

**MITIGATION MONITORING
AND REPORTING PROGRAM
FOR THE
B-6 DAIRY
EXPANSION PROJECT**

CONDITIONAL USE PERMIT 12-008



**COUNTY OF MERCED
DEPARTMENT OF COMMUNITY AND ECONOMIC DEVELOPMENT**

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1 INTRODUCTION

1.1 PURPOSE OF THE MITIGATION MONITORING AND REPORTING PROGRAM

Section 21081.6 of the California Public Resources Code requires that:

A public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. This mitigation monitoring program applies to mitigation measures adopted as part of EIRs or negative declarations.

The purpose of the Mitigation Monitoring and Reporting Program is to ensure that the mitigation measures included in the Environmental Impact Report (EIR) for the B-6 Dairy Expansion project (State Clearinghouse # 2015091049) are implemented.

1.2 DESCRIPTION OF PROJECT

The proposed B-6 Dairy Expansion project is located on 26± acres of an existing farm totaling approximately 240 acres. The project site is located on the northwest corner of Turner Avenue and Tegner Road in the Hilmar area of unincorporated Merced County. The project cropland application area consists of 214± acres located on portions of nine parcels (95± acres dairy-owned and 119± acres leased).

Conditional Use Permit CUP12-008 proposes to expand the existing dairy so that the modified dairy would house 2,500 milk cows with a total of 3,680 animals. This would represent an increase of 1,550 milk cows, or 1,911 animals from existing numbers. The proposed project would include the construction of supporting buildings and structures, including a new freestall barn, extension of an existing freestall barn, a dry cow barn, a shade structure, a commodity barn, a new milk barn, and a sprinkler pen. The existing employee residence would be removed with implementation of the project. All proposed structures/additions are within the existing facility footprint. With construction of the proposed facilities, cropped acreage would remain the same at 214 acres, and crops grown on site would continue to be used for dairy feed crops and supplement imported grain and hay.

1.3 ORGANIZATION AND FORMAT

This program describes the requirements and procedures to be followed to ensure that all mitigation measures adopted as part of this project will be implemented as described in the EIR and adopted by Merced County Planning Commission. The Mitigation Monitoring and Reporting Program contains the following chapters:

- **Chapter 2 - Inventory of Mitigation Measures.** This section contains a list of all mitigation measures included in the EIR as adopted by the Merced County Planning Commission in numerical order.
- **Chapter 3 - Implementation Schedule and Monitoring Checklist.** This section contains a summary description of the required mitigation measures in checklist format. The timing of implementation of mitigation measures is indicated, in addition to implementation and monitoring responsibility.
- **Chapter 4 - Verification Record Sheets.** Verification record sheets may be maintained for each mitigation measure by the entity responsible for monitoring the mitigation (e.g., County staff, delegated authority, hired consultant).

1.4 IMPLEMENTATION OF THE MITIGATION MONITORING AND REPORTING PROGRAM

The Director of Merced County Division of Environmental Health (DEH) and/or Community and Economic Development Department (CEDD) Director shall assign staff to manage the B-6 Dairy Expansion project Mitigation Monitoring and Reporting Program under the Division's and/or Department's responsibility.

Responsible staff shall have overall responsibility for ensuring implementation of measures under their jurisdiction and verification of such measures. Responsible staff may delegate duties and responsibilities to other Division/Department staff, state regulatory agencies, consultants, the project sponsor, or other authorities as necessary and appropriate.

1.5 DOCUMENTATION

All mitigation measures will be included on the project construction plans as prepared by a qualified engineer and submitted to the County for review.

1.5.1 IMPLEMENTATION SCHEDULE AND MONITORING CHECKLIST

Chapter 3 contains a mitigation measure implementation schedule and monitoring checklist. Responsible DEH/Community and Economic Development Department staff may use the checklist as a summary of measures to be implemented and the entities responsible for mitigation implementation and monitoring, and check off mitigation implementation as it is completed.

1.5.2 VERIFICATION CHECKLIST

A verification checklist may be maintained for each mitigation measure by the entity responsible for monitoring the mitigation (e.g., DEH/CEDD, delegated authority, hired consultant). The verification checklist should be prepared and reviewed periodically, as directed by responsible staff. Copies of the verification checklist should be submitted to the responsible staff and filed in the project file available for public review.

Responsible staff should ensure that verification checklists are filed on a timely basis and, when identified, that mitigation monitoring plan violations are reported to the DEH Director or CEDD Director. The appropriate Director and responsible staff should initiate any appropriate action necessary to correct the deficiency, including, but not necessarily limited to, holding a meeting with the applicant or requesting legal, County, or regulatory agency action.

1.5.3 MONITORING REPORTS

Responsible staff should prepare annual environmental monitoring reports summarizing the results of the program. The report may be based on the verification record sheets and information received from any person or agency regarding compliance. The monitoring report should include at least the following items:

- Summary of verification checklists;
- Analysis of deficiencies and actions taken to correct them, and;
- Recommendations for future mitigation measures and other corrective actions needed.

2 INVENTORY OF MITIGATION MEASURES

This section contains all of the required mitigation measures identified in the Environmental Impact Report (EIR) for the B-6 Dairy Expansion project. The mitigation measures are listed in numerical order. The corresponding section in the EIR is indicated in parentheses following the issue area. For mitigation measures to be implemented for cumulative impacts, please refer to the Mitigation Monitoring Plan adopted by Merced County for the Animal Confinement Ordinance Revision project.

2.1 AIR QUALITY AND ODORS (DEIR CHAPTER 5)

Mitigation Measure AQ-3a:

The proposed dairy expansion would exceed SJVAPCD permit thresholds for ROG emissions; therefore, in order to reduce emissions, prior to the initiation of operations, the applicant shall implement all air quality provisions of the ACO, including Chapter 18.48.50 U; comply with all applicable SJVAPCD Rules including but not limited to: Rule 2010 – apply for an Authority to Construct/Permit to Operate; Rule 2201 New Source Review; Rule 4570, Confined Animal Facilities; implement BACT/BARCT mitigation measures appropriate for this dairy operation to be developed during permit review in cooperation with SJVAPCD staff, including but not limited to all applicable measures in Appendix D of the DEIR; and Rules 4701 and 4702, Internal Combustion Engines.

Mitigation Measure AQ-3b:

Because project emissions have been evaluated to exceed SJVAPCD significance thresholds, the project applicant shall consult with the SJVAPCD regarding the establishment of a Voluntary Emissions Reduction Agreement between the applicant and the SJVAPCD. Consultation shall occur prior to issuance of building permits, and documentation of consultation with the SJVAPCD shall be provided to the County.

Mitigation Measure AQ-5:

The project applicant shall apply SJVAPCD-approved control measures to reduce PM₁₀ emissions below SJVAPCD health risk thresholds. As applied in the HRA prepared for the project, these control measures would include feeding heifers and bulls at dusk, providing shaded areas, and planting upwind and downwind shelter breaks. If necessary, control measures for PM₁₀ emissions may be modified by the SJVAPCD during their permitting process. All control measure requirements shall be included in the SJVAPCD permit documents.

Mitigation Measure AQ-6:

Implement Mitigation Measure AQ-5.

