County of Fresno

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

December 18, 2017

State Clearinghouse
Office of Planning and Research
Attn: Sheila Brown
1400 Tenth Street, Room 212
Sacramento, CA 95814

Dear Ms. Brown:

Subject: State Clearinghouse Review of Proposed Mitigated Negative Declaration for Initial Study Application No. 7353 (Warren Hutchings)

Enclosed Please find the following documents:

1. Notice of Completion/Reviewing Agencies Checklist
2. Notice of Intent to Adopt a Mitigated Negative Declaration
3. Fifteen (15) hard copies of Draft Initial Study, Mitigation Monitoring and Reporting Program, Draft Mitigated Negative Declaration (MND), and Project Routing
4. One (1) electronic copy of the Draft Initial Study, Mitigation Monitoring and Reporting Program, Draft Mitigated Negative Declaration (MND), and Project Routing

We request that you distribute the documents to appropriate state agencies for review as provided for in Section 15073 of the CEQA Guidelines, and that the review be completed within the normal 30-day review period. Please transmit any document to my attention at the below listed address or to eahmad@co.fresno.ca.us

Sincerely,

Ejaz Ahmad, planner
Development services division

EA:
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Enclosures

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: IS Application No. 7353 (Warren Hutchings)

Lead Agency: Fresno County, Department of Public Works and Planning | Contact Person: Ejaz Ahmad

Mailing Address: 2220 Tulare Street, 6th Floor | Phone: 559-600-4204

City: Fresno | Zip: 93720 | County: Fresno

Project Location: County: Fresno | City/Nearest Community: Burrel

Cross Streets: Southeast corner of Howard and Elkhorn Avenues; approx. 1.4 miles west of Burrel | Zip Code:

Longitude/Latitude (degrees, minutes and seconds): ____ ° ____ ′ ____ ″ N / ____ ° ____ ′ ____ ″ W Total Acres: 518.45 acres

Assessor's Parcel No.: APN 050-170-41S | Section: 3 & 4 | Twp.: 17S | Range: 18E | Base: MDBM

Within 2 Miles: State Hwy #: | Waterways:

Airports: | Railways: | Schools:

Document Type:

CEQA: ☐ NOP ☐ Early Cons ☐ Neg Dec ☒ Mit Neg Dec ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ☐ Other:

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other:

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan
☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan
☐ Rezone ☐ Prezone ☒ Use Permit ☐ Land Division (Subdivision, etc.)
☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☐ Other:

Development Type:

☐ Residential: Units ____ Acres ____
☐ Office: Sq.ft. ____ Acres ____ Employees ____
☒ Commercial: Sq.ft. ____ Acres 518.45 Employees ____
☐ Industrial: Sq.ft. ____ Acres ____ Employees ____
☐ Educational:
☐ Recreational:
☐ Water Facilities: Type ____ MGD ____
☐ Transportation: Type
☐ Mining: Mineral
☐ Power: Type ____ MW ____
☐ Waste Treatment: Type ____ MGD ____
☐ Hazardous Waste: Type
☐ Other:

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☒ Agricultural Land ☒ Air Quality ☒ Archeological/Historical ☒ Biological Resources ☐ Coastal Zone ☒ Drainage/Absorption ☐ Economic/Jobs
☐ Fiscal ☒ Flood Plain/Flooding ☒ Forest Land/Fire Hazard ☒ Geologic/Seismic ☒ Minerals ☒ Noise ☒ Population/Housing Balance ☒ Public Services/Facilities
☒ Recreation/Parks ☒ Schools/Universities ☒ Septic Systems ☒ Sewer Capacity ☒ Soil Erosion/Compaction/Grading ☒ Solid Waste ☒ Toxic/Hazardous ☒ Traffic/Circulation
☐ Vegetation ☒ Water Quality ☒ Water Supply/Groundwater ☒ Wetland/Riparian ☐ Growth Inducement ☒ Land Use ☒ Cumulative Effects ☐ Other:

Present Land Use/Zoning/General Plan Designation:

Diary/AE-20 (Exclusive Agricultural; 20-acre minimum parcel size)/Agriculture

Project Description: *(please use a separate page if necessary)*

Allow an increase in the number of mature-milk cows from 5,384 to 6,084 (net increase of 700 head) for an existing dairy and allow the use of methane from an existing lagoon digester to fuel a new gas engine to produce renewable electrical power for the dairy operation and to be sold to the power grid on an approximately 215-acre portion of a 518.45-acre parcel in the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District. The subject property is located on the southeast corner of Howard and Elkhorn Avenues approximately 1.4 miles west of the unincorporated community of Burrel (12103 W. Elkhorn Avenue, Burrel, CA) (Sup. Dist. 1) (APN 050-170-41S).

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

x	Air Resources Board		Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency		Parks & Recreation, Department of
	California Highway Patrol		Pesticide Regulation, Department of
	Caltrans District # Fresno		Public Utilities Commission
	Caltrans Division of Aeronautics	x	Regional WQCB # Fresno
	Caltrans Planning		Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
x	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of		State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of	x	SWRCB: Water Quality
	Energy Commission		SWRCB: Water Rights
x	Fish & Game Region #		Tahoe Regional Planning Agency
x	Food & Agriculture, Department of		Toxic Substances Control, Department of
x	Forestry and Fire Protection, Department of	x	Water Resources, Department of
	General Services, Department of		
x	Health Services, Department of	x	Other: U. S. Fish & Wildlife Service
	Housing & Community Development	x	Other: S.J.Valley Air Pollution Control District
	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date December 20, 2017 Ending Date January 19, 2018

Lead Agency (Complete if applicable):

Consulting Firm: County of Fresno
Address: 2220 Tulare Street, 6th Floor
City/State/Zip: Fresno, CA 93721
Contact: Ejaz Ahmad, Planner
Phone: (559) 600-4204

Applicant: Warren Hutchings
Address: 1201 Delta View Road # 5
City/State/Zip: Hanford, CA 93230
Phone: (559) 587-2800

Signature of Lead Agency Representative: _____ **Date:** 12-18-17

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

REVIEWING AGENCIES CHECKLIST

KEY
S = Document sent by lead agency
X = Document sent by SCH
✓ = Suggested distribution

_____ **Resources Agency**
_____ Boating & Waterways
_____ Coastal Commission
_____ Coastal Conservancy
_____ Colorado River Board
__x__ Conservation
__x__ Fish & Game
__x__ Forestry
_____ Office of Historic Preservation
_____ Parks & Recreation
_____ Reclamation
_____ S.F. Bay Conservation & Development Commission
__x__ Water Resources (DWR)

Business, Transportation & Housing

_____ Aeronautics
_____ California Highway Patrol
_____ CALTRANS District #_____
_____ Department of Transportation Planning (headquarters)
_____ Housing & Community Development
__x__ Food & Agriculture

Health & Welfare

__x__ Health Services, Fresno County

State & Consumer Services

_____ General Services
_____ OLA (Schools)

Environmental Protection Agency

__x__ Air Resources Board
_____ APCD/AQMD
_____ California Waste Management Board
_____ SWRCB: Clean Water Grants
_____ SWRCB: Delta Unit
__x__ SWRCB: Water Quality
_____ SWRCB: Water Rights
__x__ Regional WQCB #_____ (Fresno County)

Youth & Adult Corrections

_____ Corrections

Independent Commissions & Offices

_____ Energy Commission
_____ Native American Heritage Commission
_____ Public Utilities Commission
_____ Santa Monica Mountains Conservancy
_____ Pesticide regulation, Dept. of
__x__ U.S. Fish & Wildlife Service

__x__ S.J. Valley Air Pollution Control District

Public Review Period (to be filled in by lead agency)

Starting Date: December 20, 2017 Ending Date: January 19, 2018

Signature _____ Date 12-18-2017

Lead Agency: Fresno County
Address: 2220 Tulare Street, 6th Floor
City/State/Zip: Fresno, CA 93721
Contact: Ejaz Ahmad, Planner
Phone: (559) 600-4204

Applicant: Warren Hutchings
Address: 1201 Delta View Road # 5
City/State/Zip Hanford, CA 93230
Phone: (559) 587-2800

For SCH Use Only:
Date Received at SCH: _____
Date Review Starts: _____
Date to Agencies: _____
Date to SCH: _____
Clearance Date: _____
Notes:

E201710000355

County of Fresno

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

FILED
DEC 18 2017 TIME 11:35AM
FRESNO COUNTY CLERK
By DEPUTY
For County Clerk's Stamp

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

Notice is hereby given that the County of Fresno has prepared Initial Study Application (IS) No. 7011 pursuant to the requirements of the California Environmental Quality Act for the following proposed project:

INITIAL STUDY APPLICATION NO. 7353 and **CLASSIFIED CONDITIONAL USE PERMIT APPLICATION NO. 3590** filed by **WARREN HUTCHINGS,** proposing to allow an increase in the number of mature-milk cows from 5,384 to 6,084 (net increase of 700 head) for an existing dairy and allow the use of methane from an existing lagoon digester to fuel a new gas engine to produce renewable electrical power for the dairy operation and to be sold to the power grid on an approximately 215-acre portion of a 518.45-acre parcel in the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District. The subject property is located on the southeast corner of Howard and Elkhorn Avenues approximately 1.4 miles west of the unincorporated community of Burrel (12103 W. Elkhorn Avenue, Burrel, CA) (Sup. Dist. 1) (APN 050-170-41S). Adopt the Mitigated Negative Declaration prepared for Initial Study Application No. 7353, and take action on Classified Conditional Use Permit Application No. 3590 with Findings and Conditions.

(hereafter, the "Proposed Project")

The County of Fresno has determined that it is appropriate to adopt a Mitigated Negative Declaration for the Proposed Project. The purpose of this Notice is to (1) provide notice of the availability of IS Application No. 7353 and the draft Mitigated Negative Declaration, and request written comments thereon; and (2) provide notice of the public hearing regarding the Proposed Project.

Public Comment Period

The County of Fresno will receive written comments on the Proposed Project and Mitigated Negative Declaration from December 20, 2017 through January 19, 2018.

Email written comments to eahmad@co.fresno.ca.us, or mail comments to:

Fresno County Department of Public Works and Planning
Development Services Division
Attn: Ejaz Ahmad
2220 Tulare Street, Suite A
Fresno, CA 93721

E201710000355

IS Application No. 7353 and the draft Mitigated Negative Declaration may be viewed at the above address Monday through Thursday, 9:00 a.m. to 5:00 p.m., and Friday, 8:30 a.m. to 12:30 p.m. (except holidays). An electronic copy of the draft Mitigated Negative Declaration for the Proposed Project may be obtained from Ejaz Ahmad at the addresses above.

Public Hearing

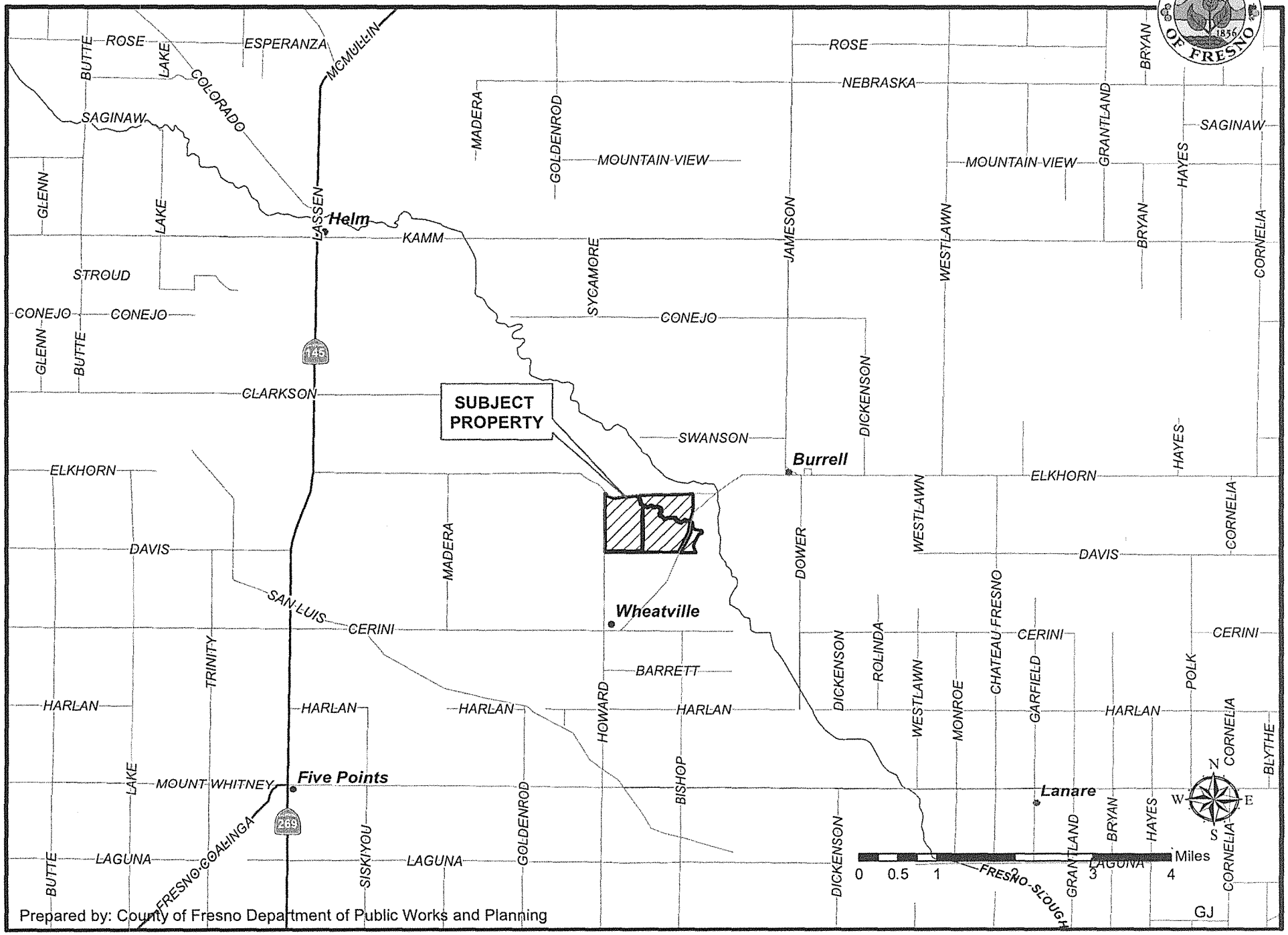
The Planning Commission will hold a public hearing to consider approving the Proposed Project and the Mitigated Negative Declaration on January 25, 2018, at 8:45 a.m., or as soon thereafter as possible in Room 301, Hall of Records, 2281 Tulare Street, Fresno, California 93721. Interested persons are invited to appear at the hearing and comment on the Proposed Project and draft Mitigated Negative Declaration.

For questions please call Ejaz Ahmad at (559) 600-4204.

Published: December 20, 2017

CUP 3590

LOCATION MAP



Prepared by: County of Fresno Department of Public Works and Planning

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INITIAL STUDY
ENVIRONMENTAL CHECKLIST FORM

1. **Project title:**
   Initial Study Application No. 7353, Classified Conditional Use Permit Application No. 3590

2. **Lead agency name and address:**
   Fresno County Department of Public Works and Planning
   Development Services and Capital Projects Division
   2220 Tulare Street, 6th Floor
   Fresno, CA 93721-2104

3. **Contact person and phone number:**
   Ejaz Ahmad, Planner, (559) 600-4204

4. **Project location:**
   The subject property is located on the southeast corner of Howard and Elkhorn Avenues approximately 1.4 miles west of the unincorporated community of Burrel (12103 W. Elkhorn Avenue, Burrel, CA) (Sup. Dist. 1) (APN 050-170-41S).

5. **Project Applicant's name and address:**
   Warren Hutchings
   1201 Delta View Route 5
   Hanford, CA 93230

6. **General Plan designation:**
   Agriculture

7. **Zoning:**
   AE-20 (Exclusive Agricultural, 20-acre minimum parcel size)

8. **Description of project: (Describe the whole action involved, including, but not limited to, later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)**
   Allow an increase in the number of mature-milk cows from 5,384 to 6,084 (net increase of 700 head) for an existing dairy and allow the use of methane from an existing lagoon digester to fuel a new gas engine to produce renewable electrical power for the dairy operation and to be sold to the power grid on an approximately 215-acre portion of a 518 .45-acre parcel in the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District.

9. **Surrounding land uses and setting: Briefly describe the project's surroundings:**
   The subject property is located in an agricultural area and developed with improvements related to a dairy facility. Surrounding land uses include farmland planted in orchard and field crops with sparse single-family residences.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

- ☐ Aesthetics
- ☐ Air Quality
- ☐ Cultural Resources
- ☐ Hazards and Hazardous Materials
- ☐ Land Use/Planning
- ☐ Noise
- ☐ Public Services
- ☐ Transportation/Traffic
- ☐ Mandatory Findings of Significance
- ☐ Agriculture and Forestry Resources
- ☐ Biological Resources
- ☐ Geology/Soils
- ☐ Hydrology/Water Quality
- ☐ Mineral Resources
- ☐ Population/Housing
- ☐ Recreation
- ☐ Utilities/Service Systems
- ☐ Greenhouse Gas Emissions

DETERMINATION OF REQUIRED ENVIRONMENTAL DOCUMENT:

On the basis of this initial evaluation:

☐ I find that the proposed project **COULD NOT** have a significant effect on the environment. **A NEGATIVE DECLARATION WILL BE PREPARED.**

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the Mitigation Measures described on the attached sheet have been added to the project. **A MITIGATED NEGATIVE DECLARATION WILL BE PREPARED.**

☐ I find the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required

☐ I find that as a result of the proposed project, no new effects could occur, or new Mitigation Measures would be required that have not been addressed within the scope of a previous Environmental Impact Report.

PERFORMED BY:

Ejaz Ahmad, Planner

Date: 12-13-2017

REVIEWED BY:

Marianne Mollring, Senior Planner

Date: 12-13-17

EA:
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INITIAL STUDY
ENVIRONMENTAL CHECKLIST FORM
(Initial Study Application No. 7353 and Classified Conditional Use Permit Application No. 3590)

The following checklist is used to determine if the proposed project could potentially have a significant effect on the environment. Explanations and information regarding each question follow the checklist.

1 = No Impact

2 = Less Than Significant Impact

3 = Less Than Significant Impact with Mitigation Incorporated

4 = Potentially Significant Impact

I. AESTHETICS

Would the project:

1 a) Have a substantial adverse effect on a scenic vista?

1 b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

1 c) Substantially degrade the existing visual character or quality of the site and its surroundings?

3 d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

II. AGRICULTURAL AND FORESTRY RESOURCES

Would the project:

1 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?

1 b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?

1 c) Conflict with existing zoning for forest land, timberland or timberland zoned Timberland Production?

1 d) Result in the loss of forest land or conversion of forest land to non-forest use?

1 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?

III. AIR QUALITY

Would the project:

2 a) Conflict with or obstruct implementation of the applicable Air Quality Plan?

2 b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

2 c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under applicable Federal or State ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

2 d) Expose sensitive receptors to substantial pollutant concentrations?

2 e) Create objectionable odors affecting a substantial number of people?

IV. BIOLOGICAL RESOURCES

Would the project:

1 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?

1 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?

1 c) Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

1 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?

1 e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

1 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?

V. CULTURAL RESOURCES

Would the project:

3 a) Cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code Section 15064.5?

3 b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Public Resources Code Section 15064.5?

3 c) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?

3 d) Disturb any human remains, including those interred outside of formal cemeteries?

2 e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074?

VI. GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

1 i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

1 ii) Strong seismic ground shaking?

1 iii) Seismic-related ground failure, including liquefaction?

1 iv) Landslides?

1 b) Result in substantial soil erosion or loss of topsoil?

1 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?

1 d) Be located on expansive soil as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

1 e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

VII. GREENHOUSE GAS EMISSIONS

Would the project:

2 a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

2 b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

1 a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

1 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?

1 c) Create hazardous emissions or utilize hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

1 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?

1 e) Result in a safety hazard for people residing or working in the project area 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?

1 f) Result in a safety hazard for people residing or working in the project area for a project within the vicinity of a private airstrip?

1 g) Impair implementation of or physically interfere with an adopted Emergency Response Plan or Emergency Evacuation Plan?

1 h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

IX. HYDROLOGY AND WATER QUALITY

Would the project:

3 a) Violate any water quality standards or waste discharge requirements?

2 b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (*e.g.*, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

1 c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?

1 d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?

1 e) 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?

1 f) Otherwise substantially degrade water quality?

1 g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

1 h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

1 i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

1 j) Cause inundation by seiche, tsunami, or mudflow?

X. LAND USE AND PLANNING

Would the project:

1 a) Physically divide an established community?

2 b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the General Plan, Specific Plan, local coastal program, or Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

1 c) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?

XI. MINERAL RESOURCES

Would the project:

1 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?

1 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?

XII. NOISE

Would the project:

1 a) Expose persons to or generate noise levels in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies?

1 b) Expose persons to or generate excessive ground-borne vibration or ground-borne noise levels?

1 c) Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

1 d) Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

1 e) Expose people residing or working in the project area to excessive noise levels, 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?

1 f) Expose people residing or working in the project area to excessive noise levels, for a project within the vicinity of a private airstrip?

XIII. POPULATION AND HOUSING

Would the project:

1 a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

1 b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

1 c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

XIV. PUBLIC SERVICES

Would the project:

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 public services:

2 a) Fire protection?

1 b) Police protection?

1 c) Schools?

1 d) Parks?

1 e) Other public facilities?

XV. RECREATION

Would the project:

1 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?

1 b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

XVI. TRANSPORTATION / TRAFFIC

Would the project:

1 a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

1 b) Conflict with an applicable Congestion Management Program including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways?

1 c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, which results in substantial safety risks?

1 d) Substantially increase hazards due to a design feature (*e.g.*, sharp curves or dangerous intersections) or incompatible uses (*e.g.*, farm equipment)?

1 e) Result in inadequate emergency access?

1 f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

XVII. UTILITIES AND SERVICE SYSTEMS

Would the project:

1 a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

2 b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

1 c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

2 d) Have sufficient water supplies available to service the project from existing entitlements and resources, or are new or expanded entitlements needed?

1 e) 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?

1 f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

1 g) Comply with federal, state, and local statutes and regulations related to solid waste?

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

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

2 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.)

1 c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Documents Referenced:

This Initial Study is referenced by the documents listed below. These documents are available for public review at the County of Fresno, Department of Public Works and Planning, Development Services and Capital Projects Division, 2220 Tulare Street, Suite A, Fresno, California (corner of M & Tulare Streets).

Fresno County General Plan, Policy Document and Final EIR
Fresno County Zoning Ordinance
Important Farmland 2010 Map, State Department of Conservation

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EVALUATION OF ENVIRONMENTAL IMPACTS

APPLICANT: Warren Hutchings

APPLICATION NOS.: Initial Study Application No. 7353 and Classified Conditional Use Permit Application No. 3590

DESCRIPTION: Allow an increase in the number of mature-milk cows from 5,384 to 6,084 (net increase of 700 head) for an existing dairy and allow the use of methane from an existing lagoon digester to fuel a new gas engine to produce renewable electrical power for the dairy operation and to be sold to the power grid on an approximately 215-acre portion of a 518.45-acre parcel in the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District.

LOCATION: The subject property is located on the southeast corner of Howard and Elkhorn Avenues approximately 1.4 miles west of the unincorporated community of Burrel (12103 W. Elkhorn Avenue, Burrel, CA) (Sup. Dist. 1) (APN 050-170-41S).

I. AESTHETICS

A. Would the project have a substantial adverse effect on a scenic vista; or

B. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

FINDING: NO IMPACT:

The subject property is located in an agricultural area and developed with improvements related to an existing dairy. Surrounding land uses include farmland planted in orchard and field crops with sparse single-family residences. The property is not located along a designated scenic highway and no scenic vistas or scenic resources were identified on or near the property to be impacted by the subject proposal.

C. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

FINDING: NO IMPACT:

The project will add 700 milk cows to an existing dairy and install a gas engine to produce renewable electrical power for the dairy operation and to be sold to the power grid. The engine and related apparatus will be confined within an existing structure with all connections to the lagoon and PG&E transmission line underground. The project will not bring any changes to the existing visual character or quality of the site and its surroundings.

D. Would the project 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:

Any proposed outdoor lighting related to the subject proposal has the potential of generating glare in the area. To mitigate such impact, a mitigation measure has been included requiring all lighting to be hooded and directed away from adjacent properties and public streets.

* ***Mitigation Measure***

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

II. AGRICULTURAL AND FORESTRY RESOURCES

A. Would the project convert prime or unique farmlands or farmland of state-wide importance to non-agricultural use; or

B. Would the project conflict with existing agricultural zoning or Williamson Act Contracts; or

C. Would the project conflict with existing zoning for or cause rezoning of forest land, timberland, or timberland zoned Timberland Production; or

D. Would the project result in the loss of forest land or conversion of forest land to non-forest use; or

E. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural uses or conversion of forest land to non-forest use?

FINDING: NO IMPACT:

The project site is not an active farmland, forestland, or timberland. The project is not in conflict with Agriculture zoning on the property and is allowed as a 'Special Agricultural Use' on land designated for agriculture with discretionary approval and adherence to the applicable General Plan Policies. Classified as Confined Animal Agriculture on the 2014 Fresno County Important Farmland Map and currently enrolled in a Williamson Act Land Conservation Contract, the project site has been developed with

buildings/structures and other improvements related to an existing dairy. According to the Policy Planning Unit of the Fresno County Department of Public Works and Planning, the project is compatible with the County's Williamson Act Program Interim Guidelines.

The Fresno County Agricultural Commissioner's Office reviewed the proposal and expressed no concerns with the project.

III. AIR QUALITY

A. Would the project conflict with or obstruct implementation of the applicable Air Quality Plan; or

B. Would the project violate any air quality standard or contribute to an existing or projected air quality violation; or

C. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under a Federal or State ambient air quality standard; or

D. Would the project expose sensitive receptors to substantial pollutant concentrations?

FINDING: LESS THAN SIGNIFICANT IMPACT:

According to the San Joaquin Valley Air Pollution Control District, the project will be subject to following rules: District Regulation VIII (Fugitive PM10 Prohibitions), Rule 4601 (Architectural Coatings), Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt Paving and Maintenance Operations) and Rule 4002 (National Emission Standards for Hazardous Air Pollutants) in the event an existing building will be renovated, partially demolished or removed. The project may also be subject to the following rules specific to confined animal operations: Rule 4102 (Nuisance) applies to any source operation that emits or may emit air contaminants or other materials; Rule 4550 (Conservation Management Practices) limits fugitive dust emissions from agricultural operation sites; and Rule 4570 (Confined Animal Facilities) applies to dairies with greater than or equal to 500 milk cows and requires filing of an application with the Air District. Additionally, prior to start of the project operation, the Applicant shall contact the District's Small Business Assistance Office to determine if the project will require an Authority to Construct (ATC) application. These requirements will be included as Project Notes.

E. Would the project create objectionable odors affecting a substantial number of people?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project will be subject to Rule 4102 (Nuisance) as discussed above.

IV. BIOLOGICAL RESOURCES

A. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any candidate, sensitive, or special-status species; or

B. Would the project 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 (CDFW) or U.S. Fish and Wildlife Service (USFWS); or

C. Would the project have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption or other means?

FINDING: NO IMPACT:

The project site is located in an agricultural area and has been disturbed by improvements related to an existing dairy. The site and the neighboring parcels have also been pre-disturbed with farming operations and as such do not provide habitat for state or federally-listed species. Additionally, the site does not contain any riparian features, wetlands, or waters under the jurisdiction of the United States.

The project was routed to the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) for review and comments. No concerns were expressed by either agency.

D. Would the project 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:

Being a developed site, no wildlife or fish movement features (*e.g.*, waterways, arroyos, ridgelines) or any wildlife nursery sites are present on the property. The project will not impact these resources.

E. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

FINDING: NO IMPACT:

The project site contains no biological resources and no trees. The project is not subject to the county tree preservation policy or ordinance.

F. Would the project 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 site is not within the boundaries of a Habitat Conservation Plan or Natural Community Conservation Plan. The project will not conflict with the provisions of such a Plan.

V. CULTURAL RESOURCES

A. Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5; or

B. Would the project cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5; or

C. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or

D. Would the project disturb any human remains, including those interred outside of formal cemeteries?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

The project site is within an area moderately sensitive to historical, archeological or paleontological resources. As such, a mitigation measure would require that in case archeological resources are uncovered, all work must be stopped until a qualified archeologist evaluates the findings, and if human remains are discovered, the Fresno County Sheriff-Coroner shall be notified. Further, if the remains are of Native Americans, the Sheriff-Coroner shall also notify to the Native American Commission (NAHC) within 24 hours of discovery in accordance with California Health and Safety Code 7050.5 and Public Resource Code 5097.98.

* ***Mitigation Measure***

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 should 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.*

E. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074?

FINDING: LESS THAN SIGNIFICANT IMPACT:

With the implementation of the aforementioned mitigation measure, the project will have a less than significant impact on tribal cultural resources as defined in Public Resources Code Section 21074. The project was routed to the Picayune Rancheria of the Chukchansi Indians, Santa Rosa Rancheria Tachi Yokut Tribe, and Dumna Wo Wah Tribal Government in compliance with Assembly Bill (AB) 52.

