	DSL	15.30261	1.256738	1.430713	2.657519	16.76736	2094.95	0.430435	0.411814

Mojave Desert	2022	MH	Aggregated	10	GAS	309.2855	0.465714	0.679568	8.747245	1.0049	3334.309	0.007683	0.007064
Mojave Desert	2022	MH	Aggregated	10	DSL	69.4635	0.954047	1.086119	2.172308	14.03871	1902.543	0.369543	0.353556
Mojave Desert	2022	MH	Aggregated	15	GAS	479.8186	0.318814	0.465212	6.77429	0.902893	2297.807	0.005146	0.004732
Mojave Desert	2022	MH	Aggregated	15	DSL	112.3669	0.48639	0.553723	1.393495	9.793503	1561.742	0.263609	0.252205
Mojave Desert	2022	MH	Aggregated	20	GAS	499.8251	0.233474	0.340685	5.595181	0.843837	1615.701	0.003685	0.003388
Mojave Desert	2022	MH	Aggregated	20	DSL	120.0341	0.219028	0.249349	0.898126	7.356592	1281.608	0.190596	0.182351
Mojave Desert	2022	MH	Aggregated	25	GAS	1105.273	0.172717	0.252028	4.585196	0.772195	1409.208	0.002693	0.002476
Mojave Desert	2022	MH	Aggregated	25	DSL	258.3262	0.150481	0.171313	0.689516	6.366138	1148.086	0.152986	0.146368
Mojave Desert	2022	MH	Aggregated	30	GAS	1544.084	0.136937	0.199819	4.00151	0.728869	1294.453	0.002124	0.001953
Mojave Desert	2022	MH	Aggregated	30	DSL	373.1212	0.121439	0.13825	0.582166	5.865345	1077.416	0.13591	0.13003
Mojave Desert	2022	MH	Aggregated	35	GAS	1749.195	0.117099	0.17087	3.698882	0.711776	1195.633	0.001781	0.001637
Mojave Desert	2022	MH	Aggregated	35	DSL	412.9511	0.101115	0.115113	0.508236	5.556736	1019.17	0.128225	0.122678
Mojave Desert	2022	MH	Aggregated	40	GAS	1999.037	0.10583	0.154427	3.551508	0.708113	1112.023	0.001585	0.001458
Mojave Desert	2022	MH	Aggregated	40	DSL	494.3803	0.08576	0.097632	0.447426	5.302577	972.6896	0.126253	0.120792
Mojave Desert	2022	MH	Aggregated	45	GAS	2542.409	0.098612	0.143894	3.456311	0.697565	1032.179	0.001464	0.001346
Mojave Desert	2022	MH	Aggregated	45	DSL	628.0126	0.074209	0.084483	0.394969	5.038508	937.5942	0.127492	0.121977
Mojave Desert	2022	MH	Aggregated	50	GAS	2167.228	0.098562	0.143821	3.572056	0.708242	964.8248	0.001445	0.001329

Mojave Desert	2022	MH	Aggregated	50	DSL	571.9383	0.069328	0.078926	0.369119	4.923258	915.0587	0.13851	0.132518
Mojave Desert	2022	MH	Aggregated	55	GAS	2473.245	0.102536	0.149621	3.822881	0.725482	938.0713	0.001492	0.001372
Mojave Desert	2022	MH	Aggregated	55	DSL	689.0251	0.070107	0.079812	0.364387	4.934806	904.8043	0.157927	0.151095
Mojave Desert	2022	MH	Aggregated	60	GAS	3443.04	0.109833	0.160268	4.211089	0.731242	943.1772	0.001606	0.001477
Mojave Desert	2022	MH	Aggregated	60	DSL	1001	0.074073	0.084328	0.365899	4.912948	905.9354	0.179071	0.171324
Mojave Desert	2022	MH	Aggregated	65	GAS	7502.142	0.125111	0.182562	4.92089	0.740673	958.9923	0.001808	0.001663
Mojave Desert	2022	MH	Aggregated	65	DSL	2098.509	0.080286	0.0914	0.370895	4.835685	918.2349	0.198858	0.190256
Mojave Desert	2022	MH	Aggregated	70	GAS	10574.66	0.141027	0.205786	5.609035	0.788989	988.3927	0.001972	0.001813
Mojave Desert	2022	MH	Aggregated	70	DSL	3384.957	0.093376	0.106302	0.402428	4.971702	943.0594	0.229773	0.219833
Mojave Desert	2022	MHDT	Aggregated	5	GAS	129.8494	0.36578	0.533745	3.256068	0.72332	3756.053	0.007534	0.006927
Mojave Desert	2022	MHDT	Aggregated	5	DSL	600.4251	0.323254	0.368	1.361051	9.539526	2200.948	0.015934	0.015245
Mojave Desert	2022	MHDT	Aggregated	10	GAS	594.2923	0.235511	0.343657	2.829568	0.634253	3205.384	0.004787	0.004402
Mojave Desert	2022	MHDT	Aggregated	10	DSL	2667.526	0.26143	0.297619	1.104222	7.449437	1953.143	0.014198	0.013584
Mojave Desert	2022	MHDT	Aggregated	15	GAS	967.2638	0.1555	0.226906	2.420863	0.557984	2210.647	0.003154	0.0029
Mojave Desert	2022	MHDT	Aggregated	15	DSL	4577.913	0.179136	0.203933	0.777137	4.789885	1639.331	0.011071	0.010592
Mojave Desert	2022	MHDT	Aggregated	20	GAS	1006.801	0.110067	0.16061	2.159417	0.506113	1554.149	0.002218	0.00204
Mojave Desert	2022	MHDT	Aggregated	20	DSL	5022.294	0.126571	0.144091	0.562114	3.055058	1431.976	0.009171	0.008774

Mojave Desert	2022	MHDT	Aggregated	25	GAS	2496.418	0.079589	0.116137	1.887496	0.45883	1359.229	0.001599	0.00147
Mojave Desert	2022	MHDT	Aggregated	25	DSL	12266.99	0.091932	0.104657	0.41203	2.01063	1319.711	0.007763	0.007427
Mojave Desert	2022	MHDT	Aggregated	30	GAS	3599.717	0.061069	0.089112	1.691359	0.420806	1249.637	0.001236	0.001136
Mojave Desert	2022	MHDT	Aggregated	30	DSL	17556.49	0.067943	0.077348	0.304648	1.503349	1245.79	0.007029	0.006725
Mojave Desert	2022	MHDT	Aggregated	35	GAS	4008.664	0.050789	0.074111	1.567917	0.399414	1153.263	0.001024	0.000942
Mojave Desert	2022	MHDT	Aggregated	35	DSL	20677.67	0.050217	0.057169	0.225449	1.20604	1187.214	0.006434	0.006155
Mojave Desert	2022	MHDT	Aggregated	40	GAS	4560.282	0.044617	0.065104	1.460495	0.384188	1073.137	0.00089	0.000819
Mojave Desert	2022	MHDT	Aggregated	40	DSL	23092.28	0.037407	0.042585	0.167431	1.030287	1139.055	0.006095	0.005831
Mojave Desert	2022	MHDT	Aggregated	45	GAS	6064.473	0.040769	0.05949	1.355796	0.371976	998.0024	0.000805	0.000741
Mojave Desert	2022	MHDT	Aggregated	45	DSL	27958.94	0.027867	0.031725	0.124427	0.907092	1098.36	0.005764	0.005515
Mojave Desert	2022	MHDT	Aggregated	50	GAS	5223.141	0.039918	0.058248	1.290677	0.367914	934.083	0.000776	0.000713
Mojave Desert	2022	MHDT	Aggregated	50	DSL	22275.21	0.021113	0.024035	0.09336	0.837159	1063.513	0.005707	0.005461
Mojave Desert	2022	MHDT	Aggregated	55	GAS	5956.924	0.041012	0.059845	1.247435	0.371383	908.4364	0.000791	0.000727
Mojave Desert	2022	MHDT	Aggregated	55	DSL	25624.45	0.01617	0.018408	0.070563	0.782	1034.51	0.005683	0.005437
Mojave Desert	2022	MHDT	Aggregated	60	GAS	8621.816	0.0432	0.063037	1.198267	0.370399	914.6303	0.000841	0.000773
Mojave Desert	2022	MHDT	Aggregated	60	DSL	35285.09	0.014191	0.016156	0.061412	0.75502	1021.176	0.005648	0.005404
Mojave Desert	2022	MHDT	Aggregated	65	GAS	20123.72	0.049248	0.071863	1.204542	0.380708	932.7193	0.000937	0.000862

Mojave Desert	2022	MHDT	Aggregated	65	DSL	65784.18	0.014205	0.016171	0.061423	0.767861	1021.054	0.005689	0.005443
Mojave Desert	2022	MHDT	Aggregated	70	GAS	28515.33	0.056844	0.082946	1.295578	0.414657	962.4215	0.001024	0.000941
Mojave Desert	2022	MHDT	Aggregated	70	DSL	95929.15	0.014573	0.016591	0.062382	0.821751	1021.617	0.006036	0.005775
Mojave Desert	2022	MHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	MHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	MHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	MHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	OBUS	Aggregated	5	GAS	79.39133	0.241955	0.35306	1.888323	0.528105	3774.706	0.006158	0.005662
Mojave Desert	2022	OBUS	Aggregated	5	DSL	53.79217	0.632872	0.720477	2.499076	13.37107	2603.229	0.024555	0.023493
Mojave Desert	2022	OBUS	Aggregated	10	GAS	368.7899	0.153145	0.223468	1.673452	0.458612	3222.845	0.003867	0.003556
Mojave Desert	2022	OBUS	Aggregated	10	DSL	242.727	0.506534	0.57665	1.999733	10.59674	2300.397	0.021979	0.021028
Mojave Desert	2022	OBUS	Aggregated	15	GAS	579.2141	0.103204	0.150595	1.517813	0.407652	2220.497	0.002596	0.002387
Mojave Desert	2022	OBUS	Aggregated	15	DSL	382.8495	0.351233	0.399852	1.391263	7.183423	1925.841	0.018807	0.017993
Mojave Desert	2022	OBUS	Aggregated	20	GAS	602.0912	0.072782	0.106203	1.376409	0.368492	1561.134	0.001822	0.001675
Mojave Desert	2022	OBUS	Aggregated	20	DSL	423.9726	0.25495	0.290242	1.016005	5.018665	1692.785	0.016875	0.016145
Mojave Desert	2022	OBUS	Aggregated	25	GAS	1399.269	0.05458	0.079643	1.267746	0.339911	1362.675	0.00136	0.00125
Mojave Desert	2022	OBUS	Aggregated	25	DSL	834.7256	0.187935	0.213949	0.749919	3.719375	1560.546	0.015407	0.01474

Mojave Desert	2022	OBUS	Aggregated	30	GAS	1969.487	0.04237	0.061826	1.160096	0.314816	1251.529	0.00107	0.000984
Mojave Desert	2022	OBUS	Aggregated	30	DSL	1143.038	0.139632	0.15896	0.557883	3.05859	1475.365	0.014254	0.013638
Mojave Desert	2022	OBUS	Aggregated	35	GAS	2206.116	0.035204	0.05137	1.077083	0.29838	1155.462	0.000882	0.000811
Mojave Desert	2022	OBUS	Aggregated	35	DSL	1363.317	0.102976	0.11723	0.411633	2.640287	1403.388	0.013245	0.012672
Mojave Desert	2022	OBUS	Aggregated	40	GAS	2534.46	0.030341	0.044273	0.987607	0.284004	1075.214	0.000761	0.0007
Mojave Desert	2022	OBUS	Aggregated	40	DSL	1625.899	0.078031	0.088833	0.313785	2.40162	1361.957	0.012589	0.012044
Mojave Desert	2022	OBUS	Aggregated	45	GAS	3310.611	0.027582	0.040248	0.912493	0.2742	998.9889	0.000696	0.00064
Mojave Desert	2022	OBUS	Aggregated	45	DSL	1751.565	0.057516	0.065477	0.231871	2.191645	1310.429	0.011831	0.011319
Mojave Desert	2022	OBUS	Aggregated	50	GAS	2872.311	0.026351	0.038452	0.843252	0.267578	934.8155	0.000666	0.000612
Mojave Desert	2022	OBUS	Aggregated	50	DSL	1476.047	0.043397	0.049404	0.176414	2.063413	1279.996	0.01132	0.01083
Mojave Desert	2022	OBUS	Aggregated	55	GAS	3287.94	0.026788	0.039088	0.794608	0.268495	909.1491	0.000677	0.000622
Mojave Desert	2022	OBUS	Aggregated	55	DSL	1958.928	0.033044	0.037618	0.136012	1.97619	1259.126	0.010925	0.010453
Mojave Desert	2022	OBUS	Aggregated	60	GAS	4682.903	0.028386	0.041421	0.750554	0.270104	914.608	0.000728	0.000669
Mojave Desert	2022	OBUS	Aggregated	60	DSL	2281.897	0.027779	0.031624	0.114513	1.89129	1226.482	0.010503	0.010049
Mojave Desert	2022	OBUS	Aggregated	65	GAS	10688.97	0.032165	0.046935	0.726462	0.275992	931.7535	0.00082	0.000754
Mojave Desert	2022	OBUS	Aggregated	65	DSL	2735.706	0.027065	0.030812	0.111088	1.857318	1210.866	0.010341	0.009894
Mojave Desert	2022	OBUS	Aggregated	70	GAS	15377.78	0.036057	0.052615	0.75128	0.290552	962.1483	0.000875	0.000805

Mojave Desert	2022	OBUS	Aggregated	70	DSL	4256.123	0.028164	0.032063	0.116362	1.908774	1234.913	0.010591	0.010133
Mojave Desert	2022	OBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	OBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	OBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	OBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	SBUS	Aggregated	5	GAS	110.2194	0.270282	0.394395	2.016367	0.64494	1807.211	0.00576	0.005296
Mojave Desert	2022	SBUS	Aggregated	5	DSL	267.0716	0.720881	0.820668	1.360587	16.87148	2290.974	0.117106	0.11204
Mojave Desert	2022	SBUS	Aggregated	10	GAS	386.3135	0.170377	0.248614	1.839648	0.558426	1542.75	0.003624	0.003333
Mojave Desert	2022	SBUS	Aggregated	10	DSL	936.0721	0.556464	0.633492	1.12158	13.71171	2053.169	0.097122	0.09292
Mojave Desert	2022	SBUS	Aggregated	15	GAS	772.6269	0.113092	0.165024	1.679907	0.49306	1063.421	0.002406	0.002212
Mojave Desert	2022	SBUS	Aggregated	15	DSL	1872.144	0.31784	0.361836	0.786847	9.366021	1708.845	0.065276	0.062452
Mojave Desert	2022	SBUS	Aggregated	20	GAS	1048.715	0.079209	0.115582	1.538481	0.442197	747.6737	0.001685	0.001549
Mojave Desert	2022	SBUS	Aggregated	20	DSL	2541.131	0.177434	0.201995	0.560166	6.967732	1456.109	0.043517	0.041635
Mojave Desert	2022	SBUS	Aggregated	25	GAS	1655.468	0.058496	0.085358	1.412056	0.403379	652.8779	0.001245	0.001144
Mojave Desert	2022	SBUS	Aggregated	25	DSL	4011.347	0.128215	0.145963	0.427656	6.162486	1324.737	0.034697	0.033196
Mojave Desert	2022	SBUS	Aggregated	30	GAS	1986.126	0.045575	0.066503	1.299561	0.373878	599.9681	0.00097	0.000892
Mojave Desert	2022	SBUS	Aggregated	30	DSL	4812.561	0.098265	0.111867	0.336786	5.766081	1245.74	0.029675	0.028392

Mojave Desert	2022	SBUS	Aggregated	35	GAS	2038.508	0.037403	0.054579	1.197498	0.353137	553.9161	0.000797	0.000733
Mojave Desert	2022	SBUS	Aggregated	35	DSL	4939.489	0.075814	0.086309	0.267472	5.504307	1182.257	0.026261	0.025125
Mojave Desert	2022	SBUS	Aggregated	40	GAS	1376.101	0.032402	0.047281	1.107065	0.338547	515.3372	0.000692	0.000636
Mojave Desert	2022	SBUS	Aggregated	40	DSL	3334.416	0.059642	0.067898	0.215402	5.329202	1131.086	0.024431	0.023374
Mojave Desert	2022	SBUS	Aggregated	45	GAS	660.2201	0.029631	0.043237	1.026833	0.329416	478.826	0.000633	0.000582
Mojave Desert	2022	SBUS	Aggregated	45	DSL	1599.773	0.048836	0.055596	0.177415	5.221009	1090.33	0.024179	0.023133
Mojave Desert	2022	SBUS	Aggregated	50	GAS	330.6583	0.028665	0.041828	0.957596	0.323986	447.9193	0.000611	0.000562
Mojave Desert	2022	SBUS	Aggregated	50	DSL	801.2147	0.042705	0.048616	0.151206	5.167364	1058.785	0.025508	0.024405
Mojave Desert	2022	SBUS	Aggregated	55	GAS	492.1637	0.028893	0.042161	0.884623	0.331434	435.5734	0.000622	0.000572
Mojave Desert	2022	SBUS	Aggregated	55	DSL	1192.557	0.040719	0.046355	0.1351	5.180879	1035.644	0.028429	0.027199
Mojave Desert	2022	SBUS	Aggregated	60	GAS	273.9122	0.031114	0.045402	0.829597	0.336483	438.2796	0.000668	0.000615
Mojave Desert	2022	SBUS	Aggregated	60	DSL	663.7139	0.041233	0.046941	0.130272	5.194415	1026.837	0.030453	0.029136
Mojave Desert	2022	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	SBUS	Aggregated	70	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	SBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	SBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	SBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2022	SBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2022	UBUS	Aggregated	5	GAS	537.9311	1.528769	2.230776	9.647282	1.978862	3829.867	0.006822	0.006272
Mojave Desert	2022	UBUS	Aggregated	5	DSL	657.7477	2.6641	16.03832	37.10561	17.87119	3292.589	0.289764	0.277229
Mojave Desert	2022	UBUS	Aggregated	10	GAS	1723.681	1.00948	1.473031	7.906525	1.74849	3269.331	0.004359	0.004008
Mojave Desert	2022	UBUS	Aggregated	10	DSL	2104.176	2.020558	12.04193	28.99244	14.87622	2990.233	0.241733	0.231275
Mojave Desert	2022	UBUS	Aggregated	15	GAS	3008.36	0.705919	1.030075	6.735939	1.579185	2253.539	0.002943	0.002706
Mojave Desert	2022	UBUS	Aggregated	15	DSL	3676.686	1.049207	6.071539	16.56537	10.48087	2455.177	0.163705	0.156623
Mojave Desert	2022	UBUS	Aggregated	20	GAS	28069.61	0.524281	0.76503	5.948614	1.463306	1584.556	0.002101	0.001932
Mojave Desert	2022	UBUS	Aggregated	20	DSL	34409.84	0.485176	2.685458	9.068115	8.179784	2013.828	0.109403	0.104671
Mojave Desert	2022	UBUS	Aggregated	25	GAS	136.627	0.255149	0.372312	2.82407	0.803846	1377.806	0.001417	0.001303
Mojave Desert	2022	UBUS	Aggregated	25	DSL	156.439	0.240427	0.972362	4.589751	6.453594	1847.389	0.097795	0.093565
Mojave Desert	2022	UBUS	Aggregated	30	GAS	192.2517	0.223289	0.325822	3.022335	0.879409	1266.045	0.001143	0.001051
Mojave Desert	2022	UBUS	Aggregated	30	DSL	232.2233	0.211611	0.906947	4.157673	6.302324	1724.705	0.08254	0.07897
Mojave Desert	2022	UBUS	Aggregated	35	GAS	210.3675	0.173495	0.253163	2.411629	0.754795	1168.063	0.00093	0.000855
Mojave Desert	2022	UBUS	Aggregated	35	DSL	250.1299	0.161652	0.631604	3.246676	5.861506	1637.868	0.074186	0.070976
Mojave Desert	2022	UBUS	Aggregated	40	GAS	253.1235	0.15659	0.228496	2.414869	0.777941	1087.616	0.00081	0.000745
Mojave Desert	2022	UBUS	Aggregated	40	DSL	292.3343	0.143799	0.591302	2.973269	5.77554	1560.276	0.065509	0.062675

Mojave Desert	2022	UBUS	Aggregated	45	GAS	352.1166	0.184615	0.269389	3.050923	0.960561	1011.883	0.000791	0.000728
Mojave Desert	2022	UBUS	Aggregated	45	DSL	428.2691	0.149478	0.687352	3.179754	6.123319	1491.514	0.060297	0.057689
Mojave Desert	2022	UBUS	Aggregated	50	GAS	311.8044	0.199976	0.291805	3.378322	1.070495	947.8997	0.000785	0.000722
Mojave Desert	2022	UBUS	Aggregated	50	DSL	375.7944	0.156112	0.751581	3.263917	6.358161	1447.956	0.057124	0.054653
Mojave Desert	2022	UBUS	Aggregated	55	GAS	405.0038	0.204314	0.298135	3.339478	1.07975	922.1585	0.000798	0.000734
Mojave Desert	2022	UBUS	Aggregated	55	DSL	475.2785	0.163019	0.769069	3.174948	6.418416	1431.034	0.058925	0.056376
Mojave Desert	2022	UBUS	Aggregated	60	GAS	553.8492	0.228236	0.333042	3.597594	1.167254	928.267	0.000868	0.000798
Mojave Desert	2022	UBUS	Aggregated	60	DSL	652.9203	0.186082	0.879478	3.341051	6.591371	1428.904	0.062921	0.060199
Mojave Desert	2022	UBUS	Aggregated	65	GAS	1206.455	0.342567	0.499873	4.943922	1.47881	947.31	0.001081	0.000994
Mojave Desert	2022	UBUS	Aggregated	65	DSL	1533.923	0.248623	1.233858	4.153466	7.400082	1435.571	0.069913	0.066889
Mojave Desert	2022	UBUS	Aggregated	70	GAS	2086.103	0.408156	0.595581	5.521065	1.559428	978.0823	0.001216	0.001118
Mojave Desert	2022	UBUS	Aggregated	70	DSL	2641	0.309554	1.510524	4.714306	8.008229	1475.628	0.084061	0.080425

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air Basin

Region: Mojave Desert

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	CalYr	VehClass	MdIYr	Speed	Fuel	VMT	ROG_RU NEX	TOG_RU NEX	CO_RUN EX	NOx_RU NEX	CO2_RU NEX	PM10_R UNEX	PM2_5_ RUNEX
Mojave Desert	2023	HHDT	Aggregated	5	GAS	11.228	2.63358	3.84292	55.2927	5.77434	4006.99	0.00599	0.00551
Mojave Desert	2023	HHDT	Aggregated	5	DSL	5671.3	0.59374	0.86134	3.74905	20.032	3152.16	0.01252	0.01198
Mojave Desert	2023	HHDT	Aggregated	10	GAS	47.973	1.68425	2.45765	50.263	5.00856	3399.56	0.00379	0.00349
Mojave Desert	2023	HHDT	Aggregated	10	DSL	15983	0.47581	0.66692	2.97986	15.2829	2752.74	0.01101	0.01053
Mojave Desert	2023	HHDT	Aggregated	15	GAS	86.987	1.08158	1.57824	45.7015	4.377	2455.42	0.00245	0.00225
Mojave Desert	2023	HHDT	Aggregated	15	DSL	22391	0.33754	0.41068	2.03377	9.45975	2194.38	0.00913	0.00873
Mojave Desert	2023	HHDT	Aggregated	20	GAS	112.68	0.7697	1.12315	41.6205	3.97978	1982.99	0.00174	0.0016
Mojave Desert	2023	HHDT	Aggregated	20	DSL	51279	0.23146	0.27054	1.37913	5.24506	1895.11	0.0075	0.00717
Mojave Desert	2023	HHDT	Aggregated	25	GAS	326.81	0.55374	0.80802	38.308	3.58266	1864.35	0.00127	0.00117
Mojave Desert	2023	HHDT	Aggregated	25	DSL	70704	0.17672	0.20661	1.05283	3.27172	1734.09	0.00721	0.0069
Mojave Desert	2023	HHDT	Aggregated	30	GAS	536.13	0.43531	0.6352	35.0549	3.31463	1773.1	0.00101	0.00093
Mojave Desert	2023	HHDT	Aggregated	30	DSL	117645	0.13032	0.15113	0.77405	2.17871	1627.58	0.00663	0.00634

Mojave Desert	2023	HHDT	Aggregated	35	GAS	678.88	0.36301	0.52971	32.4293	3.13211	1701.54	0.00083	0.00076
Mojave Desert	2023	HHDT	Aggregated	35	DSL	155521	0.09584	0.11302	0.57225	1.59497	1555.17	0.00616	0.00589
Mojave Desert	2023	HHDT	Aggregated	40	GAS	666.61	0.31406	0.45827	29.9293	2.99495	1638.31	0.00073	0.00067
Mojave Desert	2023	HHDT	Aggregated	40	DSL	168293	0.07076	0.08253	0.42079	1.20765	1481.94	0.00575	0.0055
Mojave Desert	2023	HHDT	Aggregated	45	GAS	879.25	0.28804	0.42031	27.6813	2.91878	1599.03	0.00068	0.00063
Mojave Desert	2023	HHDT	Aggregated	45	DSL	277856	0.05219	0.06017	0.30918	0.94237	1417.64	0.00538	0.00515
Mojave Desert	2023	HHDT	Aggregated	50	GAS	741.84	0.28357	0.41378	25.7383	2.89134	1574.98	0.00068	0.00063
Mojave Desert	2023	HHDT	Aggregated	50	DSL	270616	0.03851	0.04406	0.22758	0.75796	1363.39	0.00506	0.00484
Mojave Desert	2023	HHDT	Aggregated	55	GAS	908.5	0.29325	0.42791	24.1793	2.91	1544.57	0.0007	0.00064
Mojave Desert	2023	HHDT	Aggregated	55	DSL	325746	0.0285	0.03245	0.16817	0.63221	1327.33	0.0048	0.00459
Mojave Desert	2023	HHDT	Aggregated	60	GAS	1003.8	0.30585	0.44629	22.5513	2.91482	1518.42	0.00077	0.0007
Mojave Desert	2023	HHDT	Aggregated	60	DSL	287921	0.02445	0.02784	0.14424	0.58247	1311.13	0.00467	0.00447
Mojave Desert	2023	HHDT	Aggregated	65	GAS	2486.3	0.35144	0.51281	21.5563	3.02468	1510.62	0.00089	0.00082
Mojave Desert	2023	HHDT	Aggregated	65	DSL	696571	0.0243	0.02767	0.14336	0.56987	1305.3	0.00463	0.00443
Mojave Desert	2023	HHDT	Aggregated	70	GAS	3484.5	0.38744	0.56536	21.361	3.1976	1506.49	0.00096	0.00088
Mojave Desert	2023	HHDT	Aggregated	70	DSL	2E+06	0.02434	0.02771	0.1436	0.57167	1305.41	0.00464	0.00444
Mojave Desert	2023	HHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2023	HHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	HHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	HHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	LDA	Aggregated	5	GAS	42993	0.0759	0.11072	1.23088	0.1018	858.795	0.01179	0.01084
Mojave Desert	2023	LDA	Aggregated	5	DSL	491.13	0.1944	0.22131	3.31667	0.15206	625.854	0.03593	0.03438
Mojave Desert	2023	LDA	Aggregated	10	GAS	57843	0.04831	0.07046	1.11507	0.08634	639.803	0.00745	0.00685
Mojave Desert	2023	LDA	Aggregated	10	DSL	664.62	0.14393	0.16386	2.48345	0.13715	522.269	0.0266	0.02545
Mojave Desert	2023	LDA	Aggregated	15	GAS	133396	0.03239	0.04724	1.00266	0.07594	490.662	0.00496	0.00456
Mojave Desert	2023	LDA	Aggregated	15	DSL	1532.1	0.07553	0.08599	1.2331	0.10712	427.733	0.01948	0.01864
Mojave Desert	2023	LDA	Aggregated	20	GAS	182863	0.02264	0.03303	0.90477	0.06821	389.996	0.00349	0.00321
Mojave Desert	2023	LDA	Aggregated	20	DSL	2126.5	0.03646	0.04151	0.51444	0.08996	351.488	0.01524	0.01458
Mojave Desert	2023	LDA	Aggregated	25	GAS	853668	0.01703	0.02484	0.82284	0.06202	322.398	0.00258	0.00237
Mojave Desert	2023	LDA	Aggregated	25	DSL	9914.3	0.02348	0.02673	0.31602	0.0769	292.245	0.01159	0.01109
Mojave Desert	2023	LDA	Aggregated	30	GAS	2E+06	0.01324	0.01931	0.74378	0.05704	275.903	0.00201	0.00185
Mojave Desert	2023	LDA	Aggregated	30	DSL	21296	0.01797	0.02046	0.24146	0.07117	252.4	0.00943	0.00902
Mojave Desert	2023	LDA	Aggregated	35	GAS	2E+06	0.0111	0.01619	0.69841	0.05416	247.897	0.00166	0.00152
Mojave Desert	2023	LDA	Aggregated	35	DSL	21976	0.01514	0.01724	0.19794	0.07095	228.189	0.00851	0.00814

Mojave Desert	2023	LDA	Aggregated	40	GAS	2E+06	0.00957	0.01396	0.63934	0.05161	229.124	0.00144	0.00132
Mojave Desert	2023	LDA	Aggregated	40	DSL	24380	0.01295	0.01475	0.16773	0.06949	213.311	0.00765	0.00732
Mojave Desert	2023	LDA	Aggregated	45	GAS	3E+06	0.00877	0.01279	0.58885	0.05065	219.23	0.00132	0.00121
Mojave Desert	2023	LDA	Aggregated	45	DSL	38698	0.01128	0.01285	0.14565	0.06642	205.257	0.00696	0.00666
Mojave Desert	2023	LDA	Aggregated	50	GAS	2E+06	0.00844	0.01231	0.55015	0.04993	218.926	0.00127	0.00117
Mojave Desert	2023	LDA	Aggregated	50	DSL	28421	0.01049	0.01194	0.13342	0.06753	206.124	0.00672	0.00643
Mojave Desert	2023	LDA	Aggregated	55	GAS	2E+06	0.00858	0.01251	0.51494	0.05046	226.839	0.00129	0.00119
Mojave Desert	2023	LDA	Aggregated	55	DSL	24866	0.01016	0.01157	0.1262	0.06772	215.408	0.00679	0.00649
Mojave Desert	2023	LDA	Aggregated	60	GAS	1E+06	0.00908	0.01325	0.4812	0.0518	243.959	0.00138	0.00127
Mojave Desert	2023	LDA	Aggregated	60	DSL	16667	0.01046	0.01191	0.12839	0.06776	232.923	0.00719	0.00687
Mojave Desert	2023	LDA	Aggregated	65	GAS	3E+06	0.01036	0.0151	0.46165	0.05402	273.407	0.00157	0.00144
Mojave Desert	2023	LDA	Aggregated	65	DSL	33952	0.01128	0.01285	0.14005	0.06891	261.753	0.00781	0.00747
Mojave Desert	2023	LDA	Aggregated	70	GAS	3E+06	0.01116	0.01627	0.44632	0.05643	290.371	0.0017	0.00157
Mojave Desert	2023	LDA	Aggregated	70	DSL	38930	0.01198	0.01364	0.14983	0.07116	283.198	0.0083	0.00794
Mojave Desert	2023	LDT1	Aggregated	5	GAS	2690.9	0.21881	0.31914	3.66013	0.35221	1024.74	0.01857	0.01707
Mojave Desert	2023	LDT1	Aggregated	5	DSL	2.5699	0.73509	0.83686	3.47839	0.78455	899.897	0.57936	0.5543
Mojave Desert	2023	LDT1	Aggregated	10	GAS	3607.1	0.13977	0.20386	3.11601	0.28244	762.721	0.01187	0.01092

Mojave Desert	2023	LDT1	Aggregated	10	DSL	3.4177	0.51229	0.58321	2.48798	0.80579	757.569	0.40469	0.38718
Mojave Desert	2023	LDT1	Aggregated	15	GAS	8442.2	0.09735	0.14198	2.7052	0.24231	583.926	0.00789	0.00725
Mojave Desert	2023	LDT1	Aggregated	15	DSL	7.8648	0.34711	0.39516	1.67123	0.8039	621.999	0.28039	0.26826
Mojave Desert	2023	LDT1	Aggregated	20	GAS	11623	0.06762	0.09863	2.32646	0.20762	463.891	0.00552	0.00508
Mojave Desert	2023	LDT1	Aggregated	20	DSL	10.983	0.2503	0.28495	1.17975	0.81862	511.409	0.21474	0.20545
Mojave Desert	2023	LDT1	Aggregated	25	GAS	55851	0.05308	0.07741	2.06676	0.18724	382.375	0.00398	0.00366
Mojave Desert	2023	LDT1	Aggregated	25	DSL	51.51	0.18709	0.21299	0.91878	0.80236	421.293	0.15538	0.14865
Mojave Desert	2023	LDT1	Aggregated	30	GAS	120692	0.04069	0.05934	1.78326	0.16512	326.494	0.003	0.00276
Mojave Desert	2023	LDT1	Aggregated	30	DSL	108.8	0.1471	0.16746	0.75826	0.78543	359.911	0.12096	0.11573
Mojave Desert	2023	LDT1	Aggregated	35	GAS	125104	0.03601	0.05251	1.73041	0.16362	293.792	0.00257	0.00236
Mojave Desert	2023	LDT1	Aggregated	35	DSL	115.15	0.13371	0.15222	0.71676	0.85596	327.137	0.11009	0.10533
Mojave Desert	2023	LDT1	Aggregated	40	GAS	138846	0.03059	0.0446	1.55487	0.15354	271.279	0.00219	0.00202
Mojave Desert	2023	LDT1	Aggregated	40	DSL	125.17	0.1175	0.13377	0.66487	0.86372	303.385	0.09703	0.09283
Mojave Desert	2023	LDT1	Aggregated	45	GAS	223889	0.02807	0.04093	1.424	0.15117	259.259	0.00194	0.00179
Mojave Desert	2023	LDT1	Aggregated	45	DSL	201.03	0.10882	0.12389	0.65985	0.86288	289.858	0.08752	0.08374
Mojave Desert	2023	LDT1	Aggregated	50	GAS	163228	0.0258	0.03762	1.29632	0.14507	258.629	0.00181	0.00166
Mojave Desert	2023	LDT1	Aggregated	50	DSL	149.06	0.10775	0.12267	0.6974	0.87281	290.38	0.08749	0.0837

Mojave Desert	2023	LDT1	Aggregated	55	GAS	143750	0.0264	0.03849	1.25407	0.15239	268.022	0.00184	0.00169
Mojave Desert	2023	LDT1	Aggregated	55	DSL	130.9	0.11255	0.12814	0.78357	0.91258	303.351	0.09093	0.08699
Mojave Desert	2023	LDT1	Aggregated	60	GAS	96787	0.02849	0.04154	1.24519	0.16635	288.457	0.00201	0.00185
Mojave Desert	2023	LDT1	Aggregated	60	DSL	84.534	0.11968	0.13624	0.89903	0.95623	326.999	0.09674	0.09255
Mojave Desert	2023	LDT1	Aggregated	65	GAS	198150	0.0314	0.04578	1.21799	0.17616	323.027	0.00221	0.00203
Mojave Desert	2023	LDT1	Aggregated	65	DSL	175.34	0.1365	0.15539	1.12471	0.97024	366.648	0.10922	0.10449
Mojave Desert	2023	LDT1	Aggregated	70	GAS	227253	0.03255	0.04745	1.17586	0.18206	343.04	0.00232	0.00213
Mojave Desert	2023	LDT1	Aggregated	70	DSL	208.33	0.15157	0.17255	1.31383	0.97717	396.893	0.12104	0.11581
Mojave Desert	2023	LDT2	Aggregated	5	GAS	11602	0.10183	0.14856	1.57786	0.1633	1124.31	0.01201	0.01104
Mojave Desert	2023	LDT2	Aggregated	5	DSL	22.042	0.25931	0.2952	2.36816	0.16004	778.321	0.01358	0.01299
Mojave Desert	2023	LDT2	Aggregated	10	GAS	15678	0.0654	0.09542	1.42403	0.1383	837.353	0.0076	0.00698
Mojave Desert	2023	LDT2	Aggregated	10	DSL	29.644	0.19364	0.22045	1.76975	0.13532	654.635	0.01138	0.01089
Mojave Desert	2023	LDT2	Aggregated	15	GAS	37569	0.04436	0.06472	1.2799	0.12162	642.757	0.00506	0.00465
Mojave Desert	2023	LDT2	Aggregated	15	DSL	71.781	0.0957	0.10894	0.87155	0.09447	543.336	0.00934	0.00894
Mojave Desert	2023	LDT2	Aggregated	20	GAS	52933	0.03171	0.04626	1.16382	0.11029	512.213	0.00356	0.00327
Mojave Desert	2023	LDT2	Aggregated	20	DSL	101.41	0.03835	0.04366	0.34587	0.06599	446.717	0.00762	0.00729
Mojave Desert	2023	LDT2	Aggregated	25	GAS	264257	0.02413	0.03521	1.06229	0.10079	424.286	0.00263	0.00242