Mitigation Measure AQ-7a:

To minimize potential for odor nuisance conditions, prior to initiating operations at the new facilities, the applicant shall prepare an Odor Control Plan for submission and approval by the Merced DEH. Following approval, the applicant shall implement the approved Plan. The following odor control measures shall be required in the Plan:

- Liquid manure utilized for irrigation purposes shall be managed so that it does not stand in the application field for more than 24 hours.
- Implement odor control measures as contained in the Plan, which may include, but not be limited to the following:
 1. Ration/diet manipulation
This approach involves the alteration of feed in order to reduce the volume of substrate available for anaerobic activity. The approach includes reducing the nitrogen content of food, phase feeding, repartitioning agents, improved animal genetics, and various feed additives.
 2. Manure management
Utilize best management practices for manure management, including minimizing the time between excretion and application, and aeration of retention basins.

Additionally, implement the following additional best management practices:

Manure Collection Areas

- Clean out manure generated at the freestall barns daily and corrals at least twice a year, or more frequently as necessary to minimize odors;
- Keep cattle as dry and clean as possible at all times;
- Scrape manure from the corrals and bedding from the freestall barns and corrals at a frequency that would reduce or minimize odors.

Manure Treatment and Application

- Minimize moisture content of stockpiled manure/retained solids to a level that would reduce the potential for release of odorous compounds during storage;
- Minimally agitate stockpiled manure during loading for off-site transport;
- Mix process water with irrigation water prior to irrigation (dilution rate shall be adequate to minimize odor levels and maintain appropriate nutrient content in effluent);
- Clean up manure spills upon occurrence;
- Maintain and operate settling ponds and retention ponds to minimize odor levels.

General

- Implement dust suppression measures to prevent the release of odorous compound-carrying fugitive dust;
- During project operations, the dairy operator/owner shall respond to neighbors who are adversely affected by odors generated at the project site and take prompt corrective action.

If necessary and feasible, the animal confinement operation must implement the following additional measures:

1. Manure treatment
Manure treatment methods include maintaining aerobic conditions during storage, aerobic treatment using aerated lagoons or composting, anaerobic digestion, and biochemical treatment.
2. Capture and treatment of emitted gases
This approach includes the use of covered storage pits or lagoons, soil incorporation of applied liquid or solid manure, and dry scrubbers for building exhaust gases including soil absorption beds, bio-filter fields, or packed beds.
3. Enhanced air dispersion
Odor and other air contaminants are diluted to below threshold levels by atmospheric turbulence that increases with wind velocity, solar radiation, and roughness elements such as

buildings, trees, or barriers. Sound site selection with adequate separation distance and elevated sources or mechanical turbulence can aid in dispersing odorous compounds and avoiding nuisance conditions.

4. Enhanced land spreading procedures

Procedures may be modified to minimize impacts by avoiding spreading when the wind is blowing towards populated areas, employing technologies to incorporate manure into soil during or directly after application (i.e. injection, plowing, disking), or spreading manure in thin layers during warm weather.

Mitigation Measure AQ-7b:

Implement the nuisance control measures set forth in Mitigation Measures HAZ-1a and HAZ-1b.

2.2 NUISANCE INSECTS (DEIR CHAPTER 9)

Mitigation Measure HAZ-1a:

Prior to obtaining a building permit, the project sponsor shall prepare a Vector Control Plan to meet the requirements of the Animal Confinement Ordinance Chapter 18.48.055 C.8.c. The Vector Control Plan shall be submitted to the Merced County Division of Environmental Health for review and approval. The applicant shall implement all measures within the approved Vector Control Plan throughout the active life of the dairy.

Mitigation Measure HAZ-1b:

The following operational measures identified in the EIR for the Merced County Animal Confinement Ordinance shall be implemented prior to obtaining a building permit and throughout ongoing operations.

1. All confined animal facilities shall implement the following Best Management Practices to address potential fly problems:
 - a. Daily inspection of manure flushing systems to ensure that manure is being effectively removed from flushed areas, with particular attention paid to corners and isolated areas;
 - b. Daily inspections of water supply and circulation systems to ensure that any leaks are promptly repaired. These inspections shall include all watering troughs to ensure that mechanisms for controlling water level are operating effectively and are protected from damage;
 - c. Regular blading of feeding lanes in freestall barns and corrals to ensure that spilled feed is promptly removed and disposed;
 - d. Daily removal of manure and spilled feed from stalls in freestall barns;
 - e. Scraping of corrals at least twice a year to minimize the potential for development of fly populations on manure;
 - f. Weekly inspection of silage storage areas to ensure proper covering, drainage, and removal of any spoiled silage;
 - g. Weekly inspection of fence lines of corrals and other “edge” areas, and removal of any accumulated manure;
 - h. Periodic monitoring of stable flies by direct observation and counting of the number of stable flies on the legs of a representative number, minimum of two percent, of the support stock herd;

- i. All exterior doors and windows in milk rooms shall have screens that are inspected monthly to determine if they are working properly, and to identify rips in the screening. Ripped or otherwise damaged screens shall be repaired or replaced immediately;
 - j. If necessary, flytraps shall be set throughout barns at strategic locations. The traps are inspected monthly, or more frequently if necessary, and replaced when saturated with captured flies.
2. In addition to fly management practices in the cattle housing and milking areas of dairy facilities, the following sanitation practices shall be implemented at animal confinement facilities to control fly populations:
- a. Dead animals shall be stored in a secured area at the dairy facility, and off-site rendering plant operators shall immediately be notified for pickup of carcasses. Carcasses must be removed within three business days pursuant to Animal Confinement Ordinance Section 18.48.005(A);
 - b. Residual feed shall be removed from infrequently used feeding areas;
 - c. All garbage shall be disposed of in closed dumpsters that are regularly emptied by a contracted waste management service for off-site disposal;
 - d. Grass and other landscape clippings shall be removed from the site for off-site disposal or reuse (as feed or soil amendment)

2.3 HYDROLOGY AND WATER QUALITY (DEIR CHAPTER 10)

Mitigation Measure HYD-1:

The project applicant shall submit Permit Registration Documents (PRD) for the Construction General Permit Order 2009-0009-DWQ to the State Water Resources Control Board, and comply with, and implement, all requirements of the permit. A Legally Responsible Person (LRP) shall electronically submit PRDs prior to commencement of construction activities in the Storm Water Multi-Application Report Tracking System. PRDs consist of the Notice of Intent, Risk Assessment, Post-Construction Calculations, a Site Map, the Storm Water Pollution Prevention Plan (SWPPP), a signed certification statement by the LRP, and the first annual fee. Following submittal of a Notice of Intent package and development of a SWPPP in accordance with the Construction General Permit, the applicant will receive a Waste Discharge Identification Number from the SWRCB. All requirements of the site-specific SWPPP, including any revisions, shall be included in construction documents and must be available on site for the duration of the project.

Mitigation Measure HYD-3a:

The following Best Management Practices shall be implemented by all dairies and confined animal facilities as applicable:

1. Positive drainage shall be included in project design and construction to ensure that excessive ponding does not occur. The design shall comply with Title 3, Division 2, Chapter 1, Article 22, Section 646.1 of the Food and Agriculture Code for construction and maintenance of dairy or facility surroundings, corrals, and ramps, as described below.
2. Dirt or unpaved corrals, or unpaved lanes, shall not be located closer than 25 feet from the milking barn or closer than 50 feet from the milk house. Corral drainage must be provided.
3. A paved (concrete or equivalent) ramp or corral shall be provided to allow the animals to enter and leave the milking barn. This paved area shall be curbed (minimum of 6 inches high and 6 inches wide) and sloped to a drain. Cow washing areas shall be paved (concrete or

equivalent) and sloped to a drain. The perimeter of the area shall be constructed in a manner that will retain the wash water to a paved drained area. Paved access shall be provided to permanent feed racks, mangers, and water troughs. Water troughs shall be provided with: (1) a drain to carry the water from the corrals; and (2) pavement (concrete or equivalent) which is at least 10 feet wide at the drinking area.