VI. GEOLOGY AND SOILS

A. Would the project expose people or structures to potential substantial adverse effects, including risk of loss, injury or death involving:

1. Rupture of a known earthquake?

   FINDING: NO IMPACT:

   The project site does not contain any active earthquake faults, nor is it located within a designated Alquist-Priolo Earthquake Fault Zone.

2. Strong seismic ground shaking; or

3. Seismic-related ground failure, including liquefaction?

   FINDING: LESS THAN SIGNIFICANT IMPACT:

   The project site is in an area of low probability for exposure to strong ground shaking. The potential for seismic-related ground failure (liquefaction, lateral spreading, and lurching) occurring on the project site is minimal due to the absence of high groundwater levels and saturated loose granular soil on the property. In addition, the intensity of ground shaking from a large, distant earthquake is expected to be relatively low on the project site and, therefore, would not be severe enough to induce liquefaction on site.

   No agency expressed concerns or complaints related to ground shaking, ground failure, liquefaction or landslides.

4. Landslides?

   FINDING: NO IMPACT:

   The project site contains naturally flat relief which precludes the possibility of landslides on site.

B. Would the project result in substantial erosion or loss of topsoil?

FINDING: NO IMPACT:

The project will not result in erosion of loss of top soils. No concerns were expressed by the Development Engineering Section of the Development Services and Capital Projects Division.

C. Would the project result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; or

D. Would the project be located on expansive soils, creating substantial risks to life or property?

FINDING: NO IMPACT:

The project is not located within an area of known risk of landslides, lateral spreading, subsidence, liquefaction, or collapse, or within an area of known expansive soils.

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

FINDING: NO IMPACT:

No wastewater disposal impacts were identified in the analysis. The project will not install an individual sewage disposal system on the property.

VII. GREENHOUSE GAS EMISSIONS

A. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

B. Would the project conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

FINDING: LESS THAN SIGNIFICANT IMPACT:

Comments received from the Air District expressed no specific project-related concerns, supporting the determination that the project will not generate greenhouse gas emissions that may have a significant impact on the environment. The project will adhere to the Air District requirements as noted in Section III. A.B.C.D. Air Quality.

VIII. HAZARDS AND HAZARDOUS MATERIALS

A. Would the project create a significant public hazard through routine transport, use or disposal of hazardous materials; or

B. Would the project create a significant public hazard involving accidental release of hazardous materials into the environment; or

C. Would the project create hazardous emissions or utilize hazardous materials, substances or waste within one quarter-mile of a school?

FINDING: NO IMPACT:

The project does not involve transport, use or disposal of hazardous materials and will release no hazardous materials into the environment.

The project is not located within one quarter-mile of a school. The nearest school, Burrel Elementary School, is approximately 1.27 miles east of the project site.

D. Would the project be located on a hazardous materials site?

FINDING: NO IMPACT:

The project is not located on a hazardous materials site. No concerns were expressed by the Fresno County Department of Public Health, Environmental Health Division.

E. Would a project located within an airport land use plan or, absent such a plan, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area; or

F. Would a project located within the vicinity of a private airstrip result in a safety hazard for people residing or working in the project area?

FINDING: NO IMPACT:

The project site is not located within an airport land use plan area, within two miles of a public use airport, or in the vicinity of a private airstrip. The nearest airport, Swanson Ranch Number 2 Airport, is approximately 7.1 miles east of the site.

G. Would the project impair implementation of or physically interfere with an adopted Emergency Response Plan or Emergency Evacuation Plan?

FINDING: NO IMPACT:

The project site is located in an area where existing emergency response times for fire protection, emergency medical services, and sheriff protection meet adopted standards. The project does not include any characteristics (*e.g.*, permanent road closures) that would physically impair or otherwise interfere with emergency response or evacuation in the project vicinity.

H. Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

FINDING: NO IMPACT:

The project site is not within or adjacent to a wildland fire area. The project will not expose persons or structures to wildland fire hazards.

IX. HYDROLOGY AND WATER QUALITY

A. Would the project violate any water quality standards or waste discharge requirements or otherwise degrade water quality; or

FINDING: LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED:

See discussion in Section VI.E. Geology and Soils regarding wastewater disposal.

The Central Valley Regional Water Quality Control Board (RWQCB) reviewed the project for impact on groundwater quality. According to the RWCQB, an additional 700 milk cows over the maximum 5,384 currently allowed by the current Waste Discharge Order (R5-2007-0035) constitute an expansion of the existing dairy facility. As such, a Report of Waste Discharge (RWD) would be required prior to starting discharge associated with the expansion. This requirement will be included as a Mitigation Measure.

* ***Mitigation Measure***

1. *Pursuant to provision G.4 of the reissued General Order (R5-2013-0122), prior to starting discharge associated with the dairy expansion, the project proponent shall submit a Report of Waste Discharge (RWD) with the Central Valley Regional Water Quality Control Board.*

The State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW) also reviewed the subject proposal for water quality standards and stated that the existing dairy facility will be regulated as a nontransient noncommunity public water system and a domestic water supply permit would be required from the SWRCB-DDW. This mandatory requirement will be included as a Project Note.

B. Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge so that there would be a net deficit in aquifer volume or a lowering of the local groundwater table?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The current water use at the dairy facility is estimated to be 188,440 gallons per day based on 5,384 existing milk cows. The estimated increase in water volume due to addition of 700 milk cows is estimated to be 212,000 gallons per day (a net increase of 23,560 gallons of water use per day). An existing on-site private well provides water for the dairy operation.

The project site is not within a designated low-water area of Fresno County. The Fresno County Water and Natural Resources Division of the Development Services and Capital Projects Division reviewed the proposal and expressed no concerns related to water

sustainability for the use. The project will have a less than significant impact on groundwater resources.

C. Would the project substantially alter existing drainage patterns, including alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site; or

D. Would the project substantially alter existing drainage patterns, including alteration of the course of a stream or river, in a manner which would result in flooding on or off site?

FINDING: NO IMPACT:

The project will not impact any existing on-site drainage patterns or change the course Elkhorn Grade which runs along the westerly boundary of the property.

E. Would the project create or contribute run-off which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted run-off?

FINDING: NO IMPACT:

The project will not generate additional runoff than is currently generated by the existing improvements on the property. No impacts would occur.

F. Would the project otherwise substantially degrade water quality?

FINDING: NO IMPACT:

See discussion in IX. A. B. above.

G. Would the project place housing within a 100-year floodplain;

FINDING: NO IMPACT:

No housing is proposed with this application.

H. Would the project place structures within a 100-year flood hazard area that would impede or redirect flood flows; or

FINDING: NO IMPACT:

The project is not in a flood hazard area.

I. Would the project expose persons or structures to levee or dam failure; or

J. Would the project cause inundation by seiche, tsunami or mudflow?

FINDING: NO IMPACT:

The subject site is not prone to a seiche, tsunami or mudflow, nor is the project likely to expose persons or structures to potential levee or dam failure.

X. LAND USE AND PLANNING

A. Will the project physically divide an established community?

FINDING: NO IMPACT:

The project will not physically divide an established community. The unincorporated community of Burrel is approximately 1.4 miles east of the project site.

B. Will the project conflict with any Land Use Plan, policy or regulation of an agency with jurisdiction over the project?

FINDING LESS THAN SIGNIFICANT IMPACT:

The subject property is designated Agriculture in the Fresno County General Plan and is located outside of any city's Sphere of Influence (SOI). As such, the subject proposal will not be in conflict with any land use plan, policy, or regulation of an agency with jurisdiction (other than County) over the project.

The County General Plan allows the proposed facility in an agriculturally-zoned area as a 'Special Agricultural Use' by discretionary land use approval provided it meets applicable General Plan policies. The project meets the following General Plan policies:

Regarding Policy LU-A.3, Criteria a. b. c. d., the proposed project is an expansion of an existing dairy previously authorized as a by-right use; is not located on a prime farmland; will not utilize excessive water to impact the groundwater table; and, can be provided with adequate workforce from the nearest community of Burrel and others. Regarding Policy LU-A.12, Policy LU-A.13 and Policy LU-A.14, the project is a compatible use pursuant to Policy LU-A.3 and maintains adequate distance from the adjacent farming operations. Regarding Policy PF-C.17 and Policy PF-D.6, the limited water used by the project will not affect groundwater resources and the project will not install on-site sewage disposal systems for a potential impact on groundwater quality.

C. Will the project conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?

FINDING: NO IMPACT:

The project will not conflict with any Habitat Conservation or Natural Community Conservation Plans.

XI. MINERAL RESOURCES

A. Would the project result in the loss of availability of a known mineral resource; or

B. Would the project result in the loss of availability of a locally-important mineral resource recovery site designated on a General Plan?

FINDING: NO IMPACT:

No mineral resource impacts were identified in the analysis. The site is not located in a mineral resource area as identified in Policy OS-C.2 of the General Plan.

XII. NOISE

A. Would the project result in exposure of people to severe noise levels; or

B. Would the project result in exposure of people to or generate excessive ground-borne vibration or ground-borne noise levels; or

C. Would the project cause a substantial permanent increase in ambient noise levels in the project vicinity; or

D. Would the project result in a substantial temporary or periodic increase in ambient noise levels?

FINDING: NO IMPACT:

The project operation will not expose people to severe noise levels or create substantial increases in ambient noise levels. No concerns were expressed by the Fresno County Department of Public Health, Environmental Health Division related to noise.

E. Would the project expose people to excessive noise levels associated with a location near an airport or a private airstrip; or

F. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

FINDING: NO IMPACT:

See discussion in Section VIII. E.F., Hazards and Hazardous Materials.

XIII. POPULATION AND HOUSING

A. Would the project induce substantial population growth either directly or indirectly; or

B. Would the project displace substantial numbers of existing housing; or

C. Would the project displace substantial numbers of people, necessitating the construction of housing elsewhere?

FINDING: NO IMPACT:

The project will not result in an increase of housing, nor will it otherwise induce population growth.

XIV. PUBLIC SERVICES

A. Would the project result in substantial adverse physical impacts associated with the provision of new or physically-altered public facilities in the following areas:

1. Fire protection?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The Fresno County Fire Protection District (CalFire) reviewed the proposal and identified no concerns with the project. However, any future development on the property will be subject to the requirements of the current Fire Code and Building Code and annexation to the Community Facilities District No. 2010-01 of the Fresno County Fire Protection District. These requirements will be included as Project Notes.

2. Police protection; or

3. Schools; or

4. Parks; or

5. Other public facilities?

FINDING: NO IMPACT:

The project will not impact police services, schools, parks or any other public facilities.

XV. RECREATION

A. Would the project increase the use of existing neighborhood and regional parks; or

B. Would the project require the construction of or expansion of recreational facilities?

FINDING: NO IMPACT:

No impacts on recreational facilities were identified in the project analysis.

XVI. TRANSPORTATION/TRAFFIC

A. Would the project conflict with any applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation; or

B. Would the project conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demands measures?

FINDING: NO IMPACT:

The Design Division of the Fresno County Department of Public Works and Planning reviewed the proposal and expressed no concerns related to traffic or required a Traffic Impact Study for the project.

C. Would the project result in a change in air traffic patterns?

FINDING: NO IMPACT:

The project will not result in a change in air traffic patterns. No new building or structures of such height to potentially affect air traffic are proposed.

D. Would the project substantially increase traffic hazards due to design features?

The project will not increase traffic hazards due to design features. There is no change to the current access to the site or on-site improvements.

No concerns were expressed by the Road Maintenance and Operations Division and Development Engineering Section of the Fresno County Department of Public Works and Planning.

E. Would the project result in inadequate emergency access?

FINDING: NO IMPACT:

The project would not result in on-site or off-site activities that would impair emergency vehicle movement or personnel. The three current gravel access areas to the site off Elkhorn Avenue are of adequate width to accommodate emergency services response to the site.

F. Would the project conflict with adopted plans, policies or programs regarding public transit, bicycle or pedestrian facilities or otherwise decrease the performance or safety of such facilities?

FINDING: NO IMPACT:

The project will not conflict with any adopted transportation plans. As such, no impacts associated with public transit or pedestrian and bicycle hazards are expected from this proposal.

XVII. UTILITIES AND SERVICE SYSTEMS

A. Would the project exceed wastewater treatment requirements?

FINDING: NO IMPACT:

See discussion in Section VI. E. Geology and Soils.

B. Would the project require construction of or the expansion of new water or wastewater treatment facilities?

FINDING: LESS THAN SIGNIFICANT IMPACT:

See discussion in Section IX. B. Hydrology and Water Quality.

C. Would the project require or result in the construction or expansion of new storm water drainage facilities?

FINDING: NO IMPACT:

See discussion in Section IX.E Hydrology and Water Quality.

D. Would the project have sufficient water supplies available from existing entitlements and resources, or are new or expanded entitlements needed?

FINDING: LESS THAN SIGNIFICANT IMPACT:

See discussion in Section IX. B. Hydrology and Water Quality.

E. Would the project result in a determination of inadequate wastewater treatment capacity to serve project demand?

FINDING: NO IMPACT:

See discussion in Section VI.E Geology and Soils.

F. Would the project be served by a landfill with sufficient permitted capacity; or

G. Would the project comply with federal, state and local statutes and regulations related to solid waste?

FINDING: NO IMPACT:

No mineral resource impacts were identified in the analysis.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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

   FINDING: LESS THAN SIGNIFICANT IMPACT:

   No impacts on biological resources were identified in the project analysis, and impacts to cultural resources as identified in Section V. A. B. C. D. will be mitigated to a less than significant level.

B. Does the project have impacts that are individually limited, but cumulatively considerable?

   FINDING: LESS THAN SIGNIFICANT IMPACT:

   The project will adhere to the permitting requirements and rules and regulations set forth by the Fresno County Grading and Drainage Ordinance, San Joaquin Valley Air Pollution Control District, and California Code of Regulations Fire Code. No cumulatively considerable impacts were identified in the analysis other than aesthetics and cultural resources, which will be addressed with the Mitigation Measure discussed in Section I.D., Section V. A. B. C. D., and Section IX. A.

C. Does the project have environmental impacts, which will cause substantial adverse effects on human beings, either directly or indirectly?

   FINDING: NO IMPACT:

   No substantial impacts on human beings, either directly or indirectly, were identified in the analysis.

CONCLUSION/SUMMARY

Based upon the Initial Study (No. 7353) prepared for Conditional Use Permit Application No. 3590, 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 agricultural and forestry resources, biological resources, hazards and hazardous materials, mineral resources, noise, population and housing, recreation or transportation/traffic.

Potential impacts related to air quality, geology and soils, greenhouse gas emissions, land use and planning, public services, and utilities and service systems have been determined to be less than significant.

Potential impacts to aesthetics, cultural resources and hydrology and water quality have been determined to be less than significant with the identified Mitigation Measures.

A Mitigated 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" Streets, Fresno, California.

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Mitigation Monitoring and Reporting Program
Initial Study Application No. 7353
Classified Conditional Use Permit Application No. 3590

Mitigation Measures					
Mitigation Measure No.*	**Impact**	**Mitigation Measure Language**	**Implementation Responsibility**	**Monitoring Responsibility**	**Time Span**
*1.	Aesthetics	All outdoor lighting shall be hooded and directed downward so as to not shine toward adjacent properties and public streets.	Applicant	Applicant/Fresno County Department of Public Works and Planning (PWP)	On-going; for duration of the project
*2.	Biological 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 should 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/PWP	As noted
	Hydrology and Water Quality	Pursuant to provision G.4 of the reissued General Order (R5-2013-0122), prior to starting discharge associated with the dairy expansion, the project proponent shall submit a Report of Waste Discharge (RWD) with the Central Valley Regional Water Quality Control Board.	Applicant	Applicant/ Central Valley Regional Water Quality Control Board.	As noted

*MITIGATION MEASURE – Measure specifically applied to the project to mitigate potential adverse environmental effects identified in the environmental document.

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File original and one copy with:	Space Below For County Clerk Only.
Fresno County Clerk **2221 Kern Street** **Fresno, California 93721**	CLK-2046.00 E04-73 R00-00

Agency File No:	**LOCAL AGENCY PROPOSED MITIGATED NEGATIVE DECLARATION**	County Clerk File No:
IS 7353		E-

Responsible Agency (Name):	Address (Street and P.O. Box):	City:	Zip Code:
Fresno County	2220 Tulare St. Sixth Floor	Fresno	93721

Agency Contact Person (Name and Title):	Area Code:	Telephone Number:	Extension:
Ejaz Ahmad, Planner	559	600-4204	N/A

Applicant (Name):	Project Title:
Warren Hutchings	Classified Conditional Use Permit Application No. 3590

Project Description:

Allow an increase in the number of mature-milk cows from 5,384 to 6,084 (net increase of 700 head) for an existing dairy and allow the use of methane from an existing lagoon digester to fuel a new gas engine to produce renewable electrical power for the dairy operation and to be sold to the power grid on an approximately 215-acre portion of a 518.45-acre parcel in the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District. The subject property is located on the southeast corner of Howard and Elkhorn Avenues approximately 1.4 miles west of the unincorporated community of Burrel (12103 W. Elkhorn Avenue, Burrel, CA) (Sup. Dist. 1) (APN 050-170-41S).

Justification for Mitigated Negative Declaration:

Based upon the Initial Study (IS 7353) prepared for Classified Conditional Use Permit Application No. 3590, staff has concluded that the project will not have a significant effect on the environment.

No impacts were identified related to agricultural and forestry resources, biological resources, hazards and hazardous materials, mineral resources, noise, population and housing, recreation or transportation/traffic.

Potential impacts related to air quality, geology and soils, greenhouse gas emissions, land use and planning, public services, and utilities and service systems have been determined to be less than significant.

Potential impact related to aesthetics, cultural resources and hydrology and water quality has been determined to be less than significant with the identified mitigation measure.

The Initial Study and MND is available for review at 2220 Tulare Street, Suite A, Street Level, located on the southeast corner of Tulare and "M" Street, Fresno, California.

FINDING:

The proposed project will not have a significant impact on the environment.

Newspaper and Date of Publication:	Review Date Deadline:
Fresno Business Journal – December 20 , 2017	January 19, 2018

Date:	Type or Print Name:	Submitted by (Signature):
December 18, 2017	Marianne Mollring, Senior Planner	

State 15083, 15085

County Clerk File No.:_____

LOCAL AGENCY
MITIGATED NEGATIVE DECLARATION

County of Fresno

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

(Revised Routing. Additional Use proposed by this application noted in Bold)

DATE: December 5, 2017

TO: Water and Natural Resources, Attn: Glenn Allen, Division Manager
Development Services, Policy Planning, ALCC, Attn: Mohammad Khorsand
Development Services, Zoning & Permit Review, Attn: Tawanda Mtunga
Development Services, Building & Safety/Plan Check, Attn: Chuck Jonas
Development Engineering, Attn: Jennifer Parks, Grading/Mapping
Road Maintenance and Operations, Attn: Randy Ishii/Frank Daniele/Nadia Lopez
Department of Public Health, Environmental Health Division, Attn: Janet Gardner
Agricultural Commissioner, Attn: Les Wright (M/S 1)
CA Regional Water Quality Control Board, Attn:
Centralvalleyfresno@waterboards.ca.gov
San Joaquin Valley Unified Air Pollution Control District (PIC-CEQA Division)
Fresno County Fire Protection District, Attn: Chris Christoperson

FROM: Ejaz Ahmad, Planner
Development Services Division

SUBJECT: Initial Study Application No. 7353; Conditional Use Permit (CUP) Application No. 3590

APPLICANT: Warren Hutchings

DUE DATE: December 15, 2017

The Department of Public Works and Planning, Development Services Division is reviewing the subject applications proposing to allow increase in number of mature-milk cows from 5,384 to 6,084 (700 total head increase) for an existing diary located on an approximately 215-acre portion of a 518 .45-acre parcel in the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District. **Also, allow the use of methane from an existing lagoon digester to fuel a new 800 kW, 480 VAC, 60HZ gas engine to produce renewable electrical power for the dairy operation and to be sold to the power grid.**

The Department is also reviewing for environmental effects, as mandated by the California Environmental Quality Act (CEQA) and for conformity with plans and policies of the County.

Based upon this review, a determination will be made regarding conditions to be imposed on the project, including necessary on-site and off-site improvements.

We must have your comments by **December 15, 2017**. Any comments received after this date may not be used.

Please address any correspondence or questions related to environmental and/or policy/design issues to me, Ejaz Ahmad, Planner, Development Services Division, Fresno County Department of Public Works and Planning, 2220 Tulare Street, Sixth Floor, Fresno, CA 93721, or call (559) 600-4204 or email eahmad@co.fresno.ca.us.

EA:
G:\4360Devs&Pln\PROJSEC\PROJDOCS\CUP\3500-3599\3590\ROUTING\CUP3590 Routing Ltr.doc

Enclosures

Date Received: 12-1-17

CUP 3590 (Application No.)

Fresno County Department of Public Works and Planning

MAILING ADDRESS:
Department of Public Works and Planning
Development Services Division
2220 Tulare St., 6th Floor
Fresno, Ca. 93721

LOCATION:
Southwest corner of Tulare & "M" Streets, Suite A
Street Level
Fresno Phone: (559) 600-4497
Toll Free: 1-800-742-1011 Ext. 0-4497

APPLICATION FOR:

- ☐ Pre-Application (Type) _____
- ☐ Amendment Application
- ☐ Amendment to Text
- ■ Conditional Use Permit
- ☐ Variance (Class)/Minor Variance
- ☐ Site Plan Review/Occupancy Permit
- ☐ No Shoot/Dog Leash Law Boundary
- ☐ General Plan Amendment/Specific Plan/SP Amendment)
- ☐ Time Extension for _____
- ☐ Director Review and Approval
- ☐ for 2nd Residence
- ☐ Determination of Merger
- ☐ Agreements
- ☐ ALCC/RLCC
- ☐ Other _____

DESCRIPTION OF PROPOSED USE OR REQUEST:

Add an additional 700 milk cows. Add a Gusacon/Dresser Rand 480 paired with a 800 kw, 480 VAC, THREE PHASE, 60HZ gas engine.

CEQA DOCUMENTATION: ☐ *Initial Study* ☐ *PER* ☐ *N/A*

PLEASE USE FILL-IN FORM OR PRINT IN BLACK INK. Answer all questions completely. Attach required site plans, forms, statements, and deeds as specified on the Pre-Application Review. **Attach Copy of Deed, including Legal Description.**

LOCATION OF PROPERTY: South side of Elkhorn Ave between Elkhorn Grade and Howard Ave

Street address: 12103 W. Elkhorn Avenue, Burrell, CA 93607

APN: 050-170-41s Parcel size: 140 Section(s)-Twp/Rg: S 4 - T 17 S/R 18 E

ADDITIONAL APN(s): _____

I, Warren Hutchings (*signature*), declare that I am the owner, or authorized representative of the owner, of the above described property and that the application and attached documents are in all respects true and correct to the best of my knowledge. The foregoing declaration is made under penalty of perjury.

Eric & Katelyn te Velde	12103 W. Elkhorn Ave	Burrell	CA	93607
Owner (Print or Type)	Address	City	Zip	Phone
Warren Hutchings	1201 Delta View Rd, Ste 5	Hanford	CA	559-587-2800
Applicant (Print or Type)	Address	City	Zip	Phone
Innovative Ag Services, LLC	1201 Delta View Rd, Ste. 5	Hanford	93230	559-587-2800
Representative (Print or Type)	Address	City	Zip	Phone

CONTACT EMAIL:

OFFICE USE ONLY (*PRINT FORM ON GREEN PAPER*)

Application Type / No.: CUP3590 (Revision) 25% fee — Fee: $ 1,142.25
Application Type / No.: — Fee: $
Application Type / No.: — Fee: $
Application Type / No.: — Fee: $
PER/Initial Study No.: — Fee: $
Ag Department Review: — Fee: $
Health Department Review: — Fee: $
Received By: EJA2 Invoice No.: — TOTAL: $ 1,142.25

UTILITIES AVAILABLE:

WATER: Yes ☐ / No ■
Agency: _____

SEWER: Yes ☐ / No ■
Agency: _____

STAFF DETERMINATION: This permit is sought under Ordinance Section: _____

Related Application(s): CUP 3590

Zone District: AE-20

Parcel Size: 518.45 ACRES

Sect-Twp/Rg: ____ - T____ S /R____ E

APN # ___ - ___ - ____

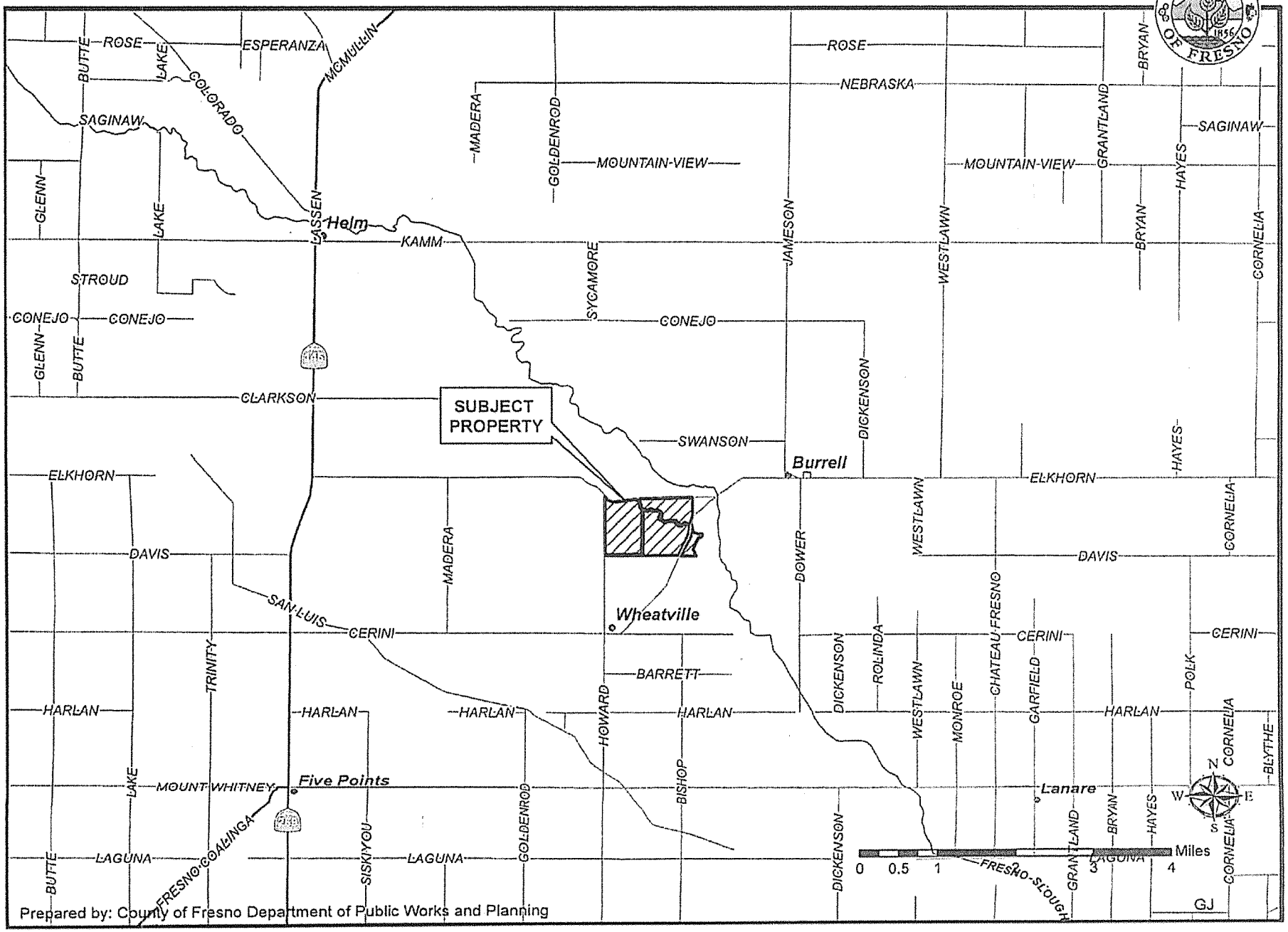
APN # ___ - ___ - ____

APN # ___ - ___ - ____

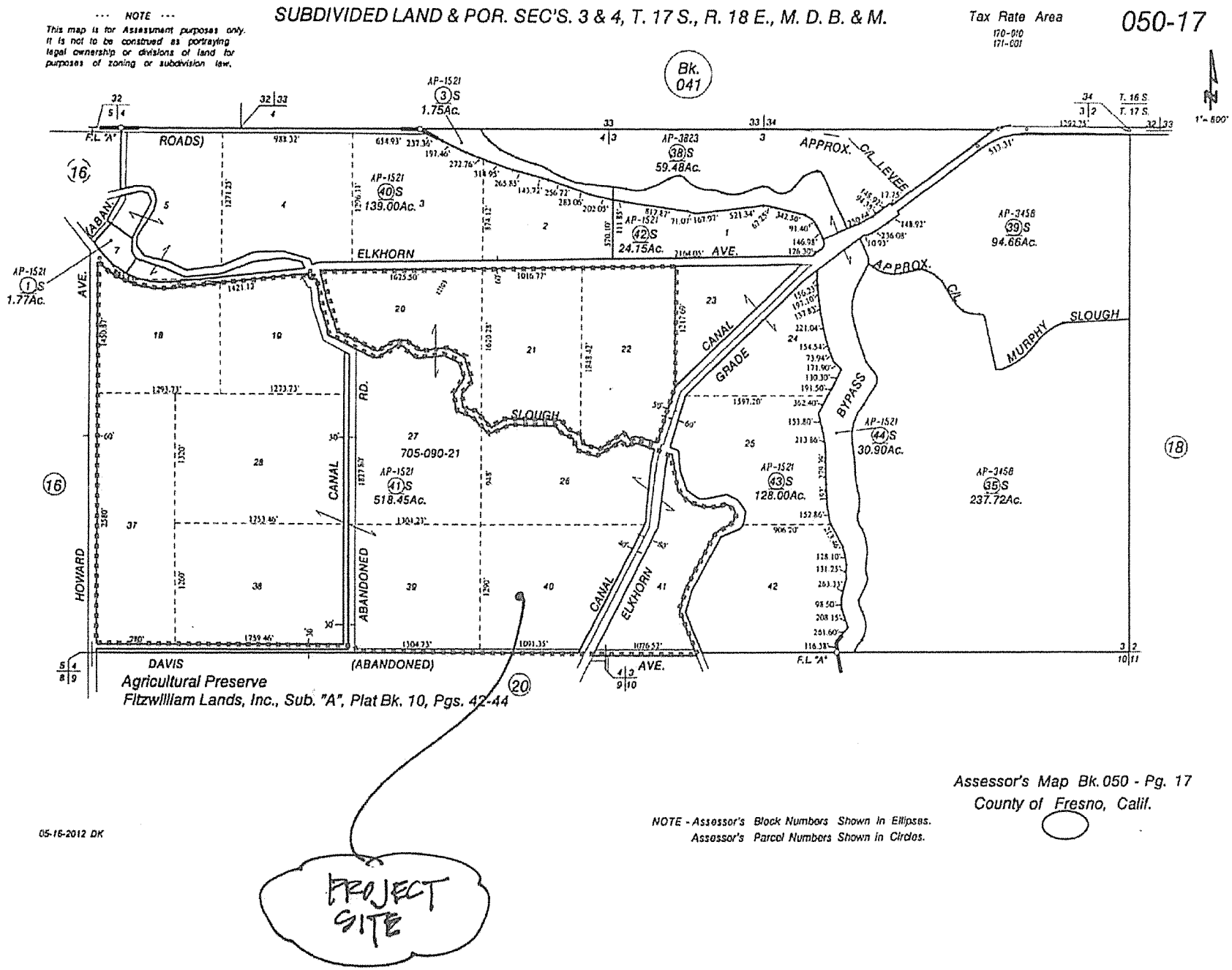
APN # ___ - ___ - ____

CUP 3590

LOCATION MAP



Prepared by: County of Fresno Department of Public Works and Planning


--- NOTE ---
This map is for Assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.
SUBDIVIDED LAND & POR. SEC'S. 3 & 4, T. 17 S., R. 18 E., M. D. B. & M.
Tax Rate Area
170-010
171-001
050-17
Bk. 041
AP-1521 (3)S 1.75Ac.
AP-3823 (38)S 59.48Ac.
AP-1521 (40)S 139.00Ac.
AP-1521 (42)S 24.75Ac.
AP-3458 (39)S 94.66Ac.
AP-1521 (1)S 1.77Ac.
AP-1521 (44)S 30.90Ac.
AP-1521 (41)S 518.45Ac.
AP-1521 (43)S 128.00Ac.
AP-3458 (35)S 237.72Ac.
705-090-21
ROADS)
ELKHORN AVE.
APPROX. C/L LEVEE
APPROX. C/L MURPHY SLOUGH
CANAL
GRADE
BYPASS
SLOUGH
HOWARD RD.
ABANDONED
CANAL
ELKHORN AVE.
DAVIS (ABANDONED)
F.L. "A"
T. 16 S.
T. 17 S.
1" = 600'
Agricultural Preserve
Fitzwilliam Lands, Inc., Sub. "A", Plat Bk. 10, Pgs. 42-44
PROJECT SITE
05-16-2012 DK
NOTE - Assessor's Block Numbers Shown In Ellipses.
Assessor's Parcel Numbers Shown In Circles.
Assessor's Map Bk. 050 - Pg. 17
County of Fresno, Calif.

Innovative Ag Services, LLC
1201 Delta View Road, Suite 5 Hanford, CA 93230
Office (559) 587-2800 Fax (559) 587-2801

Operational Statement Questions

Facility Name: **Open Sky, 12103 W. Elkhorn Avenue, Burrell CA 93607**

County: **Fresno County**

1. Detailed Description of the existing nature of the operation.
   Dairy Farm - A class of Agriculture for long term milk production. Milk is produced and hauled off-site and processed into dairy products such as cheese, butter, etc.

2. What is the proposed operation and how does it relate to the existing operation?
   Add an additional 700 milking cows to the existing herd size. Current milking permit allows 5384 total mature cows. New total would be 6084 mature cows. Add a Gusacon/Dresser Rand 480 paired with 800kw, 480 VAC, Three Phase, 60HZ gas engine. The engine will be used to reduce methane emissions.

3. How many cattle are on site?
   5384 total mature , proposed 6084 total.

4. Will the proposal increase the number cattle? **Yes** If so, by how many? **700**

5. Number of customers or visitors per day. **0**

6. Number of employees **29**.
   Will the proposal increase the number of employees? **No**

7. Number of services and delivery vehicles per day or per week. **Less than 10/day**

8. Are any goods to be sold on-site? **No** If so, are these goods grown or produced on-site or at some other location?_____

APP 3590
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COUNTY OF FRESNO
DEC 01 2017
DEPARTMENT OF PUBLIC WORKS AND PLANNING
DEVELOPMENT SERVICES DIVISION

Innovative Ag Services, LLC
1201 Delta View Road, Suite 5 Hanford, CA 93230
Office (559) 587-2800 Fax (559) 587-2801

9. What equipment is used on the entire site?
   Tractors, Loaders, Milking Machines, Feed Mixer's/Trailers

10. What supplies or materials are used and how are they store?
    Silage - Both corn and wheat are stored under a cover.
    Hay - Grains are stored in a feed bunker, that has a roof.

11. Does the use cause an unsightly appearance? No

12. List and describe any solid or liquid wastes to be produced on site.
    Liquid manure and dry manure - this is the excretion from cattle.

13. Estimated volume of water to be used (gallons per day). **212,000 gallons**
    Source of water? **Well**

14. Describe any proposed advertising including size, appearance, and placement.
    N/A

15. Will all existing buildings continue to be used or will new buildings be constructed?
    Yes, all existing buildings will remain in use.

Innovative Ag Services, LLC
1201 Delta View Road, Suite 5 Hanford, CA 93230
Office (559) 587-2800 Fax (559) 587-2801

16. Explain which buildings or what portion of buildings will be used in the operation.

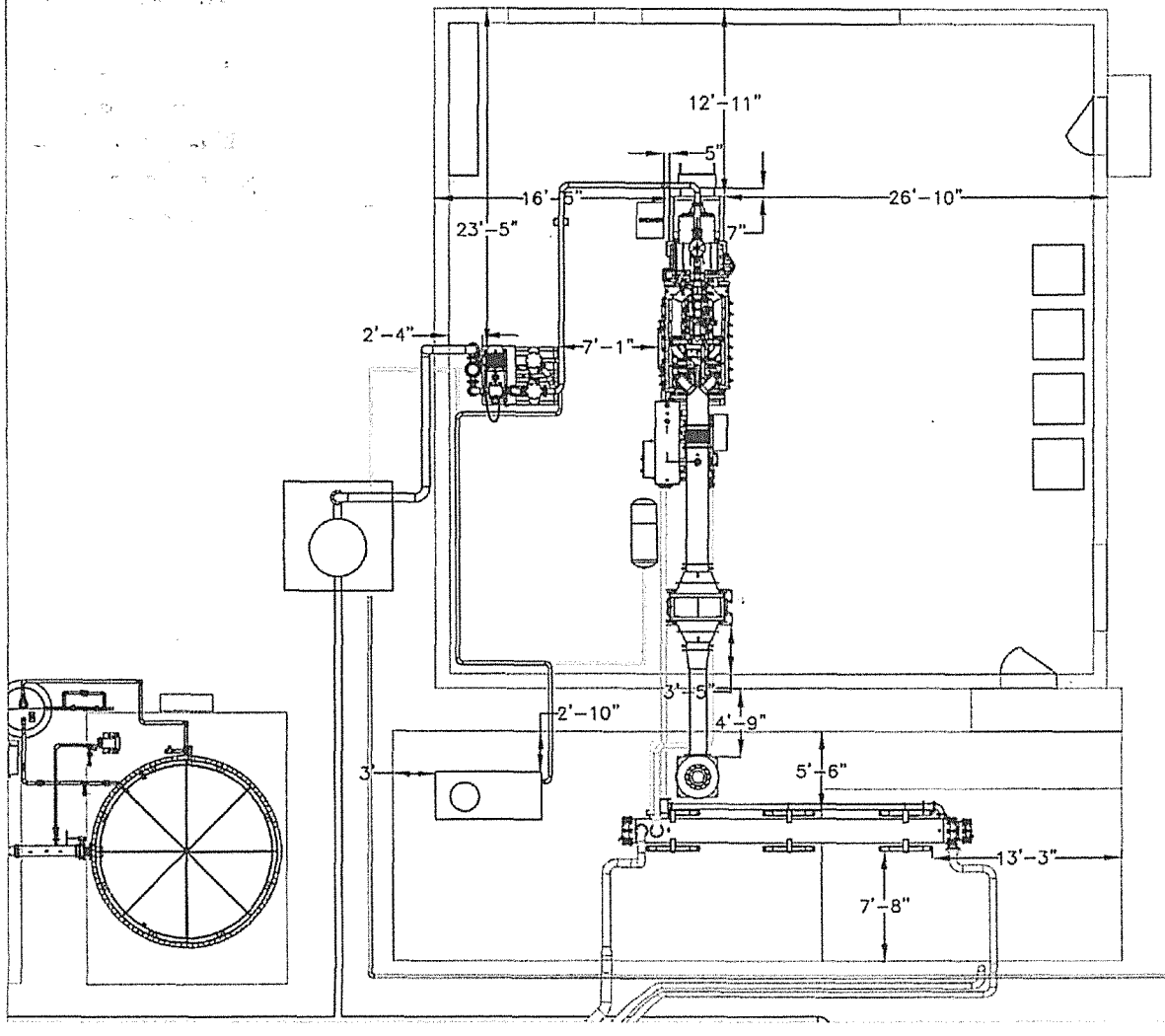
N/A

17. Add any additional information that will provide a clear understanding of the project or operation.

N/A

18. Identify all Owners.

Eric & Katelyn te Velde



CUP3590

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DEC 01 2017

DEPARTMENT OF PUBLIC WORKS
AND PLANNING
DEVELOPMENT SERVICES DIVISION

General Notes

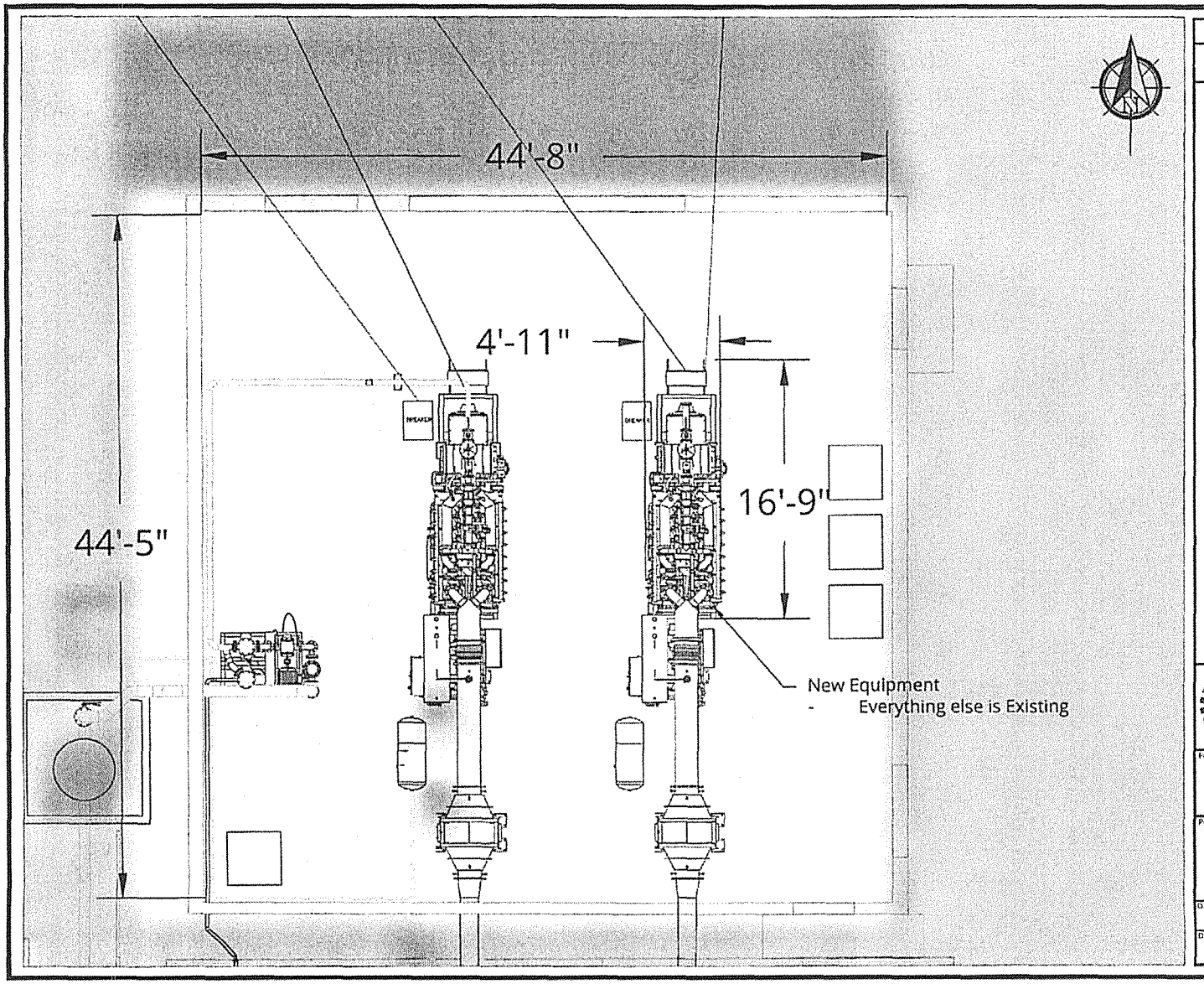
No.	Revision/Issue	Date

Maas Energy Works
1670 Market St,
Suite 256
Redding, CA 96001

Open Sky Ranch
Dairy Digester
12103 W Elkhorn Ave
Riverdale, CA

5/2/16

M3



General Notes

CONFIDENTIAL

CUP3590

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COUNTY OF FRESNO

DEC 01 2017

DEPARTMENT OF PUBLIC WORKS
AND PLANNING
DEVELOPMENT SERVICES DIVISION

MAAS ENERGY WORKS

Firm Address
3711 Meadowview Dr.
Redding, CA, 96002

Project Name and Address
Open Sky #2, 1316-RD
12103 W Elkhorn Ave.
Riverdale, CA, 93656

Date 12/1/17

Version 1.0

Drawn By Hudson Davis

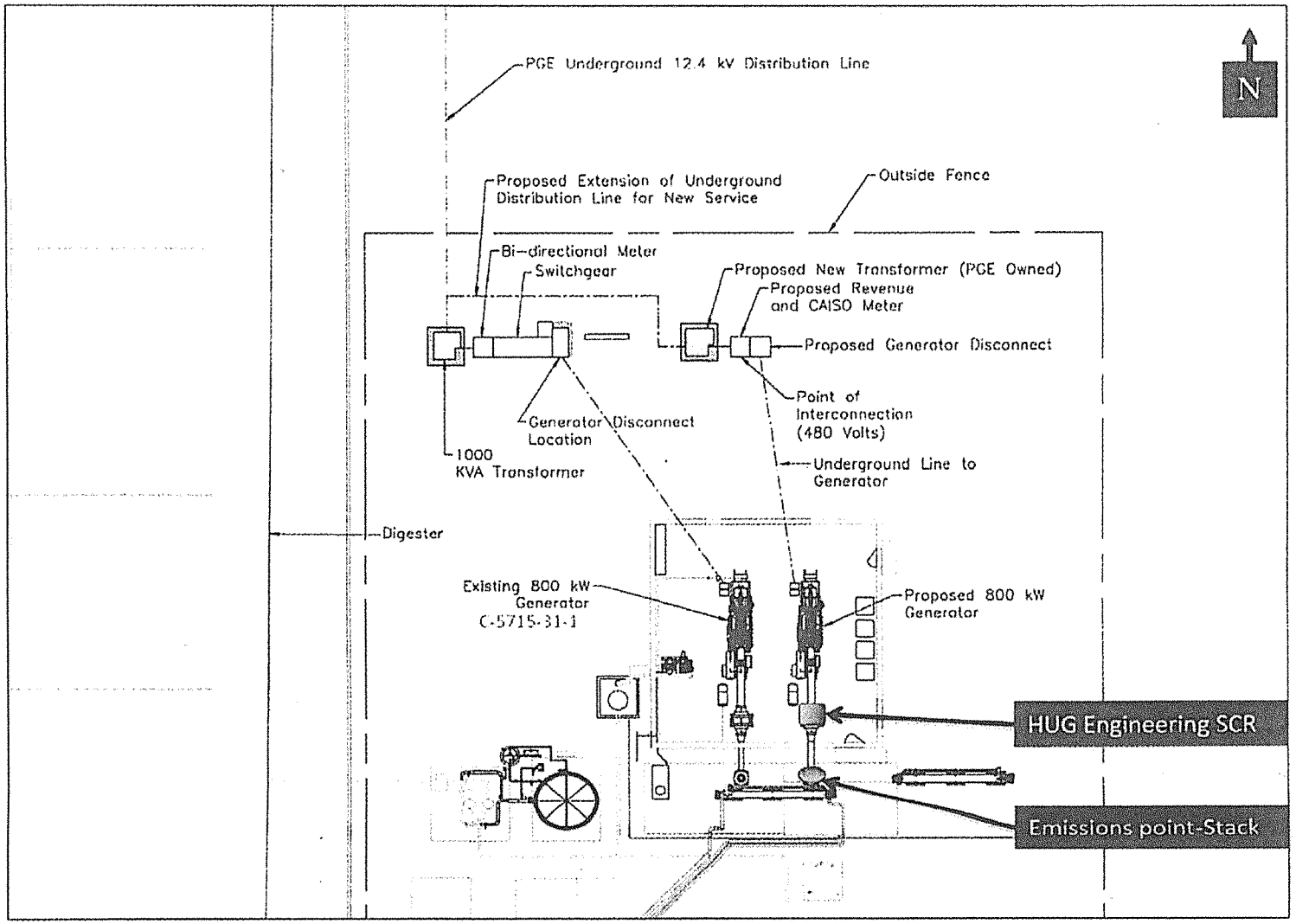

Figure 10 -- Genset Building

County of Fresno

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

INITIAL STUDY APPLICATION

INSTRUCTIONS

Answer all questions completely. An incomplete form may delay processing of your application. Use additional paper if necessary and attach any supplemental information to this form. Attach an operational statement if appropriate. This application will be distributed to several agencies and persons to determine the potential environmental effects of your proposal. Please complete the form in a legible and reproducible manner (i.e., USE BLACK INK OR TYPE).

OFFICE USE ONLY

IS No. _____

Project No(s). _____

Application Rec'd.: _____

GENERAL INFORMATION

1. *Property Owner :* Eric TeVelde *Phone/Fax* 559-707-1665
   Mailing Address: 12103 W. Elkhorn Avenue (*Street*) Burrell (*City*) CA/93607 (*State/Zip*)

2. *Applicant :* Eric TeVelde *Phone/Fax:* 559-707-1665
   Mailing Address: 12103 W. Elkorn Avenue (*Street*) Burrell (*City*) CA/93607 (*State/Zip*)

3. *Representative:* Innovative Ag Services, LLC *Phone/Fax:* 559-587-2800/559-587-2801
   Mailing Address: 1201 Delta View Rd. Ste. 5 (*Street*) Hanford (*City*) CA/93230 (*State/Zip*)

4. *Proposed Project:* Add 700 milking cows.
   Add a Gusacon/Dresser Rand 480 paired with a 800kw, 480 VAC, THREE PHASE, 60HZ, gas engine

5. *Project Location:* 12103 W. Elkhorn Avenue, Burrell CA 93607
   CUP3590

6. *Project Address:* 12103 W. Elkhorn Avenue, Burrell, CA 93607

7. *Section/Township/Range:* 3 /17S /18E 8. *Parcel Size:*

9. *Assessor's Parcel No.* 050-170-41s

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DEC 01 2017
DEPARTMENT OF PUBLIC WORKS AND PLANNING
DEVELOPMENT SERVICES DIVISION

(Revision)

10. *Land Conservation Contract No. (If applicable):* _____

11. *What other agencies will you need to get permits or authorization from:*

_____	*LAFCo (annexation or extension of services)*	[✓]	*SJVUAPCD (Air Pollution Control District)*
_____	*CALTRANS*	_____	*Reclamation Board*
_____	*Division of Aeronautics*	_____	*Department of Energy*
[✓]	*Water Quality Control Board*	_____	*Airport Land Use Commission*
_____	*Other* _____		

12. *Will the project utilize Federal funds or require other Federal authorization subject to the provisions of the National Environmental Policy Act (NEPA) of 1969?* _____ *Yes* _x_ *No*

If so, please provide a copy of all related grant and/or funding documents, related information and environmental review requirements.

13. *Existing Zone District*[1]*:* N/A

14. *Existing General Plan Land Use Designation*[1]*:* Agricultural

ENVIRONMENTAL INFORMATION

15. *Present land use:* Dairy Farm
Describe existing physical improvements including buildings, water (wells) and sewage facilities, roads, and lighting. Include a site plan or map showing these improvements:

Describe the major vegetative cover: Crops

Any perennial or intermittent water courses? If so, show on map: N/A

Is property in a flood-prone area? Describe:

No

No

16. *Describe surrounding land uses (e.g., commercial, agricultural, residential, school, etc.):*

North: Agricultural

South: Agricultural

East: Agricultural

West: Agricultural

17. *What land use(s) in the area may be impacted by your Project?:* N/A

18. *What land use(s) in the area may impact your project?:* N/A

19. *Transportation:*

NOTE: The information below will be used in determining traffic impacts from this project. The data may also show the need for a Traffic Impact Study (TIS) for the project.

A. *Will additional driveways from the proposed project site be necessary to access public roads?*
_____ *Yes* _X_ *No*

B. *Daily traffic generation:*

I. *Residential - Number of Units* _____
Lot Size _____
Single Family _____
Apartments _____

II. *Commercial - Number of Employees* _____
Number of Salesmen _____
Number of Delivery Trucks _____
Total Square Footage of Building _____

III. *Describe and quantify other traffic generation activities:* _____

20. *Describe any source(s) of noise from your project that may affect the surrounding area:* N/A

21. *Describe any source(s) of noise in the area that may affect your project:* N/A

22. *Describe the probable source(s) of air pollution from your project:* Dust or PM-10 from cows

23. *Proposed source of water:*
[✓] *private well*
( ) *community system[3]--name:* _____

24. *Anticipated volume of water to be used (gallons per day)[2]:* _____

25. *Proposed method of liquid waste disposal:*
( ) septic system/individual
( ) community system[3]-name Existing system in place

26. *Estimated volume of liquid waste (gallons per day)[2]:* 0

27. *Anticipated type(s) of liquid waste:* 0

28. *Anticipated type(s) of hazardous wastes[2]:* 0

29. *Anticipated volume of hazardous wastes[2]:* 0

30. *Proposed method of hazardous waste disposal[2]:* N/A

31. *Anticipated type(s) of solid waste:* Manure

32. *Anticipated amount of solid waste (tons or cubic yards per day):* _____

33. *Anticipated amount of waste that will be recycled (tons or cubic yards per day):* 0

34. *Proposed method of solid waste disposal:* Export

35. *Fire protection district(s) serving this area:* Fresno County/Cal Fire

36. *Has a previous application been processed on this site? If so, list title and date:* _____

37. *Do you have any underground storage tanks (except septic tanks)? Yes_____ No* X

38. *If yes, are they currently in use? Yes_____ No* X

TO THE BEST OF MY KNOWLEDGE, THE FOREGOING INFORMATION IS TRUE.

_____ 12-1-17

SIGNATURE *DATE*

[1] *Refer to Development Services Conference Checklist*
[2] *For assistance, contact Environmental Health System, (559) 600-3357*
[3] *For County Service Areas or Waterworks Districts, contact the Resources Division, (559) 600-4259*

(Revised 5/2/16)

NOTICE AND ACKNOWLEDGMENT

INDEMNIFICATION AND DEFENSE

The Board of Supervisors has adopted a policy that applicants should be made aware that they may be responsible for participating in the defense of the County in the event a lawsuit is filed resulting from the County's action on your project. You may be required to enter into an agreement to indemnify and defend the County if it appears likely that litigation could result from the County's action. The agreement would require that you deposit an appropriate security upon notice that a lawsuit has been filed. In the event that you fail to comply with the provisions of the agreement, the County may rescind its approval of the project.

STATE FISH AND WILDLIFE FEE

State law requires that specified fees (effective January 1, 2017: $3,078.25 for an EIR; $2,216.25 for a (Mitigated/Negative Declaration) be paid to the California Department of Fish and Wildlife (CDFW) for projects which must be reviewed for potential adverse effect on wildlife resources. The County is required to collect the fees on behalf of CDFW. A $50.00 handling fee will also be charged, as provided for in the legislation, to defray a portion of the County's costs for collecting the fees.

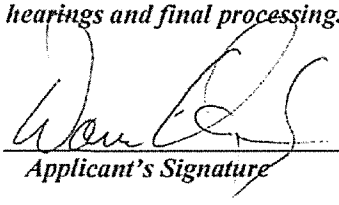
The following projects are exempt from the fees:

1. *All projects statutorily exempt from the provisions of CEQA (California Environmental Quality Act).*

2. *All projects categorically exempt by regulations of the Secretary of Resources (State of California) from the requirement to prepare environmental documents.*

A fee exemption may be issued by CDFW for eligible projects determined by that agency to have "no effect on wildlife." That determination must be provided in advance from CDFG to the County at the request of the applicant. You may wish to call the local office of CDFG at (559) 222-3761 if you need more information.

Upon completion of the Initial Study you will be notified of the applicable fee. Payment of the fee will be required before your project will be forwarded to the project analyst for scheduling of any required hearings and final processing. The fee will be refunded if the project should be denied by the County.



Applicant's Signature

12-1-17

Date

MAAS ENERGY WORKS

Project Description and Digester Operations

For the Covered Anaerobic Lagoon Digester at Open Sky Ranch

Ver. 2, 10/20/17

Prepared by:

Hudson Davis | Interconnection Project Manager

For:

Fresno County

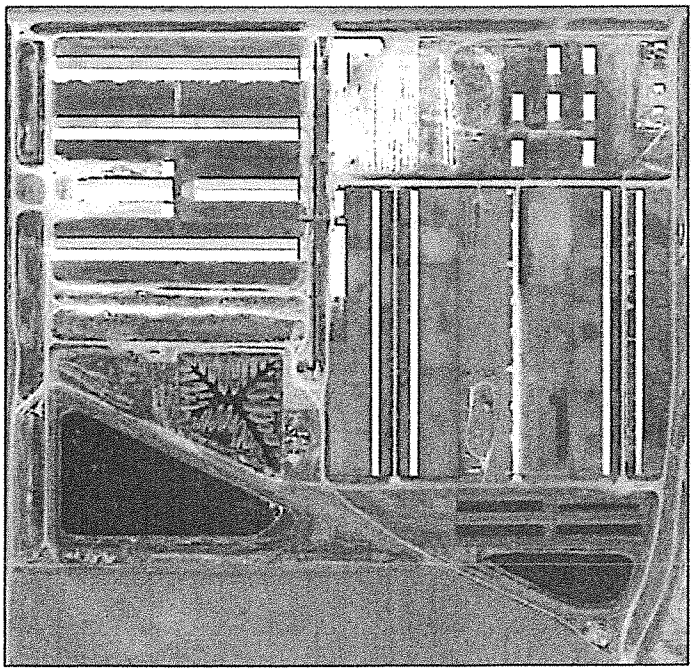


Table of Contents

Figures Table

1. Introduction

A. Project Location and contact

a. Dairy Address

- 12103 West Elkhorn Avenue, Riverdale, California 93656

b. Farmer Contact

- Farmer: Eric te Velde
- Phone number: (559) 707-1665
- Email: tevelde84@gmail.com

c. Project Developer

- Development Company: Maas Energy Works
- Interconnection Project Manager: Hudson Davis
- Address: 3711 Meadowview Dr, Suite #100, Redding, California, 96002
- Phone: 510-427-5831
- Email: Hudson@maasenergy.com

B. Project Overview

The purpose of this project is to maximize the efficiency of the dairy's waste water treatment process to satisfy the desires of the assorted regulatory agencies within the state of California. Under SB-1383 (Lara, 2016) the California Legislature has mandated that the California dairy industry reduce its methane emissions by 40%. Open Sky Ranch is choosing to make advancements towards complying with this goal before it becomes a requirement as later authorized by SB-1383.