Mojave Desert	2023	LDT2	Aggregated	25	DSL	515.63	0.02348	0.02673	0.21071	0.05211	375.28	0.00639	0.00612
Mojave Desert	2023	LDT2	Aggregated	30	GAS	592882	0.01913	0.02791	0.96911	0.09384	364.162	0.00205	0.00189
Mojave Desert	2023	LDT2	Aggregated	30	DSL	1164.1	0.01779	0.02026	0.15994	0.04425	324.636	0.00551	0.00528
Mojave Desert	2023	LDT2	Aggregated	35	GAS	599089	0.01585	0.02312	0.90204	0.0881	326.533	0.00169	0.00155
Mojave Desert	2023	LDT2	Aggregated	35	DSL	1176.9	0.01431	0.0163	0.1285	0.04096	293.123	0.005	0.00478
Mojave Desert	2023	LDT2	Aggregated	40	GAS	674378	0.01376	0.02007	0.8289	0.08437	302.126	0.00147	0.00135
Mojave Desert	2023	LDT2	Aggregated	40	DSL	1324.6	0.01189	0.01354	0.1068	0.0376	273.459	0.00456	0.00436
Mojave Desert	2023	LDT2	Aggregated	45	GAS	1E+06	0.0127	0.01853	0.76937	0.08361	289.833	0.00134	0.00123
Mojave Desert	2023	LDT2	Aggregated	45	DSL	2211	0.01026	0.01167	0.09211	0.03501	264.04	0.00429	0.0041
Mojave Desert	2023	LDT2	Aggregated	50	GAS	836087	0.01244	0.01814	0.72809	0.08404	290.373	0.00129	0.00119
Mojave Desert	2023	LDT2	Aggregated	50	DSL	1664	0.00896	0.0102	0.0809	0.03225	264.705	0.00401	0.00384
Mojave Desert	2023	LDT2	Aggregated	55	GAS	730894	0.01252	0.01826	0.68043	0.08495	300.595	0.00131	0.00121
Mojave Desert	2023	LDT2	Aggregated	55	DSL	1456.2	0.0081	0.00923	0.07332	0.03158	276.802	0.0039	0.00373
Mojave Desert	2023	LDT2	Aggregated	60	GAS	478668	0.01297	0.01892	0.62988	0.08631	322.071	0.00141	0.00129
Mojave Desert	2023	LDT2	Aggregated	60	DSL	947.36	0.00776	0.00883	0.07058	0.03199	299.216	0.00388	0.00371
Mojave Desert	2023	LDT2	Aggregated	65	GAS	998038	0.01486	0.02167	0.61103	0.09157	361.827	0.00159	0.00146
Mojave Desert	2023	LDT2	Aggregated	65	DSL	1986.4	0.00806	0.00918	0.07432	0.03231	336.536	0.00409	0.00391

Mojave Desert	2023	LDT2	Aggregated	70	GAS	1E+06	0.01619	0.02361	0.59883	0.09752	385.693	0.00172	0.00158
Mojave Desert	2023	LDT2	Aggregated	70	DSL	2347.3	0.00841	0.00958	0.07848	0.03267	363.836	0.00432	0.00413
Mojave Desert	2023	LHDT1	Aggregated	5	GAS	1286.3	0.35717	0.52119	4.15	0.69493	1381.57	0.01085	0.00998
Mojave Desert	2023	LHDT1	Aggregated	5	DSL	1434	0.82897	0.94373	3.59415	3.20307	1263.58	0.11914	0.11399
Mojave Desert	2023	LHDT1	Aggregated	10	GAS	3377.4	0.234	0.34145	3.27494	0.61387	1358.89	0.0069	0.00634
Mojave Desert	2023	LHDT1	Aggregated	10	DSL	4354.3	0.59339	0.67554	2.60525	3.30946	1062.08	0.08525	0.08156
Mojave Desert	2023	LHDT1	Aggregated	15	GAS	8163.3	0.16117	0.23518	2.68796	0.55166	943.982	0.00462	0.00425
Mojave Desert	2023	LHDT1	Aggregated	15	DSL	10201	0.37504	0.42695	1.67341	3.39001	693.463	0.06329	0.06055
Mojave Desert	2023	LHDT1	Aggregated	20	GAS	9078.1	0.11736	0.17125	2.29378	0.50912	819.598	0.00328	0.00302
Mojave Desert	2023	LHDT1	Aggregated	20	DSL	11004	0.24293	0.27656	1.11424	3.50974	591.159	0.04908	0.04695
Mojave Desert	2023	LHDT1	Aggregated	25	GAS	10865	0.08546	0.1247	1.91076	0.46369	751.135	0.00237	0.00218
Mojave Desert	2023	LHDT1	Aggregated	25	DSL	15275	0.17833	0.20302	0.84796	3.47767	522.573	0.03812	0.03647
Mojave Desert	2023	LHDT1	Aggregated	30	GAS	13049	0.06656	0.09713	1.66492	0.42733	681.582	0.00184	0.00169
Mojave Desert	2023	LHDT1	Aggregated	30	DSL	16777	0.14267	0.16242	0.70637	3.48798	473.375	0.0313	0.02995
Mojave Desert	2023	LHDT1	Aggregated	35	GAS	10158	0.05512	0.08044	1.49939	0.40486	681.543	0.0015	0.00138
Mojave Desert	2023	LHDT1	Aggregated	35	DSL	13447	0.12031	0.13697	0.62492	3.53674	472.504	0.02696	0.02579
Mojave Desert	2023	LHDT1	Aggregated	40	GAS	9557.5	0.04733	0.06906	1.36377	0.38456	678.857	0.00129	0.00118

Mojave Desert	2023	LHDT1	Aggregated	40	DSL	12911	0.10551	0.12011	0.57841	3.55732	458.617	0.02408	0.02304
Mojave Desert	2023	LHDT1	Aggregated	45	GAS	15362	0.04309	0.06288	1.28161	0.37246	675.596	0.00117	0.00107
Mojave Desert	2023	LHDT1	Aggregated	45	DSL	21543	0.09708	0.11052	0.56542	3.5982	446.683	0.0225	0.02153
Mojave Desert	2023	LHDT1	Aggregated	50	GAS	18582	0.04402	0.06423	1.32342	0.3803	712.554	0.00116	0.00106
Mojave Desert	2023	LHDT1	Aggregated	50	DSL	26343	0.10012	0.11398	0.62497	3.97324	469.999	0.02319	0.02219
Mojave Desert	2023	LHDT1	Aggregated	55	GAS	17832	0.04297	0.06271	1.28543	0.3704	750.547	0.00114	0.00105
Mojave Desert	2023	LHDT1	Aggregated	55	DSL	24698	0.09954	0.11332	0.67139	3.96324	490.035	0.02319	0.02218
Mojave Desert	2023	LHDT1	Aggregated	60	GAS	22159	0.04517	0.06591	1.33611	0.36716	761.529	0.00121	0.00112
Mojave Desert	2023	LHDT1	Aggregated	60	DSL	22443	0.10169	0.11577	0.74595	3.83921	493.068	0.02377	0.02274
Mojave Desert	2023	LHDT1	Aggregated	65	GAS	61151	0.05166	0.07539	1.49904	0.38018	771.827	0.00136	0.00125
Mojave Desert	2023	LHDT1	Aggregated	65	DSL	66250	0.11412	0.12992	0.91584	3.9364	499.333	0.02649	0.02535
Mojave Desert	2023	LHDT1	Aggregated	70	GAS	101070	0.05708	0.08328	1.63656	0.40345	764.494	0.00147	0.00135
Mojave Desert	2023	LHDT1	Aggregated	70	DSL	174620	0.12232	0.13926	1.02994	3.97838	493.597	0.0283	0.02707
Mojave Desert	2023	LHDT2	Aggregated	5	GAS	243.39	0.09164	0.13372	0.91597	0.26149	1440.66	0.0065	0.00598
Mojave Desert	2023	LHDT2	Aggregated	5	DSL	510.53	0.77267	0.87963	3.44067	1.93788	1306.89	0.07367	0.07049
Mojave Desert	2023	LHDT2	Aggregated	10	GAS	641.56	0.05926	0.08647	0.75044	0.22936	1495.22	0.00411	0.00378
Mojave Desert	2023	LHDT2	Aggregated	10	DSL	1552.5	0.56445	0.64259	2.52825	1.94707	1161.29	0.05523	0.05284

Mojave Desert	2023	LHDT2	Aggregated	15	GAS	1554.5	0.04033	0.05886	0.63662	0.2044	1051.76	0.00274	0.00252
Mojave Desert	2023	LHDT2	Aggregated	15	DSL	3644.7	0.31956	0.36379	1.45222	1.91491	772.823	0.04236	0.04053
Mojave Desert	2023	LHDT2	Aggregated	20	GAS	1724.5	0.02889	0.04216	0.55412	0.18579	920.524	0.00193	0.00177
Mojave Desert	2023	LHDT2	Aggregated	20	DSL	3926.7	0.17429	0.19841	0.81733	1.92614	659.273	0.03357	0.03212
Mojave Desert	2023	LHDT2	Aggregated	25	GAS	2133.7	0.0217	0.03166	0.49083	0.17513	831.702	0.00145	0.00133
Mojave Desert	2023	LHDT2	Aggregated	25	DSL	5602	0.12125	0.13803	0.58344	1.87899	585.278	0.02653	0.02538
Mojave Desert	2023	LHDT2	Aggregated	30	GAS	2609.6	0.01705	0.02489	0.44202	0.16317	751.469	0.00114	0.00105
Mojave Desert	2023	LHDT2	Aggregated	30	DSL	6290.4	0.09597	0.10926	0.47586	1.88095	526.447	0.02217	0.02121
Mojave Desert	2023	LHDT2	Aggregated	35	GAS	2073	0.01418	0.02069	0.40749	0.15625	751.135	0.00095	0.00087
Mojave Desert	2023	LHDT2	Aggregated	35	DSL	5125	0.07996	0.09102	0.41124	1.89884	525.475	0.01931	0.01847
Mojave Desert	2023	LHDT2	Aggregated	40	GAS	1975.2	0.01239	0.01809	0.37852	0.15045	733.762	0.00083	0.00076
Mojave Desert	2023	LHDT2	Aggregated	40	DSL	5004.4	0.06943	0.07904	0.37335	1.91374	505.225	0.01735	0.0166
Mojave Desert	2023	LHDT2	Aggregated	45	GAS	3182.8	0.01149	0.01677	0.3577	0.1468	716.429	0.00076	0.00069
Mojave Desert	2023	LHDT2	Aggregated	45	DSL	8436	0.06305	0.07178	0.35838	1.94314	484.891	0.01616	0.01546
Mojave Desert	2023	LHDT2	Aggregated	50	GAS	3750.2	0.01137	0.0166	0.34944	0.14437	747.305	0.00072	0.00066
Mojave Desert	2023	LHDT2	Aggregated	50	DSL	10005	0.06263	0.0713	0.38457	2.12371	504.552	0.01628	0.01557
Mojave Desert	2023	LHDT2	Aggregated	55	GAS	3670.8	0.01158	0.0169	0.344	0.14551	780.956	0.00074	0.00068

Mojave Desert	2023	LHDT2	Aggregated	55	DSL	9537.6	0.06126	0.06974	0.40514	2.1254	521.003	0.01601	0.01532
Mojave Desert	2023	LHDT2	Aggregated	60	GAS	4589.5	0.01239	0.01808	0.34945	0.14658	788.98	0.0008	0.00073
Mojave Desert	2023	LHDT2	Aggregated	60	DSL	8927.7	0.06276	0.07145	0.44932	2.09911	521.029	0.01629	0.01559
Mojave Desert	2023	LHDT2	Aggregated	65	GAS	12668	0.01436	0.02095	0.3783	0.15308	796.726	0.0009	0.00083
Mojave Desert	2023	LHDT2	Aggregated	65	DSL	26331	0.06929	0.07888	0.54359	2.14782	522.136	0.01772	0.01695
Mojave Desert	2023	LHDT2	Aggregated	70	GAS	20966	0.01598	0.02332	0.40491	0.16338	780.77	0.00098	0.0009
Mojave Desert	2023	LHDT2	Aggregated	70	DSL	69021	0.07287	0.08296	0.59978	2.14052	515.516	0.01853	0.01773
Mojave Desert	2023	MCY	Aggregated	5	GAS	551.42	12.9706	15.9816	53.5273	1.58784	554.544	0.01134	0.01061
Mojave Desert	2023	MCY	Aggregated	10	GAS	748.3	8.44974	10.3939	40.2659	1.4292	410.955	0.00739	0.00691
Mojave Desert	2023	MCY	Aggregated	15	GAS	1811	5.81578	7.1535	31.7499	1.32573	316.649	0.00506	0.00474
Mojave Desert	2023	MCY	Aggregated	20	GAS	2499.6	4.25604	5.22356	26.6838	1.25502	252.712	0.00366	0.00343
Mojave Desert	2023	MCY	Aggregated	25	GAS	12606	3.22741	3.96546	22.6233	1.1946	209.924	0.00277	0.00259
Mojave Desert	2023	MCY	Aggregated	30	GAS	28517	2.59853	3.18993	20.1804	1.15792	180.653	0.00221	0.00207
Mojave Desert	2023	MCY	Aggregated	35	GAS	28579	2.19108	2.6903	18.5036	1.13184	161.507	0.00187	0.00175
Mojave Desert	2023	MCY	Aggregated	40	GAS	32589	1.95155	2.39447	17.6216	1.12314	149.727	0.00166	0.00155
Mojave Desert	2023	MCY	Aggregated	45	GAS	53184	1.82575	2.24037	17.3484	1.12779	144.164	0.00154	0.00145
Mojave Desert	2023	MCY	Aggregated	50	GAS	38951	1.80213	2.20784	17.8651	1.13998	143.827	0.00152	0.00142

Mojave Desert	2023	MCY	Aggregated	55	GAS	34139	1.85678	2.27566	18.9555	1.16106	149.192	0.00157	0.00147
Mojave Desert	2023	MCY	Aggregated	60	GAS	23632	2.01209	2.46842	21.0883	1.19618	160.711	0.00169	0.00158
Mojave Desert	2023	MCY	Aggregated	65	GAS	47885	2.28533	2.80311	24.7455	1.23106	179.439	0.00193	0.00181
Mojave Desert	2023	MCY	Aggregated	70	GAS	53063	2.51222	3.07807	27.9007	1.27224	192.133	0.00211	0.00197
Mojave Desert	2023	MDV	Aggregated	5	GAS	7374.8	0.19894	0.28994	2.6705	0.31903	1549.07	0.01198	0.01101
Mojave Desert	2023	MDV	Aggregated	5	DSL	143.89	0.17923	0.20405	3.37005	0.12586	959.364	0.0213	0.02038
Mojave Desert	2023	MDV	Aggregated	10	GAS	9938	0.12378	0.1804	2.31477	0.25935	1150.25	0.00756	0.00695
Mojave Desert	2023	MDV	Aggregated	10	DSL	196.79	0.13255	0.15089	2.526	0.10761	815.28	0.01562	0.01494
Mojave Desert	2023	MDV	Aggregated	15	GAS	23464	0.08605	0.12539	2.10409	0.23532	885.867	0.00507	0.00466
Mojave Desert	2023	MDV	Aggregated	15	DSL	464.49	0.0684	0.07787	1.25218	0.07984	692.76	0.01258	0.01203
Mojave Desert	2023	MDV	Aggregated	20	GAS	32889	0.05911	0.08613	1.84614	0.20435	703.176	0.00354	0.00325
Mojave Desert	2023	MDV	Aggregated	20	DSL	668.28	0.0298	0.03393	0.50426	0.05893	576.93	0.00966	0.00924
Mojave Desert	2023	MDV	Aggregated	25	GAS	160342	0.04736	0.069	1.74094	0.19877	585.998	0.00264	0.00243
Mojave Desert	2023	MDV	Aggregated	25	DSL	3248	0.01979	0.02253	0.31279	0.05199	489.423	0.0084	0.00804
Mojave Desert	2023	MDV	Aggregated	30	GAS	353282	0.03699	0.05389	1.56747	0.18337	502.704	0.00206	0.00189
Mojave Desert	2023	MDV	Aggregated	30	DSL	7294	0.01525	0.01737	0.24032	0.04711	424.001	0.00708	0.00677
Mojave Desert	2023	MDV	Aggregated	35	GAS	361175	0.03191	0.04648	1.49588	0.17802	451.99	0.00171	0.00158

Mojave Desert	2023	MDV	Aggregated	35	DSL	7304.9	0.01281	0.01458	0.19412	0.04616	383.999	0.00654	0.00626
Mojave Desert	2023	MDV	Aggregated	40	GAS	403185	0.0274	0.0399	1.3655	0.16936	417.94	0.00149	0.00137
Mojave Desert	2023	MDV	Aggregated	40	DSL	8218.2	0.01083	0.01233	0.16307	0.04412	359.484	0.0059	0.00564
Mojave Desert	2023	MDV	Aggregated	45	GAS	657980	0.02566	0.03737	1.28259	0.1713	401.474	0.00136	0.00125
Mojave Desert	2023	MDV	Aggregated	45	DSL	13505	0.00969	0.01103	0.14248	0.04381	346.766	0.00564	0.00539
Mojave Desert	2023	MDV	Aggregated	50	GAS	490366	0.02411	0.03511	1.18337	0.16553	400.548	0.0013	0.00119
Mojave Desert	2023	MDV	Aggregated	50	DSL	10355	0.00861	0.0098	0.12667	0.04137	349.495	0.00525	0.00502
Mojave Desert	2023	MDV	Aggregated	55	GAS	429068	0.0248	0.03611	1.13297	0.17161	415.424	0.00132	0.00122
Mojave Desert	2023	MDV	Aggregated	55	DSL	8969.7	0.0083	0.00945	0.11727	0.04221	368.604	0.00534	0.00511
Mojave Desert	2023	MDV	Aggregated	60	GAS	282135	0.0269	0.03916	1.10403	0.1834	447.489	0.00144	0.00132
Mojave Desert	2023	MDV	Aggregated	60	DSL	5706.7	0.00873	0.00994	0.11843	0.04491	397.754	0.00579	0.00554
Mojave Desert	2023	MDV	Aggregated	65	GAS	584524	0.03041	0.04427	1.08403	0.19336	501.783	0.00161	0.00148
Mojave Desert	2023	MDV	Aggregated	65	DSL	12004	0.00927	0.01055	0.12592	0.04532	447.539	0.00622	0.00595
Mojave Desert	2023	MDV	Aggregated	70	GAS	683062	0.03202	0.04662	1.04719	0.19925	532.487	0.00173	0.00159
Mojave Desert	2023	MDV	Aggregated	70	DSL	14421	0.00938	0.01068	0.12913	0.04418	483.156	0.00635	0.00607
Mojave Desert	2023	MH	Aggregated	5	GAS	61.123	0.6183	0.90222	9.80334	1.03573	3894.02	0.01122	0.01031
Mojave Desert	2023	MH	Aggregated	5	DSL	14.324	1.23552	1.40656	2.64267	16.3904	2090.43	0.40641	0.38883

Mojave Desert	2023	MH	Aggregated	10	GAS	285.9	0.4126	0.60207	7.5427	0.9359	3324.89	0.00725	0.00667
Mojave Desert	2023	MH	Aggregated	10	DSL	64.97	0.93754	1.06732	2.1509	13.73	1898.48	0.34976	0.33463
Mojave Desert	2023	MH	Aggregated	15	GAS	444.1	0.28175	0.41112	5.87955	0.83777	2291.29	0.00485	0.00446
Mojave Desert	2023	MH	Aggregated	15	DSL	105.23	0.47662	0.5426	1.36272	9.56928	1558.35	0.25026	0.23944
Mojave Desert	2023	MH	Aggregated	20	GAS	462.53	0.20586	0.30039	4.88147	0.78035	1611.14	0.00346	0.00319
Mojave Desert	2023	MH	Aggregated	20	DSL	112.4	0.21377	0.24337	0.86553	7.1594	1278.83	0.18182	0.17396
Mojave Desert	2023	MH	Aggregated	25	GAS	1027.5	0.15177	0.22147	4.00837	0.71036	1405.06	0.00253	0.00233
Mojave Desert	2023	MH	Aggregated	25	DSL	243.34	0.14607	0.16629	0.65913	6.14927	1145.41	0.1456	0.1393
Mojave Desert	2023	MH	Aggregated	30	GAS	1437.3	0.11997	0.17506	3.50081	0.66783	1290.58	0.00199	0.00183
Mojave Desert	2023	MH	Aggregated	30	DSL	351.76	0.11772	0.13402	0.55606	5.64241	1074.89	0.12956	0.12395
Mojave Desert	2023	MH	Aggregated	35	GAS	1626.2	0.10258	0.14968	3.24259	0.65126	1192.13	0.00167	0.00153
Mojave Desert	2023	MH	Aggregated	35	DSL	389.01	0.09799	0.11155	0.48591	5.33119	1016.8	0.12259	0.11728
Mojave Desert	2023	MH	Aggregated	40	GAS	1859.3	0.09233	0.13472	3.10149	0.64514	1108.71	0.00148	0.00136
Mojave Desert	2023	MH	Aggregated	40	DSL	465.71	0.0831	0.0946	0.42853	5.07517	970.429	0.12101	0.11578
Mojave Desert	2023	MH	Aggregated	45	GAS	2371.8	0.08558	0.12488	2.99734	0.6322	1028.97	0.00136	0.00125
Mojave Desert	2023	MH	Aggregated	45	DSL	593.29	0.07175	0.08168	0.3783	4.80557	935.354	0.12216	0.11688
Mojave Desert	2023	MH	Aggregated	50	GAS	2025.3	0.08505	0.12411	3.0697	0.63854	961.721	0.00134	0.00123

Mojave Desert	2023	MH	Aggregated	50	DSL	540.39	0.06689	0.07615	0.35421	4.68662	912.872	0.13284	0.12709
Mojave Desert	2023	MH	Aggregated	55	GAS	2312.1	0.08831	0.12886	3.2624	0.65271	935.029	0.00138	0.00127
Mojave Desert	2023	MH	Aggregated	55	DSL	650.2	0.06742	0.07675	0.35036	4.6929	902.669	0.15163	0.14507
Mojave Desert	2023	MH	Aggregated	60	GAS	3225	0.09422	0.13749	3.55715	0.65591	940.039	0.00148	0.00136
Mojave Desert	2023	MH	Aggregated	60	DSL	945.9	0.0709	0.08071	0.35169	4.66382	903.77	0.17163	0.16421
Mojave Desert	2023	MH	Aggregated	65	GAS	7064.3	0.10658	0.15553	4.0968	0.66083	955.625	0.00167	0.00153
Mojave Desert	2023	MH	Aggregated	65	DSL	1993.8	0.07634	0.08691	0.35516	4.57548	915.935	0.18956	0.18136
Mojave Desert	2023	MH	Aggregated	70	GAS	9987.9	0.11993	0.175	4.64343	0.7022	984.845	0.00181	0.00167
Mojave Desert	2023	MH	Aggregated	70	DSL	3226.8	0.08831	0.10053	0.38423	4.69505	940.634	0.21829	0.20885
Mojave Desert	2023	MHDT	Aggregated	5	GAS	134.18	0.29371	0.42858	2.53804	0.60106	3740.22	0.00745	0.00685
Mojave Desert	2023	MHDT	Aggregated	5	DSL	613.54	0.24005	0.27328	1.24569	9.34004	2172.77	0.00656	0.00628
Mojave Desert	2023	MHDT	Aggregated	10	GAS	614.84	0.18829	0.27475	2.21723	0.52579	3191.93	0.00472	0.00434
Mojave Desert	2023	MHDT	Aggregated	10	DSL	2725	0.19426	0.22115	1.00876	7.16147	1926.79	0.00587	0.00562
Mojave Desert	2023	MHDT	Aggregated	15	GAS	998.61	0.12465	0.18188	1.91702	0.46323	2201.31	0.00312	0.00286
Mojave Desert	2023	MHDT	Aggregated	15	DSL	4679.4	0.13631	0.15518	0.71089	4.41949	1616.44	0.0049	0.00469
Mojave Desert	2023	MHDT	Aggregated	20	GAS	1039.6	0.08806	0.1285	1.716	0.41965	1547.6	0.00219	0.00201
Mojave Desert	2023	MHDT	Aggregated	20	DSL	5134.3	0.09826	0.11187	0.51437	2.61861	1411.74	0.00427	0.00409

Mojave Desert	2023	MHDT	Aggregated	25	GAS	2563.9	0.0642	0.09369	1.51684	0.38249	1353.38	0.00158	0.00146
Mojave Desert	2023	MHDT	Aggregated	25	DSL	12560	0.07209	0.08207	0.3777	1.54118	1303.01	0.00384	0.00367
Mojave Desert	2023	MHDT	Aggregated	30	GAS	3690.7	0.04934	0.07199	1.36377	0.35122	1244.24	0.00123	0.00113
Mojave Desert	2023	MHDT	Aggregated	30	DSL	17983	0.05313	0.06049	0.27842	1.02704	1231.96	0.00351	0.00336
Mojave Desert	2023	MHDT	Aggregated	35	GAS	4114.9	0.04095	0.05975	1.26319	0.33274	1148.31	0.00101	0.00093
Mojave Desert	2023	MHDT	Aggregated	35	DSL	21180	0.03919	0.04461	0.20538	0.7417	1175.57	0.00325	0.00311
Mojave Desert	2023	MHDT	Aggregated	40	GAS	4679.2	0.03586	0.05232	1.17454	0.31972	1068.51	0.00088	0.00081
Mojave Desert	2023	MHDT	Aggregated	40	DSL	23649	0.02891	0.03291	0.15141	0.56837	1129.16	0.00305	0.00292
Mojave Desert	2023	MHDT	Aggregated	45	GAS	6205.3	0.0328	0.04786	1.09132	0.31016	993.648	0.0008	0.00073
Mojave Desert	2023	MHDT	Aggregated	45	DSL	28646	0.02134	0.02429	0.11171	0.45366	1089.89	0.00288	0.00275
Mojave Desert	2023	MHDT	Aggregated	50	GAS	5336.7	0.03202	0.04673	1.03503	0.30671	929.974	0.00077	0.00071
Mojave Desert	2023	MHDT	Aggregated	50	DSL	22813	0.01578	0.01796	0.08244	0.37722	1056.27	0.00275	0.00263
Mojave Desert	2023	MHDT	Aggregated	55	GAS	6084.9	0.03285	0.04794	0.99522	0.30942	904.433	0.00078	0.00072
Mojave Desert	2023	MHDT	Aggregated	55	DSL	26229	0.01169	0.01331	0.06094	0.32206	1028.14	0.00264	0.00253
Mojave Desert	2023	MHDT	Aggregated	60	GAS	8787.5	0.03464	0.05054	0.95097	0.30919	910.574	0.00083	0.00077
Mojave Desert	2023	MHDT	Aggregated	60	DSL	36131	0.01007	0.01147	0.05239	0.29874	1015.11	0.0026	0.00249
Mojave Desert	2023	MHDT	Aggregated	65	GAS	20435	0.03959	0.05777	0.94953	0.31891	928.535	0.00093	0.00086

Mojave Desert	2023	MHDT	Aggregated	65	DSL	67434	0.01008	0.01148	0.05242	0.30052	1015.13	0.00263	0.00251
Mojave Desert	2023	MHDT	Aggregated	70	GAS	28946	0.04568	0.06665	1.01482	0.34724	958.076	0.00101	0.00093
Mojave Desert	2023	MHDT	Aggregated	70	DSL	98285	0.01016	0.01156	0.05265	0.3141	1016.17	0.00269	0.00258
Mojave Desert	2023	MHDT	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	MHDT	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	MHDT	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	MHDT	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	OBUS	Aggregated	5	GAS	80.361	0.20846	0.30419	1.6064	0.46314	3757.33	0.00637	0.00586
Mojave Desert	2023	OBUS	Aggregated	5	DSL	55.505	0.36368	0.41402	2.04168	13.0472	2537.01	0.00785	0.00751
Mojave Desert	2023	OBUS	Aggregated	10	GAS	373.21	0.13198	0.19258	1.42913	0.40235	3207.95	0.00401	0.00368
Mojave Desert	2023	OBUS	Aggregated	10	DSL	250.48	0.29157	0.33193	1.63427	9.93151	2239.18	0.00702	0.00671
Mojave Desert	2023	OBUS	Aggregated	15	GAS	586.61	0.08848	0.1291	1.28971	0.35679	2210.34	0.00268	0.00246
Mojave Desert	2023	OBUS	Aggregated	15	DSL	395.12	0.20351	0.23168	1.13908	6.10026	1871.06	0.006	0.00574
Mojave Desert	2023	OBUS	Aggregated	20	GAS	609.84	0.06228	0.09088	1.17016	0.32228	1554	0.00188	0.00173
Mojave Desert	2023	OBUS	Aggregated	20	DSL	437.52	0.14863	0.16921	0.83317	3.65019	1641.6	0.00538	0.00515
Mojave Desert	2023	OBUS	Aggregated	25	GAS	1417.3	0.04649	0.06783	1.0738	0.29658	1356.53	0.0014	0.00129
Mojave Desert	2023	OBUS	Aggregated	25	DSL	861.34	0.10948	0.12464	0.61422	2.15017	1518.62	0.00491	0.0047

Mojave Desert	2023	OBUS	Aggregated	30	GAS	1997.3	0.03592	0.05242	0.97976	0.27395	1245.96	0.0011	0.00101
Mojave Desert	2023	OBUS	Aggregated	30	DSL	1179.4	0.08117	0.0924	0.45579	1.43378	1441.84	0.00454	0.00434
Mojave Desert	2023	OBUS	Aggregated	35	GAS	2237.6	0.02975	0.04342	0.90871	0.25935	1150.31	0.0009	0.00083
Mojave Desert	2023	OBUS	Aggregated	35	DSL	1406.7	0.0597	0.06796	0.33511	1.02737	1376.5	0.00421	0.00403
Mojave Desert	2023	OBUS	Aggregated	40	GAS	2569.4	0.02573	0.03754	0.8355	0.24718	1070.4	0.00078	0.00072
Mojave Desert	2023	OBUS	Aggregated	40	DSL	1677.2	0.04511	0.05135	0.25421	0.78911	1339.25	0.004	0.00382
Mojave Desert	2023	OBUS	Aggregated	45	GAS	3355.7	0.02345	0.03422	0.7725	0.23878	994.54	0.00071	0.00066
Mojave Desert	2023	OBUS	Aggregated	45	DSL	1806.9	0.03311	0.0377	0.18649	0.6201	1292.05	0.00374	0.00358
Mojave Desert	2023	OBUS	Aggregated	50	GAS	2908.9	0.02257	0.03293	0.71735	0.23372	930.636	0.00069	0.00063
Mojave Desert	2023	OBUS	Aggregated	50	DSL	1522.3	0.02486	0.0283	0.14042	0.50822	1264.42	0.00356	0.00341
Mojave Desert	2023	OBUS	Aggregated	55	GAS	3329	0.02299	0.03355	0.6766	0.23473	905.077	0.0007	0.00064
Mojave Desert	2023	OBUS	Aggregated	55	DSL	2019.7	0.01881	0.02141	0.10663	0.42791	1245.61	0.00342	0.00327
Mojave Desert	2023	OBUS	Aggregated	60	GAS	4741.8	0.02439	0.03559	0.63867	0.23614	910.539	0.00075	0.00069
Mojave Desert	2023	OBUS	Aggregated	60	DSL	2353.5	0.01573	0.01791	0.08884	0.38828	1215.03	0.00327	0.00313
Mojave Desert	2023	OBUS	Aggregated	65	GAS	10813	0.02783	0.04061	0.62229	0.2419	927.618	0.00085	0.00078
Mojave Desert	2023	OBUS	Aggregated	65	DSL	2822.4	0.01532	0.01744	0.08616	0.38329	1200.2	0.00321	0.00307
Mojave Desert	2023	OBUS	Aggregated	70	GAS	15514	0.03152	0.04599	0.65284	0.2561	957.796	0.00091	0.00083

Mojave Desert	2023	OBUS	Aggregated	70	DSL	4388.9	0.01595	0.01816	0.09029	0.39079	1223.03	0.0033	0.00316
Mojave Desert	2023	OBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	OBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	OBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	OBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	SBUS	Aggregated	5	GAS	114.51	0.23013	0.3358	1.69951	0.55917	1801.31	0.00562	0.00517
Mojave Desert	2023	SBUS	Aggregated	5	DSL	265.81	0.68672	0.78178	1.36431	16.0378	2277.92	0.10523	0.10067
Mojave Desert	2023	SBUS	Aggregated	10	GAS	401.35	0.14506	0.21168	1.55056	0.48416	1537.72	0.00354	0.00325
Mojave Desert	2023	SBUS	Aggregated	10	DSL	931.66	0.5311	0.60462	1.12189	13.0165	2039.62	0.08749	0.0837
Mojave Desert	2023	SBUS	Aggregated	15	GAS	802.7	0.09629	0.14051	1.41592	0.42749	1059.95	0.00235	0.00216
Mojave Desert	2023	SBUS	Aggregated	15	DSL	1863.3	0.30644	0.34886	0.78568	8.87939	1699.05	0.05926	0.0567
Mojave Desert	2023	SBUS	Aggregated	20	GAS	1089.5	0.06744	0.09841	1.29671	0.38339	745.234	0.00164	0.00151
Mojave Desert	2023	SBUS	Aggregated	20	DSL	2529.2	0.17396	0.19803	0.55924	6.56086	1451.34	0.03996	0.03823
Mojave Desert	2023	SBUS	Aggregated	25	GAS	1719.9	0.04981	0.07268	1.19016	0.34974	650.747	0.00122	0.00112
Mojave Desert	2023	SBUS	Aggregated	25	DSL	3992.4	0.12597	0.1434	0.42554	5.73495	1321.97	0.03209	0.0307
Mojave Desert	2023	SBUS	Aggregated	30	GAS	2063.4	0.0388	0.05662	1.09534	0.32416	598.01	0.00095	0.00087
Mojave Desert	2023	SBUS	Aggregated	30	DSL	4789.9	0.09638	0.10972	0.3336	5.32824	1243.66	0.0276	0.02641

Mojave Desert	2023	SBUS	Aggregated	35	GAS	2117.9	0.03185	0.04647	1.00932	0.30617	552.108	0.00078	0.00072
Mojave Desert	2023	SBUS	Aggregated	35	DSL	4916.2	0.07421	0.08448	0.26379	5.06222	1180.83	0.02457	0.02351
Mojave Desert	2023	SBUS	Aggregated	40	GAS	1429.7	0.02759	0.04026	0.9331	0.29352	513.655	0.00068	0.00062
Mojave Desert	2023	SBUS	Aggregated	40	DSL	3318.7	0.05819	0.06624	0.21151	4.88406	1130.11	0.02297	0.02198
Mojave Desert	2023	SBUS	Aggregated	45	GAS	685.92	0.02523	0.03681	0.86548	0.2856	477.263	0.00062	0.00057
Mojave Desert	2023	SBUS	Aggregated	45	DSL	1592.2	0.04736	0.05391	0.17339	4.77187	1089.5	0.02279	0.02181
Mojave Desert	2023	SBUS	Aggregated	50	GAS	343.53	0.02441	0.03561	0.80712	0.2809	446.458	0.0006	0.00055
Mojave Desert	2023	SBUS	Aggregated	50	DSL	797.44	0.04101	0.04668	0.14697	4.71251	1057.74	0.02404	0.023
Mojave Desert	2023	SBUS	Aggregated	55	GAS	511.32	0.0246	0.0359	0.74564	0.28735	434.152	0.00061	0.00056
Mojave Desert	2023	SBUS	Aggregated	55	DSL	1186.9	0.03858	0.04393	0.13046	4.71645	1033.97	0.02672	0.02557
Mojave Desert	2023	SBUS	Aggregated	60	GAS	284.57	0.02649	0.03866	0.69925	0.29173	436.849	0.00065	0.0006
Mojave Desert	2023	SBUS	Aggregated	60	DSL	660.59	0.03879	0.04416	0.12534	4.72531	1024.71	0.02857	0.02734
Mojave Desert	2023	SBUS	Aggregated	65	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	SBUS	Aggregated	70	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	SBUS	Aggregated	75	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	SBUS	Aggregated	80	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	SBUS	Aggregated	85	DSL	0	0	0	0	0	0	0	0

Mojave Desert	2023	SBUS	Aggregated	90	DSL	0	0	0	0	0	0	0	0
Mojave Desert	2023	UBUS	Aggregated	5	GAS	540.68	1.39469	2.03513	8.74264	1.79657	3814.62	0.00691	0.00635
Mojave Desert	2023	UBUS	Aggregated	5	DSL	645.96	2.43845	15.2509	37.1281	16.5204	3265.1	0.26769	0.25611
Mojave Desert	2023	UBUS	Aggregated	10	GAS	1732.6	0.92274	1.34647	7.13366	1.58892	3256.31	0.00441	0.00405
Mojave Desert	2023	UBUS	Aggregated	10	DSL	2066.9	1.84978	11.4474	28.8987	13.7595	2965.29	0.22348	0.21381
Mojave Desert	2023	UBUS	Aggregated	15	GAS	3024	0.64644	0.94328	6.05706	1.43626	2244.57	0.00297	0.00273
Mojave Desert	2023	UBUS	Aggregated	15	DSL	3611.2	0.96147	5.76522	16.3129	9.70502	2434.65	0.15171	0.14515
Mojave Desert	2023	UBUS	Aggregated	20	GAS	28209	0.48087	0.70169	5.33653	1.33184	1578.25	0.00212	0.00195
Mojave Desert	2023	UBUS	Aggregated	20	DSL	33782	0.44488	2.53744	8.74628	7.57421	1997	0.10175	0.09735
Mojave Desert	2023	UBUS	Aggregated	25	GAS	139.17	0.23921	0.34906	2.55535	0.74809	1372.33	0.00145	0.00133
Mojave Desert	2023	UBUS	Aggregated	25	DSL	156.05	0.21883	0.93279	4.44139	5.92426	1828.66	0.08976	0.08588
Mojave Desert	2023	UBUS	Aggregated	30	GAS	195.75	0.20757	0.30288	2.70263	0.80893	1261.03	0.00116	0.00107
Mojave Desert	2023	UBUS	Aggregated	30	DSL	230.41	0.1932	0.86393	3.99361	5.7912	1707.17	0.07613	0.07284
Mojave Desert	2023	UBUS	Aggregated	35	GAS	214.67	0.16252	0.23714	2.16512	0.69931	1163.45	0.00095	0.00087
Mojave Desert	2023	UBUS	Aggregated	35	DSL	248.94	0.14752	0.60538	3.11702	5.37408	1620.7	0.06824	0.06529
Mojave Desert	2023	UBUS	Aggregated	40	GAS	257.59	0.14582	0.21278	2.1647	0.71872	1083.27	0.00082	0.00076
Mojave Desert	2023	UBUS	Aggregated	40	DSL	291.29	0.13097	0.56045	2.82886	5.28378	1545.02	0.06026	0.05765

