



County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

Planning Commission Staff Report Agenda Item No. 3 August 8, 2019

SUBJECT: Initial Study Application No. 7608; Unclassified Conditional Use Permit Application Nos. 3642, 3644, 3645, 3646 and 3647; and Unclassified Conditional Use Permit No. 3643 (amending Conditional Use Permit No. 3590)

Allow the installation of four new covered lagoon anaerobic dairy digesters with related biogas conditioning equipment and biogas generators to produce electricity on four existing dairies; the installation of biogas conditioning equipment at a fifth dairy with an existing digester and generator; the construction of an approximately 10.5-mile underground pipeline to connect the participating dairies; and allow produced biomethane to be transported to a centralized hub where a biogas upgrading facility will be constructed to clean and condense the biogas before it is injected into the PG&E natural gas transmission line.

LOCATION: The project is bounded by the unincorporated communities of Five Points to the southwest, Helm to the north, Burrell to the northeast, and Lanare to the east and southeast; State Route 145 (Madera Avenue) on the west; Mount Whitney Avenue on the south; Jameson Avenue on the east; and Kamm Avenue on the north; within the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) and AE-40 (Exclusive Agricultural, 40-acre minimum parcel size) Zone Districts (SUP. DIST. 1 and 4) (Dairies: APN Nos. 040-130-51S, 050-160-16S, 050-270-56S, 050-170-41S, 050-260-12S, 040-130-35S) (Pipeline APN Nos. 040-130-35S, 49, 44S, 48S, 51S; 041-100-17, 45S; 050-160-13S, 16S; 050-170-41S; 050-200-38S; 050-230-20S, 23S; 050-260-10S, 11S, 12S; 050-270-56S).

OWNERS: Eric A. and Katelyn te Velde Revocable Family Trust
L&J Vanderham Dairy
Van Der Hoek Family Revocable Trust
Van der Kooi Family Trust
Dry Creek Holdings, LLC

APPLICANTS: Five Points Pipeline, LLC; Wilson Dairy Biogas LLC; Van der Kooi Dairy Power LLC; L&J Vanderham Dairy; and Van der Hoek Dairy Biogas LLC

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RECOMMENDATION:

- Adopt the Mitigated Negative Declaration prepared for Initial Study (IS) Application No. 7608; and
- Approve Unclassified Conditional Use Permit (CUP) Application Nos. 3642, 3644, 3645, 3646 and 3647; and Unclassified Conditional Use Permit No. 3643 (amending CUP No. 3590) with recommended Findings and Conditions; and
- Direct the Secretary to prepare a Resolution documenting the Commission’s action.

EXHIBITS:

1. Mitigation Monitoring, Conditions of Approval and Project Notes
2. Location Map
3. Existing Zoning Map
4. Existing Land Use Map
5. Site Plans and Detail Drawings
6. Elevation drawings
7. Applicant’s Operational Statements
8. Summary of Initial Study Application No. 7608
9. Draft Mitigated Negative Declaration

SITE DEVELOPMENT AND OPERATIONAL INFORMATION:

Criteria	Existing	Proposed
General Plan Designation	Agricultural	No change
Zoning	AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District and AE-40 (Exclusive Agricultural, 40-acre minimum parcel size) Zone District	No change
Parcel Sizes (participating dairies)	Open Sky Ranch - APN 050-170-41S – 518.45 acres	No change

Criteria	Existing	Proposed
Pipeline route (Excluding participating dairies)	<p>L&J Vanderham Dairy - APN 050-270-56S – 320.40 acres</p> <p>Van der Hoek Dairy – APN's 040-130-51S – 625.50 acres and 040-130-35S – 203.37 acres</p> <p>Van der Kooi Dairy - APN 050-160-16S – 470.10 acres</p> <p>J&D Wilson Dairy - APN 050-260-12S – 160.00 acres</p> <p>APN 040-130-49 – 554.65 acres APN 040-130-44S – 18.68 acres APN 040-130-48S – 20.00 acres APN 041-100-17 – 424.69 acres APN 041-100-45S – 316.45 acres APN 050-160-13S – 320.00 acres APN 050-200-38S – 576.21 acres APN 050-230-20S – 136.77 acres APN 050-260-10S – 314.57 acres APN 050-230-23S – 18.00 acres APN 050-260-11S – 480.22 acres</p>	
Project Site(s)	<ol style="list-style-type: none"> 1. APN 040-130-51S and 040-130-35S/Van der Hoek Dairy/CUP No. 3645: Approximately 190 acres dedicated to dairy operations 2. APN 050-160-16S/Van der Kooi Dairy/CUP No. 3646: Approximately 130 acres dedicated to dairy operations 3. APN 050-170-41S/Open Sky Dairy/CUP No. 3642, 43: Approximately 190 acres dedicated to dairy operations 4. APN 050-270-56S/Vanderham Dairy/CUP No. 3644: Approximately 107-acres dedicated to dairy operation 	<p>Approximately 3.7 acres including proposed digester facility and biogas conditioning/electrical generation facility</p> <p>Approximately 4.76 acres, including the proposed digester facility and biogas conditioning/electrical generation facility</p> <p>Approximately 0.5 acre, including proposed Hub/ biogas upgrade facility and injection point, and electrical generation facility</p> <p>Approximately 4.73 acres including proposed digester facility and biogas conditioning/electrical generation facility</p>

Criteria	Existing	Proposed
	<p>5. APN 050-260-12S/J&D Wilson Dairy/CUP No. 3647: Approximately 120 acres dedicated to dairy operation</p>	<p>Approximately 4.73 acres including proposed digester facility and biogas conditioning/electrical generation facility</p>
<p>Structural Improvements</p>	<p>Van der Hoek Dairy – APN 040-130-51S: Two wastewater/manure storage lagoons, shade structures, free-stall barns, approximately 6.5-acre ground-mount solar panel array, milk parlor, storage barns, three settling ponds, separator, two additional manure storage ponds, three single-family dwellings</p> <p>APN 040-130-35S: 400-foot by 400-foot lined storage pond</p> <p>APN 050-160-16S/Van der Kooi Dairy: Six free-stall barns, one milking parlor, four wastewater/manure storage lagoons, approximately 5.8-acre ground-mount solar array, one single-family dwelling</p> <p>APN 050-170-41S/Open Sky Dairy/Biogas Hub: Free-stall barns/exercise pens, mechanical separation/manure drying area, biogas scrubbing facility, anaerobic digester, calf pens, shop, open-lot corral and sheds, hay barns, commodity barn, feed storage area, wastewater retention ponds, five single-family dwellings (mobile homes)</p>	<p>Installation of a 200-foot by 20-foot sand lane; and drain, dual screen separator, emergency overflow pipe, process pit, manure pipeline to digester, and effluent line connecting digester to existing storage pond on APN 040-130-35S</p> <p>Convert existing pond to a 400-foot by 400-foot covered lagoon digester, and install a new 2,400 square-foot prefabricated metal building to house a biogas generator, blower and chilling equipment and moisture trap on a concrete pad</p> <p>Convert existing storage pond to a 1,080-foot by 190-foot covered lagoon digester, and install a new 2,400 square-foot prefabricated metal building to house a biogas generator, blower and chilling equipment and moisture trap on a concrete pad</p> <p>Addition of an approximately 3,150 square-foot biogas electrical generation facility, with three biogas generators, biogas conditioning equipment, within a 20-foot-tall, 3,150 square-foot metal building,</p>

Criteria	Existing	Proposed
	<p>APN 050-270-56S/Vanderham Dairy: free-stall barns/exercise pens, mechanical separation and manure drying area, one wastewater/manure storage pond, two settling ponds, shade structures, separator, storage barns, milk parlor, process pit, one single-family dwelling</p> <p>APN 050-260-12S/Wilson Dairy: free-stall barns/exercise pens, mechanical separation/manure drying area, biogas scrubbing facility, anaerobic digester, calf pens, shop, open-lot corral and sheds, hay barns, commodity barn, feed storage area, and wastewater retention ponds</p>	<p>and an electrical switch gear and a 20,800 square-foot biogas upgrading facility including the following improvements: a sulfur dioxide (H₂S) scrubber with a 67-foot-tall exhaust stack, and 15-foot-tall secondary H₂S scrubber, CO₂ stripper, and moisture remover, a 20-foot-tall bioreactor, a ten-foot-tall chiller/re-heater, blower skid, pump house, 15-foot-tall Motor Control Center (MCC) building, 8-foot-tall chiller fans, three ten-foot-tall biogas feed compressors, and a ten-foot-tall CO₂ membrane skid, input pipeline to and PG&E point of injection and reception</p> <p>Convert two existing settling ponds to one 1,630-foot by 125-foot covered lagoon digester, and install a new 2,400 square-foot prefabricated metal building to house a biogas generator, blower and chilling equipment and moisture trap on a concrete pad</p> <p>Convert two existing settling ponds to one 1,630-foot by 125-foot covered lagoon digester, a 200-foot by 20-foot raised sand lane, and a new 2,400 square-foot prefabricated metal building to house a biogas generator, blower and chilling equipment and moisture trap on a concrete pad</p>

Criteria	Existing	Proposed
Nearest Residence	<p>Open Sky Dairy/Hub (CUP Nos. 3642 and 3643): There are five residential dwellings located in the northeast corner of the subject property approximately 2,000 feet northeast of the digester and 2,300 feet north of the upgrading facility, electrical generation facility and pipeline interconnection</p> <p>L&J Vanderham Dairy (CUP No. 3644): There is one residential dwelling located approximately 1,700 feet southwest of the proposed digester and related improvements</p> <p>Van der Hoek Dairy (CUP No. 3645): There are three residential dwellings located on the subject property, one located on APN 040-130-51S approximately one half-mile northwest and two located approximately 2,100 feet west-northwest of the proposed digester and related improvements</p> <p>Van Der Kooi Dairy (CUP No. 3646): There is one residential dwelling located approximately 1,400 feet north of the proposed digester and related improvements</p> <p>J&D Wilson Dairy (CUP No. 3647): There is one dwelling unit located on an adjacent parcel approximately 0.63 miles southeast of the proposed digester and related improvements</p>	No change
Surrounding Development	Farmland consisting of scattered residential development, large parcels containing various agricultural operations, including active dairy operations, orchards and field crops, and an agricultural aviation operation	No change
Operational Features	Open Sky Ranch - APN 050-170-41S – 518.45 acres: Milk is produced and trucked off site for processing into dairy products. The dairy has an approximate herd size of 6,767 cows, and produces approximately 176,000 gallons per day total process wastewater, per the Waste	Addition and operation of biogas conditioning equipment (CUP No. 3643), a biogas upgrade facility, electrical generation facility, biogas injection point and meter set to connect with PG&E

Criteria	Existing	Proposed
	<p>Management Plan dated October 18, 2012.</p> <p>L&J Vanderham Dairy - APN 050-270-56S – 320.40 acres: Milk is produced and trucked off site for processing into dairy products. The dairy has an approximate herd size of 6,767 cows, and produces approximately 176,000 gallons per day total process wastewater, per the Waste Management Plan dated October 18, 2012.</p> <p>Van der Hoek Dairy - APN 040-130-51S – 625.50 acres, and APN 040-130-35S – 203.37 acres: Milk is produced and trucked off site for processing into dairy products. The dairy has an approximate herd size of 4,140 cows, and produces approximately 251,763 gallons per day total process wastewater, per the Waste Management Plan dated June 6, 2010.</p> <p>Van der Kooi Dairy - APN 050-160-16S – 470.10 acres: Milk is produced and trucked off site for processing into dairy products. The dairy has an approximate herd size of 3,680 cows, and produces approximately 147,000 gallons per day total process wastewater, per the Applicant.</p> <p>J&D Wilson Dairy - APN 050-260-12S – 160.00 acres: Milk is produced and trucked off site for processing into dairy products. The dairy has an approximate herd size of 4,232 cows, and produces approximately 178,104 gallons per day total process wastewater, per the Waste Management Plan dated June 26, 2009.</p>	<p>main gas line, and a portion of a biogas pipeline traversing the parcel and connected to an existing digester (CUP No. 3642)</p> <p>Addition of covered lagoon digester, biogas conditioning equipment and a biogas generator to produce electricity for the grid</p> <p>Addition of covered lagoon digester, biogas conditioning equipment and a biogas generator to produce electricity for the grid</p> <p>Addition of covered lagoon digester, biogas conditioning equipment and a biogas generator to produce electricity for the grid</p> <p>Addition of covered lagoon digester, biogas conditioning equipment and a biogas generator to produce electricity for the grid</p>
Employees	Open Sky Ranch - 38	CUP No. 3642: additional 10-20 employees during construction of the upgrade facility and 10 employees during construction of the pipeline

Criteria	Existing	Proposed
	<p>Vanderham Dairy – 28</p> <p>Van der Hoek – 26</p> <p>Van Der Kooi – 27</p> <p>Wilson Dairy - 25</p>	<p>CUP No. 3643: 5-10 employees during construction/installation of equipment</p> <p>CUP No. 3644: additional 10-20 employees during construction</p> <p>CUP No. 3645: additional 10-20 employees during construction</p> <p>CUP No. 3646: additional 10-20 employees during construction</p> <p>CUP No. 3647: additional 10-20 employees during construction</p> <p>All dairy sites including the Hub: one employee will make daily site inspections; no permanent employees will live on site</p>
Customers	None	No change
Traffic Trips	<p>Open Sky Ranch Dairy: Estimated 61 round trips per day</p> <p>Van der Hoek Dairy: Estimated 38 round trips per day</p> <p>Vanderham Dairy: Estimated 50 round trips per day</p> <p>Van der Kooi Dairy: Estimated 39 round trips per day</p> <p>Wilson Dairy: Estimated 40 round trips per day</p> <p>*Estimated traffic trips include milk trucks, feed trucks, breeder trucks, service vehicles, and personal/employee vehicles.</p>	<p>Construction: An additional 20-27 daily round trips by employees during construction of the pipeline and for each dairy site</p> <p>Operation: An additional once daily round trip service truck for each site, and an additional two monthly round trips for delivery and disposal</p>
Lighting	Outdoor lighting associated with existing dairy operations	Additional security lighting at Hub site for scrubber

Criteria	Existing	Proposed
		equipment area and electrical generator area
Hours of Operation	24 hours per day, seven days per week	No change

EXISTING VIOLATION (Y/N) AND NATURE OF VIOLATION: N

ENVIRONMENTAL ANALYSIS:

An Initial Study (IS) was prepared for the project by County staff in conformance with the provisions of the California Environmental Quality Act (CEQA). Based on the Initial Study, staff has determined that the proposed project will not have a significant effect on the environment and a Mitigated Negative Declaration is appropriate. A summary of the Initial Study is included as Exhibit No. 8.

Notice of Intent to adopt a Mitigated Negative Declaration publication date: June 26, 2019.

During the review of the Initial Study, the California Department of Fish and Wildlife requested additional mitigation measures for potential impacts to fish and wildlife. These additional mitigation measures have been added to the Mitigation Monitoring and Reporting matrix and are shown in bold type in the attached Initial Study.

PUBLIC NOTICE:

Notices were sent to 38 property owners within 1,320 feet of the subject parcels, exceeding the minimum notification requirements prescribed by the California Government Code and County Zoning Ordinance.

PROCEDURAL CONSIDERATIONS:

Unclassified Conditional Use Permit Applications may be approved only if four Findings specified in the Fresno County Zoning Ordinance, Section 873-F are made by the Planning Commission.

The decision of the Planning Commission on Classified and Unclassified CUP Applications is final, unless appealed to the Board of Supervisors within 15 days of the Commission’s action.

BACKGROUND INFORMATION:

The project proposes to install and operate a series of covered lagoon digesters, along with biogas conditioning equipment and biogas generator(s) at four of the five dairy sites, a low-pressure underground gas pipeline to connect the five digesters, and allow each dairy to export biogas produced on the dairy to a central location via the pipeline. The proposed biogas generators will allow each dairy to produce electrical power to be exported to the PG&E grid directly from each individual dairy site.

The project area encompasses five separate existing dairies, and a number of contiguous and non-contiguous parcels adjacent to the dairies for the installation of the gas pipeline. All of the participating dairies are located on land which is restricted under Williamson Act Contract, and

as such, notices of non-renewal were recorded for the portions of the respective parcels involved in this project, including the parcels to be traversed by the proposed pipeline. The existing dairies are described as follows:

Unclassified Conditional Use Permit (CUP) Nos. 3642 and 3643: The Open Sky Ranch (Dairy) (APN 050-170-41S) is an existing dairy operation on a 518.45-acre parcel located southwest of the intersection of West Elkhorn Avenue and Elkhorn Grade, and southerly and westerly adjacent to the Fresno Slough. The Open Sky Dairy has a current total herd size of approximately 6,767 cows, including milking cows, dry cows, heifers and calves. The dairy is authorized for a maximum herd size of 10,411 animals per its Waste Management Plan dated October 18, 2012. The dairy contains an approximately 29-million-gallon covered lagoon digester and a biogas generator. The use of the generator to produce electrical power for sale to the grid was authorized by previously-approved Conditional Use Permit No. 3590, approved January 25, 2018, which also included an increase of approximately 700 mature milk cows to the herd size.

CUP No. 3642 proposes the installation of a biogas pipeline connecting five existing dairies, the installation of a biogas upgrading facility to clean the gas and remove hydrogen sulfide, an electrical generation facility to generate renewable electrical power to be sold to the grid, metering equipment to monitor gas quality, and an injection point (Hub) to allow the biogas collected from each of the five connected dairies to be injected into the PG&E main gas transmission line.

CUP No. 3643 will amend CUP No. 3590, and proposes to allow the addition of biogas conditioning equipment to chill, condense, and remove moisture from the collected biogas before it is added to the pipeline.

CUP No. 3644, L&J Vanderham Dairy, is an existing dairy operation located on a 320.40-acre parcel (APN 050-270-56S). The dairy is authorized for up to 5,300 cows, per Director Review and Approval No. 4514, and is located on a 320.40-acre parcel. The dairy has an approximate herd size of 3,335 cows and contains two uncovered lagoons which will be combined and converted in a larger single covered lagoon digester with an approximate 21-million-gallon holding capacity. The current application involves the modification of the existing commercial dairy operation to include the conversion of an existing wastewater retention pond to a covered lagoon digester, the addition of biogas conditioning equipment, and a biogas engine to produce electrical power to be sold to the PG&E grid and for use in the dairy operation.

CUP No. 3645, Van der Hoek Dairy, is an existing dairy operation located on a 625.50-acre parcel (APN 040-130-51S), and has an authorized herd size of 4,140 mature milk cows. The dairy contains a storage pond which will be converted into a covered lagoon digester with an approximate 22-million-gallon holding capacity. The current application involves the modification of the existing commercial dairy operation to include the conversion of an existing wastewater retention pond to a covered lagoon digester, the addition of biogas conditioning equipment, and a biogas engine to produce electrical power to be sold to the PG&E grid and for use in the dairy operation.

CUP No. 3646, Van der Kooi Dairy, is an existing dairy operation located on a 470.10-acre parcel (APN 050-160-16S), and has an authorized herd size of 3,680 mature milk cows. The dairy contains a storage pond which will be converted into a covered lagoon digester with an approximate 22-million-gallon holding capacity. The current application involves the modification of the existing commercial dairy operation to include the conversion of an existing wastewater retention pond to a covered lagoon digester, the addition of biogas conditioning

equipment, and a biogas engine to produce electrical power to be sold to the PG&E grid and for use in the dairy operation.

CUP No. 3647, J&D Wilson and Sons Dairy/Dry Creek Holdings, LLC, is an existing dairy operation located on a 160-acre parcel (APN 050-260-12S), and has an authorized herd size of 4,232 mature milk cows. The dairy contains a storage pond with an approximate 21-million-gallon storage capacity. The current application involves the modification of the existing commercial dairy operation to include the conversion of an existing wastewater retention pond to a covered lagoon digester, the addition of biogas conditioning equipment, and a biogas engine to produce electrical power to be sold to the PG&E grid, and for use in the dairy operation.

The overall project (CUP Nos. 3642-3647) proposes to allow the construction of a 10.5-mile-long underground pipeline to collect and convey biogas generated from on-site anaerobic digestion of manure at the participating dairies, where existing wastewater retention ponds will be modified, in some cases increased in capacity, and converted into four new covered lagoon anaerobic digesters. Each digester site will include the addition of biogas conditioning equipment, and a biogas generator, which will burn the conditioned biogas to produce electricity for the dairy operation, the balance of which will be sold to PG&E through a net-metering agreement, and distributed to the electrical grid through new on-site utility connections. The underground biogas pipeline will be comprised of a collection of gathering pipelines, and will utilize four-inch- to six-inch-diameter high-density polyethylene (HDPE) low-pressure lines connecting the five participating dairies to the pipeline and Central Hub facility.

The project also proposes the installation of a biogas upgrading facility and injection point, so that the cleaned and conditioned biogas can be injected into the PG&E main gas transmission line which traverses a portion of the Open Sky Ranch dairy site. Before the biogas is injected into the main transmission line, it will be treated (upgraded) to remove hydrogen sulfide, carbon dioxide (CO₂), and moisture, and will then be compressed before being injected. The Hub facility will also include the installation of a Meter Set Assembly (MSA) which will measure, odorize and control the flow of biogas to the PG&E pipeline.

Additionally proposed is an electrical generation facility at the Open Sky Ranch dairy, which entails the installation of up to three additional biogas generators and ancillary equipment, similar to the upgrading facility, to condition the biogas by removing moisture and reducing hydrogen sulfide before it is utilized in the generators. The electrical generation facility will require new or upgraded service and connection equipment from PG&E, including the installation of new utility poles, and an electrical switchgear. The biogas generators are internal combustion engines which will burn the conditioned biogas to create electricity to be sold to PG&E through the Bioenergy Market Adjusting Tariff (Bio Mat) via a net energy metering agreement. The engines will operate continuously except for during routine maintenance. The biogas generators will employ catalytic converters to treat the exhaust emissions from combustion.

Each digester will utilize a blower to force the biogas into the gathering lines. The gathering lines will be remotely monitored to detect leaks or changes in pressure. The pipeline will be required to register with Underground Service Alert (USA) prior to excavation. The pipeline will have marker posts installed every 700 feet, tracer wire will be installed with the pipeline so that it can be more easily located, and marker tape will be installed one foot above the pipeline in order to notify excavation workers of its location. The pipeline will be buried at a minimum depth of four feet, except where greater depth is necessary, such as under County road right-of-way crossings and canal crossings.

The pipeline route will traverse a total of 17 parcels, including those containing the five participating dairies, make approximately five (5) County road right-of-way crossings, and approximately eight (8) irrigation canal crossings.

Construction of the Hub/Upgrading facility, electrical generation facilities, pipeline and participating digesters is anticipated to take approximately 10 months to complete, and once complete, will operate 24 hours per day, seven days per week.

Finding 1: *That the site of the proposed use is adequate in size and shape to accommodate said use and all yards, spaces, walls and fences, parking, loading, landscaping, and other features required by this Division, to adjust said use with land and uses in the neighborhood*

	Current Standard:	Proposed Operation:	Is Standard Met (y/n)
Setbacks	Front: 35 feet Side: 20 feet Rear: 20 feet	<p>Van der Hoek Dairy: Front (north): 120 feet +/-, Side (west): 2,050 feet, Side (east): 60 feet, Rear (south): 0.75 miles +/-</p> <p>Van Der Kooi Dairy: Front (north): 2,000 feet +/-, Side (west): 850 feet +/-, Side (east): 1,800 feet +/-, Rear (south): 0.60 miles</p> <p>Open Sky Dairy: Front (north): 0.55 miles, Side (west): 1.00 mile, Side (east): 42 feet +/-, Rear (south): 1,000 feet +/-</p> <p>J&D Wilson Dairy: Front (south): 0.45 miles, Side (west): 615 feet +/-, Side (east): 1,960 feet +/-, Rear (north): 395 feet +/-</p> <p>Vanderham Dairy: Front (south): 0.43 miles +/-, Side (west): 702 feet +/-, Side (east): 297 feet +/-, Rear (north): 0.55 miles</p>	Yes
Parking	One parking space for every two permanent employees and one parking space for each company-owned vehicle	No change	Yes

	Current Standard:	Proposed Operation:	Is Standard Met (y/n)
Lot Coverage	No requirement	N/A	N/A
Space Between Buildings	Separation between animal shelter and structures used for human habitation: minimum of 40 feet	No change	Yes
Wall Requirements	No requirement	N/A	N/A
Septic Replacement Area	100 percent of the existing system	No change	Yes
Water Well Separation	Septic tank: 50 feet Disposal field: 100 feet Seepage pit: 150 feet	No changes proposed to water wells or septic systems	Yes

Reviewing Agency/Department Comments Regarding Site Adequacy:

Building and Safety Plan Check Section of the Fresno County Department of Public Works and Planning: Plans, permits, and inspections will be required for all on-site improvements on each property.

Development Engineering Section of the Fresno County Department of Public Works and Planning: CUP No. 3642 and CUP No. 3643 (APN 050-170-41S): According to FEMA, FIRM Panel 2850J, effective date January 20, 2016, portions of the subject parcel are shown as being in flood hazard Zone A, which is subject to flooding from the 100-year storm. Any work taking place within the flood hazard zone must comply with the provisions of the Fresno County Flood Hazard Ordinance, Fresno County Ordinance Code Section 15.48. Any structure, tank, electrical panels or other equipment placed within the flood hazard area will require an elevation certificate (1988 Datum) prepared by a licensed land surveyor.

According to USGS Quad Maps, there are natural drainage channels adjacent to or traversing some of the parcels to be traversed by the pipeline.

CUP No. 3644 (APN 050-270-56S), CUP No. 3646 (APN 050-160-16S), and CUP No. 3647 (APN 050-260-12S): According to FEMA, FIRM Panel 2850J, portions of the subject parcel are within Flood Zone A, which is subject to flooding from the 100-year storm event, and must comply with the provisions of the Fresno County Flood Hazard Ordinance, Fresno County Ordinance Code Section 15.48. The following parcels, to be traversed by the proposed pipeline, are also subject to flooding from the 100-year storm: APNs 050-260-11S and 050-200-38S.

CUP No. 3645 (APN 040-130-51S): According to FEMA, FIRM Panel 2575H, the subject parcel is not subject to flooding from the 100-year storm event. According to USGS Quad Maps, there are natural drainage channels adjacent to or traversing some of the subject parcels.

According to FEMA, FIRM Panel 2850J, effective date January 20, 2016, the following parcels are shown as being in Flood Zone A, which is subject to flooding from the 100-year storm event:

APNs 050-260-11S, 050-270-56S, and 050-200-38S. Any work proposed within the Flood Zone must comply with the provisions for flood hazard reduction, Chapter 15.48.080 of the Fresno County Ordinance Code. Any construction placed in the flood hazard area will require pre- and post-construction elevation certificates (1988 Datum) prepared by a registered civil engineer or licensed surveyor.

No other comments specific to the adequacy of the site were expressed by reviewing Agencies or Departments.

Analysis:

CUP No. 3642/Open Sky Dairy

CUP No. 3642 entails the addition of a biogas upgrade facility and electrical generation facility to be located on APN No. 050-170-41S, and an approximately 10.5-mile-long underground biogas pipeline traversing the site, which will be constructed of four-inch- to six-inch-diameter high-density polyethylene (HDPE) low-pressure lines connecting the five participating dairies to the Central Hub facility on APN 050-170-41S, thereby allowing each dairy to contribute conditioned biogas to the gathering lines on each site and be transmitted via the pipeline to the Central Hub. The pipeline will be buried at a minimum depth of four feet, except where greater depth is necessary.

The biogas upgrading facility will occupy approximately 20,800 square feet, and be located in the southeastern quadrant of the subject parcel, situated approximately 50 feet from the property line, adjacent to Elkhorn Grade which runs along the eastern boundary of the parcel, meeting the setback requirements of the AE-20 Zone District. The existing lagoon digester is located near the southwest quadrant of the subject parcel, approximately, 1,780 feet northwest of the proposed biogas upgrade facility and PG&E pipeline injection point.

CUP No. 3643/Open Sky Dairy

CUP No. 3643 will amend previously-approved CUP No. 3590, and entail the installation of biogas conditioning equipment consisting of a blower and chiller which will be housed in an existing 25-foot by 25-foot 625 square-foot prefabricated steel mechanical building containing an existing biogas generator. Other exterior supporting equipment will include a moisture trap and concrete pad. The moisture trap will reduce the amount of water in the biogas. The chiller and condenser will condense the water in the biogas before the gas is pushed into the biogas gathering line via the blower. The Open Sky Dairy contains a covered lagoon digester with a holding capacity of approximately 28,970,120 gallons.

According to the Applicant's Operational Statement, the Open Sky site previously operated as a dairy biogas injection facility, and will be recommissioned as part of this project. The Open Sky Dairy has a current total herd size of approximately 3,786 animals.

For each of the four dairies where new digesters are proposed (CUP Nos. 3644, 3645, 3646, and 3647), the follow improvements will be common to all of the four dairies:

The digesters will be created by installing a double lining made of High-Density Polyethylene (HDPE) with leak-detection sensors and a sealed cover, also made of HDPE, to capture the biogas. All digester ponds are subject to California Regional Water Quality Control Board (RWQCB) Tier 1 standards and approval from RWQCB.

The biogas conditioning equipment proposed to be installed at each dairy includes a biogas pipe, moisture trap and pad, biogas blower and chiller/condenser to be housed in an approximately 60-foot by 40-foot 2,400 square-foot prefabricated steel building. Site improvements will entail a modification of the existing liquid manure handling system, including a manure sand lane, various 8-inch to 24-inch manure pipes, and an 8-inch biogas pipe. The manure sand lanes, which are gravity flow channels designed to separate manure from the sand bedding utilized for the herd, will be approximately 200 feet long by 20 feet wide, and include a six-inch-thick concrete slab and four-foot-tall push wall. The concrete slabs will be installed on a slope of 1 to 3 % to allow the manure to flow at a consistent speed. The sand lanes are designed to slow the flow of flushed manure and capture inorganic material.

Additionally, biogas generator engines will be installed to produce electricity from the biogas, which will then be delivered to the PG&E grid under the Bioenergy Market Adjusting Tariff (Bio Mat) net energy metering with aggregation or other exporting tariff.

The biogas generators will be capable of producing approximately 800-1,000 kilowatts of electrical power. Exhaust from the generators will be treated through the use of a Selective Catalytic Reduction (SCR) system. In addition, there is supporting equipment for the electrical power generation, including, but not limited to, a transformer, utility poles per PG&E requirements, and any other essential equipment. Construction of this digester and power generation operation is expected to take approximately 7 months and employ 5-10 people. Remote sensing and monitoring of the equipment will be provided, and at least one employee will conduct regular daily inspections during business hours.

The following paragraphs describe the characteristics and proposed improvements specific to each individual dairy site:

CUP No. 3644/L&J Vanderham Dairy

CUP No. 3644 involves an existing operation located on a 320.40-acre parcel (APN 050-270-56S). The dairy has a herd size of approximately 3,335 mature milk cows. The project proposes the conversion of two existing manure storage ponds to a 1,630-foot by 125-foot by 25-foot-deep covered lagoon digester with a holding capacity of approximately 21 million gallons, and the installation of a sand lane, 8-inch to 24-inch manure pipes, biogas pipes, moisture trap and pad, biogas blower and chilling equipment, along with a biogas generator and supporting equipment to be housed in a new 2,400 square-foot prefabricated steel mechanical building.

The proposed digester involves the conversion of two existing storage ponds to a 1,630-foot by 125-foot by 25-foot covered lagoon digester with a liquid volume capacity of approximately 21,027,058 gallons, and an energy output capacity of 65,882 MMBtu annually.

CUP No. 3645/Van der Hoek Dairy

CUP No. 3645 involves an existing commercial dairy operation located on a 625.50-acre parcel (APN 040-130-51S) and a 203.37-acre parcel (APN 040-130-350), and has an approximate herd size of 4,140 mature milk cows. The project proposes the conversion of an existing 400-foot by 400-foot by 20-foot-deep manure storage pond to a covered lagoon digester with a holding capacity of approximately 21 million gallons, the installation of 8-inch to 24-inch manure pipes, biogas pipes, moisture trap and pad, biogas blower and chilling equipment, along with a biogas generator and supporting equipment to be housed in a new 2,400 square-foot steel prefabricated mechanical building and located on APN 040-130-35S. A raised sand lane and

dual screen separator are proposed to be located on APN 040-130-51S. Some of the manure pipes will traverse the boundary between the two parcels, as will the primary biogas pipeline.

CUP No. 3646/Van der Kooi Dairy

CUP No. 3646 proposes the modification of an existing commercial dairy operation located on a 470.10-acre parcel (APN 050-160-16S) which has an authorized herd size of 3,680 mature milk cows. This proposal entails the conversion of an existing 1,080-foot by 190-foot by 20-foot-deep manure storage pond to a covered lagoon digester with a holding capacity of approximately 22 million gallons, the installation of a sand lane, 8-inch to 24-inch manure pipes, biogas pipes, moisture trap and pad, biogas blower and chilling equipment, along with a biogas generator and supporting equipment to be housed in a new 2,400 square-foot prefabricated steel mechanical building.

CUP No. 3647

CUP No. 3647, J&D Wilson and Sons Dairy/Dry Creek Holdings, LLC, is an existing commercial dairy operation located on a 160-acre parcel (APN 050-260-12S), and has an approximate herd size of 4,232 mature milk cows. This proposal entails conversion of an existing 1,630-foot by 125-foot by 25-foot-deep manure storage pond to a covered lagoon digester with holding capacity of approximately 21 million gallons, the installation of a sand lane, 8-inch to 24-inch manure pipes, biogas pipes, moisture trap and pad, biogas blower and chilling equipment to be housed in a new 2,400 square-foot steel prefabricated mechanical building along with the biogas powered generator and supporting equipment.

Staff review of the site plans demonstrates that all of the proposed improvements at each participating dairy will satisfy the minimum setback requirements from adjacent property boundaries and County road rights-of-way. The subject parcels are adequate in size and shape to accommodate the proposed addition/conversion of existing ponds to lagoon digesters, and installation of appurtenant structures, including electrical generation facilities, biogas conditioning equipment and pipeline interconnections.

Recommended Conditions of Approval:

See recommended Conditions of Approval attached as Exhibit 1.

Conclusion:

Finding 1 can be made.

Finding 2: *That the site for the proposed use relates to streets and highways adequate in width and pavement type to carry the quantity and kind of traffic generated by the proposed use*

		Existing Conditions	Proposed Operation
Private Road	No	N/A	N/A
Public Road Frontage	Yes	See description of road segments (below)	No change

		Existing Conditions	Proposed Operation
Direct Access to Public Road	Yes	See description of road segments (below)	No change
Road ADT		See description of road segments (below)	No change
Road Classification		See description of road segments (below)	No change
Road Width		See description of road segments (below)	No change
Road Surface		See description of road segments (below)	No change
Traffic Trips		N/A	Estimated 10-12 one-way (20-24 two-way) employee trips and up to 27 round trip truck trips during construction
Traffic Impact Study (TIS) Prepared	No	No TIS required at this time	N/A
Road Improvements Required		Not required	N/A

Reviewing Agency/Department Comments Regarding Adequacy of Streets and Highways:

Road Maintenance and Operations Division of the Fresno County Department of Public Works and Planning: An encroachment permit shall be required from this Division for any portion of the proposed pipeline that crosses the County road right-of-way.

For all County-maintained road crossings, the Applicant shall be required to:

- 1) Execute an agreement with the County, assuming financial responsibility for and repair of any impacts to the County-maintained roadways resulting from the installation or operation of underground infrastructure and/or signage within the County right-of-way.
- 2) Acquire valid encroachment permits prior to construction of any crossings.
- 3) Provide both hard-copy and digital, stamped As-Built engineering drawings detailing all infrastructure within the County right-of-way.

At any road crossings, the proposed pipeline shall be encased in a steel sleeve (diameter and wall thickness as appropriate for the size of the carrier pipe).

The Applicants and or entities shall register with Underground Service Alert (USA) North, and pay annual fees to ensure that USA is notified any time there is a proposed excavation in proximity to the pipeline.

No longitudinal encroachments of the proposed pipeline shall be allowed in the County road right-of-way.

Any electrical interconnects shall be located outside of the County right-of-way unless the facilities are deeded to Pacific Gas and Electric (PG&E) for maintenance purposes.

Design Division of the Fresno County Department of Public Works and Planning: No comment.

Development Engineering Section of the Fresno County Department of Public Works and Planning: All County road crossings of the proposed pipeline shall be bored and sleeved in a steel casing which shall extend from right-of-way line to right-of-way line of the road. All such road crossings shall be designed by a registered civil engineer and reviewed by and permitted through the Road Maintenance and Operations Division of the Fresno County Department of Public Works and Planning.

CUP Nos. 3642 and 3643/Open Sky Dairy: West Elkhorn Avenue is classified as a Local road with a 30-foot right-of-way south of the centerline along the subject parcel frontage, per the Plat Book. The minimum width for a Local road right-of-way south of the centerline is 30 feet. West Elkhorn Avenue is a County-maintained road, and records indicate that this section of West Elkhorn Avenue, from Howard Avenue to 0.11 mile west of Elkhorn Grade, has an Average Daily Traffic (ADT) count of 300, a paved width of 24 feet, a structural section 0.2 feet AC/0.5 AB/0.95 AS, and is in very good condition.

Elkhorn Grade is classified as a Local road with an existing 40-foot right-of-way west of the centerline along the parcel frontage, and is a County-maintained road. Records indicate this section of Elkhorn Grade, from Elkhorn Avenue to Cerini, has an ADT of less than 100, pavement width ranging from 15 to 17 feet, structural section of 0.25 RMS, and is in very poor condition.

South Howard Avenue is classified as a Local road with a 30-foot right-of-way west of the section line along the parcel frontage, per the Plat Book. The minimum width for a Local road right-of-way west of the section line is 30 feet. South Howard Avenue is a County-maintained road, and records indicate that this section of South Howard, from West Elkhorn to Cerini Avenue, has an Average Daily Traffic (ADT) count of 200, a paved width of 20 feet, a structural section of 0.5 feet AC, and is in poor condition.

CUP No. 3644/Vanderham Dairy: West Mount Whitney Avenue is classified as an Expressway, with a 30-foot right-of-way north of the section line along the parcel frontage, per the Plat Book. The minimum width for an Expressway right-of-way north of the section line is a minimum of 53 feet (106 feet total) and a maximum of 63 feet (126 feet total). West Mount Whitney is a County-maintained road, and records indicate that this section of West Mount Whitney, from South Bishop Avenue to South Dickerson Avenue, has an Average Daily Traffic (ADT) count of 2,100, a paved width of 31.80 feet, a structural section of .35 feet AC/.35 feet CTB/1.2 feet IB, and is in excellent condition.

West Harlan Avenue between Dower and South Bishop Avenue is not a County-maintained Road.

CUP No. 3645/Van der Hoek Dairy: South Lassen Avenue/SR 145 is classified as a State Highway, and is not County-maintained.

Clarkson Avenue east of South Lassen Avenue/SR 145 is an alignment and not a County-maintained road.

CUP No. 3646/Van der Kooi Dairy: West Elkhorn Avenue is classified as a Local road with a 30-foot right-of-way south of the centerline along the subject parcel frontage, per the Plat Book. The minimum width for a Local road right-of-way south of the centerline is 30 feet. West Elkhorn Avenue is a County-maintained road, and records indicate that this section of West Elkhorn Avenue, from South Howard Avenue to 0.8 miles east of South Lassen Avenue/SR 145, has an Average Daily Traffic (ADT) count of 300, a paved width of 24 feet, a structural section of 0.2 feet AC, 0.5 AB/0.95 AS, and is in very good condition.

South Howard is classified as a Local road with a 30-foot right-of-way west of the section line along the parcel frontage, per the Plat Book. The minimum width for a Local road right-of-way west of the section line is 30 feet. South Howard Avenue is a County-maintained road, and records indicate that this section of South Howard, from West Elkhorn to Cerini Avenue, has an Average Daily Traffic (ADT) count of 200, a paved width of 20 feet, a structural section of 0.5 feet AC, and is in poor condition.