The project will take place at Open Sky Ranch owned by Eric te Velde. The dairy is currently operating with a covered anaerobic lagoon which captures the naturally emitted greenhouse gases before they go into the atmosphere. There is a double liner in the bottom of this lagoon, and the lagoon is sealed with a gas-tight cover to prevent gas emissions, while also realizing wastewater treatment improvements and other benefits for the dairy. The bottom liner prevents seepage of manure into the soil, in line with Regional Water Quality Control Board goals for upgraded dairy lagoons. The covering of the lagoon has captured the methane gases and is using them to benefit the farmer.

The power generated by this operation is currently being used to offset the dairy's power usage under the Net Energy Metering – Aggregation tariff (NEM-A). There is still an abundance of fuel to be harnessed so an additional engine is being placed in the current building and the excess power will be sold to the utility grid under the BioMAT tariff for dairies, a program designed by the state to incentivize dairy farmers to begin reducing their emissions.

Excess gas collected from the covered lagoon digester will piped to an additional combined heat and power engine-generator, or "genset", and used as fuel to create electricity. The electricity will be sold by

wholesale export to PG&E through a dairy-specific tariff known as the Bioenergy Market Adjusting Tariff or "BioMAT." As described herein, the BioMAT is a program designed by the state to incentivize dairy farmers to use manure emissions to create energy. The heat from the gensets will be transferred into the manure pond to increase digestion of the manure, thus improving manure fertilizer value while reducing manure odors and greenhouse gas emissions. Total fuel employment for this manure treatment exceeds total fuel for electricity generation.

The project will not increase the dairies geographic footprint in any way, nor will it add cows, nor will it increase manure volume.

1. Project Details

A. Dairy Cow Numbers:

The Facility is currently an operating dairy production facility with the cow numbers shown below under, "Figure 1 – Dairy Cow Numbers".

Type of Animal	*Present Number of Animals on 10/15/2012*	*Maximum Permitted Number of Animals*	*Breed*
Milking Cows	2,837	4,364	Holstein
Dry Cows	663	1,020	Holstein
Heifers: 15-24 mo.	1,495	2,300	Holstein
Heifers: 7-14 mo.	972	1,495	Holstein
Heifers: 4 - 6 mo.	411	632	Holstein
Calves: up to 3 mo.	390	600	Holstein
Total Herd Size	**6,767**	**10,411**	

Figure 1 – Dairy Cow Numbers Part 1

Roughly 4,300 of the milking cows are housed in free-stalls which is optimal for a dairy flush system. In a free-stall dairy about 90% of the manure from the cows is captured, creating an optimal scenario for a digester to be installed. Increase in manure results in an increase in volatile solids entering the covered anaerobic digester, resulting in more gas. With a free-stall dairy the farmer receives a higher return on investment and a greater reduction in the carbon footprint of the dairy.

B. Manure flow:

Waste water flow will remain the same on the dairy facility. Since existing lagoon is already permitted as a covered aerobic digester lagoon, there will be no change to the required storage capacity for the facility.

Figure 2 -- Waste Water Storage Numbers

C. Digester:

See Section B. 1

D. Operational times:

The dairy currently operates on a 24/7 schedule. The digester will mirror this, as it will constantly be taking influent and giving effluent in conjunction with the manure flow of the day. The additional engines themselves will run on a peaking schedule to mirror PG&E TOU price schedule under the BioMAT tariff.

E. Number of customers and visitors:

Customers nor visitors are expected to increase to the dairy.

F. Water Resources

No new water will be introduced into the facility because of the addition of a covered anaerobic digester.

G. Parking:

Parking will remain the same on the dairy.

H. Biogas:

Biogas will be captured by the existing HDPE cover. Roughly 300 SCFM on average, year-round, is captured by the cover. This gas is then scrubbed of its sulfur, as well as water removed through a moisture trap system. These processes produce biogas which is safe for the genset.

The water that drops out of the biogas amounts to roughly 8 gallons of water a day. This water is pumped back into the digester through a sump pumping system.

The chemical composition of the biogas is as follows;

Biogas Contents	
Gas	%
Methane - CH_4	60 - 69%
Oxygen - O_2	0 - 2%
Nitrogen - N_2	0 - 8%
Hydrogen Sulfide - H_2S	0 - 4000 ppm
Carbon Dioxide - CO_2	Balance

Figure 3 -- Biogas Contents Table

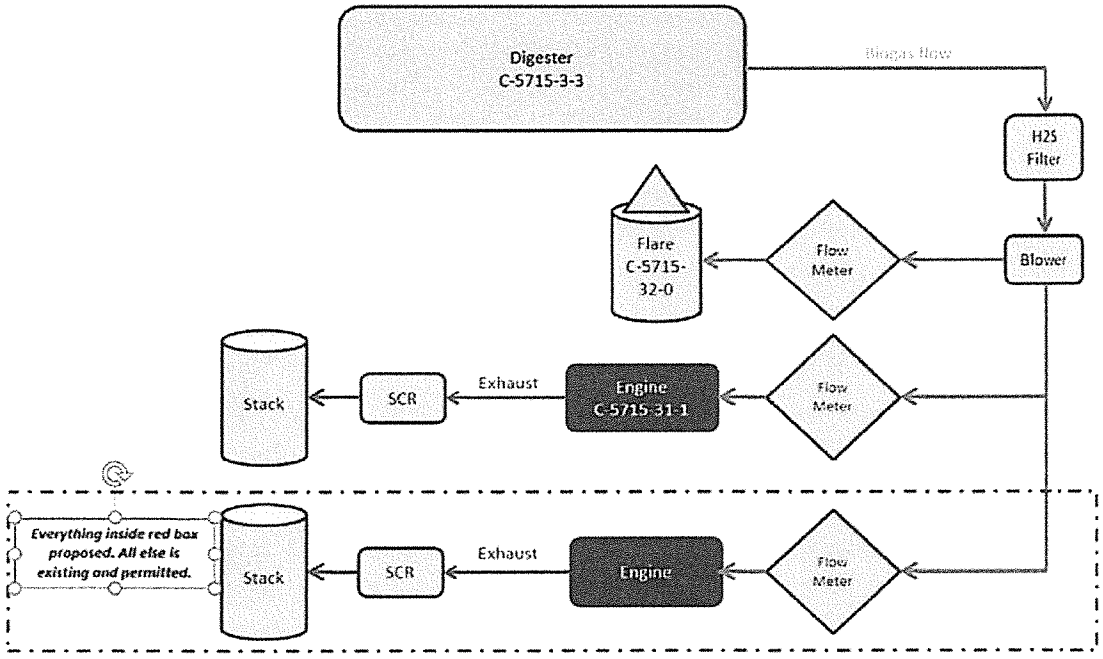
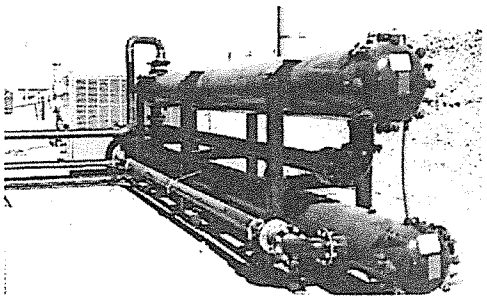


Figure 4 -- Biogas Flow Chart

I. Biogas Employment

The project's 800 kW genset converts the biogas into two useful energy streams: electricity and heat.



The majority of usable energy from the biogas is converted into hot water and transferred back into the digester by means of a water-to-water heat exchanger known as a "slurry heater". By increasing the temperature of the digester, this heat supply increases bacterial activity in the digester and thus improves digestion. Consequently, the digester and genset create a mutually reinforcing system with the fuel from the digester creating heat, which in turn improves the efficiency of the digester. The more efficient the digester, the greater the

improvements to the nutrient breakdown of the dairy manure for fertilizer, and the greater reduction in manure odors.

Slightly less than half of the usable energy from the biogas is converted into electricity. This electricity is delivered to PG&E through the BioMAT tariff under a special category for dairy manure-sourced generation. The BioMAT tariff, Senate Bill (SB) 1122, was adopted June 1, 2013 to incentivize renewable power generation on dairy's, lumber mills, waste water treatment centers, and other biomass generation facilities. PG&E is required to procure power from the following industries:

- Category 1: 30.5 MW: Biogas from wastewater treatment, municipal organic waste diversion, food processing, and co-digestion
- Category 2: 33.5 MW: Biogas from dairy and other agricultural bioenergy
- Category 3: 47 MW: Biogas or biomass using byproducts of sustainable forest management

As an operational dairy processing 100% dairy manure, Open Sky Ranch is eligible and will pursue a BioMAT contract under category 2.

More information on the Senate Bill 1122 can be found at the following,

- https://www.pge.com/includes/docs/pdfs/b2b/wholesaleelectricsuppliersolicitation/BioMAT/ELEC_SCHEDS_E-BioMAT.pdf
  https://www.pge.com/includes/docs/pdfs/b2b/wholesaleelectricsuppliersolicitation/BioMAT/BioMAT_JointIOUWebinar_FINAL.pdf

2. Project Equipment Details

A. Digester:

The Digester is covered, double lined, and anchored. There is also air injectors placed on top of the digester to inject air under the cover – A balance of roughly 1% oxygen helps reduce H2S levels. Mixers are placed every 200 feet within each avenue of the digester to avoid sludge build up.

- Cover: Cover material is made with 80 Mil HDPE.
- Lining: The material used for the liner will be two layers of 60 Mil HDPE. This material is currently in use at 6 other dairies projects in the state that Maas Energy Works developed and manages.
- Anchor Trench: Cement trenching will be done around the perimeter of the digester to "anchor" digester below. See Figure below.
- Air injection blower: Max flow 50/cfm

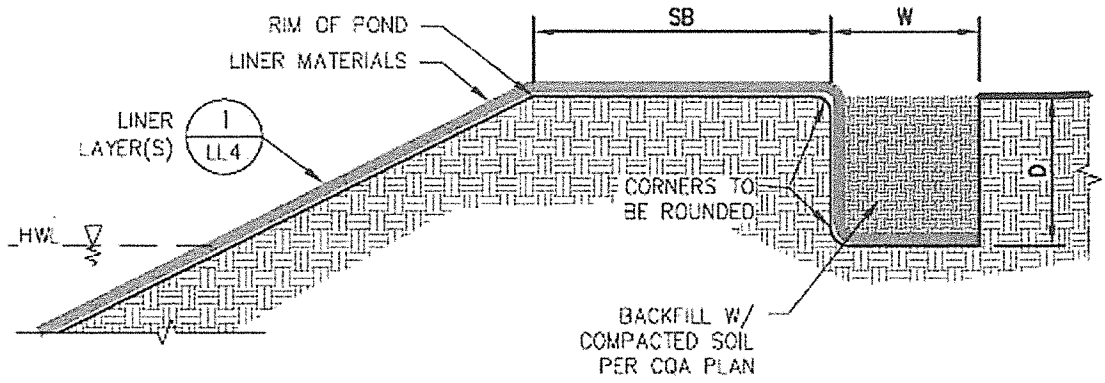


Figure 5 -- Anchor Trench Desi

B. Genset:

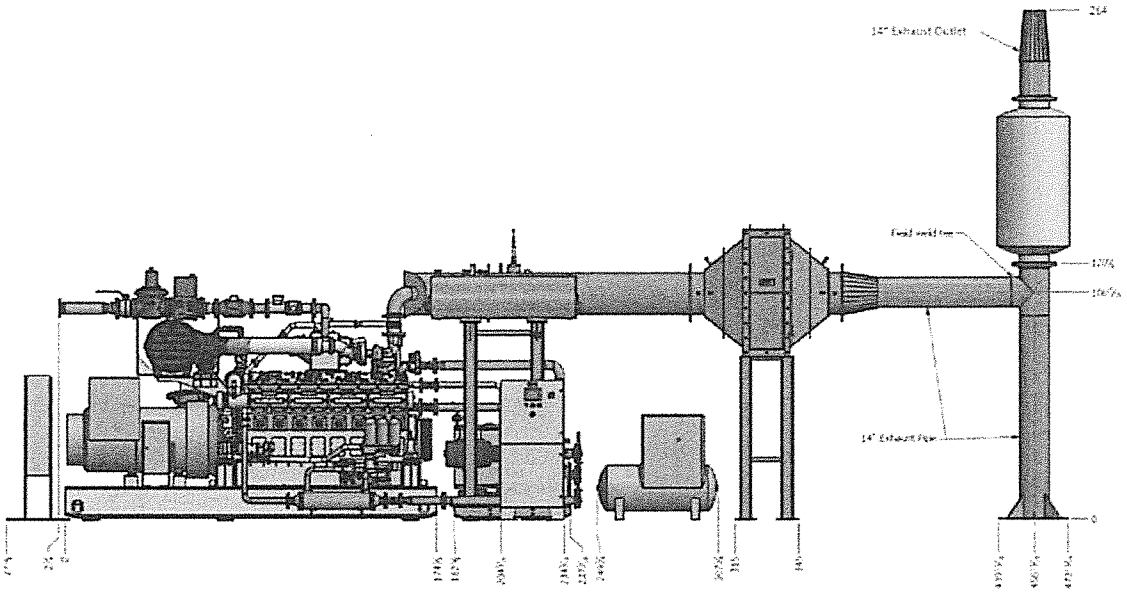


Figure 6 – Guascor Dresser-Rand SFGLD 480

The engine in use will be a Guascor/Dresser Rand SFGLD 480 paired with a 800 kW, 480 VAC, THREE PHASE, 60HZ gas engine continuous rated generator. The genset will be monitored 24/7 with smart protective relays, computers, and on call personnel. Both PG&E and customer will be interconnecting per Rule 21 interconnection guidelines.

The settings of the genset are TBD as PG&E engineering has not released the required studies due prior to the Pre-Parallel Inspection. All settings upon arrival will be verified by a 3rd party certified tester to assure the safety of the system. Protective devices such as reclosers and SCADA, GOAB's, and meters will be inspected to code and tested, as required, by third party certified testers.

Genset will be housed within an existing 44'/70' genset building plan at "Figure 14 -- Genset Building"

SEE NEXT PAGE FOR ENGINE SPECIFICATIONS FROM MANUFACTUER.

DRESSER-RAND.	GROUP		PRODUCT INFORMATION	INDEX
	IC	GAS	IC-G-B-48-074	B1
	POWER RATING		DATE 26/OE/14	DEP. 7

GENSET:	SFGLD 480	SPEED:	1800
JACKET WATER TEMPERATURE(°F):	194	FUEL TYPE:	SEWAGE GAS
INTERCOOLER WATER TEMP(°F):	131		

APPLICATION:			CONTINUOUS	COMPRESSION RATIO:	11,6:1
COOLING SYSTEM:			TWO CIRCUITS	REGULATION:	Electronic
			TWO STAGE IC	IGNITION TIMING:	12°
EXHAUST MANIFOLD TYPE:			WATER COOLED	MAX. BACK PRESSURE:	18 "H2O (450 mmH2O)
EMISSIONS:					
	NOX	g/bHPh	1	AMBIENT CONDITIONS ISO 3046/1:	
	CO	g/bHPh	<1,8	Atmospheric pressure ("Hg (kPa))=	30 (100)
	NMHC	g/bHPh	<0,7	Ambient temperature (°F (°C))=	77 (25)
				Relative humidity (%)=	30

POWER RATING (4)			NOMINAL	PARTIAL LOADS		
LOAD		%	100%	80%	60%	40%
MECHANICAL POWER	(3, 4, 5)	BHP (KWb)	1215 (906)	972 (725)	730 (544)	485 (362)
BMEP		psi (bar)	183 (12.6)	147 (10.1)	110 (7.6)	73 (5.0)
ELECTRICAL POWER (cosϕ 1)		kWe	873	697	520	342
ELECTRICAL POWER (cosϕ 0,8)		kWe	863	691	516	340
FUEL CONSUMPTION	(1)	BTU/bHP-hr (KW)	6819 (2428)	6983 (1989)	7278 (1557)	7880 (1120)
MECHANICAL EFFICIENCY		%	37.3	36.5	34.9	32.3
ELECTRICAL EFFICIENCY (cosϕ 1)		%	36.0	35.0	33.4	30.5
HEAT IN MAIN WATER CIRCUIT	(1)	BTU/min (KW)	40550 (713)	32870 (578)	25880 (455)	19340 (340)
HEAT IN SECONDARY WATER CIRCUIT	(1)	BTU/min (KW)	8644 (152)	7848 (138)	7165 (126)	5744 (101)
HEAT IN CHARGE COOLER	(1)	BTU/min (KW)	3128 (55)	2787 (49)	2445 (43)	1308 (23)
HEAT IN OIL COOLER	(1)	BTU/min (KW)	5516 (97)	5061 (89)	4720 (83)	4436 (78)
HEAT IN EXHAUST GASES (25 °C)	(1)	BTU/min (KW)	35490 (624)	29570 (520)	23090 (406)	16830 (296)
HEAT IN EXHAUST GASES (120°C)	(1)	BTU/min (KW)	27300 (480)	22910 (403)	17990 (316)	13170 (232)
EXHAUST GAS TEMPERATURE	(1)	°F (°C)	817 (436)	837 (447)	851 (455)	865 (463)
HEAT TO RADIATION	(1)	BTU/min (KW)	1877 (33)	1592 (28)	1479 (26)	1194 (21)
CARBURETION SETTINGS (2)						
O2 TO EXHAUST(DRY)(ONLY A REFERENCE)		%	7.4	7.0	6.8	6.4
MASS FLOWS						
INTAKE AIR FLOW	(1)	lb/h (Kg/h)	9490 (4300)	7690 (3490)	5880 (2670)	4200 (1900)
EXHAUST GAS FLOW (WET)	(1)	lb/h (Kg/h)	10470 (4750)	8490 (3850)	6510 (2950)	4650 (2110)

NOTES:

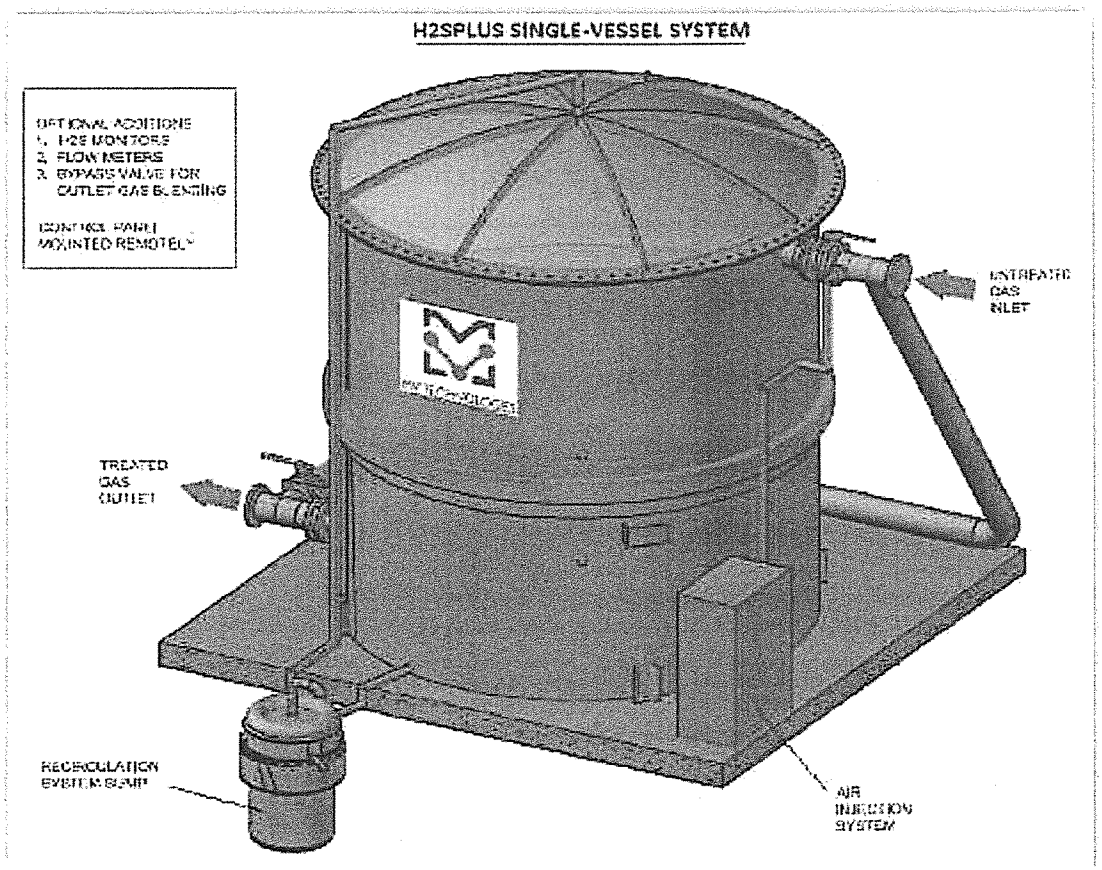
1. 100% LOAD TOLERANCES:
   FUEL CONSUMPTION +5%,
   COOLING CIRCUIT AND EXHAUST GASES ± 8%, RADIATION ±25%
   EXHAUST TEMPERATURE ±36°F (20°C), MASS FLOWS ± 10%.
2. THE ENGINE PERFORMANCE DATA, TIMING ADVANCE AND CARBURETION SETTINGS ARE VALID FOR A GAS
   THAT FULFILS THE REQUIREMENTS DEFINED IN IC-G-D-30-001 AND IC-G-D-30-003e. HEAT BALANCE FOR A REFERENCE GAS: CH4 82.5%, CO2 3.5%, N2 1,5%
3. NET POWER, MECHANICAL PUMPS NOT INCLUDED.
4. POWERS ARE VALID FOR AMBIENT TEMP.=77 °F (25 °C) AND AN ALTITUDE OF =1640 ft (500 m). SEE OTHER CONDITIONS IN PI IC-G-B-00-001
5. OVERLOAD NOT ALLOWED
6. THE SPECIFICATIONS AND MATERIALS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION
7. A ENGINE WITH INLET OR OUTPUT RESTRICTION OVER PUBLISHED LIMITS, OR WITH INADEQUATE MAINTENANCE OR INSTALLATION
   CAN MODIFY POWER RATING DATA.
8. EMISSIONS
9. ALTERNATOR VOLTAGE 440 V

CODE3	2/19/2015	Cod.: C-A	Elab:	cli35	Versión: 28/26/08/2014	1/1

Figure 7 -- G3520C Technical Data

C. H2S Scrubber

The H2S within the gas is highly toxic and corrosive. To clean the gas that is captured by the cover a H2S scrubber is to be set up as shown in the site plan. A typical scrubber is filled with desulfurization media, made of iron impregnated wood shavings. The system is shown below, as well as the media removal and refill process which is done roughly every year and a half to ensure the media sufficiently scrubs the biogas.