4. The cow standing platform at permanent feed racks shall be paved with concrete or equivalent for at least 10 feet back of the stanchion line.
5. As unpaved areas are cleaned, depressions tend to form, allowing ponding and increased infiltration. Regular maintenance shall include filling of depressions. Personnel shall be taught the correct use of manure collection machines (wheel loaders or elevating scrapers).

Mitigation Measure HYD-3b:

The applicant shall comply with requirements of the Nutrient Management Plan and Waste Management Plan (NMP/WMP), implement Central Valley Regional Water Quality Control Board (CVRWQCB) requirements included in the individual Waste Discharge Requirements (WDR) for the proposed expansion, and with all Merced County Animal Confinement Ordinance requirements not superseded by the conditions of the individual WDR.

Mitigation Measure HYD-3c:

As set forth in the NMP, proposed application rates of liquid and/or solid manure shall not exceed agronomic rates. Nutrient samples shall be collected prior to and during applications periods to confirm agronomic rates within all portions of cropped areas receiving manure, and to protect water supplies. Soil testing frequency for nitrogen, potassium, phosphorus, and salts are described in the NMP. Modifications to the NMP may be required as outlined in the individual WDR for the proposed expansion to be issued by the CVRWQCB.

Mitigation Measure HYD-3d:

The CVRWQCB may require an industry-wide or site-specific salinity report to be submitted to the CVRWQCB for review and approval prior to operation or final inspection. The salinity report shall identify sources of salt in waste generated at the dairy; evaluate measures that can be taken to minimize salt in the dairy waste; and include an affirmative commitment by the applicant to implement measures identified to minimize salt in the dairy waste to meet Basin Plan requirements. Any necessary measures shall be incorporated into the WDR issued for the facility or become a required deliverable of the WDR.

Mitigation Measure HYD-3e:

A site-specific shallow groundwater monitoring system has been implemented for the B-6 Dairy. As a condition of the individual WDR issued for the facility, the CVRWQCB will require groundwater monitoring well sampling continue at the B-6 Dairy. The resulting groundwater monitoring objectives for either the regional program or individual site shall be used to assess and mitigate groundwater impacts.

Mitigation Measure HYD-3f:

Groundwater monitoring of the on-site domestic, irrigation, and existing monitoring wells as required under the General Order and individual WDR shall be completed by the dairy operator. If appropriate, surrounding properties with domestic water supply wells within 500 feet of the land application property could be considered for sampling for nitrate and E.C. at a minimum. An updated well monitoring schedule shall be incorporated into the WDR issued for the facility.

Mitigation Measure HYD-3g:

After project implementation and subsequent groundwater monitoring, if the dairy shows increased concentration in groundwater of constituents of concern, additional manure exportation, a reduction in herd size, or additional crop acres may be necessary to accommodate the proposed expansion. A new Report of Waste Discharge (ROWD) may be required by the CVRWQCB. The ROWD shall clearly demonstrate that the herd size will not constitute a threat to groundwater quality. If necessary, the CVRWQCB shall revise the WDR issued to the facility.

Mitigation Measure HYD-3h:

The Department of Community and Economic Development and the Division of Environmental Health shall make a final inspection of the facility prior to the commencement of expanded operations to confirm the dairy meets local and state requirements.

Mitigation Measure HYD-5:

The dairy operator shall notify TID of the increase in potential stormwater runoff and obtain all necessary modifications or additions to any discharge agreements for this operational change. These modifications may include requirements to limit the amount or timing of discharges into the canal system. Upon approval of a new or revised discharge agreement, during storm events the dairy operator shall monitor the discharge to the canal from roofed areas to determine whether overtopping of the concrete lined canal is occurring or about to occur. If overtopping is likely, the dairy operator shall modify discharges to reduce or avoid overtopping.

Mitigation Measure HYD-6:

Following construction of the proposed facilities and prior to commencement of dairy expansion operations, the project applicant shall obtain a flood proofing certificate in accordance with Section 18.34.050 of the Merced County Code from the Merced County Public Works Building Department. If any portion of the dairy facility is found not to comply with flood proofing requirements, the project applicant shall complete flood proofing as necessary to obtain the flood-proofing certificate from the County.

Mitigation Measure HYD-7:

Prior to issuance of any building permit, all existing water supply wells at the facility site and property shall be inspected by the Merced County Division of Environmental Health to ensure that each well is properly sealed at the surface to prevent infiltration of waterborne contaminants into the well casing or surrounding gravel pack. If any of the wells are found not to comply with the Merced County Well Ordinance standards, the project applicant shall retain a qualified professional as described in the respective Ordinance to install the required seal or functional equivalent including setback distances of 100 feet from manured areas as required by the CVRWQCB General Order. Documentation of the inspections and seal installations, if any, shall be provided to the County Division of Environmental Health prior to commencement of dairy expansion operations.

Mitigation Measure HYD-8:

Over the course of dairy operations, the project sponsor shall obtain written agreement from the recipients of manure exported off site for the following:

- All manure shall be applied to cropland at rates and times that are reasonable for the crop, soil, climate, special local situations, and management system. Manure applications shall be timed and managed to minimize nitrogen movement below the root zone and to minimize percolation of waste constituents to groundwater.

- All stormwater that is or has been in contact with manure shall be maintained on site. No storm drainage that has been in contact with manure shall be allowed to flow or seep onto adjacent properties or public roads, or into any waterway.
- Where the commingling of water containing manure can take place with irrigation wells and irrigation and/or drainage district facilities, these facilities must be protected from pollution by a backflow device or method that is approved by the Division of Environmental Health and/or the appropriate irrigation/drainage district. It is the obligation of the property owner to install and maintain or cause to be installed and maintained the backflow device or method.
- Manure shall not be applied within 100 feet of any domestic well, irrigation well, or surface water body. Surface water bodies include creeks, streams, lakes and reservoirs, but do not include canals constructed above grade. Adequate protection of surface water bodies or irrigation wells shall prevent discharge or infiltration of manure constituents to the water body or well.

The project sponsor shall provide the most recent analysis of the dry manure, in writing, to the manure recipient. The signed agreement between the project sponsor and the recipient of manure exported off site shall be submitted to the Merced County Division of Environmental Health for review.

Mitigation Measure HYD-9:

Implement Sections 18.48.050 E, K, O, T, LL, MM, NN, and Sections 18.48.055 D, E, F, and G of the Merced County Animal Confinement Ordinance. These measures include: management practices to prevent degradation; requirements for manure, soils, and groundwater testing; and in the event of contamination, remediation to meet receiving water standards by the RWQCB as set forth in the Basin Plan.

2.4 LAND USE (DEIR CHAPTER 11)

Mitigation Measure LU-2a:

Implement the odor control measures set forth in Mitigation Measure AQ-7a.

Mitigation Measure LU-2b:

Implement the nuisance control measures set forth in Mitigation Measures HAZ-1a and HAZ-1b.

2.5 CUMULATIVE IMPACTS (DEIR CHAPTER 13)

The Merced County Board of Supervisors adopted all mitigation measures identified for cumulative impacts from new and expanding dairies in the County in 2002, and a Mitigation Monitoring and Reporting Program for the Animal Confinement Ordinance Revision project was adopted for these measures at that time. Since the Merced County Animal Confinement Ordinance EIR was completed in 2002, the 2030 Merced County General Plan EIR (2013) updated conclusions on the cumulative condition for all project types, including proposed and expanding dairy facility projects such as the B-6 Dairy Expansion project. Mitigation monitoring for cumulative mitigation measures occurs within the previously adopted 2002 Mitigation Monitoring and Reporting Program for the ACO and the 2013 MMRP for the 2031 General Plan and is not duplicated in this current document for the B-6 Dairy Expansion project.