CUP No. 3647/J&D Wilson and Sons Dairy: West Mount Whitney Avenue is classified as an Expressway with a 30-foot right-of-way north of the section line along the parcel frontage, per the Plat Book. The minimum width for an Expressway right-of-way north of the section line is a minimum of 53 feet (106 feet total) and a maximum of 63 feet (126 feet total). West Mount Whitney is a County-maintained road, and records indicate that this section of West Mount Whitney, from South Bishop Avenue to South Dickerson Avenue, has an Average Daily Traffic (ADT) count of 2,100, a paved width of 31.80 feet, a structural section of .35 feet AC/.35 feet CTB/1.2 feet IB, and is in excellent condition.

South Bishop Avenue is classified as a Local road with a 30-foot right-of-way north of the section line along the parcel frontage, per the Plat Book. The minimum width for a Local road north of the section line is 30 feet. South Bishop Avenue is a County-maintained road, and records indicate that this section of South Bishop, from West Mount Whitney to West Harlan Avenue, has an Average Daily Traffic (ADT) count of 400, a paved width of 20 feet, a structural section of 0.254 RMS/0.5 LTB, and is in very poor condition.

California Department of Transportation (Caltrans): No comment.

No other comments specific to the adequacy of streets and highways were expressed by reviewing Agencies or Departments.

Analysis:

The proposed construction and operation of the pipeline is anticipated to add approximately 27 round trip traffic trips per day. No concerns with the condition of existing roads were expressed by reviewing agencies. As all of the dairy operations are existing, the only increased impacts to surrounding roads is expected to result from construction activities and from additional truck trips associated with operation of the digesters, including, but not limited to, material and equipment delivery and solid waste pick up.

The proposed pipeline will traverse County road rights-of-way at several locations, however, it will not be allowed any longitudinal encroachments. Where the pipeline is proposed to cross a County right-of-way, it is required that the pipeline be encased in a steel sleeve, and that crossings be designed by a licensed civil engineer and also be reviewed and permitted by the Fresno County Department of Public Works and Planning, Road Maintenance and Operations Division.

CUP Nos. 3642/3643

Access to the Open Sky Dairy site is provided via West Elkhorn Avenue on the north and Elkhorn Grade on the southeast, nearest the proposed upgrading facility, which will be approximately 50 feet from the property boundary.

Based on the above information, and with implementation of requirements, the streets and highways providing access to the subject parcels are adequate to accommodate the proposed use.

CUP No. 3644

Access to the L&J Vanderham Dairy site is from Mount Whitney Avenue along the southern property boundary.

CUP No. 3645

Access to the Van der Hoek Dairy site is via a private access easement, roughly aligned with West Clarkson Avenue, from South Lassen Avenue/SR 145.

CUP No. 3646

Access to the Van der Kooi Dairy is via a private access easement from West Elkhorn Avenue.

CUP No. 3647

Access to the J&D Wilson and Sons Dairy is via a private access easement from West Mount Whitney Avenue.

Recommended Conditions of Approval:

See recommended Conditions of Approval attached as Exhibit 1.

Conclusion:

Finding 2 can be made.

Finding 3: *That the proposed use will have no adverse effect on abutting property and surrounding neighborhood or the permitted use thereof*

Surrounding Parcels - Open Sky Dairy CUP Nos. 3642 and 3643 (APN 050-170-41S)				
	Size:	Use:	Zoning:	Nearest Residence:
North	139 acres	Pistachio orchard/open space	AE-20	None

Surrounding Parcels - Open Sky Dairy CUP Nos. 3642 and 3643 (APN 050-170-41S)				
	24.15 acres			
South	576.21 acres 398.59 acres	Field crops/open space	AE-20	None
East	128.00 acres	Field crops/open space	AE-20	None
West	606.22 acres	Dairy	AE-20	0.87 miles

Surrounding Parcels - JD Wilson Dairy CUP No. 3647 (APN 050-260-12S)				
	Size:	Use:	Zoning:	Nearest Residence:
North	480.22 acres	Field crops	AE-20	None
South	596.58 acres	Field crops	AE-40	None
East	480.22 acres	Field crops	AE-40	0.41 miles
West	314.57 acres	Field crops	AE-40	0.75

Surrounding Parcels - L&J Vanderham Dairy UCUP 3644 (APN: 050-260-11S)				
	Size:	Use:	Zoning:	Nearest Residence:
North	95.64 acres	Vineyard	AE-20	None
South	38.18 acres	Field crops	AE-40	225 feet
East	66.05 acres	Field crops	AE-20	0.48 miles
	59.09 acres	Field crops	AE-20	
West	480.22 acres	Field crops	AE-20/AE-40	300 feet

Surrounding Parcels - Van Der Kooi Dairy UCUP 3646 (APN: 050-160-16S)				
	Size:	Use:	Zoning:	Nearest Residence:
North	388.91 acres	Pistachio orchard	AE-20	None
	75.10 acres			
	320.78 acres			
South	429.99 acres	Orchard	AE-20	None
East	518.45 acres	Dairy	AE-20	1.04 miles
West	320.00 acres	Field crops	AE-20	None

Surrounding Parcels - Van der Hoek Dairy UCUP 3645 (APN: 040-130-51S)				
	Size:	Use:	Zoning:	Nearest Residence:
North	216.98 acres	Pistachio orchard	AE-20	None
	203.17 acres	Field crops		
South	426.96 acres	Pistachio orchard	AE-20	1.00 mile
East	554.65 acres	Pistachio orchard	AE-20	None
	18.68 acres			
	18.68 acres			
West	194.73 acres	Field crops	AE-20	None
	101.88 acres			

Reviewing Agency/Department Comments:

Fresno County Department of Public Health, Environmental Health Division: The proposed project shall comply with the Health and Safety Element of the Fresno County General Plan and the provisions of Chapter 8.40 - Noise Control, of the Fresno County Ordinance Code.

Within 30 days of the occurrence of any of the following events, the applicant/operators shall update their online Hazardous Materials Business Plan (HMBP) and Site Map:

1. There is a 100 percent or more increase in the quantities of a previously undisclosed material; or
2. The facility begins handling a previously undisclosed material at or above the HMBP threshold levels.

The proposed operation shall certify that a review of the business plan has been conducted at least once every year and that any necessary changes were made and that the changes were submitted to the local agency.

All hazardous waste shall be handled in accordance the requirements set forth in the California Code of Regulations (CCR), Title 22, Division 4.5, which discusses proper labeling, storage and handling of hazardous wastes.

If the anaerobic digester process requires accepting manure or other feedstock from off site, the facility will be subject to the Transfer/Processing Operations and Facilities Regulatory Requirements (Title 14, California Code of Regulations (CCR), Division 7, Chapter 3, Articles 6.0-6.35.

According to the applicant's submitted operational statement, the proposed operation entails that separated solids from the anaerobic digesters will be disposed of at an appropriate solid waste facility. If the facilities change operations to use the separated solids for composting; the applicants/operators shall, prior to the production of compost from digester operations, apply for an obtain a permit to operate a Solid Waste Facility, from the County of Fresno Department of Public Health, Environmental Health Division (Local Enforcement Agency).

San Joaquin Valley Air Pollution Control District (Air District): The District has reviewed this proposal and determined that the primary functions of this project are subject to District Rule 2201 (New and Modified Stationary Source Review) or District Rule 2010 (Permits Required). Accordingly, District Rule 9510 requirements and fees do not apply. The District also indicated that estimates of potential construction, mobile and stationary emission sources, and proximity to sensitive receptors and existing emission sources should be included in the review, with consideration of the District thresholds of significance for criteria pollutants. The District recommend that short-term construction emissions be evaluated separately from operational emissions. Based on the Air District recommendations and CEQA requirements, the applicant was required to submit an Air Quality and Greenhouse Gas Analysis. The applicant provided an Air Quality Impact Analysis included a Greenhouse gas assessment, performed by Insight and Trinity Environmental Consultants, dated May 2, 2019.

The analysis found that short-term construction emissions would not exceed Air District significance thresholds during a given year and would therefore be less than significant. The project will be subject to all applicable District Rules, Under Regulation VIII – Fugitive PM10 Prohibitions, relating to construction related activities and Rule 4102 – Nuisance.

Evaluation of long-term operational emissions, including both mobile and stationary sources, determined that operations are not expected to generate a substantial source of fugitive dust (PM10) emissions, which comes primarily from vehicle emissions. Exhaust Emissions would generate mobile source criteria pollutants, however, they are not expected to generate substantial emissions. Stationary Source emissions would be generated during the biogas upgrade process and from combustion of biogas for electrical power generation. The conclusions of the Air Quality Analysis found that the project is expected to have long-term air quality impacts, however impacts are not anticipated to exceed significance thresholds, after mitigation, of mobile source emissions, stationary source fugitive gas emissions, or electrical generation emissions.

Impacts to sensitive receptors, elderly or chronically ill persons, or locations such as daycare centers, schools, hospitals, and residences, were evaluated as part of the Air Quality Assessment, however the report did not provide any specific conclusions, only that the nearest on site residence is 0.45 miles north of the project area, the nearest off site residence is 1.15 miles northeast of the project area and that there is an elementary school located approximately 2 miles northeast of the project area.

UCUP 3642/UCUP 3643 Open Sky Dairy: Staff review of the project area indicates that Burrell Elementary School is located approximately 1.3 miles northeast of the site, and the unincorporated community of Burrell, which contains a small but unknown number of residences, approximately 1.6 miles northeast of the project site, on which the biogas upgrade facility and pipeline injection point are located; additionally there is a cluster of five residences at the northeast corner of the same site, located approximately one half-mile north of the biogas Hub facility; the nearest off site residence is located approximately 0.8 miles northeast.

UCUP 3644 L& J Vanderham Dairy: review of aerial imagery shows one on site residence located approximately 1,700 feet southwest of the proposed digester pipeline connection point (project site). Additionally, there are three off-site residences located southerly and westerly adjacent to the subject parcel, with all three located approximately 0.44 miles from the project site.

UCUP 3645 Van der Hoek Dairy: Helm Elementary School is located approximately 1.6 miles northwest of the dairy site, and the nearest residence is located approximately 2,000 feet

northwest of the proposed digester and pipeline connection point. The nearest off site residences are located approximately one-mile southeast and one mile southwest respectively.

UCUP 3646 Van Der Kooi Dairy: The nearest on site residence is located approximately 1,500 feet north of the project site, and the nearest off site residence is located approximately 1.35 miles northwest of the project site.

UCUP 3647 J&D Wilson and Sons Dairy: There are no residences on site, however there are three residences located approximately three quarter-miles southeast of the dairy.

The project proponents/applicants are required to obtain a District Authority to Construct (ATC) prior to installation of an equipment that controls or emits air contaminants, including but not limited to digester systems, lagoons, herd expansions, emergency internal combustion engines, boilers, and baghouses.

This project may be subject to the following District Rules: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).

Development Engineering Section of the Fresno County Department of Public Works and Planning: An engineered grading plan and grading permit will be required for all project site improvements on all subject parcels.

This project proposes to install a low-pressure gas pipeline that will cross several County maintained and unmaintained road rights-of-way. Encroachment permits will be required for each crossing. The applicant and property owner of each parcel, to be traversed by or contain any portion of the proposed pipeline, shall create and record pipeline easement(s) with exhibit maps with the County of Fresno for the entire pipeline.

All County road right-of-way crossings shall be bored and sleeved in a steel casing, and shall extend from right-of-way line to right-of-way line. All road crossings shall be designed by a civil engineer and reviewed and permitted through the Fresno County Department of Public Works and Planning, Road Maintenance and Operations Division.

The applicant and/or property owners shall register with Underground Service Alert (USA) North, and pay annual dues to ensure they are notified any time there is excavation proposed near the pipeline.

Engineered grading plans will be required for an work exceeding 1,000 cubic yards. Grading permits are required.

State Water Resources Control Board Division of Drinking Water: The project will not result in the formation of a new public water system. The Division currently regulates the Open Sky Dairy.

California Regional Water Quality Control Board: All of the participating dairies are regulated by the Regional Water Quality Control Board, under the Dairy General Order, and are required to have a Waste Management Plan, and Certificate of Waste Discharge.

California Department of Conservation, Division of Oil, Gas and Geothermal Resources (the Division): Department records indicate there are 92 known oil or gas wells located within the project boundary, 16 of which have not been abandoned in accordance with current division requirements as prescribed by Law, and 9 that have been abandoned in accordance with current division requirements, and which are projected to be build over or have future access impeded by this project.

The Division categorically advises against building over, or in way impeding access to oil, gas, or geothermal wells, as doing so could result in the need to remove any structure or other obstacle that prevents or impedes access to any such wells.

United States Fish and Wildlife Service (USFW): No comment

California Department of Fish and Wildlife (CDFW): Review of the California Natural Diversity Database (CNDDDB) reveals records for several special-status species both on and within the broader pipeline project area, including the State threatened and federally endangered San Joaquin Kit Fox, the State threatened Swainson's Hawk, the State candidate for listing as endangered Tricolored Blackbird, and the State species of special concern, Burrowing Owl. Review of aerial imagery indicates that much of the project area is comprised of or surrounded by active agriculture, including dairy silage fields which is suitable nesting substrate for certain bird species.

Southern San Joaquin Valley Information Center: Portions of the project area have been surveyed by a qualified cultural resource consultant and cultural resources were not found. The project area was last surveyed in 1977, and the archaeological sensitivity of the project area is unknown. A record search was conducted and a letter with recommendations was completed on March 29, 2019. According to the assessment, the odds of uncovering cultural material resource deposits are unlikely and a field survey is unwarranted. This office concurs with the findings. No cultural resources work is recommended prior to approval of project plans, however, customary caution and halt work conditions should be in place for all ground disturbing activities. If cultural resources are unearthed during project activities, all work must halt in the area of the find and a qualified professional archaeologist should be called to the site, to assess the findings and make the appropriate mitigation recommendations. Project personnel should not attempt to excavate any finds.

A mitigation measure has been included with this project to ensure that in the unlikely event that any cultural resources are encountered during the project construction, that they are treated in a way to prevent significant impacts to those resources.

No other comments specific to land use compatibility were expressed by reviewing Agencies or Departments.

Analysis:

The project area is characterized by large farming parcels, which contain a variety of agricultural operations including orchards, field crops, vineyards, dairies, and other related support operations, including one agricultural aviation operation. Residential development is sparse throughout the project area, however there are residential dwellings in the vicinity of each of participating dairies contain a single family dwelling, and there are other residential dwellings in the vicinity of the dairy parcels and the pipeline route. Impacts from the dairy operations on surrounding properties are already existing, and as there is no intensification of the existing dairy operations, those impacts typically associated with dairy operations, or any confined animal operations, like odors would likewise not be increased by this proposal.

The current applications propose to add four new anaerobic lagoon digesters to four of the existing dairies. Digesters will utilize some of the biogas (methane) produced on the dairy sites, and thus reduce the adverse odor associated with dairy operations on any sensitive receptors in the vicinity. In addition to the digesters, the project proposes to install biogas generator engines that will utilize some of the biogas produced to create renewable electrical power, which will be sold to the PG&E grid. The project also proposes the installation of an underground pipeline to connect the participating dairy sites allowing them to contribute biogas to the pipeline to be transported to a central site (hub) for undergo the scrubbing/upgrading process before being injected into the PG&E main natural gas transmission line. The project will allow the biogas produced by the participating dairies to be converted into renewable energy sources, instead of being released into the atmosphere as methane, thereby reducing or minimizing project impacts to air quality.

The biogas scrubbing/upgrading process will result in the creation of elemental sulfur (sulfur sludge) as a by product. It is estimated that the facility will produce approximately 450 pounds per day or 82 tons of elemental sulfur per year. The elemental sulfur will either be stored in a covered vessel and used on site as a soil amendment, or transported to be used off site at participating dairies, or taken to an appropriate handling and disposal facility. The biogas scrubber is expected to create approximately 1,670 gallons of wastewater per day, generated by the scrubbing process.

The wastewater will contain sodium, carbonates, and sulfur compounds. The wastewater discharge will be directed to on site temporary storage tanks. Approximately once per week, the wastewater will be transported and disposed of at an appropriately permitted facility. Additionally, the drying of the biogas will produce approximately 500 gallons per day of condensation. The condensation will be returned to the digester at the Open Sky site, via a buried drain pipe. The biogas scrubbing facility will also produce approximately 10 gallons of waste compressor oil per week. The waste oil will be stored on site in sealed containers until it is picked up by a licensed oil recycler once per quarter.

The project was reviewed by the San Joaquin Valley Air Pollution Control District (Air District). The Air District recommended that the project be evaluated based on both its construction emissions (mobile) and operation (stationary source) emissions. The applicant provided an air quality impact and greenhouse gas analysis for the project. Based on the conclusions of the analysis, project construction would not exceed Air District significance thresholds for criterial pollutants, nor would operation contribute a substantial amount of criteria pollutants. The project would be subject to all applicable District Rules.

This project was routed to both the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) for comments. USFWS did not comment on the project. The applicant was required by the County to provide a habitat assessment done by a qualified biologist in order to determine if any sensitive habitats or protected, threatened, endangered or special status species were present in the project area. A reconnaissance level, site survey was conducted on April 6, 2019 by Quad Knopf (QK) Environmental Consultants. The results of the survey were that the following species have potential to occur in the project area: the Tricolored Blackbird, the Burrowing Owl, Swainson's Hawk, Loggerhead Shrike, Long-Billed Curlew, Yellow-Headed Blackbird, American Badger, and San Joaquin Kit Fox. The Kit Fox is listed as Federally endangered and State threatened. A search of the National Wetlands Inventory indicates that there are no aquatic features under federal or state jurisdiction on any of the projects sites or within the Biological Study Area (BSA).

In response to the circulation of the Initial Study prepared for this project, the California Department of Fish and Wildlife(CDFW), had some concerns about the sufficiency of the included Mitigation Measures, regarding certain wildlife species know to have a probability of occurring in the project area. Specifically, CDFW was concerned with impacts to San Joaquin Kit Fox, Swainson’s Hawk, Giant Garter Snake, Tricolored Blackbird, Burrowing Owl, and Lake and Streambed alteration. Accordingly, the recommended mitigation measures provided by the CDFW will be added to the Initial Study and Mitigation Monitoring and Reporting Program. A summary of the Initial Study is included as Exhibit 8 of the Staff Report. Per CEQA Section 15073.5(c), and 15074.1, recirculation of the Initial Study was not required.

Each participating dairy operation is regulated by the California Regional Water Quality Control Board, with regard waste discharge.

Based on the above information, and with implementation of the required Mitigation Measures, Conditions of Approval and Project Notes, staff believes the proposal will not have an adverse effect upon surrounding properties.

Recommended Conditions of Approval:

See recommended Mitigation Measures and Conditions of Approval attached as Exhibit 1.

Conclusion:

Finding 3 can be made.

Finding 4: *That the proposed development is consistent with the General Plan*

Relevant Policies:	Consistency/Considerations:
General Plan Policy LU-A.13: The County shall protect agricultural uses by requiring buffers between proposed non-agricultural uses and adjacent agricultural operations.	The surrounding area predominately contains agricultural operations. The pipeline will be buried underground and contained within an easement, which will create a buffer between the pipeline and surrounding agricultural uses. The biogas electrical generation facilities will meet the minimum setbacks required for the Exclusive Agricultural Zone District.
General Plan Policy LU-A.14: The County shall ensure that the review of discretionary permits include an assessment of the conversion of productive agricultural land and that mitigation be required where appropriate.	The project was evaluated by the Fresno County Agricultural Commissioner’s office, which did not express any concerns about the loss of productive agricultural land. The project proposes to utilize a comparatively small portion of land, within each affected parcel, for the development of the digesters, electrical generation facilities and ancillary equipment. The project was also reviewed by the Policy Planning Unit, which determined that all of the parcels involved were subject to a Williamson Act Contract and as such, subject to specific criteria therein. Because the proposed anaerobic

Relevant Policies:	Consistency/Considerations:
	<p>digesters and biogas generators would exporting renewable energy off site, the use was not considered compatible on Williamson Act restricted land. Accordingly, the portions of the subject parcels to be utilized in the operation, were required to record a partial nonrenewal of their respective Williamson Act contracts.</p>
<p>General Plan Policy LU-A.17: The County shall, prior to consideration of any discretionary project related to land use, undertake a water supply evaluation. The evaluation shall include the following:</p> <ul style="list-style-type: none"> a. A determination that the water supply is adequate to meet the highest demand that could be permitted on the lands in question. If surface water is proposed it must come from a reliable source and the supply must be made “firm” by water banking or other suitable arrangement. If groundwater is proposed, a hydrogeological investigation may be required to confirm the availability of water in amounts necessary to meet project demand. If the lands in question lie in an area of limited groundwater, a hydrogeological investigation shall be required. b. A determination of the impact that use of the proposed water supply will have on other water users in Fresno County. If use of surface water is proposed, its use must not have a significant negative impact on agriculture or other water users within Fresno County. If use of ground water is proposed, a hydrogeological investigation may be required. If the lands in question lie in an area of limited ground water, a hydrogeological investigation shall be required. Should the investigation determine that significant pumping related physical impacts will extend beyond the boundary of the property in question, those impacts shall be mitigated. 	<p>The project, not including the existing dairy operations, proposes to use approximately 5,000 gallons of water per day for the construction phase of the pipeline, and approximately 2,500 gallons per day or 2,8 acre feet per day during operation. Water for this project will be supplied by onsite wells at each participating dairy, and also delivered by truck from off site when necessary during construction. This proposal was reviewed by the Water and Natural Resources Division of the Fresno County Department of Public Works and Planning, which did not express any concerns with water supply.</p> <p>An additional 5,000 gallons of water per day will be used at each of the participating dairy sites during construction of the digester and electrical generation facilities. During subsequent operation of the facilities, approximately 2,500 gallons per day is anticipated to be used at each dairy site.</p> <p>The project was reviewed by the Water and Natural Resources Division, of the Fresno County Department of Public Works and Planning, which did not express any concerns related to water supply. The project is not in an area of the County designated as being water short. No hydrogeological investigation was required.</p>

Relevant Policies:	Consistency/Considerations:
<p>c. A determination that the proposed water supply is sustainable or that there is an acceptable plan to achieve sustainability. The plan must be structured such that it is economically, environmentally, and technically feasible. In addition, its implementation must occur prior to long-term and/or irreversible physical impacts, or significant economic hardship, to surrounding water users.</p>	
<p>General Plan Policy HS-B.1: The County shall review project proposals to identify potential fire hazards and to evaluate the effectiveness of preventive measures to reduce the risk to life and property.</p>	<p>The Fresno County Fire Protection District did not state any concerns that the project would create any new fire hazards.</p>
<p>General Plan Policy HS-F.1: The County shall require that facilities that handle hazardous materials or hazardous wastes, be designed, constructed and operated in accordance with applicable hazardous materials and waste management laws and regulations.</p>	<p>All hazardous waste shall be handled in accordance with requirements set forth in the California Code of Regulations (CCR), Title 22, Division 4.5.</p>
<p>General Plan HS-F.2: The County shall require that applications for discretionary development projects that will use hazardous materials or generate hazardous waste in large quantities, include detailed information concerning hazardous waste reduction, recycling, and storage.</p>	<p>The proposed biogas cleanup operation will generate approximately 450 pounds of elemental sulfur, as a byproduct of the hydrogen sulfide scrubber, which will be utilized as soil amendment off site, or hauled to an appropriate disposal facility.</p>

Reviewing Agency Comments:

Fresno County Department of Agriculture: The project will not result in the loss of any agricultural production

Policy Planning Section of the Fresno County Department of Public Works and Planning, Development Services and Capital Projects Division: The 518.45-acre parcel identified as APN 050-170-41S, the 554.65-acre parcel identified as APN 040-130-49S, the 424.69-acre parcel identified as APN 041-100-17, the 316.45-acre parcel identified as APN 041-100-45S, the 320.00-acre parcel identified as APN 050-160-13S, the 606.22-acre parcel identified as APN 050-160-16S, and the 576.21-acre parcel identified as APN 050-200-38S are enrolled in the Williamson Act Program under Contract No. 1521.

The 136.77-acre parcel identified as APN 050-230-20S, the 314.57-acre parcel identified as APN 050-260-10S, the 18.00-acre parcel identified as APN 050-230-23S, the 156.36-acre parcel identified as APN 050-260-12S, the 480.22-acre parcel identified as APN 050-260-11S, and the 320.00-acre parcel identified as APN 050-270-56S are enrolled in the Williamson Act Program under Contract No. 7117.

The 203.37-acre parcel identified as APN 040-130-35S is enrolled in the Williamson Act Program under Contract No. 5722.

The 627.92-acre parcel identified as APN 040-130-51S is enrolled in the Williamson Act Program under Contract No. 263.

The 18.68-acre parcel identified as APN 040-130-44S is enrolled in the Williamson Act Program under Contract No. 1515.

The 20.00-acre parcel identified as APN 040-130-48S is enrolled in the Williamson Act Program under Contract No. 1517.

Pursuant to Agricultural Land Conservation Act (Williamson Act) Program Guidelines, the use of land enrolled in the Program is limited to commercial agricultural operations and other compatible uses adopted by the Board of Supervisors. The areas proposed for anaerobic digesters, biogas generators, and the interconnected biogas pipeline are not considered compatible uses on land enrolled in the Program. Therefore, the areas proposed for anaerobic digesters, biogas generators, and the interconnected biogas pipeline must be removed from the Program through the Nonrenewal process.

Also pursuant to the Fresno County Program Guidelines, parcels that are enrolled in the Program are required to have a minimum of 20 acres of Prime soil and an active agricultural operation, to be eligible to remain in the Program. Therefore, the 18.00-acre parcel identified as APN 050-230-23S enrolled under Contract No. 7117 must be removed from the Program through the Nonrenewal process.

No discretionary action shall be taken on UCUP Application No. 3643, or UCUP Application Nos. 3642, 3644, 3645, 3646, or 3647 until Nonrenewal of the contracted project areas and the 18.00-acre parcel identified as APN 050-230-23S are recorded.

No other comments specific to General Plan Policy were expressed by reviewing Agencies or Departments.

Analysis:

The 17 parcels associated with the proposed project are restricted under Williamson Act (ALCC) Contract, and because of the commercial nature of the project, involving the exportation of renewable energy resources, gas and electric, to the grid, the proposed uses are not considered to be compatible with ALCC contracted land. Accordingly, the portions of the subject parcels being improved with the supporting digester equipment, and/or being traversed by the pipeline easement, will be non-renewed from their respective Williamson Act Contracts, however, this process will not remove a substantial amount of land from agricultural uses, in fact the proposed improvements will support the existing dairy operations. The following is a summary of the Williamson Act Contract partial non-renewals required for, each parcel associated with this project:

UCUP 3642/UCUP 3643

APN 050-170-41S (Open Sky Dairy), was required to complete a partial non-renewal, on the approximately 2.40-acre portion of land containing the proposed upgrading facility and the adjacent electrical generation facility.

UCUP 3644

APN 050-270-56S (L&J Vanderham Dairy), was required to complete a partial non-renewal, on an approximately 7.46 acre portion of land, containing the proposed 203,750 square-foot (4.68 acre) digester facility, and the 2,400 square-foot electrical generation facility.

UCUP 3645

APN No. 040-130-35S (Van der Hoek Dairy) were required to complete a partial non-renewal, on an approximately 7.32 acre portion of land, on APN (040-130-35S), containing the proposed 160,000 square-foot (3.67 acre) digester, and the 2,400 square-foot electrical generation facility.

UCUP 3646

APN 050-160-16S (Van Der Kooi Dairy) was required to complete a partial non-renewal, on an approximately 7.32 acre portion of land containing the 205,200 square-foot (4.68 acre) digester facility and the 2,400 square-foot electrical generation facility.

UCUP 3647

APN 050-260-12S (Dry Creek Holdings, LLC/Wilson Dairy), was required to complete a partial non-renewal on an approximately 7.46-acre portion of land containing the proposed 203,750 square-foot (4.68-acre) digester facility and the 2,400 square-foot electrical generation facility.

The applicants filed for non-renewal of the above noted land on May 7, 2019.

No other General Plan conflicts were identified in the analysis.

Based on these factors, the proposal to install four new dairy digesters, and appurtenant equipment and construct an approximately 10.5 mile long underground pipeline connecting the dairy digesters, and related biogas upgrading and electrical generation facilities, is consistent with the General Plan.

Recommended Conditions of Approval:

None

Conclusion:

Finding 4 can be made.

PUBLIC COMMENT:

None

CONCLUSION:

Based on the factors cited in the analysis, staff believes the required Findings for granting Unclassified Conditional Use Permit Nos. 3642-3647 can be made. Staff therefore recommends approval of Unclassified Conditional Use Permit Nos. 3642, 3643, 3644, 3645, 3646, and 3647, subject to the recommended Conditions of Approval.

PLANNING COMMISSION MOTIONS:

Recommended Motion (Approval Action)

- Move to adopt the Mitigated Negative Declaration prepared for Initial Study Application No. 7608; and
- Move to determine the required Findings can be made and move to approve Unclassified Conditional Use Permit Nos. 3642, 3643 3644, 3645, 3646, and 3647, subject to the Mitigation Measures, Conditions of Approval and Project Notes listed in Exhibit 1; and
- Direct the Secretary to prepare a Resolution documenting the Commission's action.

Alternative Motion (Denial Action)

- Move to determine that the required Findings cannot be made (state basis for not making the Findings) and move to deny Unclassified Conditional Use Permit Nos. 3642, 3643 3644, 3645, 3646, and 3647; and
- Direct the Secretary to prepare a Resolution documenting the Commission's action.

Mitigation Measures, Recommended Conditions of Approval and Project Notes:

See attached Exhibit 1.

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**Mitigation Monitoring and Reporting Program
Initial Study Application No. 7608/Unclassified Conditional Use Permit Application Nos. 3642-3647
(Including Conditions of Approval and Project Notes)**

Mitigation Measures					
Mitigation Measure No.*	Impact	Mitigation Measure Language	Implementation Responsibility	Monitoring Responsibility	Time Span
1.	Biological Resources	<p>To mitigate impacts to the tricolored blackbird (TRBL), the following measures shall be implemented:</p> <p>Construction shall be timed to avoid the normal bird breeding season (February 1 through September 15). However, if construction must take place during that time, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting TRBL, within a minimum 500-foot buffer from the Project site, no more than 10-days prior to the start of implementation to evaluate presence/absence of TRB nesting colonies in proximity to Project activities and to evaluate potential Project-related impacts.</p> <p>If an active TRBL nesting colony is found during preconstruction surveys, CDFW recommends implementation of a minimum 300-foot no-disturbance buffer in accordance with CDFW's "Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015" (CDFW 2015). CDFW advises that this buffer remain in place until the breeding season has ended or until a qualified biologist has determined that nesting has ceased, the birds have fledged, and are no longer reliant upon the colony or parental care for survival. It is important to note that TRBL colonies can expand over time and for this reason the colony should be reassessed to determine the extent of the breeding colony before conducting construction activities.</p> <p>In the event that a TRBL nesting colony is detected during surveys, consultation with CDFW is warranted to discuss how to implement the project and avoid take, or if avoidance is not feasible, to acquire an ITP, pursuant to Fish and Game Code Section 2081 (b), prior to any ground-disturbing activities.</p>	Applicant	Applicant/Fresno County Department of Public Works and Planning (PW&P) in consultation with CDFW	February 1 through September 15

EXHIBIT 1

2.	Biological Resources	<p>To mitigate impacts to the San Joaquin Kit Fox (SJKF) and American Badger, the following measures shall be implemented:</p> <p>Avoidance of Burrows for San Joaquin Kit Fox, and American Badger. If dens/burrows that could support any of these species are discovered during the pre-activity clearance surveys conducted under BIO-1, the avoidance buffers outlined below should be established. No work would occur within these buffers unless the biologist approves and monitors the activity. Dens or burrows of these species shall not be destroyed unless it is determined that the den/burrow is not occupied. In no case shall a San Joaquin kit fox natal den or known den be destroyed without the concurrence of the USFWS and CDFW and appropriate artificial den replacements are provided.</p> <ul style="list-style-type: none"> • San Joaquin Kit Fox • Potential Den – 50-feet • Atypical Den – 50-feet (includes pipes and other man-made structures) • Known Den – 100-feet • Natal/Pupping Den – 500-feet <p>American Badger</p> <ul style="list-style-type: none"> • Known Den — 100-feet <p>The applicants shall assess presence/absence of SJKF by conducting surveys following the USFWS (2011) "Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance." Specifically, CDFW advises conducting these surveys in all areas of potentially suitable habitat no less than 14-days and no more than 30-days prior to beginning of ground disturbing activities.</p> <p>SJKF detection warrants consultation with CDFW to discuss how to implement the Project and avoid take, or if avoidance is not feasible, to acquire an Incidental Take Permit (ITP), pursuant to Fish and Game Code Section 2081(b).</p> <p>Standard Avoidance and Minimization Measures for the San Joaquin kit fox and American badger. The following standard avoidance and minimization measures are recommended to be implemented:</p>	Applicant	Applicant/PW&P in consultation with CDFW	Before and during construction
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		<ul style="list-style-type: none">• Construction-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on County and City roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However, if night construction activities do occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.• To prevent inadvertent entrapment of kit foxes or other wildlife during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks should be installed. Before such holes or trenches are filled, they should be thoroughly examined for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the CDFW should be contacted as noted below.• Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.• All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.			
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		<ul style="list-style-type: none">• No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.• Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of special-status species and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation, as well as additional project-related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.• A representative should be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a special-status species or who finds a dead, injured, or entrapped special-status species. The representative will be identified during the employee education program and their name and telephone number should be provided to the USFWS.• In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for guidance.• Any person who is responsible for inadvertently killing or injuring a special-status animal species should immediately report the incident to their representative. This representative should contact the CDFW immediately in the case of a dead, injured, or entrapped special-status species. The CDFW contact for immediate assistance is State Dispatch at 916-445-0045. They will contact the local warden or wildlife biologist. The USFWS should be contacted at the number below.• The region 8 Sacramento Fish and Wildlife Office and Region 4 CDFW should be notified in writing within three working days of the accidental death or injury to			
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		<p>a kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below.</p> <p>U.S. Fish and Wildlife Service Region 8 – California and Nevada 2800 Cottage Way Sacramento, CA 95825 Contact: Tim Ludwick Phone: 916-414-6464</p> <ul style="list-style-type: none"> • New sightings of kit fox should be reported to the CNDDDB. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the appropriate wildlife agencies. <p>Den Avoidance. In the event that a potential den that may be suitable for American badger, San Joaquin, or burrowing owl is detected during pre-activity clearance surveys, the biologist should monitor the den using cameras and tracking medium for five days to determine if the den is occupied by a special-status species. If after five (5) days no activity is detected, then the den can be backfilled. Construction personnel may collapse the den only under the direct supervision of the biologist. If a special-status species is detected using the den, the den must be avoided until the animal leaves on its own. A minimum 100-foot buffer should be constructed using orange construction fencing around the den during the nonbreeding season (April to November). During the breeding season (December to March), the buffer should be extended to 250 feet. Consultation with the USFWS and/or CDFW will be required prior to collapsing dens known to be occupied by kit foxes. If authorized by the CDFW, passive relocation of wildlife may be accomplished using one-way doors to exclude wildlife from dens. An exclusion plan approved by CDFW would be required prior to the installation of one-way doors.</p>			
3.	Biological Resources	To mitigate impacts to the Swainson's Hawk (SWHA), the following measures shall be implemented:	Applicant	Applicant/PW&P in consultation with CDFW	February 1 through

		<p>Construction be timed to avoid the normal bird breeding season (February 1 through September 15). However, if construction must take place during that time, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting raptors following the survey methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) prior to project initiation. In addition, CDFW recommends that a qualified biologist conduct additional pre-construction surveys for active nests no more than 10-days prior to the start of construction.</p> <p>If an active SWHA nest is found during pre-construction surveys, CDFW recommends implementation of a minimum ½-mile no-disturbance buffer until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.</p> <p>If the ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, acquisition of an ITP for SWHA is necessary prior to project implementation, pursuant to Fish and Game Code Section 2081(b) to comply with CESA.</p>			September 15
4.	Biological Resources	<p>If project activities are planned to start during the migratory bird nesting season, February 1 to September 15, a pre-activity nesting bird survey should be conducted within seven (7) days of the start of these activities. These surveys should be phased with construction of the project. If active nests are detected during the survey, or at any time during construction of the project, an avoidance buffer will be established by a qualified biologist based on the species and the activities that are underway. For raptor species (except Swainson's hawk), the avoidance will typically be 500 feet. For non-raptor species, the buffer will be 250-feet. Note that some bird species are known to nest on human structures, including construction equipment. Construction personnel should be educated about this possibility as part of the employee education program.</p>	Applicant	Applicant/PW&P in consultation with CDFW	Before and during construction
5.	Biological Resources	<p>To mitigate impacts to the Giant Garter Snake (GGS), the following measures shall be implemented:</p>	Applicant	Applicant/PW&P in consultation with CDFW	Before and during construction

		<p>A qualified biologist shall conduct a habitat assessment well in advance of project implementation, to determine if the Project area or its vicinity contains suitable habitat for GGS.</p> <p>No more than 30-days prior to ground-disturbing activities, a qualified biologist with GGS experience and knowledge of its ecology survey the work area and a minimum 50-foot radius of the work area for burrows and crevices in which GGS could be present. It is advised that all potentially suitable burrows and cervices be flagged and avoided by a minimum 50-foot no disturbance buffer. If a 50-foot radius buffer isn't feasible, consultation with CDFW is warranted to discuss how to implement the Project and avoid take.</p> <p>If take cannot be avoided, acquisition of an ITP would be required prior to Project implementation to comply with CESA. Capture and relocation of any species listed under CESA would require an ITP from CDFW, as capture (or attempt to do so) is defined as take under Fish and Game Code Section 86.</p>			
6.	Biological Resources	<p>To mitigate impacts to the Burrowing Owl (BUOW), the following measures shall be implemented:</p> <p>The applicant shall assess presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium's (CBOC) "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012). In addition, CDFW advises that surveys include a 500-foot buffer around the Project area.</p> <p>Since BUOW occupy burrow habitat year-round, CDFW recommends seasonal no-disturbance buffers, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), be implemented prior to and during any ground-disturbing activities associated with Project implementation. Specifically, CDFW's Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.</p> <p>If BUOW are found to occupy the Project site and avoidance is not possible, it is important to note that according to the</p>	Applicant	Applicant/PW&P in consultation with CDFW	Before and during construction

		<p>Staff Report (CDFG 2012), exclusion is not a take avoidance, minimization, or mitigation method and is considered a potentially significant impact under CEQA. However, if necessary, CDFW recommends that burrow exclusion be conducted by qualified biologists and only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. CDFW recommends replacement of occupied burrows with artificial burrows at a ratio of 1 burrow collapsed to 1 artificial burrow constructed (1 :1) as mitigation for the potentially significant impact of evicting BUOW. BUOW may attempt to colonize or re-colonize an area that will be impacted; thus, CDFW recommends ongoing surveillance of the Project site during Project activities, at a rate that is sufficient to detect BUOW if they return.</p>			
7.	Biological Resources	<p>To mitigate impacts to sensitive habitat, the following measures shall be implemented:</p> <p>A formal stream mapping and wetland delineation shall be conducted by a qualified biologist to determine the location and extent of streams (including any floodplain) and wetlands within and adjacent to the Project area. Please note that, while there is overlap, State and Federal definitions of wetlands as well as what activities require Notification pursuant to Fish and Game Code Section 1602 differ.</p> <p>Therefore, it is advised that the wetland delineation identify both State and Federal wetlands in the Project area as well as what activities may require Notification to comply with Fish and Game Code. Fish and Game Code Section 2785 (g) defines wetlands; further, Section 1600 et seq. applies to any area within the bed, channel, or bank of any river, stream, or lake. It is important-to note that while accurate wetland delineations by qualified individuals have resulted in more rapid review and response from USACE and CDFW, substandard or inaccurate delineations have resulted in unnecessary time delays for applicants due to insufficient, incomplete, or conflicting data. CDFW advises that site map(s) designating wetlands as well as the location of any activities that may affect a lake or stream be included with any Project site evaluations.</p> <p>Fish and Game Code Section 1600 et seq. requires an entity to notify CDFW prior to commencing any activity that may: (a)</p>	Applicant	Applicant/PW&P in consultation with CDFW	Prior to Permits

		substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation); (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial. CDFW is required to comply with CEQA in the issuance of an LSA Agreement. For additional information on Notification requirements, please contact our staff in the LSA Program at (559) 243-4593.			
8.	Biological Resources	Prior to the issuance of building permits, if Stinson Canal cannot be avoided, specific impacts on the features shall be quantified by an aquatic resources delineation prepared by a qualified biologist. A Central Valley Regional Water Quality Control Board Section 401 Water Quality Certification, a Section 404 ACOE permit and Section 1602 California Department of Fish and Wildlife Streambed Alteration Agreement shall be obtained, or confirmation received from these agencies that regulatory permits are not required.	Applicant	Applicant/PW&P in consultation with CDFW	Prior to Permits
9.	Biological Resources	<p>Worker Environmental Awareness Training. Prior to the initiation of construction and for the duration of project construction and maintenance activities that could affect natural habitat, all new personnel should attend a Construction Personnel Environmental Awareness Training and Education Program. The program should be developed by a qualified biologist. Any employee responsible for the operation and maintenance (O&M) of the completed facilities should also attend the Construction Personnel Environmental Awareness Training and Education Program.</p> <p>a) The program should include information on the life history of the burrowing owl, American badger, San Joaquin kit fox, Swainson's hawk, migratory birds and raptors, and special-status plant species that may be encountered during construction and operations and maintenance activities.</p> <p>b) The program should discuss each species' legal protection, status, the definition of "take" under the Endangered Species Act, measures the project operator must implement to protect the species, reporting requirements, specific measures that each worker should employ to avoid take of wildlife species,</p>	Applicant	Applicant/PW&P in consultation with CDFW	Prior to construction

		<p>and penalties for violation of the State and federal ESAs.</p> <p>c) The program should provide information on how and where to bring injured animals for treatment in the case any animals are injured on the project site, and how to document animal mortalities and injuries.</p> <p>d) An attendance form signed by each worker indicating that environmental training has been completed will be kept on record.</p>			
10.	Cultural Resources	In the event that cultural resources are unearthed during ground-disturbing activities, all work shall be halted in the area of the find. An Archeologist shall be called to evaluate the findings and make any necessary mitigation recommendations. If human remains are unearthed during ground-disturbing activities, no further disturbance is to occur until the Fresno County Sheriff-Coroner has made the necessary findings as to origin and disposition. All normal evidence procedures should be followed by photos, reports, video, etc. If such remains are determined to be Native American, the Sheriff-Coroner must notify the Native American Commission within 24 hours.	Applicant	Applicant/PW&P	During ground-disturbing activities
11.	Aesthetics	All outdoor lighting shall be hooded and directed so as not to shine toward adjacent properties and public streets.	Applicant	Applicant/PW&P	During construction and operation
Conditions of Approval					
1.	Development of the property shall be in accordance with the Site Plan, Elevations and Operational Statement approved by the Planning Commission.				
2.	The Applicant shall prepare an Over and Across Agreement to permit access, equipment, conduit, pipeline, etc. crossing from one parcel to another from APN 041-030-20S to APN 041-030-48S. The agreement shall be reviewed and approved by the Development Services and Capital Projects Division of the Department of Public Works and Planning prior to the issuance of building permits.				
3.	Prior to occupancy, a Site Plan Review shall be submitted to and approved by the Department of Public Works and Planning in accordance with Section 874 of the Fresno County Zoning Ordinance for UCUP Nos. 3642-3647. Conditions of the Site Plan Review may include: design of parking and circulation areas, access, on-site grading and drainage, fire protection, landscaping, signage and lighting.				