Mojave Desert	2023	UBUS	Aggregated	45	GAS	356.86	0.17063	0.24898	2.72506	0.87917	1007.85	0.0008	0.00074
Mojave Desert	2023	UBUS	Aggregated	45	DSL	423.31	0.13672	0.64641	3.00737	5.6218	1477.47	0.05583	0.05341
Mojave Desert	2023	UBUS	Aggregated	50	GAS	314.59	0.18403	0.26853	3.02422	0.9775	944.103	0.00079	0.00073
Mojave Desert	2023	UBUS	Aggregated	50	DSL	370.65	0.14275	0.70104	3.06661	5.83797	1435.46	0.053	0.05071
Mojave Desert	2023	UBUS	Aggregated	55	GAS	408.08	0.18784	0.27409	3.00093	0.98696	918.451	0.0008	0.00074
Mojave Desert	2023	UBUS	Aggregated	55	DSL	469.54	0.14864	0.71216	2.96555	5.88255	1419.33	0.05452	0.05217
Mojave Desert	2023	UBUS	Aggregated	60	GAS	557.15	0.20922	0.3053	3.24027	1.06431	924.534	0.00087	0.0008
Mojave Desert	2023	UBUS	Aggregated	60	DSL	644.03	0.16952	0.81097	3.1115	6.04267	1417.51	0.05815	0.05563
Mojave Desert	2023	UBUS	Aggregated	65	GAS	1206.9	0.31537	0.46019	4.49735	1.34765	943.567	0.00108	0.00099
Mojave Desert	2023	UBUS	Aggregated	65	DSL	1496.6	0.22826	1.14241	3.88369	6.83784	1423.9	0.06509	0.06228
Mojave Desert	2023	UBUS	Aggregated	70	GAS	2082.8	0.37877	0.5527	5.07556	1.42953	974.256	0.00121	0.00112
Mojave Desert	2023	UBUS	Aggregated	70	DSL	2573.2	0.28447	1.39622	4.40236	7.41599	1463.85	0.07826	0.07488

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air Basin

Region: MOJAVE DESERT

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	ROG_RUN EX	TOG_RUN EX	CO_RUNE X	NOx_RUN EX	SOx_RUN EX	CO2_RUN EX	PM10_RU NEX	PM2_5_R UNEX	N2O_RUN EX
MOJAVE DESERT	2019	HHDT	Aggregate d	55	DSL	168521.9	0.076556	0.087153	0.325222	2.920048	0.011642	1232.28	0.063127	0.060396	0.193697
MOJAVE DESERT	2019	LDA	Aggregate d	55	DSL	15942.09	0.01619	0.018431	0.185422	0.163308	0.001857	196.3879	0.010781	0.010315	0.030869
MOJAVE DESERT	2019	LDT1	Aggregate d	55	DSL	62.93839	0.206692	0.235305	1.328809	1.389566	0.003522	372.5309	0.171245	0.163837	0.058557
MOJAVE DESERT	2019	LDT2	Aggregate d	55	DSL	2497.211	0.012464	0.014189	0.088477	0.065412	0.002475	261.7872	0.006931	0.006631	0.041149
MOJAVE DESERT	2019	LHDT1	Aggregate d	55	DSL	31216.83	0.105035	0.119576	0.690199	4.418481	0.004741	501.4903	0.023908	0.022873	0.078827
MOJAVE DESERT	2019	LHDT2	Aggregate d	55	DSL	11327.95	0.082494	0.093914	0.538005	3.302779	0.00514	543.7465	0.020024	0.019158	0.085469
MOJAVE DESERT	2019	MDV	Aggregate d	55	DSL	10133.58	0.010733	0.012219	0.149518	0.104381	0.003402	359.855	0.00673	0.006439	0.056564
MOJAVE DESERT	2019	MH	Aggregate d	55	DSL	960.8277	0.070413	0.080161	0.35412	5.226778	0.008651	915.0701	0.148841	0.142402	0.143836
MOJAVE DESERT	2019	MHDT	Aggregate d	55	DSL	22729.66	0.129638	0.147583	0.502979	3.186724	0.008388	887.849	0.117561	0.112476	0.139558
MOJAVE DESERT	2019	OBUS	Aggregate d	55	DSL	548.5255	0.201147	0.22899	0.712457	4.698278	0.011332	1199.479	0.138777	0.132773	0.188541
MOJAVE DESERT	2019	SBUS	Aggregate d	55	DSL	2390.572	0.055546	0.063235	0.176758	6.137032	0.009264	980.5777	0.045475	0.043507	0.154133
MOJAVE DESERT	2019	UBUS	Aggregate d	55	DSL	46.98682	0.001737	0.039011	0.054957	0.837028	0.009388	993.0421	0.012652	0.012104	0.156092

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air Basin

Region: MOJAVE DESERT

Calendar Year: 2020

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	ROG_RUN EX	TOG_RUN EX	CO_RUN EX	NOx_RUN EX	SOx_RUN EX	CO2_RUN EX	PM10_RUN EX	PM2_5_RUN EX	N2O_RUN EX
MOJAVE DESERT	2020	HHDT	Aggregated	55	DSL	172133.8	0.059464	0.067695	0.260358	2.49343	0.011381	1204.669	0.052574	0.050299	0.189357
MOJAVE DESERT	2020	LDA	Aggregated	55	DSL	16955.63	0.014167	0.016128	0.169194	0.134733	0.001812	191.6568	0.009341	0.008937	0.030126
MOJAVE DESERT	2020	LDT1	Aggregated	55	DSL	57.43328	0.195012	0.222009	1.257225	1.309366	0.003497	369.8948	0.161433	0.154449	0.058142
MOJAVE DESERT	2020	LDT2	Aggregated	55	DSL	2894.2	0.010997	0.012519	0.081839	0.054265	0.002405	254.3987	0.005888	0.005634	0.039988
MOJAVE DESERT	2020	LHDT1	Aggregated	55	DSL	30345.45	0.100465	0.114373	0.660439	4.131599	0.004705	497.746	0.023004	0.022009	0.078239
MOJAVE DESERT	2020	LHDT2	Aggregated	55	DSL	11119.34	0.078948	0.089877	0.514857	3.074224	0.005101	539.6205	0.019513	0.018669	0.084821
MOJAVE DESERT	2020	MDV	Aggregated	55	DSL	10687.18	0.010033	0.011422	0.144183	0.090866	0.003328	351.9843	0.00625	0.00598	0.055327
MOJAVE DESERT	2020	MH	Aggregated	55	DSL	932.569	0.069512	0.079135	0.34848	5.096177	0.008628	912.6931	0.144722	0.138461	0.143463
MOJAVE DESERT	2020	MHDT	Aggregated	55	DSL	23094.41	0.102671	0.116883	0.414352	2.6492	0.008225	870.5768	0.096178	0.092018	0.136843
MOJAVE DESERT	2020	OBUS	Aggregated	55	DSL	568.9785	0.137456	0.156483	0.527213	3.592758	0.011058	1170.432	0.098516	0.094254	0.183976
MOJAVE DESERT	2020	SBUS	Aggregated	55	DSL	2373.272	0.052243	0.059475	0.170617	5.854864	0.009184	972.1279	0.043277	0.041405	0.152805
MOJAVE DESERT	2020	UBUS	Aggregated	55	DSL	47.11503	0.001773	0.038987	0.055341	0.834423	0.009377	991.9324	0.012692	0.012143	0.155918

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air Basin

Region: MOJAVE DESERT

Calendar Year: 2021

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	ROG_RUN EX	NOx_RUN EX	PM10_RU NEX	PM2_5_R UNEX	CO2_RUN EX	CO_RUNE X
MOJAVE DESERT	2021	HHDT	Aggregated	55	DSL	207762.4	0.043884	2.075887	0.043716	0.041825	1173.479	0.205796
MOJAVE DESERT	2021	LDA	Aggregated	55	DSL	20856.38	0.012312	0.109124	0.008066	0.007717	186.3991	0.15267
MOJAVE DESERT	2021	LDT1	Aggregated	55	DSL	59.82337	0.190387	1.266793	0.156192	0.149435	363.7479	1.228226
MOJAVE DESERT	2021	LDT2	Aggregated	55	DSL	3935.383	0.009778	0.045111	0.00503	0.004813	247.1005	0.076508
MOJAVE DESERT	2021	LHDT1	Aggregated	55	DSL	38467.26	0.093803	3.751753	0.02169	0.020752	492.7855	0.616351
MOJAVE DESERT	2021	LHDT2	Aggregated	55	DSL	14245.68	0.074755	2.821894	0.018865	0.018049	534.2836	0.487069
MOJAVE DESERT	2021	MDV	Aggregated	55	DSL	12889.22	0.009324	0.080347	0.005799	0.005548	342.6116	0.138291
MOJAVE DESERT	2021	MH	Aggregated	55	DSL	1111.578	0.067959	4.930048	0.139796	0.133749	907.2426	0.339837
MOJAVE DESERT	2021	MHDT	Aggregated	55	DSL	28663.18	0.080047	2.085455	0.079182	0.075757	847.9892	0.337864
MOJAVE DESERT	2021	OBUS	Aggregated	55	DSL	701.5192	0.098588	2.715282	0.0771	0.073765	1124.945	0.394027
MOJAVE DESERT	2021	SBUS	Aggregated	55	DSL	2355.916	0.048662	5.542155	0.040926	0.039155	961.5665	0.163823
MOJAVE DESERT	2021	UBUS	Aggregated	55	DSL	49.89476	0.001338	0.851976	0.012746	0.012195	1003.978	0.054287

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Air Basin

Region: MOJAVE DESERT

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, g/mile for RUNEX, PMBW and PMTW

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	ROG_RUN EX	NOx_RUN EX	PM10_RU NEX	PM2_5_R UNEX	CO2_RUN EX	CO_RUNE X
MOJAVE DESERT	2022	HHDT	Aggregated	55	DSL	212033.5	0.025591	1.704066	0.02745	0.026262	1138.342	0.12293
MOJAVE DESERT	2022	LDA	Aggregated	55	DSL	21965.42	0.010683	0.089556	0.006929	0.006629	181.7716	0.139691
MOJAVE DESERT	2022	LDT1	Aggregated	55	DSL	55.58936	0.176843	1.175894	0.145043	0.138768	359.3749	1.143132
MOJAVE DESERT	2022	LDT2	Aggregated	55	DSL	4348.661	0.009251	0.04012	0.004672	0.00447	240.368	0.074608
MOJAVE DESERT	2022	LHDT1	Aggregated	55	DSL	37565.22	0.088669	3.461527	0.020634	0.019741	487.8023	0.582039
MOJAVE DESERT	2022	LHDT2	Aggregated	55	DSL	14027.73	0.070977	2.60195	0.018322	0.017529	528.9055	0.461824
MOJAVE DESERT	2022	MDV	Aggregated	55	DSL	13431.62	0.008566	0.06966	0.005298	0.005068	334.0047	0.132121
MOJAVE DESERT	2022	MH	Aggregated	55	DSL	1083.288	0.066678	4.784566	0.135592	0.129727	901.3714	0.332596
MOJAVE DESERT	2022	MHDT	Aggregated	55	DSL	29134.67	0.037621	1.275086	0.042935	0.041077	815.1993	0.177493
MOJAVE DESERT	2022	OBUS	Aggregated	55	DSL	727.1578	0.039473	1.700096	0.031021	0.029679	1083.475	0.15608
MOJAVE DESERT	2022	SBUS	Aggregated	55	DSL	2342.254	0.045177	5.217178	0.038686	0.037012	950.5036	0.157287
MOJAVE DESERT	2022	UBUS	Aggregated	55	DSL	49.60422	0.001368	0.83665	0.012831	0.012276	1004.024	0.054698

APPENDIX C

Biological Technical Report

Prepared by

Live Oak Associates

June 2018



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

Memo

To: Bert Verrips, Verrips Consulting, 11942 Red Hill Avenue, Santa Ana, CA 92705
From: Live Oak Associates, Inc.
Dr. Rick Hopkins, Senior Wildlife Biologist & Principal
Nathan Hale, M.S., Staff Ecologist & Project Manager
Wendy Fisher, Wetland and Plant Ecologist, Arborist, & Senior Project Manager
Date: June 22, 2018
Re: Biological Technical Report for the Willow Springs Water Bank project Addendum in Antelope Valley within Kern and Los Angeles Counties, California (PN 2267-01).

Live Oak Associates, Inc. (LOA) has prepared this technical biological report in support of an Addendum to the 2006 EIR for the Antelope Valley Water Bank Project (“2006 EIR”) prepared by Jones & Stokes (Kern County 2006). The Antelope Valley Water Bank Project is now called the Willow Springs Water Bank (WSWB) project. The approved 2006 project has undergone several notable changes since approval. The goal of this study is to evaluate the current WSWB project given changes to the project design and changes external to the project (e.g., any species provided with or removed of special status protections since 2006, changes in the regional regulations and/or setting, occurrences of species within the vicinity of the project since the 2006 EIR, etc.). Ultimately, the goal of this study is to evaluate the project’s potential impact on biological resources and significant biotic habitats, to determine if subsequent changes to the project or changes external to the project results in significant new impacts pursuant to the California Environmental Quality Act (CEQA), and to address what measure, including those approved in the 2006 EIR, are required to address those impacts. Where applicable, LOA has proposed minor adjustments to approved mitigation measures to address new issues.

The project site is located along the boundary of Kern and Los Angeles Counties with the majority of the site occurring in Kern County in the Antelope Valley of California, approximately 14 miles northwest from the City of Lancaster (Attachment A; Figure 1). In general the site is comprised of desert habitats, solar and wind generation facilities, agricultural land uses, and rural residential development. The proposed project, summarized below, includes expansion of existing water recharge basins, development of recovery wells and a network of collection pipelines and connecting pipelines, construction of supply pipelines from the

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California Aqueduct and from the Los Angeles Aqueduct, and construction of booster pump stations and a turnout facility. The recharge basin, collection and connecting pipelines, booster pump stations, and well sites will generally occur between Rosamond Boulevard to the north, 140th Street to the east, 195th Street to the west, and Avenue A, to the south. Extending south beyond Avenue A, the linear supply pipeline from the California Aqueduct runs south along 155th Street, then west at W Avenue C-8, then south at 160th Street, then west at SR 138, and then south at 170th Street W. An alternate route was also evaluated that runs south along 155th Street, west at SR 138A, and then south at 170th Street W. A turnout facility will be constructed adjacent to the California Aqueduct. The linear supply pipeline from the Water Bank site runs south along 140th Street past Avenue A to Avenue B, where it heads east and terminates at approximately 135th Street.

Project Summary

The Willow Springs Water Bank project (then called Antelope Valley Water Bank) was approved by Kern County on September 12, 2006. In general, the water bank facility would store imported surface water in the underlying aquifer, which would be recovered by wells when needed. The imported water would be conveyed by pipeline from the East Branch of the California Aqueduct, a State Water Project (SWP) facility located approximately 7 miles to the south. The delivered water would be recharged to the aquifer for storage. When needed, the stored water would be recovered by wells for conveyance back to the California Aqueduct or for delivery to local and regional water agencies.

The approved water bank includes approximately 1,630 gross acres of recharge basin area, and up to 57 recovery wells and associated collection piping, within an overall area of approximately 12,160 acres. The water bank was approved for a maximum storage capacity of 500,000 acre feet, with an annual capacity of 100,000 acre feet for recharge and recovery. The approved water bank project includes an 8.75 mile long supply pipeline from the California Aqueduct, along with a booster pump station. The approved water bank also includes a 4-mile long connecting pipeline to the Antelope Valley East Kern Water Agency (AVEK) West Feeder pipeline to the east.

The planned modifications to the WSWB project are generally described as follows. The total recharge basin area will be reduced to 1,106 gross acres, and the number of recovery wells will be increased to a total of 77 wells, within an overall area of approximately 8,650 acres. The planned maximum storage capacity will be increased to 1,000,000 acre feet, with a maximum annual recharge capacity of 250,000 acre feet, and a maximum annual recovered volume of 225,000 acre feet. The supply pipeline from the California Aqueduct will follow a modified route from the approved plan, and will have a total length from 9.15 miles. The modified project would include a second source of imported water from the Los Angeles Aqueduct #2 which runs through the water bank in a north-south direction along the west side of 170th Street. A new 2.5-mile long connecting pipeline to the AVEK's South-North Interconnect Pipeline (SNIP) to the southeast has also been added.

Due to the more productive hydrogeological conditions that prevail in the area to the west of the approved water bank project site, the planned wellfield area has been shifted

westward to encompass the adjacent 3,200 acres. The eastern portion of the approved wellfield, comprising approximately 6,710 acres, has been removed from the water bank. This results in an overall reduction of 3,510 acres in the size of the water bank area.

Above ground disturbance estimates from the project are summarized in Table 1.

Table 1. Willow Springs Water Bank ground disturbance estimates		
Project Element	Temporary Disturbances (acres)	Permanent Disturbances (acres)
Supply pipeline from California Aqueduct		
Pipeline	170.9	0
Turnout	2.0	1.0
Booster Pump Station	1.0	0.5
Regulating Reservoir	1.75	1.75
Supply pipeline from Los Angeles Aqueduct		
Pipeline	37.0	0
Booster Pump Station	1.0	0.5
Regulating Reservoir	1.75	1.75
Connection Pipeline to SNIP	44.8	0
Recharge Basin Berms	221.2	221.2
Recovery Wells	16.3	0.16
Collection Pipelines	587.7	0
Totals	1,084.52	225.98

METHODS

LOA evaluated the modified WSWB project’s design in contrast to the WSWB project approved in 2006 with regard to biological species, significant biological habitats, movement corridors, and existing local, state, and federal natural resource protection policies.

To facilitate this evaluation, LOA ecologists Wendy Fisher and Nathan Hale conducted a reconnaissance-level windshield survey of the site on May 8 and 9, 2018, to identify and verify current project area conditions and constituent habitat species. In addition, LOA ecologist, Neal

Kramer examined portions of the site along Rosamond Boulevard and 170th Street during a brief inspection for botanical resources and evidence of desert tortoise. All survey work supporting this report was conducted at a reconnaissance-level survey with some areas traversed on foot. Species-specific target surveys were not conducted as part of this analysis, and the results of reconnaissance surveys do not provide a basis to conclude the presence or absence of special status species potentially occurring within the site.

LOA also conducted a review of relevant source information including manuals and references related to plants, animals, habitats, and regulations of the region; the Antelope Valley Water Bank Project Draft Environmental Impact Report (Kern County 2006); the California Natural Diversity Database (CDFW 2018); the Inventory of Rare and Endangered Vascular Plants of California, 7th Edition (CNPS 2018); State and Federally Listed Endangered and Threatened Animals of California (CDFW 2018); and several planning documents and biological studies for solar projects in the immediate vicinity of the project area, including within the proposed well-fields of the project, that have been conducted regionally since the 2006 EIR for this project was certified.

Due to the presence of Joshua tree (*Yucca brevifolia*) woodlands along portions of the project's pipeline alignments, additional field study was conducted by Ms. Fisher and Mr. Hale during parts of May 7, 8, and 9, 2018, within an area designated to be a Joshua Tree SEA ("Significant Ecological Area") by Los Angeles County (LA County 2015). The focus of the effort was to survey trees within several alternate pipeline routes being considered through the Joshua Tree SEA and to identify a pipeline pathway of least impact to Joshua trees. After evaluating alternative pathways, LOA biologists mapped and categorized by size all Joshua trees within an approximate 110-ft. survey area within the SEA that includes the proposed pathway of the supply pipeline from the California Aqueduct to the project's recharge basins. The results of this mapping effort, which are included in Attachment B, helped to identify the proposed project supply pipeline route.

LOA's survey and desktop review was used to evaluate the adequacy of the findings of the 2006 EIR with regard to impacts and mitigations for biological resources. The following are our findings.

FINDINGS

EXISTING CONDITIONS

Regional Setting

The project site is located within the western portion of the greater Antelope Valley in southeast Kern County and northern Los Angeles County (Attachment A; Figure 1). The site is located within the arid valley floor of the western-most portion of the Mojave Desert region, generally between the Tehachapi Mountains to the north, the San Gabriel Mountains to the south, and the City of Lancaster, California to the east. The site falls along SR 138 with the interchange of SR 138 and Interstate 5 approximately 21 miles to the west and the interchange of SR 14 and SR 138 approximately 13 miles to the east. The water bank site is on the gently sloping valley floor with elevations generally sloping from high to low—2,860 to 2,570 feet National Geodetic Vertical Datum (NGVD)—in a west to east and north to south pattern; an exception to this pattern is the

increase in elevation along the supply pipeline from north to south ending at a project area high point of 2,965 feet NGVD where the pipeline meets the California Aqueduct.

The site is a matrix dominated by human land uses with natural habitat areas intermixed. Land uses of the site include active agriculture fields including crops and horse pasture land, fallow agricultural fields in various stages of colonization by grassland and shrubland species, solar and wind energy generation facilities, water recharge basins, and scattered rural residential properties. Natural habitats include annual grassland, Joshua tree woodland, shrubland habitats including creosote bush (*Larrea tridentata*) scrub, rabbit brush (*Ericameria nauseosa*) scrub, salt brush (*Ambrosia salsola*) scrub (also known as cheesebush scrub), and ephemeral drainage channels (Attachment A: Figure 2). Habitats and land uses are summarized further below and a list of vascular plants observed during reconnaissance surveys is included in Attachment C. In general, changes to the habitats and land-uses since the 2006 EIR include development of large-scale solar and wind generation projects and the reduction of active agriculture and natural land areas.

California annual grassland

California annual grassland was dominated by grasses and forbs common to the region, including soft chess (*Bromus hordeaceus*), cheat grass (*Bromus tectorum*), old han schismus (*Schismus barbatus*), Arabian Schismus (*Schismus arabicus*), and redstem filaree (*Erodium cicutarium*). Presence of shrubs was limited in these grassland areas. Some grassland areas contained scalds that were mostly barren of vegetation. Grasslands occurred on a continuum between less disturbed to more ruderal in nature throughout the site, indicating that some grasslands of the site are areas recolonized by grassland species that had been historically disturbed. Animal species observed within the grassland habitats of the site included common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), California ground squirrel (*Otospermophilus beecheyi*), white-tailed antelope ground squirrels (*Ammospermophilus leucurus*), and evidence of kangaroo rats (*Dipodomys* sp.).

Rabbit brush (Ericameria nauseosa) scrub

Rabbit brush (*Ericameria nauseosa*) scrub. In addition to the species mentioned below under the Joshua tree woodland description, shrubs commonly observed in this habitat included brittlebush (*Encelia farinosa*), burrobush (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), bur ragweed (*Ambrosia acanthicarpa*), and matchweed (*Gutierrezia sarothrae*). Annual species typically found in rabbitbrush scrub were prickly lettuce (*Lactuca serriola*), jimson weed (*Datura wrightii*), Saharan mustard (*Brassica tournefortii*) and spurge (*Euphorbia occellata*). Some of the animal species observed within rabbit brush scrub habitats of the site include the California horned-lark, white-tailed antelope ground squirrel, desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*)

Creosote bush (Larrea tridentata) scrub

Uniformly spaced creosote bush (*Larrea tridentata*) dominated this habitat, with very few associated species due to the chemical nature of the creosote bush. Associated species that were present included redstem filaree, Russian thistle (*Salsola tragus*), old han schismus, chia (*Salvia columbariae*), angle-stem buckwheat (*Eriogonum angulosum*) and fiddleneck. Some of the animal species observed in the creosote bush habitat area included loggerhead shrike (*Lanius ludovicianus*), house finch (*Haemorhous mexicanus*), and black-tailed jackrabbit.

Salt bush (Ambrosia salsola) scrub

Salt bush (*Atriplex polycarpa*) was prevalent within the northern portion of the project area. Some former agriculture areas appear to be transitioning back into salt bush scrub habitat. Associated species were those also found in the Joshua tree woodland, creosote bush scrub, and rabbitbrush scrub habitats. Animals noted included the same species observed in the rabbit brush scrub habitat areas.

Joshua tree woodlands

Joshua tree woodland was dominated by Joshua trees (*Yucca brevifolia*) of various sizes ranging from seedlings to mature 20 foot trees. The understory included species typically found in the rabbitbrush scrub habitat, including rubber rabbitbrush (*Ericameria nauseosa*), green rabbitbrush (*Ericameria viscidiflorus*), mormon tea (*Ephedra* sp.), California aster (*Corethrogyne filaginifolia*), fiddleneck (*Amsinckia tessellata*), London rocket (*Sysimbrium irio*) and goldfields (*Lasthenia gracile*). Occasional beavertail cacti (*Opuntia basilaris* ssp. *basilaris*) was observed within the Joshua tree woodland. Animal species richness was higher within this habitat relative to other habitat areas of the site. Some of the species observed in this habitat included the western whiptail (*Aspidoscelis tigris*), yellow-backed spiny lizard (*Sceloporus uniformis*), western side-blotched lizard (*Uta stansburiana*), northern harrier (*Circus cyaneus*), raven, mourning doves (*Zenaida macroura*), nesting cactus wrens (*Campylorhynchus brunneicapillus*), white-tailed antelope squirrel, desert cottontail, and evidence of kangaroo rats and other small rodents.

Agricultural Areas (active and fallow)

Agricultural fields observed in the project area during the field surveys were limited to alfalfa (*Medicago sativa*). Unique bird activity was noted within the larger active field on the site. Specifically, groups of foraging yellow-headed blackbirds (*Xanthocephalus xanthocephalus*), white-faced ibis (*Plegadis chihi*), and western kingbird (*Tyrannus verticalis*), were noted within the fields and interacting with the irrigation water. Nearby, a group of approximately 25-30 tri-colored blackbirds (*Agelaius tricolor*) were foraging within annual grassland areas.

Fallow agricultural fields were those that formerly were used for agricultural production, but were currently not being utilized. Non-native grasses and forbs typical of disturbed areas of the site and present within adjoining scrub or grassland habitats were commonly encroaching into fallow agricultural fields.

Ephemeral drainages

Ephemeral drainage channels were noted within scrub habitats of the site. Such drainages were predominantly located within the northwest portion of the site and along 170th Street W. A potential ephemeral drainage channel was also noted along the new supply pipeline alignment along 155th Street. These channels were not inundated during the field surveys and they were generally devoid of vegetation with some areas sparsely vegetated with non-wetland species. Shelving and sediment deposits were evidence of wetland hydrology.

Recharge basins

A few recharge basins within and adjacent to the site were observed during reconnaissance surveys. In general, the soils of these features appeared to be disced or otherwise managed, and

vegetation was similar to ruderal portions of the annual grasslands and adjacent to developed areas. Berms of the recharge basins are likely to support fossorial animal species.

Developed (Solar fields, rural residential, other infrastructure)

These typically barren developed areas were sometimes landscaped with species tolerant of desert conditions. Solar fields are kept almost completely clear of vegetation. Some of the species observed around rural residential areas included Japanese black pine (*Pinus thumbergii*), Aleppo pine (*Pinus halepensis*), Chinese elm (*Ulmus parvifolia*), honey mesquite (*Prosopis glandulosa*), or tamarisk (*Tamarix aphylla*). Areas of herbaceous cover included species typical of California annual grassland of the site and found interceded in scrub habitats, typically including non-native grasses and forbs. Some of the animal species observed in these areas included side-blotched lizard, nesting American crows (*Corvus brachyrhynchos*), nesting ravens, a perching ferruginous hawk (*Buteo regalis*), California horned lark, mourning dove, California ground squirrels, and desert cottontail. Within the solar fields, only flying bird species, such as ravens, were noted.

SPECIAL STATUS PLANT AND ANIMAL SPECIES

LOA conducted a query of special status species—those plants and animals having low populations, limited distributions, or both. These include species that are formally listed as threatened or endangered under state and federal endangered species legislation, species that are candidates for formal listing, species that have been designated as “species of special concern” or “fully protected” by California Department of Fish and Wildlife (CDFW) and plant species listed as rare or endangered by the California Native Plant Society. A query of the California Natural Diversity Database (CDFW 2018) and of the CNPS Inventory of Rare and Endangered Plants (CNPS 2018) was completed for the two USGS quadrangles in which the project site occurs (i.e., Fairmont Butte and Lake Hughes) and the ten surrounding quadrangles (i.e., Tylerhorse Canyon, Liebre Twins, Willow Springs, Little Buttes, Neenach School, Burnt Peak, Del Sur, Sleepy Valley, Green Valley, and Warm Springs Mountain). Figure 3 in Attachment A shows the locations of special status species recorded within 5 km of the site. The results were analyzed and compared to the special status species review of the 2006 EIR in order to evaluate the adequacy of the 2006 EIR’s findings given changes to the project and external to the project.

Analysis of the Potential to Occur for Special Status Species

Potential to Occur Conclusions of the 2006 EIR that are Consistent with Current Findings

In light of changes to the project, LOA has determined that the 2006 EIR adequately addressed the potential to occur for the following special status species (where names have changed, the current scientific nomenclature are used). The 2006 EIR also addresses several species that are not currently considered to be protected by the federal Endangered Species Act or California Endangered Species Act, or that are not listed as CDFW fully protected species or CDFW species of special concern (refer to the 2006 EIR); for these species (e.g., *Myotis* bat species, prairie falcon, rufous hummingbird, etc.), the 2006 EIR analysis of potential to occur is determined to be adequate.

This biological analysis determined that the 2006 EIR adequately addressed the potential to occur for the following species:

Plants

- Plants considered to have no potential to occur within the project area:
 - Braunton's milk vetch (*Astragalus brauntonii*)
 - Forest Camp sandwort (*Arenaria macradenia* var. *kuschei*)
 - Lancaster milk vetch (*Astragalus preussii* var. *laxiflorus*)
 - Nevin's barberry (*Berberis nevinii*; Federally Endangered ["FE"], California Endangered ["CE"])
 - slender mariposa lily (*Calochortus clavatus* var. *gracilis*)
 - San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*: Proposed for listing as Federally Threatened, CE)
 - Parry's spineflower (*Chorizanthe parryi* var. *parryi*)
 - White-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*)
 - slender-horned spineflower (*Dedecahema leptoceras*)
 - conejo dudleya (*Dudleya abramsii* ssp. *parva*)
 - marcescent dudleya (*Dudleya cymosa* ssp. *marcescens*)
 - Santa Monica Mountains dudleya (*Dudleya cymosa* ssp. *ovatifolia*)
 - Verity's dudleya (*Dudleya verity*)
 - round-leaved filaree (*Erodium macrophyllum*)
 - San Gabriel bedstraw (*Galium grande*)
 - sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*)
 - California orcutt grass (*Orcuttia californica*)
 - Lyon's pentachaeta (*Pentachaeta lyonii*)

Animals

- Animals with high potential to occur within the project area:
 - Coast (Blainville) horned lizard (*Phrynosoma blainvilli*; California species of special concern ["SSC"])
 - mountain plover (*Charadrius montanus*; SSC)
 - white-tailed kite (*Elanus leucurus*; CDFW Fully Protected Species ["FP"])
 - American badger (*Taxidea taxus*; SSC)
- Animals with low potential to occur within the project area:
 - California legless lizard (*Anniella pulchra*; SSC)
 - southern grasshopper mouse (*Onychomys torridus ramona*; SSC)
- Animals considered to have no potential to occur within the project area:
 - Quino checkerspot butterfly (*Euphydryas editha quino*; FE)
 - Riverside fairy shrimp (*Strptocephalus woottoni*; FE)
 - vernal pool fairy shrimp (*Branchinecta lynchi*: Federally Threatened ["FT"])
 - arroyo toad (*Anaxyrus californicus*; FE, SSC)
 - California red-legged frog (*Rana draytonii*; FT)
 - Tehachapi slender salamander (*Batrachoseps stebbinsi*; California Threatened ["CT"])
 - western spadefoot (*Spea hammondi*; SSC)
 - blunt-nosed leopard lizard (*Gambelia sila*; FE, CE, FP)
 - coastal western whiptail (*Aspidoscelis tigris stegnegeri*; SSC)
 - western pond turtle (*Emys marmorata*; SCC)
 - two-striped garter snake (*Thamnophis hammondi*; SSC)

- American peregrine falcon (*Falco peregrinus*; FP)*
- bald eagle (*Haliaeetus leucocephalus*; CE, FP)*
- black swift (*Cypseloides niger*; SSC)*
- California condor (*Gymnogyps californianus*: FE, CE, FP)*
- California gnatcatcher (*Polioptila californica californica*: FT, SSC)
- California least tern (*Sternula antillarum browni*: FE, CE)
- least Bell's vireo (*Vireo bellii pusillus*: FE, CE)
- southwestern willow flycatcher (*Empidonax traillii extimus*; FE, CE)
- Vaux's swift (*Chaetura vauxi*; SSC)*
- western snowy plover (*Charadrius alexandrinus nivosus*; FT, SSC)*
- tri-colored blackbird (*Agelaius tricolor*; Candidate for listing as State of California Threatened)*
- Mohave ground squirrel (*Xerospermophilus mohavensis*; CT)
- Nelson's antelope squirrel (*Ammospermophilus nelson*; CT)
- short-nosed kangaroo rat (*Dipodomys nitratooides brevinasus*; SSC)
- spotted bat (*Euderma maculatum*; SSC)
- greater western mastiff bat (*Eumops perotis californicus*; SSC)
- Tehachapi pocket mouse (*Perognathus alticolus inexpectatus*; SSC)
- Tulare grasshopper mouse (*Onychomys torridus tularensis*; SSC)

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 [*Avian species shown with an asterisk are considered to have no potential to occur onsite in a way that is important for the species breeding or foraging success. They may travel over the site on occasion as part of migratory movements, and some of them may use the project area as foraging habitat from time to time, but nesting potential is considered to be lacking from the site for them; therefore, for the purpose of this analysis, the 2006 EIR conclusion for their lack of potential to occur is assumed to be based on the lack of potential to occur as part of nesting and/or important foraging habitat and it is determined to be consistent with current findings].

Potential to Occur Conclusions of the 2006 EIR that are Inconsistent with Current Findings

Conclusions about the potential for occurrence of a small number of species evaluated in the 2006 EIR were determined to be inconsistent with the current analysis given changes to the project and changes external to the project. These conclusions involve the following two plant species and five animal species—an expanded discussion of each is included below:

Plants

- Alkali mariposa lily (*Calochortus striatus*) (CNPS 1B.2)
- Spreading Navarretia (*Navarretia fossalis*; FT)

Animals

- desert tortoise (*Gopherus agassizii*; FT, CT);
- Swainson's hawk (*Buteo swainsoni*; CT);
- Western burrowing owl (*Athene cunicularia*; SSC);
- Le Conte's thrasher (*Toxostoma lecontei*; SSC);
- loggerhead shrike (*Lanius ludovicianus*; SSC);

Alkali mariposa lily

The approved 2006 EIR determined that suitable habitat for the alkali mariposa lily was not present on the site; however, this species is now considered to be possible but unlikely to occur within the site. This species was observed approximately 0.5 miles from the boundary of the Rosamond Solar Array, however the exact location information was not provided. The species has also been observed within the proposed footprint of the Willow Springs Solar Array along 110th Street, approximately 3 miles to the east from the WSWB project area. This species occurs in alkaline meadows and ephemeral washes within chaparral, chenopod scrub, Mojavean desert scrub between 70-2210 meters in elevation NGVD. It blooms April – June. There are five occurrences of this species within the region of the project area (CNDDDB 2018), the nearest is approximately 8 miles southeast of the project area. Associated species include *Bromus rubens*, *Hordeum murinum*, *Atriplex spinifera*, *Leptosyne calliopsidea*, and *Salsola tragus*, most of which were present. Potentially suitable habitat for this species is present within desert scrub and ephemeral washes of the project area.

Spreading Navarretia

The approved 2006 EIR determined that suitable habitat for the spreading navarretia was not present on the site; however, this species is now considered potential to occur within the site. This species was not observed during surveys conducted for solar projects in the vicinity of the site since the 2006 EIR was certified. This species occurs in freshwater vernal pools and ditches in scrub, primarily in Riverside and San Diego Counties between 30-1300 meters in elevation. This annual plant blooms in the April to June period of the year. An occurrence of this species was discovered near the project site in 2010. As shown on Figure 3, the nearest documented occurrence of this annual plant species is approximately 1/2 mile east of the proposed pipeline alignment, in the southeastern part of the project area. This population occurs near the northernmost extent of the distribution of this species, and may be considered an outlier population. Potentially suitable habitat for this species is present within temporarily ponded areas of the site including roadside ditches, ephemeral washes, and low lying areas that may pond on occasion.

Desert tortoise

The approved 2006 EIR determined that the desert tortoise has no potential to occur within the project site due to the fact that the site was outside of the tortoise's range at the time the EIR was prepared. The 2006 EIR also notes that there were no CNDDDB records of the tortoise within 10 miles of the site. However, wildlife surveys for the Desert tortoise since the 2006 EIR have documented several occurrences within 10 miles of the site. CNDDDB records documented 5 desert tortoise burrows in 2010, within 1.8 miles to the northwest of the corner of the site (i.e., the intersection of 170th Street W and Rosamond Boulevard), one showing recent use. Another CNDDDB record documented a desert tortoise approximately 8.3 miles to the northeast of the site, near the Cactus Queen Mine, in 2006. This individual was observed crossing Tehachapi Willow Springs Road near Golden Gate Avenue. Two desert tortoise individuals were documented approximately 14 miles northeast of the site at/near the Alta-Oak Creek wind energy project. Also, surveys for the PdV Wind Energy Project in 2005 documented potential desert tortoise scat and a class-4 burrow (i.e., a dilapidated burrow that could be that of a desert tortoise) within 2 miles to the north of the site (Kern County 2011). Numerous protocol surveys for desert tortoise and general wildlife surveys for desert tortoise within project areas occurring within the general WSWB project area failed to detect desert tortoise.

Given these documented occurrence of individuals and potential evidence of tortoises in the region to the north of the site; the fact that the desert tortoise can occur within virtually any desert habitat type; that there do not appear to be definitive barriers for desert tortoise movement between these locations and the project area; and that surveys throughout the project area and immediately adjacent to the project area have not detected the presence of desert tortoise individuals, this species is considered to have a low likelihood of occurrence within the project site.