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3 IMPLEMENTATION SCHEDULE AND CHECKLIST

This section contains an abbreviated description of each mitigation measure presented in tabular, checklist format. A complete description of each measure is contained in the preceding Chapter 2, *Inventory of Mitigation Measures*, contained within this document.

The mitigation measures to be implemented by the project applicant(s) and successors in interest are separated into the following phases:

- Prior to Issuance of a Building Permit
- Prior to Construction
- During Construction
- Prior to Final Inspection or Prior to Initiation of New Operations
- Ongoing Operations.

A summary of the checklist is presented below. Some measures have components that are to be implemented during several project phases. These measures are noted in each category. For mitigation measures that require implementation of a different mitigation measure required for the project, only the measure monitored is listed below.

Timing of Implementation of Measure	Mitigation Measure Number
Prior to Issuance of a Building Permit	AQ-3b, AQ-7b, HAZ-1a, HAZ-1b, HYD-3a, HYD-3b, HYD-7, LU-2b
Prior to Construction	HYD-1, HYD-5
During Construction	HYD-1
Prior to Final Inspection or Prior to Initiation of New Operations	AQ-3a, AQ-5, AQ-6, AQ-7a, HYD-3d, HYD-3h, HYD-6, HYD-7, LU-2a
Ongoing Operations	AQ-3a, AQ-3b, AQ-5, AQ-6, AQ-7a, AQ-7b, HAZ-1a, HAZ-1b, HYD-3a, HYD-3b, HYD-3c, HYD-3d, HYD-3e, HYD-3f, HYD-3g, HYD-5, HYD-8, HYD-9, LU-2a, LU-2b

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Table 3-1 Mitigation Measure Implementation Schedule and Monitoring Checklist

Timing of Verification (To occur prior to the following actions)	Measure Complete? (check)	Mitigation Measures	Responsibility - Implementation	Responsibility - Monitoring
Prior to Final Inspection or Prior to Initiation of New Operations, Ongoing Operations		Mitigation Measure AQ-3a: Implement all air quality provisions of the ACO; comply with all applicable SJVAPCD Rules; implement BACT/BARCT mitigation measures appropriate for this dairy operation during permit review in cooperation with SJVAPCD staff.	Project Applicant	Merced Co. CEDD, SJVAPCD
Prior to Issuance of a Building Permit, Ongoing Operations		Mitigation Measure AQ-3b: Consult with the SJVAPCD regarding the establishment of a Voluntary Emissions Reduction Agreement between the applicant and the SJVAPCD.	Project Applicant	Merced Co. CEDD, SJVAPCD
Prior to Final Inspection or Prior to Initiation of New Operations, Ongoing Operations		Mitigation Measure AQ-5: (Also AQ-6) Comply with applicable requirements of SJVAPCD Rules 4565 and 4570 to reduce ammonia concentrations.	Project Applicant	Merced Co. DEH, SJVAPCD
Prior to Final Inspection or Prior to Initiation of New Operations, Ongoing Operations		Mitigation Measure AQ-6: Comply with applicable requirements of SJVAPCD Rules 4565 and 4570 to reduce ammonia concentrations.	Project Applicant	Merced Co. DEH, SJVAPCD
Prior to Final Inspection or Prior to Initiation of New Operations, Ongoing Operations		Mitigation Measure AQ-7a (also LU-2a): Prepare an Odor Control Plan for submission and approval by the Merced DEH. Following approval, implement all measures of the approved Plan.	Project Applicant	Merced Co. DEH
Prior to Issuance of a Building Permit, Ongoing Operations		Mitigation Measure AQ-7b: Implement nuisance control measures set forth in Mitigation Measures HAZ-1a and HAZ-1b.	Project Applicant	Merced Co. DEH
Prior to Issuance of a Building Permit, Ongoing Operations		Mitigation Measure HAZ-1a (also AQ-7b, LU-2b): Prepare a Vector Control Plan to meet the requirements of the ACO for submission and approval by the Merced DEH. Following approval, implement all measures of the approved Plan.	Project Applicant	Merced Co. CEDD, Merced Co. DEH
Prior to Issuance of a Building Permit, Ongoing Operations		Mitigation Measure HAZ-1b (also AQ-7b, LU-2b): Implement BMPs to address potential fly problems.	Project Applicant	Merced Co. CEDD, Merced Co. DEH
Prior to Construction, During Construction		Mitigation Measure HYD-1: Submit Permit Registration Documents for the Construction General Permit Order 2009-0009-DWQ to the SWRCB. Comply with, and implement, all requirements of the permit.	Project Applicant	Merced Co. Building Dept., SWRCB

Table 3-1 Mitigation Measure Implementation Schedule and Monitoring Checklist

Timing of Verification (To occur prior to the following actions)	Measure Complete? (check)	Mitigation Measures	Responsibility - Implementation	Responsibility - Monitoring
Prior to Issuance of a Building Permit, Ongoing Operations		Mitigation Measure HYD-3a: Implement BMPs as identified on the Mitigation Measure Verification Form in this MMRP to prevent groundwater contamination.	Project Applicant	Merced Co. DEH, Merced Co. CEDDD, CVRWQCB
Prior to Issuance of a Building Permit, Ongoing Operations		Mitigation Measure HYD-3b: Comply with requirements of the NMP/WMP, implement all applicable CVRWQCB requirements, and comply with all Merced County ACO requirements.	Project Applicant	Merced Co. DEH, Merced Co. CEDDD, CVRWQCB
Ongoing Operations		Mitigation Measure HYD-3c: Apply liquid and solid manure to not exceed agronomic rates as set forth in the NMP. Confirm agronomic rates with soil testing as described in the NMP.	Project Applicant	Merced Co. DEH, Merced Co. CEDDD, CVRWQCB
Prior to Final Inspection or Initiation of New Operations, Ongoing Operations		Mitigation Measure HYD-3d: If required by the CVRWQCB, complete a salinity evaluation and implement any identified measures.	Project Applicant	Merced Co. DEH, Merced Co. CEDDD, CVRWQCB
Ongoing Operations		Mitigation Measure HYD-3e: Continue shallow groundwater monitoring well sampling as required by the CVRWQCB.	Project Applicant	Merced Co. DEH, Merced Co. CEDDD, CVRWQCB
Ongoing Operations		Mitigation Measure HYD-3f: Complete groundwater monitoring at a frequency and for constituents as required by the CVRWQCB. Incorporate an updated well monitoring schedule into the WDR issued for the facility.	Project Applicant	Merced Co. DEH, Merced Co. CEDDD, CVRWQCB
Ongoing Operations		Mitigation Measure HYD-3g: After monitoring, if groundwater contamination is shown, submit a new Report of Waste Discharge to the CVRWQCB.	Project Applicant	Merced Co. CEDDD, Merced Co. DEH, CVRWQCB
Prior to Final Inspection or Initiation of New Operations		Mitigation Measure HYD-3h: Make a final inspection of the facility prior to the commencement of operations to confirm the dairy meets local and state requirements.	Project Applicant	Merced Co. CEDDD, Merced Co. DEH, CVRWQCB
Prior to Construction, Ongoing Operations		Mitigation Measure HYD-5: Notify TID of the increase in potential stormwater runoff and obtain all necessary modifications or additions to any discharge agreements for this operational change. Upon approval of a new or revised discharge agreement, monitor the discharge to determine whether overtopping of the concrete lined canal is occurring or about to occur. If overtopping is likely, the dairy operator shall modify discharges to reduce or avoid overtopping.	Project Applicant	Turlock Irrigation District