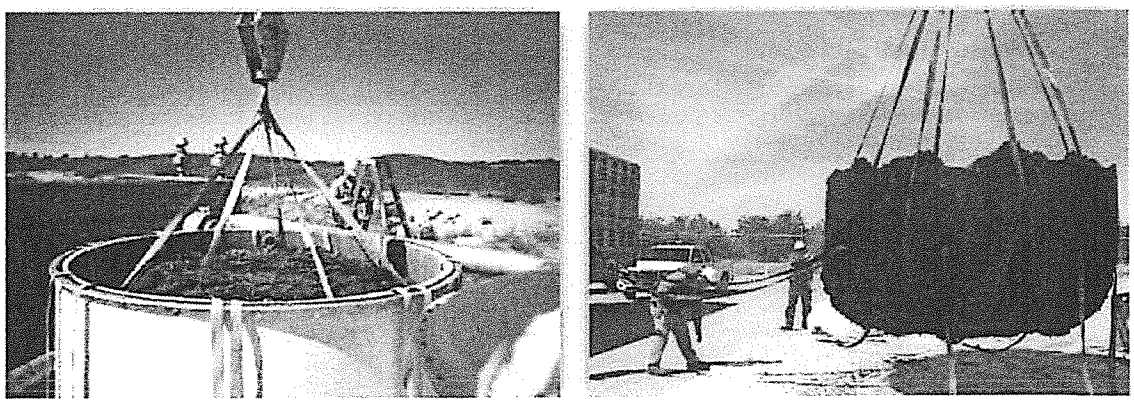


Figure 8 -- MV Tech H2S Scrubber

3. Project Site Plans

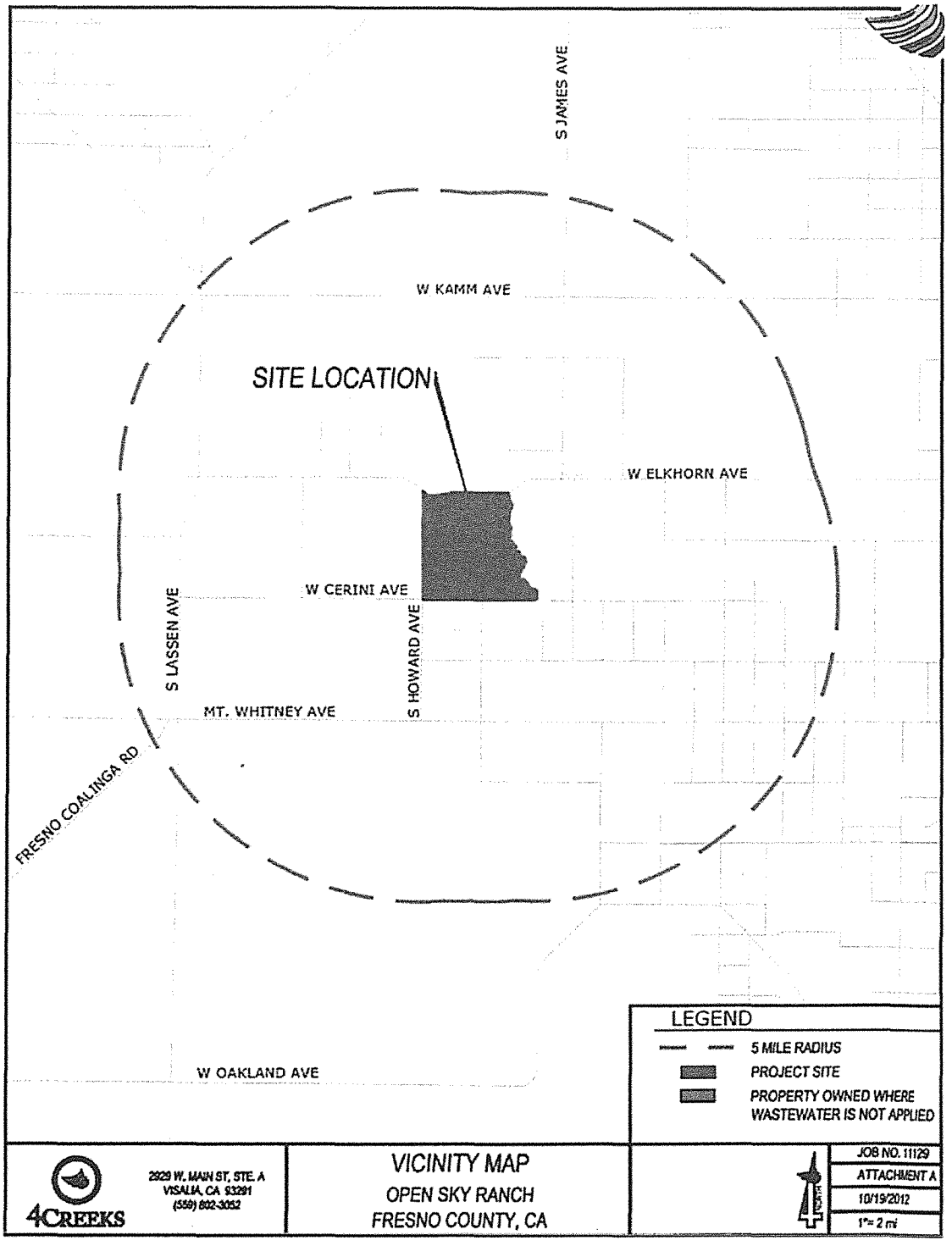


Figure 9 -- Project Vicinity Map

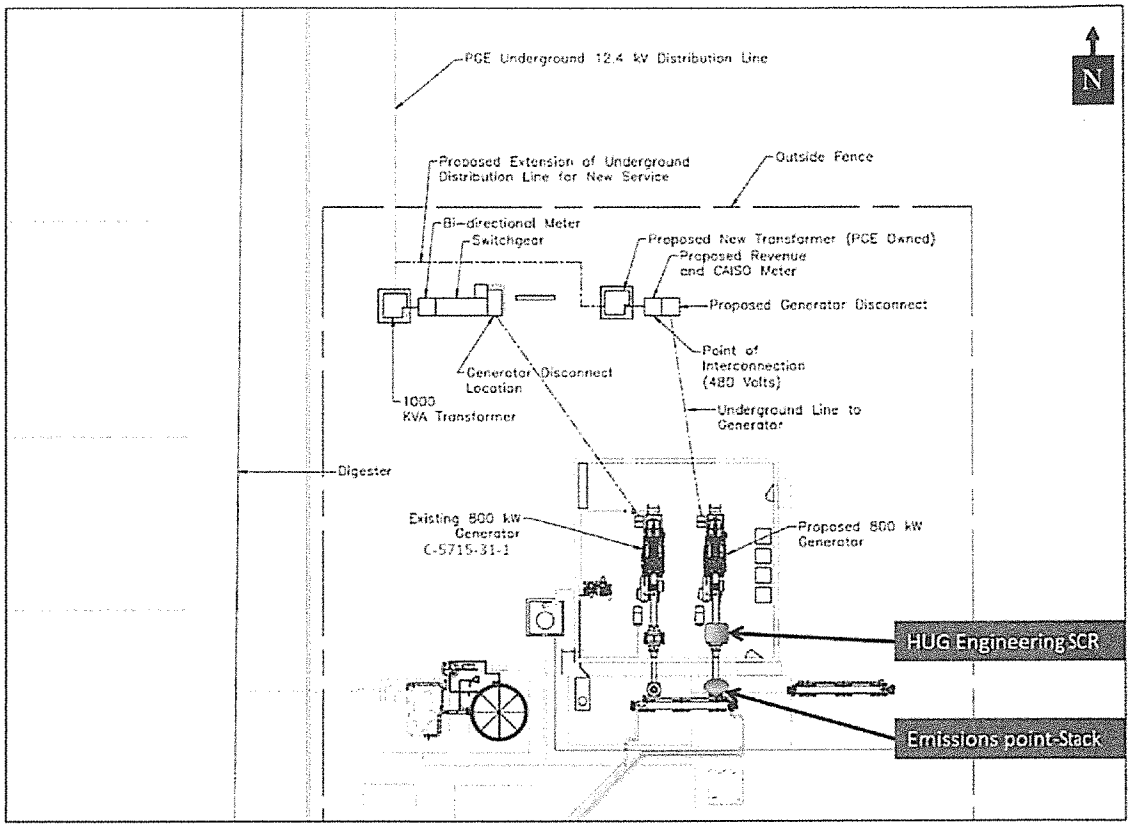


Figure 10 -- Genset Building

County of Fresno

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

DATE: August 23, 2017

TO: Department of Public1Works and Planning, Attn: Steven E. White, Director
Development Services, Attn: William M. Kettler, Division Manager
Development Services, Senior Planner, Attn: Marianne Mollring
Development Services, Principal Planner, Attn: Chris Motta
Development Services, Policy Planning, ALCC, Attn: Mohammad Khorsand
Development Services, Water/Geology/Natural Resources, Attn: Jennifer Parks
Development Services, Zoning & Permit Review, Attn: Tawanda Mtunga
Development Services, Site Plan Review, Attn: Hector Luna
Development Services, Building & Safety/Plan Check, Attn: Chuck Jonas
Development Engineering, Attn: Jennifer Parks, Grading/Mapping
Road Maintenance and Operations, Attn: Randy Ishii/Frank Daniele/Nadia Lopez
Design Division, Transportation Planning, Attn: Dale Siemer/Harpreet Kooner
Department of Public Health, Environmental Health Division, Attn: Janet Gardner
Agricultural Commissioner, Attn: Les Wright (M/S 1)
U.S. Department of Interior, Fish & Wildlife Service, Attn: Patricia Cole
CA Department of Fish and Wildlife, Attn: Steve Hulbert
CA Regional Water Quality Control Board, Attn:
Centralvalleyfresno@waterboards.ca.gov
NAS Lemoore Military Airspace, Attn: Marlana Brown
San Joaquin Valley Information Center, Attn: Celeste Thomson
Consolidated Mosquito Abatement District, Attn: Steve Mulligan
State Water Resources Control Board, Division of Drinking Water, Attn: Jose Robeldo
Dumna Wo Wah Tribal Government, Attn: Robert Ledger, Tribal Chairman
Santa Rosa Rancheria Tachi Yokut Tribe, Attn: Shana Powers
San Joaquin Valley Unified Air Pollution Control District (PIC-CEQA Division)
Fresno County Fire Protection District, Attn: Chris Christoperson

FROM: Ejaz Ahmad, Planner
Development Services Division

SUBJECT: Initial Study Application No. 7353; Conditional Use Permit (CUP) Application No. 3590

APPLICANT: Warren Hutchings

DUE DATE: September 6, 2017

The Department of Public Works and Planning, Development Services Division is reviewing the subject applications proposing to allow increase in number of mature-milk cows from 5,384 to 6,084 (700 total head increase) for an existing diary located on an approximately 215-acre

portion of a 518 .45-acre parcel in the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District.

The Department is also reviewing for environmental effects, as mandated by the California Environmental Quality Act (CEQA) and for conformity with plans and policies of the County.

Based upon this review, a determination will be made regarding conditions to be imposed on the project, including necessary on-site and off-site improvements.

We must have your comments by **September 6, 2017**. Any comments received after this date may not be used.

Please address any correspondence or questions related to environmental and/or policy/design issues to me, Ejaz Ahmad, Planner, Development Services Division, Fresno County Department of Public Works and Planning, 2220 Tulare Street, Sixth Floor, Fresno, CA 93721, or call (559) 600-4204 or email eahmad@co.fresno.ca.us.

EA:
G:\4360Devs&Pln\PROJSEC\PROJDOCS\CUP\3500-3599\3590\ROUTING\CUP3590 Routing Ltr.doc

Enclosures

Date Received: 07/28/17

CUP3590 (Application No.)

Fresno County Department of Public Works and Planning

MAILING ADDRESS:
Department of Public Works and Planning
Development Services Division
2220 Tulare St., 6th Floor
Fresno, Ca. 93721

LOCATION:
Southwest corner of Tulare & "M" Streets, Suite A
Street Level
Fresno Phone: (559) 600-4497
Toll Free: 1-800-742-1011 Ext. 0-4497

APPLICATION FOR:

- ☐ Pre-Application (Type) _____
- ☐ Amendment Application
- ☐ Amendment to Text
- ☒ Conditional Use Permit
- ☐ Variance (Class)/Minor Variance
- ☐ Site Plan Review/Occupancy Permit
- ☐ No Shoot/Dog Leash Law Boundary
- ☐ General Plan Amendment/Specific Plan/SP Amendment)
- ☐ Time Extension for _____
- ☐ Director Review and Approval
- ☐ for 2nd Residence
- ☐ Determination of Merger
- ☐ Agreements
- ☐ ALCC/RLCC
- ☐ Other _____

DESCRIPTION OF PROPOSED USE OR REQUEST:
Add an additional 700 milk cows. Add a substrates to digester.

CEQA DOCUMENTATION: ☐ *Initial Study* ☐ *PER* ☐ *N/A*

PLEASE USE FILL-IN FORM OR PRINT IN BLACK INK. Answer all questions completely. Attach required site plans, forms, statements, and deeds as specified on the Pre-Application Review. **Attach Copy of Deed, including Legal Description.**

LOCATION OF PROPERTY: South side of Elkhorn Ave
between Elkhorn Grade and Howard Ave
Street address: 12103 W. Elkhorn Avenue, Burrell, CA 93607

APN: 050-170-41s Parcel size: 140 Section(s)-Twp/Rg: S 4 - T 17 S/R 18 E

ADDITIONAL APN(s):

I, _____ (*signature*), declare that I am the owner, or authorized representative of the owner, of the above described property and that the application and attached documents are in all respects true and correct to the best of my knowledge. The foregoing declaration is made under penalty of perjury.

Owner (Print or Type)	Address	City	Zip	Phone
Eric & Katelyn te Velde	12103 W. Elkhorn Ave	Burrell CA	93607	
Applicant (Print or Type)	**Address**	**City**	**Zip**	**Phone**
Warren Hutchings	1201 Delta View Rt #5	Hanford	93230	559-587-2800
Innovative Ag Services, LLC	1201 Delta View Rd, Ste. 5	Hanford	93230	559-587-2800
Representative (Print or Type)	Address	City	Zip	Phone

CONTACT EMAIL:

OFFICE USE ONLY (*PRINT FORM ON GREEN PAPER*)

Application Type / No.:	CUP3590	Fee: $ 4,569.00
Application Type / No.:		Fee: $
Application Type / No.:		Fee: $
Application Type / No.:		Fee: $
PER/Initial Study No.:	IS 7353	Fee: $ 3,901.00
Ag Department Review:		Fee: $ 93.00
Health Department Review:		Fee: $ 992.00
Received By: EJAZ	Invoice No.:	TOTAL: $ 9,555.00

UTILITIES AVAILABLE:

WATER: Yes ☐ / No ☒
Agency: _____

SEWER: Yes ☐ / No ☒
Agency: _____

STAFF DETERMINATION: This permit is sought under Ordinance Section: _____

Related Application(s): AE-20

Zone District: _____

Parcel Size: 518.45 ACRES.

Sect-Twp/Rg: ____ - T____ S/R____ E

APN # ___ - ___ - ____

APN # ___ - ___ - ____

APN # ___ - ___ - ____

APN # ___ - ___ - ____

Development Services Division

MAIL TO: INNOVATIVE Ag Services 12101 Delta View Rd 4 5 HANFORD, CA 93230

Pre-Application Review

Department of Public Works and Planning

NUMBER: 39188-39189
APPLICANT: Innovative Ag Services
PHONE: _____

PROPERTY LOCATION: 12103, 12105, 12107, 12109 & 12101 W. Elkhorn
APN: 050 - 170 - 415 ALCC: No ___ Yes (# 40162) VIOLATION NO. NO
CNEL: No ✓ Yes ___ (level) LOW WATER: No ___ Yes ___ WITHIN ½ MILE OF CITY: No ✓ Yes ___
ZONE DISTRICT: AE20; SRA: No ✓ Yes ___ HOMESITE DECLARATION REQ'D.: No ✓ Yes ___
LOT STATUS:
Zoning: (✓ Conforms; ( ) Legal Non-Conforming lot; ( ) Deed Review Req'd (see Form #236)
Merger: May be subject to merger: No ___ Yes ___ ZM# ___ Initiated ___ In process ___
Map Act: ( ) Lot of Rec. Map; (✓ On '72 rolls; (✓ Other Permit Record) ( ) Deeds Req'd (see Form #236)
SCHOOL FEES: No ✓ Yes ___ DISTRICT: Riverdale Unified PERMIT JACKET: No ___ Yes ✓
FMFCD FEE AREA: (✓ Outside ( ) District No.: ___ FLOOD PRONE: No ✓ Yes ___
PROPOSAL C.U.P. to Allow Existing Dairy (permitted prior to Adoption of Ord) to expand its herd of cattle to 700 additional Milking Cows, from 5384 Cows to 6084 Milking Cows within the AE 20 Zone District.
COMMENTS: ___
ORD. SECTION(S): 816.3X / 869.2A BY: _____ DATE: 5/15/17

GENERAL PLAN POLICIES:
LAND USE DESIGNATION: AGRICULTURE
COMMUNITY PLAN: ___
REGIONAL PLAN: ___
SPECIFIC PLAN: ___
SPECIAL POLICIES: ___
PHERE OF INFLUENCE: ___
ANNEX REFERRAL (LU-G17/MOU): ___

PROCEDURES AND FEES:

( )GPA:		( )MINOR VA:	
( )AA:		(✓)HD:	$992.00
(✓)CUP:	$4,569.00	(✓)AG COMM:	$93.00
( )DRA:		( )ALCC:	
( )VA:		(✓)IS/PER*:	$3,901.00
( )AT:		( )Viol. (35%):	
( )TT:		( )Other:	

Filing Fee: $ 9,555.00
Pre-Application Fee: -$247.00
Total County Filing Fee: $9,308.00

COMMENTS: ___

FILING REQUIREMENTS:
(✓) Land Use Applications and Fees
(✓) This Pre-Application Review form
(✓) Copy of Deed / Legal Description
(✓) Photographs
( ) Letter Verifying Deed Review
(✓) IS Application and Fees* * Upon review of project materials, an Initial Study (IS) with fees may be required.
(✓) Site Plans - 4 copies (folded to 8.5"x11") + 1 - 8.5"x11" reduction
(✓) Floor Plan & Elevations - 4 copies (folded to 8.5"X11") + 1 - 8.5"x11" reduction
(✓) Project Description / Operational Statement (Typed)
( ) Statement of Variance Findings
( ) Statement of Intended Use (ALCC)
( ) Dependency Relationship Statement
( ) Resolution/Letter of Release from City of ___
Referral Letter # ___

OTHER FILING FEES:
(✓) Archaeological Inventory Fee: $75 at time of filing (Separate check to Southern San Joaquin Valley Info. Center)
(✓) CA Dept. of Fish & Wildlife (DFW): ($50) ($50+$2,792.25; $50+$2,010.25) (Separate check to Fresno County Clerk for pass-thru to DFW. Must be paid prior to IS closure and prior to setting hearing date.)

PLU # 113 Fee: $247.00
Note: This fee will apply to the application fee if the application is submitted within six (6) months of the date on this receipt.

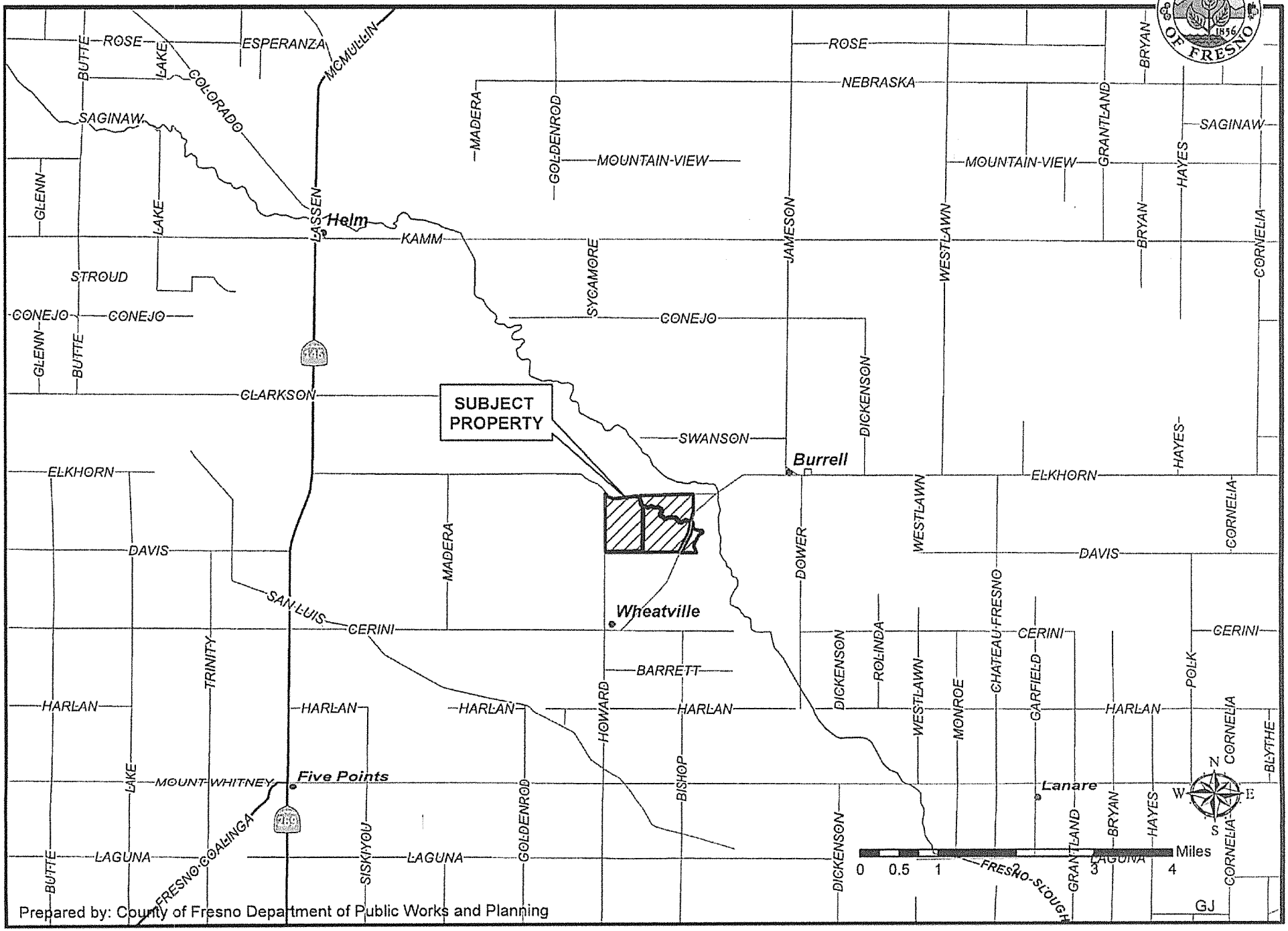
BY: [signature] EJAZ AHMAD DATE: 06/19/17
PHONE NUMBER: (559) 600-4204

NOTE: THE FOLLOWING REQUIREMENTS MAY ALSO APPLY:

( ) COVENANT	(✓) SITE PLAN REVIEW
( ) MAP CERTIFICATE	(✓) BUILDING PLANS
( ) PARCEL MAP	(✓) BUILDING PERMITS
( ) FINAL MAP	( ) WASTE FACILITIES PERMIT
( ) FMFCD FEES	(✓) SCHOOL FEES
( ) ALUC or ALCC	( ) OTHER (see reverse side)

CUP 3590

LOCATION MAP



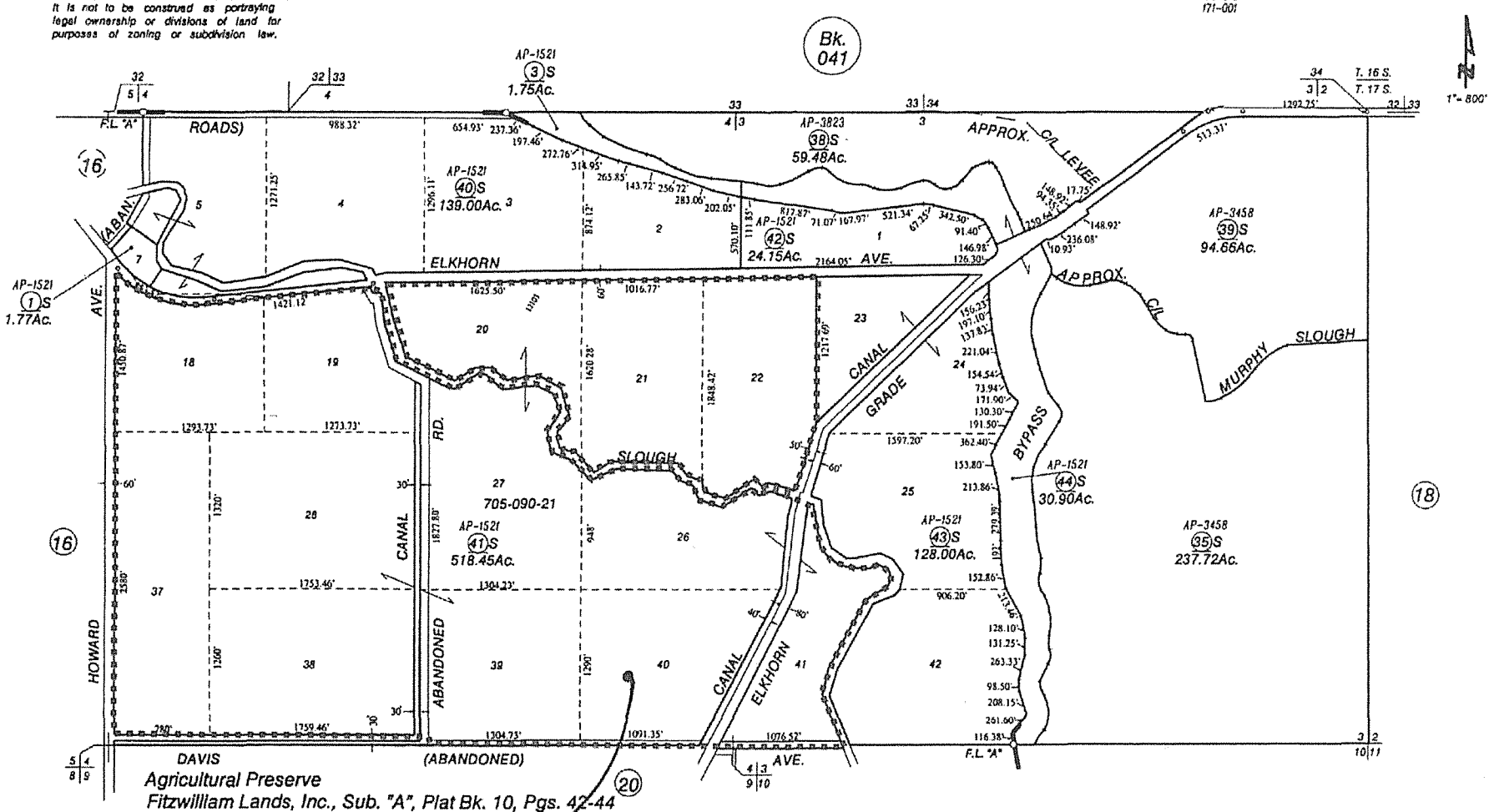
Prepared by: County of Fresno Department of Public Works and Planning

--- NOTE ---
This map is for Assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.

SUBDIVIDED LAND & POR. SEC'S. 3 & 4, T. 17 S., R. 18 E., M. D. B. & M.

Tax Rate Area
170-010
171-001

050-17



Agricultural Preserve
Fitzwilliam Lands, Inc., Sub. "A", Plat Bk. 10, Pgs. 42-44

Assessor's Map Bk. 050 - Pg. 17
County of Fresno, Calif.

NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.

05-16-2012 DK

PROJECT SITE

April 14, 2017

RE: Operational Statement for Open Sky Ranch

Open Sky Ranch, located at 12103 W. Elkhorn Avenue, Burrell CA.

Open Sky Ranch wishes to amend their current permit to add 700 milking cows and the ability to add Substrates to the digester. The animal number increase will not create a need for additional housing.

Sincerely submitted,

Innovative Ag Services, LLC
1201 Delta View Road, Suite 5 Hanford, CA 93230
Office (559) 587-2800 Fax (559) 587-2801

CUP 3590

Operational Statement Questions

Facility Name: **Open Sky, 12103 W. Elkhorn Avenue, Burrell CA 93607**

County: **Fresno County**

1. Detailed Description of the existing nature of the operation.
   Dairy Farm - A class of Agriculture for long term milk production. Milk is produced and hauled off-site and processed into dairy products such as cheese, butter, etc.

2. What is the proposed operation and how does it relate to the existing operation?
   Add an additional 700 milking cows to the existing herd size. Current milking permit allows 5384 total mature cows.
   New total would be 6084 mature cows.

3. How many cattle are on site?
   5384 total mature , proposed 6084 total.

4. Will the proposal increase the number cattle? **Yes** If so, by how many? **700**

5. Number of customers or visitors per day. **0**

6. Number of employees **46**.
   Will the proposal increase the number of employees? **No**

7. Number of services and delivery vehicles per day or per week. **Less than 10/day**

8. Are any goods to be sold on-site? **No** If so, are these goods grown or produced on-site or at some other location?_____

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9. What equipment is used on the entire site?
   Tractors, Loaders, Milking Machines, Feed Mixer's/Trailers

10. What supplies or materials are used and how are they store?
    Silage - Both corn and wheat are stored under a cover.
    Hay - Grains are stored in a feed bunker, that has a roof.

11. Does the use cause an unsightly appearance? No

12. List and describe any solid or liquid wastes to be produced on site.
    Liquid manure and dry manure - this is the excretion from cattle.

13. Estimated volume of water to be used (gallons per day). 212,000 gallons
    Source of water? Well

14. Describe any proposed advertising including size, appearance, and placement.
    N/A

15. Will all existing buildings continue to be used or will new buildings be constructed?
    Yes, all existing buildings will remain in use.

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16. Explain which buildings or what portion of buildings will be used in the operation.

N/A

17. Add any additional information that will provide a clear understanding of the project or operation.

N/A

18. Identify all Owners.

Eric & Katelyn te Velde

Fresno Emergency Response Plan

In Case of an Emergency Storage Facility Spill, Leak or Failure

Implement the following first containment steps:

a. Stop all other activities to address the spill.
b. Stop the flow. For example, use skid loader or tractor with blade to contain or divert spill or leak.
c. Call for help and excavator if needed.
d. Complete the clean-up and repair the necessary components.
e. Assess the extent of the emergency and request additional help if needed.

In Case of an Emergency Spill, Leak or Failure during Transport or Land Application

Implement the following first containment steps:

a. Stop all other activities to address the spill and stop the flow.
b. Call for help if needed.
c. If the spill posed a hazard to local traffic, call for local traffic control assistance and clear the road and roadside of spilled material.
d. Contain the spill or runoff from entering surface waters using straw bales, saw dust, soil or other appropriate materials.
e. If flow is coming from a tile, plug the tile with a tile plug immediately.
f. Assess the extent of the emergency and request additional help if needed.

Emergency Contacts

Department / Agency	Phone Number
Innovative Ag Services, LLC	(559) 587-2800
Fire	(559) 621-4199
Rescue services: Ambulance	(559) 443-5900
Veterinarian	
Sheriff or local police	(559) 488-3939
California Fish and Game	(916) 445-9338
California Office of Emergency Services (OES)	(800) 852-7550

Nearest available excavation equipment/supplies for responding to emergency

Equipment Type	Contact Person	Phone Number
Pumping		
Excavating		
Hauling		

Contacts to be made by the owner or operator within 24 hours

Organization	Phone Number
Regional Water Quality Control Board (RWQCB)	(559) 445-5116
County Health Department	(559) 600-3200
Office of Emergency Services	(559) 459-6000

Be prepared to provide the following information:

a. Your name and contact information.
b. Farm location (driving directions) and other pertinent information.
c. Description of emergency.
d. Estimate of the amounts, area covered, and distance traveled.
e. Whether manure has reached surface waters or major field drains.
f. Whether there is any obvious damage: employee injury, fish kill, or property damage.
g. Current status of containment efforts.

VECTOR CONTROL PROGRAM

Pond Management
Ponds are managed and maintained to prevent breeding of vectors, in accordance with the local county Mosquito Abatement District.

Ponds are managed to eliminate coves and irregularities around the perimeter. Debris, vegetation, and dead algae will not accumulate on the water surface. Solid manure accumulation will be mechanically removed if needed.

MORTALITY PROGRAM

Mortality Management
This facility utilizes a Rendering Service for disposal. Rendering receipts are enclosed.

County of Fresno

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

INITIAL STUDY APPLICATION

INSTRUCTIONS

Answer all questions completely. An incomplete form may delay processing of your application. Use additional paper if necessary and attach any supplemental information to this form. Attach an operational statement if appropriate. This application will be distributed to several agencies and persons to determine the potential environmental effects of your proposal. Please complete the form in a legible and reproducible manner (i.e., USE BLACK INK OR TYPE).

OFFICE USE ONLY
IS No. 7353
Project No(s). CUP 3590
Application Rec'd.:

GENERAL INFORMATION

1. *Property Owner :* Eric TeVelde *Phone/Fax* 559-707-1665
   Mailing Address: 12103 W. Elkhorn Avenue (*Street*) Burrell (*City*) CA/93607 (*State/Zip*)
2. *Applicant :* Eric TeVelde *Phone/Fax:* 559-707-1665
   Mailing Address: 12103 W. Elkorn Avenue (*Street*) Burrell (*City*) CA/93607 (*State/Zip*)
3. *Representative:* Innovative Ag Services, LLC *Phone/Fax:* 559-587-2800/559-587-2801
   Mailing Address: 1201 Delta View Rd. Ste. 5 (*Street*) Hanford (*City*) CA/93230 (*State/Zip*)
4. *Proposed Project:* Add 700 milking cows. No structures. Add substrates to digester.
5. *Project Location:* 12103 W. Elkhorn Avenue, Burrell CA 93607
6. *Project Address:* 12103 W. Elkhorn Avenue, Burrell, CA 93607
7. *Section/Township/Range:* 3 /17S /18E 8. *Parcel Size:*
9. *Assessor's Parcel No.* 050-170-41s

10. *Land Conservation Contract No. (If applicable):* _____

11. *What other agencies will you need to get permits or authorization from:*

____	*LAFCo (annexation or extension of services)*	☑	*SJVUAPCD (Air Pollution Control District)*
____	*CALTRANS*	____	*Reclamation Board*
____	*Division of Aeronautics*	____	*Department of Energy*
☑	*Water Quality Control Board*	____	*Airport Land Use Commission*
____	*Other* _____		

12. *Will the project utilize Federal funds or require other Federal authorization subject to the provisions of the National Environmental Policy Act (NEPA) of 1969?* ____ *Yes* _X_ *No*

If so, please provide a copy of all related grant and/or funding documents, related information and environmental review requirements.