Swainson's hawk

The 2006 EIR determined that Swainson's hawks had a low potential to occur onsite, "because only a few known records from Antelope Valley [exist]," at the time the EIR was prepared. Wildlife surveys, including focused surveys for Swainson's hawks, conducted since 2006 in the immediate vicinity of the project have documented numerous occurrences of individuals foraging throughout the vicinity of the site including within the site. Several active nesting sites, which are presumed to be extant, were documented within 3.5 miles of the site to the east (Kern County 2014a; Kern County 2014b; Kern County 2015; Kern County 2010). Swainson's hawks have been observed nesting in trees typical of the site, including Joshua trees and non-native trees typical of rural residential landscaping and wind rows in the area. Given what appears to be an increase in occurrence within the site since the 2006 study, the Swainson's hawk is determined to have a high potential to occur within the project site, and the project site provides low to moderate quality foraging habitat for this species.

Western burrowing owl

The 2006 EIR determined that the western burrowing owl had a low potential to occur on the site; however, individuals are recently known to breed, forage, and overwinter within the project vicinity. Therefore, the western burrowing owl is determined to have a high potential to breed, overwinter, and forage within the site.

Le Conte's thrasher

The 2006 EIR determined that Le Conte's thrasher had a low potential to occur on the site; however, individuals have been observed within the project area, including during survey for the Rosamond Solar Array (Kern County 2014a) and the Astoria Solar project (Kern County 2014b). Therefore, the Le Conte's thrasher is now considered to have a high potential to occur within the site.

Loggerhead shrike

The 2006 EIR determined that the loggerhead shrike had a low potential to occur on the site; however, individuals were observed by LOA during May 2018 reconnaissance-level surveys of the site. Additionally, this species was observed copulating during site surveys within the Astoria Solar project (Kern County 2014b), and has been documented as occurring immediately adjacent to the site and within 3 miles of the site on CNDDDB. Therefore, the loggerhead shrike is now considered to have a high potential to occur within the site.

Additional Species not included in the 2006 EIR

Thirteen species of plants and seven additional animal species were evaluated as part of this biological analysis that were not included in the 2006 EIR. These species are included in Table 2a and Table 2b, below.

TABLE 2a. List Of Special Status Plant Species Not Evaluated in the 2006 EIR That Could Occur In The Project Vicinity

<i>Species</i>	<i>Status</i>	<i>Habitat</i>	<i>Potential Occurrence within the Project Area</i>
Howell's Onion (<i>Allium howellii</i> var. <i>clokeyi</i>)	CNPS 1B.3	Occurs in meadows and seeps of Great Basin scrub, and pinyon and juniper woodland between 1300-1850 m. in elevation throughout much of western and central California. Blooms April-June.	Absent. The project area is below the elevational range for this species.
Horn's Milkvetch (<i>Astragalus hornii</i> var. <i>hornii</i>)	CNPS 1B.1	Occurs in alkaline meadows, seeps, playas and lake margins in the central valley, south coast, Transverse Ranch and Mojave desert between 60-850 m. in elevation. Blooms May-October.	Absent. Suitable habitat is not present. The project area does not support alkaline meadows, seeps, playas or lake margins.
Clokey's Cryptantha (<i>Cryptantha clokeyi</i>)	CNPS 1B.2	Occurs in Mojavean desert scrub between 725-1365 m. in elevation, specifically in sandy or gravelly soils of creosote bush scrub habitat. Though most of the occurrences are in Los Angeles and San Bernardino Counties, there are also scattered occurrences in Inyo, Kern and San Luis Obispo Counties. Blooms in April.	Possible. Suitable habitat lies within creosote bush scrub within the project area. Though the exact location is unknown, a documented occurrence is from approximately 2 miles east of the southern portion of the main pipeline from 2003.
Tejon Poppy (<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>)	CNPS 1B.1	Occurs in valley and foothill grassland and chenopod scrub between 160-1000 m. in elevation in the Tehachapi and western transverse ranges. Blooms February-May.	Unlikely. Although habitat appears to be marginal for this species, no occurrences of this species occur within the Mojave Desert. The nearest documented occurrence is from Sacatara Creek in Tejon Ranch from 2014.
Newhall Sunflower (<i>Helianthus inexpectatus</i>)	CNPS 1B.2	Occurs in marshes, swamps and freshwater seeps within riparian woodland around 305 m. in elevation. Blooms August-October.	Absent. The project area is above the elevational range for this species.
Ross' Pitcher Sage (<i>Lepechinia rossii</i>)	CNPS 1B.2	Occurs in chaparral within the western Transverse Range between 305-790 m. in elevation. Blooms May-September.	Absent. Suitable habitat is not present. The project area does not support chaparral habitat.
Narrowleaf Monardella (<i>Monardella linoides</i> ssp. <i>oblonga</i>)	CNPS 1B.3	Occurs in steep NE facing slopes of lower and upper montane coniferous forest and pinyon and juniper woodland between 900-2470 m. in elevation throughout much of the south coast and eastern central California, including the Mojave desert. Blooms May-August.	Absent. Suitable habitat in the form of NE facing slopes in forests and pinyon/juniper woodlands is absent for this species.
Paiute Mountains Navarretia (<i>Navarretia setiloba</i>)	CNPS 1B.1	Occurs in clay or gravelly loam soils of cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland between 285-2100 m. in elevation in the southern Sierra Nevada foothills, San Joaquin valley and western Transverse Ranges. Blooms April-June.	Unlikely. Although habitat appears to be marginal for this species, no occurrences of this species occur within the plains of the Mojave Desert. The only documented occurrence in the region is from mountainous areas to the north from 2018.

TABLE 2a. List Of Special Status Plant Species Not Evaluated in the 2006 EIR That Could Occur In The Project Vicinity

<i>Species</i>	<i>Status</i>	<i>Habitat</i>	<i>Potential Occurrence within the Project Area</i>
Short-joint Beavertail (<i>Opuntia basilaris</i> var. <i>brachyclada</i>)	CNPS 1B.2	Occurs in sandy, coarse granitic loams within chaparral, Joshua tree woodland, Mojavean desert scrub and pinyon juniper woodland between 425 and 1400 m. in elevation in the San Gabriel and San Bernardino Mountains. Blooms April–August. Known to hybridize with more common varieties of <i>Opuntia basilaris</i> .	Possible. Suitable habitat for this species is present within the project site. Three individuals of <i>Opuntia basilaris</i> ssp. <i>basilaris</i> were found within the project area. Some hybrids of the special status species have been found in the Antelope Valley.
White Rabbit Tobacco (<i>Pseudognaphalium leucocephalum</i>)	CNPS 1B.1	Occurs in sandy gravelly soils in riparian woodland, chaparral, cismontane woodland and coastal scrub between sea level and 2100 m. in elevation in the south coast, San Bernardino Mountains, Peninsular Ranges, and San Jacinto Mountains. Blooms July-December.	Absent. Suitable habitat is not present. The project area does not support riparian woodland, chaparral, cismontane woodland or coastal scrub.
Rayless Ragwort (<i>Senecio aphanactis</i>)	CNPS 2B.2	Occurs in alkaline soils of coastal scrub, chaparral and cismontane woodland in central and south coast of California between 15 and 800 m. in elevation. Blooms January -May.	Absent. Suitable habitat is not present. The project area does not support alkaline coastal scrub, chaparral or cismontane woodland.
New Mexico Checker-Mallow (<i>Sidalcea neomexicana</i>)	CNPS 2B.2	Occurs in alkaline, mesic areas of playas, chaparral, coastal scrub and lower montane coniferous forest throughout much of southern California including the Mojave desert between 15 and 1530 m. in elevation. Blooms March-June.	Absent. Suitable habitat is not present. The project area does not support alkaline mesic playas, coastal scrub, chaparral or lower montane coniferous forest.
Greata’s Aster (<i>Symphyotrichum greata</i>)	CNPS 1B.3	Occurs in mesic areas of riparian woodland, broadleaved upland forest, chaparral, cismontane woodland, and lower montane coniferous forest in the San Gabriel Mountains between 300-2010 m. in elevation. Blooms June-October.	Absent. Suitable habitat is not present. The project area does not support mesic riparian, forest, chaparral, cismontane woodland or coniferous forest.

TABLE 2b. List Of Special Status Animal Species Not Evaluated in the 2006 EIR That Could Occur In The Project Vicinity

<i>Species</i>	<i>Status</i>	<i>Habitat</i>	<i>Occurrence within the Project Area</i>
Unarmored threespine stickleback (<i>Gasterosteus aculeatus willimasoni</i>)	FE, CE, FP	Inhabits slow-moving reaches or quiet-water microhabitats in streams and rivers. Usually occurs in area shaded by dense and abundant vegetation or algal mats.	Absent. No Suitable habitat occurs in the project area.
California glossy snake (<i>Arizona elegans occidentalis</i>)	SSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Appears to prefer microhabitats of open areas and areas with soil loose enough for easy burrowing.	Absent. The site is considered to be outside of the range for this subspecies. One individual of this species was documented 30 miles southwest of the site, but the subspecies was not determined and two subspecies are expected to occur in that area.

TABLE 2b. List Of Special Status Animal Species Not Evaluated in the 2006 EIR That Could Occur In The Project Vicinity

<i>Species</i>	<i>Status</i>	<i>Habitat</i>	<i>Occurrence within the Project Area</i>
Golden eagle (<i>Aquila chrysaetos</i>)	FP	Occur in open and semi-open landscapes throughout North America. They typically avoid developed areas and uninterrupted stretches of forest. Mostly found in mountains, canyons, rimrock terrain, and riverside cliffs and bluffs. Golden Eagles nest on cliffs and steep escarpments in grassland, chaparral, shrubland, forest, and other vegetated areas. Golden Eagles usually nest on cliffs. They may also build nests in trees, on the ground, or on tall human-made structures.	Likely. While the golden eagle is likely to occur within the site during overwintering periods, including as part of migratory movements, foraging, and perching, the golden eagle has not been known to nest in the project vicinity. Nesting records are absent from the vicinity of the project.
San Diego black-tailed jackrabbit (<i>Lepus californicus bennetti</i>)	SSC	Occurs in mesic areas of riparian woodland, broadleaved upland forest, chaparral, cismontane woodland, and lower montane coniferous forest in the San Gabriel Mountains between 300-2010 m. in elevation. Blooms June-October.	Absent. Suitable habitat is not present. The project area does not support mesic riparian, forest, chaparral, cismontane woodland or coniferous forest.
Pallid bat (<i>Antrozous pallidus</i>)	SSC	Occurs in a wide variety of habitats including grasslands, shrublands, woodlands, and forests from sea level through mixed conifer forests. Most abundant in open, dry habitats with rocky habitat that is critical for roosting. Forages within 1-3 miles of day roost locations.	Unlikely. The pallid bat may migrate through the site on occasion, but the absence of suitable roosting habitat from the site would preclude roosting and foraging.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	SSC	Occurs in a variety of habitats of the state. Primarily a cave-dwelling bat that may also roost in buildings. Prefers mesic environments and requires water for drinking.	Unlikely. The Townsend's big-eared bat may migrate through the site on occasion. Suitable roosting habitat is absent for this species; therefore, foraging is unlikely.

Summary of Species with Some Potential to Occur within the WSWB Project Area

LOA has determined that the four protected plant species and ten special status animal species, listed here below, have some level of potential to occur within the project area in a meaningful way. There are additional species of birds and bats described above that may forage over the site or migrate over the site from time to time, but they are not expected to breed within the site, utilize the site as part of important or critical foraging habitat, or utilize the site for day roosts—in the case of pallid bat and Townsend's big-eared bat.

Plants that could occur within the WSWB site:

- Alkali mariposa lily
- Spreading Navarretia
- Clokey's cryptantha
- short-tailed beavertail cactus

Animals that could occur within the WSWB site:

- desert tortoise
- Coast horned lizard

- California legless lizard
- white-tailed kite
- Swainson's hawk
- Western burrowing owl
- Le Conte's thrasher
- loggerhead shrike
- southern grasshopper mouse
- American badger

DISCUSSION

ENVIRONMENTAL IMPACTS AND MITIGATIONS SPECIFIC TO THE PROJECT SITE

The planned project consists of the development of a network of ground water recovery wells, water pipelines, a water recharge basin, and some associated structures that support water banking within the project planned wellfield. The majority of the project impacts are temporary and would result from excavation of pipelines. Permanent impacts associated with the project include the conversion of former and active agricultural areas into recharge basins that may be grazed when dry, construction of pump stations within former agricultural fields and annual grassland areas, and placement of 77 recovery wells (well equipment at the ground surface occupies approximately 100 sq. ft. at each well site) scattered uniformly above the wellfield. As discussed in the 2006 EIR, activities resulting in impacts to biotic resources may be regulated by local, state, and federal laws.

1. Potential Impacts to Project Habitats

The proposed project will result in +1,000 acres of temporary impacts and approximately 226 acres of permanent impacts. Permanent impacts include impacts primarily to fallow and active agricultural fields. Temporary impacts include effectively all habitat types of the site. Impacts to ephemeral drainages are discussed below under the Potential Impacts to Jurisdictional Waters. Impact to Joshua tree woodlands are discussed below under Potential Impacts to Joshua Tree Woodlands. For the remaining habitats, the approved 2006 EIR adequately addresses the potential impacts to annual grassland, agricultural habitats, and rabbitbrush scrub habitats (*Impact 4.3-1 and Impact 4.3-3*). Otherwise, habitats of the site, including salt brush scrub and creosote brush scrub are locally and regionally common. The potential impacts to these habitat areas would predominantly be in the form of temporary impacts. Therefore, these impacts would be considered less than significant.

Impacts. Impacts to habitats of the site, not including ephemeral drainages and Joshua tree woodlands which are discussed below, are considered to be less than significant.

2. Potential Impacts to Special Status Plants

Of the 20 special status plants evaluated by the approved 2006 EIR and the thirteen additional plants evaluated in this biotics analysis, potentially suitable habitat has been determined to be present for four special status plant species occurring in the region. These include Clokey's cryptantha, short-tailed beavertail cactus, alkali mariposa lily, and spreading navarretia. Absence cannot be determined without surveys targeted for these species within the appropriate blooming period.

The 2006 EIR found that there were no impacts to special status plant species, but changes to the project and changes external to the project, including new occurrences of protected species and changes in species' protected status, have resulted in the finding that the four species described above may occur within the site. Specifically, Clokey's cryptantha could occur within creosote brush scrub areas of the site. The short-tailed beavertail cactus could occur within Joshua tree woodlands and natural scrub habitat areas of the site; although, no individuals were observed within the proposed project alignment through the Joshua tree SEA. The alkali mariposa lily could occur within desert scrub and ephemeral washes of the project area. Spreading navarretia could occur within or adjacent to any potentially occurring ponded areas, including human-made ditches, in scrub habitats of the southern portion of the site. The spreading navarretia would not be expected to occur with the Kern County portion of the project area and its known occurrence adjacent to the site is near the southern-most portion of the supply pipeline alignment, near the California Aqueduct. Prior to ground disturbance, protocol-level rare plant surveys would need to be conducted during the relevant species' blooming period in suitable habitat areas of the site to precisely map their distributions on-site, if present. Should any populations be found a precise impact assessment can be conducted to determine the magnitude of the impact. If future, appropriately timed, surveys do not detect populations of any of the aforementioned species in areas that will be temporarily or permanently disturbed, then no further mitigations would need to be implemented.

Impacts. While a definitive conclusion of impacts to special species plants cannot be made at this time, the following prescriptive mitigations are recommended as precautionary measures for the purpose of avoiding impacts to special status plant species in the unlikely event they are found to be present within the area subject to project disturbance.

Mitigation 2.1. Avoidance. Avoidance of sensitive plant resources is the preferred alternative. The project should be designed to avoid direct (i.e., removal) or indirect impact (i.e., establish a suitable buffer from the work zone of at least 25 to 50 ft.) impact to any special status plant species population detected during the rare plant surveys.

Mitigation 2.2. Minimization Measures. A number of measures will need to be implemented to ensure that construction related activities do not inadvertently impact avoided populations of special status plant species, should they be found to be present. The following measures should be employed:

- Erect construction fencing around any identified population of special status plant species to ensure that the project would not inadvertently damage plants that were expected to be avoided.
- Provide for a qualified on-site monitor to be present during construction and trenching activities to ensure that these activities do not inadvertently affect plant populations that are to be avoided.

Mitigation 2.3. Restoration for Impacts to Special Status Plants that Cannot be Avoided. To compensate for any direct impacts to the special status plant species that are detected within the work area and cannot be avoided, the applicant should prepare and implement a site restoration plan for any permanent and/or temporary impacts.

The site restoration plan will be developed to replace the any populations of special status plant species that are directly or indirectly impacted by the project. A qualified botanist shall identify all avoidance areas and establish buffer zones of sufficient size around these areas to eliminate potential disturbance to any special status plant species during construction. The size of the buffer zone(s) shall account for such factors type and proximity of construction activities. At a minimum, the site restoration plan shall address the following:

- Location of on-site areas (and suitable buffer) to restore lost plant populations. It is assumed that the topsoil can be stockpiled and replaced once the trenching operation is complete. These areas shall be prepared and, based on appropriate propagation techniques, restored to the reclaimed areas. Once established, these areas would become part of the larger open space area and set aside in perpetuity by establishing a conservation easement.
- Propagation techniques (such as seed collecting, greenhouse efforts to grow plants, etc.) to be employed in the restoration effort.
- The timetable to implement the restoration plan, including pilot-phase studies if necessary.
- Remedial measures to be performed in the event that initial restoration measures are not successful in meeting the performance criteria. The performance criteria would need to ensure that there would be a minimum of a 1:1 replacement of the size of the population and area affected (replaced:lost).
- Site maintenance activities to follow restoration activities, including weed control, irrigation, and control of herbivory wildlife.
- Identification of a suitable land trust organization (approved by the CDFW and USFWS) to take over management of these areas once established by the applicant or its agent.
- Provision of a suitable bond or endowment to adequately fund long-term management of any special status plant species affected by the project.

3. Potential Impacts to Special Status Animals

The 2006 EIR evaluated 62 special status animal species that are known to occur, or historically known to occur, within the region of the WSWB project. As part of this analysis, six additional special status animal species that are currently known to occur regionally were evaluated for this report. Of the 68 special status animal species evaluated, 45 were determined to be absent from the site due to the lack of suitable habitats and/or the considerable distance of the site from the known ranges of the species. The 23 remaining species were determined to have some potential to occur within the project site. Of these 23 animal species, eleven species are birds and bats that are not expected to utilize the site for breeding habitat, bat-roosting habitat, or as important/critical foraging habitat. These include the California condor, American peregrine falcon, Golden eagle, bald eagle, mountain plover, black swift, Vaux's swift, western snowy plover, tri-colored blackbird, pallid bat, and Townsend's big-eared bat. These species may occur within the site from time to time as part of foraging or migratory movements, but the project is not expected to have an effect on these species. Two of the remaining twelve species are species that are no longer listed with a protected status. These include the California horned lark (*Eremophila alpestris actia*) and long-billed curlew (*Numenius americanus*), both of which are known to occur within the site vicinity; incidentally, both of these species are protected during nesting by the Migratory Bird Treaty Act and CDFW code and are adequately protected under

mitigation identified the 2006 EIR (*Mitigation Measure 4.3-7*) with minor modifications to this mitigation measure as identified below.

The remaining ten special status animal species have been determined to have some potential to occur within the project site. These include the desert tortoise, Coast horned lizard, California legless lizard, white-tailed kite, Swainson's hawk, Western burrowing owl, Le Conte's thrasher, loggerhead shrike, southern grasshopper mouse, and American badger.

The current design of the proposed WSWB project is expected to result in a less-than-significant impact to habitat for all of the special status animal species analyzed as part of this report. Site development may potentially result in direct mortality of individuals of these ten species if they were found present during construction. Possible project impacts to individuals of these species are discussed in greater detail in the following sections.

Impacts. Impacts to habitat for the animal species listed above are considered to be less-than-significant.

4. Potential Impacts to Nesting Special Status Bird Species and other Nesting Migratory Birds

Although the loss of habitat resulting from project buildout for white-tailed kite, Le Conte's thrasher, loggerhead shrike, California horned lark, and other nesting migratory bird species protected by the California Fish and Wildlife Code and/or the federal Migratory Bird Treaty Act would not be considered significant, impacts to individuals would be considered significant. The trees, shrubs, and human-made structures of the site provide suitable nesting habitat for the majority of these species, and barren ground areas of the site provide suitable habitat for ground nesting species such as the California horned lark. Project related activities, especially including removal of trees and shrubs, during the nesting season (February 1 through August 31) could directly impact the nests, if present, or induce the adults to abandon the nest when eggs or juveniles are present, thus leading to their starvation or becoming inviable. The mortality of juveniles including developing eggs would constitute a significant adverse impact of the project.

The 2006 EIR adequately addresses potential impacts to special status bird nests during construction via *Impact 4.3-9*: and *Mitigation Measure 4.3-7*; however, this mitigation measure does not address potential impacts to nesting migratory birds which are also protected under federal and state regulations. The following minor modifications are prescribed to address potential impacts to nesting birds.

Impact. Less than significant with mitigation including minor modifications described below.

Recommended Minor Modifications to Mitigation Measure 4.3-7 of the 2006 EIR.

Nesting surveys as described in the 2006 EIR *Mitigation Measure 4.3-7* shall be conducted for all species protected by federal and state laws including the Migratory Bird Treaty Act and CDFW Code. Surveys shall occur within 14-days prior to any new construction impact in any new impact zones of the site during the nesting period from February through May and within 30-days prior to such construction impacts from June through August. Nesting surveys shall be phased to occur 14 or 30 days, as described above, prior to initial construction disturbances (i.e., vegetation clearing, grading, mobilization of project equipment and materials, and/or excavation)

for any given phase or new impact zone of the project site. To facilitate this, the project manager(s) will ensure the qualified biologist(s) is properly informed of project scheduling.

Pre-construction survey areas should be based on species-type buffer requirements. Thus, while Mitigation Measure 4.3-7 stipulates that surveys shall be conducted within 0.25 miles of the project site, a 0.25 mile survey area is more than suitable for large raptors nesting on any tall structures of the site, but survey areas for smaller bird species such as perching-bird species, including ground nesting birds, shall include the project impact area and an area of no-less than 100 feet from the project impact areas.

5. Potential Impacts to Swainson's Hawks

The 2006 EIR adequately addresses impacts and mitigations related to Swainson's hawks. As described above, several additional occurrences of Swainson's hawks have been discovered near the project area; however, this fact, and changes to the project would have no change in the potential impact to this species.

Impact. Less than significant with mitigation.

Mitigation. Mitigation Measure 4.3-4 of the 2006 EIR adequately reduces impacts to Swainson's Hawks to a less than significant level.

6. Potential Impacts to Western Burrowing Owls

The 2006 EIR adequately addresses impacts and mitigations related to western burrowing owls in *Impact 4.3-7* and *4.3-8*. As described above, several additional occurrences of burrowing owls have been documented within the area encompassing the project site; however, this fact, and changes to the project would have no change in the potential impact to this species.

Impact. Less than significant with mitigation.

Mitigation. Mitigation Measures 4.3-5 and *4.3-6* of the 2006 EIR adequately reduces impacts to burrowing owls to a less than significant level.

7. Potential Impact to Desert Tortoises

As discussed above, desert tortoises are considered to have a low-likelihood to occur within the project area. The project area does not support known habitat for the tortoise, and the majority of the project area supports habitats that are generally unsuitable for the tortoise, including agricultural fields, fallow fields, developed areas, ruderal annual grassland areas, and recharge basins. The majority of permanent project impacts to the site will occur within unsuitable habitat areas for the tortoise. Scrub habitats, Joshua tree woodland, and contiguous portions of annual grasslands with low historical disturbances could potentially support a desert tortoise if one were to colonize these areas; however, the habitat areas within the site are not known to support desert tortoise at this time. Based on this and the negative findings for desert tortoise in numerous projects overlapping the WSWB project area, it is not expected that the project would result in a loss of habitat for the desert tortoise. In the unlikely event that a transient tortoise moved onto the site during construction, direct loss of desert tortoise individuals can be avoided through pre-construction surveys, avoidance, and minimization measures. Such surveys and measures are partially addressed in the 2006 EIR in *Mitigation Measures 4.3-5* and *4.3-6*; however, the

following modifications shall be applied to the approved Mitigation Measures to avoid impacts to transient desert tortoise individuals.

Impact. Less than significant with minor modification to the 2006 EIR *Mitigation Measures 4.3-5* and *4.3-6*, described below.

Recommended Minor Modifications to Mitigation Measure 4.3-5 of the 2006 EIR.

Pre-construction surveys for burrowing owls shall be extended to provide for desert tortoises including surveying within a species-appropriate buffer of the project footprint, as determined by a qualified biologist, and including scoping of any potentially suitable burrows that occur within 50 feet of project impact areas for desert tortoises. Such surveys shall coincide with the phasing of project disturbances of the site, and they shall occur within 14-days prior to any new construction impact in any new impact zones of the site. If no tortoises are detected, no further mitigation is required.

Recommended Minor Modifications to Mitigation Measure 4.3-7 of the 2006 EIR.

If desert tortoises are detected adjacent to the project site, all work will cease within ¼ miles of the tortoise, and USFWS and CDFW shall be notified.

8. Potential Impacts to Coast Horned Lizard, California Legless Lizard, and Southern Grasshopper Mouse

The 2006 EIR addresses potential impacts to these species during construction (***Impact 4.3-11*** and ***Impact 4.3-13***). Coast horned lizards have been documented as occurring in the proposed footprint of the project's supply pipeline from the California Aqueduct during reconnaissance-level surveys supporting the 2006 EIR analysis and within approximately 1 miles of the supply pipeline's proposed location during biotic surveys associated with the AV Solar project in 2009. California legless lizards have not been documented as occurring within the project site. One individual was documented approximately 5.8 miles north of the site within desert woodland habitat in the foothill slopes of the Tehachapi mountains, another was documented approximately 8 miles northwest of the site in the Tehachapi foothills. The southern grasshopper mouse has not been documented as occurring within 10 miles of the site, but habitats are potentially suitable for this species.

As mentioned above, habitat loss as a result of this project for these three species is considered to be less than significant as the permanent impact footprint represents a minor fraction of regionally available suitable habitats. Construction of the project may impact an unknown number of individuals. Impacts to individuals of these three species is considered to be less than significant for several reasons. For the California legless lizard and southern grasshopper mouse it is uncertain if these species occur within the project site, and they have not been detected within the immediate vicinity of the project site during biotic studies conducted for solar projects adjacent to and within the project area. For the Coast horned lizard, the project site is generally considered to be on the margins of its typical range and habitat preference (i.e., it prefers slightly more mesic conditions). All three of these species are r-selected species (i.e., species that reproduce quickly and in large numbers to make use of ephemeral resource availability) that are not put at risk due to the loss of a few individuals, and since important habitat for these species will not be impacted during project buildout, impacts are considered to be less than significant.

Impact. Less than significant.

9. Potential Impacts to American Badger

American badger is known to occur within the site. Habitats of the site primarily include disturbed land uses and areas of former disturbance that are being colonized by constituent native habitat species. Some natural areas, including scrub habitats, Joshua tree woodland, the annual grassland areas, and the banks of ephemeral drainages, as well as some of the areas with human made topographic elements in the forms of berms and catchments, may support American badgers. However, the potentially suitable habitat of the site is not unique to the site and it represents a minor fraction of the regionally available habitat for badgers. Similar habitat areas within the Antelope Valley are abundantly available. Project impacts would primarily be temporary in nature, and permanent impacts would primarily occur within low-quality potential badger habitat areas (i.e., active and fallow agricultural areas and ruderal annual grassland areas). Therefore, project construction would result in a less-than-significant impact to American badger habitat. Direct impacts to individuals, which are addressed in the 2006 EIR, could result from project construction, but such impacts can be avoided through pre-construction surveys, avoidance, and minimization measures. Such surveys and measures are partially addressed in the 2006 EIR in *Mitigation Measures 4.3-5* and *4.3-6*; however, the following modifications shall be applied to the approved Mitigation Measures to avoid impacts to American badger individuals.

Impact. Less than significant with minor modification to the 2006 EIR *Mitigation Measures 4.3-5* and *4.3-6*, described below.

Recommended Minor Modifications to Mitigation Measure 4.3-5 of the 2006 EIR.

Pre-construction surveys for burrowing owls shall be extended to include American badgers.

Recommended Minor Modifications to Mitigation Measure 4.3-5 of the 2006 EIR.

If an active American badger den is identified during pre-construction surveys within or immediately adjacent to the construction envelope, a construction-free buffer of up to 300 ft. (or distance specified by the resource agencies, i.e., CDFW) should be established around the den. If the badger den(s) is determined to be a breeding den(s), a biological monitor should be present onsite during construction activities to ensure the buffer is adequate to avoid direct impact to individuals within the den. The monitoring would continue until it is determined that young are of an independent age and construction activities would not harm individual badgers. Once it has been determined that badgers have vacated the site, the burrows can be collapsed or excavated by hand with the biological monitor present, and ground disturbance can proceed.

10. Potential Impacts to Movement Corridors for Wildlife Species

The project site encompasses an area with open expanses of undeveloped land intermixed with developed and low-disturbance lands (i.e., solar fields, rural residential, and agricultural areas). Natural habitat areas of the site, including shrubland habitats, Joshua tree woodland, ephemeral drainages, and grasslands would serve as the areas of the site most likely to provide for wildlife movement corridors. The area that encompasses the greater project does not lie within any known wildlife corridors of note. Specifically, the project site does not occur within or along any narrow movement corridor that connects two larger habitat areas. Also, the site is not within mapped “Essential Connectivity Areas,” as determined by the California Essential Habitat Connectivity Project (Spencer et al. 2010). The nature of the project area itself, being largely a

network of underground pipes that would involve temporary ground disturbances, with some areas of scattered permanent impacts in the forms of well pads, generally small pump stations and a turnout facility, and the recharge basins (planned to occur within areas of active and fallowed agricultural fields), will not result in impacts to movement corridors.

Impact. Less than significant.

11. Potential Impacts to Jurisdictional Waters

The 2006 EIR addressed potential impacts to 0.19 acres of ephemeral drainages of the site in **Impact 4.3-4**. Changes to the project, including addition of the western wellfield area of the project and relocation of a portion of the supply pipeline from 170th Street to 155th Street, would involve additional ephemeral drainage impacts (Attachment 1; Figure 2). All impacts to ephemeral drainages would be in the form of temporary impacts from trenching for pipeline construction. Project plans include reestablishment of natural contours during post-construction activities, limiting construction activities in ephemeral drainages to the dry season, storing any excavated material within upland areas, and ensuring that excavated materials will be placed in a manner that prevents erosional dispersal (Kern County 2006).

Regulatory Considerations.

Some or all of the ephemeral drainage features of the project footprint would likely be considered jurisdictional to the top of the bank by CDFW and to the extent of the ordinary high water (OHW) marks on opposing banks by the Lahontan Regional Water Quality Control Board (LRWQCB), and they may be jurisdictional to the extent of OHW marks on opposing banks by the U.S. Army Corps of Engineers (USACE), though many or all of the ephemeral drainages may be determined to be isolated waters and not jurisdictional to the USACE. Prior to any work, the applicant would need to submit a formal wetland delineation of the project area to the USACE for verification and would need to apply for any requisite permits from these agencies.

Impact. The 2006 EIR adequately considers impacts to ephemeral drainages to be significant and requires the project to comply with any permit conditions from the appropriate regulatory agencies.

12. Potential Impacts to Joshua Tree Woodlands

The 2006 EIR addresses potential impacts to Joshua Trees in **Impact 4.3-3**. The project alignment of the supply pipeline from the California Aqueduct would pass through an area designated by Los Angeles County as a Joshua Tree SEA (refer to 13 below). In addition, Joshua tree individuals were observed within the newly added West Wells and Southwest Wells Areas of the project. Outside of the SEA, Joshua trees were identified along 195th Street between solar arrays and along the western-most extension of the project extending along Holiday Avenue and Patterson Road/Willow Avenue within creosote brush scrub habitat. It is unknown if any wells or collection pipelines would be planned in the immediate vicinity of these Joshua trees during final project design. Potential impacts to Joshua tree woodlands are considered to be a significant adverse effect due to the sensitivity of this habitat type and increasing threats to Joshua tree woodlands from anthropogenic pressures throughout its distribution. The 2006 EIR provides **Mitigation Measures 4.3-1** and **4.3-2** to avoid impacts to Joshua trees; however, the measures do not address direct impacts to Joshua trees that could not be avoided during excavation for the project pipelines. To avoid significant impacts to Joshua

tree woodlands, the following modification to *Mitigation Measure 4.3-1* shall be applied to the project.

Impact. Less than significant with *Mitigation Measures 4.3-1* and *4.3-2* and modifications to the 2006 EIR *Mitigation Measures 4.3-1*, described below.

Recommended Modifications to Mitigation Measure 4.3-1 of the 2006 EIR.

For Joshua trees that cannot be avoided and require relocation to avoid being impacted by project construction, a Joshua tree relocation, maintenance, and monitoring plan shall be prepared by a qualified restoration ecologist. The plan, which shall be implemented for all Joshua trees that require relocation, shall include at a minimum the following elements:

Relocation Measures

- Transplantation of Joshua trees shall occur between October and March. Priority timing should be planned for fall relocation plantings. Transplanting is not allowed between April and September.
- In the days prior to excavation for relocation, trees should be watered once per day for 3 days including on the day of relocation.
- Flagging or a durable but non-permanent mark should be made on the north side of the trunk of trees to be relocated. This will be used to orient trees into relocation holes so they are facing the same orientation.
- Relocation locations for each tree shall be selected in consultation with a qualified restoration ecologist and with express authorization of the landowner.
- Relocation locations shall be prepared prior to excavation of the trees.
- Trees shall be excavated with sufficiently large tree spade to ensure root balls are kept in contact with soils.
- For trees connected by rhizomes, they should either be relocated together, if feasible, or a clean cut should be made of the connecting root.
- Exposed roots and root cuts shall be dusted with powdered sulfur or horticultural charcoal to prevent fungal infection.
- Joshua trees shall be planted within 48 hours of excavation.
- Watering shall occur immediately after trees are planted.
- Where necessary, larger trees should be staked for stability.

Maintenance Measures

- Relocated trees should be checked and watered once every 2-weeks, excepting rain events after which they should be watered 2-weeks later.
- Watering should occur for a minimum of 8 months which shall include the period from relocation through the end of the first annual high heat period.
- Any staking or other support materials shall be removed after this 8 month period.

Biological Monitoring

- A qualified botanist or restoration ecologist shall monitor the relocated Joshua trees annually in the spring for 3 years after planting. Prior to annual monitoring, a baseline monitoring survey shall be conducted documenting the locations of relocated trees and establishing photo points to be replicated during annual monitoring. Annual reports shall be submitted to Kern and Los Angeles Counties.
- Survival of Joshua trees shall not drop below 75% during annual monitoring.

- If survival of relocated Joshua trees is found to drop below 75% in any annual monitoring survey during the 3-year monitoring period, dead trees shall be replaced during that year's planting season with nursery grown Joshua trees at a rate of 10 seedlings to 1 dead tree. Nursery grown trees shall be sourced from seed collected within the onsite Joshua Tree SEA, and they shall be planted according the measures outlined above, including watering for a minimum of 8 months following installation.

13. Potential Conflicts with Local Policies and Habitat Conservation Plans

The 2006 EIR describes local policies and EIRs relevant to the project area. Of particular note, Joshua tree woodlands, like those identified within the project area, are considered to be sensitive by Kern County and Los Angeles County. The Kern County General Plan, Kern County's Willow Springs Specific Plan, and the Los Angeles County Significant Ecological Area (SEA) Ordinance seek to protect this sensitive habitat type. The project design will include measures to avoid the maximum number of Joshua trees as per *Mitigation Measures 4.3-1* and *4.3-2*. In addition, modifications to the *Mitigation Measures 4.3-1*, described above, would ensure that direct impacts to Joshua trees are properly addressed through relocation and follow-up maintenance and monitoring. Additional project review and permit application measures may also be required of the project.

The project site is located within the boundaries of the draft Desert Renewable Energy Conservation Plan (DRECP), which is a collaborative effort being developed under the California Natural Community Conservation Planning Act (NCCPA) and the Federal Endangered Species Act (FESA), and the Federal Land Policy and Management Act (FLPMA). Phase I of the DRECP was approved by the U.S. Bureau of Land Management (BLM) in 2016. Phase II, currently in progress, focuses on better aligning local, state, and federal renewable energy development and conservation plans, policies, and goals. The project also occurs within the greater boundary of the BLM's West Mojave Plan, which is a habitat conservation plan and federal land use plan amendment that provides a comprehensive strategy to conserve and protect numerous species within the Mojave Desert. Both of these plans are applicable to projects on public lands (e.g., BLM lands). The project area is not located within public lands, so the project would not be subject to these habitat conservation plans. Therefore, impacts of the proposed project on habitat conservation plans would be less than significant and no mitigation measures are required.