Table 3-1 Mitigation Measure Implementation Schedule and Monitoring Checklist

Timing of Verification (To occur prior to the following actions)	Measure Complete? (check)	Mitigation Measures	Responsibility - Implementation	Responsibility - Monitoring
Prior to Final Inspection or Initiation of New Operations		Mitigation Measure HYD-6: Obtain a flood proofing certificate from the Merced County Public Works Department in accordance with Merced County Code Section 18.34.050. If any portion of the facility is found not to comply, complete flood proofing.	Project Applicant, Merced Co. Public Works Bldg. Dept.	Merced Co. Public Works Building Dept.
Prior to Issuance of a Building Permit, Prior to Final Inspection or Initiation of New Operations		Mitigation Measure HYD-7: DEH shall inspect the seals of all existing on-site wells for compliance with County Well Ordinance standards. Comply with Well Ordinance Standards prior to commencement of operations.	Project Applicant, Merced Co. DEH	Merced Co. DEH
Ongoing Operations		Mitigation Measure HYD-8: The project sponsor shall obtain written agreement from the recipients of manure exported off site, and provide them with the most recent analysis of the dry manure. A copy of the agreement shall be submitted to DEH.	Project Applicant	Merced Co. CEDDD, Merced Co. DEH
Ongoing Operations		Mitigation Measure HYD-9: Implement Merced County ACO measures to prevent degradation; meet requirements for manure, soils, and groundwater testing; and in the event of contamination, remediate to meet receiving water standards by the RWQCB as set forth in the Basin Plan.	Project Applicant	Merced Co. DEH
Prior to Final Inspection or Prior to Initiation of New Operations, Ongoing Operations		Mitigation Measure LU-2a: Implement the odor control measures set forth in Mitigation Measure AQ-7a.	Project Applicant	Merced Co. DEH
Prior to Issuance of a Building Permit, Ongoing Operations		Mitigation Measure LU-2b: Implement the nuisance control measures set forth in Mitigation Measures HAZ-1a and HAZ-1b.	Project Applicant	Merced Co. CEDDD, Merced Co. DEH

Notes: NMP = Nutrient Management Plan, CEDDD = Merced County Community and Economic Development Department, MCDEH = Merced County Division of Environmental Health

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4 VERIFICATION RECORDS

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility: Merced County Community and Economic Development Department / San Joaquin Valley Air Pollution Control District

Timing of Verification: Prior to Final Inspection or Initiation of New Operations, Ongoing Operations

Implementation Responsibility: Project Applicant

Issue Area: Air Quality and Odors

Mitigation Measure AQ-3a:

The proposed dairy expansion would exceed SJVAPCD permit thresholds for ROG emissions; therefore, in order to reduce emissions, prior to the initiation of operations, the applicant shall implement all air quality provisions of the ACO, including Chapter 18.48.50 U; comply with all applicable SJVAPCD Rules including but not limited to: Rule 2010 – apply for an Authority to Construct/Permit to Operate; Rule 2201 New Source Review; Rule 4570, Confined Animal Facilities; implement BACT/BARCT mitigation measures appropriate for this dairy operation to be developed during permit review in cooperation with SJVAPCD staff, including but not limited to all applicable measures in Appendix D of the DEIR; and Rules 4701 and 4702, Internal Combustion Engines.

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure AQ-3a: Implement all air quality provisions of the ACO; comply with all applicable SJVAPCD Rules; implement BACT/BARCT mitigation measures appropriate for this dairy operation during permit review in cooperation with SJVAPCD staff.

Monitoring Party: Merced County Community and Economic Development Department / San Joaquin Valley Air Pollution Control District

Verification Timing: Prior to Final Inspection or Initiation of New Operations, Ongoing Operations

Compliance: _____ Acceptable	_____ Unacceptable:	_____ remedial action taken
	_____ require work stop	_____ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

By:

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Community and Economic Development Department / San Joaquin Valley Air Pollution Control District
Timing of Verification:	Prior to Issuance of a Building Permit, Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Air Quality and Odors

Mitigation Measure AQ-3b:

Because project emissions have been evaluated to exceed SJVAPCD significance thresholds, the project applicant shall consult with the SJVAPCD regarding the establishment of a Voluntary Emissions Reduction Agreement between the applicant and the SJVAPCD. Consultation shall occur prior to issuance of building permits, and documentation of consultation with the SJVAPCD shall be provided to the County.

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure AQ-3b: Consult with the SJVAPCD regarding the establishment of a Voluntary Emissions Reduction Agreement between the applicant and the SJVAPCD.

Monitoring Party: Merced County Community and Economic Development Department / San Joaquin Valley Air Pollution Control District

Verification Timing: Prior to Issuance of a Building Permit, Ongoing Operations

Compliance: _____ Acceptable

_____ Unacceptable:

_____ remedial action taken

_____ require work stop

_____ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

By:

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Department of Environmental Health; San Joaquin Valley Air Pollution Control District
Timing of Verification:	Prior to Final Inspection or Initiation of New Operations, Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Air Quality and Odors

Mitigation Measure AQ-5 (also AQ-6):

The project applicant shall apply SJVAPCD-approved control measures to reduce PM₁₀ emissions below SJVAPCD health risk thresholds. As applied in the HRA prepared for the project, these control measures would include feeding heifers and bulls at dusk, providing shaded areas, and planting upwind and downwind shelter breaks. If necessary, control measures for PM₁₀ emissions may be modified by the SJVAPCD during their permitting process. All control measure requirements shall be included in the SJVAPCD permit documents.

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure AQ-5 (also AQ-6): Comply with applicable requirements of SJVAPCD Rules 4565 and 4570 to reduce ammonia concentrations.

Monitoring Party: Merced County Department of Environmental Health/ San Joaquin Valley Air Pollution Control District

Verification Timing: Prior to Final Inspection or Initiation of New Operations, Ongoing Operations

Compliance: _____ Acceptable

___ Unacceptable:

___ remedial action taken

___ require work stop

___ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Department of Environmental Health
Timing of Verification:	Prior to Final Inspection or Initiation of New Operations, Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Air Quality and Odors

Mitigation Measure AQ-7a (also LU-2a):

To minimize potential for odor nuisance conditions, prior to initiating operations at the new facilities, the applicant shall prepare an Odor Control Plan for submission and approval by the Merced Division of Environmental Health. Following approval, the applicant shall implement the approved Plan. The following odor control measures shall be required in the Plan:

- Liquid manure utilized for irrigation purposes shall be managed so that it does not stand in the application field for more than 24 hours.
- Implement odor control measures as contained in the Plan, which may include, but not be limited to the following:
 1. Ration/diet manipulation
This approach involves the alteration of feed in order to reduce the volume of substrate available for anaerobic activity. The approach includes reducing the nitrogen content of food, phase feeding, repartitioning agents, improved animal genetics, and various feed additives.
 2. Manure management
Utilize best management practices for manure management, including minimizing the time between excretion and application, and aeration of retention basins.

Additionally, implement the following additional best management practices:

Manure Collection Areas

- Clean out manure generated at the freestall barns daily and corrals at least twice a year, or more frequently as necessary to minimize odors;
- Keep cattle as dry and clean as possible at all times;
- Scrape manure from the corrals and bedding from the freestall barns and corrals at a frequency that would reduce or minimize odors.