*MITIGATION MEASURE – Measure specifically applied to the project to mitigate potential adverse environmental effects identified in the environmental document.
Conditions of Approval reference recommended Conditions for the project.

Notes

The following Notes reference mandatory requirements of Fresno County or other Agencies and are provided as information to the project Applicant.

1.	Unclassified Conditional Use Permit (CUP) Nos. 3642-3647 shall become void unless there has been substantial development within two years of the effective date of approval.
2.	Plans, permits, and inspections are required for the proposed improvements. Contact the Building and Safety Section of the Fresno County Department of Public Works and Planning at (559) 600-4540 for permits and inspections.
3.	All survey monumentation – property corners, section corners, County benchmarks, Federal benchmarks and triangulation stations, etc. – within the subject area shall be preserved in accordance with Section 8771 of the Professional Land Surveyors Act and Section 6730.2 of the Professional Engineers Act.
4.	The proposed Project may be subject to the following Air District Rules and Regulations: <ul style="list-style-type: none"> – Regulation VIII (Fugitive PM 10 Prohibitions), – Rule 4102 (Nuisance) – Rule 4601 (Architectural Coatings) – Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt Paving and Maintenance Operations) – Rule 4002 (National Emission Standards for Hazardous Air Pollutants) – Rule 4550 (Conservation and Management Practices) – Rule 4570 (Confined Animal Facilities) – District Rule 2201 (New and Modified Stationary Source Review) or District Rule 2010 (Permits Required).
5.	Engineered grading plans will be required for an work exceeding 1,000 cubic yards. An engineered grading plan and grading permit will be required for all project site improvements on all subject parcels
6.	To satisfy Best Practicable Treatment or Control requirements of the Digester Order, the proposed new pond should meet the Tier 1 liner design specifications cited in Pond Specification C.5 of the Reissued Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order No. R5-2013-0122.
7.	Any additional runoff generated by the proposed developed of this site should be retained on site.
8.	An encroachment permit from the Road Maintenance and Operations division of the Fresno County Department of Public Works and Planning will be required for any work done in the County right-of-way.
9.	All proposed improvements shall be located outside of the County road right-of-way. Setbacks to proposed structures shall be measured from the ultimate County road right of way.
10.	This application shall comply with California Code of Regulation Title 24 – Fire Code. Prior to receiving Fresno County Fire Protection District (FCFPD) conditions of approval for this project, the Applicant shall submit construction plans to the County of Fresno Department Public Works and Planning for review. It is the Applicant’s responsibility to deliver three sets of plans to FCFPD. This project shall annex to Community Facilities District No. 2010-01 and will be subject to the requirements of the current Fire Code and Building Code when a building permit or certificate of occupancy is sought. FCFPD requirements may include, but are not limited to:

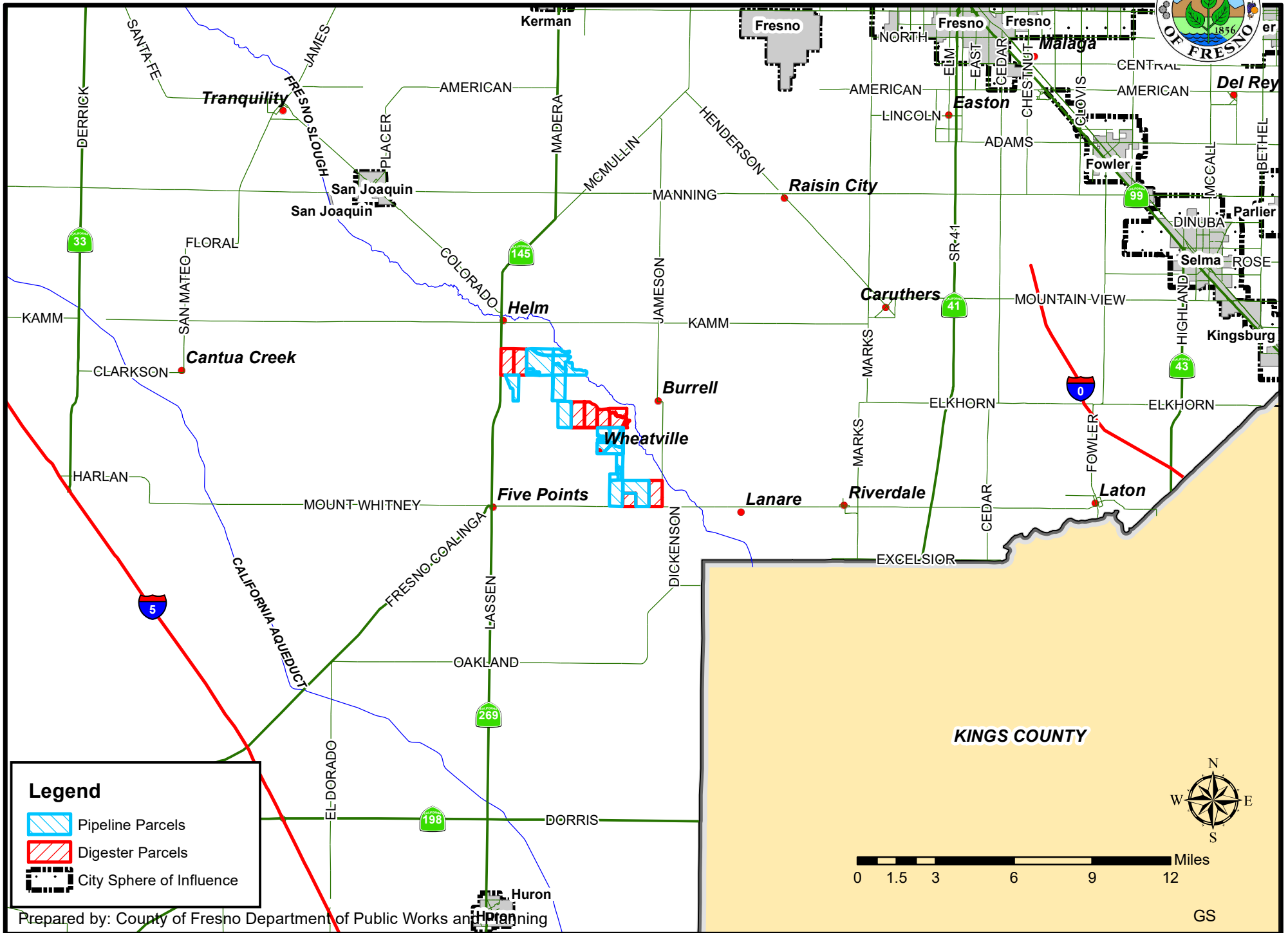
Notes	
	water flow requirements, water storage requirements, fire pumps, road access, Public Resources Code 4290, fire hydrants, fire sprinkler systems, fire alarm systems, premises identification and Title 15.60 County Ordinance.
11.	Prior to the production of compost from operations of the digester, the facility shall apply for and obtain a permit to operate a solid waste facility from the County of Fresno Department of Public Health, Environmental Health Division acting as the Local Enforcement Agency. Please contract Solid Waste staff at (559) 600-3271 for more information.
12.	The projects shall comply with the provisions of the Fresno County Flood Hazard Ordinance, Fresno County Ordinance Code Section 15.48. Any structure, tank, electrical panels or other equipment placed within the flood hazard area, will require an elevation certificate (1988 Datum) prepared by a licensed land surveyor.
13	<p>For all County-maintained road crossings the applicant shall be required to:</p> <ul style="list-style-type: none"> • Execute an agreement with the County, assuming financial responsibility for and repair of any impacts to the County maintained roadways, resulting from the installation or operation of underground infrastructure and/or signage within the County right-of-way. • Acquire valid encroachment permits prior to construction of any crossings. • Provide both hard-copy and digital, stamped As-Built engineering drawings detailing all infrastructure within the County right-of-way.
14	<p>At any road crossings, the proposed pipeline shall be encased in a steel sleeve (diameter and wall thickness as appropriate for the size of the carrier pipe).</p> <p>All County road crossings, of the proposed pipeline, shall be bored and sleeved in a steel casing, which shall extend from right-of-way line to right-of-way line of the road. All such road crossings shall be designed by a registered civil engineer and reviewed by and permitted through the Road Maintenance and Operations Division of the Fresno County Department of Public Works and Planning.</p> <p>No longitudinal encroachments of the proposed pipeline, shall be allowed in the County road right-of-way.</p> <p>Any electrical interconnects shall be located outside of the County right-of-way unless the facilities are deeded to Pacific Gas and Electric (PG&E) for maintenance purposes.</p>
15.	The applicants and or entities, shall register with Underground Service Alert (USA) North, and pay annual fees to ensure that USA is notified any time there is a proposed excavation in proximity to the pipeline.
16.	The project shall comply with the Health and Safety Element of the Fresno County General Plan and the provisions of Chapter 8.40 - Noise Control, of the Fresno County Ordinance Code.
17.	<p>Within 30 days of the occurrence of any of the following events, the applicant/operators shall update their online Hazardous Materials Business Plan (HMBP) and Site Map:</p> <ol style="list-style-type: none"> 1. There is a 100 percent or more increase in the quantities of a previously undisclosed material; or

Notes	
	<p>2. The facility begins handling a previously undisclosed material at or above the HMBP threshold levels.</p> <p>The proposed operation shall certify that a review of the business plan has been conducted at least once every year and that any necessary changes were made and that the changes were submitted to the local agency.</p>
18,	<p>All hazardous waste shall be handled in accordance the requirements set forth in the California Code of Regulations (CCR), Title 22, Division 4.5, which discusses proper labeling, storage and handling of hazardous wastes.</p> <p>If the anaerobic digester process requires accepting manure or other feedstock from off site, the facility will be subject to the Transfer/Processing Operations and Facilities Regulatory Requirements (Title 14, California Code of Regulations (CCR), Division 7, Chapter 3, Articles 6.0-6.35.</p>
19.	<p>According to the applicant's submitted operational statement, the proposed operation entails that separated solids from the anaerobic digesters will be disposed of at an appropriate solid waste facility. If the facilities change operations to use the separated solids for composting; the applicants/operators shall, prior to the production of compost from digester operations, apply for an obtain a permit to operate a Solid Waste Facility, from the County of Fresno Department of Public Health, Environmental Health Division (Local Enforcement Agency).</p>
20.	<p>The applicant and property owner of each parcel, to be traversed by or contain any portion of the proposed pipeline, shall create and record pipeline easement(s) with exhibit maps with the County of Fresno for the entire pipeline.</p>
21.	<p>All of the participating dairies are regulated by the Regional Water Quality Control Board, under the Dairy General Order, and are required to have a Waste Management Plan, and Certificate of Waste Discharge.</p>




JS:

G:\4360Devs&PIn\PROJSEC\PROJDOCS\CUP\3600-3699\3642\SR\CUP 3642-3647 MMRP (Ex 1).docx

LOCATION MAP



Legend

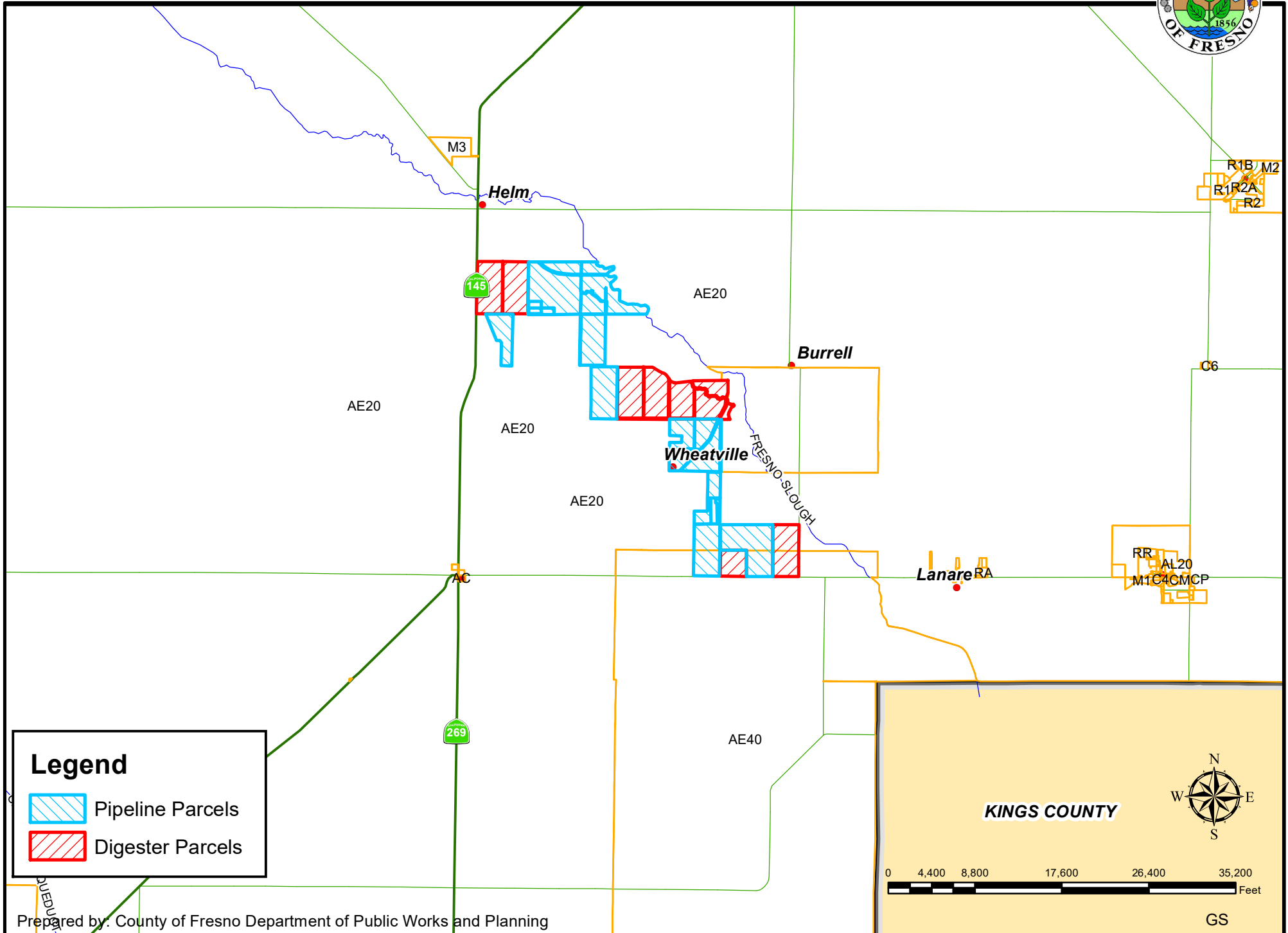
-  Pipeline Parcels
-  Digester Parcels
-  City Sphere of Influence

N
W —+— E
S

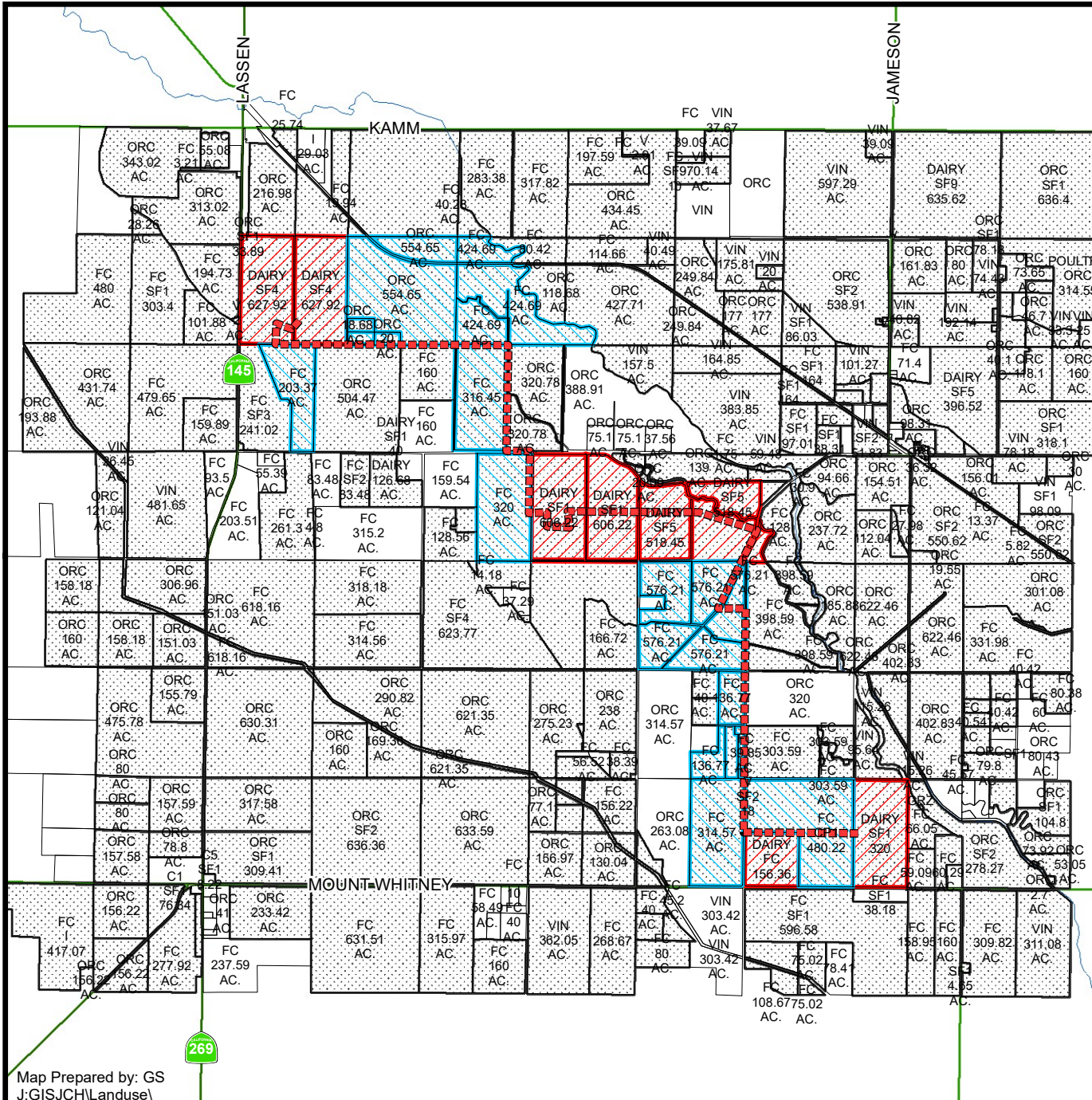
0 1.5 3 6 9 12 Miles

GS

EXISTING ZONING MAP

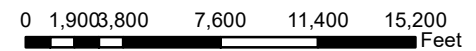


EXISTING LAND USE MAP



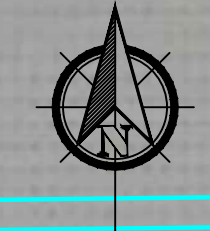
LEGEND	
CP# -	OFFICE COMM./PROF
C -	COMMERCIAL
C# -	COMMERCIAL
DAIRY	
FC -	FIELD CROP
FEE -	FEED LOT
GRZ -	GRAZING
I -	INDUSTRIAL
ORC -	ORCHARD
SF# -	SINGLE FAMILY RESIDENCE
V -	VACANT
VIN -	VINEYARD

Legend	
	Proposed Pipeline
	Pipeline Parcels
	Digester Parcels
	Ag Contract Land

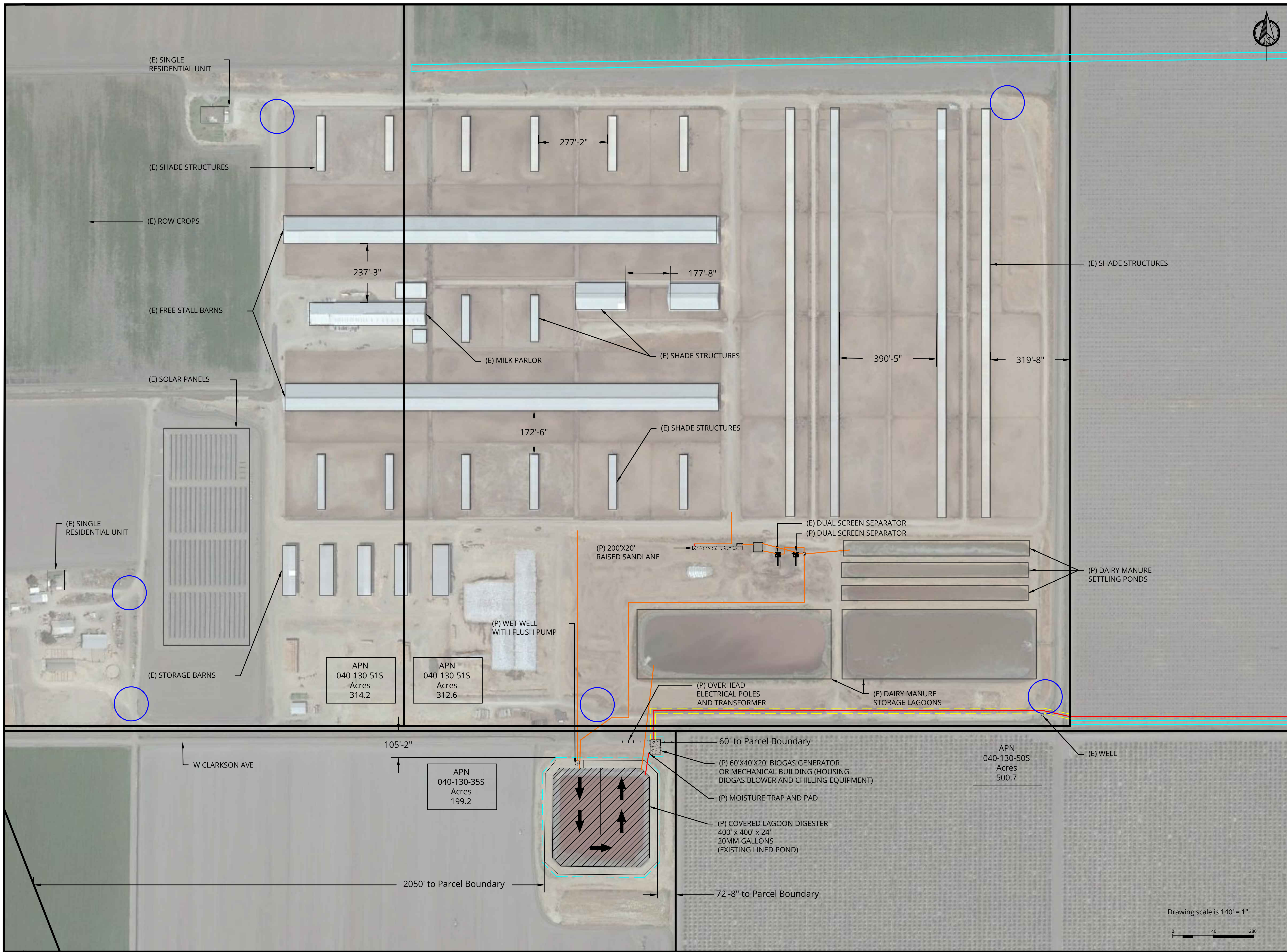


Department of Public Works and Planning
Development Services Division

Map Prepared by: GS
J:GISJCHLanduse1

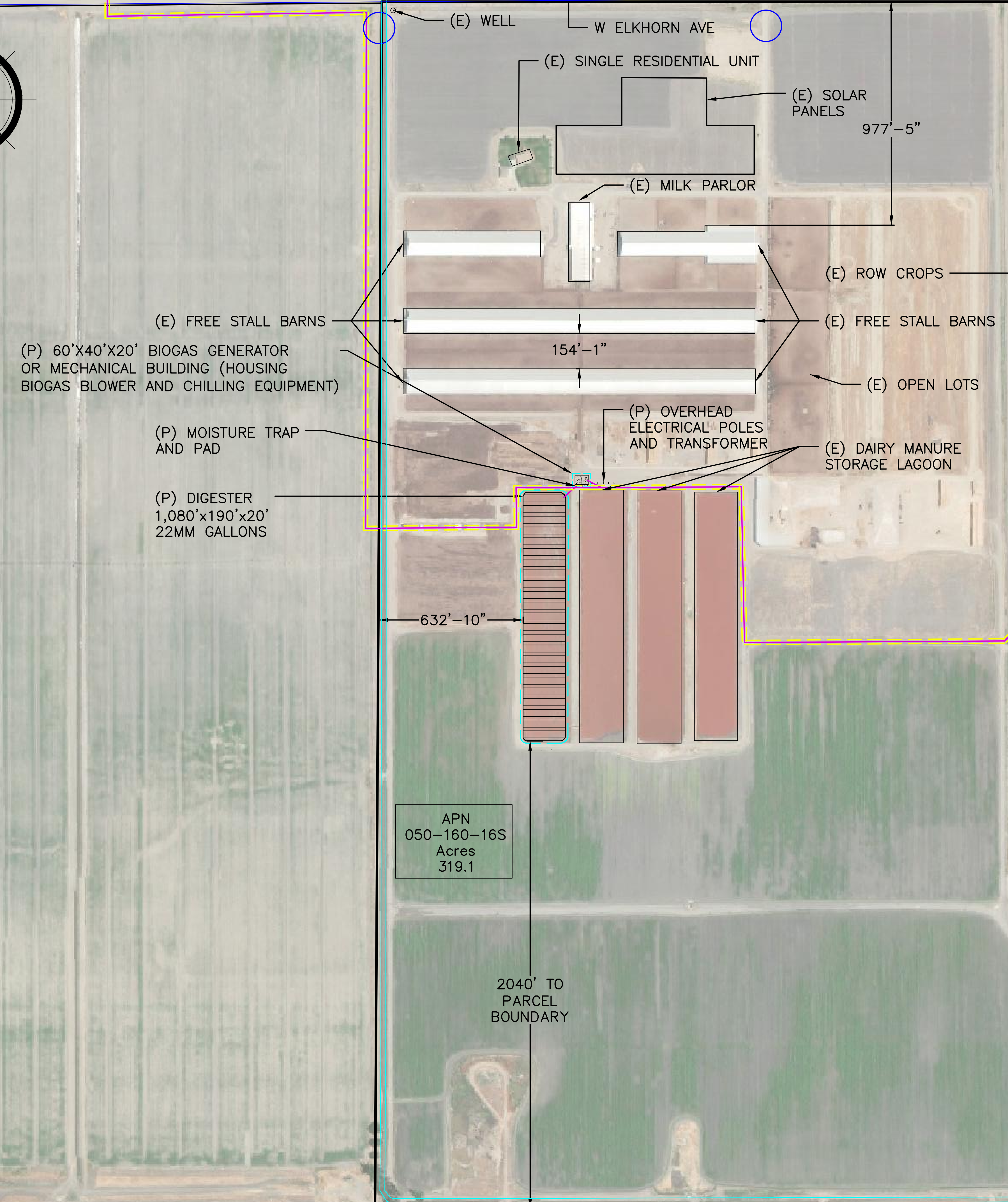
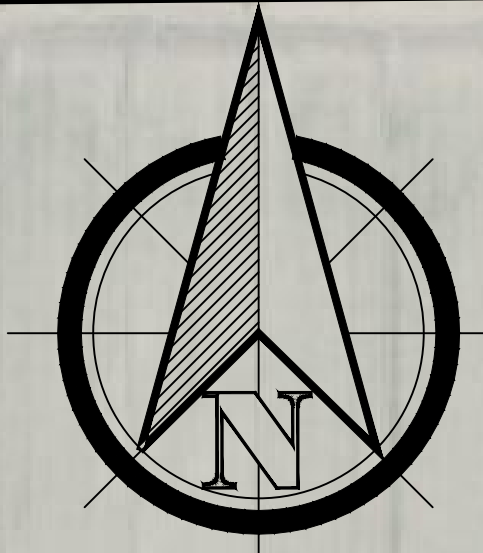


General Notes	
Confidential and Not for Construction	
• (E) Existing	
• (P) Proposed	
• Proposed Fencing	
• No improvements to streets have been propose.	
• Off-street dirt parking and loading areas exist throughout the property. No new parking/loading areas have been proposed.	
• 4" Biogas Gathering Lines	
• 6" Biogas Gathering Lines	
• Manure Piping	
• PG&E Transmission Line	
• APN Boundaries	
• Nearest Water Courses to Dairy Parcel	
• Williamson Act	
• 20' Pipeline Easement	
• Property Access	
All pipes are in private easement W Clarkson Ave, no County Public Right of Way.	
*040-130-50S and 040-130-35S property boundary lines updated for accuracy, 06/05/2019	
Firm Address 3711 Meadow View Dr. Suite 100 Redding, CA, 96002	
Project Name and Address Vander Hoek Dairy 15886 S Lassen Avenue Helm, California 93627	
Date 7/31/19	Version 1.2



Drawing scale is 1/4" = 1'





General Notes

CONFIDENTIAL

- (E) - Existing
- (P) - Proposed
- Access to the Property
- Proposed Fencing
- No improvements to streets have been propose.
- Off-street dirt parking and loading areas exist throughout the property. No new parking/loading areas have been proposed.
- 4" Biogas Gathering Lines
- 6" Biogas Gathering Lines
- Manure Piping
- PG&E Transmission Line
- APN Boundaries
- Nearest water courses to Dairy Parcel
- Williamson Act
- County Right of Way
- 20' Pipeline Easement
- Property Access

All pipes are in private easement with the exception of crossings shown.

Proposed pipeline is 20' or more from ROW.

Elkhorn Ave, 60' County Right of Way.

MAAS ENERGY WORKS

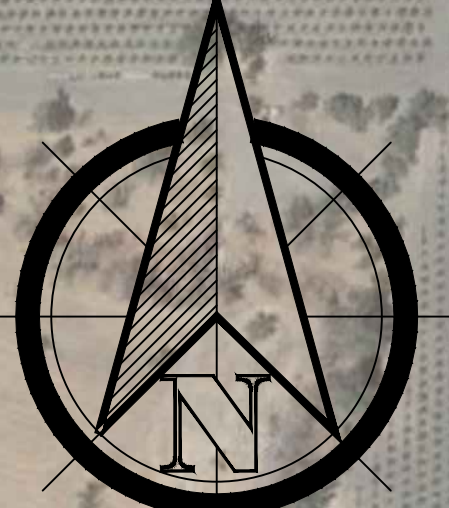
Firm Address
3711 Meadow View Dr.
Suite 100
Redding, CA, 96002

Project Name and Address
Van Der Kooi Dairy Digester
13695 W. Elkhorn Ave
Riverdale, CA 93656

Date
1/24/19

Version
1.0

Drawing scale is 235' = 1"



General Notes

CONFIDENTIAL Not for Construction

Cleanup Hub and Interconnection Property Detail Map

- (E) - Existing
- (P) - Proposed
- Access to the Property
- Proposed Fencing
- No improvements to streets have been propose.
- Off-street dirt parking and loading areas exist throughout the property. No new parking/loading areas have been proposed.
- 4" Biogas Gathering Lines
- 6" Biogas Gathering Lines
- PG&E Transmission Line
- APN Boundaries
- 10" Biogas Gathering Lines
- Approximate County Right of Way
- Property Access

-All pipes are in private easement with the exception of crossings shown.
 -Proposed pipeline is 20' or more from ROW.
 -Bishop Ave, 60' County Right of Way.
 -W Harlan Ave, 60' County Right of Way.