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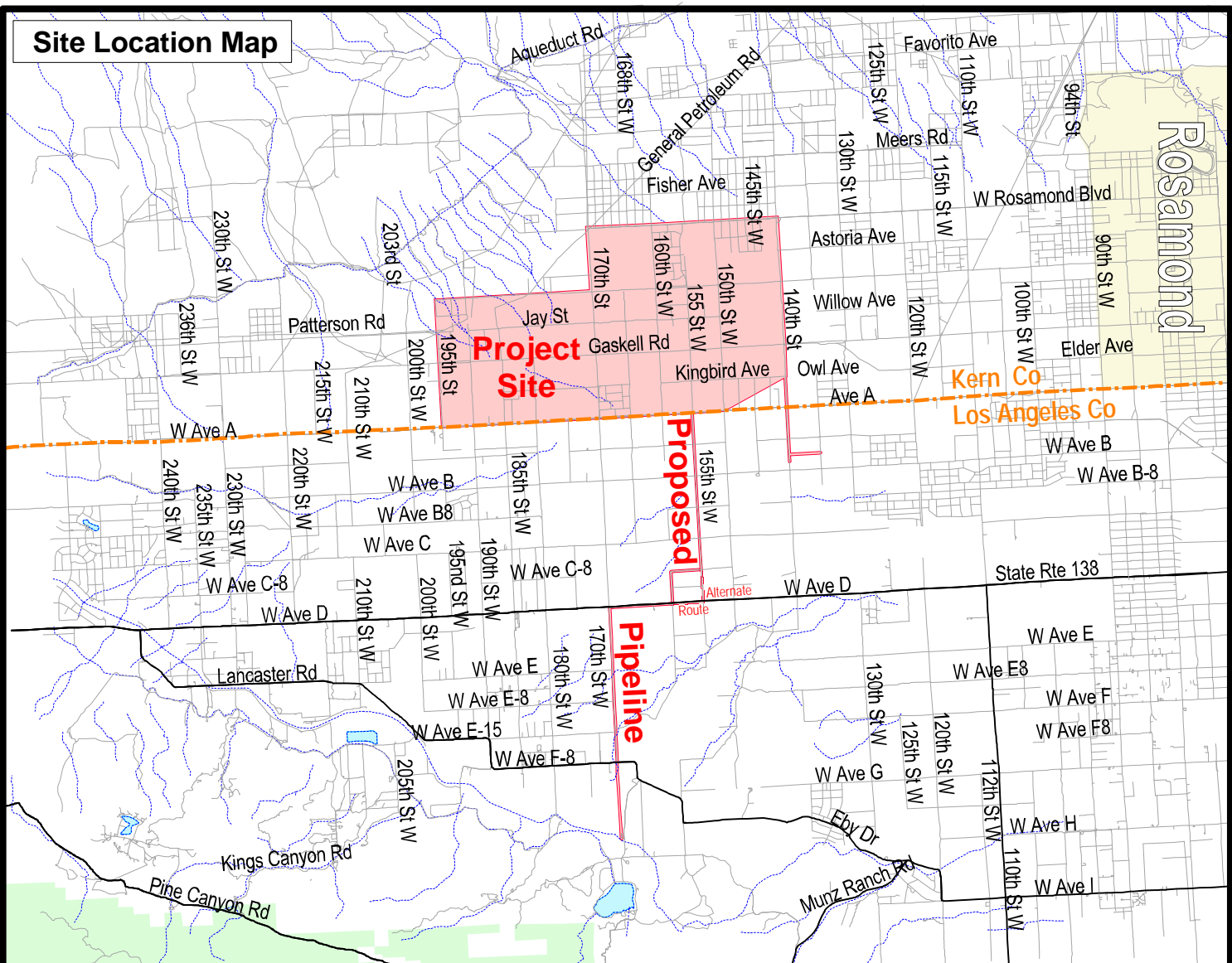
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ATTACHMENT A: REPORT FIGURES

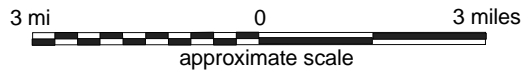
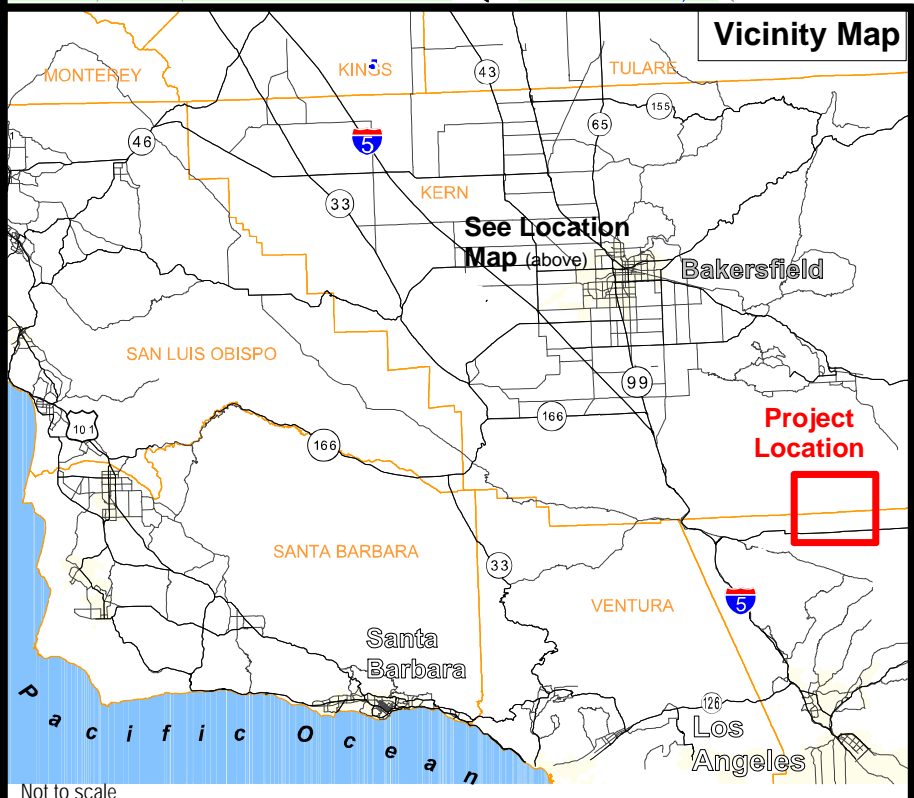
List of Figures:

- Figure 1: Site Vicinity Map
- Figures 2a & 2b: Biotic Habitats and Land Uses
- Figure 3: Special Status Species

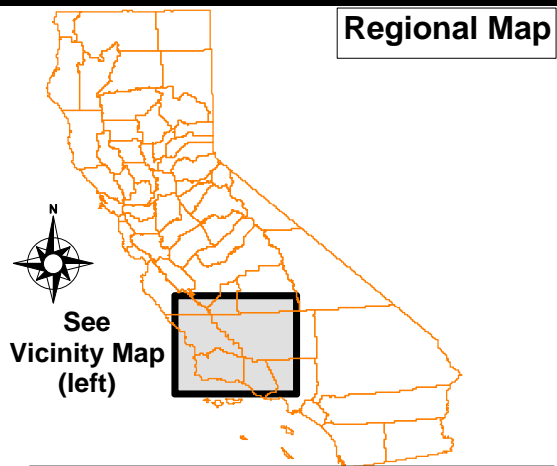
Site Location Map



Vicinity Map



Regional Map













	Live Oak Associates, Inc.		
	Willow Springs Water Bank Site / Vicinity Map		
Date	Project #	Figure #	
6/22/2018	2267-01	1	

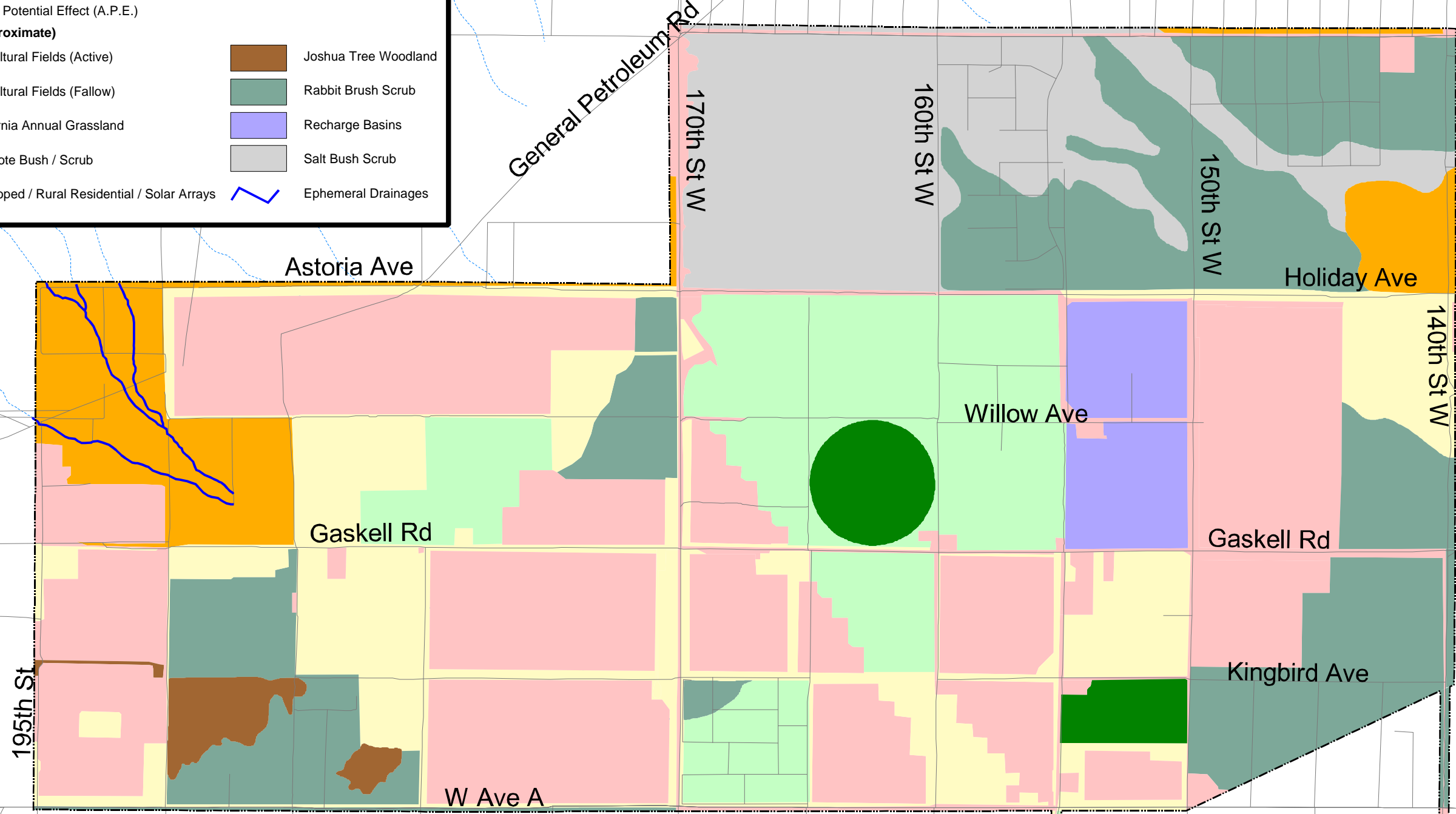
Not to scale


LEGEND

Area of Potential Effect (A.P.E.)

Biotic Habitats (Approximate)

	Agricultural Fields (Active)		Joshua Tree Woodland
	Agricultural Fields (Fallow)		Rabbit Brush Scrub
	California Annual Grassland		Recharge Basins
	Creosote Bush / Scrub		Salt Bush Scrub
	Developed / Rural Residential / Solar Arrays		Ephemeral Drainages

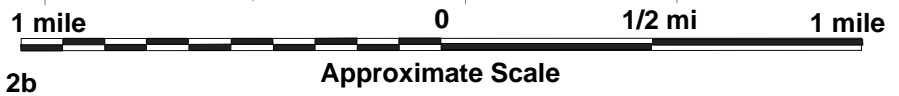


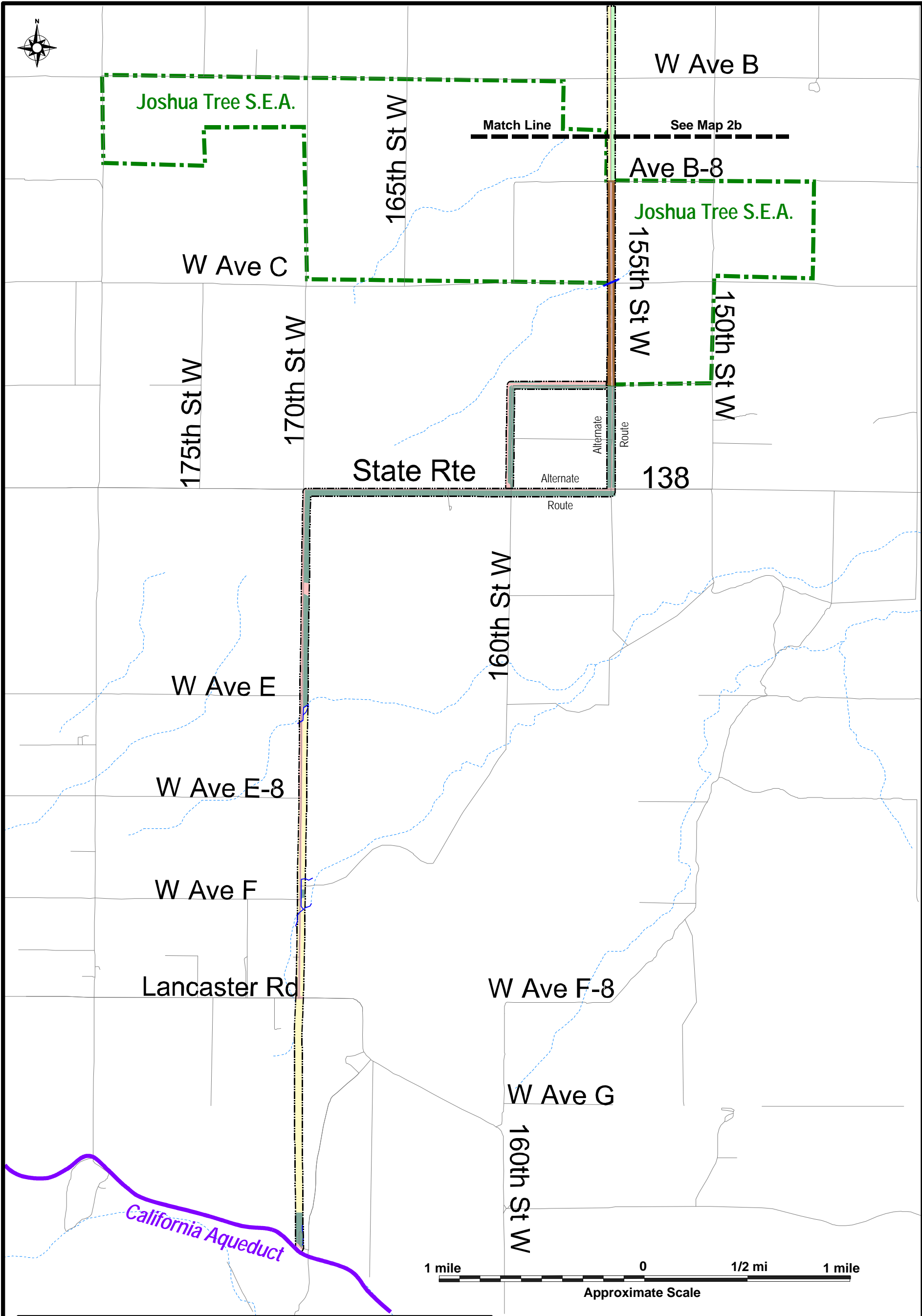
 Live Oak Associates, Inc.		
Willow Springs Water Bank Biotic Habitats		
Date	Project #	Figure #
5/19/2018	2267-01	2a

Joshua Tree S.E.A.

Match Line

See Map 2b





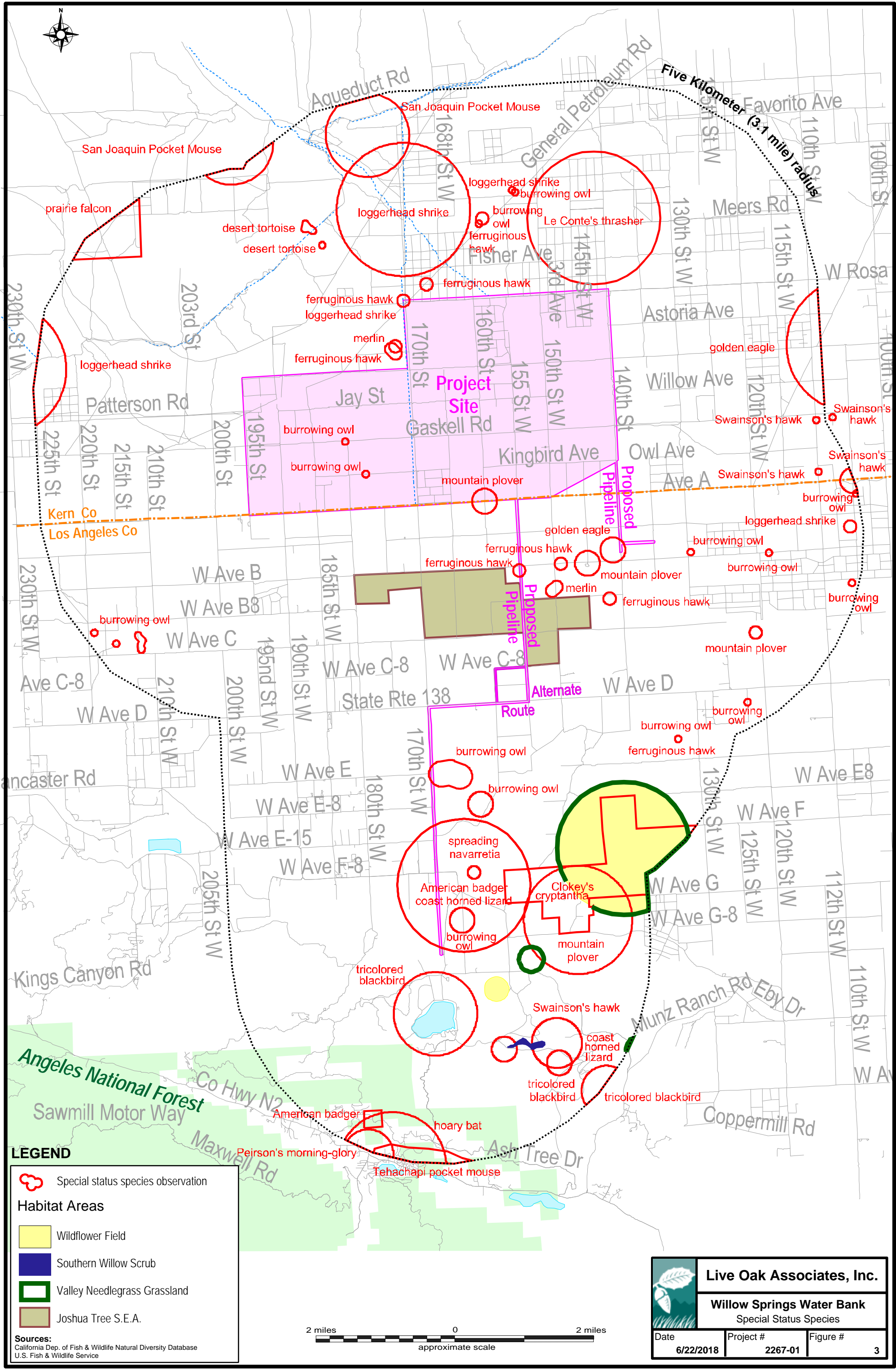
LEGEND

Area of Potential Effect (A.P.E.)

Biotic Habitats (Approximate)

	Agricultural Fields (Active)		Joshua Tree Woodland
	Agricultural Fields (Fallow)		Rabbit Brush Scrub
	California Annual Grassland		Recharge Basins
	Creosote Bush / Scrub		Salt Bush Scrub
	Developed / Rural Residential / Solar Arrays		Ephemeral Drainages

	Live Oak Associates, Inc.	
	Willow Springs Water Bank Biotic Habitats	
Date 6/22/2018	Project # 2267-01	Figure # 2b



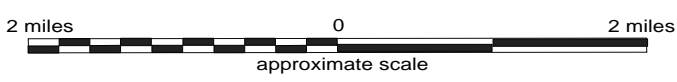
LEGEND

- Special status species observation

Habitat Areas

- Wildflower Field
- Southern Willow Scrub
- Valley Needlegrass Grassland
- Joshua Tree S.E.A.

Sources:
 California Dep. of Fish & Wildlife Natural Diversity Database
 U.S. Fish & Wildlife Service



Live Oak Associates, Inc.

Willow Springs Water Bank
 Special Status Species

Date	Project #	Figure #
6/22/2018	2267-01	3

ATTACHMENT B:
**JOSHUA TREE LOCATIONS AND SIZE CLASSES ADJACENT TO THE
PROPOSED SUPPLY PIPELINE ROUTE WITHIN THE JOSHUA TREE
S.E.A.**



Joshua trees within Antelope Valley Joshua Tree SEA. May 9, 2018.

Joshua Trees Adjacent to 155th Street Supply Pipeline Alignment of the Willow Springs Water Bank project in the Joshua Tree SEA

Alternative routes for the California Aqueduct supply pipeline were considered for the proposed Willow Springs Water Bank project. LOA evaluated alternates to aid in determining a path for the pipeline through the Joshua Tree Significant Ecological Area (Joshua Tree SEA) that least impacts Joshua trees. LOA determined that, of the proposed routes, a pathway through the Joshua Tree SEA along 155th Street would potentially result in the fewest impacts to Joshua Trees. The 155th Street alignment would be a shorter pipeline route in the Joshua Tree SEA compared with alternate alignments (i.e., approximately 0.5 miles versus 1.0 mile of SEA traversed), and there appears to be more opportunity to avoid Joshua trees within the 155th Street corridor compared with other alternatives. The precise number of Joshua trees that will be subject to direct impacts in this alignment will depend on engineering measures to avoid individual trees, such as using sheet piling or other feasible methods to minimize trench widths where the alignment encroaches upon individual Joshua trees.

On May 7 through 9, 2018, LOA biologists documented all Joshua trees within an approximate 100-foot wide, north-to-south corridor through which the supply pipeline would be installed. Trees were mapped, numbered, and categorized by size (i.e., height and branching characteristics) to facilitate pipeline analysis and estimation of the cost and difficulty of relocating each individual tree. Given the growth nature of Joshua trees, trees in close proximity were mapped as tree groups rather than individuals. Maps showing all mapped trees along the 155th Street alignment are included as Map 1 (key map) and Maps 1a through 1g. Due to slight modifications that were made in the proposed pipeline alignment since the Joshua Tree survey was completed—changes which are intended to avoid impacts to Joshua Trees inside the SEA—not all portions of the alignment shown on Map 1d through 1g were surveyed, although review of aerial imagery for this area suggests that there are few if any Joshua trees present in the areas that were not surveyed.

A table documenting numbered trees is included below the tree maps. This table identifies 385 trees and categorizes them into 5 size groups. Seedlings were not included in this mapping work, but they were counted. In total, 55 Joshua tree seedlings were counted, typically located around more mature Joshua trees.

The 385 mapped trees are broken down into the following general size distinctions:

- Small (1' to 5.25' + single stem)
- Medium (2.5' to 5.25' + with multiple branches OR >5.25' to 7' + unbranched)
- Large (>7' OR >5.25' + significant branching + single stem)
- X-Large (Medium to Large trees + branching + moderate number of multiple stems)
- 2X-Large (Large trees + numerous multiple stems, often spreading horizontally)



Ave B-8

Map 1a

Map 1b

Map 1c

Map 1d

Map 1e

Map 1f

Map 1g

160th St W

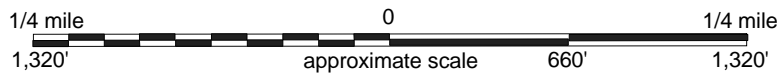
155th St W

150th St W




W Ave C

W Ave C

W Ave C-8



LEGEND

-  Joshua Tree Locations within Pipeline Corridor
-  Pipeline Corridor
-  Joshua Tree S.E.A.

Sources:
Aerial Photograph courtesy of USDA_FSA_APFO Aerial Photography Field Office 10/07/2016






Live Oak Associates, Inc.

Willow Springs Water Bank
Joshua Trees in Pipeline Route
Within Joshua Tree S.E.A. Key Map

Date	Project #	Map #
6/29/2018	2267-01	1



LEGEND

-  Joshua Tree Locations and Number
-  Pipeline Corridor
-  Joshua Tree S.E.A.

Ave B-8

155th St W

100' Wide Corridor

384

385

382-383

380 381

336

335

315

316

309-311

338-379

337

317-334

314

313

312

284-308

Match Line
See Map 4f

200'

0

200'

approximate scale



Live Oak Associates, Inc.

Willow Springs Water Bank

Joshua Trees in Pipeline Route
Within Joshua Tree S.E.A.

Date

6/29/2018

Project #

2267-01




Map #

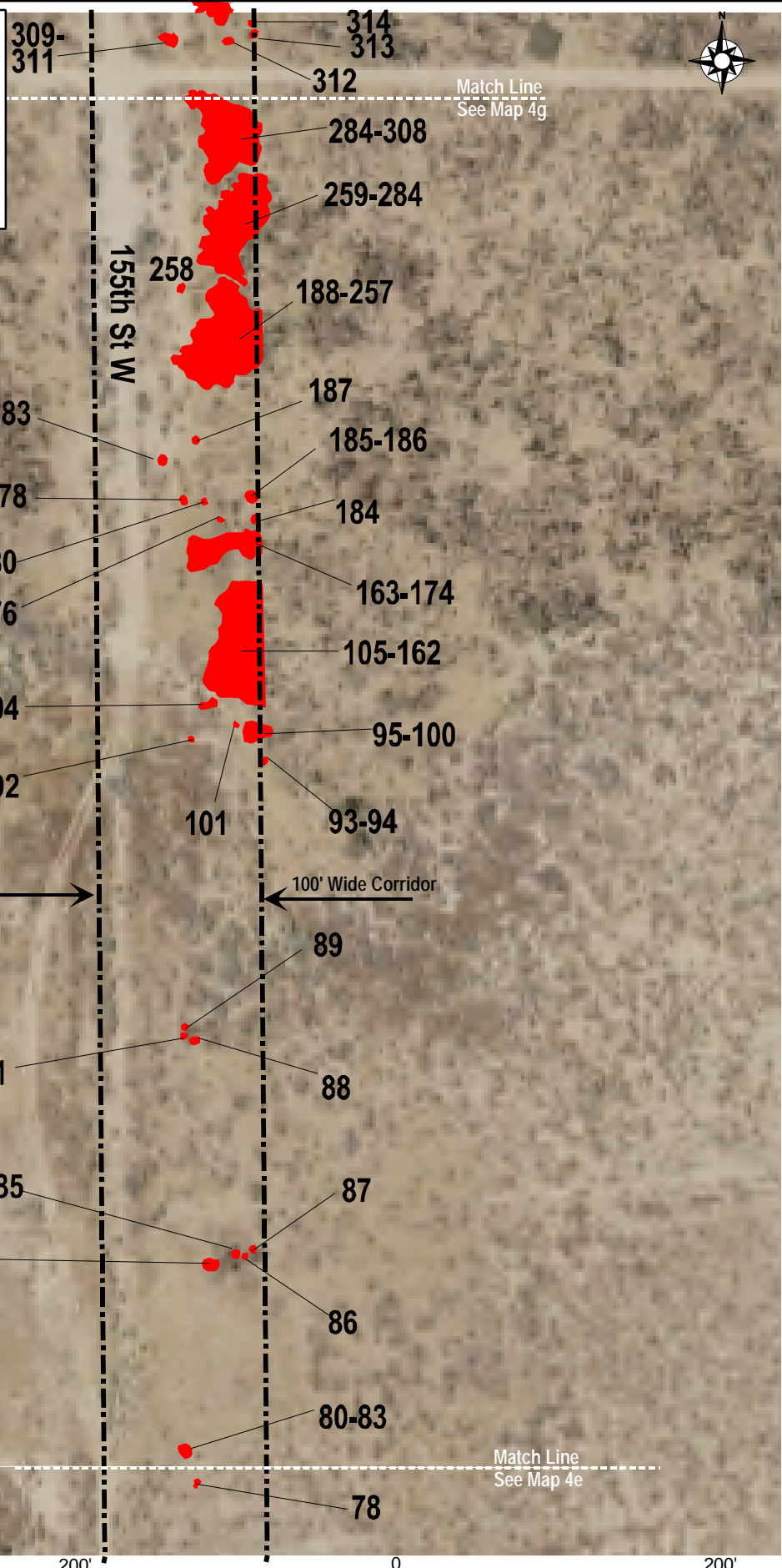
1a

Sources:

Aerial Photograph courtesy of USDA_FSA_APFO Aerial Photography Field Office 10/07/2016

LEGEND

-  Joshua Tree Locations and Number
-  Pipeline Corridor
-  Joshua Tree S.E.A.



Live Oak Associates, Inc.
Willow Springs Water Bank
 Joshua Trees in Pipeline Route
 Within Joshua Tree S.E.A.

Date	Project #	Map #
6/29/2018	2267-01	1b

Sources:
 Aerial Photograph courtesy of USDA_FSA_APFO Aerial Photography Field Office 10/07/2016

LEGEND



Joshua Tree Locations and Number



Pipeline Corridor



155th St W

80-83

Match Line
See Map 4f

78

100' Wide Corridor

76

77

75

Match Line
See Map 4d

74

73

72

56-71

200'

0

200'

approximate scale



Live Oak Associates, Inc.

Willow Springs Water Bank

Joshua Trees in Pipeline Route
Within Joshua Tree S.E.A.




Date
6/29/2018

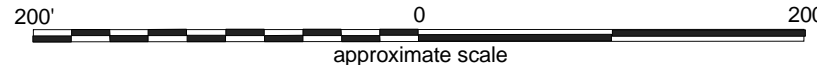
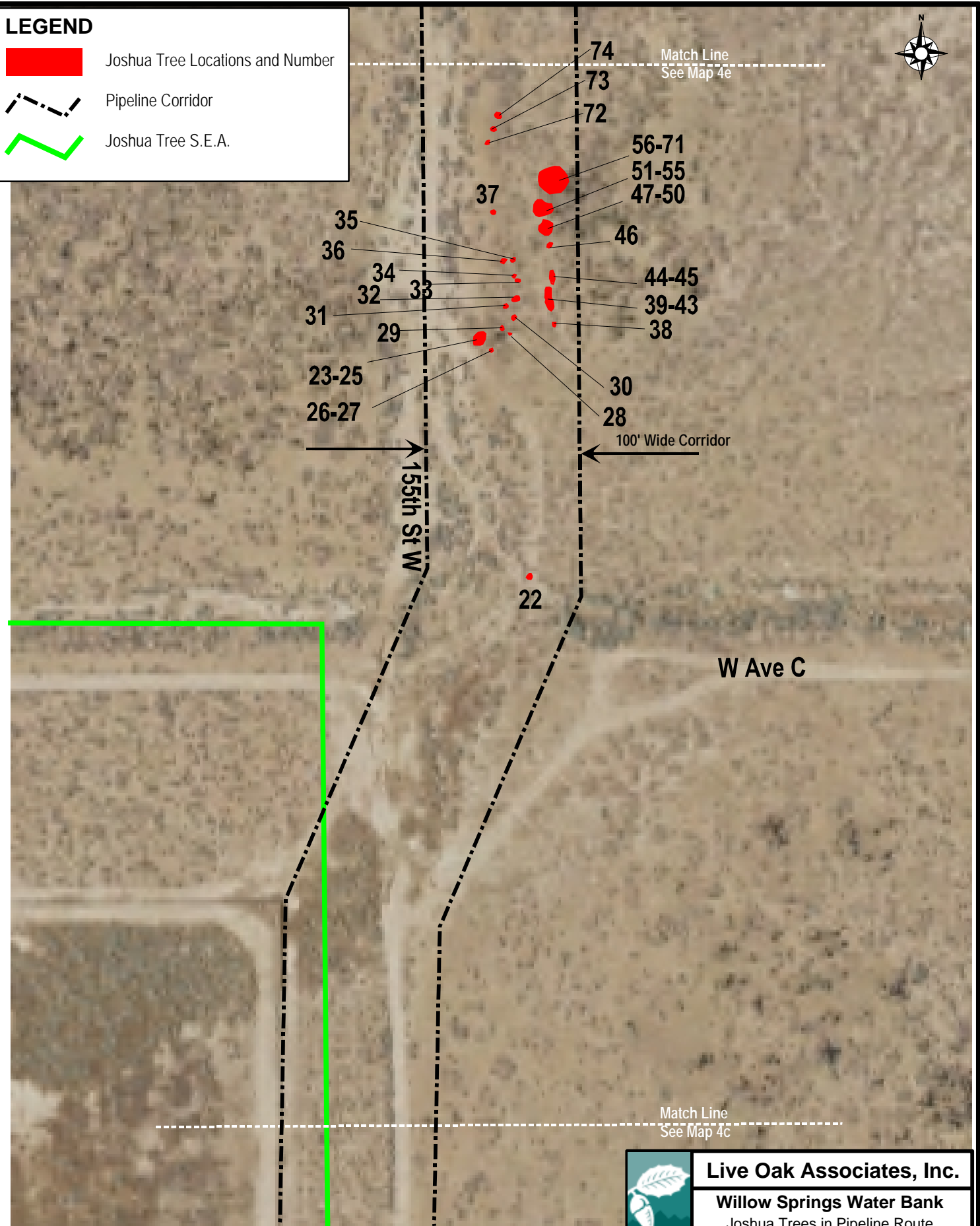
Project #
2267-01

Map #
1c


Sources:
Aerial Photograph courtesy of USDA_FSA_APFO Aerial Photography Field Office 10/07/2016

LEGEND

-  Joshua Tree Locations and Number
-  Pipeline Corridor
-  Joshua Tree S.E.A.



Sources:
Aerial Photograph courtesy of USDA_FSA_APFO Aerial Photography Field Office 10/07/2016

	Live Oak Associates, Inc.		
	Willow Springs Water Bank Joshua Trees in Pipeline Route Within Joshua Tree S.E.A.		
Date	Project #	Map #	
6/29/2018	2267-01	1d	



Match Line
See Map 4d

LEGEND



Joshua Tree Locations and Number



Pipeline Corridor



Joshua Tree S.E.A.

21

100' Wide Corridor

155th St W

15-17

14

18-20

13

11

10

12

8

9

Match Line
See Map 4b

200'

0

200'

approximate scale

Sources:

Aerial Photograph courtesy of USDA_FSA_APFO Aerial Photography Field Office 10/07/2016



Live Oak Associates, Inc.

Willow Springs Water Bank

Joshua Trees in Pipeline Route
Within Joshua Tree S.E.A.

Date

6/29/2018

Project #




2267-01

Map #

1e



LEGEND

-  Joshua Tree Locations and Number
-  Pipeline Corridor
-  Joshua Tree S.E.A.

Match Line
See Map 4c

7

3-6


100' Wide Corridor

2
1

Match Line
See Map 4a



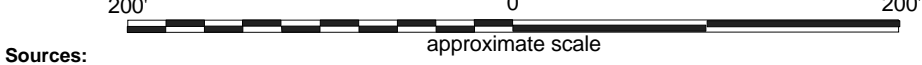
Sources: Aerial Photograph courtesy of USDA_FSA_APFO Aerial Photography Field Office 10/07/2016

	Live Oak Associates, Inc.		
	Willow Springs Water Bank		
Joshua Trees in Pipeline Route Within Joshua Tree S.E.A.			
Date	Project #	Map #	
6/29/2018	2267-01		1f




LEGEND

- Joshua Tree Locations and Number
- Pipeline Corridor
- Joshua Tree S.E.A.



Sources:
Aerial Photograph courtesy of USDA_FSA_APFO Aerial Photography Field Office 10/07/2016

	Live Oak Associates, Inc.		
	Willow Springs Water Bank Joshua Trees in Pipeline Route Within Joshua Tree S.E.A.		
Date	Project #	Map #	
6/29/2018	2267-01	1g	

	Small	Med.	Large	XL	XXL
Tree #	1' to 5.25' +single stem	2.5' to 5.25' + multiple branchings OR >5.25' to 7' + unbranched	>7' OR >5.25' + significant branching + single stem	Medium or Large trees + branching + moderate number of multiple stems	Large trees + numerous multiple stems, often spreading horizontally
1	√				
2		√			
3				√	
4			√		
5			√		
6		√			
7		√			
8			√		
9	√				
10		√			
11	√				
12		√			
13				√	
14	√				
15		√			
16			√		
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36		√			
37		√			
38		√			
39		√			
40		√			
41		√			
42	√				
43	√				

	Small	Med.	Large	XL	XXL
44			√		
45		√			
46			√		
47				√	
48				√	
49				√	
50			√		
51		√			
52					√
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	Small	Med.	Large	XL	XXL
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	Small	Med.	Large	XL	XXL
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ATTACHMENT C: VASCULAR PLANTS OF THE PROJECT SITE

The vascular plant species listed below were observed on the project site during site surveys conducted by Live Oak Associates, Inc. on May 2, 7, 8, and 9, 2018. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
 FACW - Facultative Wetland
 FAC - Facultative
 FACU - Facultative Upland
 UPL - Upland
 NR - No review
 NA - No agreement
 NI - No investigation

AGAVACEAE—Century-Plant Family

Yucca brevifolia Joshua Tree UPL

ASCLEPIADACEAE—Milkweed Family

Asclepias fascicularis Narrow-leaved Milkweed FAC

ASTERACEAE - Sunflower Family

Acamptopappus sphaerocephalus Rayless Goldenhead UPL
Ambrosia acanthacarpa Flatspur Bur Ragweed UPL
Ambrosia dumosa Burrobush UPL
Ambrosia salsola Cheesebrush UPL
Artemisia dracunculatus Tarragon UPL
Baccharis salicifolia Mule Fat FAC
Calycoseris parryi Yellow Tackstem UPL
Centauria melitensis Tocalote UPL
Corethrogyne filaginifolia California Aster UPL
Encilia farinosa Brittlebush UPL
Ericameria cooperi Cooper's Goldenbush UPL
Ericameria nauseosa Rabbitbrush UPL
Ericameria viscidiflorus Green Rabbitbrush UPL
Erigeron canadensis Canada Horseweed FACU
Grindelia camporum ssp. *camporum* Gumweed FACW
Gutierrezia microcephala Sticky Snakeweed UPL
Gutierrezia sarothrae Matchweed UPL
Helianthus annuus Common Sunflower FACU
Holocarpa heermani Heerman's Tarweed UPL
Isocoma menziesii Goldenbush FAC
Lasthenia gracile Goldfields UPL
Lactuca serriola Prickly Lettuce FACU
Malacothryx glabrata Desert Dandelion UPL
Matricaria discoidea Pineapple Weed FACU
Solidago confinis Southern Goldenrod OBL
Stephanomeria pauciflora Wire Lettuce UPL

BORAGINACEAE – Borage Family

<i>Amsinckia tessellata</i>	Fiddleneck	UPL
<i>Cryptantha</i> sp.	Popcorn Flower	-
<i>Heliotropium curassavicum</i>	Salt Heliotrope	FACU
<i>Pectocarya recurvata</i>	Recurved Pectocarya	UPL
<i>Pectocarya penicillata</i>	Winged Comb Seed	UPL
<i>Phacelia ciliata</i>	Great Valley Phacelia	UPL
<i>Plagiobothrys arizonica</i>	Arizona Popcorn Flower	UPL

BRASSICACEAE - Mustard Family

<i>Brassica nigra</i>	Black Mustard	UPL
<i>Brassica tournefortii</i>	Saharan Mustard	UPL
<i>Hirschfeldia incana</i>	Mustard	UPL
<i>Sisymbrium irio</i>	London Rocket	UPL
<i>Sisymbrium orientale</i>	Indian Hedgemustard	UPL

CACTACEAE – Cactus Family

<i>Opuntia basilaris</i> var. <i>basilaris</i>	Beavertail Cactus	UPL
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CHENOPODIACEAE—Goosefoot Family

<i>Atriplex canescens</i>	Hoary Saltbush	UPL
<i>Atriplex polycarpa</i>	Saltbush	UPL
<i>Atriplex serenana</i> ssp. <i>seranana</i>	Bracted Saltscale	FAC
<i>Krascheninnikovia lanata</i>	Winter Fat	UPL
<i>Salsola tragus</i>	Russian Thistle	FACU

CONVOLVULACEAE—Bindweed Family

<i>Convolvulus arvensis</i>	Field Bindweed	UPL
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CUCURBITACEAE – Cucumber Family

<i>Marah fabacea</i>	California Man-root	UPL
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CUPRESSACEAE – Cypress Family

<i>Juniperus osteosperma</i>	Utah Juniper	UPL
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EPHEDRACEAE – Mormon Tea Family

<i>Ephedra californica</i>	California Ephedra	UPL
<i>Ephedra nevadensis</i>	Nevada Mormon Tea	UPL
<i>Ephedra viridis</i>	Green Ephedra	UPL

EUPHORBIACEAE—Spurge Family

<i>Croton setigerus</i>	Dove Weed	UPL
<i>Euphorbia albomarginata</i>	Spurge	UPL
<i>Euphorbia ocellata</i>	Spurge	UPL

FABACEAE- Legume Family

<i>Acmispon glaber</i> var. <i>glaber</i>	Deerweed	UPL
<i>Astragalus douglasii</i>	Douglas Pea	UPL
<i>Astragalus lentiginosus</i> var. <i>variabilis</i>	Freckled Milkvetch	UPL
<i>Lupinus concinnus</i>	Lupine	UPL
<i>Medicago sativa</i>	Alfalfa	UPL
<i>Prosopis glandulosa</i>	Honey Mesquite	FACU

GERANIACEAE – Geranium Family

<i>Erodium cicutarium</i>	Redstem Filaree	UPL
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LABIATAE – Mint Family

<i>Marrubium vulgare</i>	Common Horehound	FACU
<i>Salvia columbariae</i>	Chia	UPL
MALVACEAE – Mallow Family		
<i>Malva parviflora</i>	Small Flowered Mallow	UPL
NYCTAGINACEAE – Nine O’Clock Family		
<i>Mirabilis laevis</i>	Desert Wishbone Bush	UPL
ONAGRACEAE – Fuschia Family		
<i>Camissonia</i> sp.	Evening Primrose	-
PAPAVERACEAE – Poppy Family		
<i>Eschscholzia californica</i>	California Poppy	UPL
<i>Eschscholzia minutiflora</i>	Small Flowered Poppy	UPL
PINACEAE – Pine Family		
<i>Pinus halepensi</i>	Aleppo pine	UPL
<i>Pinus thumbergii</i>	Japanese Black Pine	UPL
PLANTAGINACEAE – Plantain Family		
<i>Plantago lanceolata</i>	English Plantain	FAC
POACEAE - Grass Family		
<i>Achyrachaena mollis</i>	Blow Wives	FAC
<i>Arundo donax</i>	Giant Reed	FACW
<i>Avena fatua</i>	Wild Oat	UPL
<i>Bromus diandrus</i>	Ripgut	UPL
<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red Brome	UPL
<i>Bromus tectorum</i>	Cheat Grass	UPL
<i>Cynodon dactylon</i>	Bermuda Grass	FAC
<i>Elymus multisetus</i>	Big Squirreltail Grass	UPL
<i>Hordeum murinum</i>	Barnyard Barley	FAC
<i>Schismus arabicus</i>	Arabian Schismus	UPL
<i>Schismus barbatus</i>	Old Han Schismus	UPL
<i>Stipa cernua</i>	Nodding Needle Grass	UPL
<i>Stipa hymenioides</i>	Indian Rice Grass	UPL
<i>Stipa speciosa</i>	Desert Needle Grass	UPL
POLEMONIACEAE – Polemonium Family		
<i>Gilia capitata</i>	Blue Field Gilia	UPL
<i>Eriastrum sapphirinum</i>	Sapphire Woollystar	UPL
POLYGONACEAE - Buckwheat Family		
<i>Eriogonum angulosum</i>	Angle Stem Buckwheat	UPL
<i>Eriogonum fasciculatum</i>	Buckwheat	UPL
<i>Eriogonum maculatum</i>	Angle Stemmed Buckwheat	UPL
<i>Navarretia pubescens</i>	Pubescent Navarretia	UPL
<i>Rumex hymenosepalus</i>	Wild Rhubarb	UPL
SOLANACEAE - Nightshade Family		
<i>Datura wrightii</i>	Jimson Weed	UPL
<i>Lycium andersonii</i>	Water Jacket	UPL
<i>Lycium cooperi</i>	Cooper’s Box Thorn	UPL
<i>Solanum elaeagnifolium</i>	Silverleaf Nightshade	UPL
TAMARIKACEAE – Tamarisk Family		

<i>Tamarix aphylla</i>	Tamarisk	FAC
<i>Tamarix chinensis</i>	Chinese Tamarisk	FAC
<i>Tamarix ramosissima</i>	Tamarisk	UPL
ULMACEAE – Elm Family		
<i>Ulmus parvifolia</i>	Chinese Elm	UPL
ZYGOPHYLLACEAE—Creosote-bush Family		
<i>Larrea tridentata</i>	Creosote Bush	UPL

APPENDIX D

Cultural Resources Review

Prepared by

Basin Research Associates

June 2018

CULTURAL RESOURCES REVIEW

**ADDENDUM to 2006 EIR
Modifications to the Former Antelope Valley Water Bank
Willow Springs Water Bank
Kern and Los Angeles Counties**

FOR

Environmental Consulting Services
11942 Red Hill Avenue
Santa Ana, CA 92705

ATTN: Mr. Bert Verrips, AICP

BY

BASIN RESEARCH ASSOCIATES
1933 Davis Street, Suite 210
San Leandro, CA 94577

JUNE 2018

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1.0 INTRODUCTION

The Antelope Valley Water Bank (AVWB) Project is located in the Antelope Valley of eastern Kern County near the western edge of the Mojave Desert. The AVWB was approved by the county on September 12, 2006 to store imported surface water in the underlying aquifer, which would be recovered by wells when needed (see Kern County 2006, State Clearinghouse No. 2005091117). The imported water would be obtained via a pipeline connecting with the East Branch of the California Aqueduct, a State Water Project (SWP) facility located approximately seven miles to the south. When needed, the stored water would be recovered for conveyance back to the California Aqueduct or for delivery to local water agencies.

The project as approved in 2006 included approximately 1,630 gross acres of recharge basin area, and up to 57 recovery wells and associated collection piping, within an overall area of approximately 12,160 acres. The approved water bank project included an 8.75 mile long supply pipeline from the East Branch of the California Aqueduct, along with a booster pump station. The AVWB also included a 4-mile long connecting pipeline to the Antelope Valley East Kern Water Agency (AVEK) West Feeder pipeline to the east.

Planned modifications since the 2006 approval have resulted in the reduction in the overall area of recharge basins, an increase in total number of recovery wells, and changes to the overall facilities layout plan including elimination of the eastern portion of the wellfield and expansion of the wellfield to the west, and modifications and additions to supply and distribution pipelines including importing water from the Los Angeles Aqueduct #2. In addition, the name of the project has been changed to Willow Springs Water Bank (WSWB). The overall scale and characteristics of the modified WSWB project are generally consistent with the facilities planned under the project approved in 2006 with some variations.

The planned modifications will be covered in an Addendum to the 2006 EIR in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15164. The modifications to the planned WSWB project have a potential to affect cultural resources and additional analysis is required under CEQA. The Rosamond Community Services District (CSD) is the agency responsible for authorizing construction of the improvements planned for the WSWB project. The CSD is required to identify cultural resources within the revised project area and determine if the previous approved mitigation measures are appropriate for the modified project and would adequately mitigate potential impacts on both historical and archaeological cultural resources.

Additional cultural resources analysis was conducted to provide the Rosamond CSD with updated information and analysis on cultural resources within the modified project area. The additional cultural resources analysis included the completion of revised archival records searches at the California Historical Resources Information System Information Centers for Kern County and Los Angeles County - Southern San Joaquin Valley Information Center (CSU Bakersfield - Kern County) and the South Central Coastal Information Center (CSU Fullerton - Los Angeles County). The archival information was analyzed to determine what areas within and adjacent to the modified WSWB had been subject to archaeological compliance review from 2006 to 2018 during the environmental review process for projects that have been proposed, approved, and constructed within and near the WSWB project site during those years, including solar facility development, transmission line modifications, wind energy projects, and other

development activities. The information was used to guide the archaeological survey of selected water pipeline alignments and extraction well locations that had not been subject to previous review.

2.0 PROJECT LOCATION AND DESCRIPTION

The project area is located in the Antelope Valley of eastern Kern County and northern Los Angeles County, approximately 10 miles west of the unincorporated community of Rosamond in Kern County, and 17 miles northwest of the City of Lancaster in Los Angeles County. Avenue A, the county line between Kern and Los Angeles counties, is immediately south of the area of the recharge and recovery facilities [Fig. 1]. The valley, a semiarid region with gently sloping land that borders the Mojave Desert, is within the alluvial plain of Cottonwood Creek (see Kern County 2006).

The majority of the project site area is bounded by Rosamond Boulevard and Astoria Avenue on the north; 140th Street on the east; 170th and 195th streets on the western borders; and Avenue A on the south. Supply pipelines extend south of Gaskell Road along 155th Street to W Avenue D where it turns west to join with the 170th Street alignment. The connecting pipeline to the AVEK South North Intertie Pipeline (SNIP) is planned to follow 140th Street south to Avenue B where it turns east to connect with the SNIP facility at 135th Street [T9N R14W; T9N R15W; T8N R14W; T8N R15W; T7N R14W, T7N R15W - USGS Fairmont Butte 1995, USGS Little Buttes 1975, USGS Lake Hughes 1995) [Figs. 1-2].

2.1 DESCRIPTION

The WSWB project was approved by Kern County on September 12, 2006 (see Kern County 2006). In general, the water bank facility would store imported surface water in the underlying aquifer, which would be recovered by wells when needed. The imported water would be conveyed by pipeline from the East Branch of the California Aqueduct, a State Water Project (SWP) facility located approximately seven miles to the south. A second source of imported water would be the Los Angeles Aqueduct #2 which runs through the water bank in a north-south direction. The delivered water would be recharged to the aquifer for storage. When needed, the stored water would be recovered for conveyance back to the California Aqueduct or the Los Angeles Aqueduct #2 for delivery to local water agencies.

The approved water bank included approximately 1,630 gross acres of recharge basin area, and up to 57 recovery wells and associated collection piping, within an overall area of approximately 12,160 acres bounded by Rosamond Boulevard on the north, 100th Street on the east, Avenue A on the south, and 170th Avenue on the west. In addition, the approved water bank project included an 8.75 mile long supply pipeline from the California Aqueduct, along with a booster pump station. The approved water bank also included a 4-mile long connecting pipeline to the AVEK West Feeder pipeline to the east.

Project modifications since approval in 2006 have resulted in a reduced recharge basin area (1,106 acres) and an increase of recovery wells (77) within an overall area of approximately 8,650 acres. The planned maximum storage capacity of the water bank will be increased to 1,000,000 acre feet, with a maximum annual recharge capacity of 250,000 acre feet, and a

maximum annual recovered volume of 225,000 acre feet. The supply pipeline from the California Aqueduct will follow a modified route from the approved plan, and will have a total length of approximately 9.2 miles. The connecting pipeline to the AVEK West Feeder has been partially completed, and the remainder of this pipeline will not be completed. A new 2.5-mile long connecting pipeline to the AVEK South-North Intertie Pipeline (SNIP) to the southeast has been added. Another new planned facility consists of a 2-mile long supply pipeline from the Los Angeles Aqueduct #2 to the west.

Due to the more conducive hydrogeological conditions that prevail in the area to the west of the approved water bank project site, the planned wellfield area has been shifted westward to 195th Street to include the adjacent 3,200 acres. The eastern portion of the approved wellfield, comprising approximately 6,710 acres between 140th and 100th streets, has been removed from the water bank resulting in an overall reduction of 3,510 acres. Currently planned facilities for the water bank are mapped on Figures 3 and 4, and the differences between the previously approved water bank facilities and the currently planned facilities are illustrated in Figure 5.

2.2 AREA OF POTENTIAL EFFECTS (APE) [see Fig. 2]

The Area of Potential Effects (APE) for Archaeology includes the area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, should any be present within the APE. The horizontal and vertical APE consists of the proposed construction within the WSWB project site and the various water pipelines necessary for supply, collection and connection including temporary access roads to the project facilities and staging areas for material laydown and storage of any spoils.

The various elements of the modified project including booster pump stations and associated reservoirs, wells and other associated infrastructure would be constructed in open areas within the WSWB site, and along existing or planned road alignments. Pipeline construction will use standard cut-and-cover to place the 9.2 mile long 84-inch diameter supply pipeline from the California Aqueduct and the 2.0 mile long 48-inch diameter supply pipeline from the Los Angeles Aqueduct #2. The new 2.5-mile long connecting pipeline to the AVEK SNIP will range from 36-48-inches in diameter depending on final design and also use cut-and-cover. The collection pipelines will range in diameter from 12-54 inches. The trench widths for all pipelines will range from 4 feet (for the 12-inch pipe) to 40 feet (for the 84-inch pipe). Excavation, grading and trenching will use heavy equipment to prepare infrastructure locations, well pads, and reservoirs.

The horizontal APE is corresponds to the planned footprint of the modified project, including adjacent areas for equipment maneuvering and temporary placement of spoils, while the vertical APE ranges from 3 feet to 10 feet, with the maximum depth at any given location depending on the sizes of the various supply, collection and connecting pipelines as well as reservoir depths.

3.0 REGULATORY CONTEXT

This addendum document for the previously approved 2006 EIR on the AVWB (now WSWB) has been prepared to meet applicable CEQA requirements for historic properties (cultural resources) which require the identification and evaluation of cultural resources that could be

affected by the project. Cultural resources include prehistoric and historic archaeological sites, districts and objects; standing historic structures, buildings, districts and objects; and locations of important historic events or sites of traditional/cultural importance to various groups. The analysis of cultural resources can provide valuable information on the cultural heritage of both local and regional populations.

The Rosamond CSD is the agency responsible for authorizing construction of the improvements planned for the WSWB project. The CSD is required to identify cultural resources within the revised project area and determine if the previously approved mitigation measures are appropriate for the proposed future development and would adequately mitigate potential impacts on any significant resources that may be affected by the project to a less than significant effect in accordance with CEQA.

4.0 BACKGROUND REVIEW

Prehistoric and historic contexts, a regulatory overview, the results both an archival search and field review and mitigation recommendations are presented in the cultural resources report completed in 2006 for the Antelope Valley Water Bank Project by Jones & Stokes (see Kern County 2006:Appendix C). Other detailed information on prehistoric and historic contexts are presented in the numerous reports compiled since 2006 for solar development within and adjacent to the WSWB (see Section 5.0).

5.0 PRE-FIELD IDENTIFICATION EFFORT

Prehistoric and historic site record and literature searches were completed by the California Historical Resources Information System, Southern San Joaquin Valley Information Center (CSU Bakersfield - Kern County, File No. 18-103) and the South Central Coastal Information Center (CSU Fullerton - Los Angeles County, File Nos. 18696.4721 and 18892.4903). Specialized listings for cultural resources consulted include:

- *National Historic Landmarks* (NHL) and *National Register of Historic Places* (NRHP) listings in Kern and Los Angeles Counties, California (USNPS 2018).
- *Archeological Determinations of Eligibility for Kern and Los Angeles Counties* (ADOE) CAL/OHP 2012b).
- *Historic Properties Directory* (HPD) for Lancaster, Los Angeles County (CAL/OHP 2012a).
- *California History Plan* (CAL/OHP 1973).
- *California Inventory of Historic Resources* (CAL/OHP 1976).
- *Five Views: An Ethnic Sites Survey for California* (CAL/OHP 1988).
- *California Historical Resources – Kern and Los Angeles Counties* [including National Register, State Landmark, California Register, and Point of Interest] (CAL/OHP 2018).

No other agencies, departments or local historical societies were contacted regarding landmarks, potential historic sites or structures.

5.1 RECORDS SEARCH RESULTS (see Tables 5.1 to 5.2) [Figs. 6-7]

The records review found:

- 40 cultural resources reports or studies within or adjacent to the APE¹ and 4 reports or studies within 0.25 mile (Table 5.1).²
- 36 recorded cultural resources have been recorded in/adjacent or within 100 feet of a component of the planned project (Table 5.2).
- 14 prehistoric resources are on/adjacent or within 100 feet of a component of the planned project. The prehistoric resources include:
 - 1 lithic scatters - only lithic debitage present,
 - 3 lithic scatters with habitation debris, hearth pits, milling stones and/or fire cracked rock (FCR) present,
 - 2 isolated lithic finds, and,
 - 8 prehistoric resources categorized as "other."
- 20 historic resources are on/adjacent or within 100 feet of a component of the planned project. This historic resources include (Note: a recorded resource can include more than one site "type"):
 - 2 water conveyance systems (e.g., irrigation ditches, pipes or aqueducts),
 - 6 electric transmission lines/structures (e.g., towers),
 - 1 town site,
 - 1 site with foundations,
 - 4 roads,
 - 1 road with trash scatter
 - 1 alignment of historic trees, and,
 - 4 trash dumps/privies.
- 2 prehistoric/historic component resources are on/adjacent or within 100 feet of a component of the planned project. The resources include:
 - 1 possible prehistoric village with occupation loci and numerous associated features with a historic component of minor agricultural piping, and,
 - 1 historic ranch site (Larson Ranch with buildings, structures and objects associated historic ranching) with a prehistoric component (lithic debris, FCR, ground stone).
- 4 resources appear or have been determined eligible for the NRHP:

-
1. Thirty (30) of the 40 reports on/adjacent listed in Table 5.1 are on file with the two Information Centers. Ten reports are not on file and were obtained as appendices to various environmental documents. In most cases, site specific information (i.e., site forms, exact map locations) is not included with the document. Therefore, the archives information on file with the two Information Centers is considered incomplete).
 2. Five reports are listed with both KE (CSU Bakersfield) and LA (CSU Fullerton) file numbers – they have been counted only once each.

P-19-001780 / 2S2 - prehistoric lithic scatter suggesting reduction/manufacture with many ground stones (milling) indicating possible occupation; subject to site testing/collection and monitored during solar bank installation; portions graded.

P-15-014603 - possible prehistoric village with occupation loci and numerous associated features; appears eligible under criterion d. Historic component consists of minor agricultural piping and is not eligible.

P-15-017243 / 2D2- Vincent 220kV Transmission Line - contributing element to Big Creek Hydro System Historic District.

P-19-186876 / 2D2 or 6Z - SCE Eagle Rock-Pardee & Antelope-Vincent No. 1 220kV Transmission Line Corridor (see P-15-018243) - part of a district; individual resource within district - not eligible.

- 4 resources appear or have been determined not eligible for the NRHP:
 - 1 lithic scatter (P-19-003875/LAN-003875).
 - 1 historic ranch location (Historic Larson Ranch, P-19-004418/LAN-004418H).
 - 1 transmission line (Big Creek No. 4, 220 kv Transmission Line, P-15-017582 - not eligible 6Y 6Z).
 - 1 town site (Old Fairmont Complex, P-19-001673/LAN-001673H).
- 28 resources have either not been evaluated (16), or their status could not be determined or is unknown (12).

TABLE 5.1
Studies In/Adjacent To or Within 0.25 Miles of the Project³

Report #	Author	Date	Title	Study Type	Comments	Resources within 100 ft
In or Adjacent						
KE-00355	Gregory R. Clift and Mark Q. Sutton	1994	An Archaeological Assessment of Tentative Tract No. 5612, Rosamond, Kern County, California	Archaeological, Field study	Negative	None
KE-00519	Scott Jackson	1990	An Archaeological Assessment of 470 Acres of Land Southwest of Willow Springs, Kern County, CA	Archaeological, Field study	Negative	None
KE-00803	Robert E. Parr	1989	An Archaeological Assessment of 80 Acres of Land West of Rosamond, Kern County, California	Archaeological, Field study	Negative	None

3. Note: Report references are not cited in the References section of this report.

TABLE 5.1, con't
Studies In/Adjacent To or Within 0.25 Miles of the Project

Report #	Author	Date	Title	Study Type	Comments	Resources within 100 ft
In or Adjacent, con't						
KE-01010	R.W. Robinson	1991	Regional Overview of the Cultural Resources of the Willow Springs Specific Plan Update, Southern Kern County, California	Literature search, Management/ planning	Negative	None
KE-01010A	Robert Bein	1991	Environmental Impact Report Draft, Willow Springs Specific Plan Update	Literature search	Negative	None
KE-03534 (LA-08169)	Elena Nilsson, Russel Beville, Michael S. Kelly, and Erin Dwyer,	2006	Archaeological Inventory of the First and Second Los Angeles Aqueducts and Selected Access Roads, Kern, Inyo, and Los Angeles Counties, CA	Archaeological, Field study	Numerous resources outside of the project vicinity One resource (P-15-012725) within ¼ mile	None
KE-03941 (LA-10175)	Barry A. Price, Mary Clark Baloian, Robert Lichtenstein, and Marc Linder	2009	Confidential Specialist Report: Cultural Resources Inventory for the Tehachapi Renewable Transmission Project Kern, Los Angeles, and San Bernardino Counties, California	Archaeological, Field study	Numerous resources outside of the project vicinity Three resources (P-15-013655, P-15-013656, P-15-013657) within ¼ mile	P-19-186876
KE-03947	Robert E. Parr	2009	Cultural Resource Assessment for the Replacement of Three Deteriorated Power Poles on Southern California Edison Company Duntley and Snowden Circuits Kern and Los Angeles Counties, California	Archaeological, Field study	Negative	None
KE-03995	Phil Fulton	2010	Purchase Order No. 4500155911, CWA No. 82; Cultural Resources Study of the EMT Upgrades Project for 32 Towers on the Midway-Vincent No. 1, Midway-Vincent No. 2, and Midway-Vincent No. 3 Transmission Lines in the Counties of Kern and Los Angeles, California	Archaeological, Field study	Negative	None
KE-04039	Monica Strauss, Candace Ehringer, and Madeleine Bray	2010	Antelope Valley Water Bank Initial Recharge and Recovery Facility Improvement Project, Kern County, California	Archaeological, Field study	Negative	None
KE-04057	Scott M. Hudlow	2011	Phase I Cultural Resources Survey for PV3, Willow Springs, Kern County, California	Archaeological, Field study	Negative	None
KE-04058	Scott M. Hudlow	2011	Phase I Cultural Resources Survey for PV-11, (Rosamond Solar Array) Rosamond, Kern County, California	Archaeological, Field study	Negative	None
KE-04080	Stacie Wilson and Stacey C. Jordan	2010	Cultural Resources Report for the Proposed RRG Antelope Valley Solar Project Kern and Los Angeles Counties, California	Archaeological, Field study	Three resources (P-15-014589, P-15-014597, P-15-014598) within ¼ mile	P-15-014592 (KER-8175H) P-15-014593 KER-8176H)

TABLE 5.1, con't
Studies In/Adjacent To or Within 0.25 Miles of the Project

Report #	Author	Date	Title	Study Type	Comments	Resources within 100 ft
In or Adjacent, con't						
KE-04099	Jason Andrew Miller	2012	Results of the AV Solar Ranch Survey (LSA Project No. SCE1105S)	Archaeological, Field study	Several resources (P-15-015698, P-15-015744, P-15-015745, P-15-015746, P-15-015747) within ¼ mile	None
KE-04149	James J. Schmidt	2011	Archaeological Letter Report: Duntley 12 kV, Kinsey 12 kV, and Unidentified Circuit Deteriorated Pole Replacement Projects (W06036-4800, J-4866 (TD458354) and K- 4850; and WO 36-TD521842), Kern and Los Angeles Counties, California	Archaeological, Field study	Negative	None
KE-04225	Thomas Jackson, Matthew Armstrong, and Nancy Sikes	2010	Cultural Resources Inventory of the Southern California Edison Company Whirlwind to Rosamond and Rosamond to Windhub Telecommunication Line, Kern County, California	Archaeological, Field study	Numerous resources outside of the project vicinity One resources (P-15-013703) within ¼ mile	None
KE-04226 (LA-11980)	Tsim D. Schneider and John Holson	2010	Supplemental Archaeological Survey Report #2, Tehachapi Renewable Transmission Project Segment 4, Kern and Los Angeles Counties, California	Archaeological, Field study	Numerous previously recorded resources outside of the project vicinity Negative in Kern County	None
KE-04227	Tsim D. Schneider and John Holson	2010	Supplemental Archaeological Survey Report #2, Tehachapi Renewable Transmission Project Segment 10, Kern County, California	Archaeological, Field study	Numerous resources outside of the project vicinity	None
KE-04229	Lee Panich, Stephanie Cimino, and John Holson	2010	Supplemental Archaeological Survey Report #1, Tehachapi Renewable Transmission Project Segment 10, Kern County, California	Archaeological, Field study	Numerous resources outside of the project vicinity	None
KE-04233 (LA-12547)	Lee Panich, Stephanie Cimino, and John Holson	2010	Supplemental Archaeological Survey Report #1, Tehachapi Renewable Transmission Project, Segment 4, Kern and Los Angeles Counties, California	Archaeological, Field study	Numerous resources outside of the project vicinity	None
KE-04235 (LA-11837)	Wayne Bischoff	2011	Cultural Resources Survey Letter Report for the CT-12 Avenue A Culvert Variance Request, Segment 4, Tehachapi Renewable Transmission Project, Kern and Los Angeles Counties, California	Archaeological, Field study	Negative	None
LA-03705	R.G. Coleman, J. Jones, and T.F. King	1969	An Archaeological Reconnaissance of Southern California Edison Company's Vincent Transmission, From Bakersfield to Glendale, California	Archaeological, Field study	Two sites outside of project vicinity	P-19-186876
LA-08169 (KE-03534)	Elena Nielson, Russell Bevill, and Michael S. Kelly,	2006	Archaeological Inventory of the First and Second Los Angeles Aqueducts and Selected Access Roads, Kern, Inyo, and Los Angeles Counties, California	Archaeological, Excavation, Field study	Numerous resources outside of the project vicinity	None

TABLE 5.1, con't
Studies In/Adjacent To or Within 0.25 Miles of the Project

Report #	Author	Date	Title	Study Type	Comments	Resources within 100 ft
In or Adjacent, con't						
LA-09322	McDougall, Dennis	2008	Cultural Resources Survey of Approximately 1568.5 Acres of the North Buttes WSSP for the Antelope Valley-East Kern Water Agency Water Banking Project	Archaeological, Field study	One resource (P-19-003796) within ¼ mile	
LA-09705	Pacific Legacy, Inc.	2007	Cultural Resources Inventory of the Southern California Edison Company Tehachapi Renewable Transmission Project, Kern, Los Angeles and San Bernardino Counties, California. ARR #05-01-01046	Archaeological, Field study	Numerous resources outside of the project vicinity	None
LA-10175 (KE-03941)	Applied Earthworks, Aspen Environmental Group	2009	Confidential Cultural Resources Specialist Report for the Tehachapi Transmission Project	Archaeological, Field study, Other research	Numerous resources outside of the project vicinity	P-19-186876
LA-10578	Jana Fortier	2009	TEA21 Rural Roadside Inventory: Native American Consultation and Ethnographic Study Caltrans District 7, County of Los Angeles	Management/ planning	Negative	None
LA-10632	Mark Neal	2010	Draft Environmental Impact Report AV Solar Ranch One Project Volumes I, II and III	Management/ planning	Numerous resources outside of the project vicinity	P-19-001780 (LAN-1780) P-19-003869 (LAN-3869) P-19-003875 (LAN-3875) P-19-003876 (LAN-3876) P-19-003882 (LAN-3882)
LA-10634	Madeleine Bray	2010	Preliminary Archaeological Survey Report for 98 linear Miles of the East Branch Extension of the California Aqueduct for the DWR East Branch Enlargement Project, Los Angeles and San Bernardino Counties	Archaeological, Field study	Numerous resources outside of the project vicinity	None
LA-11230	Matrix Environmental	2011	Wildflower Green Energy Farm County Project, 16700 Lancaster Road, Antelope Valley, CA 93536	Management/ planning		None
LA-11837 (KE-04235)	Wayne Bischoff	2011	Cultural Resources Survey Letter Report for the CT-12 Avenue A Culvert Variance Request, Segment 4, Tehachapi Renewable Transmission Project, Kern and Los Angeles Counties, California	Archaeological, Field study	Negative	None
LA-11838	Lisa Holm	2010	TRTP Negative Archaeological Survey Report, Tehachapi Renewable Transmission Project, Cultural Resources Survey Report with Negative Findings, Segment 9 Whirlwind Substation Alternate Route Survey, Los Angeles and Kern County, CA	Archaeological, Field study	Negative	None

TABLE 5.1, con't
Studies In/Adjacent To or Within 0.25 Miles of the Project

Report #	Author	Date	Title	Study Type	Comments	Resources within 100 ft
In or Adjacent, con't						
LA-11980 (KE-04226)	Tsim Schneider and John Holson	2010	Supplemental Archaeological Survey Report #2, Tehachapi Renewable Transmission Project Segment 4, Kern and Los Angeles Counties, California	Archaeological, Field study	Numerous resources outside of the project vicinity	P-19-001780 (LAN-1780)
LA-12495	Scott Kremkau, Mark Sutton, and Michael Lerch	2013	Rhyolite and Roasting Pits Archaeological Data Recovery in the Antelope Valley, AV Solar Ranch One Project, Los Angeles County, California	Archaeological, Excavation, Field study	Three sites outside of project vicinity	P-19-001780 (LAN-1780)
LA-12547 (KE-04233)	Lee Panich, Stephanie Cimino, and John Holson	2010	Supplemental Archaeological Survey Report #1, Tehachapi Renewable Transmission Project Segment 4, Kern and Los Angeles Counties, California	Archaeological, Field study	Numerous resources outside of the project vicinity	None
n/a	Fulton, Phil	2012	Cultural Resources Assessment, Kingbird Solar Project, Kern County, California. Prepared for Kingbird Solar, LLC, San Francisco	Archaeological, Field study	Negative	None
n/a	ICF International	2012	Cultural Resources Inventory for the Rosamond Solar Project – Project Area Modifications, Unincorporated Kern County, California	Archaeological, Field study		
n/a	Jones and Stokes	2005	Archaeological Evaluation report for The Antelope Valley Water Bank Project, Kern and Los Angeles Counties, California. Prepared for WDS, Los Angeles, CA	Archaeological, Field study	Negative	None
n/a	Sapphos Environmental, Inc.	2009	Pacific Wind Energy Project Cultural Resources Technical Report. Prepared for EnXco Development Corporation, San Ramon	Archaeological, Field study		
n/a	Sapphos Environmental, Inc.	2010	Pacific Wind Energy Project Addendum to the Cultural Resources Technical Report. Prepared for EnXco Development Corporation, San Ramon	Archaeological, Field study		None
n/a	Chris L. Shaver and Karolina Chmiel	2010	Draft Archaeological Survey Report for the Rosamond Solar Project, Kern County, California	Archaeological, Field study		
n/a	David S. Whitley and Peter A. Carey	2016	Phase I Survey/Class III Inventory, Rosamond 5 and 6 Solar Project Areas, Kern County, California (Draft). Prepared for Ecology and Environment, Inc. Sandy, Utah.	Archaeological, Field study		
n/a	Stacie Wilson	2014	Cultural Resources Phase I Survey Report for the Proposed Recurrent Energy Astoria Project, Kern County, California (Revised Draft). Prepared for Recurrent Energy, San Francisco	Archaeological, Field study	Includes 2014 Addendum	P-15-014592 (KER-008175H) P-15-014593 (KER-008176H) P-15-014603 (KER-8185/H)

TABLE 5.1, con't
Studies In/Adjacent To or Within 0.25 Miles of the Project

Report #	Author	Date	Title	Study Type	Comments	Resources within 100 ft
In or Adjacent, con't						
n/a	Stacie Wilson, Stacey C. Jordan and Christy Dolan	2011	Cultural Resources Report for the Powerline and Whirlwind Substation Portion of the Proposed RRG Antelope Valley Solar Project, Kern And Los Angeles Counties, California. Prepared for Renewable Resources Group (RRG), Los Angeles.	Archaeological, Field study		
n/a	Stacie Wilson, Christy Dolan and Stacey C. Jordan	2012	Cultural Resources Report for the Gaskell Property Portion of the Proposed RRG Antelope Valley Solar Project, Kern and Los Angeles Counties, California	Archaeological, Field study	One resource (P-15-014690) within ¼ mile	None
Within a 0.25 mile radius						
KE-04650	Hannah Haas and Robert Ramirez	2014	Cultural Resources Study for the RE Garland Solar Project, Rosamond, Kern County, California	Archaeological, Field study	Numerous resources outside of the project vicinity	None
LA-03206	Brian D. Dillon	1992	An Archaeological Resource Evaluation and Impact Assessment of the Soaring Vista Ranch, Section 5, Range 14 West, Township 8 North, in the Antelope Valley, Los Angeles, California	Archaeological, Field study	Three sites outside of project vicinity	None
LA-07864	Whitley, David S. and Joseph M. Simon	2004	Phase I Archaeological Survey of Tpm 26805, Antelope Valley, Los Angeles County, California	Archaeological, Field study	Three sites outside of project vicinity	None
LA-11978	Panich, Lee	2010	TRTP Cultural Resources Survey Report with Negative Findings, Segment 4 Geotechnical Boreholes	Archaeological, Field study	Numerous resources outside of the project vicinity	None

TABLE 5.2
Recorded Cultural Resources Within/Adjacent To and Within 100 Feet of Proposed Pipeline Alignments

Resource	Type	Recorded by	Comment
In or adjacent (within 100 ft), con't			
P-15-014592 KER-008175H	Site Historic; Privies/dumps/trash scatters	2010 (T. Cooley)	Not evaluated - (See Fig. 7-1)
P-15-014593 KER-008176H	Site Historic; Privies/dumps/trash scatters	2010 (T. Cooley) 2012 (Teresa J. Terry)	Not evaluated - (See Fig. 7-1)
P-15-014594 KER-008177	Site Prehistoric; Lithic scatter, Habitation debris	2010 (J. Trudell, T. Malinowski, A. Lown)	Not evaluated - (See Fig. 7-2)
P-15-014603 KER-008185/H	Site Prehistoric, Historic; Probable Village with habitation debris	2010 (J. Trudell, T. Malinowski, A. Lown)	Prehistoric - appears eligible under NRHP criterion d Historic - minor agricultural irrigation pipe installation (See Fig. 7-1)
P-15-014902 KER-008324H	Site Historic; Foundations/structure pads	2010 (Scott M. Hudlow)	Not evaluated - (See Fig. 7-2)
P-15-014903 KER-008325H	Site Historic; Water conveyance system	2010 (Scott M. Hudlow)	Not evaluated - (See Fig. 7-2)

Table 5.2, con't
Recorded Cultural Resources Within/Adjacent To and
Within 100 Feet of Proposed Pipeline Alignments

Resource	Type	Recorded by	Comment
In or adjacent (within 100 ft), con't			
P-15-014906 KER-008328H	Historic; possibly planted one mile long row of tamarisk windrows - trees/vegetation	2011 (Scott M. Hudlow)	Not evaluated - (See Fig. 7-2) Historic landscape feature with no attribution
P-15-017243	Structure Historic; Engineering structure; Vincent 220 kV Transmission Line	2011 (Wendy L. Tinsley Becker)	Contributing element to NRHP eligible Big Creek Hydro System Historic District and CRHR - Criteria a/1, b/2, c/3 (2D2) (See Fig. 7-1, 7-2)
P-15-017582	Structure Historic; Engineering structure Big Creek No. 4 220 kV Transmission Line	2011 (Wendy L. Tinsley Becker, Heather Crane) 2017 (Audry Williams)	Not eligible for the NRHP (6Y, 6Z) (See Fig. 7-1, 7-2)
P-15-017587	Other Historic; Privies/dumps/trash scatters	2012 (Teresa Terry)	Not evaluated (See Fig. 7-1)
P-15-017590	Other Historic; Privies/dumps/trash scatters	2012 (Teresa Terry)	Not evaluated (See Fig. 7-1)
P-19-001673 LAN-001673H	Site Historic; Old Fairmont Complex	1989 (R. H. Norwood) 2011 (Ange Tomes)	Not eligible for the NRHP (See Fig. 7-3)
P-19-001777 LAN-001777	Site Prehistoric; Lithic scatter; Habitation debris; Hearths/pits; Milling & FCR	1990 (Bruce Love); 2009 (S. Black, W. Jensen, N. Orsi, and R. Folkes); 2014 (Joshua Trampier, Teresa Terry)	(See Fig. 7-3)
P-19-001780 LAN-001780	Site Prehistoric; Lithic scatter; Hearths/pits; Milling & FCR	1990 (Bruce Love) 2009 (M. Neal, D. Barlow, S. Wetherbee, and M. Campbell) 2014 (Joshua Trampier, Teresa Terry)	Determined eligible for the NRHP (2S2) Partially tested and monitored during solar installation; area graded during previous construction (See Fig. 7-2, 7-3)
P-19-003875 LAN-003875	Site Prehistoric; Lithic scatter	2009 (M. Neal, D. Barklow, and S. Wetherbee) 2010 (Joshua Trampier, Teresa Terry)	Not eligible for the NRHP (6Y) (See Fig. 7-2, 7-3)
P-19-004154 LAN-004154H	Structure, Element of district, Historic; Water conveyance system; Canal/aqueduct	2009 (Katherine Anderson) 2011 (N. Lawson, M. Kaye) 2011 (Patricia Ambacher) 2013 (M. Strauss and M. Bray) 2015 (Josh Smallwood) 2017 (A. Hill)	East Branch of the California Aqueduct (EBA) - no evaluation provided for this segment of the California Aqueduct (See Fig. 7-3)
P-19-004260 LAN-004260H	Site Historic; Roads/trails/railroad grades; Highway/trail	2011 (Patrick Stanton)	Not evaluated (See Fig. 7-3)
P-19-004385 LAN-004385H	Site Historic; Roads/trails/railroad grades	2013 (Teresa Terry)	Not evaluated (See Fig. 7-3)
P-19-004398 LAN-004398H	Site Historic; Utility line	2011 (Teresa Terry)	(See Fig. 7-3)
P-19-004410 LAN-004410H	Site Historic; Other – Utility Line	2011 (Teresa Terry)	Not evaluated (See Fig. 7-1, 7-3)
P-19-004412 LAN-004412H	Site Historic; Other – Utility Line	2012 (Teresa Terry)	Not evaluated (See Fig. 7-3)
P-19-004413 LAN-004413H	Site Historic; Roads/trails/railroad grades	2013 (Teresa Terry)	Not evaluated (See Fig. 7-1, 7-3)
P-19-004414 LAN-004414H	Site Historic; Privies/dumps/ trash scatters; Roads/trails/ railroad grades	2013 (Teresa Terry) 2014 (W. Blumel) 2016 (Lauren Downs)	Not evaluated (See Fig. 7-3)
P-19-004415 LAN-004415H	Historic: Roads/trails/railroad grades	2013 (Teresa Terry)	Not evaluated (See Fig. 7-1, 7-2, 7-3)
P-19-004418 LAN-004418H	Prehistoric (lithic debris, FCR, ground stone), Historic; Larson Ranch with buildings, structures and objects associated historic ranching	2014 (Teresa Terry) 2010 (L. Solis, N. Orsi)	Not eligible for the NRHP (N6Z) (See Fig. 7-3)

Table 5.2, con't
Recorded Cultural Resources Within/Adjacent To and
Within 100 Feet of Proposed Pipeline Alignments

Resource	Type	Recorded by	Comment
In or adjacent (within 100 ft) con't			
P-19-100668	Prehistoric; Isolate	2009 (M. Neal, D. Barklow, and S. Wetherbee)	(See Fig. 7-3)
P-19-100669	Prehistoric; Isolate	2009 (M. Neal, D. Barklow, and S. Wetherbee)	(See Fig. 7-3)
P-19-101061	Prehistoric; Other	2011 (Teresa Terry)	(See Fig. 7-3)
P-19-101077	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101078	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101079	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101131	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101137	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101142	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101155	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-186876 (see also P-15-017243) SCE Eagle Rock- Pardee & Antelope- Vincent No. 1 220kV Transmission Line Corridor	Structure; Element of district; Historic; Engineering structure	2003 (James J. Schmidt, June A. Schmidt) 2006 (Koral Ahmet, Sara Bholat) 2010 (Wendy L. Tinsley Becker) 2010 (Wendy L. Tinsley Becker) 2011 (Wendy L. Tinsley Becker) 2011 (Patrick Stanton) 2012 (Wendy L. Tinsley Becker) 2014 (Daniel Leonard)	2D2 or 6Z - Historic engineering structure part of a district; individual resource within district - not eligible (See Fig. 7-2)

6.0 FIELD IDENTIFICATION EFFORT

A field inventory was completed on April 2-6, 2018 by Christopher Canzonieri (M.A.), an archaeologist meeting the Standards of the Secretary of the Interior, for selected sections of the proposed water bank pipeline alignments not previously reviewed for cultural resources [Fig. 8]. The majority of the pipeline routes (proposed and alternative) followed existing unimproved access roads. The inventory utilized a pedestrian survey using 30 meter wide transects parallel to the proposed alignment (e.g., road). Depending on previous survey coverage, either one or both sides of a road were covered. Surface visibility varied from poor (0-49%), good from (50-79%) and excellent (80-100%). Approximately 16.1 miles of inventory were completed. Potential cultural resource locations were noted but not recorded. All of the resources located during the inventory were historic with the majority consisting of either trash scatters or water conveyance/control structures or features.

The majority of the project area has little change in elevation with the exception of a small area along 155th Street W, south of W Avenue B, and an area at the west end of Astoria Avenue. Vegetation includes tumbleweeds, Joshua Trees, brush (coyote?), bunch grasses, and other desert shrubs. The observed sediment is primarily a coarse sand with small rounded to subrounded rocks (e.g., granite, basalt, quartz, etc). Fine sand was observed at the north end of 185th Street W within a previously recorded prehistoric site (P-15-014603).

The project area is dominated by recent solar facility construction including several major high voltage transmission lines, other lower voltage power lines, various roads both improved and unimproved and a variety of infrastructure improvements. Recent modern trash and previously disposed historic trash is present with the dispersed materials generally extending for 75 feet or

more on both sides of the local roads. Additionally, numerous goat/sheep bones were observed throughout the project possibly indicating local livestock carcass disposal.

6.1 FIELD RESULTS - BY SECTION [see Fig. 8 to locate each section]]

The various alignments subject to inventory were grouped into 11 sections or partial sections to allow for ease of description.

6.1A Section 1- Astoria Avenue West from 180th Street W [Photos 1-2]

Alignment is approximately 1.5 miles long. Survey included majority of the area north of Astoria Avenue and a 0.5 mile section at the west end on both sides. The south side of Astoria Avenue is primarily a solar farm. North side and the area west of the solar farm consists of brush and Joshua trees. Several small seasonal washes present. Field visibility good with approximately 70% of the surface observable. Light cover of modern/recent trash at the west end. Two small recent fire pits constructed from locally available rounded and subrounded cobbles (quartz, granite, and sandstone) present at the west end with recently disposed beer bottles in the immediate vicinity.

6.1B Section 2- Rosamond Boulevard to Holiday Avenue between 170th Street W and 145th Street W [Photos 3-7]

Section 2a - Two mile long inventory along the south side of Rosamond Boulevard between 170th Street W and 150th Street W. Section is within open space with moderate density vegetation cover. Field visibility excellent with approximately 80-90% of the surface observable [Photos 3-4].

Section 2b - inventory of 1.5 miles completed on the north and south sides of Astoria Avenue (unimproved road) from 170th Street W to 155th Street W (Section 2b). Section is within open space with moderate density vegetation. Field visibility excellent with approximately 80-90% of the surface observable [Photos 5-6].

P-15-014592, a previously recorded historic refuse scatter, was documented on the east side of 170th Street W extending north from Astoria Avenue. Field review failed to relocate the site. Since the original recordation in 2010; the area east of 170th Street W has been impacted by additional access roads, power poles, and substations. Site may have been destroyed.

Section 2c - one-mile alignment extending from Rosamond Boulevard south along 160th Street W (unimproved road) to Holiday Avenue was surveyed on both sides of road. Section is within open space with moderate density vegetation. Field visibility excellent with approximately 80-90% of the surface observable [Photo 7].

6.1C Section 3 - Holiday Avenue North Along 150th Street West to Astoria Avenue [Photos 8-13]

A one mile long section extending from Holiday Avenue north along 150th Street W before heading east along Astoria Avenue to 145th Street W. Inventory reviewed both sides. Area is in

open space with moderate density vegetation. Field visibility excellent with approximately 80-90% of the surface observable. Standard power poles and a buried fiber cable follow the east side of 150th Street W. A disused livestock enclosure is present at the southeast corner of 50th Street W and Astoria Avenue. Four historic period (unknown chronology) trash scatters probably associated with isolated dumping episodes are located on the north side of Astoria Avenue, extending from 0.25 to 0.40 miles east of the intersection of 150th Street W.

Livestock Enclosure GPS176 (11S 372329 mE / 3857853 mN WGS84) [Photo 10]

The disused enclosure is located at the southeast corner of 150th Street W and Astoria Avenue. It is marked by several fence post and remnants of barbed wire. The enclosure contains several small pens located within the larger structure. Enclosure measure 650 feet north-south x 180 feet east-west. Numerous goat bones and modern trash are present within the enclosure. Possibly used a holding area for livestock (sheep, goat) prior to transport.

Trash Scatter GPS 180 (11S 0372715 mE / 3857928 mN WGS84) [Photo 11]

Located approximately 30 feet north of Astoria Avenue, and 0.25 mile east of the intersection of 150th Street W and Astoria Avenue. 22-foot diameter scatter with 15+ metal cans, 3 metal objects, one intact glass bottle, one intact cold cream jar, and assorted colored broken bottle glass. Isolated dumping episode.

Trash Scatter GPS 181 (11S 372774 mE / 3857918 mN WGS84)

Located approximately 30 feet north of Astoria Avenue, and 0.30 mile east of the intersection of 150th Street W and Astoria Avenue. 10-foot diameter scatter measures of metal cans and a few bottles. Isolated dumping episode.

Trash Scatter GPS182 (11S 0372889 mE / 3857925 mN WGS84) [Photo 12]

Located approximately 30 feet north of Astoria Avenue, and 0.37 mile east of the intersection of 150th Street W and Astoria Avenue. Is approximately 10 feet in diameter; predominately of metal cans, broken bottles, and ceramics fragments. Isolated dumping episode.

Trash Scatter GPS183 (11S 0372926 mE / 3857915 mN WGS84) [Photo 13]

Located approximately 20 feet north of Astoria Avenue, and 0.37 mile east of the intersection of 150th Street W and Astoria Avenue. Is approximately 20 feet in diameter; predominately of metal cans, broken bottles, and ceramics fragments. Isolated dumping episode.

6.1D Section 4 - Kingbird Avenue extending from 155th Street W to 140th Street W [Photos 14-15]

Inventory of the north side of Kingbird Avenue extending from 155th Street W to 140th Street W (Section 4a - 1.5 miles) as well as the east side of 150th Street W from Kingbird Avenue to W Avenue A (Section 4b - 0.5 mile). Visibility varied from poor (30%) along 150th Street W to fair with approximately 60% of the surface observable throughout the other areas.

Two resources identified along Kingbird Avenue between 150th Street W and 140th Street W. Both resources are foundations associated with water distribution; possible water pumps/wells.

Former Well/Pump Foundation Slab with Well Shaft GPS 191 (0372663 mE / 3854693 mN WGS84)

Located approximately 40 feet north Kingbird Avenue, approximately 0.25 mile east of the intersection of 150th Street W and Kingbird Avenue. Concrete foundation measures 10 feet long (east-west) x 8 feet wide (north-south) x 6+ inches thick. There are two threaded galvanized steel pipes (2.5 inch and 5.5 inch diameter) exiting the concrete slab at a 45 degree angle and a 10-inch diameter vertical steel well shaft approximately with a steel cap with a small valve extending up from the cap. Small steel projections are welded to the well shaft near the top probably to assist with attachment of an electric pump. There are four 1/2 inch diameter bolts (2 on the north side and 2 on the south side) placed into the foundation, likely associated with wood framing. A disconnected 6-inch diameter electrical pole is located on the west side of the pad.

Former Well Foundation Slab with Blue Painted Locked Steel Cap GPS 192 (11S 0373494 mE / 3854687 mN WGS84) [Possible Monitoring Well]

Located approximately 40 feet north Kingbird Avenue, approximately 0.75 mile east of the intersection of 150th Street W and Kingbird Avenue. The concrete foundation measures 10 feet long (east-west) x 8 feet wide (north-south) x 6+ inches thick. There is one threaded galvanized steel pipe (5.5 inch diameter) exiting the concrete slab at a 45 degree angle. The 5.5 inch diameter pipe is capped. The 10-inch diameter vertical steel well shaft observed at the other feature (GPS 191) has been cut flush with the concrete slab and covered with a circular diamond steel plate locked with a padlock. It appears that the former well may be used for monitoring. There are four 1/2 inch diameter bolts (2 on the north side and 2 on the south side); a wood 2x4 is held in place with the bolts on the north side of the foundation. A disconnected 6-inch diameter electrical pole is located on the west side of the pad.

6.1E Section 5 - 140th Street W from Kingbird Avenue to W Avenue A [Photo 16]

Both sides of 140th Street W from Kingbird Avenue to W Avenue A were inventoried for 0.5 mile. Surface visibility approximately 60%.

6.1F Section 6 - 140th Street W from W Avenue A-8 South to W Avenue 8 [Photos 17-19]

Inventory of east side of 140th Street W, just north of W Avenue A-8 (0.6 mile) and south to W Avenue B and along both sides of W Avenue B from 140th Street W to 135th Street W (terminates near water tanks) (0.5 mile).

The east side along 140th Street W is a dirt access road with wood power poles and a recently excavated trench with several large diameter water pipes feeding into a number of large retention/holding ponds. The section along W Avenue B has a very wide gravel road grading into dirt along the sides and giving way to the large retention ponds. Visibility excellent with 80-100% of the surface observable. Two potential resources observed.

Irrigation box and concrete well/pump foundation GPS193 (11S 0374264 mE / 3852226 mN WGS 84) [Photo 19]

Features located on the south side of W Avenue B approximately 0.25 mile east of the intersection of 140th Street W and W Avenue B. A wood power pole [2015253E | BLF 40A 90770] is just north of the rectangular wooden irrigation box and approximately 15 feet north of the concrete foundation. The box corners are constructed from 4 inch x 4 inch posts, the sides from 5 1/2 foot long x 12 inch wide x 2 inch thick boards. The overall structure is 5 1/2 feet long x 4 feet wide x 4+ feet deep. The feature is filled in with soil and grass. A four inch diameter irrigation valve is located just south of the box.

The concrete well/pump foundation is similar to those observed along Kingbird Avenue. The pad measures 10 feet long x 8 feet wide x 6+ inches thick. Pipes are all capped. USGS Elevation reference mark present within the pad.

6.1G Section 7 - 155th Street W from W Avenue A South to W Avenue D [Photos 20-24]

Inventory of 3.5 miles completed along 155th Street W between W Avenue A and W Avenue D (State Highway 138) including a 0.5 mile section west on W Avenue D. Visibility good with approximately 60-75% of the surface observable. Two retention ponds and associated irrigation infrastructure observed along the alignment. Additionally, a segment of a previously recorded historic resource on W Avenue C (P-19-004415 / LAN-4415H) identified as a "historical two-track road" was reviewed. There is an extensive wash present along the north side of W Avenue C.

A small retention pond observed on the west side of 155th Street W, just south of W Avenue C-12. The pond is approximately 60 feet north-south x 100 feet east-west. A single valve, no longer operational, is located on north side of the pond [Photo 23].

An additional retention pond, with three concrete risers is present in the southwest corner of the intersection of 160th Street W and W Avenue D. The square retention pond is approximately 200 feet x 200 feet. Two concrete risers are located in the northwest corner of the retention pond and one is outside of the retention pond. A wood structure, possibly a pipe stand, may be associated with the risers within the pond. The pond is empty [Photo 24].

6.1H Section 8 - Kingbird Avenue between 165th Street W and 170th Street W and Kingbird Avenue south along 165th Street W to W Avenue A [Photos 25-26]

Inventory of two 0.5 mile alignments along south side of Kingbird Avenue at 170th Street W (north side covered by previous inventory) and from Kingbird Avenue south along 165th Street W to W Avenue A (east and west sides inventoried). Area is open with low vegetation. Field visibility excellent with approximately 80-90% of the surface observable. Area appears to have been graded in the past; possibly for a subdivision. Since original recordation in 2010, the area west of 170th Street W has been impacted by the Kingbird Solar Project and to the east by additional access roads, power poles, and substations. A new solar facility has been installed immediately east of 165th Street W between Kingbird Avenue and W Avenue A.

One previously recorded resource, P-15-017590, consisting of a cluster of ceramic insulators, was not relocated.

The inventory noted a wide excavated earth flood control channel extending from 165th Street W, just south of W Avenue A east to 155th Street W. The structure is just outside of the APE but could have extended slightly into the APE at one time.

Channel - earth channel that extends across the project area from 165th Street W, just south of W Avenue A east to 155th Street W, is 600 feet wide from toe to toe. The internal canal is approximately 480 feet wide and varies in depth with a maximum of 10 feet. The access roads on each bank that conform to the channel configuration are approximately 15 feet wide (with some variations) and the slopes of the canal measure approximately 15 feet wide (with some variations). The channel appears to have been excavated for possible flash flood water diversion during previous agricultural use of the

6.1I Section 9 - 170th Street W Between Kingbird Avenue and W Avenue A [Photo 27]

Inventory of a 0.25 mile alignment along the north and south sides of an unimproved road between Kingbird Avenue and W Avenue A and east of 170th Street W. Field visibility excellent with approximately 90% of the surface observable. Area appears to have been previously graded for possible subdivision.

6.1J Section 10 - 185th Street W at W Avenue A [Photo 28]

Inventory of 0.5 mile alignment starting at intersection of 185th Street W at W Avenue A and terminating 0.5 mile to north on 185th Street W. Both sides of 185th Street W were inventoried. Area is open with moderate vegetation cover; Joshua Trees are present at the north end. Field visibility good with approximately 70% of the surface observable. Some modern/recent trash observed within alignment. In addition, several fence posts with barbed wire are located along the east side of 185th Street W and may be associated with prior agricultural use.

A previously recorded prehistoric resource, P-15-014603, is located outside of the north termination of the alignment. This prehistoric occupation site appears to be eligible for the NRHP under criterion d (see Table 5.2). It was relocated near the north end of this section and while the pipeline alignment does not appear to impact the location, the area should be considered sensitive of archaeological resources.

6.1K Section 11 - 190th Street W at W Avenue A [Photo 29]

Only the 0.25 mile long east side of 190th Street W north from W Avenue A was inventoried. The area includes a small area of open field with dense vegetation and Joshua Trees. Field visibility was poor with approximately 10% of the surface observable. Modern/recent trash present within section.

7.0 FINDINGS

Additional archaeological analysis of the WSWB was undertaken for the EIR Addendum. The analysis included two archival records searches completed by the CHRIS to provide updated information on cultural resources within the project area and a review of environmental

documents associated with solar and wind energy developments. A focused archaeological field inventory, guided by the results from previous studies for solar facility development and other improvements from 2006 to the present, was completed of approximately 16.1 miles of selected water pipeline alignments and extraction well locations that had not been subject to previous review.

7.1 SITE DENSITY OBSERVATIONS

The majority of the archaeological inventories completed in the project area have focused on pre-construction inventories and monitoring of ground disturbing construction for solar and wind energy developments (see Table 5.1). Site density observations are presented by area.

7.1A Area North of W Avenue A and Supply Pipeline from Gaskell Road South Along 155th Street W to W Avenue C Bounded by 170th Street W

The archival review indicates a low density of recorded archaeological resources in the project area to the north of W Avenue A and along the Supply Pipeline from Gaskell Road south along 155th Street W to W Avenue C. The area north of Holiday Avenue and south of Rosamond Boulevard bounded by 170th Street W and 140th Street W had not been previously reviewed except for several road alignments.

The majority of the 13 recorded sites in this area of the project have not been evaluated and include components of three electric transmission lines; a prehistoric lithic scatter with habitation debris; historic dumps/privies/trash scatters, a historic landscape feature consisting of planted tamarisk windrows and several roads and trails (see Table 7.1).

TABLE 7.1
Recorded Cultural Resources Within/Adjacent To and
Within 100 Feet of Proposed Pipeline Alignments

Resource	Type	Recorded by	Comment
In or adjacent (within 100 ft)			
P-15-014592 KER-008175H	Site Historic; Privies/dumps/trash scatters	2010 (T. Cooley)	Not evaluated - (See Fig. 7-1)
P-15-014593 KER-008176H	Site Historic; Privies/dumps/trash scatters	2010 (T. Cooley) 2012 (Teresa J. Terry)	Not evaluated - (See Fig. 7-1)
P-15-014594 KER-008177	Site Prehistoric; Lithic scatter, Habitation debris	2010 (J. Trudell, T. Malinowski, A. Lown)	Not evaluated - (See Fig. 7-2)
P-15-014902 KER-008324H	Site Historic; Foundations/structure pads	2010 (Scott M. Hudlow)	Not evaluated - (See Fig. 7-2)
P-15-014903 KER-008325H	Site Historic; Water conveyance system	2010 (Scott M. Hudlow)	Not evaluated - (See Fig. 7-2)
P-15-014906 KER-008328H	Historic; possibly planted one mile long row of tamarisk windrows - trees/vegetation	2011 (Scott M. Hudlow)	Not evaluated - (See Fig. 7-2) Historic landscape feature with no attribution
P-15-017243	Structure Historic; Engineering structure; Vincent 220 kV Transmission Line	2011 (Wendy L. Tinsley Becker)	Contributing element to NRHP eligible Big Creek Hydro System Historic District and CRHR - Criteria a/1, b/2, c/3 (2D2) (See Fig. 7-1, 7-2)

TABLE 7.1, con't
Recorded Cultural Resources Within/Adjacent To and
Within 100 Feet of Proposed Pipeline Alignments

Resource	Type	Recorded by	Comment
In or adjacent (within 100 ft), con't			
P-15-017582	Structure Historic; Engineering structure Big Creek No. 4 220 kV Transmission Line	2011 (Wendy L. Tinsley Becker, Heather Crane) 2017 (Audry Williams)	Not eligible for the NRHP (6Y, 6Z) (See Fig. 7-1, 7-2)
P-15-017587	Other Historic; Privies/dumps/trash scatters	2012 (Teresa Terry)	Not evaluated (See Fig. 7-1)
P-15-017590	Other Historic; Privies/dumps/trash scatters	2012 (Teresa Terry)	Not evaluated (See Fig. 7-1)
P-19-004410 LAN-004410H	Site Historic; Other – Utility Line	2011 (Teresa Terry)	Not evaluated (See Fig. 7-1, 7-3)
P-19-004413 LAN-004413H	Site Historic; Roads/trails/railroad grades	2013 (Teresa Terry)	Not evaluated (See Fig. 7-1, 7-3)
P-19-186876 (see also P-15-017243) SCE Eagle Rock- Pardee & Antelope- Vincent No. 1 220kV Transmission Line Corridor	Structure; Element of district; Historic; Engineering structure	2003 (James J. Schmidt, June A. Schmidt) 2006 (Koral Ahmet, Sara Bholat) 2010 (Wendy L. Tinsley Becker) 2010 (Wendy L. Tinsley Becker) 2011 (Wendy L. Tinsley Becker) 2011 (Patrick Stanton) 2012 (Wendy L. Tinsley Becker) 2014 (Daniel Leonard)	2D2 or 6Z - Historic engineering structure part of a district; individual resource within district - not eligible (See Fig. 7-2)

7.1B Collection Pipeline Area West of 170th Street W From Astoria Avenue to W Avenue A

Site density for the collection pipelines west of 170th Street W is very low although one NRHP eligible multi-component resource with an important prehistoric occupation site (15-014603) is present just south of Gaskell Road between 185th Street W and 190th Street W [see Fig. 7-1].

7.1C Supply Pipeline - W Avenue C South to W Avenue D East to 170th Street W to East Branch of California Aqueduct

The majority of this section of the supply pipeline has been subject to an intensive archaeological inventory by Statistical Research from 2011-2014 for a project report that is currently pending. The inventory recorded 23 prehistoric, historic and multi-component resources the majority of which were not evaluated for inclusion on the NRHP or the California Register of Historical Resources (CRHR) (see Table 7.2.).

TABLE 7.2
Recorded Cultural Resources Within/Adjacent To
Supply Pipeline from Gaskell Road South to East Branch California Aqueducts

Resource	Type	Recorded by	Comment
In or adjacent (within 100 ft)			
P-19-001673 LAN-001673H	Site Historic; Old Fairmont Complex	1989 (R. H. Norwood) 2011 (Ange Tomes)	Not eligible for the NRHP (See Fig. 7-2)
P-19-001777 LAN-001777	Site Prehistoric; Lithic scatter; Habitation debris; Hearths/pits; Milling & FCR	1990 (Bruce Love); 2009 (S. Black, W. Jensen, N. Orsi, and R. Folkes); 2014 (Joshua Trampier, Teresa Terry)	(See Fig. 7-2)

TABLE 7.2, con't
Recorded Cultural Resources Within/Adjacent To
Supply Pipeline from Gaskell Road South to East Branch California Aqueducts

Resource	Type	Recorded by	Comment
In or adjacent (within 100 ft), con't			
P-19-001780 LAN-001780	Site Prehistoric; Lithic scatter; Hearths/pits; Milling & FCR	1990 (Bruce Love) 2009 (M. Neal, D. Barlow, S. Wetherbee, and M. Campbell) 2014 (Joshua Trampier, Teresa Terry)	Determined eligible for the NRHP (2S2) Partially tested and monitored during solar installation; area graded during previous construction (See Fig. 7-2, 7-3)
P-19-003875 LAN-003875	Site Prehistoric; Lithic scatter	2009 (M. Neal, D. Barklow, and S. Wetherbee) 2010 (Joshua Trampier, Teresa Terry)	Not eligible for the NRHP (6Y) (See Fig. 7-2, 7-3)
P-19-004154 LAN-004154H	Structure, Element of district, Historic; Water conveyance system; Canal/aqueduct	2009 (Katherine Anderson) 2011 (N. Lawson, M. Kaye) 2011 (Patricia Ambacher) 2013 (M. Strauss and M. Bray) 2015 (Josh Smallwood) 2017 (A. Hill)	East Branch of the California Aqueduct (EBA) - no evaluation provided for this segment of the California Aqueduct (See Fig. 7-3)
P-19-004260 LAN-004260H	Site Historic; Roads/trails/railroad grades; Highway/trail	2011 (Patrick Stanton)	Not evaluated (See Fig. 7-3)
P-19-004398 LAN-004398H	Site Historic; Utility line	2011 (Teresa Terry)	(See Fig. 7-3)
P-19-004410 LAN-004410H	Site Historic; Other – Utility Line	2011 (Teresa Terry)	Not evaluated (See Fig. 7-1, 7-3)
P-19-004412 LAN-004412H	Site Historic; Other – Utility Line	2012 (Teresa Terry)	Not evaluated (See Fig. 7-3)
P-19-004413 LAN-004413H	Site Historic; Roads/trails/railroad grades	2013 (Teresa Terry)	Not evaluated (See Fig. 7-1, 7-3)
P-19-004414 LAN-004414H	Site Historic; Privies/dumps/ trash scatters; Roads/trails/ railroad grades	2013 (Teresa Terry) 2014 (W. Blumel) 2016 (Lauren Downs)	Not evaluated (See Fig. 7-3)
P-19-004418 LAN-004418H	Prehistoric (lithic debris, FCR, ground stone), Historic; Larson Ranch with buildings, structures and objects associated historic ranching	2014 (Teresa Terry) 2010 (L. Solis, N. Orsi)	Not eligible for the NRHP (N6Z) (See Fig. 7-3)
P-19-100668	Prehistoric; Isolate	2009 (M. Neal, D. Barklow, and S. Wetherbee)	(See Fig. 7-3)
P-19-100669	Prehistoric; Isolate	2009 (M. Neal, D. Barklow, and S. Wetherbee)	(See Fig. 7-3)
P-19-101061	Prehistoric; Other	2011 (Teresa Terry)	(See Fig. 7-3)
P-19-101077	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101078	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101079	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101131	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101137	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101142	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-101155	Prehistoric; Other	2012 (Teresa Terry)	(See Fig. 7-3)
P-19-186876 (see also P-15-017243) SCE Eagle Rock- Pardee & Antelope- Vincent No. 1 220kV Transmission Line Corridor	Structure; Element of district; Historic; Engineering structure	2003 (James J. Schmidt, June A. Schmidt) 2006 (Koral Ahmet, Sara Bholat) 2010 (Wendy L. Tinsley Becker) 2010 (Wendy L. Tinsley Becker) 2011 (Wendy L. Tinsley Becker) 2011 (Patrick Stanton) 2012 (Wendy L. Tinsley Becker) 2014 (Daniel Leonard)	2D2 or 6Z - Historic engineering structure part of a district; individual resource within district - not eligible (See Fig. 7-2)

The inventory located 12 prehistoric sites, three utility lines, two historic roads and trails, a transmission line corridor, a historic dump/trash scatter, a historic ranch with prehistoric occupation present, and the East Branch of the California Aqueduct (see Table 7.2.).

Density along this portion of the supply pipeline is high and the proposed alignment appears moderately to highly sensitive based on the site density.

7.2 2018 FIELD INVENTORY RESULTS

The field inventory completed for the Addendum EIR focused on selected sections of the proposed water bank pipeline alignments not previously reviewed for cultural resources [see Fig. 8]. The project area is dominated by recent solar facility construction including several major high voltage transmission lines, other lower voltage power lines, various roads and a variety of infrastructure improvements. Recent modern trash and previously disposed historic trash is present with the dispersed materials generally extending for 75 feet or more on both sides of the local roads.

The majority of the pipeline routes (proposed and alternative) followed existing unimproved access roads. Approximately 16.1 miles of inventory were completed. No prehistoric archaeological materials were noted. The locations of two previously recorded historic resources (P-15-014592 and P-15-017590) were re-visited but no indications of the resources were present. It is probable that solar facility construction removed any cultural materials. Twelve new historic resources were located as a result of the 2018 survey: 4 historic trash scatters; 1 livestock enclosure; 3 former well heads set within a concrete slab; 1 irrigation box valve box; 2 retention ponds; and, a probable earth flood control channel. Preliminary evaluation suggests that none of the historic resources appear eligible for any of the registers either individually or as part of a historic district.

8.0 IMPACTS AND MITIGATION MEASURES

This section analyzes the potential impacts related to cultural resources that could result from project development and provides two recommended mitigation measures.

8.1 DEFINITION AND USE OF SIGNIFICANCE CRITERIA

The following criteria have been established for determining the significance of potential impacts on cultural resources, based on the CEQA Guidelines environmental checklist. Development of the WSWB would have a significant impact on cultural resources if it would:

Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5. Specifically, substantial adverse changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired;

Cause damage to, disrupt, or adversely affect an important prehistoric or historic archaeological resource such that its integrity could be compromised or eligibility

for future listing on the California Register of Historical resources diminished (CEQA Guidelines § 15064 .5);

Disturb any human remains, including those interred outside of formal cemeteries.

8.2 GENERAL PROJECT IMPACTS

Ground-disturbing construction activities including excavation for pipeline installation and infrastructure installation have the highest potential to directly impact recorded cultural resources within the project footprint by disturbing both surface and subsurface soils. Subsurface and surface disturbance could result in the loss of integrity of cultural deposits and loss of information. There is also a potential for inadvertent discoveries of buried archaeological materials during construction.

8.3 POTENTIAL IMPACTS

The records review found that 40 previous studies had been completed within or adjacent to the WSWB project (see Table 5.1) resulting in the recordation of 36 cultural resources in/adjacent or within 100 feet of a component of the planned project (Table 5.2; Fig. 7). The cultural resources included 14 prehistoric sites, 20 historic resources, and two sites with both a prehistoric and historic component. Of the 36 sites, four appear or have been determined eligible for the NRHP (and by extension the CRHR) and four appear or have been determined not eligible for the NRHP (and by extension the CRHR). The remaining 28 resources have not been formally evaluated based on the data available from the CHRIS.

The 2018 field inventory of 16.1 miles of proposed pipeline alignments found no prehistoric archaeological materials but noted 12 new historic resources. The resources were not formally recorded but preliminary field evaluation suggests that none of the historic resources appear eligible for any of the registers either individually or as part of a historic district.

The high density of prehistoric resources within and adjacent to the Supply Pipeline from W Avenue C to the East Branch of the California Aqueduct and the presence of one NRHP/CRHP eligible prehistoric resource along with a number of unevaluated prehistoric resources suggest that this alignment has a potential for exposing as yet unknown surface and subsurface resources associated with the Native American occupation of the Antelope Valley. Discoveries could potentially have important research values and would, therefore, be significant under CEQA. Examples of research questions that could be answered by these potential resources include chronological information on occupation of the project vicinity; site formation processes in regard to valley floor and foothill occupation; subsistence/settlement/spatial organization; and, trade and exchange patterns.

Large areas of the WSWB have been impacted by past and ongoing solar energy construction. It is possible that construction associated with the proposed WSWB pipeline construction could result in disturbance of as yet unknown subsurface archaeological resources. Such finds may meet the definition of a "unique archaeological resource" as specified in Section 21083.2 of the Public Resources Code. Furthermore, it is possible that human remains could be encountered due to the presence of at least two and possibly more prehistoric occupation sites that suggest

intensive use possibly associated with a seasonal village. No historic cemeteries or burial areas are known for the project area.

In summary, the WSWB project has a low to moderate potential depending on location to affect as yet unknown prehistoric or historic cultural deposits.⁴

The 2006 EIR addressed impacts related to cultural resources in Impact 4.4-1 which concluded that the project could damage or destroy a significant historical resource and would represent a significant impact. Archaeological research conducted over the past 12 years for energy development and other projects confirms that the impact is still applicable with slight modification. The three mitigation measures proposed in 2006, with modifications, adequately reduce the impacts of the modified WSWB project for cultural resources to a less-than-significant level. Therefore, the modified project would not result in new significant or substantially more severe impacts to cultural resources than identified in the 2006 EIR.

Impact CR-1: The potential to cause a substantial adverse change in the significance of historical resources as defined in §15064.5 of CEQA

Previously unknown historical resources could be exposed during ground disturbing construction operations associated with pipeline installation, grading, roadway, utility, and/or drainage improvements and/or other development associated with the modified project. Construction operations could result in the inadvertent exposure of historical resources that could be eligible for inclusion on the CRHR (PRC Section 5024.1).

This impact would be reduced to a less-than-significant impact with implementation of Mitigation Measure CM-1 which requires the review, identification, evaluation and treatment of any significant finds by a Professional Archaeologist at the time of discovery.

4. Significant prehistoric cultural resources may include:

- a. Human bone - either isolated or intact Native American burials.
- b. Habitation (occupation or ceremonial structures as interpreted from rock rings/features, distinct ground depressions, differences in compaction (e.g., house floors).
- c. Artifacts including chipped stone objects such as projectile points and bifaces; groundstone artifacts such as manos, metates, mortars, pestles, grinding stones, pitted hammerstones; and, shell and bone artifacts including ornaments and beads.
- d. Various features and samples including hearths (fire-cracked rock; baked and vitrified clay), artifact caches, faunal and shellfish remains (which permit dietary reconstruction), distinctive changes in soil stratigraphy indicative of prehistoric activities.
- e. Isolated artifacts

Historic cultural materials may include finds from the late 19th through early 20th centuries. Objects and features associated with the Historic Period can include.

- a. Structural remains or portions of foundations (bricks, cobbles/boulders, stacked field stone, postholes, etc.).
- b. Trash pits, privies, wells and associated artifacts.
- c. Isolated artifacts or isolated clusters of manufactured artifacts (e.g., glass bottles, metal cans, manufactured wood items, etc.).
- d. Historic human remains.

In addition, cultural materials including both artifacts and structures that can be attributed to Hispanic, Asian and other ethnic or racial groups are potentially significant. Such features or clusters of artifacts and samples include remains of structures, trash pits, and privies.

Potential Impact CR-2: The potential to cause a substantial adverse change in the significance of archeological resources pursuant to §15064.5 of CEQA

Previously unknown archaeological resources could be exposed during ground disturbing construction operations associated with pipeline installation, grading, roadway, utility, and/or drainage improvements and/or other development associated with the modified project. Construction operations in areas of native soil could result in the inadvertent exposure of buried prehistoric or historic archaeological materials that could be eligible for inclusion on the CRHR (PRC Section 5024.1) and/or meet the definition of a unique archeological resource as defined in Section 21083.2 of the Public Resources Code (PRC).

This impact would be reduced to a less-than-significant impact with implementation of Mitigation Measure CM-1 which requires the review, identification, evaluation and treatment of any significant archaeological finds by a Professional Archaeologist at the time of discovery.

Potential Impact CR-3: The potential to disturb any human remains, including those interred outside of formal cemeteries.

Previously unknown Native American human remains could be exposed during ground disturbing construction operations associated with grading, roadway, utility, and/or drainage improvements and/or other development. Construction operations could result in the inadvertent exposure of buried prehistoric or protohistoric (ethnographic) Native American human remains.

No human remains, including historic cemeteries, are known within the project area. Although considered unlikely, future project activities have the possibility of disturbing human remains.

This significant impact would be reduced to a less-than-significant impact with implementation of Mitigation Measure CM-2 which requires that the treatment of human remains and or associated or unassociated funerary objects exposed during construction must comply with applicable state law.

8.4 MITIGATION MEASURES

Mitigation measures for the modified WSWB project impacts based on the archaeological information collected during the intervening 12 years are recommended below.

CM-1

- (a) The project proponent shall conduct a pre-construction analysis of any area subject to project ground disturbance that has not been previously reviewed or surveyed for cultural resources. If non-evaluated resources identified in these surveys or previous surveys are present within any area subject to ground disturbance they shall be relocated in the field and evaluated for inclusion on the California Register of Historical Resources. Evaluation may include additional intensive recordation including supplementary archival research and archaeological testing to determine the presence of significant buried cultural materials. The results shall be reported in an appropriate technical document with

recommendations to guide ground disturbing construction. The technical document shall be submitted for review and approval by the appropriate county regulatory agency(ies).

- (b) The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.
- (c) The project proponent shall retain a Professional Archaeologist to provide a pre-construction cultural awareness briefing to supervisory personnel of any excavation contractor to inform construction personnel of the types of cultural resources that may be encountered during construction, and to bring awareness to personnel of actions to be taken in the event of a cultural resources discovery, and to alert them to the possibility of exposing significant historic or prehistoric archaeological resources within the project area. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery site within a specified radius of the find, and the procedures to follow regarding discovery, protection, and notification of the project proponent and archaeological team until the find has been evaluated.
- (d) Archaeological monitoring⁵ shall be initiated for ground disturbing construction within a 150-foot radius of the recorded site boundaries of a resource that appears to be eligible for the California Register of Historical Resources (CRHR) or has not been evaluated for inclusion on the CRHR. Monitoring will continue until the Project Archaeologist has determined that there is minimal potential to expose significant archaeological resources. This decision shall be communicated to the appropriate regulatory agency(ies).
- (e) The project proponent shall retain a Professional Archaeologist on an “on-call” basis during ground disturbing construction for the project to review, identify and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources, and the appropriate Kern or Los Angeles county regulatory agency and the tribes identified by the Native American Heritage Commission for SB 18 consultation shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under the California Environmental Quality Act (CEQA).
- (f) If the Professional Archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a

5. *Archaeological monitoring* refers to the controlled observation and regulation of construction operations on or in the vicinity of a known or potentially significant cultural resource in order to prevent or minimize impact to the resource.

less-than-significant level. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the project proponent in consultation with either the appropriate agency for Kern County or Los Angeles County. The archaeologist shall document the resources using DPR 523 forms and file said forms with the appropriate California Historical Resources Information System, Information Center. The resources shall be photo-documented and collected by the archaeologist for curation with an appropriate facility. The archaeologist shall be required to submit to the County(ies) for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

CM-2

- (a) Pursuant to State Health and Safety Code Section 7050.5(e) and Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found at any time during on - or off-site construction, all work shall stop in the vicinity of the find and the appropriate County Coroner/Medical Examiner shall be notified immediately. If the remains are determined to be Native American, the Coroner shall notify the California State Native American Heritage Commission (NAHC), who shall identify the person believed to be the Most Likely Descendant (MLD). The project proponent, and MLD, with the assistance of the archaeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon Treatment Plan shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. California Public Resources Code allows 48 hours for the MLD to make their wishes known to the landowner after being granted access to the site. If the MLD and the other parties do not agree on the reburial method, the project will follow PRC Section 5097.98(e) which states that ". . . the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."
- (b) The Treatment Plan shall be implemented and any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the appropriate County agency(ies), and the regional California Historical Resources Information System Information Center.

9.0 RECOMMENDATIONS

It is recommended, based on the review of archival data and a focused field inventory, that the modified WSWB project can proceed as planned with the recommended mitigation measures to protect known or potential prehistoric and historic archaeological resources.

10.0 REFERENCES⁶

- California (State of), Department of Parks and Recreation, Office of Historic Preservation (CAL/OHP)
- 1973 The California History Plan, Volume One - Comprehensive Preservation Program. Volume Two - Inventory of Historic Features.
- 1976 California Inventory of Historic Resources.
- 1988 Five Views: An Ethnic Sites Survey for California.
- 1990 California Historical Landmarks.
- 1992 California Points of Historical Interest. May 1, 1992.
- 2012a [*Historic Properties Directory*] Directory of Properties in the Historic Property Data file for Lancaster, Los Angeles County (includes *National Register of Historic Places* status codes, *California Historical Landmarks* and *California Points of Historical Interest* listings, etc.)
- 2012b *Archeological Determinations of Eligibility (ADOE)* for Kern and Los Angeles Counties [including National Register, State Landmark, California Register, and Point of Interest] (CAL/OHP 2012b)
- 2018 California Historical Resources – Kern County and Los Angeles County [including National Register, State Landmarks, California Register, and Points of Interest].
<<http://ohp.parks.ca.gov/ListedResources/?view=county&criteria=16>> accessed 5/17/18.
- Jones and Stokes
- 2005 Archaeological Evaluation report for The Antelope Valley Water Bank Project, Kern and Los Angeles Counties, California. Prepared for WDS, Los Angeles, CA. On file, Kern County Planning Department and Basin Research Associates, San Leandro.
- Kern County Planning Department with Jones and Stokes
- 2006 Draft Environmental Impact Report, Antelope Valley Water Bank Project. On file, Kern County Planning Department.
- United States Department of the Interior, National Register of Historic Places
- 2018 *National Historic Landmarks (NHL)* and *National Register of Historic Places (NRHP)* listings in Kern and Los Angeles Counties, California.

6. The reports and site forms listed in Tables 5.1 and 5.2 are not cited in the references. The citations are included in the two tables. Thirty (30) reports are on file with the two Information Centers while 10 are available as appendices in on-line documents available from the county planning departments. The site forms listed in Table 5.2 can be accessed by site number at the two Information Centers.

Verrips Environmental Consulting

2018 Background information and graphics for Willow Springs Water Bank Project.
Draft materials on file, Verrips Environmental Consulting, Santa Ana, and
Basin Research Associates, San Leandro.

ATTACHMENTS

FIGURES

FIGURE 1	Regional Location
FIGURE 2	Project Vicinity
FIGURE 3	Planned Recovery Wells and Collection Pipes
FIGURE 4	Planned External Connections and Facilities
FIGURE 5	Modifications from 2006 Water Bank Plan
FIGURE 6	Planned Project with Previous Cultural Resources Studies in the Vicinity
FIGURE 7-1	Project Alignments and Cultural Resources within 100 Feet
FIGURE 7-2	Project Alignments and Cultural Resources within 100 Feet
FIGURE 7-3	Project Alignments and Cultural Resources within 100 Feet
FIGURE 8	Project Components with Alignments Surveyed - 2018

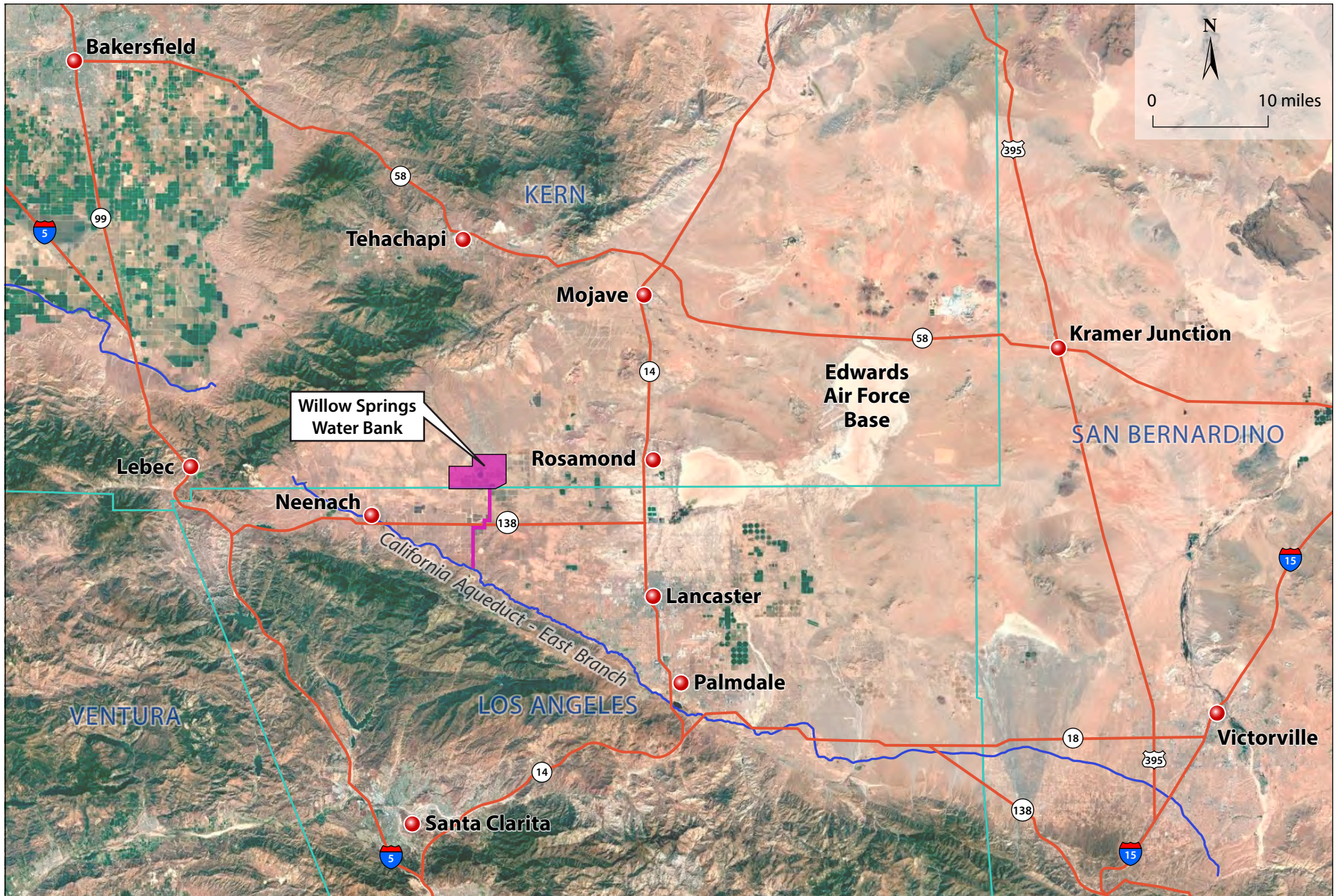
PHOTOS

PHOTO 1	Section 1, view west along the Astoria Avenue alignment, from 180 th Street W
PHOTO 2	Section 1, view east along the Astoria Avenue alignment from the 195 th Street W alignment
PHOTO 3	Section 2A, view east along Rosamond Boulevard from 170 th Street W
PHOTO 4	Section 2A, view west along Rosamond Boulevard from 150 th Street W
PHOTO 5	Section 2B, view east along alignment 0.5 mile south of Rosamond Boulevard from 170 th Street W
PHOTO 6	Section 2B, view west along alignment 0.5 mile south of Rosamond Boulevard from 155 th Street W
PHOTO 7	Section 2C, view north along 160 th Street W from Holiday Avenue
PHOTO 8	Section 3, view north along 150 th Street W from Holiday Avenue
PHOTO 9	Section 3, view east along the Astoria Avenue alignment from 150 th Street W
PHOTO 10	Section 3, livestock enclosure at southeast corner of 150 th Street W and Astoria Avenue - view northeast
PHOTO 11	Section 3, GPS180 trash scatter, Astoria Avenue and 2 nd Avenue
PHOTO 12	Section 3, GPS182 trash scatter, Astoria Avenue and 1 st Avenue

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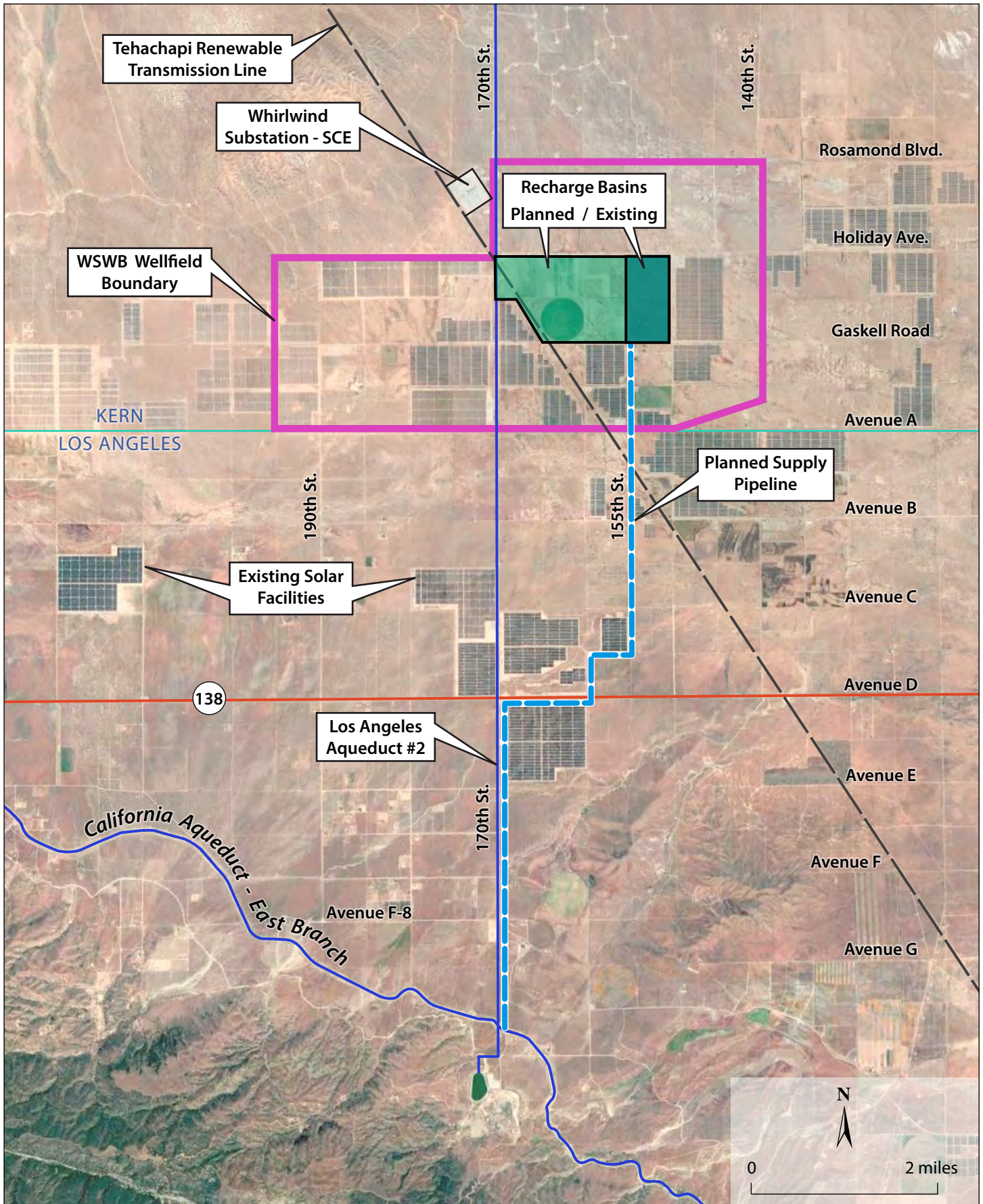
PHOTOS, con't

- PHOTO 13 Section 3, GPS183 trash scatter, Astoria Avenue and 1st Avenue
- PHOTO 14 Section 4A, view east along Kingbird Avenue from 155th Street W
- PHOTO 15 Section 4B, view north along 150th Street W from W Avenue A
- PHOTO 16 Section 5, view south along 140th Street W from Kingbird Avenue
- PHOTO 17 Section 6, view south along 140th Street W, from just north of W Avenue A-8
- PHOTO 18 Section 6, view east along W Avenue B from 140th Street W
- PHOTO 19 Section 6, GPS191, capped wellhead, W Avenue B
- PHOTO 20 Section 7, view north along 155th Street W from W Avenue C
- PHOTO 21 Section 7, view south along 155th Street W from W Avenue C
- PHOTO 22 Section 7, view east along W Avenue D (Hwy 138) from 160th Street W
- PHOTO 23 Section 7, water conveyance system and retention pond 155th Street W at W Avenue C-12
- PHOTO 24 Section 7, water conveyance system and retention pond 160th Street W at W Avenue D
- PHOTO 25 Section 8, view east along Kingbird Avenue from 170th Street W
- PHOTO 26 Section 8, view south along 165th Street from Kingbird Avenue
- PHOTO 27 Section 9, view east along alignment halfway between Kingbird Avenue and W Avenue A from 170th Street W
- PHOTO 28 Section 10, view north along 185th Street W from W Avenue A
- PHOTO 29 Section 11, view north along 190th Street W from W Avenue A



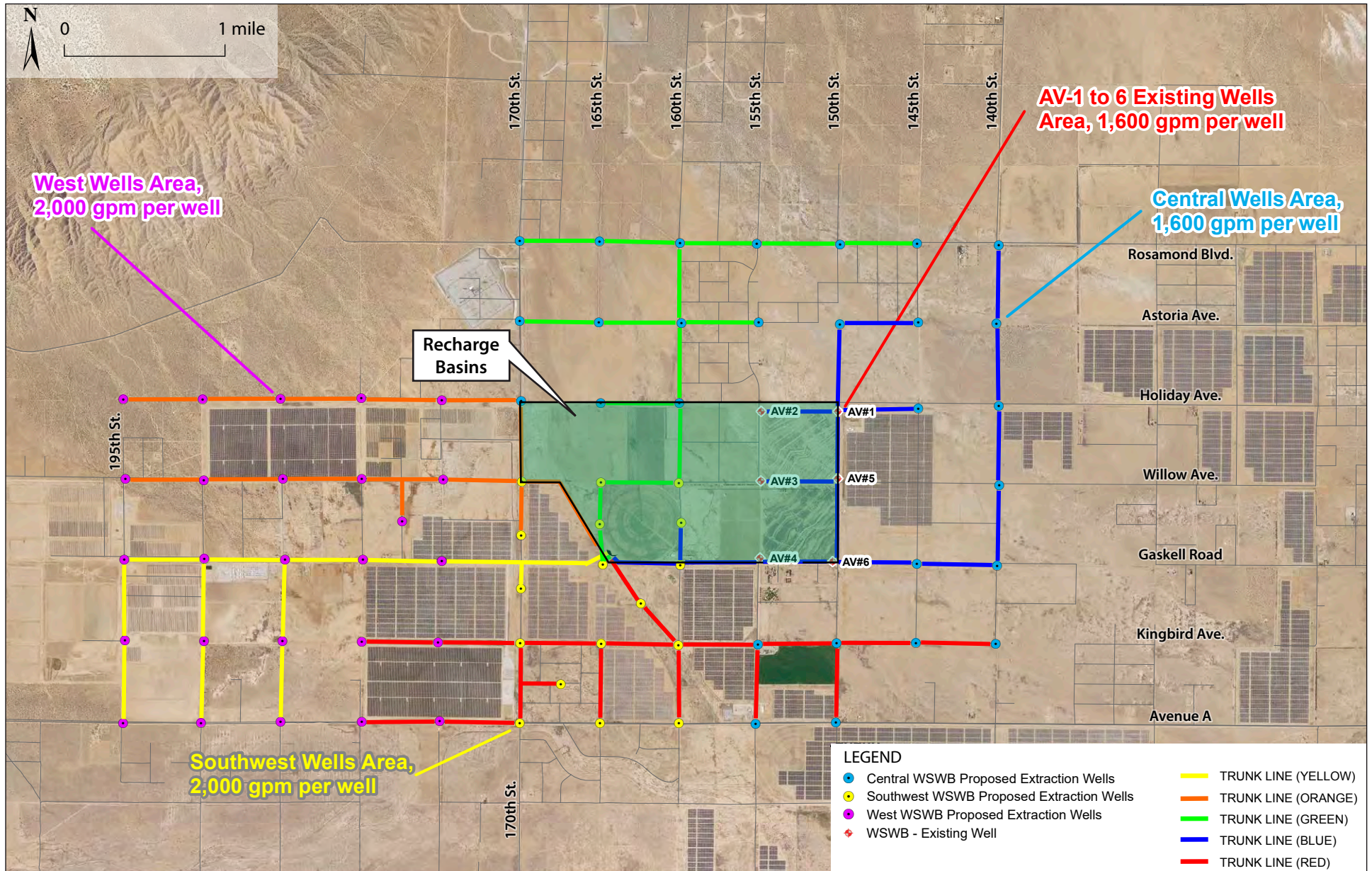
Source: Google Earth, 2018

Regional Location
Figure 1



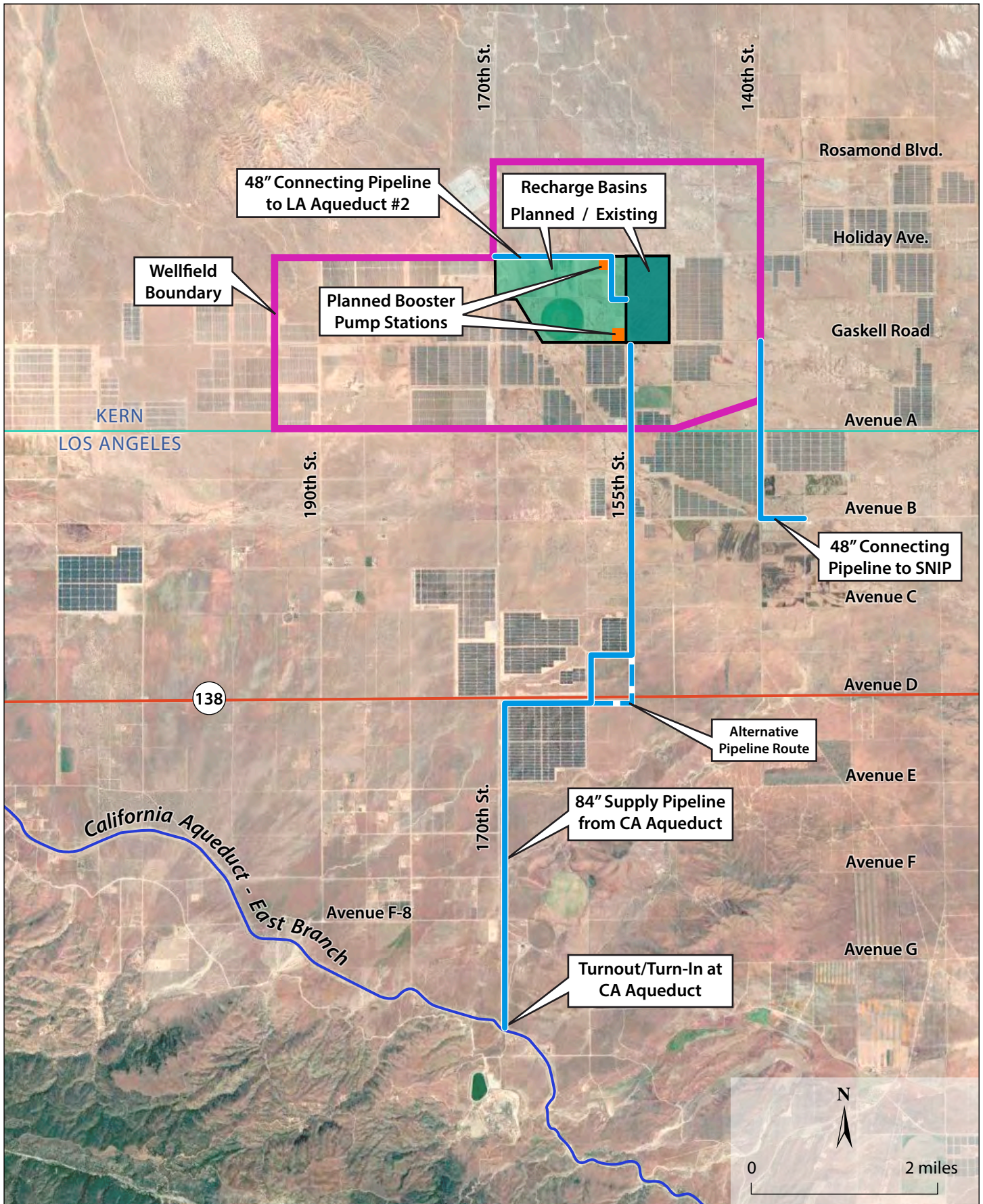
Sources: WSWB; Google Earth, 2018

Project Vicinity
Figure 2



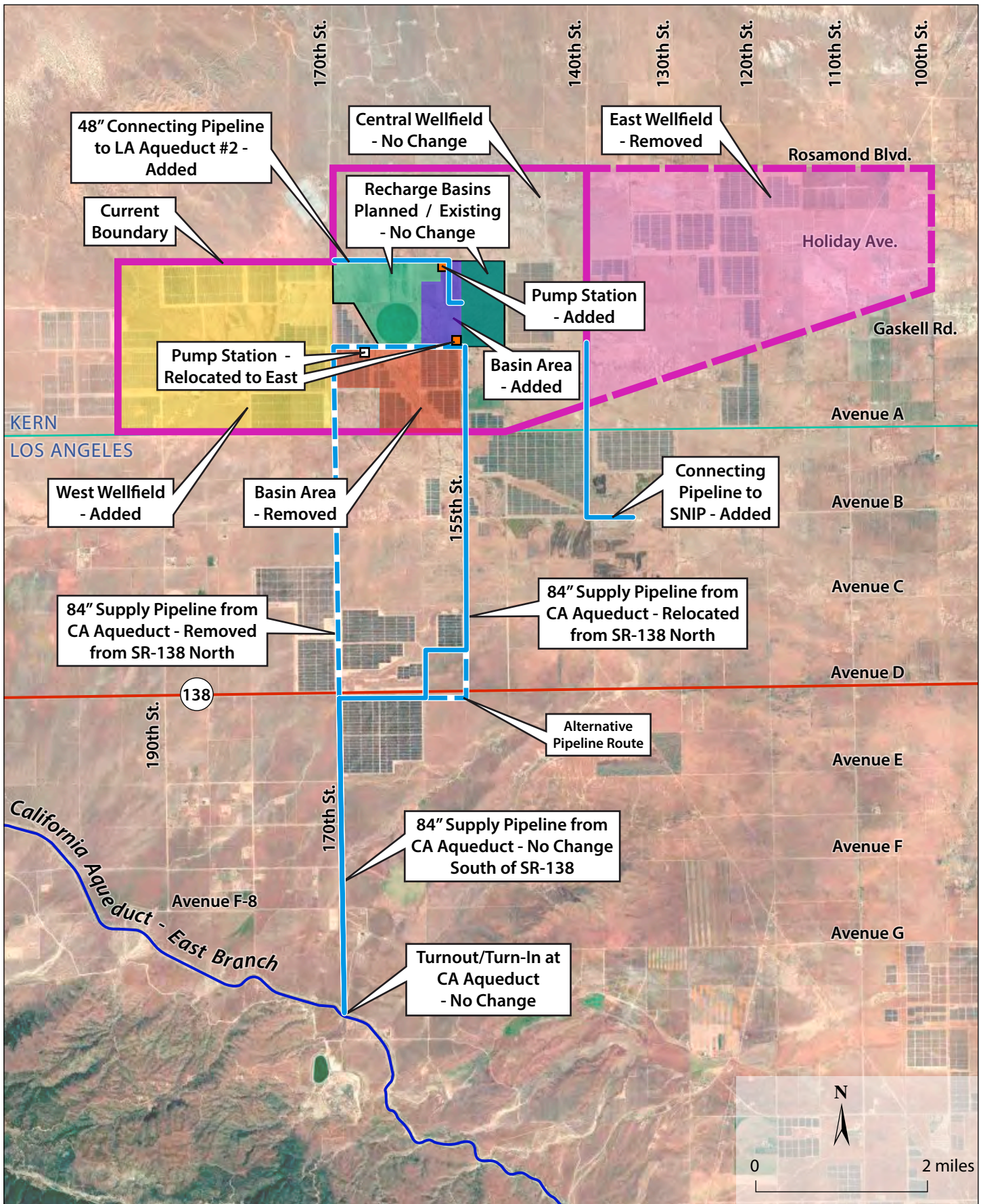
Source: WSWB, 2018

Planned Recovery Wells and Collection Pipes
Figure 3



Sources: WSWB; Google Earth, 2018

Planned External Connections and Facilities
Figure 4



Source: WSWB; Google Earth, 2018

**Modifications from 2006 Water Bank Plan
Figure 5**

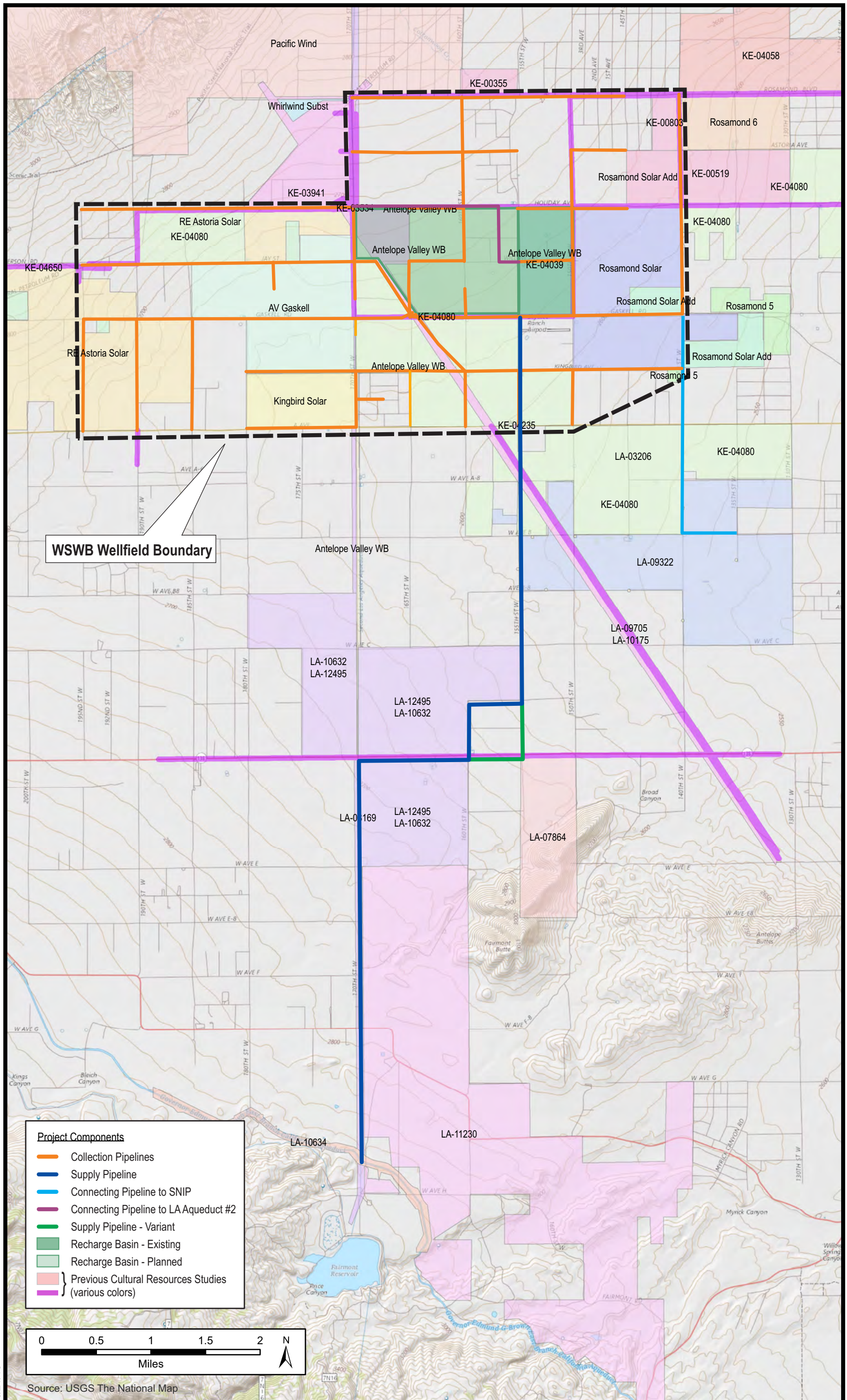


Figure 6: Planned Project with Previous Cultural Resources Studies in the Vicinity

Figures 7-1 through 7-3

[Note: These Figures have been removed from the public review version of this Cultural Resources Report because they show the locations of recorded cultural features which are to remain administratively confidential under State law. These Figures may be reviewed upon request at the Rosamond Community Services District.]

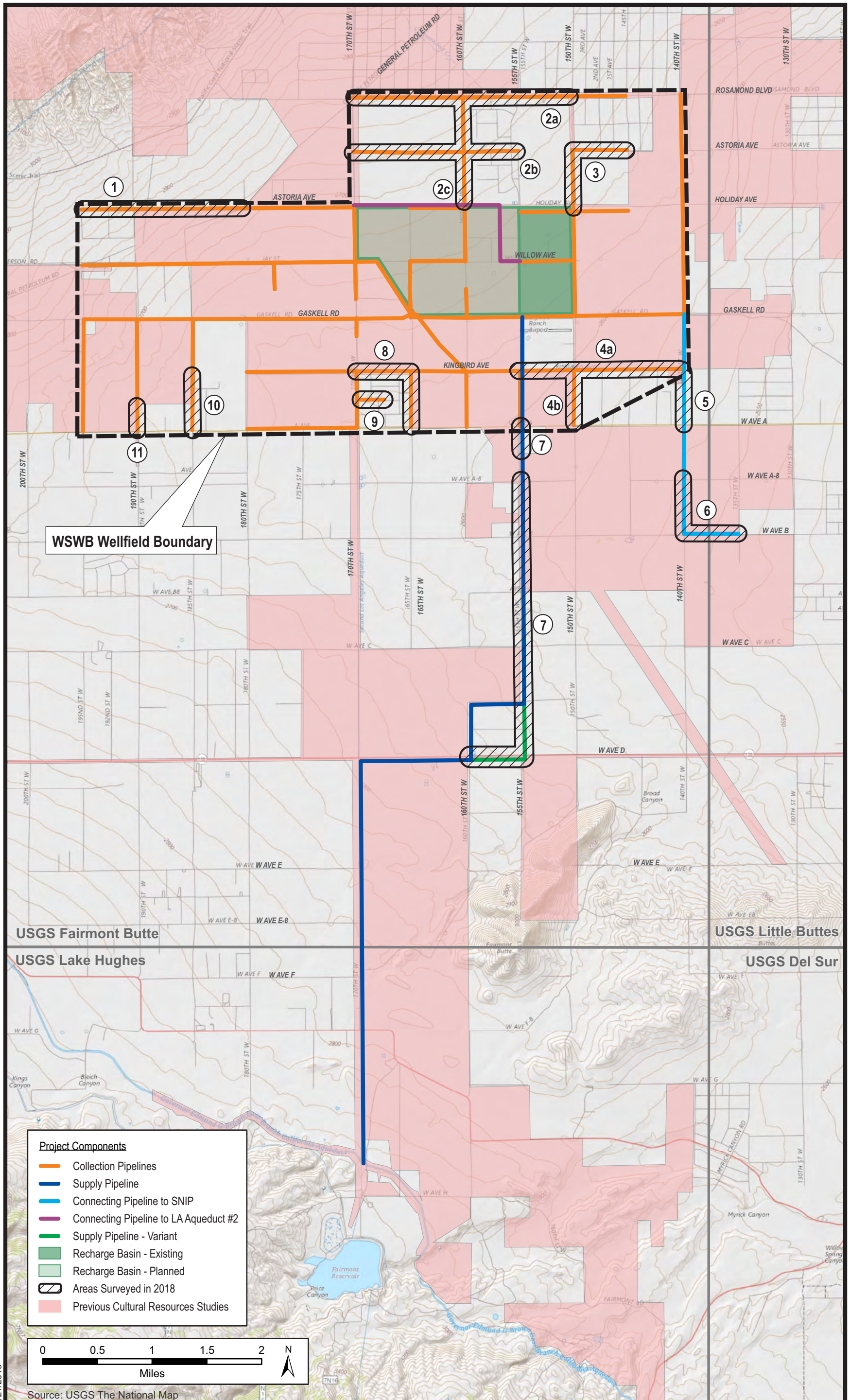


Figure 8: Project Components with Alignments Surveyed - 2018



Photo 1: Section 1, view west along the Astoria Avenue alignment, from 180th Street W



Photo 2: Section 1, view east along the Astoria Avenue alignment from the 195th Street W alignment



Photo 3: Section 2A, view east along Rosamond Boulevard from 170th Street W



Photo 4: Section 2A, view west along Rosamond Boulevard from 150th Street W



Photo 5: Section 2B, view east along alignment 0.5 mile south of Rosamond Boulevard from 170th Street W



Photo 6: Section 2B, view west along alignment 0.5 mile south of Rosamond Boulevard from 155th Street W



Photo 7: Section 2C, view north along 160th Street W from Holiday Avenue



Photo 8: Section 3, view north along 150th Street W from Holiday Avenue



Photo 9: Section 3, view east along the Astoria Avenue alignment from 150th Street W



Photo 10: Section 3, livestock enclosure at southeast corner of 150th Street W and Astoria Avenue - view northeast



Photo 11: Section 3, GPS180 trash scatter, Astoria Avenue and 2nd Avenue



Photo 12: Section 3, GPS182 trash scatter, Astoria Avenue and 1st Avenue



Photo 13: Section 3, GPS183 trash scatter, Astoria Avenue and 1st Avenue



Photo 14: Section 4A, view east along Kingbird Avenue from 155th Street W



Photo 15: Section 4B, view north along 150th Street W from W Avenue A



Photo 16: Section 5, view south along 140th Street W from Kingbird Avenue



Photo 17: Section 6, view south along 140th Street W, from just north of W Avenue A-8



Photo 18: Section 6, view east along W Avenue B from 140th Street W



Photo 19: Section 6, GPS191, capped wellhead, W Avenue B



Photo 20: Section 7, view north along 155th Street W from W Avenue C



Photo 21: Section 7, view south along 155th Street W from W Avenue C



Photo 22: Section 7, view east along W Avenue D (Hwy 138) from 160th Street W



Photo 23: Section 7, water conveyance system and retention pond 155th Street W at W Avenue C-12



Photo 24: Section 7, water conveyance system and retention pond 160th Street W at W Avenue D



Photo 25: Section 8, view east along Kingbird Avenue from 170th Street W



Photo 26: Section 8, view south along 165th Street from Kingbird Avenue



Photo 27: Section 9, view east along alignment halfway between Kingbird Avenue and W Avenue A from 170th Street W



Photo 28: Section 10, view north along 185th Street W from W Avenue A



Photo 29: Section 11, view north along 190th Street W from W Avenue A