Manure Treatment and Application

- Minimize moisture content of stockpiled manure/retained solids to a level that would reduce the potential for release of odorous compounds during storage;
- Minimally agitate stockpiled manure during loading for off-site transport;

- Mix process water with irrigation water prior to irrigation (dilution rate shall be adequate to minimize odor levels and maintain appropriate nutrient content in effluent);
- Clean up manure spills upon occurrence;
- Maintain and operate settling ponds and retention ponds to minimize odor levels.

General

- Implement dust suppression measures to prevent the release of odorous compound-carrying fugitive dust;
- During project operations, the dairy operator/owner shall respond to neighbors who are adversely affected by odors generated at the project site and take prompt corrective action.

If necessary and feasible, the animal confinement operation must implement the following additional measures:

1. Manure treatment
Manure treatment methods include maintaining aerobic conditions during storage, aerobic treatment using aerated lagoons or composting, anaerobic digestion, and biochemical treatment.
2. Capture and treatment of emitted gases
This approach includes the use of covered storage pits or lagoons, soil incorporation of applied liquid or solid manure, and dry scrubbers for building exhaust gases including soil absorption beds, bio-filter fields, or packed beds.
3. Enhanced air dispersion
Odor and other air contaminants are diluted to below threshold levels by atmospheric turbulence that increases with wind velocity, solar radiation, and roughness elements such as buildings, trees, or barriers. Sound site selection with adequate separation distance and elevated sources or mechanical turbulence can aid in dispersing odorous compounds and avoiding nuisance conditions..
4. Enhanced land spreading procedures
Procedures may be modified to minimize impacts by avoiding spreading when the wind is blowing towards populated areas, employing technologies to incorporate manure into soil during or directly after application (i.e. injection, plowing, disking), or spreading manure in thin layers during warm weather.

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure AQ-7a (also LU-2a): Prepare an Odor Control Plan for submission and approval by the Merced DEH. Following approval, implement all measures of the approved Plan.

Monitoring Party: Merced County Department of Environmental Health

Verification Timing: Prior to Final Inspection or Initiation of New Operations, Ongoing Operations

Compliance: _____ Acceptable

_____ Unacceptable:

_____ remedial action taken

_____ require work stop

_____ follow-up required

Observations:

Recommendations:

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Community and Economic Development Department / Merced County Division of Environmental Health
Timing of Verification:	Prior to Issuance of a Building Permit, Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Nuisance Insects

Mitigation Measure HAZ-1a (also AQ-7b, LU-2b):

Prior to obtaining a building permit, the project sponsor shall prepare a Vector Control Plan to meet the requirements of the Animal Confinement Ordinance Chapter 18.48.055 C.8.c. The Vector Control Plan shall be submitted to the Merced County Division of Environmental Health for review and approval. The applicant shall implement all measures within the approved Vector Control Plan throughout the active life of the dairy.

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure HAZ-1a (also AQ-7b, LU-2b): Prepare a Vector Control Plan to meet the requirements of the ACO and submit to the Merced County DEH for review and approval. Implement all measures within the Plan.

Monitoring Party: Merced County Community and Economic Development Department, Merced County Division of Environmental Health

Verification Timing: Prior to Issuance of a Building Permit, Ongoing Operations

Compliance: _____ Acceptable

_____ Unacceptable:

_____ remedial action taken

_____ require work stop

_____ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Community and Economic Development Department / Merced County Division of Environmental Health
Timing of Verification:	Prior to Issuance of a Building Permit, Ongoing Operations
Implementation Responsibility:	Project Applicant, Construction Contractor

Issue Area: Nuisance Insects

Mitigation Measure HAZ-1b (also AQ-7b, LU-2b):

The following operational measures identified in the EIR for the Merced County Animal Confinement Ordinance shall be implemented prior to obtaining a building permit and throughout ongoing operations.

1. All confined animal facilities shall implement the following Best Management Practices to address potential fly problems:
 - a. Daily inspection of manure flushing systems to ensure that manure is being effectively removed from flushed areas, with particular attention paid to corners and isolated areas;
 - b. Daily inspections of water supply and circulation systems to ensure that any leaks are promptly repaired. These inspections shall include all watering troughs to ensure that mechanisms for controlling water level are operating effectively and are protected from damage;
 - c. Regular blading of feeding lanes in freestall barns and corrals to ensure that spilled feed is promptly removed and disposed;
 - d. Daily removal of manure and spilled feed from stalls in freestall barns;
 - e. Scraping of corrals at least twice a year to minimize the potential for development of fly populations on manure;
 - f. Weekly inspection of silage storage areas to ensure proper covering, drainage, and removal of any spoiled silage;
 - g. Weekly inspection of fence lines of corrals and other “edge” areas, and removal of any accumulated manure;
 - h. Periodic monitoring of stable flies by direct observation and counting of the number of stable flies on the legs of a representative number, minimum of two percent, of the support stock herd;
 - i. All exterior doors and windows in milk rooms shall have screens that are inspected monthly to determine if they are working properly, and to identify rips in the screening. Ripped or otherwise damaged screens shall be repaired or replaced immediately;
 - j. If necessary, flytraps shall be set throughout barns at strategic locations. The traps are inspected monthly, or more frequently if necessary, and replaced when saturated with captured flies.

2. In addition to fly management practices in the cattle housing and milking areas of dairy facilities, the following sanitation practices shall be implemented at animal confinement facilities to control fly populations:
 - a. Dead animals shall be stored in a secured area at the dairy facility, and off-site rendering plant operators shall immediately be notified for pickup of carcasses. Carcasses must be removed within three business days pursuant to ACO Section 18.48.005(A);
 - b. Residual feed shall be removed from infrequently used feeding areas;
 - c. All garbage shall be disposed of in closed dumpsters that are regularly emptied by a contracted waste management service for off-site disposal;
 - d. Grass and other landscape clippings shall be removed from the site for off-site disposal or reuse (as feed or soil amendment).

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure HAZ-1b (also AQ-7b, LU-2b): Implement BMPs to address potential fly problems.

Monitoring Party: Merced County Community and Economic Development Department, Merced County Division of Environmental Health

Verification Timing: Prior to Issuance of a Building Permit, Ongoing Operations

Compliance: _____ Acceptable

_____ Unacceptable:

_____ remedial action taken

_____ require work stop

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility: Merced County Building Department, State Water Resources Control Board

Timing of Verification: Prior to and During Construction

Implementation Responsibility: Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-1:

The project applicant shall submit Permit Registration Documents (PRD) for the Construction General Permit Order 2009-0009-DWQ to the State Water Resources Control Board, and comply with, and implement, all requirements of the permit. A Legally Responsible Person (LRP) shall electronically submit PRDs prior to commencement of construction activities in the Storm Water Multi-Application Report Tracking System. PRDs consist of the Notice of Intent, Risk Assessment, Post-Construction Calculations, a Site Map, the Storm Water Pollution Prevention Plan (SWPPP), a signed certification statement by the LRP, and the first annual fee. Following submittal of a Notice of Intent package and development of a SWPPP in accordance with the Construction General Permit, the applicant will receive a Waste Discharge Identification Number from the SWRCB. All requirements of the site-specific SWPPP, including any revisions, shall be included in construction documents and must be available on site for the duration of the project.

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-1: The project applicant shall submit Permit Registration Documents (PRD) for the Construction General Permit Order 2009-0009-DWQ to the State Water Resources Control Board, and comply with, and implement, all requirements of the permit.