13. *Existing Zone District*[1]*:* N/A

14. *Existing General Plan Land Use Designation*[1]*:* Agricultural

ENVIRONMENTAL INFORMATION

15. *Present land use:* Dairy Farm
Describe existing physical improvements including buildings, water (wells) and sewage facilities, roads, and lighting. Include a site plan or map showing these improvements:

Describe the major vegetative cover: Crops

Any perennial or intermittent water courses? If so, show on map: N/A

Is property in a flood-prone area? Describe:

No

No

16. *Describe surrounding land uses (e.g., commercial, agricultural, residential, school, etc.):*

North: Agricultural

South: Agricultural

East: Agricultural

West: Agricultural

17. *What land use(s) in the area may be impacted by your Project?:* N/A

18. *What land use(s) in the area may impact your project?:* N/A

19. *Transportation:*

NOTE: The information below will be used in determining traffic impacts from this project. The data may also show the need for a Traffic Impact Study (TIS) for the project.

A. *Will additional driveways from the proposed project site be necessary to access public roads?*
_____ *Yes* _x_ *No*

B. *Daily traffic generation:*

I. *Residential - Number of Units* _____
Lot Size _____
Single Family _____
Apartments _____

II. *Commercial - Number of Employees* _____
Number of Salesmen _____
Number of Delivery Trucks _____
Total Square Footage of Building _____

III. *Describe and quantify other traffic generation activities:* _____

20. *Describe any source(s) of noise from your project that may affect the surrounding area:* N/A

21. *Describe any source(s) of noise in the area that may affect your project:* N/A

22. *Describe the probable source(s) of air pollution from your project:* Dust or PM-10 from cows

23. *Proposed source of water:*
[✓] *private well*
( ) *community system[3]--name:* _____

24. *Anticipated volume of water to be used (gallons per day)[2]:* _____

25. *Proposed method of liquid waste disposal:*
( ) septic system/individual
( ) community system[3]–name Existing system in place

26. *Estimated volume of liquid waste (gallons per day)[2]:* 0

27. *Anticipated type(s) of liquid waste:* 0

28. *Anticipated type(s) of hazardous wastes[2]:* 0

29. *Anticipated volume of hazardous wastes[2]:* 0

30. *Proposed method of hazardous waste disposal[2]:* N/A

31. *Anticipated type(s) of solid waste:* Manure

32. *Anticipated amount of solid waste (tons or cubic yards per day):* _____

33. *Anticipated amount of waste that will be recycled (tons or cubic yards per day):* 0

34. *Proposed method of solid waste disposal:* Export

35. *Fire protection district(s) serving this area:* Fresno County/Cal Fire

36. *Has a previous application been processed on this site? If so, list title and date:* _____

37. *Do you have any underground storage tanks (except septic tanks)? Yes_____ No* X

38. *If yes, are they currently in use? Yes_____ No* X

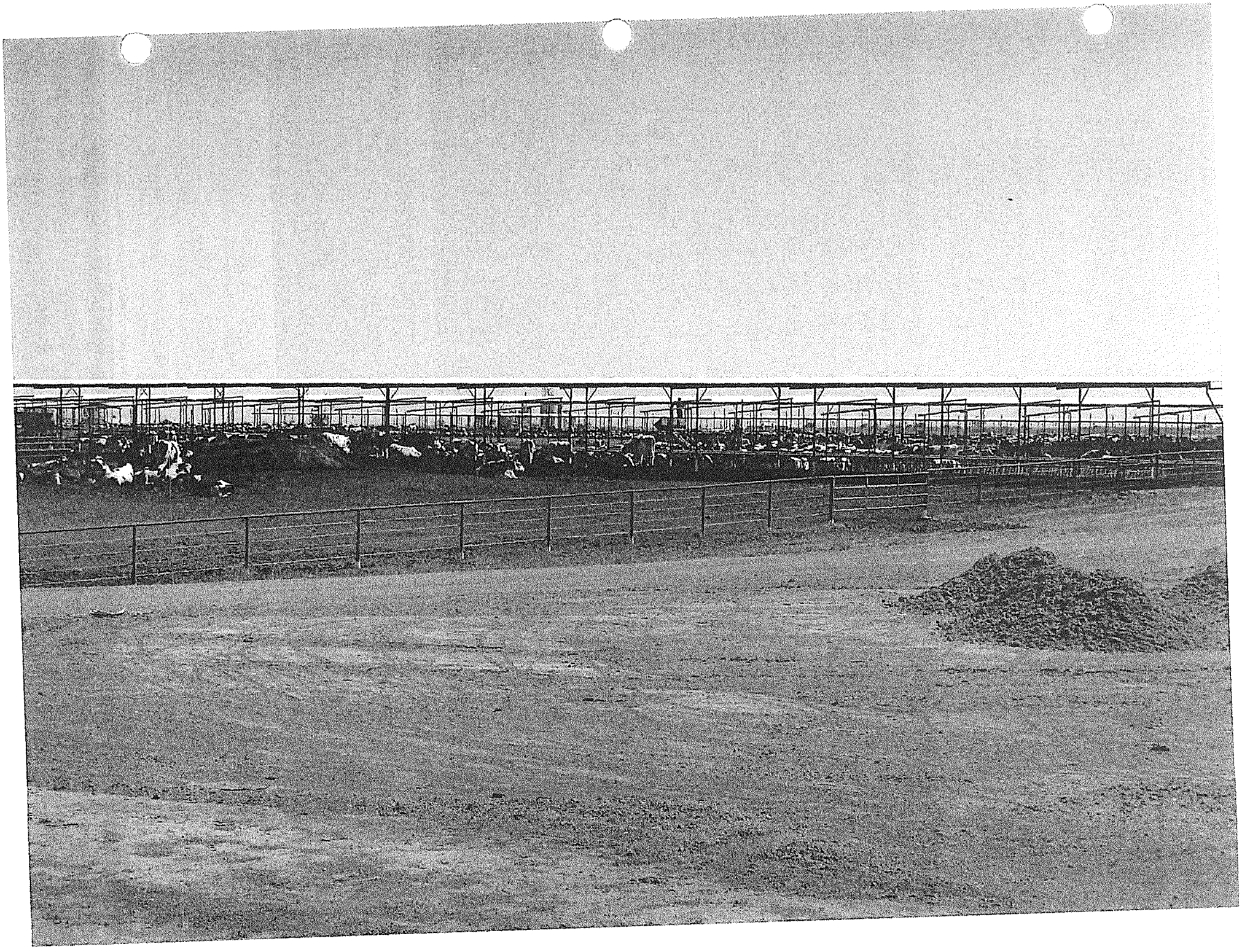
TO THE BEST OF MY KNOWLEDGE, THE FOREGOING INFORMATION IS TRUE.

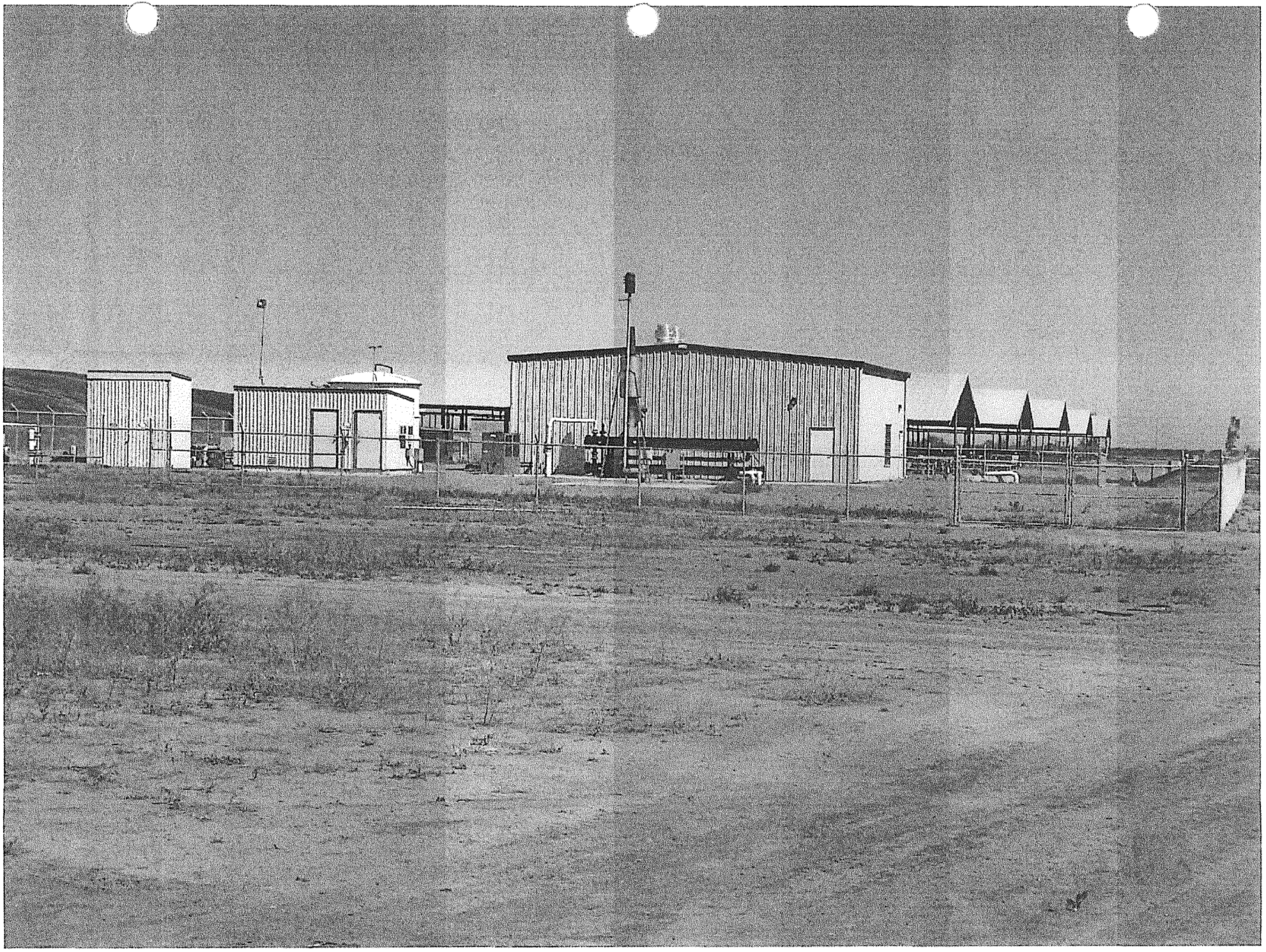
_____ 7-20-17

SIGNATURE *DATE*

[1] *Refer to Development Services Conference Checklist*
[2] *For assistance, contact Environmental Health System, (559) 600-3357*
[3] *For County Service Areas or Waterworks Districts, contact the Resources Division, (559) 600-4259*

(Revised 5/2/16)

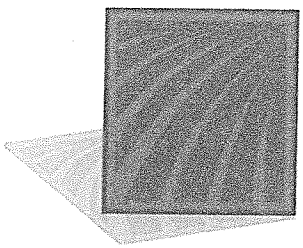




Nutrient Management Plan

OPEN SKY DAIRY
12103 W. ELKHORN AVENUE
BURREL, CA 93607

Prepared by:



Innovative Ag Services, LLC
1201 Delta View Road, Suite 5 Hanford, CA 93230
Office (559) 587-2800 Fax (559) 587-2801

NUTRIENT MANAGEMENT PLAN

A Nutrient Management Plan (NMP) is required for all existing milk cow dairies subject to Waste Discharge Requirements General Order No. R5-2013-0122. This Nutrient Management Plan has been prepared in accordance with the General Order requirements as outlined in Attachment C, Sections I. – VII. and Technical Standards for Nutrient Management Sections I. – X. The NMP provides monitoring guidelines for the facility and land application area are while budgeting the nutrients applied to the land application area(s) considering all sources of nutrients, crop requirements, soil types, climate, and local conditions in order to prevent adverse impacts to surface water and groundwater quality. The NMP must take the site-specific conditions into consideration in identifying steps that will minimize nutrient movement through surface runoff or leaching past the root zone.

OPEN SKY DAIRY

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

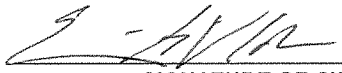
OPERATOR:

_____
SIGNATURE OF OPERATOR

_____
PRINT NAME

_____
DATE

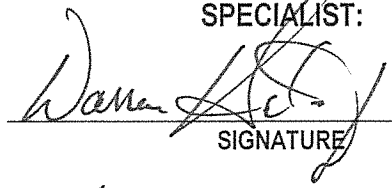
OWNER:


SIGNATURE OF OWNER

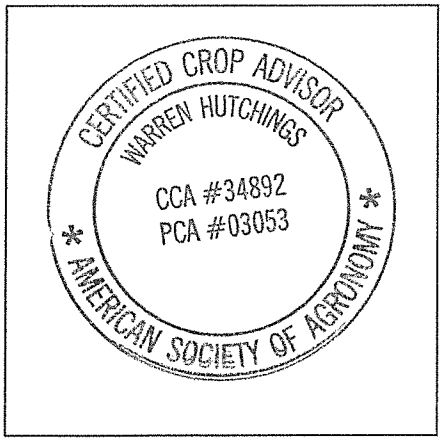
Eric te Velde
PRINT NAME

7-20-17
DATE

CERTIFIED NUTRIENT MANAGEMENT PLAN SPECIALIST:


SIGNATURE

6-1-17
DATE



DAIRY FACILITY INFORMATION

A. Name of the Facility & County Location

Facility Name:	OPEN SKY DAIRY
County:	FRESNO

B. Facility Location

Address:	12103 W. ELKHORN AVENUE BURREL, CA 93607

C. Responsible Party:

Operator:	ERIC TE VELDE 1652 4TH AVENUE KINGSBURG, CA 93631
Owner:	SAME AS OPERATOR

TABLE OF CONTENTS

FIGURES:

I. LAND APPLICATION AREA INFORMATION

A. Land Application Area Map (See Attachment A)

This map identifies of all land application areas (under the control of the discharger, whether it is owned, rented or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling) on a single published base map (topographical map or aerial photo) at an appropriate scale which includes:

i. A field identification system (Assessor's Parcel Number; land application area by name or number; total acreage of each land application area; indication if each land application area is owned, rented or leased by the Discharger; indication what type of waste is applied; drainage flow direction in each field, nearby surface waters, and storm water discharge points; tailwater and storm water drainage controls; subsurface (tile) drainage systems; irrigation supply wells and groundwater monitoring wells; sampling locations for discharges of storm water and tailwater to surface water from the field; and

ii. Process wastewater conveyance structures; discharge points and discharge mixing points with irrigation water supplies; pumping facilities; flow meter locations; drainage ditches and canals, culverts, drainage controls (berms, levees, etc.), and drainage easements.

B. Crop Map (See Attachment B)

This map identifies each field's common name, total acreage, crops grown, and crop rotation.

C. Wastewater Agreements (See Attachment C)

Copies of written agreements with third parties that receive process wastewater for their own use from the discharger's dairy are attached, if applicable.

D. Vicinity Map (See Attachment D)

Identify each field under the control of the discharger and within five miles of the dairy where neither process wastewater nor manure is applied. Each field shall be identified on a single published base map at an appropriate scale by the following: Assessors' Parcel Number, total acreage, and information regarding who owns or leases the field

II. SAMPLING AND ANALYSIS PLAN

A. Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies.

Excerpt from: California Regional Water Quality Control Board, Central Valley Region, Sampling and Analysis http://www.waterboards.ca.gov/centralvalley/water_issues/dairies/general_order_guidance/sampling_analysis/index.shtml

Monitoring and Reporting Program No. R5—2013-0122(MRP) requires existing milk cow dairies to conduct nutrient and groundwater monitoring. The MRP does not identify complete sampling procedures to be followed for this monitoring. The sampling and analytical procedures listed below for nutrients (process wastewater, manure, plant tissue, soil, and irrigation water) and groundwater are approved procedures. As noted in General Monitoring Requirements item 2 of the MRP, "When special procedures appear to be necessary at an individual dairy, the Discharger may request approval of alternative sampling procedures for nutrient management. The Executive Officer will review such requests and if adequate justification is provided, may approve the requested alternative sampling procedure."
Note: The University of California is developing recommendations on how to conduct sampling required by the Water Board's Order. These recommendations will be posted on this web site as soon at the material has been submitted and approved for use by the Executive Officer.

Electrical Conductivity

Where field measurement of electrical conductivity is required by the Order, laboratory measurements of electrical conductivity will be accepted if sample collection, preservation and holding time all comply with procedures provided by the laboratory and the laboratory is accredited for conducting such testing.

Total Ammonia-Nitrogen and Un-ionized Ammonia Nitrogen

Where field measurement of total ammonia-nitrogen and un-ionized ammonia nitrogen is required by the Order, laboratory analyses will be accepted if sample collection, preservation and holding time all comply with procedures provided by the laboratory and the laboratory is accredited for conducting such testing. The procedure used by the lab must have a minimum detection limit (MDL) of 0.05 mg/L or lover for un-ionized ammonia.

Process Wastewater Sampling and Analysis

1. *Process wastewater composite samples shall be collected as follows:*
    a. *A representative composite or grab sample of process wastewater shall be prepared. Containers that are reused shall be cleaned between sampling events.*
    b. *The samples shall be collected at a point that is prior to any dilution or blending with irrigation water and shall be representative of the process wastewater applied to the land application area.*
2. *Laboratory analyses of process wastewater applied to land application areas shall be conducted by a laboratory that is either accredited for such analyses by the California Department of Health Services or that is participating in the manure analysis proficiency (MAP) program. These laboratory analyses shall be conducted in accordance with the Title 40 Code of Federal Regulations Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants), MAP program-approved methods or other test methods approved by the Executive Officer.*

Manure Sampling and Analysis

1. *Manure composite samples shall be collected as follows:*
    a. *Equal-size samples of manure shall be collected from a minimum of three locations around the manure pile. These samples shall be collected from a depth of no less than one foot below the surface of the manure pile.*
    b. *The three samples shall be combined and thoroughly mixed to make a single composite sample.*
    c. *Sample containers that are reused shall be cleaned between sampling events.*
2. *Manure analysis shall be conducted by methods utilized by the Manure Analyses Proficiency (MAP) Testing Program or accepted by the University of California and laboratories participating in the MAP Testing Program or other programs whose tests are accepted by the University of California.*

Plant Tissue Sampling and Analysis

1. *Samples of harvested silage shall be collected as follows:*
    a. *Samples shall be collected within one week of harvest from a minimum of five locations in the*

silage pile.

   b. Samples shall be obtained from a minimum depth of one foot below the silage pile surface.
   c. The five samples shall be combined and thoroughly mixed to make a single composite sample.

2. *Harvested plant tissue sample samples from crops other than silage shall be collected as follows:*
   a. At least 10 equal-size samples (for example, using a two or three-pound coffee can) of the harvested portion of the crop shall be collected from the storage area. These samples shall be combined and thoroughly mixed in a plastic bag, taking care not to allow drying.
   b. Mid-season plant tissue samples, if collected, shall be collected following University of California recommendations for the specific plan being tested.
3. *Plant tissue analysis shall be conducted by: methods utilized by the North American Proficiency Testing (NAPT) Program or accepted by the University of California; and laboratories participating in the NAPT Program or other programs whose tests are accepted by the University of California.*

Soil Sampling and Analysis

1. *Soil samples from each land application area shall be collected after harvest of a crop and before nutrients are added for the next crop as follows:*
   a. Dischargers with less than 400 acres shall collect a composite sample for every 40 acres of land application area. Dischargers with 400 or more acres shall collect a composite soil sample for every 80 acres.
   b. Each composite Sample shall be composited by:
      i. Placing equal volumes of soil from each of 10 or more sample sites for each 40 or 80 acre composite area and for each sample depth, in a clean plastic bucket. Moist soils may be air dried until they can be mixed easily.
      ii. Thoroughly mixing the sample and placing at least one pint of the composite sample in a clean plastic container.
   c. Samples from each site shall be split into sections representing the depth intervals to be sampled (see above). All samples from the same depth interval for all sites within each land application area shall be composited for analyses.
   d. Soil samples shall be collected with soil probes or augers and composited as described below:
      i. At least three of the 10 samples shall be from the upper third of the land application area.
      ii. In fields where soil texture, crop yield, or other soil-related factors vary, at least 10 samples shall be collected form each different area and composites from each area shall be analyzed separately.
      iii. Sample locations in each land application area shall be recorded on a sketch for future sampling consistency.
      iv. Soil probes or augers shall be cleaned between sample depth intervals.
2. *Analyses of soil shall be conducted by: methods utilized by the North American Proficiency Testing (NAPT) Program or accepted by the University of California; and laboratories participating in the NAPT Program or other programs whose tests are accepted by the University of California. This shall include analysis for nitrate-nitrogen utilizing the 2 M potassium chloride extract of soil.*
3. *Analyses of phosphorus in soil samples shall be performed using the method recommended by the University of California or the bicarbonate-P or Olsen-P test.*

Irrigation Water Sampling and Analysis

1. *Irrigation water samples shall be collected as follows:*
   a. Samples shall be collected before the addition of process wastewater; and
   b. Samples from irrigation wells shall be collected after the pump has run for a minimum of 30 minutes or after at least three well volumes have been purged from the well.
2. *Laboratory analyses of irrigation water shall be conducted by a laboratory certified for such analyses by the California Department of Health Services. These laboratory analyses shall be conducted in accordance with the Title 40 Code of Federal Regulations Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants) or other test methods approved by the Executive Officer.*
3. *All nutrient monitoring results shall be included in the Annual Monitoring Report (see Reporting Requirements C.2.n).*

Groundwater Sampling and Analysis

1. *Groundwater samples from supply wells and subsurface (tile) drainage systems shall be collected as specified on page MRP-7 of the MRP.*
2. *Groundwater samples from monitoring wells shall be collected as specified in an approved Monitoring Well Installation and Sampling Plan (see Attachment A to Monitoring and Reporting Program No. R5-2013-0122).*
3. *Laboratory analyses of all groundwater samples (including samples from supply wells, subsurface (tile) drainage systems, and monitoring wells) shall be conducted by a laboratory certified for such analyses by the California Department of Health Services. These laboratory analyses shall be conducted in accordance with the Title 40 Code of Federal Regulations Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants) or other test methods approved by the Executive Officer.*

B. Process Wastewater

Process Wastewater shall be sampled and analyzed as follows:
Each application:
Record the volume (gallons or acre-inches) and date of process wastewater application to each land application area.
Quarterly during one application event:
Field measurement of electrical conductivity. Laboratory analyses for nitrate-nitrogen (only when retention pond is aerated), un-ionized ammonia-nitrogen, total Kjeldahl nitrogen, total phosphorus, total potassium, and total dissolved solids.
Once every two years (biennially):
Laboratory analyses for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride).
Annually
Laboratory analyses of liquid process wastewater, prior to blending with irrigation water, for pH, total dissolved solids, electrical conductivity, nitrate-nitrogen, ammonium-nitrogen, total Kjeldahl nitrogen, total phosphorus, and total potassium.

i. Process wastewater shall be collected as follows:
   a. A representative sample must be collected during an application event.
   b. The sample should represent what is being applied to a field
   c. A minimum of 1 liter (or an amount as specified by the laboratory), must be collected in a clean container, kept cool, and be delivered to the laboratory within 24 hours.

ii. Laboratory analysis of process wastewater shall be conducted by a laboratory that is either accredited for such analyses by the California Department of Health Services or that is participating in the manure analysis proficiency (MAP) program. These laboratory analyses shall be conducted I accordance with the Title 40 Code of Federal Regulations Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants), MAP program-approved methods or other test methods approved be the Executive Officer.

iii. If a management change is made on the facility that affects processed wastewater, a sample shall be taken to test for a change in the processed wastewater. Examples: Freshwater is added to the lagoon, Herd size/type modifications, New or Modified Solid Separating System.

C. Manure

Manure shall be sampled and analyzed as follows:
Once every two years (biennially): Laboratory analyses for general minerals (calcium, magnesium, sodium, sulfur, chloride) and fixed solids (ash). Twice per year: Laboratory analyses for total nitrogen, total phosphorus, total potassium, and percent moisture. Each application to each land application area:
Record the percent moisture and total weight (tons) applied.
Each offsite export of manure:
Record the percent moisture and total weight (tons) exported. Laboratory analyses for percent moisture.
Annually:
Record the total dry weight (tons) of manure applied annually to each land application area and the total dry weight (tons) of manure exported offsite.

i. Manure shall be collected as follows:
   a. Equal-size samples of manure shall be collected from a minimum of three locations around the manure pile. These samples shall be collected from a depth of no less than one foot below the surface of the manure pile.
   b. The three samples shall be combined and thoroughly mixed to make a single composite sample and deliver to a laboratory within 72 hours.
   c. Sample containers that are reused shall be cleaned between sampling events.

ii. Manure analyses shall be conducted by methods utilized by the Manure Analyses Proficiency (MAP) Testing Program or accepted by the University of California and laboratories participating in the MAP Testing Program or other programs whose tests are accepted by the University of California.

iii. Samples shall be taken within 30 days of the application or export of the manure to ensure representation of the manure. Each type of solid manure shall be sampled twice a year if available for land application or export. Example: Solid Separator Manure, Mature Cow Corral Manure, Heifer Corral Manure, Calf Manure, Sludge,...

D. Plant Tissue

Plant Tissue shall be sampled and analyzed as follows:
At harvest:

Record the percent moisture and total weight (tons) of harvested material removed from each land application area.

Laboratory analyses for total nitrogen, total phosphorus, total potassium (expressed on a dry weight basis), fixed solids (ash), and percent moisture.

The following test is only required if the Discharger wants to add fertilizer in excess of 1.4 times the nitrogen expected to be removed by the harvested portion of the crop (see Attachment C of Order No. R5-2013-0122 for details): Mid-season, if necessary to assess the need for additional nitrogen fertilizer during the growing season.
Laboratory analyses for total nitrogen, expressed on a dry weight basis.

i. Plant tissue shall be collected as follows:
   a. Five to ten representative samples shall be combined and thoroughly mixed to make a single composite sample.
   b. This single composite sample shall be placed into a minimum 1 quart size bag, kept cool, and be delivered to the laboratory within 72 hours.
   c. Any mid-season plant tissue samples taken to evaluate the agronomic needs of the crop in-season shall be collected following University of California recommendations for the specific plant being tested.

ii. Plant tissue shall be sampled and analyzed as follows:
   a. Each harvest, from each field, laboratory analyses for total nitrogen, total phosphorous, total potassium (expressed on a dry weight basis), fixed solids (ash), and percent moisture.
   b. If the discharger wants to add fertilizer in excess of 1.4 times the nitrogen expected to be removed by the harvested portion of the crop, a mid-season laboratory analysis for total nitrogen, expressed on a dry weight basis.

iii. Plant tissue analyses shall be conducted by: methods utilized by the North American Proficiency Testing (NAPT) Program or accepted by the University of California; and laboratories participating in the NAPT Program or other programs whose test are accepted by the University of California.

iv. Samples must represent the land application management area. A land application management area is defined as a land application area that is managed as a single unit, in which all planting, nutrient applications, and harvest events occur as single events, and not over separate time periods. If nutrient applications, planting dates, or harvest dates are managed separately within a land application area, then the area must be sampled separately in accordance to the management differences.

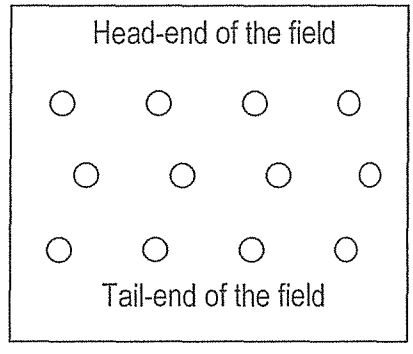
v. Each type of plant tissue removed from the field must be sampled to represent each type of plant tissue remove that year. For example: For an 'Alfalfa' crop, each type of harvest must be sampled independently each year it is harvested, thus if Alfalfa Hay, Alfalfa Green Chop, Alfalfa Dry Chop, and/or Alfalfa/Oat Hay Blend is harvested – then each type must be sample to reflect the changes in nutrient extraction that they may present. Corn Grain and Corn Fodder or Wheat Grain and Wheat Straw will both need to be harvested if they are harvested independently to represent the differences they will create in nutrient extraction.

E. Soil

i. Soil samples shall be collected as follows:

a. Dischargers with less than 400 acres shall collect a composite sample for every 40 acres of land application area. Dischargers with 400 or more acres shall collect a composite soil sample for every 80 acres.
b. In fields that are larger than the 40/80 acres soil sampling requirements, the field must be split perpendicular to the head-end of the field. This will still facilitate the proper collection of samples in relation to the head and tail ends of the field.
c. Each sample shall be composed of 12 sub-samples. Four from the head end of the field, four from the center of the field, and four from the tail end of the field (Figure 1).

Figure 1:



d. Soil samples shall be collected with soil probes or augers to a depth of 18" and composited as described below:

ii. In fields where soil texture, crop yield, or other soil-related factors vary, at least 10 samples shall be collected from each different area and composites from each area shall be analyzed separately.

iii. Sample locations in each land application area shall be recorded on a sketch for future sampling consistency.

iv. Soil probes or augers shall be cleaned between sample depth intervals.

v. Each composite sample shall be composited by doing the following:

a. Moist soils may be air dried until they can be mixed easily
b. Thoroughly mixing the sample and placing at least one pint of the composite sample in a clean plastic container.

vi. Soils shall be samples and analyzed for:

a. Saturation Percentage (SP%), pH, Electrical Conductivity (EC), Calcium, Magnesium, Sodium, Potassium, Chloride, Exchangeable Sodium Percentage (ESP), Lime Presence, Boron, Nitrate-Nitrogen (NO3-N), Phosphorus (PO4-P), Soluble Potassium (K-AA), Zinc, Maganese, Iron, Copper and Sulfate (SO4S).
b. Analyses of phosphorus in soil samples shall be performed using the method recommended by the University of California or the bicarbonate-P or Olsen-P test. In addition to the 40/80 acre requirement, soils shall be sampled for each land application management unit
c. Analyses of the soil shall be conducted by: methods utilized by the North American Proficiency Testing (NAPT) Program or accepted by the University of California; and laboratories participating in the NAPT Program or other programs whose test are accepted by the University of California. This shall include analysis for nitrate-nitrogen and ammonium-nitrogen utilizing the 2 M potassium chloride extract or soil.

vii. Analyses of the soil shall be conducted by: methods utilized by the North American Proficiency Testing (NAPT) Program or accepted by the University of California; and laboratories participating in the NAPT Program or other programs whose test are accepted by the University of California. This shall include analysis for nitrate-nitrogen and ammonium-nitrogen utilizing the 2 M potassium chloride extract or soil.

viii. Soils shall be sampled from each land application area after the harvest of a crop and before nutrients are added for the next crop, and:

a. At least once every five (5) years, or
b. Annually when there is a change in the cropping pattern/rotations or field management techniques.
c. Fields/soils that have been in alfalfa production, or other legume copes, shall be sampled before the production of the next crop to determine any nitrogen fixing by the legume crop.

F. Irrigation Water

Irrigation Water[1] shall be sampled and analyzed as follows:
Each irrigation event for each land application area:
Record volume (gallons or acre-inches)[2] and source (well or canal) of irrigation water applied and dates applied. One irrigation event during each irrigation season during actual irrigation events: For each irrigation water source (well and canal): Electrical conductivity, total dissolved solids, and total nitrogen.[3] Data collected to satisfy the groundwater monitoring requirements (below) can be used to satisfy this requirement.
[1] The Discharger shall monitor irrigation water (from each water well source and canal) that is used on all land application areas. [2] Initial volume measurements may be the total volume for all land application areas. [3] In lieu of sampling the irrigation water, the Discharger may provide equivalent data from the local irrigation district.

i. Irrigation water shall be collected as follows:

a. Samples from irrigation wells shall be collected after the pump has run for a minimum of 30 minutes or after at least three well volumes have been purged from the well.
b. Irrigation districts may provide a water analysis of the surface water delivered that will meet the regulatory requirements. If not, then a representative sample must be collected.
c. Samples shall be submitted to a laboratory within 24 hours of sampling.

ii. Laboratory analyses of irrigation water shall be conducted by a laboratory certified for such analyses by the California Department of Health Services. These laboratory analyses shall be conducted in accordance with the Title 40 Code of Federal Regulations Part 136 (Guidelines Established Test Procedures for the Analysis of Pollutants) or other test methods approved by the Executive Officer.

G. Site Specific Instructions (See Attachment E).

III. NUTRIENT BUDGET

In accordance to the Waste Discharge Requirements as indicated by the General Order, Attachment C, Section III, page C-4, the discharger shall develop a nutrient budget for each land application area. The nutrient budget shall establish planned rates of nutrient application for each crop based on soil test results, manure and process wastewater analyses, irrigation water analyses, crop nutrient requirements and patterns, seasonal and climatic conditions, the use and timing of irrigation water, and the nutrient application restrictions.

The attached Nutrient Budget prepared by Innovative Ag Services, LLC analyzes both the supply and demand of the nutrients for land applications. By utilizing the American Society of Agricultural Engineers excretion factors, an estimated supply of nutrients can be made to determine the nutrient supply from a discharge facility. The supply of nutrients from other sources (atmospheric deposition, irrigation water, residual soils, commercial fertilizer, etc.) can also be estimated using historical records and the best available data. The demands for these nutrients are made using a field-by-field analysis.

The following section contains guidelines for the discharger and the Certified Nutrient Management Plan Specialist regarding general nutrient production and balance analysis, field-by-field nutrient budgeting, general salt production and loading analysis, as well as creating a nutrient budget summary and storage period summary.

A. General Nutrient Production and Balance Analysis (Attachment F)

i. Summary

In compliance with the General Order, the attached General Nutrient Production and Budget Analysis provides an overview of the expected supply of nutrients available from a discharge facility anticipated for land application use or export from the facility. This analysis focuses on the nitrogen, phosphorus and potassium nutrients found and analyzed in the dairy waste through a sampling and analysis program. The General Nutrient Production and Balance Analysis is a guide to assist the discharger and Certified Nutrient Management Specialist to administer the nutrients expected from a facility.

ii. Nutrient Measurement Method, Application, and Export:

a. The General Nutrient Production and Balance Analysis examines the amount of nitrogen, phosphorus and potassium expected to be generated by dairy waste at the discharger's facility are made using excretion factors based on standards established by the American Society of Agricultural Engineers. This analysis uses a 40 percent atmospheric loss of nitrogen on the production facility and breaks down the capture rate of the nitrogen in either the liquid or solid form. The capture rates of nitrogen are dependent upon the dairy facility's housing system and management practices. The American Society of Agricultural Engineers provides standards used to estimate capture rates between different housing systems (liquid form: 71% under a freestall system, 29% under a flush-lane, and 11% under an open-lot). This analysis allows the capture rate to be customized when site-specific data is available.

b. This analysis estimates the pounds of nitrogen, phosphorus and potassium available for land application or export to another user.

c. Land application of nutrients under the control of the discharger needs to be applied in accordance with the General Order and this Nutrient Management Plan. Exports of dairy waste must be tested and recorded with a "Manure Manifest" documentation provided by the

Regional Water Quality Control Board. An approved wastewater agreement is required prior to the export of processing wastewater from the dairy facility.

iii. Results

a. From the available nutrient for land application, this analysis gives simple guidelines to the discharger to estimate the amount of acres required mitigate this waste in crop production. Three different cropping scenarios are analyzed to give the discharger guidance as to the amount of acres that may be needed to balance the different nutrients.

- The high extraction analysis is based on a high yielding and aggressive cropped system that would extract 600 pounds of nitrogen, 90 pounds of phosphorus and 800 pounds of potassium per acre.
- The medium extraction analysis is based on an average mixed cropping system that would extract 400 pounds of nitrogen, 60 pounds of phosphorus and 500 pounds of potassium per acre.
- The low extraction analysis is based on a low yielding/producing system that would extract 200 pounds of nitrogen, 30 pounds of phosphorus and 200 lbs of potassium per acre.

b. The nitrogen analysis utilizes agronomic and regulatory standards of a 1.4 nitrogen ratio of applied nitrogen over extracted nitrogen.

c. The attached General Nutrient Production and Budget Analysis estimates the amount of acres needed to agronomically manage the nutrients found in dairy waste. There are many variables that may affect the specific nutrient balance and management on this facility and this analysis is to only serve as a guideline until further data can be collected and analyzed by a Certified Nutrient Management Plan Specialist.

B. General Salt Production and Loading Analysis (See Attachment G)

i. Guidelines

a. The attached General Salt Loading Analysis estimates the amount of salts generated by the discharge facility buy using the American Society of Agricultural Engineers standards for salt excretion on the herd that is housed at this facility. This analysis then evaluates the number of acres that may be needed to mitigate these salts.

b. This analysis uses the same capture rates as nitrogen to determine the amount of salts in both the liquid and the solid forms.

c. The applications of salts to land areas are not restricted under the General Order, yet this analysis establishes common agronomic guidelines useful for managing the salts generated from a discharge facility.

ii. Salt Production and Loading Mitigation

a. The discharge facility and Innovative Ag Services, LLC anticipate that the California Regional Water Quality Control Board will establish technical standards applicable for measuring and mitigating salt production and loading rates in collaboration with the University of California and the American Society of Agronomy.

b. This analysis uses a maximum loading rate of salt at 2,000 pounds per acre on a single crop and 3,000 pounds per acre on a double crop.

iii. Results

a. This analysis shows the number of acres that may be needed to mitigate salts at these maximum loading rates. The Certified Nutrient Management Specialist and the discharger can use this analysis as a guideline for the acres that may be required.

b. These results do not display the required acres to comply with law, rather the acres needed for common agronomic and environmental practices.

C. Nutrient Budget Summary and Storage Period (See Attachment H)

i. Purpose

a. The Nutrient Budget Summary is a review of the estimated supply of nutrient from the facility, the recommended application of nutrients to each field, the expected demand from each field, and the nutrient ratio for nitrogen, phosphorus and potassium.
b. This summary also reviews the whole farm nutrient balance by totaling the applied recommended application and the expected demand of nutrients. This analysis provides a helpful evaluation by holistically reviewing each discharge facility.
c. This summary evaluates the nitrogen, phosphorus and potassium nutrient with the different forms of discharge waste (liquid and solid).

ii. Benefits of the Nutrient Budget Summary

a. The attached Nutrient Budget Summary demonstrates if the recommend applications meet the demand of the crops with the expected supply from the facility.
b. This summary can also be use to predict the demand for export, both the solid and the liquid form.
c. Changes in the NMP can be made to maximize the combinations of nutrient types and forms being applied to the crops.

iii. Application and Storage

a. The Nutrient Budget Summary displays that there is a high demand of these valuable nutrients for crop production. While the timing of each application cannot be accurately established with the changing dynamics of climate conditions, the demand for nutrients and correlating irrigation will require applications to be made at a minimum of every 120 days. This Nutrient Management Plan evaluation establishes a maximum storage period of time anticipated between land applications events, (storage period), to be 120 days based on the proper timing of and compliance with Technical Standards V. C. of Attachment C in the General Order.

D. Field-by-Field Nutrient Budget (See Attachment I)

i. Data Sources

The Field-by-Field Nutrient Budget analysis focuses on each land application area and defines the crop(s) planned for production as required by the General Order. Each field budget is based off of the best available data including, but not limited to: harvest lab data, yield records, land application records, manure laboratory data, process wastewater laboratory data, irrigation water laboratory data, expected atmospheric deposition, and soil laboratory data.

ii. Nutrient Application Rate

The nutrient application rates for each application must follow the technical standards established by the General Order for Existing Milk Cow Dairies, R5-2013-0122 (Attachment C – Technical

Standards for Nutrient Management V. B.). The quantity of each nutrient source to be utilized for land application and crop production is defined to meet crops demand for the nutrients while complying with the General Order.

iii. Nutrient Application Timing and Methodology

a. The timing of applications within the field's budget are dependent on field conditions and are to be made using the Technical Standards established within the General Order for Existing Milk Cow Dairies, R5-2013-0122 (Attachment C – Technical Standards for Nutrient Management, Section V. C.).
b. Each application of nutrients shall be applied uniformly to application areas or as prescribed by precision agricultural techniques. Unless otherwise noted, the method for solid manure applications are to be made with a spreader truck and process wastewater applications are to be made by the mixing with a flood irrigation event.

IV. SURFACE WATER PROTECTIVE MEASURES

This section identifies all potential surface waters or conduits to surface water that are within 100 feet of any land application area. For each land application area that is within 100 feet of surface water or a conduit to surface water, the setback, vegetated buffer, or other alternative practice that will be implemented to protect surface water is identified.

Manure and process wastewater shall not be applied closer than 100 feet to any down gradient surface waters unless a 35-foot wide vegetated buffer or physical barriers subsisted for the 100-foot setback or alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions achieved by the 100-foot setback.

A. Setback

A Setback is a specified distance from surface waters or potential conduits to surface waters where manure and process wastewater may not be land applied, but where crops may continue to be grown.

B. Vegetated Buffer

i. A vegetated buffer is a narrow, permanent strip of dense perennial vegetation where no crops are grown and which is established parallel to the contours of and perpendicular to the dominant slope of the land application area for the purposes of slowing water runoff, enhancing water infiltration, trapping pollutants bound to sediment, and minimizing the risk of any potential nutrients or pollutants from leaving the land application area and reaching surface waters.

ii. Removal of vegetation in vegetated buffers will be in accordance with site production limitations, rate of plant growth, and the physiological needs of the plants.

iii. Do not mow below the recommended height for the plant species.

iv. Maintain adequate ground cover and plant density to maintain or improve filtering capacity of the vegetation.

v. Maintain adequate ground cover, litter, and canopy to maintain or improve infiltration and soil condition.

vi. Periodic rest from mechanical harvesting may be needed to maintain or restore the desired plant community following episodic events such as drought.

vii. When weeds are a significant problem, implement pest management to protect the desired plant communities.

viii. Prevent channels from forming.

C. Physical Barriers and Alternatives

i. Examples of physical barriers and alternative conservation practices as applicable to field specific conditions may used alone or in conjunction with each other to provide a pollutant reduction equivalent or better than the reductions achieved by the 100-foot set back are: a levee, a raised road, a border, a berm, a diversion ditch, a surface water collection system, an uphill gradient, regulated wastewater application system such as drip irrigation or sprinklers.

D. Site Specific Surface Water Protective Measures (See Attachment J)

V. FIELD RISK ASSESSMENT

This section evaluates the effectiveness of management practices used to control the discharge of waste constituents from land application areas by assessing the water quality monitoring results of discharges of manure, process wastewater, tailwater, subsurface drainage, or storm water from the land application areas.

Has this facility had any of the following discharges from any land application areas to surface water in the past twelve (12) months?

• Process wastewater	_____ Yes	___✓___ No
• Manure	_____ Yes	___✓___ No
• Storm Water	_____ Yes	___✓___ No
• Tailwater* (within 60 days of manure or wastewater application)	_____ Yes	___✓___ No
• Subsurface (tile) drainage	_____ Yes	___✓___ No

If you answered "No" to all of the above, then nitrogen and/or phosphorus have not moved from any of your land application areas to surface water and your Field Risk Assessment is complete.

If you answered "Yes" to any of the above, then the results of the water quality monitoring of the discharges have been used to assess the movement of nitrogen and phosphorus from each land application area for each of the discharges identified above.

*This only includes a discharge of tailwater that occurs less than 60 days after application of manure and/or process wastewater.

VI. RECORD-KEEPING

The discharger shall maintain records for each land application area as required in the Record-Keeping Requirements of Monitoring and Reporting Program No. R5-2013-0122.

It is the discharger's responsibility to accurately complete these forms for each field and crop grown each year. The records that will be maintained for each land application area are identified in the following form. (Figure 2)

Field Balance Monitoring

Figure 2.

Dairy: _____ Field: _____ Crop: _____ Acres: _____

Date Planted: _____ Projected Yield per Acre: _____ Actual Yield per Acre: _____

Estimated Maximum lbs. of Nitrogen to be Applied per acre: _____

Log each input and removal of nitrogen as a separate line item. i.e. well or canal water, process wastewater, manure, comercial fertilizers, plant tissue, other

						Innovative Ag Services Use Only	
Start Date & Time	Stop Date & Time	Indentification of Input or Removal	Qty Applied or Removed	Calculations Used	Name & Signature*	Est. # of N per App	Est. Total N App

*By signing this document, you are stating that each application or harvest was inspected daily and the land application berms are in good working order (rodent control, piping, bank erosion), there is no field saturation, ponding, erosion, or runoff (including tail water discharges from the end of fields, pipes, or other conveyances), there are no nuisance conditions and vegetated buffers are in good working order. You are also signing that soil and field conditions were conducive to receive the application. If not, please explain on the back side of this page with the date, a description of the problem and the corrective action taken. You are also stating that precipitation did not occur, nor was standing water present, at the time of a manure and/or process wastewater application, and for 24 hours prior to and after an application. If precipitation did occur or standing water was present, please note on the back of this page.

VII. NUTRIENT MANAGEMENT PLAN REVIEW

A. Nutrient Management Plan Updates

i. This Nutrient Management Plan shall be updated when discharges from any land application area exceed water quality objectives, a nutrient source has changes, or site-specific information has become available to replace default values used in the overall nutrient balance or the nutrient budget, nitrogen application rates in any land application area exceed the rates specified or the Field Risk Assessment finds that management practices are not effective in minimizing discharges.

ii. This Nutrient Management Plan shall be updated prior to any anticipated changes that could affect the overall nutrient balance or the nutrient budget such as, but not limited to, a crop rotation change, changes in the available cropland, or the changes in the volume of process wastewater generated.

B. Nutrient Management Plan Review & Regional Board Notice

The discharger shall review the Nutrient Management Plan at least once every five years and notify the Regional Board in the annual report of any proposed changes that would affect the Nutrient Management Plan.

C. Benefits of a Nutrient Management Plan

i. The Nutrient Management Plan was written to assist the dairy producer and farm management team produce valuable crops. The implementation of sustainable agronomic practice found in this NMP will increase yield, reduce cost, improve quality, mitigate risks, and sustain productivity/profitability.

ii. To maximize the benefits and the professional agronomic services provided by Innovative Ag Services, LLC, regular reviews of the nutrient supply and demand need to be made throughout the year. The ever-changing dynamics of crop production require constant management, including regular input and alteration of the Nutrient Management Plan.

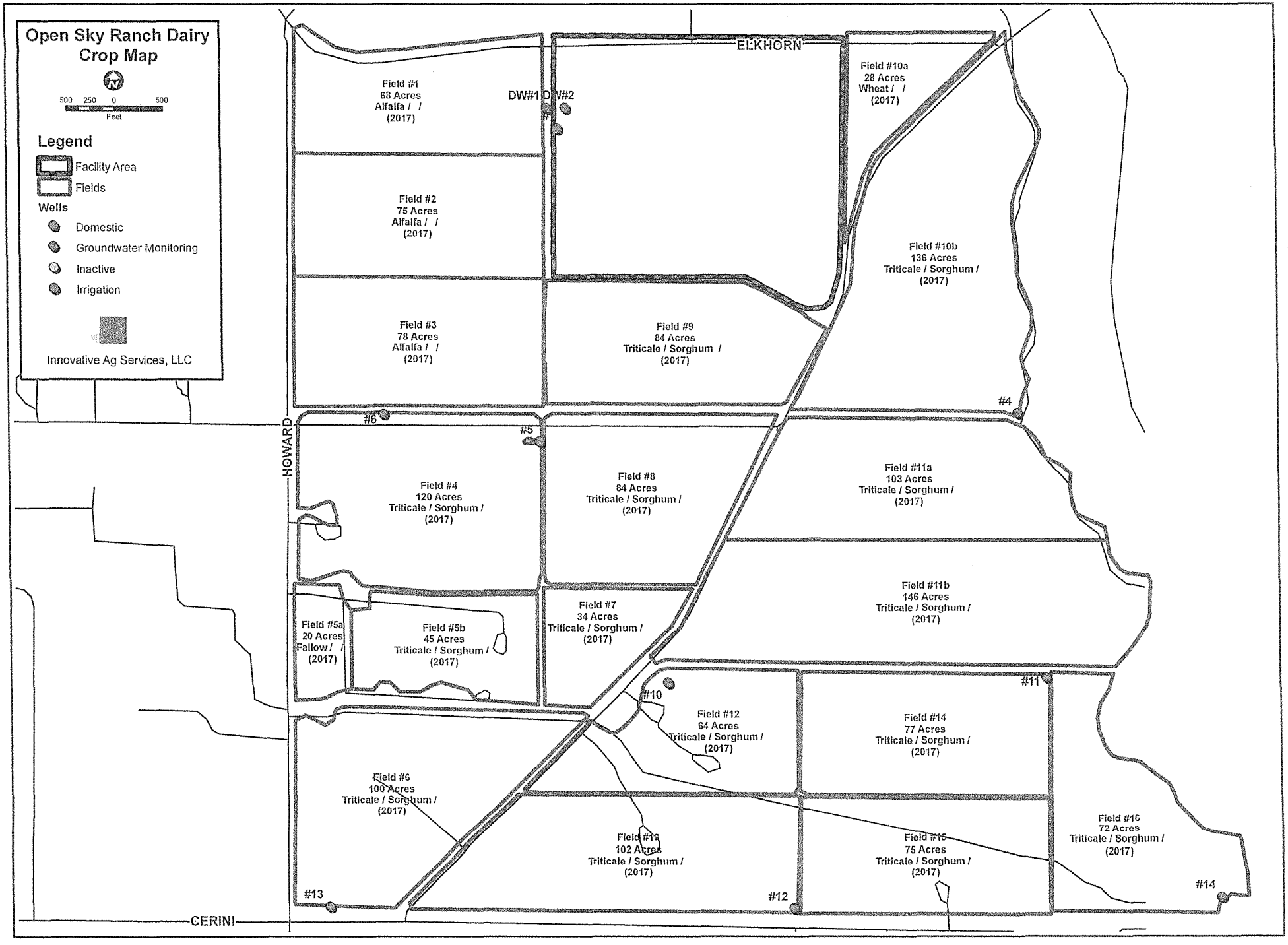
VIII. REFERENCES

California Regional Water Quality Control Board – Central Valley Region – Order Number R5-2013-0122
"Waste Discharge Requirements General Order for Existing Milk Cow Dairies"

California Regional Water Quality Control Board – Central Valley Region – Sampling and Analysis
"Approved Sampling and Analysis Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies"
http://www.waterboards.ca.gov/ventralvalley/water_issues/dairies/general_order_guidance/sampling_analysis/index.shtml

ATTACHMENT A. LAND APPLICATION MAP

ATTACHMENT B. CROP MAP


Open Sky Ranch Dairy
Crop Map
500 250 0 500
Feet
Legend
Facility Area
Fields
Wells
Domestic
Groundwater Monitoring
Inactive
Irrigation
Innovative Ag Services, LLC
ELKHORN
HOWARD
CERINI
Field #1
68 Acres
Alfalfa / /
(2017)
DW#1
DW#2
Field #2
75 Acres
Alfalfa / /
(2017)
Field #3
78 Acres
Alfalfa / /
(2017)
Field #9
84 Acres
Triticale / Sorghum /
(2017)
Field #10a
28 Acres
Wheat / /
(2017)
Field #10b
136 Acres
Triticale / Sorghum /
(2017)
#4
#5
#6
Field #4
120 Acres
Triticale / Sorghum /
(2017)
Field #8
84 Acres
Triticale / Sorghum /
(2017)
Field #11a
103 Acres
Triticale / Sorghum /
(2017)
Field #5a
20 Acres
Fallow / /
(2017)
Field #5b
45 Acres
Triticale / Sorghum /
(2017)
Field #7
34 Acres
Triticale / Sorghum /
(2017)
Field #11b
146 Acres
Triticale / Sorghum /
(2017)
#10
#11
Field #12
64 Acres
Triticale / Sorghum /
(2017)
Field #14
77 Acres
Triticale / Sorghum /
(2017)
Field #6
100 Acres
Triticale / Sorghum /
(2017)
Field #13
102 Acres
Triticale / Sorghum /
(2017)
Field #15
75 Acres
Triticale / Sorghum /
(2017)
Field #16
72 Acres
Triticale / Sorghum /
(2017)
#13
#12
#14

ATTACHMENT C. WASTEWATER AGREEMENTS

This facility does NOT transfer process wastewater to any third party sources.

ATTACHMENT D. VICINITY MAP

Vicinity Map
for
Open Sky Ranch

MAP KEY

- Dairy Facility & Land Application Area

- Additional Land under the control of the Discharger, within five miles of the dairy, which does not receive process wastewater or manure.

NORTH

ATTACHMENT E. SITE SPECIFIC SAMPLING & ANALYSIS PLAN

Waste water samples are to be taken from the lagoon near the pump intake.

Domestic wells – DW1 and DW2 are to be sampled from the faucet nearest the well head.

Irrigation wells – 4, 5, 6, 10, 11, 12, 13, and 14 are to be sampled from the well discharge pipe prior to entering the stand pipe

Manure samples are taken randomly from the piles throughout the corrals.

ATTACHMENT F. GENERAL NUTRIENT PRODUCTION & BALANCE ANALYSIS

Nutrient Budget

Open Sky Ranch Dairy 2017

General Nutrient Production and Balance Analysis

			Nitrogen			
			Liquid		Solid	
Animal	Head	Housing Type	Net Available for Application*	Acres Required **	Net Available for Application*	Acres Required **
Milk Cows	4,626	Freestalls	712,103.77	1,271.6	290,859.29	519.4
Dry Cows	752	Flushed Lanes	17,292.24	30.9	65,051.76	116.2
Heifers (15-24)	1,589	Flushed Lanes	27,769.68	49.6	104,466.90	186.5
Heifers (7-14)	1,960	Flushed Lanes	23,436.50	41.9	88,165.90	157.4
Calves (4-6)	785	Flushed Lanes	5,054.30	9.0	19,013.80	34.0
	9,712		**785,656.50**	**1,403.0**	**567,557.64**	**1,013.5**

Total Liquids & Solids		
Capture	Available	Required
2,255,356.90	**1,353,214.14**	**2,416.5**

** Atmospheric Loss of 40% nitrogen used to calculate Net Available for Application*
*** Nitrogen Extraction Levels: 400lbs/acre (To meet a 1.4 ratio)*

Excretion factors from ASAE D.384.2 March 2005, Table 1b, Page 2. Potassium excretion values for heifers and calves are not available in this study and were extrapulated based upon weight.

Open Sky Ranch Dairy 2017

General Nutrient Production and Balance Analysis

			Phosphorus		Potassium	
				Acres Required		Acres Required
Animal	Head	Housing Type	Net Available for Application	Extraction	Net Available for Application	Extraction
Milk Cows	4,626	Freestalls	287,043.30	4,784.1	388,352.70	776.7
Dry Cows	752	Flushed Lanes	19,213.60	320.2	90,578.40	181.2
Heifers (15-24)	1,589	Flushed Lanes	34,799.10	580.0	104,397.30	208.8
Heifers (7-14)	1,960	Flushed Lanes	31,477.60	524.6	107,310.00	214.6
Calves (4-6)	785	Flushed Lanes	12,607.10	210.1	22,922.00	45.8
	9,712		**385,140.70**	**6,419.0**	**713,560.40**	**1,427.1**

Phosphorus Extraction Levels: 60lbs/acre (To meet a 1.0 ratio)
Potassium(K) Extraction Levels: 500lbs/acre (To meet a 1.0 ratio)
No atmospheric losses computed and capture rates between liquid and solid forms are unknown

Excretion factors from ASAE D.384.2 March 2005, Table 1b, Page 2. Potassium excretion values for heifers and calves are not available in this study and were extrapulated based upon weight.

ATTACHMENT G. GENERAL SALT PRODUCTION & LOADING ANALYSIS

Open Sky Ranch Dairy 2017

General Salt Production and Loading Analysis

Estimated Crop Acre Requirements

Animal	Head	Housing Type	Liquid Salts lbs / year	Solid Salts lbs / year	Total Salts lbs / year
Milk Cows	4,626	Freestalls	1,546,488	631,664	2,178,152
Dry Cows	752	Flushed Lanes	36,314	136,609	172,922
Heifers (15-24)	1,589	Flushed Lanes	76,732	288,659	365,391
Heifers (7-14)	1,960	Flushed Lanes	94,647	356,055	450,702
Calves (4-6)	785	Flushed Lanes	18,954	71,302	90,255
	9,712		**1,773,135**	**1,484,288**	**3,257,422**
		Single Crop Acres Required	**887**	**742**	**1,629**
		Double Crop Acres Required	**591**	**495**	**1,086**

Salt excretion values for milk cows and dry cows were derived from:
Committee of Experts on Dairy Manure Management, 2005 and ASABE 384.2, 2005, Chapter 7 pages 54 and 65
(Excretion values for heifers and calves are not addressed in this study. Excretion values for these animals were extrapulated based upon animal weight.)

Acre requirements based on 2,000 lbs of salt per single crop and 3,000 lbs of salt per double crop

ATTACHMENT H. NUTRIENT BUDGET SUMMARY & STORAGE PERIOD SUMMARY

Open Sky Ranch Dairy 2017

Waste Application Summary

Field	Acres	N Applied - Liquid Waste	N Applied - Solid Waste	Total N Applied	N Removed	N Ratio	P Applied	P Removed	P Ratio	K Applied	K Removed	K Ratio
1	68	43,680.48	0.00	43,775.68	36,148.80	1.21	6,060.84	8,504.08	0.71	66,533.92	41,951.92	1.59
2	75	48,177.00	0.00	48,282.00	38,278.50	1.26	6,684.75	9,510.00	0.70	73,383.00	47,595.75	1.54
3	78	14,315.34	0.00	14,377.74	10,670.40	1.35	1,985.88	4,212.00	0.47	21,804.90	8,704.80	2.50
4	120	63,868.80	0.00	64,036.80	52,939.20	1.21	8,862.00	12,724.80	0.70	97,285.20	61,752.00	1.58
5a	20	6,592.40	4,064.20	10,687.00	7,697.00	1.39	2,509.40	1,645.00	1.53	15,472.00	6,664.80	2.32
5b	45	23,455.35	0.00	23,515.65	18,963.45	1.24	3,254.40	4,863.60	0.67	35,726.85	22,053.15	1.62
6	100	51,976.00	0.00	52,101.00	37,225.00	1.40	7,211.00	9,184.00	0.79	79,170.00	40,637.00	1.95
7	34	17,197.54	0.00	17,240.04	12,324.66	1.40	2,386.12	3,216.40	0.74	26,195.30	13,304.54	1.97
8	84	48,407.52	0.00	48,525.12	34,684.44	1.40	6,715.80	8,332.80	0.81	73,735.20	40,631.64	1.81
9	84	45,632.16	0.00	45,753.96	32,713.80	1.40	6,330.24	8,018.64	0.79	69,508.32	36,306.48	1.91
10a	49	22,590.47	0.00	22,653.19	16,143.05	1.40	3,134.53	4,374.72	0.72	34,409.76	18,602.36	1.85
10b	136	78,772.56	0.00	78,967.04	56,510.72	1.40	10,928.96	14,906.96	0.73	119,990.08	72,177.92	1.66
11a	103	53,610.47	0.00	53,742.31	38,452.99	1.40	7,438.66	10,730.54	0.69	81,660.46	49,897.32	1.64
11b	146	90,890.84	0.00	91,099.62	65,057.60	1.40	12,611.48	15,995.76	0.79	138,444.50	83,620.04	1.66
12	64	41,815.68	0.00	41,907.20	29,978.88	1.40	5,801.60	7,015.68	0.83	63,693.44	34,817.28	1.83
13	102	61,551.90	0.00	61,697.76	44,050.74	1.40	8,539.44	11,187.36	0.76	93,755.34	52,042.44	1.80
14	77	38,720.99	0.00	38,831.10	27,718.46	1.40	5,371.52	6,825.28	0.79	58,980.46	26,903.80	2.19
15	75	41,844.00	0.00	41,951.25	29,980.50	1.40	5,805.00	7,679.25	0.76	63,738.75	28,168.50	2.26
16	49	26,259.10	0.00	26,329.17	18,842.46	1.40	3,643.15	4,783.38	0.76	39,999.19	19,894.49	2.01
Totals:	**1,509**	**819,358.60**	**4,064.20**	**825,473.63**	**608,380.65**	**1.36**	**115,274.77**	**153,710.25**	**0.75**	**1,253,486.6**	**705,726.23**	**1.78**
Total Available For Appplication:		**785,656.50**	**567,557.64**	**1,353,214.1**			**385,140.70**			**713,560.40**		
Excess (Deficient) Available:		**(33,702.10)**	**563,493.44**	**527,740.51**			**269,865.93**			**(539,926.27**		

Gallons of Processed Wastewater to be Exported Annually:	**0**
Tons of Corral Solids to be Exported Annually:	**13,865**
Whole Farm Balance:	**1.36**
Whole Farm Balance without Recommended Exports:	**2.22**

ATTACHMENT I. FIELD-BY-FIELD NUTRIENT BUDGET

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 1 **Acres:** 68

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	642.36	Total Nutrients Applied	643.76	89.13	978.44
Solid Manure Applied		Total Nutrients Harvested	(531.60)	(125.06)	(616.94)
		Nutrient Ratio	1.21	0.71	1.59

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 68

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Waste Water	1.65	Acre Inches	324.55	mg/L	121.13		121.13	16.81	184.51
11/15/2016	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	15.00	Tons	1.32	%			(394.80)	(71.06)	(505.34)
						451.49		57.29	(8.41)	182.36

Total Nutrients Applied	452.09	62.65	687.70
Total Nutrients Harvested	(394.80)	(71.06)	(505.34)
Nutrient Ratio	1.15	0.88	1.36

Open Sky Ranch Dairy 2017

Nutrient Applications

Field Name: 1 **Acres:** 68

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 68

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 2 **Acres:** 75

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	642.36	Total Nutrients Applied	643.76	89.13	978.44
Solid Manure Applied		Total Nutrients Harvested	(510.38)	(126.80)	(634.61)
		Nutrient Ratio	1.26	0.70	1.54

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 75

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
11/15/2016	Waste Water	1.65	Acre Inches	324.55	mg/L	121.13		121.13	16.81	184.51
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
05/15/2017	Harvest	15.50	Tons	1.21	%			(373.58)	(72.80)	(523.01)
						451.49		**78.51**	**(10.15)**	**164.69**

Total Nutrients Applied	**452.09**	**62.65**	**687.70**
Total Nutrients Harvested	**(373.58)**	**(72.80)**	**(523.01)**
Nutrient Ratio	**1.21**	**0.86**	**1.31**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 2 **Acres:** 75

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 75

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
05/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 3 **Acres:** 78

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	183.53	Total Nutrients Applied	184.33	25.46	279.55
Solid Manure Applied		Total Nutrients Harvested	(136.80)	(54.00)	(111.60)
		Nutrient Ratio	1.35	0.47	2.50

Crop 1: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 78

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						183.53		**47.53**	**(28.54)**	**167.95**

Total Nutrients Applied	184.33	25.46	279.55
Total Nutrients Harvested	(136.80)	(54.00)	(111.60)
Nutrient Ratio	1.35	0.47	2.50

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 4 **Acres:** 120

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	532.24	Total Nutrients Applied	533.64	73.85	810.71
Solid Manure Applied		Total Nutrients Harvested	(441.16)	(106.04)	(514.60)
		Nutrient Ratio	1.21	0.70	1.58

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 120

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
11/15/2016	Waste Water	1.65	Acre Inches	324.55	mg/L	121.13		121.13	16.81	184.51
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	17.00	Tons	0.90	%			(304.36)	(52.04)	(403.00)
						341.37		37.61	(4.67)	116.97

Total Nutrients Applied	341.97	47.37	519.97
Total Nutrients Harvested	(304.36)	(52.04)	(403.00)
Nutrient Ratio	1.12	0.91	1.29

Open Sky Ranch

Land Area Map

500 250 0 500

Feet

Legend

- Fields
- Contracted Field(s) / Acres
- Facility Area
- Wastewater Agreement
- VulnerableArea
- APN Parcels
- Flow Meter
- Mixing Point
- Pumping Station
- Discharge Point
- Tailwater Point
- Tailwater Line
- Surface Water
- Transfer Canal
- Wastewater Transfer Canal
- Transfer Pipe
- Transfer Pipe with Discharge Points
- WW Transfer Pipe
- WW Transfer Pipe with Discharge Points

Wells (Controlled)

- Domestic
- Groundwater Monitoring
- Inactive
- Irrigation

Wells (Not Controlled)

- Domestic
- Irrigation
- Drainage Flow Direction

Innovative Ag Services, LLC

2016 Aerial Photography provided by the USDA's National Ag Imagery Program

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 4 **Acres:** 120

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 120

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
05/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 5a **Acres:** 20

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	329.62	Total Nutrients Applied	534.35	125.47	773.60
Solid Manure Applied	203.21	Total Nutrients Harvested	(384.85)	(82.25)	(333.24)
		Nutrient Ratio	1.39	1.53	2.32

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 20

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/01/2016	Corral Solids	5.00	Tons	2.03	%		203.21	203.21	79.75	271.52
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
02/01/2017	Waste Water	0.50	Acre Inches	324.59	mg/L	36.71		36.71	5.09	55.91
02/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
03/15/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
03/15/2017	Waste Water	0.40	Acre Inches	324.50	mg/L	29.36		29.36	4.07	44.73
04/15/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
05/15/2017	Harvest	18.00	Tons	0.69	%			(248.05)	(28.25)	(221.64)
						139.48	**203.21**	**95.36**	**70.84**	**262.34**

Total Nutrients Applied	**343.41**	**99.09**	**483.98**
Total Nutrients Harvested	**(248.05)**	**(28.25)**	**(221.64)**
Nutrient Ratio	**1.38**	**3.51**	**2.18**

Open Sky Ranch Dairy 2017

Nutrient Applications

Field Name: 5a **Acres:** 20

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 20

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	0.89	Acre Inches	324.57	mg/L	65.34		65.34	9.06	99.52
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	0.95	Acre Inches	324.54	mg/L	69.74		69.74	9.68	106.23
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.14		**54.14**	**(27.62)**	**178.02**

Total Nutrients Applied	**190.94**	**26.38**	**289.62**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.60**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 5b **Acres:** 45

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	521.23	Total Nutrients Applied	522.57	72.32	793.93
Solid Manure Applied		Total Nutrients Harvested	(421.41)	(108.08)	(490.07)
		Nutrient Ratio	1.24	0.67	1.62

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 45

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	2.50	Acre Inches	0.16	mg/L			0.09	0.00	0.00
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	18.00	Tons	0.79	%			(284.61)	(54.08)	(378.47)
						330.36		**46.29**	**(8.24)**	**124.72**

Total Nutrients Applied	330.90	45.84	503.19
Total Nutrients Harvested	(284.61)	(54.08)	(378.47)
Nutrient Ratio	1.16	0.85	1.33

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 5b **Acres:** 45

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 45

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		54.87	(27.52)	179.14

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 6 **Acres:** 100

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	519.76	Total Nutrients Applied	521.01	72.11	791.70
Solid Manure Applied		Total Nutrients Harvested	(372.25)	(91.84)	(406.37)
		Nutrient Ratio	1.40	0.79	1.95

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 100

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
11/15/2016	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.48	Acre Inches	324.55	mg/L	108.65		108.65	15.07	165.50
05/15/2017	Harvest	18.00	Tons	0.65	%			(235.45)	(37.84)	(294.77)
						328.89		**93.89**	**7.79**	**206.19**

Total Nutrients Applied	329.34	45.63	500.96
Total Nutrients Harvested	(235.45)	(37.84)	(294.77)
Nutrient Ratio	1.40	1.21	1.70

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 6 **Acres:** 100

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 100

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 7 **Acres:** 34

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	505.81	Total Nutrients Applied	507.06	70.18	770.45
Solid Manure Applied		Total Nutrients Harvested	(362.49)	(94.60)	(391.31)
		Nutrient Ratio	1.40	0.74	1.97

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 34

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
11/15/2016	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.29	Acre Inches	324.55	mg/L	94.70		94.70	13.14	144.25
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	18.00	Tons	0.63	%			(225.69)	(40.60)	(279.71)
						314.94		**89.70**	**3.10**	**200.00**

Total Nutrients Applied	315.39	43.70	479.71
Total Nutrients Harvested	(225.69)	(40.60)	(279.71)
Nutrient Ratio	1.40	1.08	1.72

Open Sky Ranch Dairy 2017

Nutrient Applications

Field Name: 7 **Acres:** 34

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 34

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 8 **Acres:** 84

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	576.28	Total Nutrients Applied	577.68	79.95	877.80
Solid Manure Applied		Total Nutrients Harvested	(412.91)	(99.20)	(483.71)
		Nutrient Ratio	1.40	0.81	1.81

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 84

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
11/15/2016	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.25	Acre Inches	324.53	mg/L	91.76		91.76	12.73	139.78
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	18.00	Tons	0.77	%			(276.11)	(45.20)	(372.11)
						385.41		**109.90**	**8.27**	**214.95**

Total Nutrients Applied	**386.01**	**53.47**	**587.06**
Total Nutrients Harvested	**(276.11)**	**(45.20)**	**(372.11)**
Nutrient Ratio	**1.40**	**1.18**	**1.58**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 8 **Acres:** 84

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 84

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 9 **Acres:** 84

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	543.24	Total Nutrients Applied	544.69	75.36	827.48
Solid Manure Applied		Total Nutrients Harvested	(389.45)	(95.46)	(432.22)
		Nutrient Ratio	1.40	0.79	1.91

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 84

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.30	Acre Inches	324.53	mg/L	95.43		95.43	13.24	145.37
03/15/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
04/15/2017	Ground Water	4.50	Acre Inches	0.17	mg/L			0.17	0.00	0.00
05/15/2017	Harvest	18.00	Tons	0.70	%			(252.65)	(41.46)	(320.62)
						352.37		**100.37**	**7.42**	**216.12**

Total Nutrients Applied	**353.02**	**48.88**	**536.74**
Total Nutrients Harvested	**(252.65)**	**(41.46)**	**(320.62)**
Nutrient Ratio	**1.40**	**1.18**	**1.67**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 9 **Acres:** 84

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 84

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 10a **Acres:** 49

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	461.03	Total Nutrients Applied	462.31	63.97	702.24
Solid Manure Applied		Total Nutrients Harvested	(329.45)	(89.28)	(379.64)
		Nutrient Ratio	1.40	0.72	1.85

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 49

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	0.68	Acre Inches	324.55	mg/L	49.92		49.92	6.93	76.04
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	18.00	Tons	0.54	%			(192.65)	(35.28)	(268.04)
						270.16		**77.99**	**2.21**	**143.46**

Total Nutrients Applied	270.64	37.49	411.50
Total Nutrients Harvested	(192.65)	(35.28)	(268.04)
Nutrient Ratio	1.40	1.06	1.54

Open Sky Ranch Dairy 2017

Nutrient Applications

Field Name: 10a **Acres:** 49

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 49

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 10b **Acres:** 136

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	579.21	Total Nutrients Applied	580.64	80.36	882.28
Solid Manure Applied		Total Nutrients Harvested	(415.52)	(109.61)	(530.72)
		Nutrient Ratio	1.40	0.73	1.66

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 136

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.25	Acre Inches	324.53	mg/L	91.76		91.76	12.73	139.78
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
03/15/2017	Waste Water	1.25	Acre Inches	324.53	mg/L	91.76		91.76	12.73	139.78
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.29	Acre Inches	324.55	mg/L	94.70		94.70	13.14	144.25
05/15/2017	Harvest	20.00	Tons	0.70	%			(278.72)	(55.61)	(419.12)
						388.34		110.25	(1.73)	172.42

Total Nutrients Applied	388.97	53.88	591.54
Total Nutrients Harvested	(278.72)	(55.61)	(419.12)
Nutrient Ratio	1.40	0.97	1.41

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 10b **Acres:** 136

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 136

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 11a **Acres:** 103

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	520.49	Total Nutrients Applied	521.77	72.22	792.82
Solid Manure Applied		Total Nutrients Harvested	(373.33)	(104.18)	(484.44)
		Nutrient Ratio	1.40	0.69	1.64

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 103

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.49	Acre Inches	324.54	mg/L	109.38		109.38	15.18	166.62
05/15/2017	Harvest	18.50	Tons	0.64	%			(236.53)	(50.18)	(372.84)
						329.62		**93.57**	**(4.44)**	**129.24**

Total Nutrients Applied	330.10	45.74	502.08
Total Nutrients Harvested	(236.53)	(50.18)	(372.84)
Nutrient Ratio	1.40	0.91	1.35

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 11a **Acres:** 103

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 103

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 11b **Acres:** 146

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	622.54	Total Nutrients Applied	623.97	86.38	948.25
Solid Manure Applied		Total Nutrients Harvested	(445.60)	(109.56)	(572.74)
		Nutrient Ratio	1.40	0.79	1.66

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 14(

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.38	Acre Inches	324.56	mg/L	101.31		101.31	14.06	154.32
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	18.50	Tons	0.83	%			(308.80)	(55.56)	(461.14)
						431.67		**123.50**	**4.34**	**196.37**

Total Nutrients Applied	**432.30**	**59.90**	**657.5**
Total Nutrients Harvested	**(308.80)**	**(55.56)**	**(461.14)**
Nutrient Ratio	**1.40**	**1.08**	**1.43**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 11b **Acres:** 146

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 146

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 12 **Acres:** 64

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	653.37	**Total Nutrients Applied**	654.80	90.65	995.21
Solid Manure Applied		**Total Nutrients Harvested**	(468.42)	(109.62)	(544.02)
		Nutrient Ratio	1.40	0.83	1.83

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 64

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.80	Acre Inches	324.55	mg/L	132.14		132.14	18.33	201.28
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
05/15/2017	Harvest	19.00	Tons	0.87	%			(331.62)	(55.62)	(432.42)
						462.50		**131.51**	**8.55**	**272.05**

Total Nutrients Applied	**463.13**	**64.17**	**704.47**
Total Nutrients Harvested	**(331.62)**	**(55.62)**	**(432.42)**
Nutrient Ratio	**1.40**	**1.15**	**1.63**

Open Sky Ranch Dairy 2017

Nutrient Applications

Field Name: 12 **Acres:** 64

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 64

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.8
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		54.87	(27.52)	179.14

Total Nutrients Applied	191.67	26.48	290.74
Total Nutrients Harvested	(136.80)	(54.00)	(111.60)
Nutrient Ratio	1.40	0.49	2.61

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 13 **Acres:** 102

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	603.45	Total Nutrients Applied	604.88	83.72	919.17
Solid Manure Applied		Total Nutrients Harvested	(431.87)	(109.68)	(510.22)
		Nutrient Ratio	1.40	0.76	1.80

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 102

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.62	Acre Inches	324.56	mg/L	118.93		118.93	16.50	181.15
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	17.75	Tons	0.83	%			(295.07)	(55.68)	(398.62)
						412.58		**118.14**	**1.56**	**229.81**

Total Nutrients Applied	**413.21**	**57.24**	**628.43**
Total Nutrients Harvested	**(295.07)**	**(55.68)**	**(398.62)**
Nutrient Ratio	**1.40**	**1.03**	**1.58**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 13 **Acres:** 102

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 102

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 14 **Acres:** 77

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	502.87	Total Nutrients Applied	504.30	69.76	765.98
Solid Manure Applied		Total Nutrients Harvested	(359.98)	(88.64)	(349.40)
		Nutrient Ratio	1.40	0.79	2.19

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 77

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
05/15/2017	Harvest	17.50	Tons	0.64	%			(223.18)	(34.64)	(237.80)
						312.00		**89.45**	**8.64**	**237.44**

Total Nutrients Applied	**312.63**	**43.28**	**475.24**
Total Nutrients Harvested	**(223.18)**	**(34.64)**	**(237.80)**
Nutrient Ratio	**1.40**	**1.25**	**2.00**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 14 **Acres:** 77

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 77

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 15 **Acres:** 75

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	557.92	Total Nutrients Applied	559.35	77.40	849.85
Solid Manure Applied		Total Nutrients Harvested	(399.74)	(102.39)	(375.58)
		Nutrient Ratio	1.40	0.76	2.26

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 75

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.25	Acre Inches	324.53	mg/L	91.76		91.76	12.73	139.78
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
03/15/2017	Waste Water	1.25	Acre Inches	324.53	mg/L	91.76		91.76	12.73	139.78
04/15/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	17.75	Tons	0.74	%			(262.94)	(48.39)	(263.98)
						367.05		**104.74**	**2.53**	**295.13**

Total Nutrients Applied	**367.68**	**50.92**	**559.11**
Total Nutrients Harvested	**(262.94)**	**(48.39)**	**(263.98)**
Nutrient Ratio	**1.40**	**1.05**	**2.12**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 15 **Acres:** 75

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 75

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		**54.87**	**(27.52)**	**179.14**

Total Nutrients Applied	**191.67**	**26.48**	**290.74**
Total Nutrients Harvested	**(136.80)**	**(54.00)**	**(111.60)**
Nutrient Ratio	**1.40**	**0.49**	**2.61**

Open Sky Ranch Dairy 2017
Nutrient Applications

Field Name: 16 **Acres:** 49

Field Summary (in lbs/acre)					
	Nitrogen		Nitrogen	Phosphorus	Potassium
Process Wastewater Applied	535.90	Total Nutrients Applied	537.33	74.35	816.31
Solid Manure Applied		Total Nutrients Harvested	(384.54)	(97.62)	(406.01)
		Nutrient Ratio	1.40	0.76	2.01

Crop 1: Wheat (South Valley) **Variety:** Wheat (South Valley) - General **Plant Date:** November 2016 **Acres Planted:** 49

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
11/15/2016	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
11/15/2016	Waste Water	1.20	Acre Inches	324.54	mg/L	88.09		88.09	12.22	134.19
02/01/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
02/02/2017	Waste Water	1.50	Acre Inches	324.56	mg/L	110.12		110.12	15.28	167.73
03/15/2017	Waste Water	1.25	Acre Inches	324.53	mg/L	91.76		91.76	12.73	139.78
03/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
04/15/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
04/15/2017	Ground Water	4.00	Acre Inches	0.17	mg/L			0.15	0.00	0.00
05/15/2017	Harvest	22.00	Tons	0.56	%			(247.74)	(43.62)	(294.41)
						345.03		**97.92**	**4.25**	**231.16**

Total Nutrients Applied	345.66	47.87	525.57
Total Nutrients Harvested	(247.74)	(43.62)	(294.41)
Nutrient Ratio	1.40	1.10	1.79

Open Sky Ranch Dairy 2017

Nutrient Applications

Field Name: 16 **Acres:** 49

Crop 2: Milo (Silage) **Variety:** Milo (Silage) - General **Plant Date:** June 2017 **Acres Planted:** 49

Date	Application	Quantity (per Acre)	Units	N Value	Units	Nitrogen from Process Wastewater	Nitrogen from Solid Manure	Nitrogen (lbs per acre)	Phosphorus (lbs per acre)	Potassium (lbs per acre)
05/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
05/01/2017	Waste Water	0.75	Acre Inches	324.56	mg/L	55.06		55.06	7.64	83.87
07/01/2017	Ground Water	6.00	Acre Inches	0.16	mg/L			0.22	0.00	0.00
07/01/2017	Waste Water	1.00	Acre Inches	324.54	mg/L	73.41		73.41	10.18	111.82
08/01/2017	Waste Water	0.85	Acre Inches	324.55	mg/L	62.40		62.40	8.66	95.05
08/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
09/01/2017	Ground Water	5.00	Acre Inches	0.16	mg/L			0.18	0.00	0.00
10/01/2017	Harvest	18.00	Tons	0.38	%			(136.80)	(54.00)	(111.60)
						190.87		54.87	(27.52)	179.14

Total Nutrients Applied	191.67	26.48	290.74
Total Nutrients Harvested	(136.80)	(54.00)	(111.60)
Nutrient Ratio	1.40	0.49	2.61

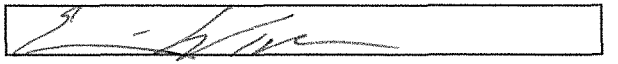
ATTACHMENT J. SITE SPECIFIC SURFACE WATER PROTECTIVE MEASURES

The Fresno Slough is along the East Board of the land application area for this facility. It is protected by a large levee that is maintained by the Kings River Conservation District and by a raised road and berm operated and maintained by Open Sky Dairy that is equivalent to a 100 foot setback.

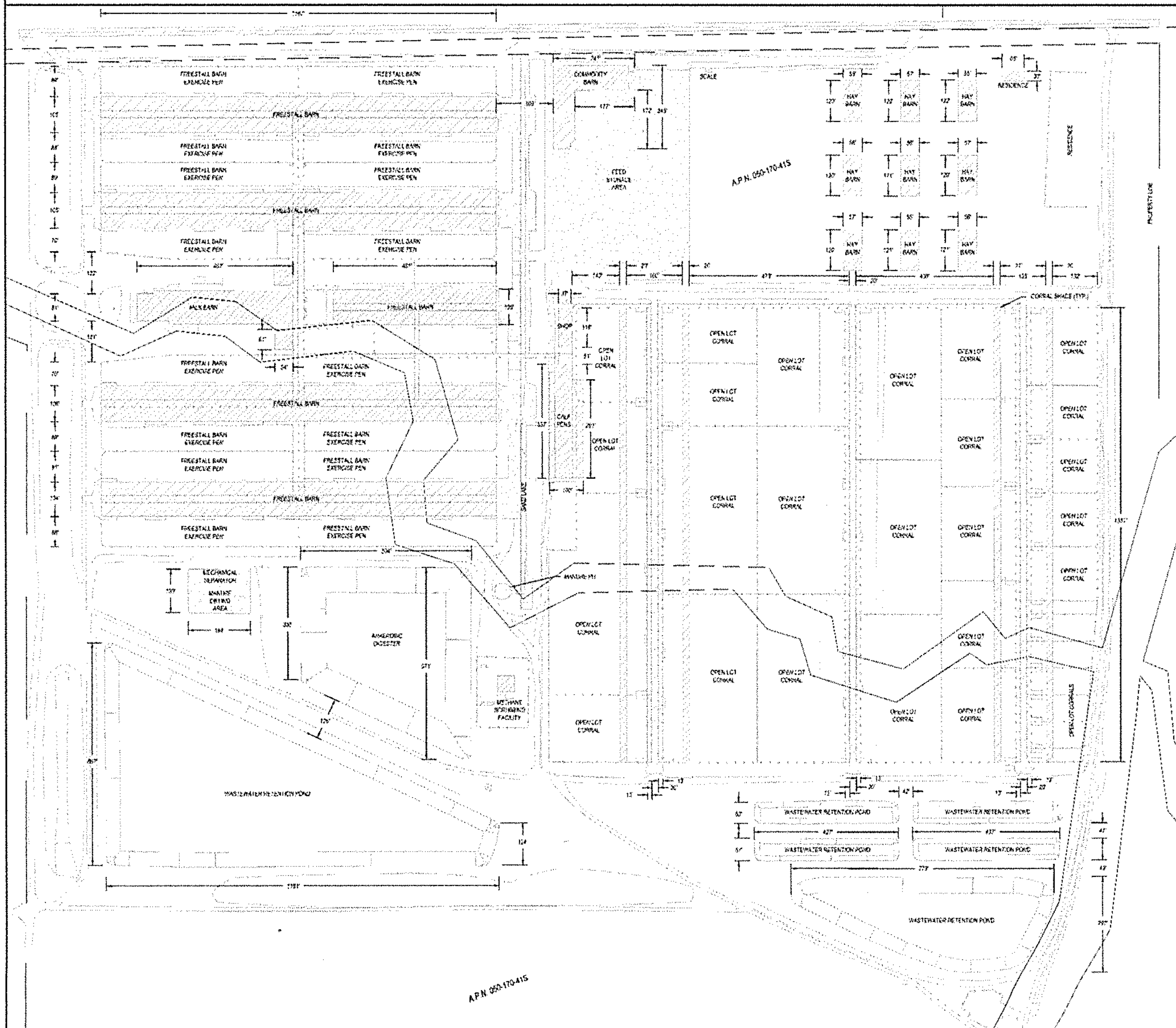
On 'wet' years with excess surface water, there are two canals that will transport water through this facilities land application area. The first one runs along he would side of Field 10B, Field 9 and Field 3, this canal is protected by a raised road that is equivalent to a 100 foot setback. The second berm is located on the South side of Field 11b, Field 7 and Field 5, that is protected by a raised road that is equivalent to a 100 foot setback.

Open Sky Ranch Dairy 2017

Nutrient Budget Certification

	
Signature of Operator of Facility	Signature of Owner of Facility
	Eric te Velde
Print Name	Print Name
	Owner/President 7-20-17
Title and Date	Title and Date
	
Signature of Certified Nutrient Management Plan Specialist	
Agronomist 6-1-17	
Title and Date	

OPEN SKY RANCH DAIRY
SITE PLAN



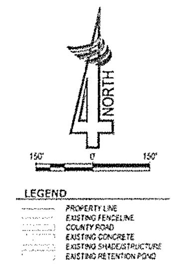
SITE PLAN SCALE: 1" = 150'

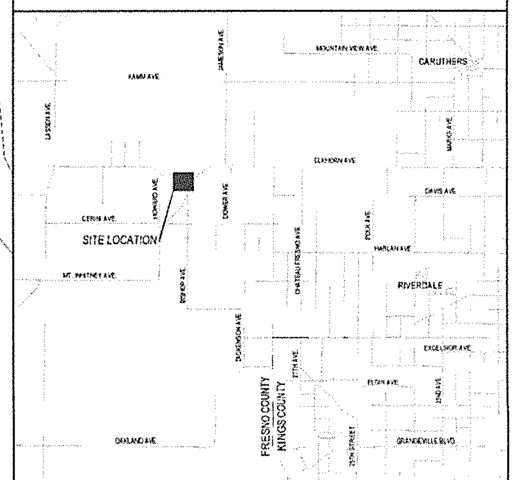
OWNER/OPERATOR ERIC TE VELDE

ADDRESS 12103 ELKHORN AVENUE
RIVERDALE, CA 93656

COUNTY FRESNO COUNTY

A.P.N. 050-170-041





VICINITY MAP SCALE: 1" = 2 MI.

PREPARED BY 4CREEKS

OPEN SKY RANCH DAIRY
12103 ELKHORN AVENUE
RIVERDALE, CA 93656

DAIRY FACILITY MODIFICATIONS
SITE PLAN

PLOT DATE: JUL 17, 2017
JOB NO.: 17153
FILE NAME: 17153-SITE PLAN
SCALE: SEE SHEET
SHEET NO.: 1 OF 1