MAAS ENERGY WORKS

Firm Address
 3711 Meadow View Dr.
 Suite 100
 Redding, CA, 96002

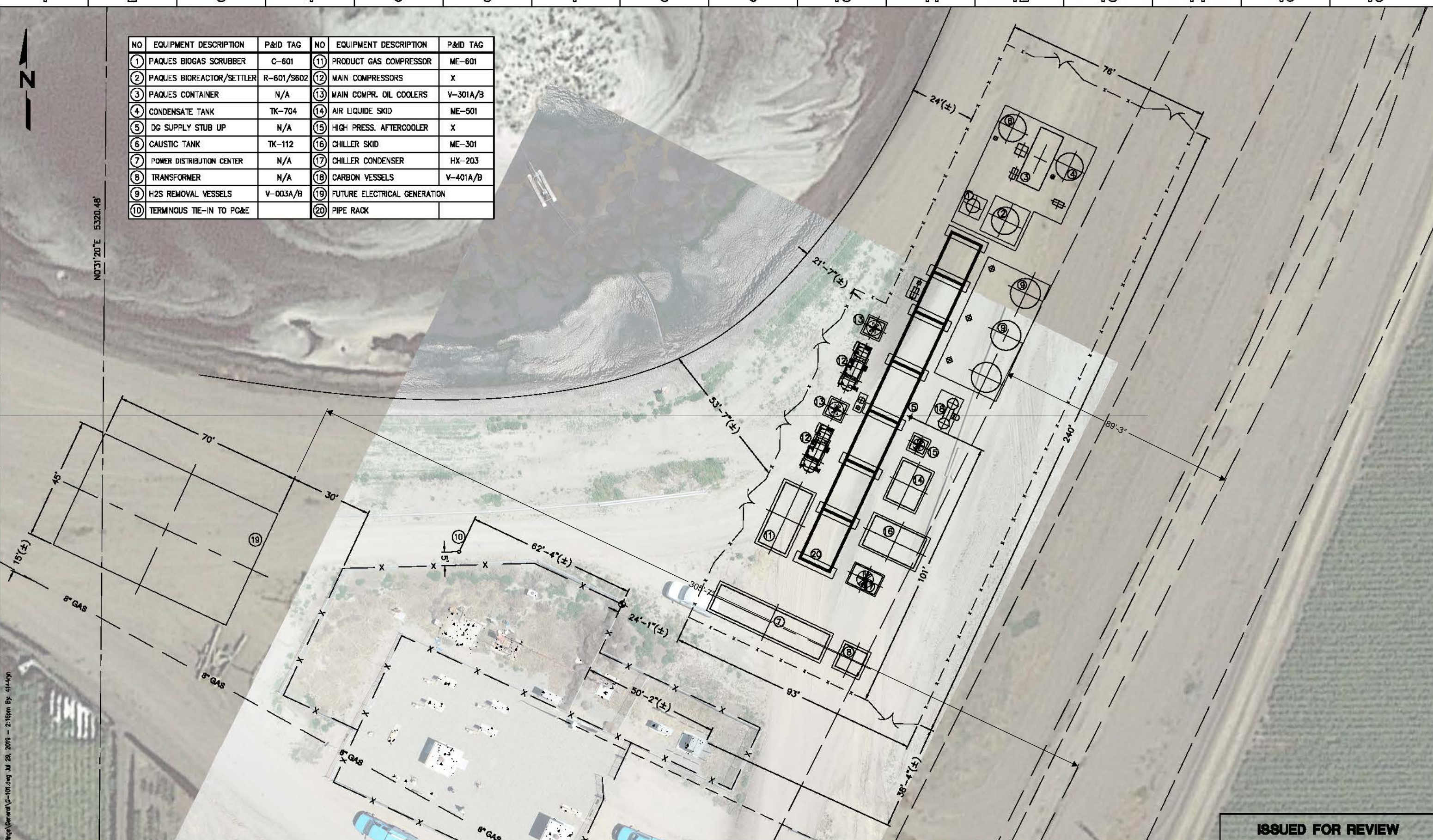
Project Name and Address
 Five Points Cluster
 Cleanup Hub & Injection Point
 12103 Elkhorn Ave,
 Riverdale, CA 93656

Date: 3/21/19
 Drawn By: SG, BO

Version: 2.2

Drawing scale is 250' = 1"

NO	EQUIPMENT DESCRIPTION	P&ID TAG	NO	EQUIPMENT DESCRIPTION	P&ID TAG
1	PAQUES BIOGAS SCRUBBER	C-601	11	PRODUCT GAS COMPRESSOR	ME-601
2	PAQUES BIOREACTOR/SETTLER	R-601/9602	12	MAIN COMPRESSORS	X
3	PAQUES CONTAINER	N/A	13	MAIN COMPR. OIL COOLERS	V-301A/B
4	CONDENSATE TANK	TK-704	14	AIR LIQUIDE SKID	ME-501
5	DG SUPPLY STUB UP	N/A	15	HIGH PRESS. AFTERCOOLER	X
6	CAUSTIC TANK	TK-112	16	CHILLER SKID	ME-301
7	POWER DISTRIBUTION CENTER	N/A	17	CHILLER CONDENSER	HX-203
8	TRANSFORMER	N/A	18	CARBON VESSELS	V-401A/B
9	H2S REMOVAL VESSELS	V-003A/B	19	FUTURE ELECTRICAL GENERATION	
10	TERMINOUS TIE-IN TO PG&E		20	PIPE RACK	



N0°31'20"E 5320.48'

ISSUED FOR REVIEW

EXHIBIT 5.3

N:\PROJECTS\08218005\00\Drawings\General\G-101.dwg, Jul 23, 2019 - 2:16pm By: 4144pp

SCS ENERGY
 3800 KILROY AIRPORT WAY
 LONG BEACH, CA 90806
 (562) 426-8844

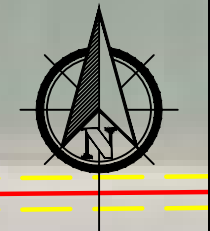
PROJ. NO. 08218005.00
 DWN. BY: DL
 CHK. BY: RN
 APP. BY: RV

CLIENT
MASS ENERGY
 12103 ELKHORN AVE.
 RIVERDALE, CA 93066

SHEET TITLE
SITE LAYOUT

PROJECT TITLE
**FIVE POINT CLUSTER
 RENEWABLE NATURAL GAS PLANT**

NO.	REVISION	DATE	PROJECT DATE:
A1	ISSUED FOR REVIEW	07/02/19	05/01/19
A2	ISSUED FOR REVIEW	07/18/19	SCALE: AS SHOWN
A3	ISSUED FOR REVIEW	07/19/19	DRAWING NO.
A4	ISSUED FOR REVIEW	07/24/19	G-101
A5	ISSUED FOR REVIEW	07/26/19	
A6	ISSUED FOR REVIEW	07/29/19	



General Notes	
Confidential and Not for Construction	
• Existing Structures (E)	
• Proposed Structures (P)	
• Access to the Property	
• Proposed Fencing	

• No improvements to streets have been proposed	
• Off-street dirt parking and loading areas exist throughout the property. No new parking/loading areas have been proposed.	
• 4" Biogas Gathering Lines	
• 6" Biogas Gathering Lines	
• Manure Piping	
• PG&E Transmission Line	
• APN Boundaries	
• Williamson Act	
• County Right of Way	
• 20' Pipeline Easement	
	Property Access
All pipes are in private easement with the exception of crossings shown.	
Proposed pipeline is 20' or more from ROW.	
Bishop Ave, 60' County Right of Way.	
Firm Address 3711 Meadow View Dr. Suite 100 Redding, CA, 96002	
Project Name and Address Wilson Dairy 11720 West Mount Whitney Ave Riverdale, California 93656	
Date 3/21/19	Version 1.0
Drawn By Byron Oja	

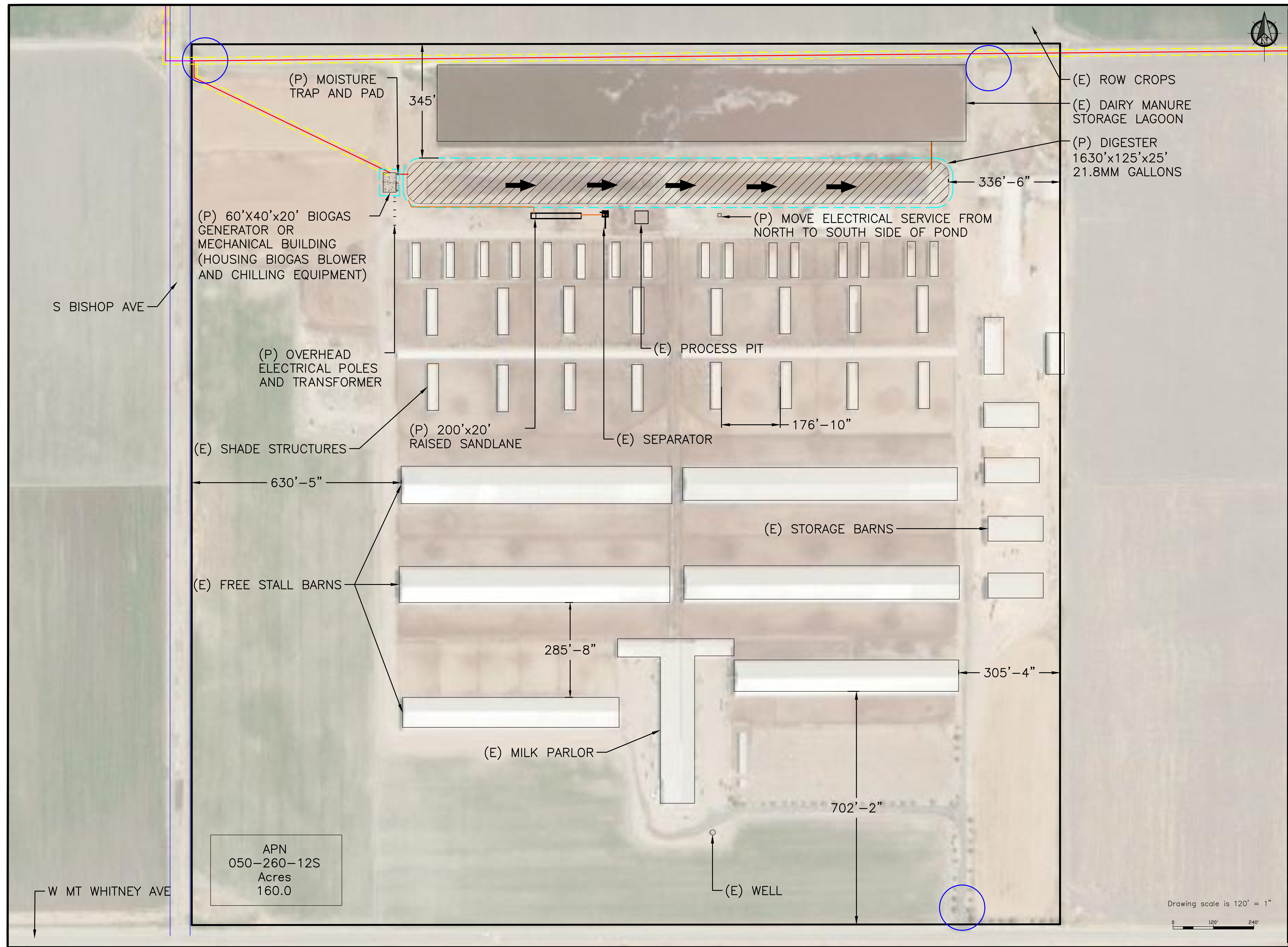
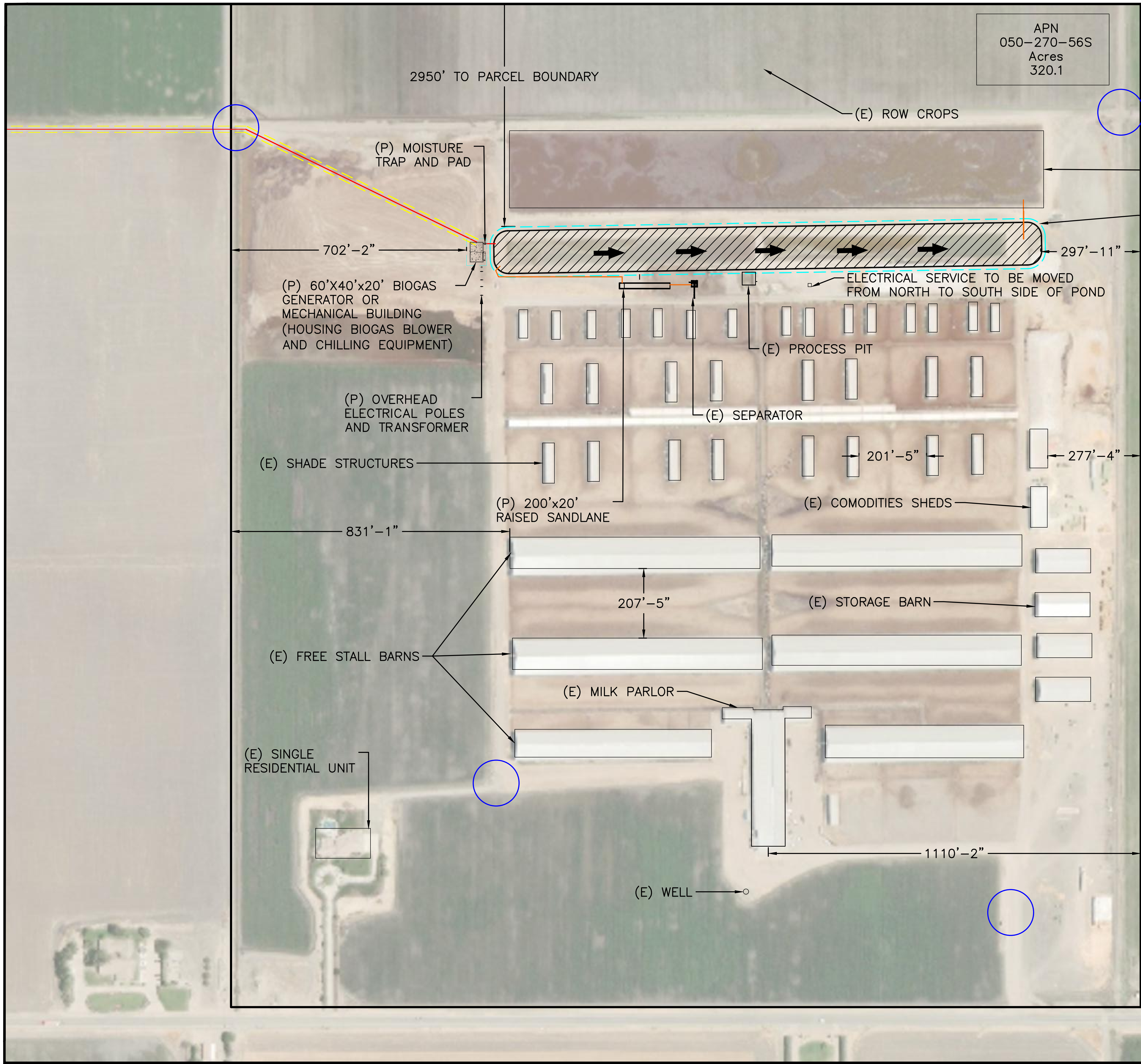


EXHIBIT 5.4



APN
050-270-56S
Acres
320.1



- General Notes
- Confidential and Not for Construction
- (E) – Existing
 - (P) – Proposed
 - Access to the Property
 - Proposed Fencing
 - No improvements to streets have been propose.
 - Off-street dirt parking and loading areas exist throughout the property. No new parking/loading areas have been proposed.
 - 4" Biogas Gathering Lines
 - 6" Biogas Gathering Lines
 - Manure Piping
 - PG&E Transmission Line
 - APN Boundaries
 - Williamson Act
 - 20' Pipeline Easement
 - Property Access

All pipes are in private easement

MAAS ENERGY WORKS

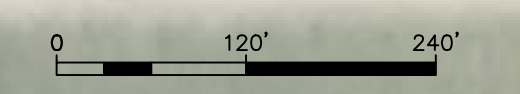
Firm Address
3711 Meadow View Dr.
Suite 100
Redding, CA, 96002

Project Name and Address
L & J Vander Ham Dairy
10846 W Mt Whitney Ave,
Riverdale, 93656

Date: 3/21/19
Version: 1.0

Drawn By: Byron Oja

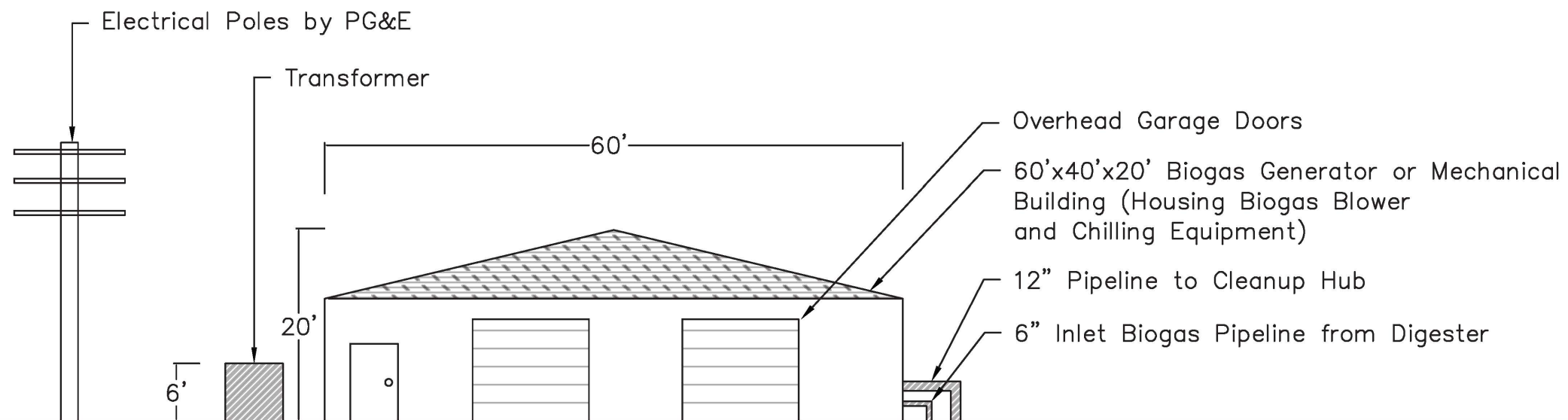
Drawing scale is 120' = 1"





General Notes

Not for Construction



Firm Address

3711 Meadow View Dr.
Suite 100
Redding, CA, 96002

Project Name and Address

Five Points Cluster
Cleanup Hub & Injection Point
12103 Elkhorn Ave,
Riverdale, CA 93656

Date

3/22/19

Version

1.0

Drawn By

Byron Oja

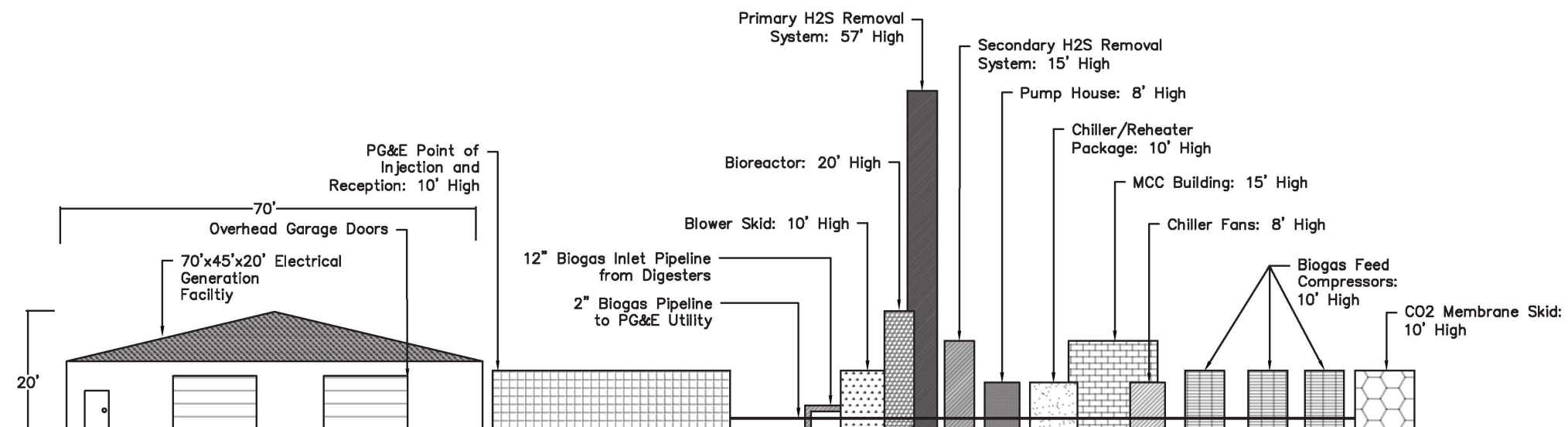
Drawing scale is 15' = 1"





General Notes

Not for Construction



Drawing scale is 25' = 1"



Firm Address

3711 Meadow View Dr.
Suite 100
Redding, CA, 96002

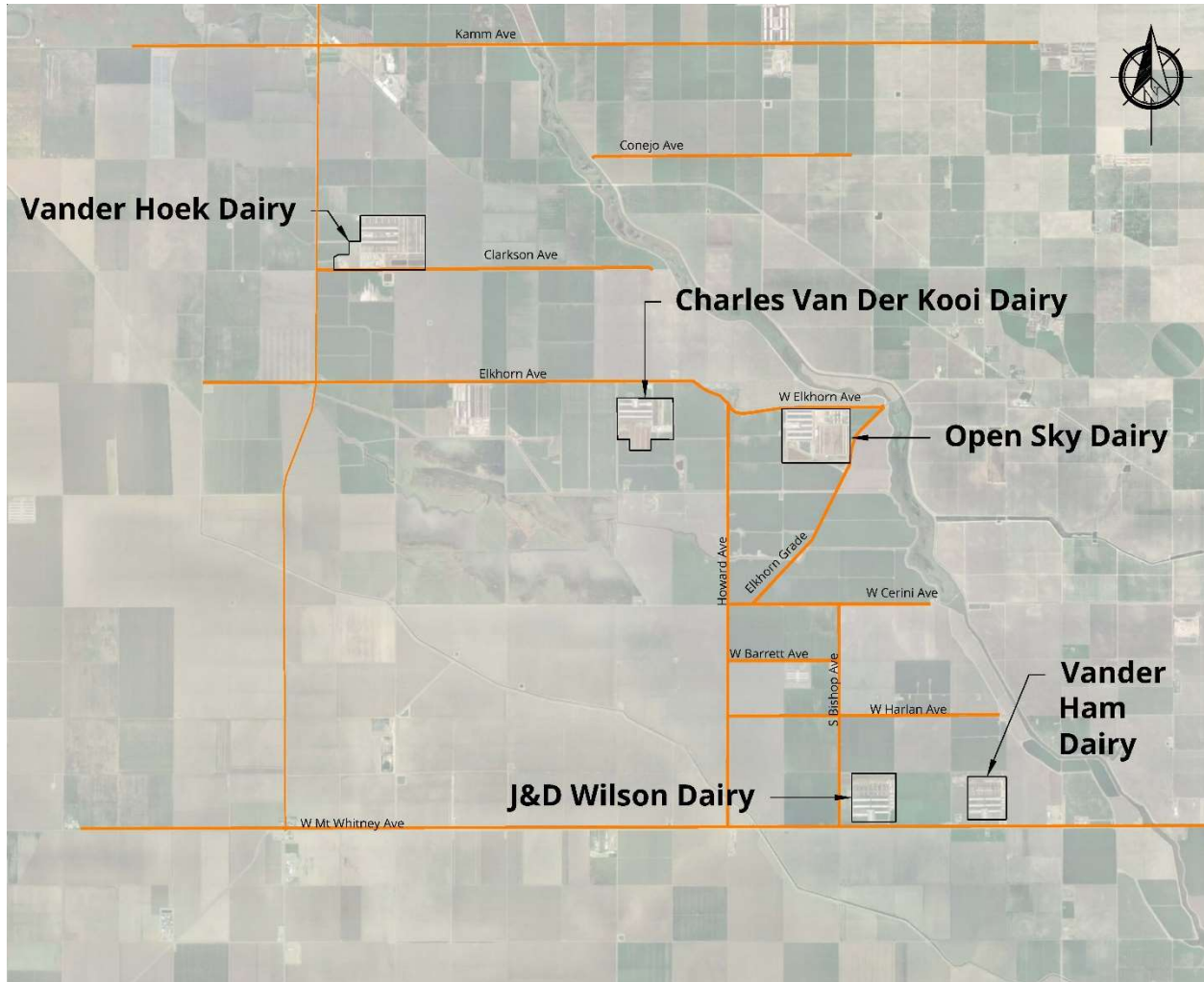
Project Name and Address

Five Points Cluster
Cleanup Hub & Injection Point
12103 Elkhorn Ave,
Riverdale, CA 93656

Date	Version
3/22/19	1.0
Drawn By	
Byron Oja	



Five Points Pipeline Dairy Digester Cluster Project
Five Points Pipeline LLC



Prepared by Maas Energy Works, Inc

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Project Overview

Introduction

The Five Points Pipeline Dairy Digester Cluster project (project) is being developed by Maas Energy Works Inc., California's largest and most reliable dairy digester developer. The project is a renewable gas production project that has the potential of expanding into a power generation project.

The biogas upgrading hub and common pipeline infrastructure will be owned by a new entity, Five Points Pipeline LLC, which is owned by Maas Energy Works Inc. Land owned by Open Sky Ranch will host the biogas upgrading facility and Pacific Gas & Electric (PG&E) natural gas transmission line and electrical interconnection points.

A total of 5 dairies have signed agreements with Five Points Pipeline LLC and Maas Energy Works to participate in this cluster as shown in Figure 1. The project hub location at Open Sky Ranch is the only previous dairy biomethane pipeline injection facility in the State, which will be recommissioned as part of this project. The particulars of the proposed upgrades of each participating dairy is discussed in detail throughout. The goals of the project are as follows:

- 1) Build covered lagoon anaerobic digesters on four of the five participating dairies to capture biomethane;
- 2) Transport the captured biomethane: via a newly constructed underground, fusion welded high-density polyethylene low-pressure pipeline, with easements from landowners to the biogas upgrading hub and interconnection point and/or via underground biogas pipe to individual biogas generators on site at each dairy;
- 3) Construct a state-of-the-art biogas conditioning facility that will clean the biomethane and convert it to renewable natural gas and/or construct a biogas generator at each dairy site to generate electricity;
- 4) Compress and then inject the resulting renewable natural gas into the PG&E distribution line and/or deliver electricity to the PG&E grid under the Bioenergy Market Adjusting Tariff (BioMAT), net energy metering with aggregation (NEM-A) or other applicable exporting tariff.

The project will utilize covered lagoon digester technology. Nearly all successful digesters in California utilize this technology since it is ideal for the State's high ambient temperatures and flush manure management systems. A total of 5 digesters are included in the project as listed in Table 1 below. The Open Sky Digester has already been designed, permitted (amendments needed) and constructed, while the other four digesters have thus far completed the design phase. All 5 participating dairy property owners have signed an agreement consenting their property's involvement in the project (see Five Points Pipeline Attachments Table and corresponding documentation: A-3, OS-3, B-3, C-3, D-3 and E-3). Two of the dairies whose projects will be built and owned by 3rd parties have signed a "Lease Agreement" consenting their property's involvement in the project (including the installation of the proposed pipeline and manure digesters). For the remaining three digester projects that are being built and owned by the dairy owners, a "Grant of Easement and Agreement" consenting their property's involvement in the project (for the installation of the proposed pipeline only) has been obtained. **For Private Land Owners whose land needs to be traversed in order to connect the various gathering lines to the Hub we have also obtained a "Acknowledgement of and Consent to Application" or "Grant of Easement and Agreement" consenting their property's involvement in the project application.** (for the installation of the proposed pipeline only) (see Attachment A-3.1 and A-3.2).

Project Owner and Developer

- Project Owner:
Five Points Pipeline, LLC
3711 Meadow View Dr,
Ste. 100, Redding, CA 96002
- Project Developer:
Maas Energy Works, Inc.
3711 Meadow View Dr,
Ste. 100 Redding, CA 96002

Project Locations and Property Owners

The Five Points Pipeline Dairy Digester Cluster project is located in the western portion of unincorporated Fresno County, approximately 3 miles west of the community of Riverdale and approximately 21.5 miles south of the City of Fresno (Figure 1).

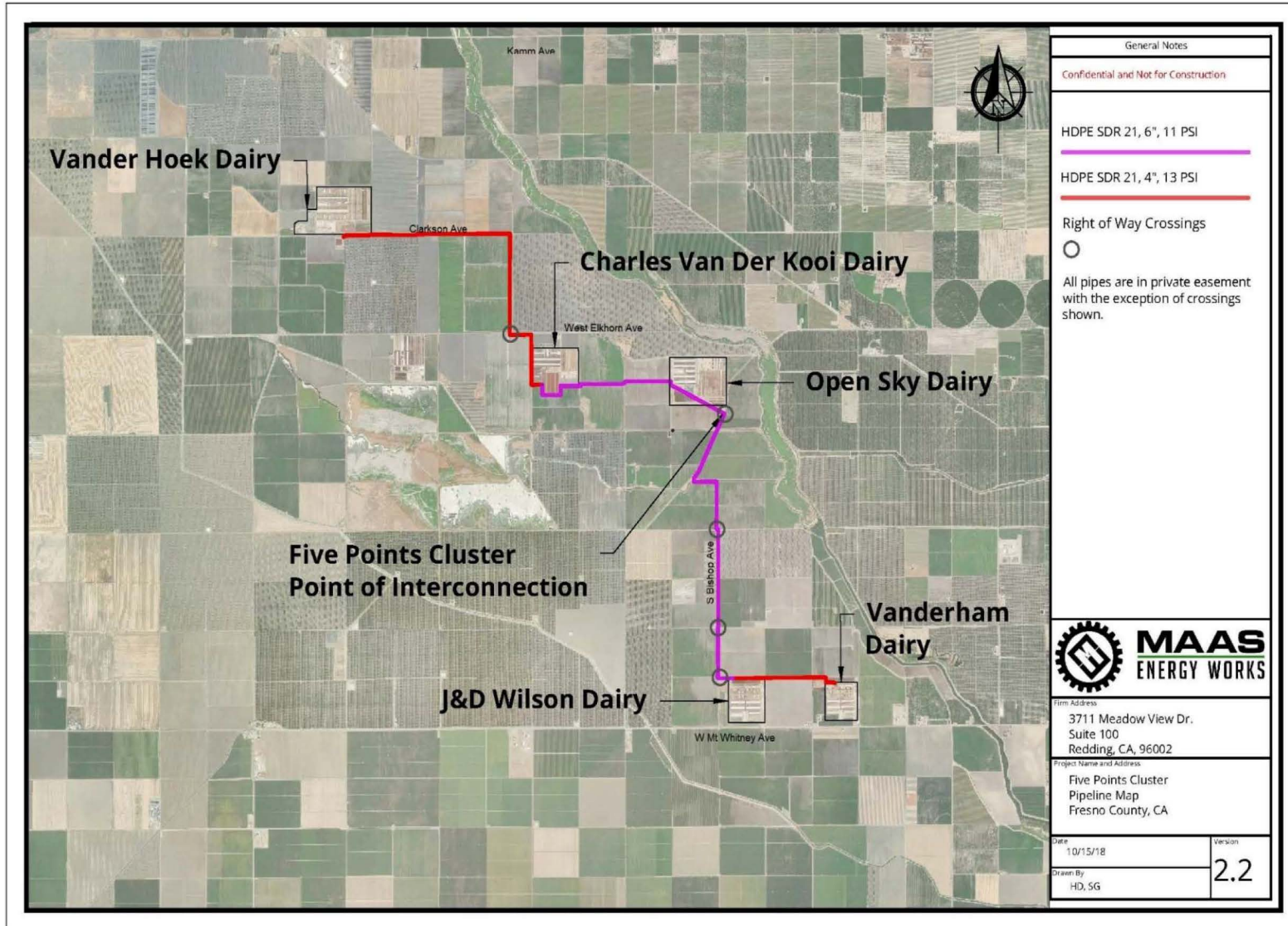


Figure 1- Project location



The project facility is located within Helm and Five Points, California USGS 7.5-minute topographic quadrangle maps, Township (T) 16 South, Range (R) 17 East, T 16S R 18E, and T 17S R 18E of the Mount Diablo Base and Meridian (MDB&M).

Table 1 lists the project components, property owners, addresses and associated Assessor’s Parcel Numbers (APNs).

Table 1
List of Project Locations

Description	Property Owner	Address	APNs
Biogas Upgrading Hub	Eric and Katelyn te Velde	12103 W Elkhorn Ave Riverdale, CA 93656	050-170-41S
PG&E Point of Interconnection	Eric and Katelyn te Velde	12103 W Elkhorn Ave Riverdale, CA 93656	050-170-41S
Digester #1 – Open Sky	Eric and Katelyn te Velde	12103 W Elkhorn Ave Riverdale, CA 93656	050-170-41S
Digester #2 – Vanderham	L&J Vanderham Dairy	10846 W Mt Whitney Ave, Riverdale, CA 93656	050-270-56S
Digester #3 – Van der Hoek	Pier and Darlene Van der Hoek	15886 S Lassen Avenue, Helm, CA 93627	040-130-51S
Digester #4 – Van der Kooi	Charles and Lynette Van der Kooi	13695 West Elkhorn Avenue, Riverdale, CA 93656	050-160-16S
Digester #5 – Wilson	Dry Creek Holdings, LLC	11720 West Mount Whitney Avenue, Riverdale, CA 93656	050-260-12S
Biogas Pipeline Route	Van Der Hoek		040-130-35S, 040-130-51S
	Steven Maddox		040-130-49, 040-130-44S, 040-130-48S, 041-100-17
	Van Der Kooi Family Trust		041-100-45S, 050-160-13S, 050-160-16S,
	E. te Velde		050-170-41S, 050-200-38S
	Dry Creek Holdings		050-230-20S, 050-260-10S
	American AG Aviation Inc		050-230-23S
	J&D Wilson		050-260-12S
	L&J Vanderham		050-260-11S, 050-270-56S

Entitlement Request

The project proponent is requesting approval of five Conditional Use Permits (CUPs) (See Table 2 Below and Attachments A-1, B-1, C-1, D-1 and E-1) and one amended CUP (see Table 2 below and Attachment OS-1) from the County of Fresno to allow for the construction and operation of a series of biogas collection facilities (digesters), gathering pipelines, and one upgrading facility. Initial Study Applications have been included to supplement CUP applications per the County’s request (See Attachments A-2, OS-2, B-2, C-2, D-2, E-2). The upgrading facility will consist of moisture removal, H₂S scrubbing, CO₂ stripping, and biomethane compressors. Approximately 10.5 miles of underground high-density polyethylene (HDPE) biogas gathering lines will also be installed to connect with up to four new dairy digesters and one existing digester (see Table 2, below and Attachment OS-5). The Five Points Cluster project will interconnect to the Pacific Gas and Electric (PG&E) Gas Transmission Line 138. An MSA will monitor gas quality, odorization and control equipment per the relevant Tariffs and Rules including but not limited to PG&E Gas Rule 21. All the equipment will be designed specifically for this use.

Project Permit Applications

Table 2 - List of CUPs Requested by Fresno County

Description	Applications
Biogas Upgrading Hub - Open Sky	CUP “A” – Name to be assigned by Fresno County
PG&E Point of Interconnection	
Pipeline Route	
Digester #1 – Open Sky	Amendment to CUP 3590
Digester #2 – Vanderham	CUP “B” – Name to be assigned by Fresno County
Digester #3 – Van der Hoek	CUP “C” – Name to be assigned by Fresno County
Digester #4 – Van der Kooi	CUP “D” – Name to be assigned by Fresno County
Digester #5 – Wilson	CUP “E” – Name to be assigned by Fresno County

The dairies participating in the Five Points Pipeline Dairy Cluster project include entitlements for four new CUPs and an amendment to CUP 3590. A list of the items to be installed and detailed explanations of each project component is included for every application under “CUP Application Project Details”, which is listed throughout. Each of the dairy sites (CUP “B” through CUP “E”) has similar components. However, CUP “A” includes several key components that will only be associated with this site. This information is presented below.

CUP “A” Application Project Details (PG&E Interconnection, Hub & Gathering Lines)

Lists the proposed project components to be installed at the participating project site for CUP “A”.

- PG&E Point of Interconnection and Injection Point
 - Meter Set Assembly
- Biogas Upgrading and Electrical Generation Facility (Hub)
- Biogas Gathering Lines

PG&E Point of Interconnection and Injection Point

- Meter Set Assembly (MSA)

The project proposes to install an interconnection and injection point with PG&E. The MSA includes equipment which measures, odorizes, and controls the biomethane gas flow into the PG&E pipeline. This equipment will be controlled by PG&E via SCADA. PG&E will monitor gas quality 24/7 through this equipment. If at any point, the biomethane is not within the PG&E Rule 30 standards, the equipment automatically closes the injection valve and the biomethane is not injected into the pipeline. The interconnection point is shown in the attached facility layout.

All portions of the project will comply with Pipeline and Hazardous Materials Safety Administration (PHMSA) guidelines, 49 CFR Part 192, and with the CPUC’s Safety Enforcement Division (SED) General Order 112-F.

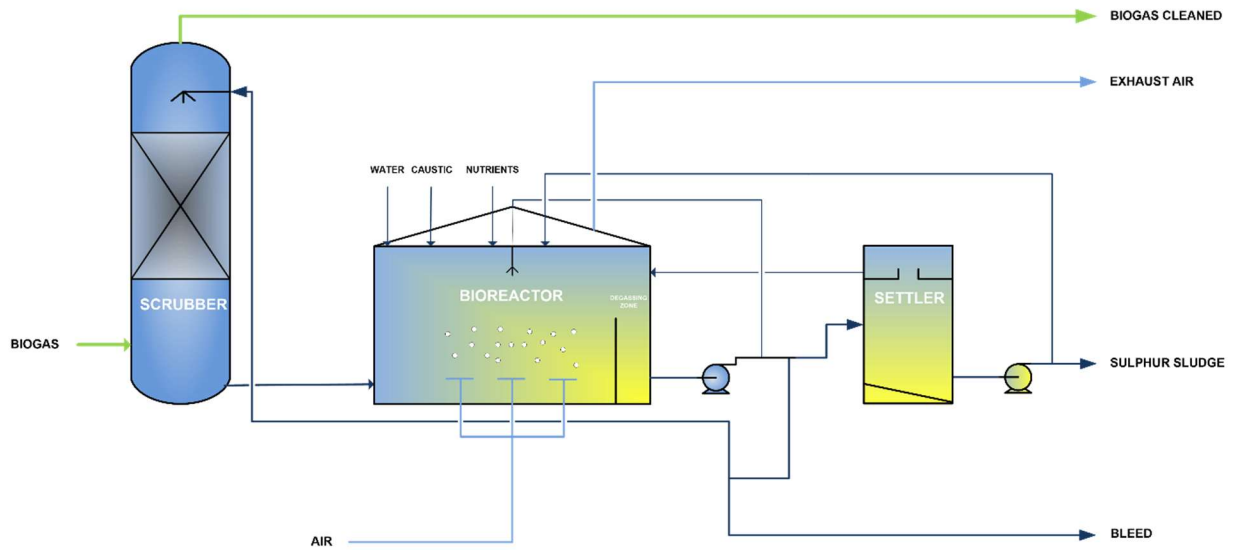
Biogas Upgrading and Electrical Generation Facility (Hub)

- Blower Skid
- Primary H₂S Removal System
- Chiller/Re-Heater Package
- Biogas Feed Compressor
- Secondary H₂S Removal System
- CO₂ Membrane Skid
- Product Gas Compression
- Biogas Generator

The project proposes to install the biogas upgrading facility APN 050-170-41S. The upgrading facility will consist of moisture removal, H₂S scrubbing, CO₂ stripping, and biomethane compressors. The facility will require upgraded or new electrical service from Pacific Gas and Electric (PG&E) to power the equipment. All the equipment will be designed specifically for this use and sourced from experienced vendors. The proposed footprint is approximately 160 feet x 130 feet. (See facility site plan found in Attachment A-5.)

The upgrading facility removes impurities, moisture, and gas constituents that are not suitable for injection into the PG&E pipeline. After the incoming gas is metered, it enters the hydrogen sulfide removal system. The project will use a Sulfurex (or equivalent) Caustic Scrubber with biological media regeneration to remove Hydrogen Sulfide (H₂S). Sulfurex is a desulfurization process that combines chemical desulfurization, at medium to high pH, with biological regeneration of the solvent (caustic). The system consists of a packed column, a biological reactor and a settler. The Figure below shows a basic process flow diagram of the Sulfurex process.

Figure 2 – Caustic Scrubber Flow Diagram



The biogas enters the scrubber at the bottom of the tower and flows upwards through a packed column that is 57 feet in height. A caustic solution is distributed on top of the column over the packing media and falls through the packing material in a counter-current direction of the gas. The packing material inside the column ensures good contact between hydrogen sulfide and the process liquid for maximum efficiency. While the biogas flows through the packed column, H₂S is absorbed in the caustic solvent. The biogas leaves the column free of hydrogen sulfide at the top. The saturated process liquid is collected in the sump at the bottom of the scrubber and flows under gravity to the bioreactor. In the bioreactor, the hydrogen sulfide present in the liquid is biologically oxidized into elemental sulfur by Thiobacillus bacteria. The oxygen required for this biological process is supplied by an aeration system installed at the bottom of the bioreactor. During oxidation, the caustic solution is regenerated before being reused for another washing step in the scrubber. In the bioreactor water, nutrients and caustic are automatically refreshed for cellular growth and guarantee good operating conditions. The elemental sulfur is separated from the process liquid in the settler, which can be integrated inside the bioreactor. The settler is fed with a small part of the effluent coming from the bioreactor. The overflowing process liquid (low TSS) flows from the settler to the bioreactor. Sulfur sludge is removed from the bottom of the settler with a high dry matter content of 5-10% mass, which can then be used as high-quality fertilizer.

The Sulfurex system is an extremely flexible desulfurization technology that achieves low hydrogen sulfide outlet concentrations with low operational expenses. Since the air injection takes place in the bioreactor, no oxygen mixes with the product biogas making it suitable for biogas upgrading. This technology is also able to operate efficiently under very high loads of sulfur as is common with dairy biogas.

After passing through the hydrogen sulfide (H₂S) removal system at the hub, the gas runs through one more chilling and reheating system to ensure any remaining moisture is captured and the gas is dry enough to meet pipeline quality standards. Thereafter, the gas is drawn via a compressor to provide operating pressure for the CO₂ removal membranes. To remove CO₂, the project will use an CO₂ membrane removal system. After passing through the membranes, the purified gas is monitored in a project-owned gas chromatograph for gas quality. If the gas does not meet pipeline quality standards, it is recirculated through the gas

conditioning process and new deliveries of raw gas from the digesters are reduced or paused. Once the biogas meets pipeline quality standards and pressure, the biogas will be delivered to the MSA.

A byproduct of the biogas cleaning and conditioning process includes elemental sulfur. Elemental sulfur is considered a non-hazardous material that can be used as an organic soil additive that can be used to safely correct soil pH levels and as a plant nutrient (PubMed, 2018). Currently elemental sulfur is added to some of the surrounding farmland as a soil amendment. It is anticipated that this additive will be allowable as determined by each dairy's nutrient management plan. This material will only be generated at the project hub site.

The amount of elemental sulfur generated during the biogas cleaning process depends upon the quantity and H₂S content of the biogas. In a worst-case scenario, at 2,500 standard cubic feet per minute (scfm) and 3,000 parts per million (ppm), the combined project would generate approximately 450 lbs of sulfur per day or approximately 82 tons per year. In the unlikely event that the sulfur is not used as a soil amendment, it is anticipated that the material would be transported to a landfill by a qualified disposal firm. Based on the worst-case scenario, one truck every four weeks would transport the material to an appropriate disposal site.

Electrical Generation Facility

The project proposes to install the biogas generation facility adjacent the biogas upgrading facility on APN 050-170-41S, with a footprint of approximately 70' x 45'. This facility houses the generator(s) and any ancillary equipment (including but not limited to Carbon H₂S Scrubbers, Chillers, Condensers and Blower Equipment). (Please reference Attachment A-5 for a depiction of the facility's location and dimensions in relation to surrounding equipment).

Biogas Generators

The project's internal combustion engine's emissions will be regulated by the SJVACPD under the latest Best Available Control Technology (BACT) standards. This power generation project will consume biogas in an onsite generator, to create electricity for delivery to the PG&E grid under the Bioenergy Market Adjusting Tariff (BioMAT), net energy metering with aggregation or other exporting tariff. When the engine is off for maintenance, the biogas will be stored in the covered lagoon, which has capacity for approximately 2 days of biogas storage. An emergency vent will also be installed per San Joaquin Valley Air Pollution Control District permit requirements.

The engine(s) are Guascor SFGLD-560 or similar, 16-cylinder lean-burn, turbo-charged reciprocating internal combustion engine mated with a synchronous generator. The combined rated electrical power of the system is 800-1,000 kW. The biogas from this project will be conditioned to remove moisture and reduce hydrogen sulfide below 40 ppm. Moisture from the biogas will be removed using a Bell & Gosset (or equivalent) plate and frame heat exchanger cooled by a Cold Shots (or equivalent) 240,000 BTU/hr industrial air-cooled chiller. H₂S reduction will be achieved in two stages. First a built-in air injection system under the digester's cover will encourage biological fixation of sulfur molecules. Secondly, the project will employ a media-based scrubber using non-toxic media (Sulfatreat or similar). CO₂ does not need to be removed prior to combustion under this design. The project engine generator(s) is oversized to increase reliability and to allow the project to generate during the time of day when the power prices are most profitable. The project will signed a final interconnection agreement with PG&E.

Emissions Reduction Plan: The project will treat exhaust emissions using a Selective Catalytic Reduction (SCR) system with Oxidation Catalyst from HUG Engineering (or similar manufacturer) that comes with a guarantee of performance.

Biogas Gathering Lines

The project will install HDPE biogas collection lines between the hub and the individual digesters. All of the necessary land is controlled by dairy farms and so no third party or public easements are required to complete the pipeline, except where crossing county roads. The pipeline will be constructed of SDR 17 and SDR 21 HDPE, which does not corrode when exposed to biogas (even if wet) and has excellent wall strength for this application. The pipeline will be operated at between 3 and 20 pounds per square inch. This very low pressure has several advantages. First, it requires much less electricity than higher pressure gas lines. Second, the biogas compression equipment installed at the farms is limited to single stage rotary lobe blowers, which are easy to repair and maintain in a farm environment. Finally, the safety risks of all equipment and pipelines are greatly attenuated by operating them at lower pressures.

The project pipelines will maintain minimum vertical and horizontal utility clearances during installation. Since the project is not building in public rights of way except where the pipeline crosses county roads, there is very little interaction with existing buried utilities. The pipeline minimum depth will be 48 inches although in nearly all locations it will be significantly deeper due to engineering requirements such as channel crossings and line sloping. The line will be sloped toward designed low points with moisture removal traps to enable draining, testing, and maintenance. No High-Speed Rail crossings are required for any initial or future digesters.

The project's design and operation will comply with all county code requirements and any applicable portions of the federal Pipeline and Hazardous Materials Safety Administration. The project will install tracer wires and marker tapes on all gas gathering pipelines.

The pipeline will be hydrotested prior to first use. Isolation valves will be installed at each dairy, and at the hub, to allow disconnection of biogas for equipment repair and maintenance.

Biogas Gathering Lines in Relation to Dairies and Blowers

The gathering lines will move biogas from each participating dairy to the central upgrading facility. A blower will be installed at each digester to move the biogas into the gathering lines at pressure of less than 20 psi. Each blower will be controlled by a central SCADA system that is overseen by operators on a 24/7 basis. When a blower increases in speed, more biogas is pushed to the upgrading facility, and when it decreases, less biogas is sent. The gathering lines will be pressure monitored via SCADA equipment in real time to detect leaks or major failures. Additionally, flow meters will be installed at each digester site and at the upgrading facility to monitor biogas flows.

Biogas condensate in the pipeline will be primarily managed via moisture removal at each dairy, and further checked by relative humidity sensors at the outlet of each dairy's gas handling equipment. However, the gas gathering pipelines are further protected from moisture using moisture condensate traps at the outlet of each dairy, and at low points along the pipeline route. These moisture traps include a visual indicator when they are approximately half full. These traps will be checked weekly as part of standard operating procedures, and more often whenever the project's control system indicates high moisture gas may have been delivered by one or more dairy digesters.

Pipeline integrity will be monitored via several methods. First, the project's control system monitors outgoing and incoming pressures at various points along the line. The system automatically generates alarms and shuts down when extreme failures are indicated by rapid loss of pressure/increase of flow. Additionally, the total gas volume delivered and received is metered and will be tracked over time via trend analysis. This analysis can indicate any gradual loss of integrity due to mismatched delivery/receipts indicating missing gas or other anomalies. Finally, the pipeline will be walked at least once per year with

handheld gas detection equipment to search for very small methane leaks. Remote sensing of such leaks via drone-mounted sensors may also be employed if such techniques are approved by regulatory authorities.

Operation Details

Safety Plan

The project will include an Operations and Maintenance manual. The O&M manual will outline safety protocols and procedures which will be utilized in the unlikely event of a pipeline or liner failure, or gas leakage. Though it is excluded from their regulatory scope, the O&M manual is built to the standards of DOT's Pipeline and Hazardous Materials Safety Administration. The project will also be monitored using a computerized SCADA remote control system and monitoring equipment.

The pipeline utilizes fusion-welded joints and will be pressure tested during construction to ensure it was installed without leaks. The blowers are equipped with a SCADA system and are designed to inject biogas into the pipeline at a maximum working pressure of 20 psi, so the likelihood of over-pressurization is minimal.

The possibility of accidental breach of the pipeline by either unauthorized excavation or farming activities has been accounted for. The following measures will be implemented in the design process to minimize accidental breaches of the pipeline:

- The pipeline will be registered with the Utility Services Alert (USA) system. There are legal requirements for contacting USA prior to any excavation, and the pipeline operator will mark the location of the pipeline in the area of the proposed excavation.
- Marker posts are installed at maximum 700-foot intervals warning of the presence of the pipeline and providing contact information of the pipeline operator.
- Copper clad steel tracer will be installed with the pipeline to aid in the future location of the pipeline by the pipeline operator.
- Marker tape will be installed 1-foot above the pipeline to warn excavators that the pipeline is located below the marker tape.
- The pipe will be installed with a minimum of 4-feet of cover, which is below the depth of normal farming activities.

Additionally, the pipeline operator will develop an education program to inform landowners and farm operators of the existence of the pipeline, along with its location and restrictions regarding farm operations in the area of the pipeline.

In the unlikely event of an accidental breach of the pipeline, the following procedures will minimize risk to the public:

- The blowers that pressurize the pipeline are controlled by the central SCADA system, which can remotely turn off all of the system blowers. All the blowers should then be turned off, which would stop the flow of biogas into the pipeline.
- High performance butterfly valves are located throughout the pipeline network. The valves near the breached section of pipeline should be closed to isolate the breach from the rest of the system.

If such an event were to occur, local emergency personnel must be notified to restrict access to the area adjacent to the breach and assist with any required evacuations.

Operational Times and Visitors

The facility will be operational 24/7, but not open to public visitors without prior permission.

Number of Employees

Construction:

Hub: a maximum of 20 people for short periods of time, with an average of 10 people on site during the 10 months of construction.

Pipeline: a maximum 10 people for the 7 months of construction.

Operations:

Remote sensor and computer monitoring of the equipment will be operated permanently. One employee will make a daily inspection of the facility. That work will be conducted during regular business hours, 8am-5pm, and on-call 24/7. No permanent facility employees will work or live on-site.

The number of dairy employees will not increase.

Service and Delivery Vehicles

A service truck will visit once per day, two delivery trucks and one disposal truck will be on site approximately once per month.

Access to the Site

The closest access to the project hub is via a private driveway off Elkhorn Grade. However, there are several other private driveways on the dairy's property that will provide additional routes if needed, to the proposed equipment for any initial construction or future maintenance. Other surrounding public streets that may be used for access to the hub equipment include: West Elkhorn Avenue, South Howard Avenue; as well as nearby unnamed farm roads. In projects such as this, pipeline is always located adjacent to public or private roads.

Parking

Construction crews and equipment will use the existing dairy for parking and staging. The primary parking location will be on the southeast side of the property as this is closest to the proposed construction. This area already exists as a flat dirt parking area for farm equipment and vehicles as necessary.

Goods

No goods will be sold on site.

Equipment

Equipment used on site will include but is not limited to chillers, valves, condensers and electrical distribution and automation.

Supplies or Materials

The facility will use and store small quantities of materials such as fuels, lubricants, and hydraulic fluids. Handling of hazardous materials are regulated by federal and State laws, which minimizes worker safety risks from both physical and chemical hazards in the workplace.

Appearance/Noise/Dust

The project facility is similar in nature to the existing dairy infrastructure and fits into its surroundings. The pipeline will run underground and will not be seen. Noise generated by the project equipment will not be above typical agriculture facility levels. The facility does not include any lights or other sources of glare beyond what is currently used for security reasons at the dairy. Once operational, the project will not generate fugitive dust. The project will not emit or concentrate any odors.

Solid or Liquid Wastes to be Produced

The facility will produce up to 500 gallons per day of condensation from drying the biogas in preparation for injection into the natural gas pipeline. This condensation will be drained into the adjacent dairy manure storage lagoon or a leachate field.

Facility will produce less than 10 gallons per week of waste compressor oil. Oil will be stored in marked and sealed containers onsite until picked up by oil recycling company about once per quarter. In addition, facility will produce minimal amounts of other varied solid wastes. This will be stored in marked containers and picked up once per month by a solid waste disposal company for disposal at an appropriate landfill.

The elemental sulfur will be removed from the site on a monthly basis for use as a soil amendment or it will be disposed of at an appropriate disposal site.

Construction and Operational Water Usage

Construction of the hub will take approximately 10 months (200 working days) and pipeline is anticipated to take approximately 7 months (140 working days). Water for construction and operations would be supplied by an existing on-site agricultural well.

Construction (Hub and Pipeline): An estimated 5,000 gallons/day is anticipated during up to 10 months of construction activities. Based on an average 20 work days a month, approximately 3.0 AF would be required (5,000 gallons x 200 days = 1,00,000 gallons).

Operations: Water usage is anticipated to be approximately 2,500 gallons per day or 2.8 AF annually during operation.

Advertising

There will be no advertisements at the project site.

Buildings

The project will not construct any new buildings, but 2-3 small containers may be installed for electrical controls and other equipment. These will be steel and unobtrusive colors. No office or Operations and Maintenance building is proposed.

Lighting and Outdoor Sound Amplification

No outdoor sound amplification systems will be installed for the project. The facility will function 24 hours a day and will include the same standard security lighting as found on the surrounding parcels. All lighting would be directed downward and shielded to focus illumination on the desired work areas only and prevent light spillage onto adjacent properties.

Landscaping and Fencing

There will be chain link fencing installed around the perimeter of the facility. No landscaping is proposed for the project.

Restrooms

There is no on-site permanent staff. Maintenance staff will use the existing dairy restroom facilities.

Amendment to CUP 3590 Application Project Details (Open Sky)

The existing digester at the Open Sky Ranch is permitted by CUP 3590. The additional proposed components to be installed at the participating project site for the amendment to CUP 3590 are listed below.

Digester #1 – Open Sky Ranch:

- Biogas Blower and Chilling Equipment
- Mechanical Building
- Supporting Equipment

Biogas Blower and Chilling Equipment

A chiller and condenser will be installed to condense most of the water in the biogas before blowing into the gathering pipeline. The chiller is a typical commercial unit for cooling glycol. The condenser is a commercially available unit for condensing moisture from biogas. A blower will be installed at the existing digester to move the biogas into the gathering lines at pressure of less than 20 psi. Each blower will be controlled by a central SCADA system that is overseen by operators on a 24/7 basis. When a blower increases in speed, more biogas is pushed to the upgrading facility, and when it decreases, less biogas is sent. The gathering lines will be pressure monitored via SCADA equipment in real time to detect leaks or major failures. Additionally, flow meters will be installed at each digester site and at the upgrading facility to monitor biogas flows.

Mechanical Building

The mechanical building will be a prefabricated steel building no larger than 25' x 25' and placed on a new concrete pad. This building will house the blower and chilling equipment.

Supporting Equipment

Supporting equipment is any equipment which is essential for the function of the aforementioned equipment and completion of the project ambitions. Such equipment may include small pumps, electrical controls, and other minor equipment which is deemed necessary.

Operational Times and Visitors

The facility will be operational 24/7, but not open to public visitors without prior permission.

Number of Employees

Construction:

A maximum of 10 people on site during the 2 months (40 work days) of construction.

Operations:

Remote sensor and computer monitoring of the equipment will be operated permanently. One employee will make a daily inspection of the facility. That work will be conducted during regular business hours, 8am-5pm, and on-call 24/7. No permanent facility employees will work or live on-site.

The number of dairy employees will not increase.

Service and Delivery Vehicles

There will be one service truck visit per day and a disposal truck once a month. No delivery trucks will be required.

Access

Access would be taken from South Howard Avenue onto a private driveway to the facility.

Parking

Parking will be accessible directly at the project facility. This area already exists as a flat dirt parking area for farm equipment. Construction crews and equipment will use the existing dairy for parking and staging.

Goods

No goods will be sold on site.

Supplies or Materials

The facility will use and store small quantities of materials such as fuels, lubricants, and hydraulic fluids. Handling of hazardous materials are regulated by federal and State laws, which minimizes worker safety risks from both physical and chemical hazards in the workplace.

Appearance/Noise/Dust

The project facility is similar in nature to the existing dairy infrastructure and fits into its surroundings. The pipeline will run underground and will not be seen. Noise generated by the project equipment will not be above typical agriculture facility levels. The facility does not include any lights or other sources of glare beyond what is currently used for security reasons at the dairy. Once operational, the project will not generate fugitive dust. The project will not emit or concentrate any odors.

Solid or Liquid Wastes to be Produced

Facility will produce minimal amounts of solid waste. Waste will be picked up once per month by a solid waste disposal company and taken to an appropriate landfill.

Facility will produce less than 10 gallons per month of waste blower oil. This oil will be stored on site in containers less than 45 gallons and picked up by a disposal company whenever the container is full.

Construction and Operational Water Usage

Construction of the mechanical building and the installation of the equipment is anticipated to take approximately 2 months (40 working days).

Water for construction and operations would be supplied by an existing on-site agricultural well.

Construction: An estimated 5,000 gallons/day is anticipated during up to 2 months of construction activities. Based on an average 20 work days a month, approximately 0.6 AF would be required (5,000 gallons x 40 days = 200,000 gallons).

Operations: Water usage is anticipated to be approximately 2,500 gallons per day or 2.8 AF annually during operation.

Advertising

There will be no advertisements at the project sites.

Buildings

The project will not construct any new buildings, but 2-3 small containers may be installed for electrical controls and other equipment. These will be steel and unobtrusive colors.

Lighting and Outdoor Sound Amplification

No outdoor sound amplification systems will be installed for the project. The facility will function 24 hours a day and will include the same standard security lighting as found on the surrounding parcels. All lighting would be directed downward and shielded to focus illumination on the desired work areas only and prevent light spillage onto adjacent properties.

Landscaping and Fencing

There will be chain link fencing installed around the perimeter of the facility. No landscaping is proposed for the project.

Restrooms

There is no on-site permanent staff. Maintenance staff will use the existing dairy restroom facilities.

CUP “B” Application Project Details (Vanderham)

Lists the proposed project components to be installed at the participating project site for CUP “B”.

Digester #2 – L&J Vanderham Dairy:

- Sandlane
- Various 8”-24” Manure Pipes
- Digester
- 8” Biogas Pipe
- Moisture Trap and Pad
- Biogas Blower and Chilling Equipment
- Mechanical Building
- Biogas Generator
- Supporting Equipment

Dairy Liquid Manure Handling System

(Sandlane and Manure Pipes)

To prepare the dairy for the digester installation, the project will modify the existing liquid manure handling system on the dairy to accommodate the digester. This modification will include the installation of various liquid manure pipes between 8” and 24” in diameter. These pipes are installed via standard open trenching practices in compliance with all OSHA standards.

Additionally, the project will include the installation of a manure sandlane. This sandlane will be no longer than 400’ and no wider than 16’. The final design is in process, but the preliminary design is a flat, 300’ long, 14’ wide, 6” thick, concrete slab with a 4’ high push wall. The preliminary design indicates that the slab will be installed on a slope of 1-3% to allow the manure to flow at a consistent speed. The sandlane is designed to slow the flow of flushed manure down in order to capture sand and other inorganics.

Digester Technology

The anaerobic covered lagoon digesters are a passive addition to the dairy and require minimal oversight. Cameras and automation equipment will be installed at each digester sight to enable remote monitoring. The digester will be suited with an emergency vent as required by the San Joaquin Valley Air District (SJVAPCD). A small mechanical building will be constructed on-site that will house a biogas chiller to remove condensate prior to entering the biogas gathering lines and a biogas blower to move the gas from the digester system to the biogas gathering lines as discussed in more detail below.

The digester will be created by first double-lining a new or existing storage pond. All digester ponds will meet the Central Valley Regional Water Quality Control Board (CRWQCB) Tier 1 standards, which include the installation of double-layered liners of welded 60 ml HDPE with leak detection to ensure water quality. All digester pond designs must be pre-approved by the CRWQCB and their installation is monitored by professional engineers. Once constructed and prior to actual operation of the ponds to treat wastewater, an installation report will be submitted to CRWQCB for their review and approval.

The project will then cover the newly lined pond(s) with 80 ml flexible HDPE material to create the project’s biogas collection system. The lagoon cover will be welded to the liner ensuring a complete seal.

A perforated pipe runs above the water line around the entire perimeter of the covered lagoon to ensure uninterrupted gas flow to the outlet. The cover will also include submersible mixers to agitate the manure which will minimize settling, reduce sludge in the digester, and increase biogas production. An HDPE baffle creates a pathway for manure to slowly flow through the digester, ensuring hydraulic retention time and eliminating dead spots. Finally, sludge draw-off pipes are commonly added as a final protection against sludge buildup. This type of covered lagoon technology is highly commercialized and represents 100% of the successful digester installations in California since 2014. Engineered site plan and design drawings for the proposed digester are found in Attachment B-5. A summary of digester type, digester dimensions, digester volume, and estimated gas output is also summarized in the table below.

Table 3 - Vanderham Dairy Digester

Digester	Participating Dairy	Digester Dimensions (ft)	Digester Volume (gal)	Gas Output (mmBTU/yr)
Digester #2	L&J Vanderham Dairy	1,630' x 125' x 25'	21,027,058	65,882

Biogas Pipe

The biogas pipe is responsible for the delivery of the biogas from the digester to the moisture trap.

Moisture Trap and Pad

After leaving the digester but before entering the mechanical building, the biogas is processed through a moisture trap to reduce the amount of H₂O in the biogas. The trap is supported by a new concrete pad which will also accommodate the blower, chilling equipment and mechanical building.

Biogas Blower and Chilling Equipment

Once it has passed through the moisture trap, the biogas will be pulled through the blower and sent to chilling equipment and then the gathering lines.

A chiller and condenser will be installed to condense most of the water in the biogas before blowing into the gathering pipeline. The chiller is a typical commercial unit for cooling glycol. The condenser is a commercially available unit for condensing moisture from biogas.

A blower will be installed near the digester to move the biogas into the gathering lines at pressure of less than 20 psi. Each blower will be controlled by a central SCADA system that is overseen by operators on a 24/7 basis. When a blower increases in speed, more biogas is pushed to the upgrading facility, and when it decreases, less biogas is sent. The gathering lines will be pressure monitored via SCADA equipment in real time to detect leaks or major failures. Additionally, flow meters will be installed at each digester site and at the upgrading facility to monitor biogas flows.

Mechanical Building

The mechanical building will be a prefabricated steel building no larger than 60' x 40'. This building will house chilling equipment and the blower and the biogas generator.

Biogas Generator

The project's internal combustion engine's emissions will be regulated by the SJVACPD under the latest Best Available Control Technology (BACT) standards. This power generation project will consume biogas in an onsite generator, to create electricity for delivery to the PG&E grid under the Bioenergy Market Adjusting Tariff (BioMAT), net energy metering with aggregation or other exporting tariff. When the engine is off for maintenance, the biogas will be stored in the covered lagoon, which has capacity for approximately 2 days of biogas storage. An emergency vent will also be installed per San Joaquin Valley Air Pollution Control District permit requirements.

The engine is a Guascor SFGLD-560 or similar, 16-cylinder lean-burn, turbo-charged reciprocating internal combustion engine mated with a synchronous generator. The combined rated electrical power of the system is 800-1,000 kW. The biogas from this project will be conditioned to remove moisture and reduce hydrogen sulfide below 40 ppm. Moisture from the biogas will be removed using a Bell & Gosset (or equivalent) plate and frame heat exchanger cooled by a Cold Shots (or equivalent) 240,000 BTU/hr industrial air-cooled chiller. H₂S reduction will be achieved in two stages. First a built-in air injection system under the digester's cover will encourage biological fixation of sulfur molecules. Secondly, the project will employ a media-based scrubber using non-toxic media (Sulfatreat or similar). CO₂ does not need to be removed prior to combustion under this design. The project engine generator is oversized to increase reliability and to allow the project to generate during the time of day when the power prices are most profitable. The project will sign a final interconnection agreement with PG&E.

Emissions Reduction Plan: The project will treat exhaust emissions using a Selective Catalytic Reduction (SCR) system with Oxidation Catalyst from HUG Engineering (or similar manufacturer) that comes with a guarantee of performance.

Supporting Equipment

Supporting equipment is including but not limited to a transformer and electrical poles which will be installed per PG&E requirements in order to support the biogas generator. Furthermore, supporting equipment is any equipment which is essential for the function of the aforementioned equipment and completion of the project ambitions. Such equipment may include small pumps, electrical controls, and other minor equipment which is deemed necessary.

Operational Times and Visitors

The facility will be operational 24/7, but not open to public visitors without prior permission.

Number of Employees

Construction:

Digester: a maximum of 10 people for short periods of time, with an average of 5 people on site during the 7 months of construction.

Operations:

Remote sensor and computer monitoring of the equipment will be operated permanently. One employee will make a daily inspection of the facility. That work will be conducted during regular business hours, 8am-5pm, and on-call 24/7. No permanent facility employees will work or live on-site.

Service and Delivery Vehicles

A service truck will visit once per day. No delivery trucks will be on site.

Access

Access to the site would be from South Bishop Avenue to a private driveway to the dairy and facility.

Parking

Construction crews and equipment will use the existing dairy for parking and staging. This area already exists as a flat dirt parking area for farm equipment.

Goods

No goods will be sold on site.

Supplies or Materials

The facility will use and store small quantities of materials such as lubricants, and hydraulic fluids. Handling of hazardous materials are regulated by federal and State laws, which minimizes worker safety risks from both physical and chemical hazards in the workplace.

Appearance/Noise/Dust

The project facility is similar in nature to the existing dairy infrastructure and fits into its surroundings. The pipeline will run underground and will not be seen. Noise generated by the project equipment will not be above typical agriculture facility levels. The facility does not include any lights or other sources of glare beyond what is currently used for security reasons at the dairy. Once operational, the project will not generate fugitive dust. The project will not emit or concentrate any odors, and in fact will reduce odors with the installation of the covered manure lagoons.

Solid or Liquid Wastes to be Produced

Facility will produce minimal amounts of solid waste. Waste will be picked up once per month by a solid waste disposal company and taken to an appropriate landfill.

Facility will produce less than 10 gallons per month of waste blower oil. This oil will be stored on site in containers less than 45 gallons and picked up by a disposal company whenever the container is full.

Water

Construction of the digester and ancillary equipment is anticipated to take approximately 140 working days.

Water for construction and operations would be supplied by an existing on-site agricultural well.

Construction: An estimated 20,000 gallons/day is anticipated during the first 20 working days of construction activities, and 2,000 gallons/day is anticipated during the remaining 6 months of construction activities. Based on an average 20 work days a month, approximately 2 AF would be required (20,000 gallons x 20 days + 2,000 gallons x 120 days = 640,000 gallons).

Operations: Water usage is anticipated to be approximately 500 gallons per day or 0.5 AF annually during operation.

Advertising

There will be no advertisements at the project sites.

Buildings

The project will not construct any new buildings, but 2-3 small containers may be installed for electrical controls and other equipment. These will be steel and unobtrusive colors.

Lighting and Outdoor Sound Amplification

No outdoor lighting or sound amplification systems will be installed for the project.

Landscaping and Fencing

There will be chain link fencing installed around the perimeter of the facility. No landscaping is proposed for the project.

Restrooms

There is no on-site permanent staff. Maintenance staff will use the existing dairy restroom facilities.

CUP “C” Application Project Details (Van der Hoek)

Lists the proposed project components to be installed at the participating project site for CUP “C”.

Digester #3 – Van der Hoek Dairy:

- Sandlane
- Various 8”-24” Manure Pipes
- Digester
- 8” Biogas Pipe
- Moisture Trap and Pad
- Biogas Blower and Chilling Equipment
- Mechanical Building
- Biogas Generator
- Supporting Equipment

Dairy Liquid Manure Handling System

(Sandlane and Manure Pipes)

To prepare the dairy for the digester installation, the project will modify the existing liquid manure handling system on the dairy to accommodate the digester. This modification will include the installation of various liquid manure pipes between 8” and 24” in diameter. These pipes are installed via standard open trenching practices in compliance with all OSHA standards.

Additionally, the project will include the installation of a manure sandlane. This sandlane will be no longer than 400’ and no wider than 16’. The final design is in process, but the preliminary design is a flat, 300’ long, 14’ wide, 6” thick, concrete slab with a 4’ high push wall. The preliminary design indicates that the slab will be installed on a slope of 1-3% to allow the manure to flow at a consistent speed. The sandlane is designed to slow the flow of flushed manure down in order to capture sand and other inorganics.

Digester Technology

The anaerobic covered lagoon digesters are a passive addition to the dairy and require minimal oversight. Cameras and automation equipment will be installed at each digester sight to enable remote monitoring. The digester will be suited with an emergency vent as required by the San Joaquin Valley Air District (SJVAPCD). A small mechanical building will be constructed on-site that will house a biogas chiller to remove condensate prior to entering the biogas gathering lines and a biogas blower to move the gas from the digester system to the biogas gathering lines as discussed in more detail below.

The digester will be created by first double-lining a new or existing storage pond. All digester ponds will meet the Central Valley Regional Water Quality Control Board (CRWQCB) Tier 1 standards, which include the installation of double-layered liners of welded 60 ml HDPE with leak detection to ensure water quality. All digester pond designs must be pre-approved by the CRWQCB and their installation is monitored by professional engineers. Once constructed and prior to actual operation of the ponds to treat wastewater, an installation report will be submitted to CRWQCB for their review and approval.

The project will then cover the newly lined pond(s) with 80 ml flexible HDPE material to create the project’s biogas collection system. The lagoon cover will be welded to the liner ensuring a complete seal.

A perforated pipe runs above the water line around the entire perimeter of the covered lagoon to ensure uninterrupted gas flow to the outlet. The cover will also include submersible mixers to agitate the manure which will minimize settling, reduce sludge in the digester, and increase biogas production. An HDPE baffle creates a pathway for manure to slowly flow through the digester, ensuring hydraulic retention time and eliminating dead spots. Finally, sludge draw-off pipes are commonly added as a final protection against sludge buildup. This type of covered lagoon technology is highly commercialized and represents 100% of the successful digester installations in California since 2014. Engineered site plan and design drawings for the proposed digester are found in Attachment C-5. A summary of digester type, digester dimensions, digester volume, and estimated gas output is also summarized in the table below.

Table 4 - Van der Hoek Dairy Digester

Digester	Participating Dairy	Digester Dimensions (ft)	Digester Volume (gal)	Gas Output (mmBTU/yr)
Digester #3	Van der Hoek Dairy	400' x 400' x 24'	21,287,541	67,222

Biogas Pipe

The biogas pipe is responsible for the delivery of the biogas from the digester to the moisture trap.

Moisture Trap and Pad

After leaving the digester but before entering the mechanical building, the biogas is processed through a moisture trap to reduce the amount of H₂O in the biogas. The trap is supported by a new concrete pad which will also accommodate the blower, chilling equipment and mechanical building.

Biogas Blower and Chilling Equipment

Once it has passed through the moisture trap, the biogas will be pulled through the blower and sent to chilling equipment and then the gathering lines.

A chiller and condenser will be installed to condense most of the water in the biogas before blowing into the gathering pipeline. The chiller is a typical commercial unit for cooling glycol. The condenser is a commercially available unit for condensing moisture from biogas.

A blower will be installed near the digester to move the biogas into the gathering lines at pressure of less than 20 psi. Each blower will be controlled by a central SCADA system that is overseen by operators on a 24/7 basis. When a blower increases in speed, more biogas is pushed to the upgrading facility, and when it decreases, less biogas is sent. The gathering lines will be pressure monitored via SCADA equipment in real time to detect leaks or major failures. Additionally, flow meters will be installed at each digester site and at the upgrading facility to monitor biogas flows.

Mechanical Building

The mechanical building will be a prefabricated steel building no larger than 60' x 40'. This building will house chilling equipment and the blower and the biogas generator.

Biogas Generator

The project's internal combustion engine's emissions will be regulated by the SJVACPD under the latest Best Available Control Technology (BACT) standards. This power generation project will consume biogas in an onsite generator, to create electricity for delivery to the PG&E grid under the Bioenergy Market Adjusting Tariff (BioMAT), net energy metering with aggregation or other exporting tariff. When the engine is off for maintenance, the biogas will be stored in the covered lagoon, which has capacity for approximately 2 days of biogas storage. An emergency vent will also be installed per San Joaquin Valley Air Pollution Control District permit requirements.

The engine is a Guascor SFGLD-560 or similar, 16-cylinder lean-burn, turbo-charged reciprocating internal combustion engine mated with a synchronous generator. The combined rated electrical power of the system is 800-1,000 kW. The biogas from this project will be conditioned to remove moisture and reduce hydrogen sulfide below 40 ppm. Moisture from the biogas will be removed using a Bell & Gosset (or equivalent) plate and frame heat exchanger cooled by a Cold Shots (or equivalent) 240,000 BTU/hr industrial air-cooled chiller. H₂S reduction will be achieved in two stages. First a built-in air injection system under the digester's cover will encourage biological fixation of sulfur molecules. Secondly, the project will employ a media-based scrubber using non-toxic media (Sulfatreat or similar). CO₂ does not need to be removed prior to combustion under this design. The project engine generator is oversized to increase reliability and to allow the project to generate during the time of day when the power prices are most profitable. The project will sign a final interconnection agreement with PG&E.

Emissions Reduction Plan: The project will treat exhaust emissions using a Selective Catalytic Reduction (SCR) system with Oxidation Catalyst from HUG Engineering (or similar manufacturer) that comes with a guarantee of performance.

Supporting Equipment

Supporting equipment is including but not limited to a transformer and electrical poles which will be installed per PG&E requirements in order to support the biogas generator. Additionally, a wet well with a flush pump and a second primary dual screen separator are proposed as upgrades to the liquid manure handling system. This upgrade better supports the functionality of the digester. Furthermore, supporting equipment is any equipment which is essential for the function of the aforementioned equipment and completion of the project ambitions. Such equipment may include small pumps, electrical controls, and other minor equipment which is deemed necessary.

Operational Times and Visitors

The facility will be operational 24/7, but not open to public visitors without prior permission.

Number of Employees

Construction:

Digester and ancillary equipment: a maximum of 10 people for short periods of time, with an average of 5 people on site during the 7 months of construction.

Operations:

Remote sensor and computer monitoring of the equipment will be operated permanently. One employee will make a daily inspection of the facility. That work will be conducted during regular business hours, 8am-5pm, and on-call 24/7. No permanent facility employees will work or live on-site.

Service and Delivery Vehicles

There will be one service truck which will visit once per day. No delivery trucks will be on site pertaining to the digester on site.

Access to the Site

Access to the site would be from West Elkhorn Avenue to a private driveway.

Parking

There is existing parking at the dairy. The construction crew will utilize this parking during construction activities.

Goods

No goods will be sold on site.

Supplies or Materials

The facility will use and store small quantities of materials such as lubricants, and hydraulic fluids. Handling of hazardous materials are regulated by federal and State laws, which minimizes worker safety risks from both physical and chemical hazards in the workplace.

Appearance/Noise/Dust

The project facility is similar in nature to the existing dairy infrastructure and fits into its surroundings. The pipeline will run underground and will not be seen. Noise generated by the project equipment will not be above typical agriculture facility levels. The facility does not include any lights or other sources of glare beyond what is currently used for security reasons at the dairy. Once operational, the project will not generate fugitive dust. The project will not emit or concentrate any odors, and in fact will reduce odors with the installation of the covered manure lagoons.

Solid or Liquid Wastes to be Produced

Facility will produce minimal amounts of solid waste. Waste will be picked up once per month by a solid waste disposal company and taken to an appropriate landfill.

Facility will produce less than 10 gallons per month of waste blower oil. This oil will be stored on site in containers less than 45 gallons and picked up by a disposal company whenever the container is full.

Construction and Operational Water Usage

Construction of the digester and ancillary equipment is anticipated to take approximately 140 working days.

Water for construction and operations would be supplied by an existing on-site agricultural well.

Construction: An estimated 20,000 gallons/day is anticipated during the first 20 working days of construction activities, and 2,000 gallons/day is anticipated during the remaining 6 months of construction

activities. Based on an average 20 work days a month, approximately 2 AF would be required (20,000 gallons x 20 days + 2,000 gallons x 120 days = 640,000 gallons).

Operations: Water usage is anticipated to be approximately 500 gallons per day or 0.5 AF annually during operation.

Advertising

There will be no advertisements at the project sites.

Buildings

The project will not construct any new buildings, but 2-3 small containers may be installed for electrical controls and other equipment. These will be steel and unobtrusive colors.

Lighting and Outdoor Sound Amplification

No outdoor sound amplification systems will be installed for the project. The facility will function 24 hours a day and will include the same standard security lighting as found on the surrounding parcels. All lighting would be directed downward and shielded to focus illumination on the desired work areas only and prevent light spillage onto adjacent properties.

Landscaping and Fencing

There will be chain link fencing installed around the perimeter of the facility. No landscaping is proposed for the project.

Restrooms

There is no on-site permanent staff. Maintenance staff will use the existing dairy restroom facilities.

CUP “D” Application Project Details (Van der Kooi)

Lists the proposed project components to be installed at the participating project site for CUP “D”.

Digester #4 – Charles Van der Kooi Dairy:

- Various 8”-24” Manure Pipes
- Digester
- 8” Biogas Pipe
- Moisture Trap and Pad
- Biogas Blower and Chilling Equipment
- Mechanical Building
- Biogas Generator
- Supporting Equipment

Dairy Liquid Manure Handling System

(Manure Pipes)

To prepare the dairy for the digester installation, the project will modify the existing liquid manure handling system on the dairy to accommodate the digester. This modification will include the installation of various liquid manure pipes between 8” and 24” in diameter. These pipes are installed via standard open trenching practices in compliance with all OSHA standards.

Digester Technology

The anaerobic covered lagoon digesters are a passive addition to the dairy and require minimal oversight. Cameras and automation equipment will be installed at each digester sight to enable remote monitoring. The digester will be suited with an emergency vent as required by the San Joaquin Valley Air District (SJVAPCD). A small mechanical building will be constructed on-site that will house a biogas chiller to remove condensate prior to entering the biogas gathering lines and a biogas blower to move the gas from the digester system to the biogas gathering lines as discussed in more detail below.

The digester will be created by first double-lining a new or existing storage pond. All digester ponds will meet the Central Valley Regional Water Quality Control Board (CRWQCB) Tier 1 standards, which include the installation of double-layered liners of welded 60 ml HDPE with leak detection to ensure water quality. All digester pond designs must be pre-approved by the CRWQCB and their installation is monitored by professional engineers. Once constructed and prior to actual operation of the ponds to treat wastewater, an installation report will be submitted to CRWQCB for their review and approval.

The project will then cover the newly lined pond(s) with 80 ml flexible HDPE material to create the project’s biogas collection system. The lagoon cover will be welded to the liner ensuring a complete seal. A perforated pipe runs above the water line around the entire perimeter of the covered lagoon to ensure uninterrupted gas flow to the outlet. The cover will also include submersible mixers to agitate the manure which will minimize settling, reduce sludge in the digester, and increase biogas production. An HDPE baffle creates a pathway for manure to slowly flow through the digester, ensuring hydraulic retention time and eliminating dead spots. Finally, sludge draw-off pipes are commonly added as a final protection against sludge buildup. This type of covered lagoon technology is highly commercialized and represents 100% of the successful digester installations in California since 2014. Engineered site plan and design drawings for

the proposed digester are found in Attachment D-5. A summary of digester type, digester dimensions, digester volume, and estimated gas output is also summarized in the table below.

Table 5 - Van der Kooi Dairy Digester

Digester	Participating Dairy	Digester Dimensions (ft)	Digester Volume (gal)	Gas Output (mmBTU/yr)
Digester #4	Charles Van der Kooi Dairy	1,080' x 190' x 20'	22,021,399	55,216

Biogas Pipe

The biogas pipe is responsible for the delivery of the biogas from the digester to the moisture trap.

Moisture Trap and Pad

After leaving the digester but before entering the mechanical building, the biogas is processed through a moisture trap to reduce the amount of H₂O in the biogas. The trap is supported by a new concrete pad which will also accommodate the blower, chilling equipment and mechanical building.

Biogas Blower and Chilling Equipment

Once it has passed through the moisture trap, the biogas will be pulled through the blower and sent to chilling equipment and then the gathering lines.

A chiller and condenser will be installed to condense most of the water in the biogas before blowing into the gathering pipeline. The chiller is a typical commercial unit for cooling glycol. The condenser is a commercially available unit for condensing moisture from biogas.

A blower will be installed near the digester to move the biogas into the gathering lines at pressure of less than 20 psi. Each blower will be controlled by a central SCADA system that is overseen by operators on a 24/7 basis. When a blower increases in speed, more biogas is pushed to the upgrading facility, and when it decreases, less biogas is sent. The gathering lines will be pressure monitored via SCADA equipment in real time to detect leaks or major failures. Additionally, flow meters will be installed at each digester site and at the upgrading facility to monitor biogas flows.

Mechanical Building

The mechanical building will be a prefabricated steel building no larger than 60' x 40'. This building will house chilling equipment and the blower and the biogas generator.

Biogas Generator

The project's internal combustion engine's emissions will be regulated by the SJVACPD under the latest Best Available Control Technology (BACT) standards. This power generation project will consume biogas in an onsite generator, to create electricity for delivery to the PG&E grid under the Bioenergy Market Adjusting Tariff (BioMAT), net energy metering with aggregation or other exporting tariff. When the engine is off for maintenance, the biogas will be stored in the covered lagoon, which has capacity for approximately 2 days of biogas storage. An emergency vent will also be installed per San Joaquin Valley Air Pollution Control District permit requirements.

The engine is a Guascor SFGLD-560 or similar, 16-cylinder lean-burn, turbo-charged reciprocating internal combustion engine mated with a synchronous generator. The combined rated electrical power of the system is 800-1,000 kW. The biogas from this project will be conditioned to remove moisture and reduce hydrogen sulfide below 40 ppm. Moisture from the biogas will be removed using a Bell & Gosset (or equivalent) plate and frame heat exchanger cooled by a Cold Shots (or equivalent) 240,000 BTU/hr industrial air-cooled chiller. H₂S reduction will be achieved in two stages. First a built-in air injection system under the digester's cover will encourage biological fixation of sulfur molecules. Secondly, the project will employ a media-based scrubber using non-toxic media (Sulfatreat or similar). CO₂ does not need to be removed prior to combustion under this design. The project engine generator is oversized to increase reliability and to allow the project to generate during the time of day when the power prices are most profitable. The project will have signed a final interconnection agreement with PG&E.

Emissions Reduction Plan: The project will treat exhaust emissions using a Selective Catalytic Reduction (SCR) system with Oxidation Catalyst from HUG Engineering (or similar manufacturer) that comes with a guarantee of performance.

Supporting Equipment

Supporting equipment is including but not limited to a transformer and electrical poles which will be installed per PG&E requirements in order to support the biogas generator. Furthermore, supporting equipment is any equipment which is essential for the function of the aforementioned equipment and completion of the project ambitions. Such equipment may include small pumps, electrical controls, and other minor equipment which is deemed necessary.

Operational Times and Visitors

The facility will be operational 24/7, but not open to public visitors without prior permission.

Number of Employees

Construction:

Digester and ancillary equipment: a maximum of 10 people for short periods of time, with an average of 5 people on site during the 7 months of construction.

Operations:

Remote sensor and computer monitoring of the equipment will be operated permanently. One employee will make a daily inspection of the facility. That work will be conducted during regular business hours, 8am-5pm, and on-call 24/7. No permanent facility employees will work or live on-site.

Service and Delivery Vehicles

There will be one service truck which will visit once per day. No delivery trucks will be on site pertaining to the digester on site.

Access to the Site

Access to the site would be from West Elkhorn Avenue to a private driveway.

Parking

There is existing parking at the dairy. The construction crew will utilize this parking during construction activities.

Goods

No goods will be sold on site.

Supplies or Materials

The facility will use and store small quantities of materials such as lubricants, and hydraulic fluids. Handling of hazardous materials are regulated by federal and State laws, which minimizes worker safety risks from both physical and chemical hazards in the workplace.

Appearance/Noise/Dust

The project facility is similar in nature to the existing dairy infrastructure and fits into its surroundings. The pipeline will run underground and will not be seen. Noise generated by the project equipment will not be above typical agriculture facility levels. The facility does not include any lights or other sources of glare beyond what is currently used for security reasons at the dairy. Once operational, the project will not generate fugitive dust. The project will not emit or concentrate any odors, and in fact will reduce odors with the installation of the covered manure lagoons.

Solid or Liquid Wastes to be Produced

Facility will produce minimal amounts of solid waste. Waste will be picked up once per month by a solid waste disposal company and taken to an appropriate landfill.

Facility will produce less than 10 gallons per month of waste blower oil. This oil will be stored on site in containers less than 45 gallons and picked up by a disposal company whenever the container is full.

Construction and Operational Water Usage

Construction of the digester and ancillary equipment is anticipated to take approximately 140 working days.

Water for construction and operations would be supplied by an existing on-site agricultural well.

Construction: An estimated 20,000 gallons/day is anticipated during the first 20 working days of construction activities, and 2,000 gallons/day is anticipated during the remaining 6 months of construction activities. Based on an average 20 work days a month, approximately 2 AF would be required (20,000 gallons x 20 days + 2,000 gallons x 120 days = 640,000 gallons).

Operations: Water usage is anticipated to be approximately 500 gallons per day or 0.5 AF annually during operation.

Advertising

There will be no advertisements at the project sites.

Buildings

The project will not construct any new buildings, but 2-3 small containers may be installed for electrical controls and other equipment. These will be steel and unobtrusive colors.

Lighting and Outdoor Sound Amplification

No outdoor lighting or sound amplification systems will be installed for the project.

Landscaping and Fencing

There will be chain link fencing installed around the perimeter of the facility. No landscaping is proposed for the project.

Restrooms

There is no on-site permanent staff. Maintenance staff will use the existing dairy restroom facilities.

CUP “E” Application Project Details (Wilson)

Lists the proposed project components to be installed at the participating project site for CUP “E”.

Digester #5 – J&D Wilson & Sons Dairy:

- Sandlane
- Various 8”-24” Manure Pipes
- Digester
- 12” Biogas Pipe
- Moisture Trap and Pad
- Biogas Blower and Chilling Equipment
- Mechanical Building
- Biogas Generator
- Supporting Equipment

Dairy Liquid Manure Handling System

(Sandlane and Manure Pipes)

To prepare the dairy for the digester installation, the project will modify the existing liquid manure handling system on the dairy to accommodate the digester. This modification will include the installation of various liquid manure pipes between 8” and 24” in diameter. These pipes are installed via standard open trenching practices in compliance with all OSHA standards.

Additionally, the project will include the installation of a manure sandlane. This sandlane will be no longer than 400’ and no wider than 16’. The final design is in process, but the preliminary design is a flat, 300’ long, 14’ wide, 6” thick, concrete slab with a 4’ high push wall. The preliminary design indicates that the slab will be installed on a slope of 1-3% to allow the manure to flow at a consistent speed. The sandlane is designed to slow the flow of flushed manure down in order to capture sand and other inorganics.

Digester Technology

The anaerobic covered lagoon digesters are a passive addition to the dairy and require minimal oversight. Cameras and automation equipment will be installed at each digester sight to enable remote monitoring. The digester will be suited with an emergency vent as required by the San Joaquin Valley Air District (SJVAPCD). A small mechanical building will be constructed on-site that will house a biogas chiller to remove condensate prior to entering the biogas gathering lines and a biogas blower to move the gas from the digester system to the biogas gathering lines as discussed in more detail below.

The digester will be created by first double-lining a new or existing storage pond at each dairy. All digester ponds will meet the Central Valley Regional Water Quality Control Board (CRWQCB) Tier 1 standards, which include the installation of double-layered liners of welded 60 ml HDPE with leak detection to ensure water quality. All digester pond designs must be pre-approved by the CRWQCB and their installation is monitored by professional engineers. Once constructed and prior to actual operation of the ponds to treat wastewater, an installation report will be submitted to CRWQCB for their review and approval.

The project will then cover the newly lined ponds with 80 ml flexible HDPE material to create the project’s biogas collection system. The lagoon cover will be welded to the liner ensuring a complete seal. A perforated pipe runs above the water line around the entire perimeter of the covered lagoon to ensure

uninterrupted gas flow to the outlet. The cover will also include submersible mixers to agitate the manure which will minimize settling, reduce sludge in the digester, and increase biogas production. An HDPE baffle creates a pathway for manure to slowly flow through the digester, ensuring hydraulic retention time and eliminating dead spots. Finally, sludge draw-off pipes are commonly added as a final protection against sludge buildup. This type of covered lagoon technology is highly commercialized and represents 100% of the successful digester installations in California since 2014. Engineered site plan and design drawings for the proposed digester are found in Attachment E-5. A summary of digester type, digester dimensions, digester volume, and estimated gas output is also summarized in the table below.

Table 5 - J&D Wilson & Sons Dairy Digester

Digester	Participating Dairy	Digester Dimensions (ft)	Digester Volume (gal)	Gas Output (mmBTU/yr)
Digester #5	J&D Wilson & Sons Dairy	1,630' x 125' x 25'	21,027,058	66,423

Biogas Pipe

The biogas pipe is responsible for the delivery of the biogas from the digester to the moisture trap.

Moisture Trap and Pad

After leaving the digester but before entering the mechanical building, the biogas is processed through a moisture trap to reduce the amount of H₂O in the biogas. The trap is supported by a new concrete pad which will also accommodate the blower, chilling equipment and mechanical building.

Biogas Blower and Chilling Equipment

Once it has passed through the moisture trap, the biogas will be pulled through the blower and sent to chilling equipment and then the gathering lines.

A chiller and condenser will be installed to condense most of the water in the biogas before blowing into the gathering pipeline. The chiller is a typical commercial unit for cooling glycol. The condenser is a commercially available unit for condensing moisture from biogas.

A blower will be installed near the digester to move the biogas into the gathering lines at pressure of less than 20 psi. Each blower will be controlled by a central SCADA system that is overseen by operators on a 24/7 basis. When a blower increases in speed, more biogas is pushed to the upgrading facility, and when it decreases, less biogas is sent. The gathering lines will be pressure monitored via SCADA equipment in real time to detect leaks or major failures. Additionally, flow meters will be installed at each digester site and at the upgrading facility to monitor biogas flows.

Mechanical Building

The mechanical building will be a prefabricated steel building no larger than 60' x 40'. This building will house chilling equipment and the blower and the biogas generator.

Biogas Generator

The project's internal combustion engine's emissions will be regulated by the SJVACPD under the latest Best Available Control Technology (BACT) standards. This power generation project will consume biogas in an onsite generator, to create electricity for delivery to the PG&E grid under the Bioenergy Market Adjusting Tariff (BioMAT), net energy metering with aggregation or other exporting tariff. When the engine is off for maintenance, the biogas will be stored in the covered lagoon, which has capacity for approximately 2 days of biogas storage. An emergency vent will also be installed per San Joaquin Valley Air Pollution Control District permit requirements.

The engine is a Guascor SFGLD-560 or similar, 16-cylinder lean-burn, turbo-charged reciprocating internal combustion engine mated with a synchronous generator. The combined rated electrical power of the system is 800-1,000 kW. The biogas from this project will be conditioned to remove moisture and reduce hydrogen sulfide below 40 ppm. Moisture from the biogas will be removed using a Bell & Gosset (or equivalent) plate and frame heat exchanger cooled by a Cold Shots (or equivalent) 240,000 BTU/hr industrial air-cooled chiller. H₂S reduction will be achieved in two stages. First a built-in air injection system under the digester's cover will encourage biological fixation of sulfur molecules. Secondly, the project will employ a media-based scrubber using non-toxic media (Sulfatreat or similar). CO₂ does not need to be removed prior to combustion under this design. The project engine generator is oversized to increase reliability and to allow the project to generate during the time of day when the power prices are most profitable. The project will sign a final interconnection agreement with PG&E.

Emissions Reduction Plan: The project will treat exhaust emissions using a Selective Catalytic Reduction (SCR) system with Oxidation Catalyst from HUG Engineering (or similar manufacturer) that comes with a guarantee of performance.

Supporting Equipment

Supporting equipment is including but not limited to a transformer and electrical poles which will be installed per PG&E requirements in order to support the biogas generator. Furthermore, supporting equipment is any equipment which is essential for the function of the aforementioned equipment and completion of the project ambitions. Such equipment may include small pumps, electrical controls, and other minor equipment which is deemed necessary.

Operational Times and Visitors

The facility will be operational 24/7, but not open to public visitors without prior permission.

Number of Employees

Construction:

Digester and ancillary equipment: a maximum of 10 people for short periods of time, with an average of 5 people on site during the 7 months of construction.

Operations:

Remote sensor and computer monitoring of the equipment will be operated permanently. One employee will make a daily inspection of the facility. That work will be conducted during regular business hours, 8am-5pm, and on-call 24/7. No permanent facility employees will work or live on-site.

Service and Delivery Vehicles

There will be one service truck which will visit once per day. No delivery trucks will be on site pertaining to the digester on site.

Access

Access to the site would be taken from West Mt Whitney Avenue.

Parking

There is existing parking at the dairy. The construction crew will utilize this parking during construction activities.

Goods

No goods will be sold on site.

Supplies or Materials

The facility will use and store small quantities of materials such as lubricants, and hydraulic fluids. Handling of hazardous materials are regulated by federal and State laws, which minimizes worker safety risks from both physical and chemical hazards in the workplace.

Appearance/Noise/Dust

The project facility is similar in nature to the existing dairy infrastructure and fits into its surroundings. The pipeline will run underground and will not be seen. Noise generated by the project equipment will not be above typical agriculture facility levels. The facility does not include any lights or other sources of glare beyond what is currently used for security reasons at the dairy. Once operational, the project will not generate fugitive dust. The project will not emit or concentrate any odors, and in fact will reduce odors with the installation of the covered manure lagoons.

Solid or Liquid Wastes to be Produced

Facility will produce minimal amounts of solid waste. Waste will be picked up once per month by a solid waste disposal company and taken to an appropriate landfill.

Facility will produce less than 10 gallons per month of waste blower oil. This oil will be stored on site in containers less than 45 gallons and picked up by a disposal company whenever the container is full.

Construction and Operational Water Usage

Construction of the digester and ancillary equipment is anticipated to take approximately 140 working days.

Water for construction and operations would be supplied by an existing on-site agricultural well.

Construction: An estimated 20,000 gallons/day is anticipated during the first 20 working days of construction activities, and 2,000 gallons/day is anticipated during the remaining 6 months of construction activities. Based on an average 20 work days a month, approximately 2 AF would be required (20,000 gallons x 20 days + 2,000 gallons x 120 days = 640,000 gallons).

Operations: Water usage is anticipated to be approximately 500 gallons per day or 0.5 AF annually during operation.

Advertising

There will be no advertisements at the project sites.

Buildings

The project will not construct any new buildings, but 2-3 small containers may be installed for electrical controls and other equipment. These will be steel and unobtrusive colors.

Lighting and Outdoor Sound Amplification

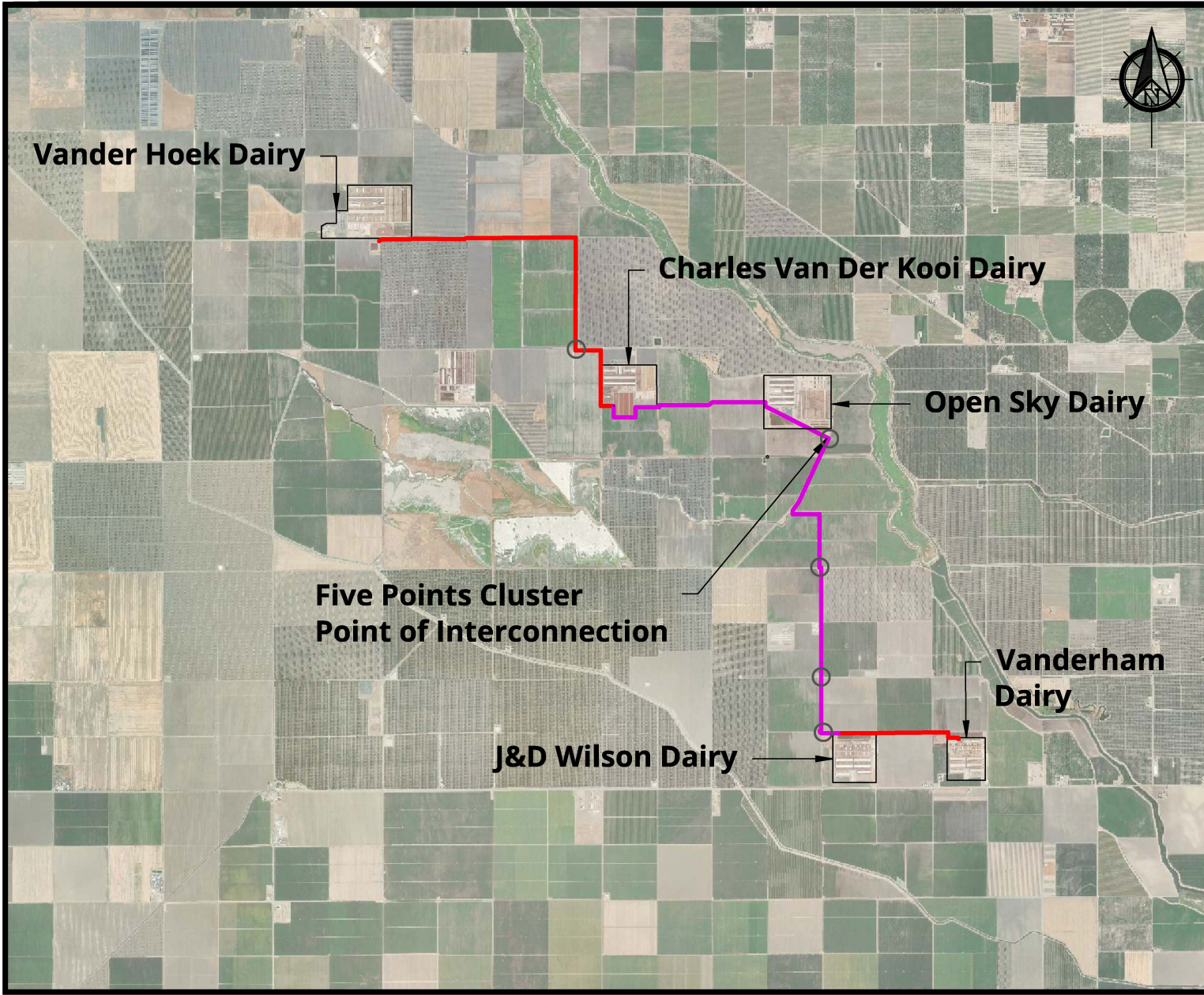
No outdoor lighting or sound amplification systems will be installed for the project.

Landscaping and Fencing

There will be chain link fencing installed around the perimeter of the facility. No landscaping is proposed for the project.

Restrooms

There is no on-site permanent staff. Maintenance staff will use the existing dairy restroom facilities.



General Notes

Confidential and Not for Construction

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Right of Way Crossings



All pipes are in private easement with the exception of crossings shown.



Firm Address
 3711 Meadow View Dr.
 Suite 100
 Redding, CA, 96002

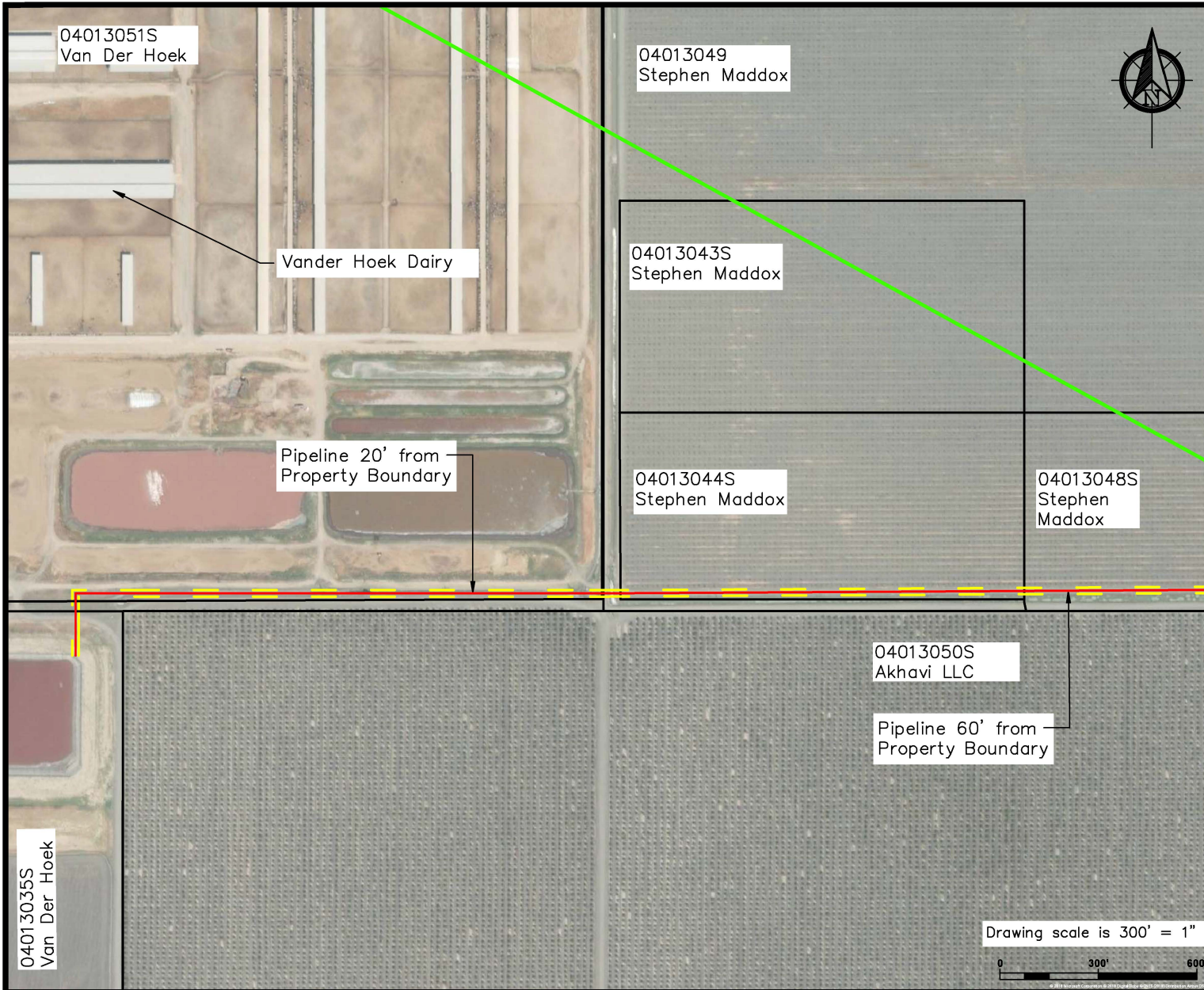
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 Five Points Cluster
 Pipeline Map
 Fresno County, CA

Date
 10/15/18

Version

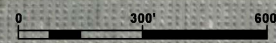
Drawn By
 HD, SG

2.2

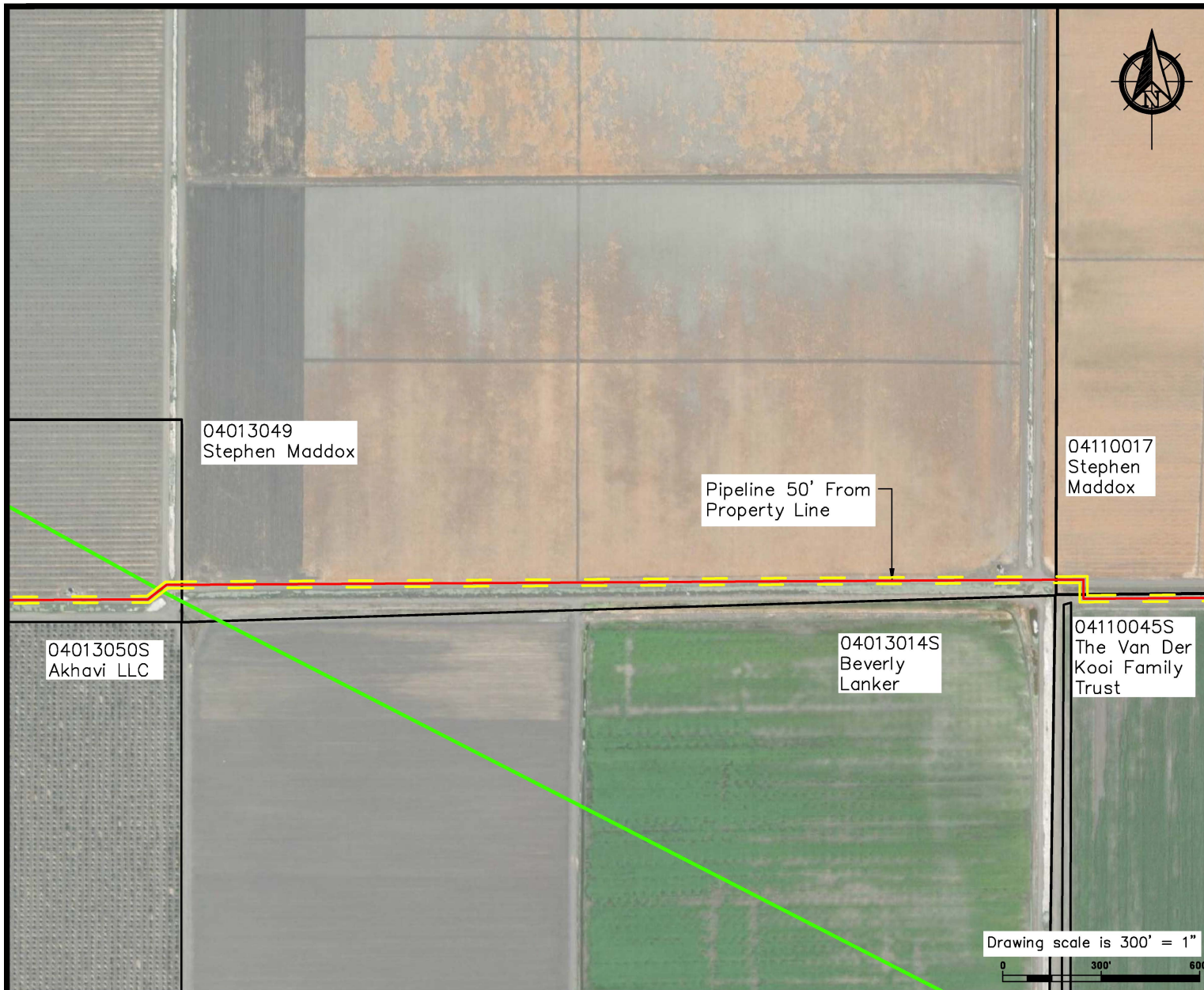


General Notes	
Confidential and Not for Construction	
Drawing #1	
Parcel Boundaries	
HDPE SDR 21, 6", 11 PSI	
HDPE SDR 21, 4", 13 PSI	
Approximate County Right of Way	
PG&E Transmission Line	
20' Pipeline Easement	
Pipeline Crosses Right of Way	
All pipes are in private easement with the exception of crossings shown.	
W Clarkson Ave, no County Public Right of Way.	
Firm Address 3711 Meadow View Dr. Suite 100 Redding, CA, 96002	
Project Name and Address Five Points Cluster Pipeline Map Fresno County, CA	
Date	Version
1/23/19	2.2
Drawn By HD, SR, SG	

Drawing scale is 300' = 1"



Pipeline Detail Map - Attachment FP-2



04013049
Stephen Maddox

04110017
Stephen
Maddox

Pipeline 50' From
Property Line

04013050S
Akhavi LLC

04013014S
Beverly
Lanker

04110045S
The Van Der
Kooi Family
Trust



General Notes

Confidential and Not for Construction

Drawing #2

Parcel Boundaries

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Approximate County Right of Way

PG&E Transmission Line

20' Pipeline Easement

Pipeline Crosses Right of Way



All pipes are in private easement with the exception of crossings shown.

W Clarkson Ave, no County Public Right of Way.



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Redding, CA, 96002

Project Name and Address

Five Points Cluster Pipeline Map
Fresno County, CA

Date

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Version

2.2

Drawn By

HD, SR, SG

Drawing scale is 300' = 1"



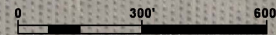
Pipeline Detail Map - Attachment FP-2



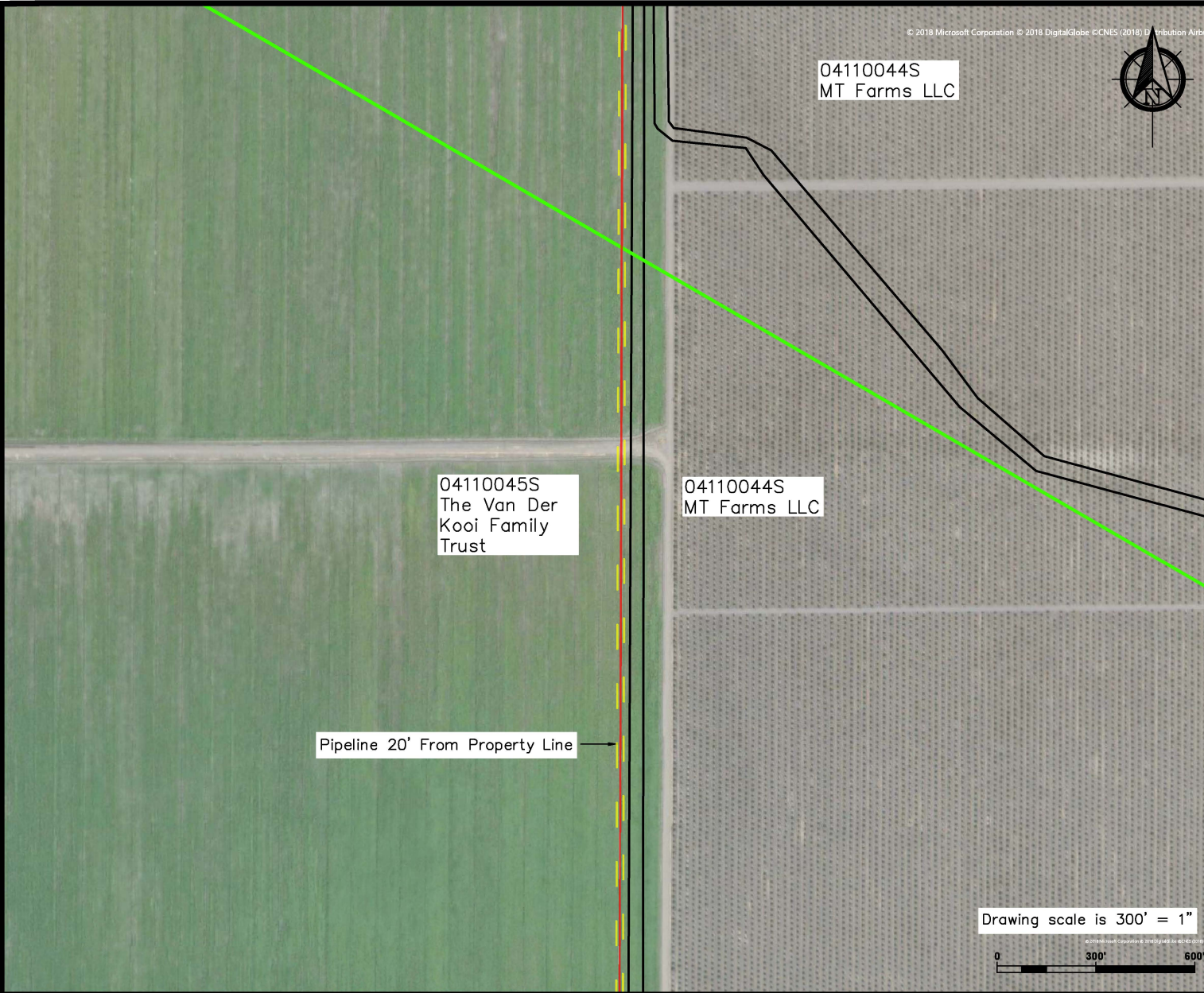
General Notes	
Confidential and Not for Construction	
Drawing #3	
Parcel Boundaries	
HDPE SDR 21, 6", 11 PSI	
HDPE SDR 21, 4", 13 PSI	
Approximate County Right of Way	
PG&E Transmission Line	
20' Pipeline Easement	
Pipeline Crosses Right of Way	
All pipes are in private easement with the exception of crossings shown.	
W Clarkson Ave, no County Public Right of Way.	
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Firm Address	
3711 Meadow View Dr. Suite 100 Redding, CA, 96002	
Project Name and Address	
Five Points Cluster Pipeline Map Fresno County, CA	
Date	Version
1/23/19	2.2
Drawn By	
HD, SR, SG	

Pipeline 20' From Property Line

Drawing scale is 300' = 1"



Pipeline Detail Map - Attachment FP-2



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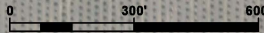
04110044S
MT Farms LLC

04110045S
The Van Der
Kooi Family
Trust

04110044S
MT Farms LLC

Pipeline 20' From Property Line

Drawing scale is 300' = 1"



General Notes

Confidential and Not for Construction

Drawing #4

Parcel Boundaries

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Approximate County Right of Way

PG&E Transmission Line

20' Pipeline Easement

Pipeline Crosses Right of Way



All pipes are in private easement with the exception of crossings shown.

W Clarkson Ave, no County Public Right of Way.



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3711 Meadow View Dr.
Suite 100
Redding, CA, 96002

Project Name and Address

Five Points Cluster Pipeline Map
Fresno County, CA

Date

1/16/19

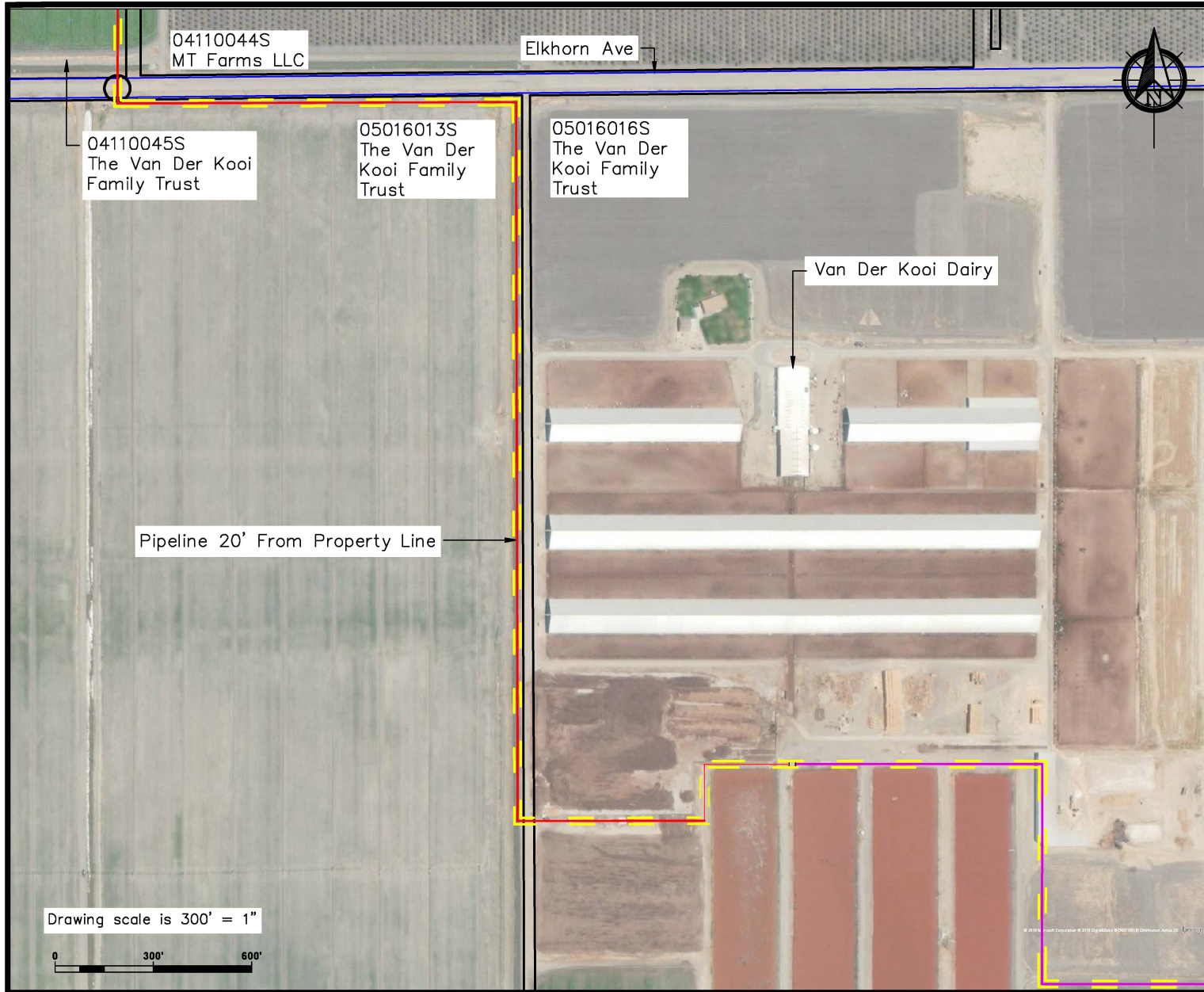
Version

2.2

Drawn By

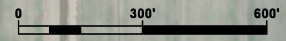
HD, SR, SG

Pipeline Detail Map - Attachment FP-2



General Notes	
Confidential and Not for Construction	
Drawing #5	
Parcel Boundaries	
HDPE SDR 21, 6", 11 PSI	
HDPE SDR 21, 4", 13 PSI	
Approximate County Right of Way	
PG&E Transmission Line	
20' Pipeline Easement	
Pipeline Crosses Right of Way 	
All pipes are in private easement with the exception of crossings shown.	
Proposed pipeline is 20' or more from ROW.	
Elkhorn Ave, 60' County Right of Way.	
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Firm Address 3711 Meadow View Dr. Suite 100 Redding, CA, 96002	
Project Name and Address Five Points Cluster Pipeline Map Fresno County, CA	
Date 1/23/19	Version 2.2
Drawn By HD, SR, SG	

Drawing scale is 300' = 1"



Pipeline Detail Map - Attachment FP-2



General Notes

Confidential and Not for Construction

Drawing #6

Parcel Boundaries

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Approximate County Right of Way

PG&E Transmission Line

20' Pipeline Easement

Pipeline Crosses Right of Way

○
All pipes are in private easement with the exception of crossings shown.

Proposed pipeline is 20' or more from ROW.

Elkhorn Ave, 60' County Right of Way.

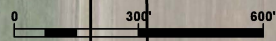


Firm Address
3711 Meadow View Dr.
Suite 100
Redding, CA, 96002

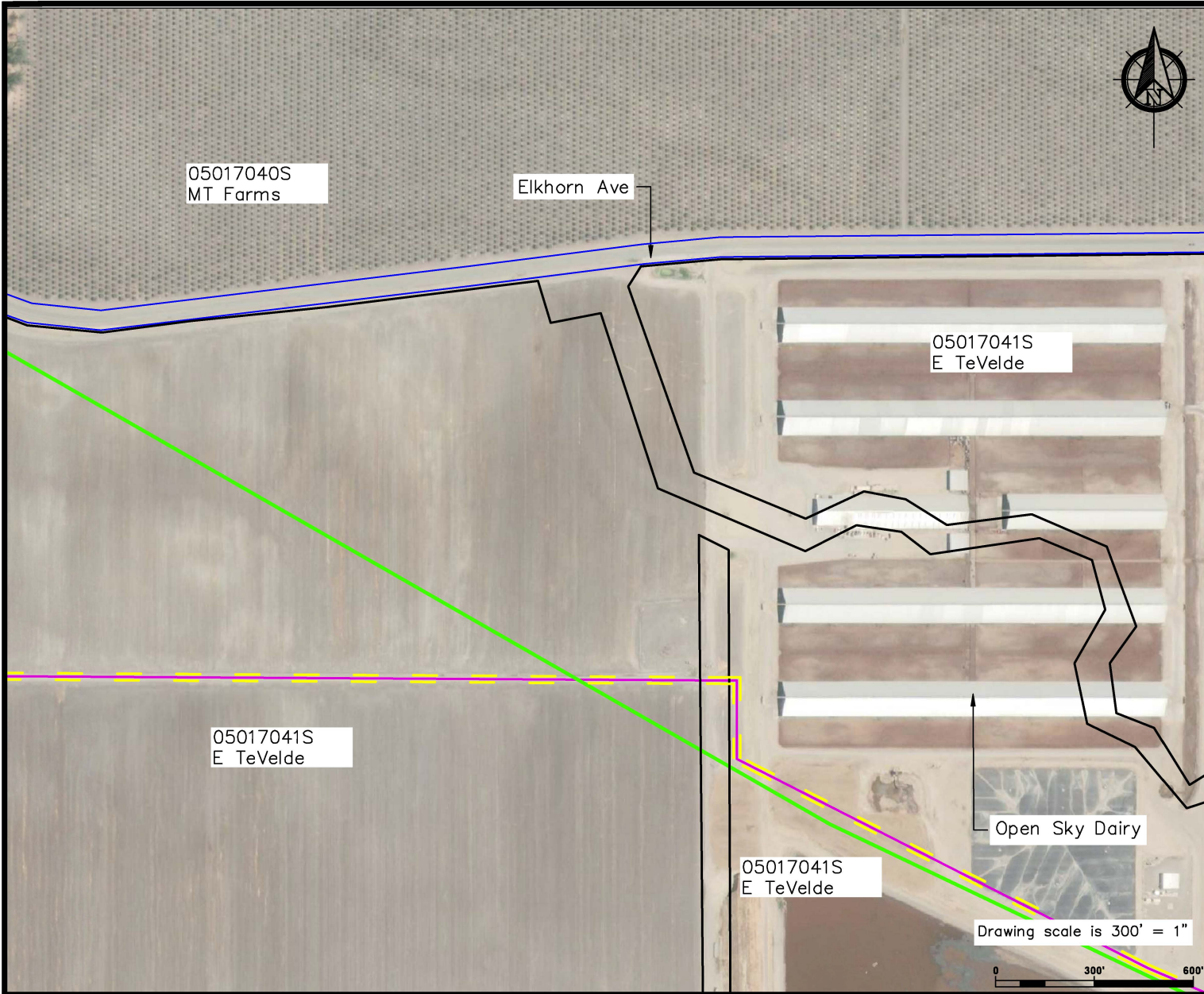
Project Name and Address
Five Points Cluster Pipeline Map
Fresno County, CA

Date	Version
1/16/19	2.2
Drawn By	
HD, SR, SG	

Drawing scale is 300' = 1"



Pipeline Detail Map - Attachment FP-2



General Notes

Confidential and Not for Construction

Drawing #7

Parcel Boundaries

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Approximate County Right of Way

PG&E Transmission Line

20' Pipeline Easement

Pipeline Crosses Right of Way



All pipes are in private easement with the exception of crossings shown.

Proposed pipeline is 20' or more from ROW.

Elkhorn Ave, 60' County Right of Way.



Firm Address
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Project Name and Address
Five Points Cluster Pipeline Map
Fresno County, CA

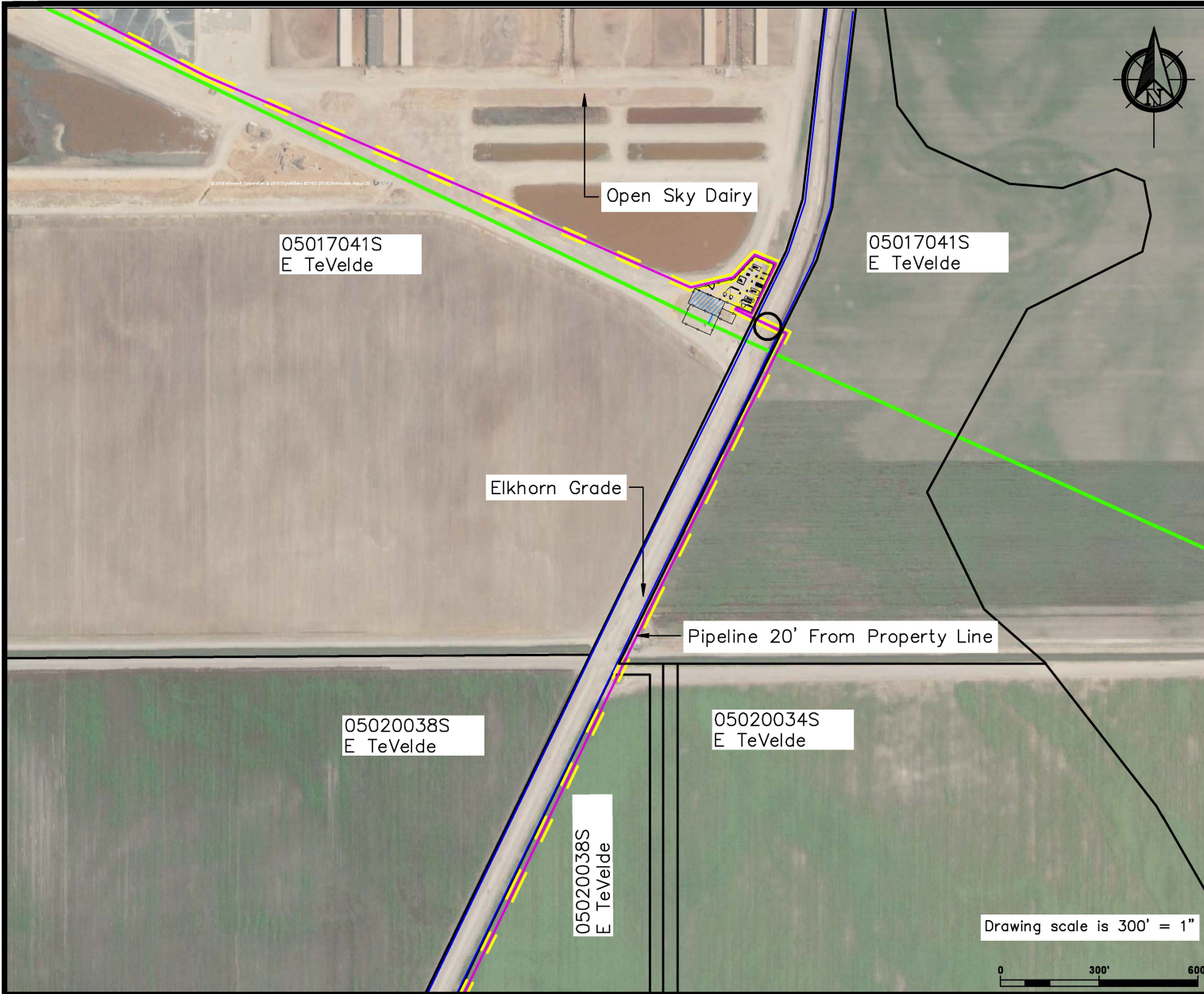
Date
1/23/19

Version
2.2

Drawn By
HD, SR, SG

Drawing scale is 300' = 1"

Pipeline Detail Map - Attachment FP-2



General Notes

Confidential and Not for Construction

Drawing #8
See Attachment 6.2 and 6.3 for Cleanup and Injection details.

Parcel Boundaries

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Approximate County Right of Way

PG&E Transmission Line

20' Pipeline Easement

Pipeline Crosses Right of Way

All pipes are in private easement with the exception of crossings shown.

Proposed pipeline is 20' or more from ROW.

Elkhorn Grade, 80' County Right of Way.

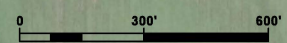
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Project Name and Address
Five Points Cluster Pipeline Map
Fresno County, CA

Date 1/23/19	Version 2.2
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Drawing scale is 300' = 1"



Pipeline Detail Map - Attachment FP-2



General Notes

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Drawing #9

Parcel Boundaries

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Approximate County Right of Way

PG&E Transmission Line

20' Pipeline Easement

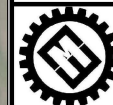
Pipeline Crosses Right of Way



All pipes are in private easement with the exception of crossings shown.

Proposed pipeline is 20' or more from ROW.

Elkhorn Grade, 80' County Right of Way.



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Project Name and Address

Five Points Cluster Pipeline Map
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Date

1/16/19

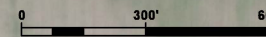
Version

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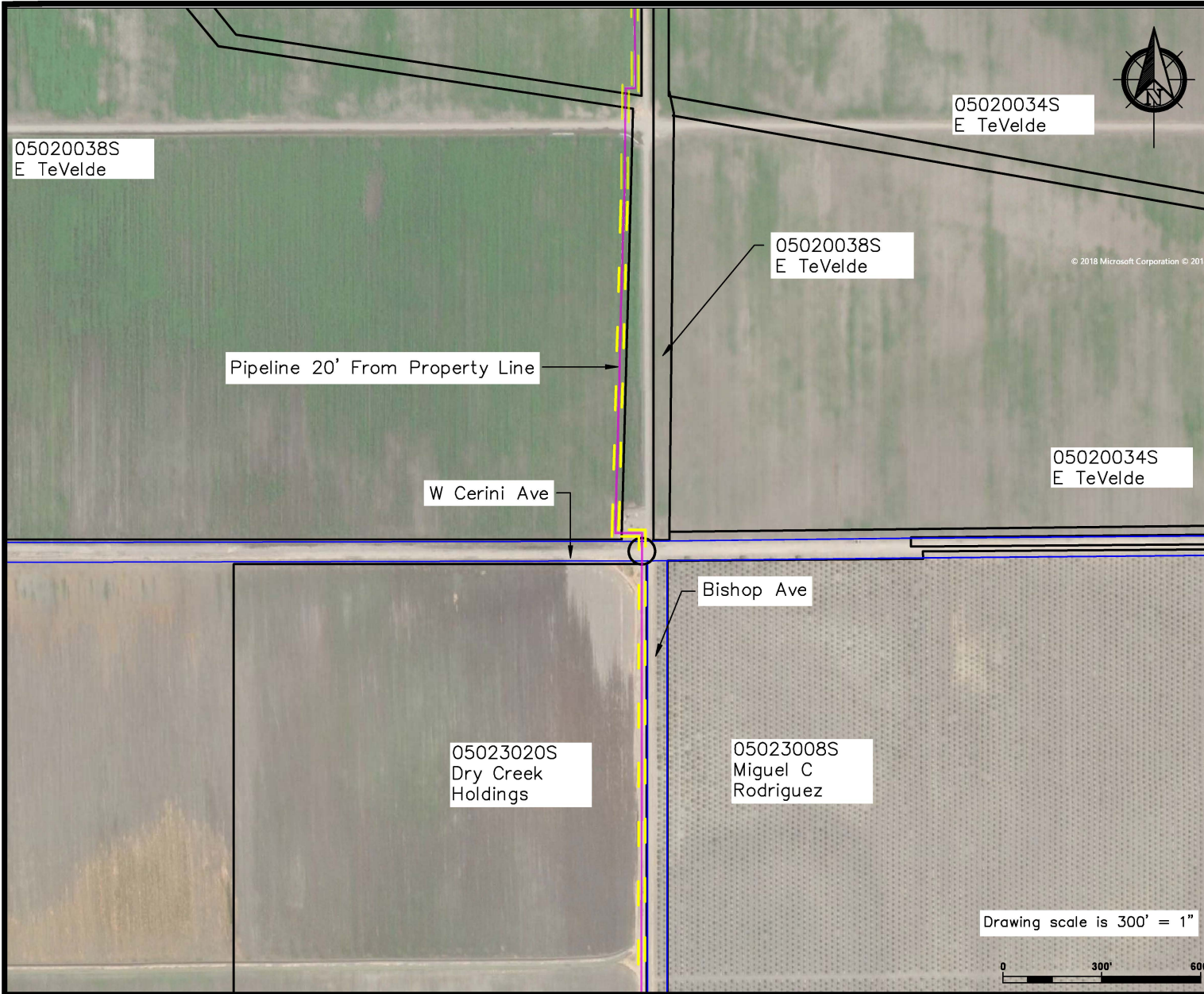
Drawn By

HD, SR, SG

Drawing scale is 300' = 1"



Pipeline Detail Map - Attachment FP-2



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General Notes

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Drawing #10

Parcel Boundaries

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Approximate County Right of Way

PG&E Transmission Line

20' Pipeline Easement

Pipeline Crosses Right of Way



- All pipes are in private easement with the exception of crossings shown.
- Proposed pipeline is 20' or more from ROW.
- Bishop Ave, 60' County Right of Way.
- W Cerini Ave, 60' County Right of Way.



Firm Address

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Project Name and Address

Five Points Cluster Pipeline Map
Fresno County, CA

Date

1/16/19

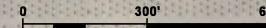
Version

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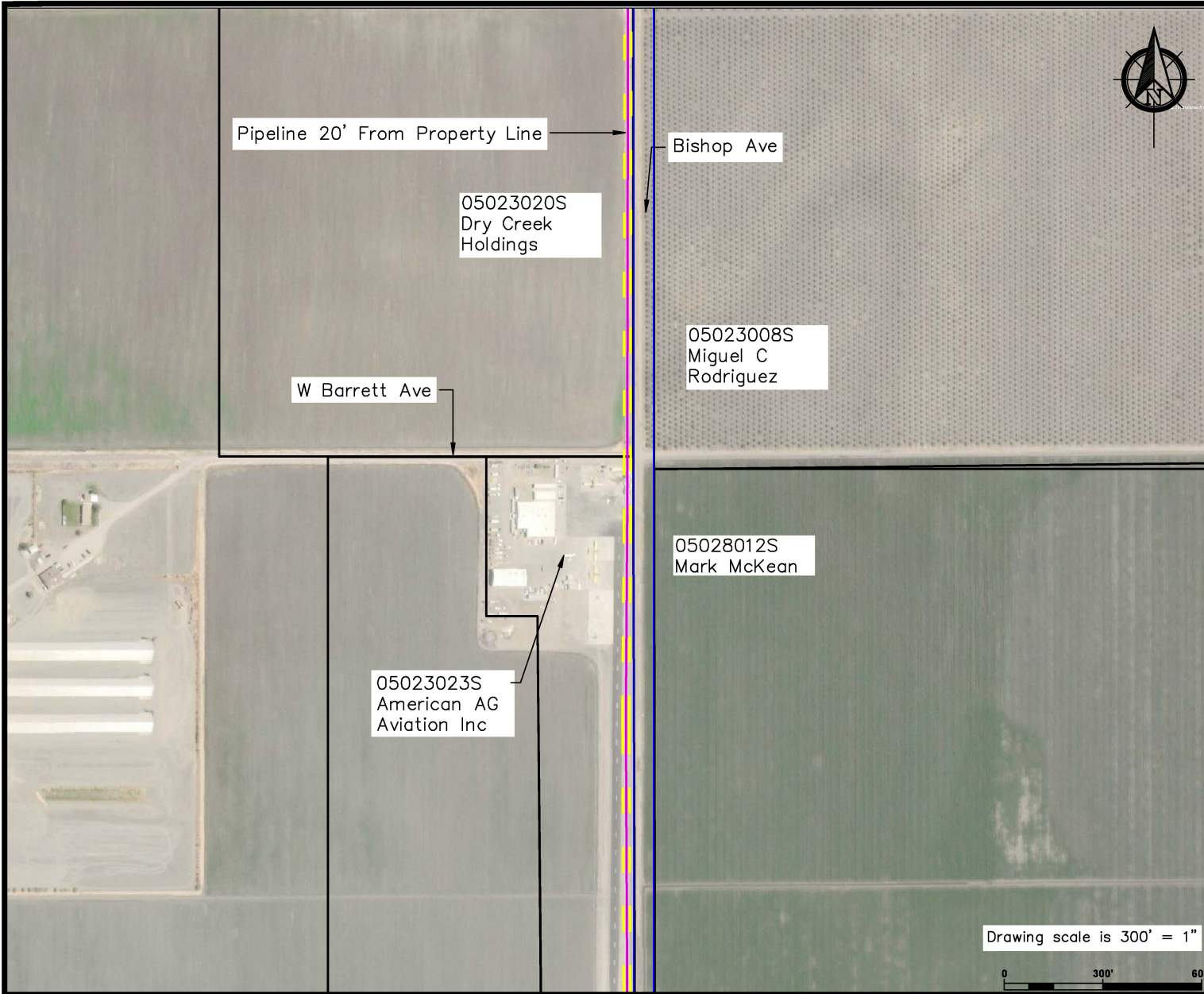
Drawn By

HD, SR, SG

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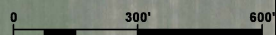


Pipeline Detail Map - Attachment FP-2











General Notes	
Confidential and Not for Construction	
Drawing #11	
Parcel Boundaries	
HDPE SDR 21, 6", 11 PSI	
HDPE SDR 21, 4", 13 PSI	
Approximate County Right of Way	
PG&E Transmission Line	
20' Pipeline Easement	
Pipeline Crosses Right of Way	
○	
All pipes are in private easement with the exception of crossings shown.	
Proposed pipeline is 20' or more from ROW.	
Bishop Ave, 60' County Right of Way.	
Firm Address 3711 Meadow View Dr. Suite 100 Redding, CA, 96002	
Project Name and Address Five Points Cluster Pipeline Map Fresno County, CA	
Date	Version
1/16/19	2.2
Drawn By	HD, SR, SG

Drawing scale is 300' = 1"

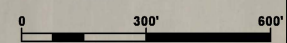


Pipeline Detail Map - Attachment FP-2

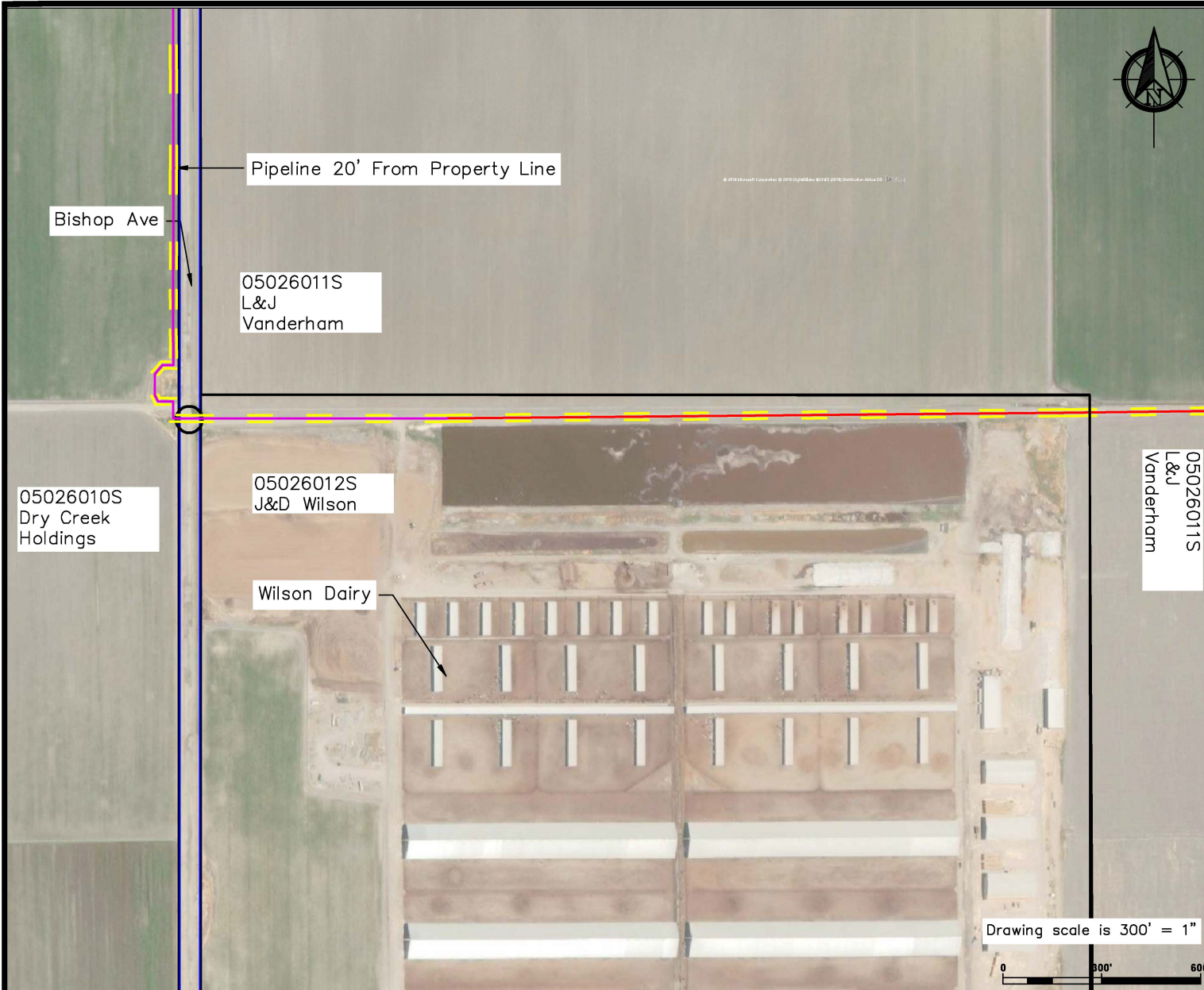


General Notes	
Confidential and Not for Construction	
Drawing #12	
Parcel Boundaries	
	
HDPE SDR 21, 6", 11 PSI	
	
HDPE SDR 21, 4", 13 PSI	
	
Approximate County Right of Way	
	
PG&E Transmission Line	
	
20' Pipeline Easement	
	
Pipeline Crosses Right of Way	
	
<ul style="list-style-type: none"> -All pipes are in private easement with the exception of crossings shown. -Proposed pipeline is 20' or more from ROW. -Bishop Ave, 60' County Right of Way. -W Harlan Ave, 60' County Right of Way. 	
	
Firm Address	
3711 Meadow View Dr. Suite 100 Redding, CA, 96002	
Project Name and Address	
Five Points Cluster Pipeline Map Fresno County, CA	
Date	Version
1/16/19	2.2
Drawn By	
HD, SR, SG	

Drawing scale is 300' = 1"



Pipeline Detail Map - Attachment FP-2



General Notes

Confidential and Not for Construction

Drawing #13

Parcel Boundaries

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Approximate County Right of Way

PG&E Transmission Line

20' Pipeline Easement

Pipeline Crosses Right of Way

All pipes are in private easement with the exception of crossings shown.

Proposed pipeline is 20' or more from ROW.

Bishop Ave, 60' County Right of Way.

05026011S L&J Vanderham

05026010S Dry Creek Holdings

05026012S J&D Wilson

Wilson Dairy

Drawing scale is 300' = 1"

0 300' 600'

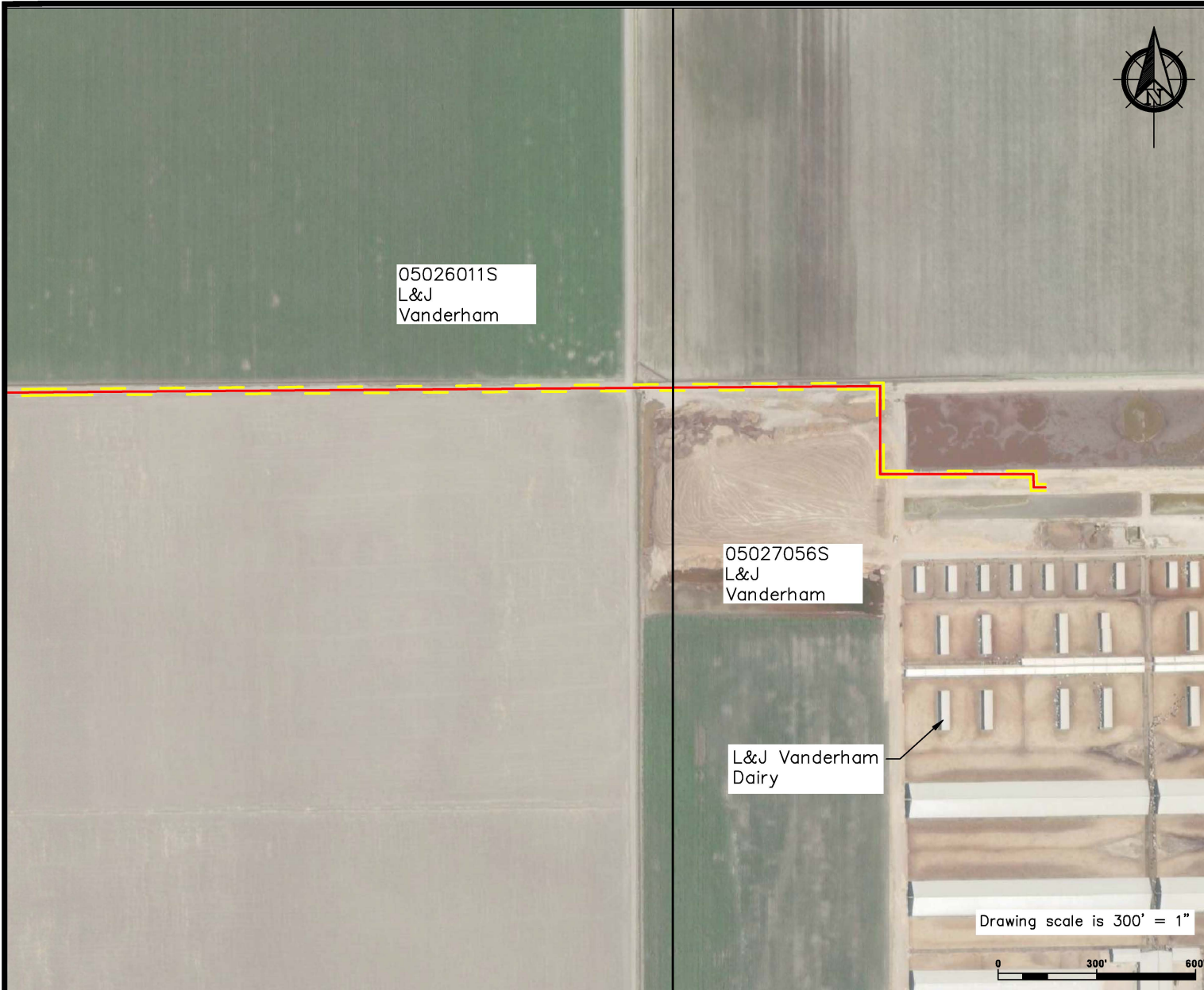


Firm Address
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Project Name and Address
Five Points Cluster Pipeline Map
Fresno County, CA

Date	1/23/19	Version	2.2
Drawn By	HD, SR, SG		

Pipeline Detail Map - Attachment FP-2

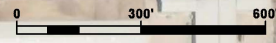


05026011S
L&J
Vanderham

05027056S
L&J
Vanderham

L&J Vanderham
Dairy

Drawing scale is 300' = 1"



General Notes

Confidential and Not for Construction

Drawing #14

Parcel Boundaries

HDPE SDR 21, 6", 11 PSI

HDPE SDR 21, 4", 13 PSI

Approximate County Right of Way

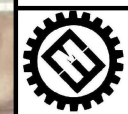
PG&E Transmission Line

20' Pipeline Easement

Pipeline Crosses Right of Way



All pipes are in private easement with the exception of crossings shown.



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Redding, CA, 96002

Project Name and Address

Five Points Cluster Pipeline Map
Fresno County, CA

Date

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Version

2.2

Drawn By

HD, SR, SG



County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

EVALUATION OF ENVIRONMENTAL IMPACTS

- APPLICANT:** Five Points Pipeline, LLC
- APPLICATION NOS.:** Initial Study Application No. 7608 and Unclassified Conditional Use Permit Application Nos. 3642, 3643, 3644, 3645, 3646, and 3647.
- DESCRIPTION:** This project proposes to allow the installation of four new covered lagoon, anaerobic dairy digesters with related biogas conditioning equipment and biogas generators to produce electricity on four existing dairies; the installation of biogas conditioning equipment at a fifth dairy with an existing digester and generator; the construction of an approximately 10.5 mile underground pipeline to connect the participating dairies and allow produced biomethane to be transported to a centralized hub, where a biogas upgrading facility will be constructed to clean and condense the biogas before it is injected into the PG&E natural gas transmission line.
- LOCATION:** The project is bounded by the unincorporated communities of Five Points to the southwest, Helm to the north, Burrell to the northeast, and Lanare to the east and southeast; State Route 145 (Madera Avenue) on the west, Mount Whitney Avenue on the south, Jameson Avenue on the east, and Kamm Avenue on the north within the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) and AE-40 (Exclusive Agricultural, 40-acre minimum parcel size) Zone Districts. (SUP. DIST. 1 and 4) (Dairies: APN Nos. 040-130-51S; 050-160-16S; 050-270-56S; 050-170-41S; 050-260-12S; 040-130-35S) (Pipeline APN Nos. 040-130-51S, 49, 44S, 48S; 041-100-17, 45S; 050-160-13S, 16S; 050-200-38S; 050-230-20; 050-260-10S; 050-230-23S; 050-260-12S, 11S; 050-270-56S; 040-130-35S).

I. AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

- A. Have a substantial adverse effect on a scenic vista?

FINDING: NO IMPACT:

The project is located in an agricultural area and is not near any scenic vistas. The proposed project involves the installation of a 10.5 mile underground gas pipeline to connect 5 existing dairies, which will introduce biomethane to the pipeline, to be collected at a central hub where the biogas will be conditioned to meet commercial standards before it is injected into Pacific Gas and Electric's (PG&E) main natural gas line, which traverses the central hub site. The project area encompasses portions of 17 parcels, consisting of the five participating dairies, and an additional 12 parcels to be traversed by the proposed pipeline. This area is characterized by large farming parcels and open space. The project will not add any structures that would obstruct any views from neighboring properties or from adjacent roadways. Project construction will be limited to the proposed underground pipeline and the installation of new gas conditioning equipment at the existing dairy sites. Therefore, the project will have no impact on scenic vistas.

- B. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

FINDING: NO IMPACT:

No scenic resources, including trees, rock outcroppings, or historic buildings were identified in the analysis or by any reviewing agencies. One of the dairy sites is located approximately one third-mile east of State Route 145 (South Lassen Avenue), which is not a Scenic Highway per the Fresno County General Plan, Figure OS-2.

- C. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

FINDING: NO IMPACT:

The project area is entirely located in a rural area characterized by large-scale agricultural operations. As previously stated, the project does not entail the addition of any structures that would negatively impact viewsheds from surrounding properties or public roadways, or substantially degrade the visual character or quality of public views of any of the project sites. The proposed improvements are consistent with the existing dairy operations.

- D. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

The proposed project will not introduce substantial, new sources of light or glare. The proposed facilities will utilize outdoor security lighting and all lighting will be required to be hooded and directed downward so as not to shine on adjacent properties or roadways.

* **Mitigation Measure(s)**

1. *All outdoor lighting shall be hooded and directed so as not to shine toward adjacent properties and public streets.*

II. AGRICULTURAL AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology in Forest Protocols adopted by the California Air Resources Board. Would the project:

- A. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

FINDING: LESS THAN SIGNIFICANT IMPACT:

Farmland on the subject parcels has been classified as a mixture of farmland of statewide importance and confined animal agriculture. The confined animal designation is limited to the area where the dairy cows are housed and the new improvements will be located in the area of the existing dairies where the land has been designated for confined animal agriculture. The proposed pipeline will transverse farmland of statewide importance, but will be located at least four feet below the surface of the farming operation, and will not hinder agricultural operations. The new improvements will be supportive of dairy operations.

- B. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The parcels involved with the proposed project are restricted by Williamson Act Contracts, and due the commercial nature of gas and electrical exportation to gas pipelines and the electrical grid, the areas of each dairy where the digesters and supporting equipment are located will be required to non-renew the existing contracts on those portions of the property. The amount of land that will be non-renewed does

not represent a significant reduction in land restricted by Williamson Act Contracts and will not result in the reduction of agricultural products.

- C. Conflict with existing zoning for forest land, timberland or timberland zoned Timberland Production; or
- D. Result in the loss of forest land or conversion of forest land to non-forest use?

FINDING: NO IMPACT:

The project is not located near any land that is used or zoned for Timberland Production. Therefore, there are no conflicts with, or loss of, timberland or forest land as a result of this project. All of the land involved is zoned Agricultural and limited to uses allowed in such zone districts.

- E. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project entails the installation of new dairy digesters at four existing dairy sites along with ancillary equipment; the addition of ancillary equipment at a fifth dairy site with an existing digester; construction of an approximately 10.5 mile underground pipeline connecting the five dairies to one central hub; and allowing biomethane produced at each participating dairy to be collected and transported via the pipeline, to the central hub, located on the Open Sky Dairy which is centrally located to the other dairies. From the central hub, the collected biogas will be conditioned to commercial natural gas standards before being injected into the adjacent PG&E main natural gas pipeline.

The portions of the parcels where the digesters and ancillary equipment will be located have been submitted for non-renewal of the associated Williamson Act Contracts. The conflict with the Williamson Act is primarily due to the commercial nature of the operation, which proposes to generate gas and electricity for sale to PG&E. The continued dairy operations on these parcels is necessary to feed the digesters. Therefore, approval of this project will not result in the conversion of farmland to non-agricultural uses.

As noted above, the project is not located in the vicinity of forestland and therefore, will have no impacts on the conversion of forestland to non-forest uses.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

A. Conflict with or obstruct implementation of the applicable Air Quality Plan?

FINDING: LESS THAN SIGNIFICANT IMPACT:

This project proposal was reviewed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). The District recommended that the evaluation of this proposal include estimates of construction, operation, mobile and stationary emissions sources, and the project's proximity to sensitive receptors and other existing emission sources, and that District established thresholds of significance for criteria pollutants be considered in the evaluation. The District also recommended that Operational Emissions (stationary sources) and non-permitted (mobile sources) be evaluated separately, and that project related criteria pollutant emissions from construction and operation should be identified and quantified.

The applicant provided an air quality impact and greenhouse gas analysis, completed by Insight Environmental/Trinity Consultants, dated May 2019. According to the analysis, the proposed project's construction and operations would contribute the following criteria pollutant emissions: reactive organic gases (ROG), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and suspended particulate matter (PM₁₀ and PM_{2.5}). Project operations would generate air pollutant emissions from mobile sources (automobile activity from employees) and area sources (incidental activities related to facility maintenance). Criteria and GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (California Air Pollution Control Officers Association (CAPCOA) 2017), which is the most current version of the model approved for use by the San Joaquin Valley Air Pollution Control District (SJVAPCD).

Based on the air quality impact analysis, the short-term construction emissions would not exceed Air District significance thresholds for criteria pollutant levels during a given year and impacts would therefore, be less than significant. Project operational emissions are not anticipated to be a substantial source of PM₁₀ emissions, but rather the main sources of PM₁₀ would be vehicular traffic associated with the project. Transportation related activities from employees and maintenance would generate mobile source ROG, NO_x, SO_x, CO, PM₁₀, PM_{2.5} from vehicle exhaust.

Stationary source emissions from the project are anticipated to consist of VOC emissions from the biogas upgrade process and ROG, No_x, SO_x, CO, PM₁₀ and PM_{2.5} exhaust emissions from the combustion of the biogas to generate electrical power.

Air pollution associated with stationary sources is regulated through the permitting authority of the SJVAPCD under the New and Modified Stationary Source Review Rule (SJVAPCD Rule 2201). Owners of any new or modified equipment that emits, reduces, or controls air contaminants, except those specifically exempted by the SJVAPCD, are required to apply for an Authority to Construct and Permit to Operate (SJVAPCD Rule 2010). Additionally, best available control technology (BACT) is required on specific

types of stationary equipment and are required to offset both stationary source emission increases along with increases in cargo carrier emissions if the specified threshold levels are exceeded (SJVAPCD Rule 2201, 4.7.1). Through this mechanism, the SJVAPCD would require that all stationary sources within the project area would be subject to the standards of the SJVAPCD to ensure that new developments do not result in net increases in stationary sources of criteria air pollutants.

With adherence to the rules and requirements of the SJVAPCD, the estimated construction and operational emissions from the proposed project will be less than significant.

- B. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project area is located in the San Joaquin Valley Air Basin (SJVAB), which is included among the eight counties that comprise the SJVAPCD. Under the provisions of the U.S. Clean Air Act, the Fresno County portion of the SJVAB has been classified as nonattainment/extreme, nonattainment/severe, nonattainment, attainment/unclassified, attainment for various criteria pollutants. As shown in the analysis by Insight Environmental Consultants, the project does not pose a substantial increase to basin emissions. Because the proposed project would generate less than significant project-related operational impacts to criteria air pollutants, the project's contribution to cumulative air quality impacts would not be cumulatively considerable.

- C. Expose sensitive receptors to substantial pollutant concentrations; or
- D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

FINDING: LESS THAN SIGNIFICANT IMPACT:

Dairies are known to release objectionable odors, primarily due to animal waste from the milking cows. The project proposes to install covered digesters, which will process manure. The manure will be anaerobically activated to release methane, which will then be piped through a gas collection system to a central hub to generate renewable energy. The capture of methane gas is anticipated to remove adverse odors from the air as compared to the baseline.

Lead Agencies should consider situations wherein a new or modified source of hazardous air pollutants (HAPs) is proposed for a location near an existing residential area or other sensitive receptor when evaluating potential impacts related to HAPs. Typical sources of HAPs include diesel trucks or permitted sources such as engines, boilers, or storage tanks. The project will be located near scattered rural residences on large agricultural parcels. Since there will be HAPs emitted from the project and

occasional diesel truck travel on-site, a prioritization score was determined for the facility to determine if a health risk assessment (HRA) would be required. A Health Risk Assessment (HRA) is not required for a project with a total facility prioritization score of less than or equal to one. The project's prioritization score was 0.04, which is less than one. Therefore, no further analysis is required to determine the HAPs impacts from this project and potential risk to the population attributable to emissions of HAPs from the proposed project would be less than significant.

According to the analysis, the proposed project would not exceed any screening trigger levels to be considered a source of objectionable odors or odorous compounds. Furthermore, there does not appear to be any significant source of objectionable odors in close proximity that may adversely impact the project site when it is in operation. The project emission estimates indicate that the proposed project would not be expected to adversely impact surrounding receptors. As such, the project would not be a source of any odorous compounds nor would it likely be impacted by any odorous source.

Development in this area is dominated by large parcels of agricultural production with very limited residential development. Due to the anticipated reduction in objectionable odors and the distance between the closest residences and the project site, this project will not expose sensitive receptors to substantial pollutant concentrations and will not create objectionable odors affecting a substantial number of people.

IV. BIOLOGICAL RESOURCES

Would the project:

- A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; or
- B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

A Biological Analysis Report (BAR), dated April 2019, was prepared for the project by the applicant's consultant, Quad Knopf, Inc. (QK). Reviews of agency-maintained databases were conducted to determine the potential presence of sensitive biological resources and special-status species. The results of the database and literature review indicate that eight (8) special-status species have the potential to occur within the vicinity of the project. Those species are the Swainson's hawk (*Buteo swainsoni*), western burrowing owl (*Athene cunicularia*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), loggerhead shrike (*Lanus ludovicianus*), tricolored blackbird (*Agelaius tricolor*), American badger (*Taxidea taxus*), San Joaquin kit fox (*Vulpes macrotis mutica*), and long-billed curlew (*Numenius americanus*).

A reconnaissance level field survey was conducted to identify sensitive biological resources on site and to document the suitability of the habitat on the project to support special-status species. No sensitive natural plant communities occur on the project sites. No special-status plant species were observed on the project sites. Swainson's hawk, loggerhead shrike, and long-billed curlew were observed near the site. No other special-status animal species were observed on site.

The project sites are highly disturbed and currently mostly cleared of vegetation. The pipeline route will run through private agricultural land. The presence of special-status species on these sites prior to ground disturbance cannot be positively determined. Reviews of the databases and on-site field examinations indicated that there are five defined waters or wetlands on or near the project sites. There are no designated migratory corridors or linkages, significant nursery sites, or designated Critical Habitat that occur on the project site.

A reconnaissance-level site survey was conducted on April 6, 2019 by QK. The survey consisted of meandering pedestrian transects with supplemental windshield survey of the Biological Study Area (BSA). Adjacent parcels were visually scanned for potential special-status resources and habitat conditions that could support special-status resources. The BSA supports a variety of bird, and mammal species. Various wildlife sign (i.e. scat, tracks, burrows etc.) were detected on all five sites. Wildlife sign detected included common bird species, two stick nests that could potentially be used by raptors, and numerous small mammal burrows. Twelve animal species or their sign were observed within the BSA. The project contained a few small mammal burrows scattered throughout the BSA.

Within the BSA, suitable San Joaquin kit fox habitat is not present; however, the pipeline route, specifically along the agriculture irrigation canals, may be used by the species while foraging or traveling through the area. The surrounding area near the pipeline route and dairy digester sites may provide suitable habitat for the species. There are multiple records of this species occurring near the BSA, but there is no positive evidence that the San Joaquin kit fox is present in the BSA.

Suitable foraging Swainson's hawk habitat is present in the agricultural fields surrounding the site. A Swainson's hawk was observed approximately 0.2-miles north, outside of the project area and east of the Van der Kooi Dairy. Suitable nesting habitat is found near the intersection of W. Elkhorn Avenue and S. Howard Avenue and along the Fresno Slough, but no nesting Swainson's hawks were found in the BSA during the reconnaissance survey.

Within the BSA, suitable foraging habitat for tricolored blackbird is present, but no nesting habitat is present. Suitable foraging loggerhead shrike habitat is present in the agricultural fields. Suitable nesting habitat is unlikely to be present within the BSA, but it may be present in the surrounding area. Trees with dense foliage that have the potential to house nests for this species occur in areas surrounding the BSA. Also, suitable foraging habitat for yellow-headed blackbird is present, but no nesting habitat is

present within the BSA. Suitable foraging and nesting long-billed curlew habitat is present. They typically nest in areas that are relatively dry and exposed. The nests are built near conspicuous objects such as livestock dung piles, rocks, or dirt mounds.

Within the project area, suitable badger habitat is not present, but the pipeline route, specifically along the irrigation canals, may be used by this species while foraging or traveling through the area.

Due to the high level of disturbance within the project footprint, lack of potential suitable areas for special-status plant species on the project site, and lack of potential for special status plants to exist on the site, no avoidance or minimization measures for special-status plant species are warranted.

~~The lack of special-status species within the localized project impact area and the short duration of activities, coupled with implementation of avoidance and minimization mitigation measures will be sufficient to reduce impacts of the projects to special-status wildlife species to level that would be less than significant.~~

The California Department of Fish and Wildlife (CDFW) commented that Tricolored Blackbird (TRBL) are known to occur in the Project area. Flood-irrigated agricultural land, including silage fields associated with ~airies, is an increasingly important nesting habitat type for TRBL, particularly in the San Joaquin Valley (Meese et al. 2014). This potential nesting substrate is distributed throughout the Project area. TRBL aggregate and nest colonially, forming colonies of up to 100,000 nests (Meese et al. 2014). Approximately 86% of the global population of the species is found in the San Joaquin Valley (Kelsey 2008, Weintraub et al. 2016). Increasingly, TRBL are forming larger colonies that contain progressively larger proportions of the species' total population (Kelsey 2008). In 2008, for example, 55% of the species' global population nested in only two colonies, which were located in silage fields (Kelsey 2008). Nesting can occur synchronously, with all eggs laid within one week (Orians 1961). For these reasons, depending on timing, disturbance to nesting colonies can cause abandonment, significantly impacting TRBL populations (Meese et al. 2014). CDFW recommends the following mitigation measures to ensure that the TRBL is not impacted by the project.

* **Mitigation Measure(s)**

1. ***To mitigate impacts to the tricolored blackbird (TRBL), the following measures shall be implemented:***

Construction shall be timed to avoid the normal bird breeding season (February 1 through September 15). However, if construction must take place during that time, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting TRBL, within a minimum 500-foot buffer from the Project site, no more than 10-days prior to the start of implementation

to evaluate presence/absence of TRB nesting colonies in proximity to Project activities and to evaluate potential Project-related impacts.

If an active TRBL nesting colony is found during preconstruction surveys, CDFW recommends implementation of a minimum 300-foot no-disturbance buffer in accordance with CDFW's "Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015" (CDFW 2015). CDFW advises that this buffer remain in place until the breeding season has ended or until a qualified biologist has determined that nesting has ceased, the birds have fledged, and are no longer reliant upon the colony or parental care for survival. It is important to note that TRBL colonies can expand over time and for this reason the colony should be reassessed to determine the extent of the breeding colony before conducting construction activities.

In the event that a TRBL nesting colony is detected during surveys, consultation with CDFW is warranted to discuss how to implement the project and avoid take, or if avoidance is not feasible, to acquire an ITP, pursuant to Fish and Game Code Section 2081 (b), prior to any ground-disturbing activities

~~—Pre-activity Surveys for Special Status Species. No less than 14 days prior to the start of project ground disturbance activities in any specific area, a pre-activity clearance survey should be conducted by a qualified biologist knowledgeable in the identification of listed species. The surveys should cover the project site plus a 250-foot buffer. Pedestrian surveys achieving 100% visual coverage should be conducted. Multiple surveys are anticipated to be needed as each project site and the pipeline route is initiated. If no evidence of these species is detected, no further action is required.~~

San Joaquin Kit Fox (SJKF) have the potential to occur on the Project site. Without appropriate avoidance and minimization measures for SJKF, potential significant impacts associated with the Project's construction include den collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of young, and direct mortality of individuals.

- 2. Avoidance of Burrows for San Joaquin Kit Fox, and American Badger. If dens/burrows that could support any of these species are discovered during the pre-activity clearance surveys conducted under BIO-1, the avoidance buffers outlined below should be established. No work would occur within these buffers unless the biologist approves and monitors the activity. Dens or burrows of these species shall not be destroyed unless it is determined that the den/burrow is not occupied. In no case shall a San Joaquin kit fox natal den or known den be destroyed without the concurrence of the USFWS and CDFW and appropriate artificial den replacements are provided.*

San Joaquin Kit Fox

- *Potential Den – 50-feet*
- *Atypical Den – 50-feet (includes pipes and other man-made structures)*
- *Known Den – 100-feet*
- *Natal/Pupping Den – 500-feet*

American Badger

- *Known Den — 100-feet*

The applicants shall assess presence/absence of SJKF by conducting surveys following the USFWS (2011) "Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance." Specifically, CDFW advises conducting these surveys in all areas of potentially suitable habitat no less than 14-days and no more than 30-days prior to beginning of ground disturbing activities.

SJKF detection warrants consultation with CDFW to discuss how to implement the Project and avoid take, or if avoidance is not feasible, to acquire an Incidental Take Permit (ITP), pursuant to Fish and Game Code Section 2081(b).

3. *Standard Avoidance and Minimization Measures for the San Joaquin kit fox and American badger. The following standard avoidance and minimization measures are recommended to be implemented:*
 - *Construction-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on County and City roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However, if night construction activities do occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.*
 - *To prevent inadvertent entrapment of kit foxes or other wildlife during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks should be installed. Before such holes or trenches are filled, they should be thoroughly examined for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the CDFW should be contacted as noted below.*
 - *Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently*

buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

- *All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.*
- *No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.*
- *Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of special-status species and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation, as well as additional project-related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.*
- *A representative should be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a special-status species or who finds a dead, injured, or entrapped special-status species. The representative will be identified during the employee education program and their name and telephone number should be provided to the USFWS.*
- *In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for guidance.*
- *Any person who is responsible for inadvertently killing or injuring a special-status animal species should immediately report the incident to their representative. This representative should contact the CDFW immediately in the case of a dead, injured, or entrapped special-status species. The CDFW contact for immediate assistance is State Dispatch at 916-445-0045. They will contact the local warden or wildlife biologist. The USFWS should be contacted at the number below.*
- *The region 8 Sacramento Fish and Wildlife Office and Region 4 CDFW should be notified in writing within three working days of the accidental death or injury to a kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS*

contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below.

*U.S. Fish and Wildlife Service
Region 8 – California and Nevada
2800 Cottage Way
Sacramento, CA 95825
Contact: Tim Ludwick
Phone: 916-414-6464*

- *New sightings of kit fox should be reported to the CNDDDB. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the appropriate wildlife agencies.*
4. *Den Avoidance. In the event that a potential den that may be suitable for American badger, San Joaquin, or burrowing owl is detected during pre-activity clearance surveys, the biologist should monitor the den using cameras and tracking medium for five days to determine if the den is occupied by a special-status species. If after five (5) days no activity is detected, then the den can be backfilled. Construction personnel may collapse the den only under the direct supervision of the biologist. If a special-status species is detected using the den, the den must be avoided until the animal leaves on its own. A minimum 100-foot buffer should be constructed using orange construction fencing around the den during the nonbreeding season (April to November). During the breeding season (December to March), the buffer should be extended to 250 feet. Consultation with the USFWS and/or CDFW will be required prior to collapsing dens known to be occupied by kit foxes. If authorized by the CDFW, passive relocation of wildlife may be accomplished using one-way doors to exclude wildlife from dens. An exclusion plan approved by CDFW would be required prior to the installation of one-way doors.*
 5. *If project activities are planned to start during the migratory bird nesting season, February 1 to September 15, a pre-activity nesting bird survey should be conducted within seven (7) days of the start of these activities. These surveys should be phased with construction of the project. If active nests are detected during the survey, or at any time during construction of the project, an avoidance buffer will be established by a qualified biologist based on the species and the activities that are underway. For raptor species (except Swainson's hawk), the avoidance will typically be 500 feet. For non-raptor species, the buffer will be 250-feet. Note that some bird species are known to nest on human structures, including construction equipment. Construction personnel should be educated about this possibility as part of the employee education program. ~~included under measure BIO-7~~*

Without appropriate avoidance and minimization measures for. SWHA, potential significant impacts associated with the Project's construction include: nest

abandonment, reduced reproductive success, and reduced health and vigor of eggs and/or young.

Trees within ½-mile of the Project area represent some of the only remaining suitable nesting habitat in the vicinity, which is otherwise intensively managed for agriculture. In addition, the Project area includes low growing crops, which may provide foraging habitat for SWHA. The presence of these two requisite habitat features increases the likelihood of occurrence of SWHA. The primary threat to SWHA in California is loss of foraging and nesting habitat resulting from urban development and incompatible agriculture (CDFW 2016). Depending on timing, ground-disturbing activities that have the potential to result from the Project including noise, vibration, and movement of workers or equipment, could affect SWHA nests and have the potential to result in nest abandonment, potentially significantly impacting local nesting SWHA.

6. *To mitigate impacts to the Swainson's Hawk (SWHA), the following measures shall be implemented:*

Construction be timed to avoid the normal bird breeding season (February 1 through September 15). However, if construction must take place during that time, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting raptors following the survey methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) prior to project initiation. In addition, CDFW recommends that a qualified biologist conduct additional pre-construction surveys for active nests no more than 10-days prior to the start of construction.

If an active SWHA nest is found during pre-construction surveys, CDFW recommends implementation of a minimum ½-mile no-disturbance buffer until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

If the ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, acquisition of an ITP for SWHA is necessary prior to project implementation, pursuant to Fish and Game Code Section 2081(b) to comply with CESASwainson's Hawk Avoidance and Minimization.

~~*If project activities are planned to start during the Swainson's hawk nesting season, March 20 to July 30, a pre-activity nesting bird survey should be conducted within seven (7) days of the start of these activities. These surveys should be phased with construction of the project site. A report of survey findings should be provided to the County to confirm compliance with this measure. If an active Swainson's hawk nest is present on-site, no work may occur within 0.5 mile of the nest without consultation with the CDFW.*~~

The Giant Garter Snake (GGS) has the potential to be present in or near Project sites. As documented in CNDDDB, GGS are known to occur in the Fresno Slough (CDFW 2019) and the species is known to occupy managed waterways, including those managed for agricultural irrigation (USFWS 2017). Potential significant impacts associated with Project construction include burrow excavation and collapse, inadvertent entrapment, and direct mortality of individuals.

7. To mitigate impacts to the Giant Garter Snake (GGS), the following measures shall be implemented:

A qualified biologist shall conduct a habitat assessment well in advance of project implementation, to determine if the Project area or its vicinity contains suitable habitat for GGS.

No more than 30-days prior to ground-disturbing activities, a qualified biologist with GGS experience and knowledge of its ecology survey the work area and a minimum 50-foot radius of the work area for burrows and crevices in which GGS could be present. It is advised that all potentially suitable burrows and cervices be flagged and avoided by a minimum 50-foot no disturbance buffer. If a 50-foot radius buffer isn't feasible, consultation with CDFW is warranted to discuss how to implement the Project and avoid take.

If take cannot be avoided, acquisition of an ITP would be required prior to Project implementation to comply with CESA. Capture and relocation of any species listed under CESA would require an ITP from CDFW, as capture (or attempt to do so) is defined as take under Fish and Game Code Section 86.

Burrowing Owl (BUOW) have been documented within the vicinity of the Project area. BUOW occupy treeless open areas that contain small mammal burrows (Zeiner et al. 1990). BUOW can also occupy burrows within the banks of earthen canals (Coulombe 1971). Review of aerial imagery indicates that the Project area contains both of these land cover types. The Project area likely also provides suitable foraging habitat for BUOW. The presence of these land cover types increases the likelihood of BUOW occurrence both on and within the vicinity of the Project area. Potentially significant direct impacts associated with the Project's construction include burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

8. To mitigate impacts to the Burrowing Owl (BUOW), the following measures shall be implemented:

The applicant shall assess presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl

Consortium's (CBOC) "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012). In addition, CDFW advises that surveys include a 500-foot buffer around the Project area.

Since BUOW occupy burrow habitat year-round, CDFW recommends seasonal no-disturbance buffers, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), be implemented prior to and during any ground-disturbing activities associated with Project implementation. Specifically, CDFW's Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

If BUOW are found to occupy the Project site and avoidance is not possible, it is important to note that according to the Staff Report (CDFG 2012), exclusion is not a take avoidance, minimization, or mitigation method and is considered a potentially significant impact under CEQA. However, if necessary, CDFW recommends that burrow exclusion be conducted by qualified biologists and only during the non-breeding season, before breeding behavior is exhibited and after the burrow is confirmed empty through non-invasive methods, such as surveillance. CDFW recommends replacement of occupied burrows with artificial burrows at a ratio of 1 burrow collapsed to 1 artificial burrow constructed (1 :1) as mitigation for the potentially significant impact of evicting BUOW. BUOW may attempt to colonize or re-colonize an area that will be impacted; thus, CDFW recommends ongoing surveillance of the Project site during Project activities, at a rate that is sufficient to detect BUOW if they return.

9. *Worker Environmental Awareness Training.* Prior to the initiation of construction and for the duration of project construction and maintenance activities that could affect natural habitat, all new personnel should attend a Construction Personnel Environmental Awareness Training and Education Program. The program should be developed by a qualified biologist. Any employee responsible for the operation and maintenance (O&M) of the completed facilities should also attend the Construction Personnel Environmental Awareness Training and Education Program.
 - a. The program should include information on the life history of the burrowing owl, American badger, San Joaquin kit fox, Swainson's hawk, migratory birds and raptors, and special-status plant species that may be encountered during construction and operations and maintenance activities.
 - b. The program should discuss each species' legal protection, status, the definition of "take" under the Endangered Species Act, measures the project

operator must implement to protect the species, reporting requirements, specific measures that each worker should employ to avoid take of wildlife species, and penalties for violation of the State and federal ESAs.

c. The program should provide information on how and where to bring injured animals for treatment in the case any animals are injured on the project site, and how to document animal mortalities and injuries.

d. An attendance form signed by each worker indicating that environmental training has been completed will be kept on record.

- C. Have a substantial adverse effect on state or federally-protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

Reviews of the National Wetlands Inventory (NWI; USFWS 2019b) and National Hydrography Dataset (USGS 2019) were completed to identify whether wetlands had previously been documented on or adjacent to the project site. There are five defined waters or wetlands on or near the project site.

The United States Army Corps of Engineers (USACE) has regulatory authority over the Clean Water Act (CWA), as provided for by the EPA. The USACE has established specific criteria for the determination of wetlands based upon the presence of wetland hydrology, hydric soils, and hydrophilic vegetation. There are no federally-protected wetlands or vernal pools that occur within the project site.

Wetlands, streams, reservoirs, sloughs, and ponds typically meet the criteria for federal jurisdiction under Section 404 of the CWA and State jurisdiction under the Porter-Cologne Water Quality Control Act. Streams and ponds typically meet the criteria for State jurisdiction under Section 1602 of the California Fish and Game Code. There are no features on the project site that would meet the criteria for either federal or State jurisdiction. No waters of the U.S., including wetlands, or waters of the State were observed on the project site. Therefore, the project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA. Accordingly, there are no wetlands or Waters of the U.S. occurring on the project site. There would be no impact to federally protected wetlands or waterways as a result of the proposed project. Therefore, impacts would be considered less than significant.

However, the gathering lines will cross several existing irrigation drainages or canals, as well as the Stinson Canal. Stinson Canal may be considered Waters of the US or Waters of the State. As proposed, the pipeline will be installed using either a jack and bore method or an open cut method to traverse the Stinson Canal. If the jack and bore method is used, there would be no disturbance of the drainage bed and bank, and therefore impacts would be considered less than significant. If the open cut method is used, as required by BIO-8, prior to the commencement of gathering pipeline

construction, a jurisdictional delineation of the Stinson Canal would be conducted by a qualified biologist to determine if the drainage was considered Waters of the US or Waters of the State, identify the bed and bank, and determine the amount of disturbance area that would be required. Applications for the appropriate permits such as a 401 water quality certification, a Section 404 permit or a Section 1602 permit would be obtained prior to any construction activities. Implementation of BIO-8 would reduce impacts to less than significant.

* **Mitigation Measure(s)**

8. *Prior to the issuance of building permits, if Stinson Canal cannot be avoided, specific impacts on the features shall be quantified by an aquatic resources delineation prepared by a qualified biologist. A Central Valley Regional Water Quality Control Board Section 401 Water Quality Certification, a Section 404 ACOE permit and Section 1602 California Department of Fish and Wildlife Streambed Alteration Agreement shall be obtained, or confirmation received from these agencies that regulatory permits are not required.*
9. ***A formal stream mapping and wetland delineation shall be conducted by a qualified biologist to determine the location and extent of streams (including any floodplain) and wetlands within and adjacent to the Project area. Please note that, while there is overlap, State and Federal definitions of wetlands as well as what activities require Notification pursuant to Fish and Game Code Section 1602 differ.***

Therefore, it is advised that the wetland delineation identify both State and Federal wetlands in the Project area as well as what activities may require Notification to comply with Fish and Game Code. Fish and Game Code Section 2785 (g) defines wetlands; further, Section 1600 et seq. applies to any area within the bed, channel, or bank of any river, stream, or lake. It is important to note that while accurate wetland delineations by qualified individuals have resulted in more rapid review and response from USACE and CDFW, substandard or inaccurate delineations have resulted in unnecessary time delays for applicants due to insufficient, incomplete, or conflicting data. CDFW advises that site map(s) designating wetlands as well as the location of any activities that may affect a lake or stream be included with any Project site evaluations.

Fish and Game Code Section 1600 et seq. requires an entity to notify CDFW prior to commencing any activity that may: (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation); (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial. CDFW is required to comply with CEQA in the issuance of an LSA Agreement. For additional information on Notification requirements, please contact our staff in the LSA Program at (559) 243-4593.

- D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

FINDING: NO IMPACT:

The project would have no impacts to wildlife movement corridors or wildlife nursery sites and no mitigation measures are required. No fisheries resources that would be impacted by the project and no mitigation measures are warranted.

- E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- F. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan?

FINDING: NO IMPACT:

The project will not conflict with local policies or ordinances protecting biological resources or a tree preservation policy. The project is within the PG&E Habitat Conservation Plan (HCP) covered areas; however, the HCP is limited to PG&E maintenance activities. The project will not impact or conflict with the PG&E HCP and will not conflict with any Natural Conservation Community Plans or other approved conservation plans in the project area. Therefore, the project will not conflict with adopted or approved plans.

V. CULTURAL RESOURCES

Would the project:

- A. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5; or
- B. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or
- C. Disturb any human remains, including those interred outside of formal cemeteries?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

The project is located in an area of moderate archeological sensitivity. The applicant's consultant, QK, evaluated the project site and conducted a Cultural Resources Records Search. The purpose of the search was to determine whether any known cultural resources or previously conducted cultural resource surveys were located on or near the subject property, and whether construction of the project would impact any known or

potential cultural resources. The records search covered an area within one-half mile of the project and included a review of the *National Register of Historic Places, California Points of Historical Interest, California Registry of Historic Resources, California Historical Landmarks, California State Historic Resources Inventory*, and a review of cultural resource reports on file.

The records search indicated that one previous linear cultural resource survey had intersected with the project route near the center of Section 5, T.17S, R.18E (MDB&M). No other studies have been done along the route. One additional cultural resource study was conducted within a half mile of the project. No cultural resources have been recorded along the project route and it is not known if any exist there. One cultural resource has been recorded within a half mile of the project. This is the historic Stinson Canal that was built between 1891 and 1900.

Based on the results of cultural records search findings and the lack of historical or archaeological resources previously identified within a 0.5-mile radius of the proposed project, the potential to encounter subsurface cultural resources is minimal. However, there is still a possibility that historical or archaeological materials may be exposed during construction or trenching for underground pipes. Grading and trenching, as well as other ground-disturbing actions have the potential to damage or destroy these previously unidentified and potentially significant cultural resources within the project area, including historical or archaeological resources. Implementation of Mitigation Measure 1 would reduce the potential impacts on cultural resources, including historical resources associated with the proposed project to less than significant levels.

* **Mitigation Measure(s)**

1. *In the event that cultural resources are unearthed during ground-disturbing activities, all work shall be halted in the area of the find. An archeologist shall be called to evaluate the findings and make any necessary mitigation recommendations. If human remains are unearthed during ground-disturbing activities, no further disturbance is to occur until the Fresno County Sheriff-Coroner has made the necessary findings as to origin and disposition. All normal evidence procedures should be followed by photos, reports, video, etc. If such remains are determined to be Native American, the Sheriff-Coroner must notify the Native American Commission within 24 hours.*

VI. ENERGY

Would the project:

- A. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; or
- B. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project will produce renewable energy in the form of gas and electricity. Some energy will be expended during construction, but it is not expected to be wasteful or unnecessary with adherence to standard construction practices. The project will not conflict with or obstruct a state or local plan for renewable energy.

VII. GEOLOGY AND SOILS

Would the project:

- A. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - 1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?
 - 2. Strong seismic ground shaking?
 - 3. Seismic-related ground failure, including liquefaction?
 - 4. Landslides?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The topography of the site is relatively flat with little topographic variation. The project area is located geographically east of the San Andres Fault and is to the east of the Coast Range. Figure 9-5 of the Fresno County General Plan Background Report (FCGPBR) indicates that the project site is located in an area where ground acceleration due to seismic hazards has only a 10% chance to exceed 20%g (speed of gravity) within the next 50 years. The structures associated with this project will be subject to building standards at the time of development, which include specific regulations to protect against damage caused by earthquake and/or ground acceleration.

Figure 9-6 (FCGPBR) shows that the project site is not in an area of moderate or high landslide hazards and the project site is generally flat, precluding site-specific risk factors. The site is however, in an area of deep subsidence. With required compliance to the Fresno County Building code, development of this project will have a less than significant impact on the risk of adverse effects due to rupture of a known earthquake, strong seismic ground shaking or ground-related failure, and landslides.

- B. Result in substantial soil erosion or loss of topsoil?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The proposed improvements to the existing dairies will not represent a significant expansion of graded area. Any grading that is performed will require a grading permit or voucher and ministerial review of those permits will ensure that substantial erosion or loss of topsoil does not occur.

- C. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; or
- D. Be located on expansive soil as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The area is underlain by three soil types, Tachi Clay, Armona Loam, and Gepford Clay. Tachi Clay is a very deep and very poorly drained soils that formed in alluvium derived from igneous and/or sedimentary rocks. It is typically found on flood plains on basin floors. These soils are used for irrigation crops such as cotton, fruits, and wheat. It is not a hydric soil. Armona Loam is very deep and poorly drained soil that formed in alluvium from igneous and/or sedimentary rock. It is typically found on flood plains on basin floors and basin rims. This soil is used for irrigated crops. Gepford Clay is a very deep and poorly drained soil that is formed in mixed alluvium derived predominately from granitic rocks, influenced by lacustrine sediments. It is typically found flood plains, basin floors, and basin rims. This soil is used as irrigated cropland including barley, grain, sorghum, and sugar beets. The soil can also be used for dairy and cattle production and building site development. It is not a hydric soil.

The project site is not located in an area that is at risk of on-site or offsite landslide, lateral spreading, liquefaction, or collapse, according to Figure 7-1 (FCGPBR), and will not be located on expansive soils. The project is located in an area of deep subsidence, however, the Fresno County Department of Public Works and Planning, Water and Natural Resources Division, had no concerns with the operation of this project as planned.

- E. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

FINDING: NO IMPACT:

The project currently operates with the use of the existing permitted septic systems. No new septic is proposed as part of this application.

- F. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

The subject parcel is located in an area which has been designated as moderately to archaeological or paleontological finds, however there are no known paleontological resources in the area. On March 29, 2019, the applicant provided a Cultural Resources Records Search Result, prepared by QK. No evidence of unique paleontological resources was noted in the report. However, there is still a possibility that paleontological or archaeological materials may be exposed during construction or trenching for underground pipes. Disturbance of any deposits of paleontological material that have the potential to provide significant scientific data would be considered a significant impact under CEQA. Implementation of the mitigation measure 1 (Cultural Resources, Section V, would reduce potential impacts on paleontological resources to less than significant.

* **Mitigation Measure(s)**

1. See Mitigation Measure 1, Section V, above.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:

- A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- B. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

FINDING: LESS THAN SIGNIFICANT IMPACT:

Human activities, including fossil fuel combustion and land use changes, release carbon dioxide (CO₂) and other compounds cumulatively termed greenhouse gases. GHGs are effective at trapping radiation that would otherwise escape the atmosphere. The SJVAPCD, a CEQA Trustee Agency for this project, has developed thresholds to determine significance of a proposed project – either implement Best Performance Standards or achieve a 29% reduction from Business as Usual (BAU) (a specific numerical threshold). On December 17, 2009, SJVAPCD adopted *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* (SJVAPCD 2009), which outlined the SJVAPCD's methodology for assessing a project's significance for GHGs under CEQA.

Project construction and operational activities would generate greenhouse gas (GHG) emissions. In the Air Quality Impact Analysis, GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (California Air Pollution Control Officers Association (CAPCOA) 2017), which is the most current version of the model approved for use by the San Joaquin Valley Air Pollution Control District (SJVAPCD).

The proposed project will be subject to any regulations developed under AB 32 as determined by CARB. In order for the project to be considered less than significant, it would need to conform with the goals of AB32. The proposed project is designed to capture methane gas, that would otherwise be emitted to the air from dairy operations, and convert it to renewable power. With the incorporation of electrical generation from a renewable resource the project would decrease overall GHG emissions. Therefore, the GHG emissions increases associated with this project would have a less than significant individual and cumulative impact on global climate change.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

- A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or
- B. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

FINDING: LESS THAN SIGNIFICANT IMPACT:

Methane will be produced in anaerobic digesters by natural biological processes (the decomposition of manure waste). The digesters will be created by first double-lining a new or existing storage pond. All digester ponds will meet the Central Valley Regional Water Quality Control Board (CRWQCB) Tier 1 standards, which include the installation of double-layered liners of welded 60 ml High-density polyethylene (HDPE) with leak detection to ensure water quality. Once produced, the methane is transferred by pipe to a biogas generator and subsequently by the Five Points pipeline to the meter set assembly hub and then to the PG&E gas line injection point. All portions of the project will comply with Pipeline and Hazardous Materials Safety Administration (PHMSA) guidelines, 49 CFR Part 192, and with the CPUC's Safety Enforcement Division (SED) General Order 112-F.

Therefore, while the routine use of the hazardous methane gas will occur, risk to the public as a result of its transport or accidental release is less than significant. The operator is required to maintain an emergency response plan. With compliance to the existing regulations and the operation of the digester system distant from nearby residences, there will be a less than significant impact on public hazards as a result of the transport or use of hazardous materials.

- C. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

FINDING: NO IMPACT:

The project is not located within one quarter-mile of an existing or proposed school.

- D. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

FINDING: NO IMPACT:

Review of the US EPA's NEPAAssist report indicates that there are no hazardous or contaminated sites within one mile of the project site. The following lists were consulted: Resource Conservation and Recovery Act (RCRA), Toxic Releases Inventory (TRI), Superfund/National Priorities List, Brownfields Assessment Cleanup and Redevelopment Exchange System (ACRES), RADInfo, and Toxic Substances Control Act.

- E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project is not located within an airport land use plan or within two miles of a public airport or public use airport. The project is located adjacent to a private use airport (crop dusting) at the intersection of W. Barrett and S. Bishop Avenues, however, based on land use, and limited residences and workforce needed for the operation of project, the airport safety risk and noise will be minimal.

- F. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- G. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

FINDING: NO IMPACT:

Approval of this project will not impair the implementation of an Emergency Response Plan or Emergency Evacuation Plan. Following construction, there will be a negligible increase in the amount of traffic generated by this project for maintenance and operation of the system. The project site is located in an area of local responsibility for fire protection and is not at significant risk of damage due to wildfire.

X. HYDROLOGY AND WATER QUALITY

Would the project:

- A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality; or
- B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project area is adjacent to several riverine or canal features. There are four unnamed blue line streams (irrigation canals) and the Stinson Canal that are intersected or traversed by the project area. Two of the canal features are present along the north side of the project approximately 0.5-miles east of the Vander Hoek Dairy. Another canal is located northwest of the Van Der Kooi Dairy along W. Elkhorn Avenue. Another unnamed canal and the Stinson Canal are located along north of W. Cerini Avenue and S. Bishop Avenue, northwest of the J&D Wilson and Sons Dairy. The Fresno Slough is approximately 0.4 miles east of the project, which will not be impacted. Portions of the project are located within the 1% annual chance of flood (500-year flood zone) or an area of minimal flood hazard zone

No concerns related to groundwater supplies were expressed by any of the reviewing agencies or departments.

The subject dairies are required to enroll under Waste Discharge Requirements, which is associated with a monitoring and reporting program. The Central Valley Regional Water Quality Control Board is responsible for monitoring the quality of water produced by this dairy. With the technical reports required by the Digester Order and associated operational requirements, this project will be in compliance with the Water Boards' standards and will not violate any water quality standards

- C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - 1. Result in substantial erosion or siltation on or off site?
 - 2. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?
 - 3. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or
 - 4. Impede or redirect flood flows?

FINDING: NO IMPACT:

The project will not result in the alteration of an existing drainage pattern of any of the individual sites or the larger project area. The project site is not located in an area of special flood hazard; however, all development in the County of Fresno that involves grading is required to obtain a grading permit or voucher. Compliance to the provisions in the permit or voucher will ensure that excessive flooding and erosion do not occur.

- D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

FINDING: NO IMPACT:

The proposed project is not located in an area prone to flood hazard, tsunami, or seiche.

- E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

FINDING: NO IMPACT:

The project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

XI. LAND USE AND PLANNING

Would the project:

- A. Physically divide an established community; or
- B. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

FINDING: NO IMPACT:

The community of Burrell is 1.3 miles east of the project; the community of Lanare is 2.8 miles east, the community of Five Points is four miles west; and the community of Helm is 1.5 miles north. Therefore, approval of this project does not have the potential to divide an established community. The proposed use is allowed in the County of Fresno with the approval of an Unclassified Conditional Use Permit, which will be reviewed by the Planning Commission concurrently with this Initial Study.

XII. MINERAL RESOURCES

Would the project:

- A. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or

- B. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local General Plan, Specific Plan or other land use plan?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The proposed project is located in an identified oil production zone, per the Fresno County General Plan Background Report (FCGPBR). This proposal was reviewed by the California Department of Conservation, Division of Oil Gas and Geothermal Resources (DOGGR). DOGGR comments and map exhibits indicate the presence of a number of abandoned oil and gas wells in the vicinity of the project and located on some of the parcels directly involved with this project, however the Division expressed no further concerns with this proposal, provided that construction does not build over or impede access to the abandoned well sites.

XIII. NOISE

Would the project result in:

- A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or
- B. Generation of excessive ground-borne vibration or ground-borne noise levels; or
- C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project is not located within an airport land use plan or within two miles of a public airport or public use airport. The project is located adjacent to a private use airport (crop dusting) at the intersection of W. Barrett and S. Bishop Avenues, however, that use is not expected to expose people in the project area to excessive noise levels. Noise generated by the project equipment will not be above typical agriculture facility levels and the project is distant to sensitive receptors. Therefore, due to the project's distance from sensitive receptors, there will be no increase in the exposure of persons to severe or adverse noise levels or ground borne noise or vibration.

XIV. POPULATION AND HOUSING

Would the project:

- A. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?; or
- B. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

FINDING: NO IMPACT:

Approval of this project would allow methane produced by the manure of cows to produce renewable energy, which would be sold to PG&E. This will not induce substantial population growth because it will not create a significant number of new job opportunities or otherwise increase the desirability of living in this area. No housing will be displaced as a result of this project. This project similarly will not displace substantial numbers of people. It will be developed on areas of farmland that were previously dedicated to agricultural production.

XV. PUBLIC SERVICES

Would the project:

- A. Result in substantial adverse physical impacts associated with the provision of new or physically-altered governmental facilities, or the need for new or physically-altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:
 - 1. Fire protection;
 - 2. Police protection;
 - 3. Schools;
 - 4. Parks; or
 - 5. Other public facilities?

FINDING: NO IMPACT:

This project will not increase the need for public facilities associated with fire or police protection. As this project will not lead to population growth, there will be no impacts on schools or parks. Any structures associated with this project will be reviewed by the Fresno County Fire Protection District to ensure compliance with California Code of Regulations Title 24 – Fire Code.

XVI. RECREATION

Would the project:

- A. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- B. Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

FINDING: NO IMPACT:

This project will not increase the use of existing neighborhood and regional parks. There are no such facilities in the vicinity of the project and the request to add anaerobic digesters and a pipeline to convey methane gas will not result in population expansion.

XVII. TRANSPORTATION

Would the project:

- A. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; or
- B. Be in conflict or be inconsistent with the California Environmental Quality Act (CEQA) Guidelines Section 15064.3, subdivision (b); or
- C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- D. Result in inadequate emergency access?

FINDING: LESS THAN SIGNIFICANT IMPACT:

Operation of this facility will require less than 10 round trips per day by service and delivery vehicles. The addition of 1-2 trips per month for maintenance of the digesters and related facilities will not conflict with any circulation plans or contribute to existing congestion of nearby County streets. Streets in the area are rectilinear, crossing at 90 degree angles and do not have sharp curves. There are no plans, policies, or programs that relate to public transit, bicycle, or pedestrian facilities in this area. The surrounding development consists of large parcels, which have been planted with row crops or support dairies similar to the project site.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:

- A. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place,

cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

Under the provisions of Assembly Bill 52, the County of Fresno was required to provide notice that this Initial Study was being prepared to Native American Tribes who had previously indicated interest in reviewing CEQA projects. Notices were sent on April 19, 2019, to Robert Ledger of the Dumna Wo Wah, Robert Pennell of Table Mountain Rancheria, Ruben Barrios of Santa Rosa Rancheria and to Tara Estes-Harter of the Picayune Rancheria of Chukchansi Indians. None of the Tribal Governments responded to the notice.

The project is located in an area of moderate archeological sensitivity. The applicant's consultant, QK, evaluated the project site and conducted a Cultural Resources Records Search. The purpose of the search was to determine whether any known cultural resources or previously conducted cultural resource surveys were located on or near the subject property, and whether construction of the project would impact any known or potential cultural resources. See the discussion in Section V, above.

Despite the failure of the tribes and historical databases to identify known tribal cultural resources, the potential exists for significant artifacts to be excavated during construction. Therefore, the following mitigation measure is proposed to ensure that impacts to previously unknown tribal cultural resources can be reduced to less than significant.

* **Mitigation Measure(s)**

1. See Mitigation Measure 1, Section V, above.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:

- A. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

FINDING: NO IMPACT:

The project will not require construction or expansion of new water or wastewater treatment facilities. Approximately 5,000 gallons/day will be used during the 40-day construction period and will be provided by on-site wells. Operational water is anticipated to be 2,500 gallons/day or 2.8 AF annually.

The inclusion of the digesters will add an additional step between collection of manure from the herd and application of the wastewater to the surrounding fields. Wastewater is not exported to any offsite system for processing. It is retained on site and used for irrigation, typically after being diluted with fresh water. The project site is not in an area that is known to be short of water, so there are no concerns that the limited increase in use will result in the need to obtain additional water entitlements.

- B. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

FINDING: NO IMPACT:

The project is not in a water short area and is served by on-site wells. The Water and Natural Resources Division had no concerns with the project.

- C. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; or
- D. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- E. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

FINDING: LESS THAN SIGNIFICANT IMPACT:

Upon completion of construction, the applicants will be required to submit technical reports to the Central Valley Regional Water Quality Control Board. These submissions are required by Provisions in Section E of the Digester Order. The operation will also be required to obtain a permit to operate a Solid Waste Facility from the County of Fresno, Environmental Health Division, acting as the Local Enforcement Agency. The need to comply with the Digester Order and other regulations enforced by the Water Quality Control Board will ensure that there is no adverse impact regarding noncompliance with statutes and regulations related to solid waste.

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- A. Substantially impair an adopted emergency response plan or emergency evacuation plan, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; or
- B. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; or
- C. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- D. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

FINDING: NO IMPACT:

The project is not located in or near a state responsibility area or land classified as very high fire hazard severity zones, and will not impair an adopted emergency response or evacuation plan. The project will adhere to the site development and operational requirements of the Fresno County Fire Protection District.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

- A. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

The pipeline route will run through private agricultural land. The presence of special-status species on these sites prior to ground disturbance cannot be positively determined. Based upon habitat conditions surrounding the site and the assumption that the site contain similar habitat characteristics, it is possible that the Swainson's hawk, western burrowing owl, tricolored blackbird, loggerhead shrike, American badger, San

Joaquin kit fox, long-billed curlew, and yellow-headed blackbird may have been present prior to site disturbances. Therefore, the Mitigation Measures noted in Section IV. will be implemented, requiring preconstruction surveys and avoidance measures if construction occurs during the nesting season.

In addition, it is unlikely but possible that previously undiscovered subsurface paleontological, cultural or tribal resources are present in the proposed area of development. Implementation of the mitigation measure in Section V, which describes avoidance and reporting requirements, will ensure that impacts are less than significant.

* **Mitigation Measures**

1. See Section IV.

2. See Section V.

- B. Have impacts that are individually limited, but cumulatively considerable (“cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

FINDING: LESS THAN SIGNIFICANT IMPACT:

Emissions of criteria pollutants from this project will be consistent with the State Implementation Plan administered by the San Joaquin Valley Air Pollution Control District. The proposed improvements do not represent a substantial increase in the size of the dairy and will not result in adverse cumulative aesthetic or odor impacts. The proposed digester will capture some of the methane that is currently released into the air by the natural decomposition of manure and will convert it into electricity. Said power will be sold to PG&E, providing a source of renewable energy.

- C. Have environmental effects which will cause substantial adverse effects on human beings either directly or indirectly?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The proposed improvements will generally decrease the odor in the area of the project site and will contribute renewable energy to be transferred to PG&E operations.

CONCLUSION/SUMMARY

Based upon the Initial Study prepared for Unclassified Conditional Use Permit Application Nos. 3642-3647, staff has concluded that the project will not have a significant effect on the environment. It has been determined that there would be no impacts to Land Use and Planning, Population and Housing, Public Services and Wildfire.

Potential impacts related to Agriculture, Air Quality, Energy, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Mineral Resources, Noise, Utilities and Service Systems, and Transportation have been determined to be less than significant. Potential impacts relating to Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, and Tribal Cultural Resources have determined to be less than significant with compliance with noted Mitigation Measures.

A Mitigated Negative Declaration/Negative Declaration is recommended and is subject to approval by the decision-making body. The Initial Study is available for review at 2220 Tulare Street, Suite A, street level, located on the southwest corner of Tulare and "M" Street, Fresno, California.

JS

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File original and one copy with: Fresno County Clerk 2221 Kern Street Fresno, California 93721		Space Below For County Clerk Only. CLK-2046.00 E04-73 R00-00	
Agency File No: IS 7608	LOCAL AGENCY PROPOSED MITIGATED NEGATIVE DECLARATION		County Clerk File No: E-
Responsible Agency (Name): Fresno County	Address (Street and P.O. Box): 2220 Tulare St. Sixth Floor	City: Fresno	Zip Code: 93721
Agency Contact Person (Name and Title): Jeremy Shaw, Planner	Area Code: 559	Telephone Number: 600-4207	Extension: N/A
Project Applicant/Sponsor (Name): MAAS Energy Works, Inc.	Project Title: Unclassified Conditional Use Permit Application Nos. 3642-3647		
<p>Project Description:</p> <p>Allow the installation of four new covered lagoon anaerobic dairy digesters with related biogas conditioning equipment and biogas generators to produce electricity on four existing dairies; the installation of biogas conditioning equipment at a fifth dairy with an existing digester and generator; the construction of an approximately 10.5 mile underground pipeline to connect the participating dairies; and allow produced biomethane to be transported to a centralized hub where a biogas upgrading facility will be constructed to clean and condense the biogas before it is injected into the PG&E natural gas transmission line. The project is bounded by the unincorporated communities of Five Points to the southwest, Helm to the north, Burrell to the northeast, and Lanare to the east and southeast; State Route 145 (Madera Avenue) on the west; Mount Whitney Avenue on the south; Jameson Avenue on the east; and Kamm Avenue on the north; within the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) and AE-40 (Exclusive Agricultural, 40-acre minimum parcel size) Zone Districts (SUP. DIST. 1 and 4) (Dairies: APN Nos. 040-130-51S, 050-160-16S, 050-270-56S, 050-170-41S, 050-260-12S, 040-130-35S) (Pipeline APN Nos. 040-130-35S, 49, 44S, 48S, 51S; 041-100-17, 45S; 050-160-13S, 16S; 050-170-41S; 050-200-38S; 050-230-20S, 23S; 050-260-10S, 11S, 12S; 050-270-56S).</p>			
<p>Justification for Negative Declaration:</p> <p>Based upon the Initial Study prepared for Unclassified Conditional Use Permit Application Nos. 3642-3647, staff has concluded that the project will not have a significant effect on the environment. It has been determined that there would be no impacts to Aesthetics, Land Use and Planning, Mineral Resources, Population and Housing, and Recreation.</p> <p>Potential impacts related to Air Quality, Geology and Soils, Greenhouse Gases, Hazard and Hazardous Materials, Hydrology and Water Quality, Noise, Public Services, Transportation/Traffic, and Utilities and Service Systems have been determined to be less than significant.</p> <p>Potential impacts relating to Biological Resources and Cultural Resources have determined to be less than significant with compliance with noted Mitigation Measures</p>			
<p>FINDING:</p> <p>With the Mitigation Measures incorporated, the proposed project will not have a significant impact on the environment.</p>			
Newspaper and Date of Publication: Fresno Business Journal – June 26, 2019		Review Date Deadline: Planning Commission – August 8, 2019	
Date:	Type or Print Signature: Marianne Mollring Senior Planner	Submitted by (Signature): Jeremy Shaw, Planner	

State 15083, 15085

County Clerk File No.: _____

**LOCAL AGENCY
MITIGATED NEGATIVE DECLARATION**