Monitoring Party: Merced County Building Department, State Water Resources Control Board

Verification Timing: Prior to and During Construction

Compliance: _____ Acceptable

___ Unacceptable:

___ remedial action taken

___ require work stop

___ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Division of Environmental Health / Community and Economic Development / Central Valley Regional Water Quality Control Board
Timing of Verification:	Prior to Issuance of a Building Permit, Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-3a:

The following Best Management Practices shall be implemented by all dairies and confined animal facilities as applicable:

1. Positive drainage shall be included in project design and construction to ensure that excessive ponding does not occur. The design shall comply with Title 3, Division 2, Chapter 1, Article 22, Section 646.1 of the Food and Agriculture Code for construction and maintenance of dairy or facility surroundings, corrals, and ramps, as described below.
2. Dirt or unpaved corrals, or unpaved lanes, shall not be located closer than 25 feet from the milking barn or closer than 50 feet from the milk house. Corral drainage must be provided.
3. A paved (concrete or equivalent) ramp or corral shall be provided to allow the animals to enter and leave the milking barn. This paved area shall be curbed (minimum of 6 inches high and 6 inches wide) and sloped to a drain. Cow washing areas shall be paved (concrete or equivalent) and sloped to a drain. The perimeter of the area shall be constructed in a manner that will retain the wash water to a paved drained area. Paved access shall be provided to permanent feed racks, mangers, and water troughs. Water troughs shall be provided with: (1) a drain to carry the water from the corrals; and (2) pavement (concrete or equivalent) which is at least 10 feet wide at the drinking area.
4. The cow standing platform at permanent feed racks shall be paved with concrete or equivalent for at least 10 feet back of the stanchion line.
5. As unpaved areas are cleaned, depressions tend to form, allowing ponding and increased infiltration. Regular maintenance shall include filling of depressions. Personnel shall be taught the correct use of manure collection machines (wheel loaders or elevating scrapers).

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-3a: Implement BMPs as identified in the Mitigation Measure to prevent groundwater contamination.

Monitoring Party: Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board

Verification Timing: Prior to Issuance of a Building Permit, Ongoing Operations

Compliance: _____ Acceptable

___ Unacceptable:

___ remedial action taken

___ require work stop

___ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Division of Environmental Health / Community and Economic Development / Central Valley Regional Water Quality Control Board
Timing of Verification:	Prior to Issuance of a Building Permit, Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-3b:

The applicant shall comply with requirements of the Nutrient Management Plan and Waste Management Plan (NMP/WMP), implement Central Valley Regional Water Quality Control Board (CVRWQCB) requirements included in the individual Waste Discharge Requirements (WDR) for the proposed expansion, and comply with all Merced County Animal Confinement Ordinance requirements not superseded by the conditions of the individual WDR.

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-3b: Comply with requirements of the NMP/WMP, implement all applicable CVRWQCB requirements, and comply with all Merced County ACO requirements.

Monitoring Party: Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board

Verification Timing: Prior to Issuance of a Building Permit, Ongoing Operations

Compliance: _____ Acceptable

___ Unacceptable:

___ remedial action taken

___ require work stop

___ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

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Comments/Actions:

Entered into Monitoring File:

Date:

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Division of Environmental Health / Community and Economic Development / Central Valley Regional Water Quality Control Board
Timing of Verification:	Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-3c:

As set forth in the NMP, proposed application rates of liquid and/or solid manure shall not exceed agronomic rates. Nutrient samples shall be collected prior to and during applications periods to confirm agronomic rates within all portions of cropped areas receiving manure, and to protect water supplies. Soil testing frequency for nitrogen, potassium, phosphorus, and salts are described in the NMP. Modifications to the NMP may be required as outlined in the individual WDR for the proposed expansion to be issued by the CVRWQCB.

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-3c: Apply liquid and solid manure to not exceed agronomic rates as set forth in the NMP. Confirm agronomic rates with soil testing as described in the NMP.

Monitoring Party: Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board

Verification Timing: Ongoing Operations

Compliance: _____ Acceptable

___ Unacceptable:

___ remedial action taken

___ require work stop

___ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

By:

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board
Timing of Verification:	Prior to Final Inspection or Initiation of New Operations, Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-3d:

The CVRWQCB may require an industry-wide or site-specific salinity report to be submitted to the CVRWQCB for review and approval prior to operation or final inspection. The salinity report shall identify sources of salt in waste generated at the dairy; evaluate measures that can be taken to minimize salt in the dairy waste; and include an affirmative commitment by the applicant to implement measures identified to minimize salt in the dairy waste to meet Basin Plan requirements. Any necessary measures shall be incorporated into the WDR issued for the facility or become a required deliverable of the WDR.

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-3d: If required by the CVRWQCB, complete a salinity evaluation and implement any identified measures.

Monitoring Party: Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board

Verification Timing: Prior to Final Inspection or Initiation of New Operations, Ongoing Operations

Compliance: _____ Acceptable	_____ Unacceptable:	_____ remedial action taken
	_____ require work stop	_____ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date: _____ Time: _____ Monitor: _____

Comments/Actions:

Entered into Monitoring File:

Date: _____ By: _____

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board
Timing of Verification:	Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-3e:

A site-specific shallow groundwater monitoring system has been implemented for the B-6 Dairy. As a condition of the individual WDR issued for the facility, the CVRWQCB will require groundwater monitoring well sampling continue at the B-6 Dairy. The resulting groundwater monitoring objectives for either the regional program or individual site shall be used to assess and mitigate groundwater impacts.

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-3e: Continue shallow groundwater monitoring well sampling as required by the CVRWQCB.

Monitoring Party: Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board

Verification Timing: Ongoing Operations

Compliance: _____ Acceptable

_____ Unacceptable:

_____ remedial action taken

_____ require work stop

_____ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board
Timing of Verification:	Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-3f:

Groundwater monitoring of the on-site domestic, irrigation, and existing monitoring wells as required under the General Order and individual WDR shall be completed by the dairy operator. If appropriate, surrounding properties with domestic water supply wells within 500 feet of the land application property could be considered for sampling for nitrate and E.C. at a minimum. An updated well monitoring schedule shall be incorporated into the WDR issued for the facility.

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-3f: Complete groundwater monitoring at a frequency and for constituents as required by the CVRWQCB. Incorporate an updated well monitoring schedule into the WDR issued for the facility.

Monitoring Party: Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board

Verification Timing: Ongoing Operations

<p>Compliance: _____ Acceptable</p>	<p>___ Unacceptable: ___ remedial action taken ___ require work stop ___ follow-up required</p>
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Observations:

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility: Merced County Division of Environmental Health /
Merced County Community and Economic Development
Department / Central Valley Regional Water Quality
Control Board

Timing of Verification: Ongoing Operations

Implementation Responsibility: Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-3g:

After project implementation and subsequent groundwater monitoring, if the dairy shows increased concentration in groundwater of constituents of concern, additional manure exportation, a reduction in herd size, or additional crop acres may be necessary to accommodate the proposed expansion. A new Report of Waste Discharge (ROWD) may be required by the CVRWQCB. The ROWD shall clearly demonstrate that the herd size will not constitute a threat to groundwater quality. If necessary, the CVRWQCB shall revise the WDR issued to the facility.

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-3g: After monitoring, if groundwater contamination is shown, submit a new Report of Waste Discharge to the CVRWQCB.

Monitoring Party: Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board

Verification Timing: Ongoing Operations

<p>Compliance: _____ Acceptable</p>	<p>___ Unacceptable: ___ remedial action taken ___ require work stop ___ follow-up required</p>
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Observations:

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Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Division of Environmental Health / Community and Economic Development Department / Central Valley Regional Water Quality Control Board
Timing of Verification:	Prior to Final Inspection or Initiation of New Operations
Implementation Responsibility:	Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-3h:

The Department of Community and Economic Development and the Division of Environmental Health shall make a final inspection of the facility prior to the commencement of expanded operations to confirm the dairy meets local and state requirements.

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-3h: Make a final inspection of the facility prior to the commencement of operations to confirm the dairy meets local and state requirements.

Monitoring Party: Merced County Division of Environmental Health /Community and Economic Development Department / Central Valley Regional Water Quality Control Board

Verification Timing: Prior to Final Inspection or Initiation of New Operations

Compliance: _____ Acceptable

_____ Unacceptable:

_____ remedial action taken

_____ require work stop

_____ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

By:

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Turlock Irrigation District
Timing of Verification:	Prior to Construction, Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-5:

The dairy operator shall notify TID of the increase in potential stormwater runoff and obtain all necessary modifications or additions to any discharge agreements for this operational change. These modifications may include requirements to limit the amount or timing of discharges into the canal system. Upon approval of a new or revised discharge agreement, during storm events the dairy operator shall monitor the discharge to the canal from roofed areas to determine whether overtopping of the concrete lined canal is occurring or about to occur. If overtopping is likely, the dairy operator shall modify discharges to reduce or avoid overtopping.

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-5: Notify TID of the increase in potential stormwater runoff and obtain all necessary modifications or additions to any discharge agreements for this operational change. Upon approval of a new or revised discharge agreement, monitor the discharge to determine whether overtopping of the concrete lined canal is occurring or about to occur. If overtopping is likely, the dairy operator shall modify discharges to reduce or avoid overtopping.

Monitoring Party: Turlock Irrigation District

Verification Timing: Prior to Construction, Ongoing Operations

Compliance: _____ Acceptable

_____ Unacceptable:

_____ remedial action taken

_____ require work stop

_____ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

By:

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Public Works Building Department
Timing of Verification:	Prior to Final Inspection or Initiation of New Operations
Implementation Responsibility:	Project Applicant / Merced County Public Works Building Department

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-6:

Following construction of the proposed facilities and prior to commencement of dairy expansion operations, the project applicant shall obtain a flood proofing certificate in accordance with Section 18.34.050 of the Merced County Code from the Merced County Public Works Building Department. If any portion of the dairy facility is found not to comply with flood proofing requirements, the project applicant shall complete flood proofing as necessary to obtain the flood-proofing certificate from the County.

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-6: Take measures to bring the existing and proposed facilities into compliance with General Order requirements for flood protection. Obtain a flood proofing certificate from the Merced County Public Works Department in accordance with Merced County Code Section 18.34.050.

Monitoring Party: Merced County Public Works Building Department

Verification Timing: Prior to Final Inspection or Initiation of New Operations

Compliance: _____ Acceptable

_____ Unacceptable:

_____ remedial action taken

_____ require work stop

_____ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

By:

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Division of Environmental Health
Timing of Verification:	Prior to Issuance of a Building Permit, Prior to Final Inspection or Initiation of New Operations
Implementation Responsibility:	Project Applicant / Merced County Division of Environmental Health

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-7:

Prior to issuance of any building permit, all existing water supply wells at the facility site and property shall be inspected by the Merced County Division of Environmental Health to ensure that each well is properly sealed at the surface to prevent infiltration of waterborne contaminants into the well casing or surrounding gravel pack. If any of the wells are found not to comply with the Merced County Well Ordinance standards, the project applicant shall retain a qualified professional as described in the respective Ordinance to install the required seal or functional equivalent including setback distances of 100 feet from manured areas as required by the CVRWQCB General Order. Documentation of the inspections and seal installations, if any, shall be provided to the County Division of Environmental Health prior to commencement of dairy expansion operations.

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-7: DEH shall inspect the seals of all existing on-site wells for compliance with County Well Ordinance standards. Comply with Well Ordinance Standards prior to commencement of operations.

Monitoring Party: Merced County Division of Environmental Health

Verification Timing: Prior to Issuance of a Building Permit, Prior to Final Inspection or Initiation of New Operations

Compliance: _____ Acceptable

___ Unacceptable:

___ remedial action taken

___ require work stop

___ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

By:

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Monitoring Responsibility:	Merced County Community and Economic Development / Merced County Division of Environmental Health
Timing of Verification:	Ongoing Operations
Implementation Responsibility:	Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-8:

Over the course of dairy operations, the project sponsor shall obtain written agreement from the recipients of manure exported off site for the following:

- All manure shall be applied to cropland at rates and times that are reasonable for the crop, soil, climate, special local situations, and management system. Manure applications shall be timed and managed to minimize nitrogen movement below the root zone and to minimize percolation of waste constituents to groundwater.
- All stormwater that is or has been in contact with manure shall be maintained on site. No storm drainage that has been in contact with manure shall be allowed to flow or seep onto adjacent properties or public roads, or into any waterway.
- Where the commingling of water containing manure can take place with irrigation wells and irrigation and/or drainage district facilities, these facilities must be protected from pollution by a backflow device or method that is approved by the Division of Environmental Health and/or the appropriate irrigation/drainage district. It is the obligation of the property owner to install and maintain or cause to be installed and maintained the backflow device or method.
- Manure shall not be applied within 100 feet of any domestic well, irrigation well, or surface water body. Surface water bodies include creeks, streams, lakes and reservoirs, but do not include canals constructed above grade. Adequate protection of surface water bodies or irrigation wells shall prevent discharge or infiltration of manure constituents to the water body or well.

The project sponsor shall provide the most recent analysis of the dry manure, in writing, to the manure recipient. The signed agreement between the project sponsor and the recipient of manure exported off site shall be submitted to the Merced County Division of Environmental Health for review.

Verification Record

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-8: The project sponsor shall obtain a written agreement from the recipients of manure exported off site, and provide them with the most recent analysis of the dry manure. A copy of the agreement shall be submitted to DEH.

Monitoring Party: Merced County Community and Economic Development, Merced County Division of Environmental Health

Verification Timing: Ongoing Operations

Compliance: _____ Acceptable

___ Unacceptable:

___ remedial action taken

___ require work stop

___ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

By:

B-6 Dairy Expansion Project
Mitigation Monitoring and Reporting Program

Monitoring Responsibility: Merced County Division of Environmental Health

Timing of Verification: Ongoing Operations

Implementation Responsibility: Project Applicant

Issue Area: Hydrology and Water Quality

Mitigation Measure HYD-9:

Implement Sections 18.48.050 E, K, O, T, LL, MM, NN, and Sections 18.48.055 D, E, F, and G of the Merced County Animal Confinement Ordinance. These measures include: management practices to prevent degradation; requirements for manure, soils, and groundwater testing; and in the event of contamination, remediation to meet receiving water standards by the RWQCB as set forth in the Basin Plan

Verification Record

B-6 Dairy Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure HYD-9: Implement Merced County ACO measures to prevent degradation; meet requirements for manure, soils, and groundwater testing; and in the event of contamination, remediate to meet receiving water standards by the RWQCB as set forth in the Basin Plan.

Monitoring Party: Merced County Division of Environmental Health

Verification Timing: Ongoing Operations

Compliance: _____ Acceptable

___ Unacceptable:

___ remedial action taken

___ require work stop

___ follow-up required

Observations:

Recommendations:

Receipt by Program Manager:

Date:

Time:

Monitor:

Comments/Actions:

Entered into Monitoring File:

Date:

By:
