MADERA COUNTY DAIRY ELEMENT

Prepared for
Madera County

July 2008

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CHAPTER 1
Introduction

1.0 Welcome to Madera County

Agricultural production (in particular dairy production) represents a major portion of Madera County's economy (see Table 1-1). Currently, Madera County is home to 59 dairies, with a total of 61,800 milk cows. The number will likely continue to increase, given the continued migration of dairy operations from Southern California into the Sacramento/San Joaquin Valley. In addition, herd sizes have increased in response to changes within the dairy industry.

TABLE 1-1. MADERA COUNTY DAIRY PRODUCTION STATISTICS

Year	Crop Ranking	Value
2006	3	$169,000,000
2005	3	$195,370,000
2004	3	$195,446,000
2003	3	$126,954,000
2002	3	$108,843,000
2001	2	$125,002,000

Source: Madera County Agricultural Reports, 2001 -2006

This chapter identifies the goals, policies, and development standards of the County as they related to the location, design, and monitoring of dairies. This chapter also describes the process for the review of new dairies, expansion of existing dairies, and provides guidance on the County's approval process for these new and expanding existing dairies (including compliance with the California Environmental Quality Act).

1.1 Relationship to the Existing General Plan

State law State law requires each county and city to prepare and adopt a comprehensive and long-range general plan for its physical development (Government Code Section 65300). This general plan must address the seven topics (referred to as "elements") of land use, circulation, housing, open-space, conservation, safety, and noise as identified in state law (Government Code Section 65302), to the extent that the topics are locally relevant. It may also include other topics of local interest, as chosen by the County (Government Code Section 65303). Because of the overall importance of the dairy industry to the County's economy, Madera County has chosen to prepare and adopt a Dairy Element as an optional element to the County's general plan.

> The County's Dairy Element reflects the importance of agriculture to the local economy

Consistency with other General Plan Elements

This Dairy Element has been prepared to be consistent with the other elements of the County's General Plan. The policies of this Dairy Element support, and are supported by, the goals and policies provided in other elements of the County's existing General Plan.

1.2 Purpose and Objectives of the Dairy Element

The intent of this element is to guide the future growth of this key County asset while protecting the public and the environmental conditions of Madera County. In preparing this Dairy Element, the County was guided by the following key objectives:

- Guide the future growth of this key County industry, dairy production, while protecting the public and the environment.
- Avoid an over concentration of the dairy industry within Madera County, or any specific part of the County.
- Protection of established dairies from encroachment by incompatible land uses.

- Establishment of appropriate setbacks and/or buffers around existing communities or residences.
- Streamline the processing and permitting of new dairy development in Madera County, including how the County requirements will be practically implemented by both the Dairy Operator and the County.
- Provide dairy development standards and mitigation, monitoring, and reporting measures applicable to the establishment of new and expanded dairies in Madera County.
- Integrate and streamline information required by the Central Valley Regional Water Quality Control Board (CVRWQCB) and the San Joaquin Valley Air Pollution Control District (SJVAPCD) into the dairy permitting process.

1.3 Compliance with the California Environmental Quality Act

As required under the California Environmental Quality Act (CEQA, Public Resources Code Section 21000, et seq.), the Board of Supervisors will consider the findings of an environmental impact report (EIR) prior to adopting the Dairy Element. To the extent feasible, all mitigation measures recommended to reduce the potential environmental impacts of the Dairy Element below a level of significance are integrated into the policies of the Dairy Element.

1.4 Public Participation

To help guide preparation of the County's Dairy Element, the County created a Dairy Standards Advisory Committee. This committee consisted of a variety of dairy stakeholders, including staff from various County departments (i.e., Environmental Health, Agriculture, etc.), dairy industry professionals, representatives from the SJVAPCD, the CVRWQCB, and technical experts from the UC Davis Extension Program and California State University Fresno.

Seven advisory committee meetings were held during preparation of the draft Dairy Element and prior to release of the draft EIR for the element. Each of the committee meetings was designed to deliver updates on preparation of the element and solicit stakeholder input at key milestones in the process.

1.5 Scope and Organization of the Element

The Dairy Element is comprised of the following chapters and topics:

CHAPTER 1. INTRODUCTION

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3.4 Dairy Monitoring Programs

Similar to the County's existing General Plan, the Dairy Element provides a set of goals, policies, and implementation programs that have been designed specifically to help guide the future growth of the County. In the case of this Dairy Element, the various policy statements have been developed to help guide future growth of this key County asset. To assist the reader, Chapter 3 "Goals, Policies, and Programs" has been organized into the four sections identified above.

Consequently, each section will include its own set of goals, policies and implementation programs that will be numbered consecutively according to the specific topic they have been designed to address.

Goal

In general terms, a goal is a statement that describes a desired future condition or "end" state. A goal serves as a general direction-setter. In this Dairy Element, goal statements will be formatted like the following example. In the blue box is the goal's reference number: "DLS" refers to the "Dairy Location and Siting" topic area and the "1" means this is the first goal under this topic. Each topic area will have one or more goals.

Example:

GOAL DLS 1	***To site new dairies and facilitate the expansion of existing dairies to those areas of the County where they are most compatible with surrounding land uses.***

Policy

A policy is a statement that guides a specific course of action for decision-makers to achieve a desired goal. A policy must be clear and unambiguous. The example below shows what a policy statement looks like. In this Dairy Element, every goal has one or more policies associated with it. The letters and first number (e.g., "DLS-1.1") show what goal this policy supports. The final number in the identifier (e.g., ".1"), shows that this is the first policy that supports Goal DLS 1. Additional policies supporting Goal DLS 1 are numbered sequentially (i.e., "DLS-1.2, DLS-1.3, etc.).

Example:

Policy DLS-1.1 Buffer Zones for Sensitive Land Uses. The County shall require new dairies and associated facilities (including but not limited to corrals, barns, feed and manure storage areas, and lagoons) to be located outside a one mile buffer zone around any residential zone (land zoned or designated for residential uses by Madera County or any city General Plan or zoning ordinance). However, the transportation and use of manure (used for fertilizer) and dairy process water (used to irrigate cropland) may occur within a residential buffer zone.

Existing legally established dairies that do not meet the separation required from residential zones may only be expanded after the approval of a conditional use permit by the Planning Commission. However, the nonconformity in the separation shall not be increased by further encroachment of the actual Dairy Facility toward the residential zone.

Implementation Program

To help ensure that appropriate actions are taken to implement the Dairy Element, a set of implementation programs called "Dairy Monitoring Programs" are provided. An implementation program is a specific measure, program, procedure, or technique that carries out plan policies. Following the goals and policies will be a list of implementation programs resembling the program listed below.

Example:

Program DMP-1.1 Water Quality Monitoring

The County shall require groundwater and surface water quality monitoring as determined by the RWQCB. The RWQCB will use a risk-based decision process to develop site-specific monitoring requirements.

CHAPTER 2
Environmental Setting

2.0 Introduction

To help provide a framework for development of the various goals, policies, and implementation programs that comprise the County's Dairy Element, this chapter provides a summary of the environmental issues that are most relevant to portions of the County that are anticipated for future dairy development. For each environmental topic, a summary of key opportunities and constraints is also described. The environmental setting information provided in this chapter is summarized from the more detailed setting information provided in the draft Programmatic Environmental Impact Report (PEIR) for the County's Dairy Element.

2.1 Existing Facilities and Potential Areas of Future Growth

Existing dairy facilities in Madera County are located through out the eastern portion of the County, with a majority located east of State Route 99 (SR99). There are currently 59 dairies in Madera County.

The County's Dairy Element reflects the importance of agriculture to the local economy

State law State law requires each county and city to prepare and adopt a comprehensive and long-range general plan for its physical development (Government Code Section 65300). This general plan must address the seven topics (referred to as "elements") of land use, circulation, housing, open-space, conservation, safety, and noise as identified in state law (Government Code Section 65302), to the extent that the topics are locally relevant. It may also include other topics of local interest, as chosen by the County (Government Code Section 65303). Because of the overall importance of the dairy industry to the County's economy, Madera County has chosen to prepare and adopt a Dairy Element as an optional element to the County's general plan.

2.2 Land Use and Planning Issues

The County of Madera is the primary authority with jurisdiction over local aesthetic and land use resources in the Study Area. However, the California Department of Transportation (Caltrans) provides some guidance over roadways that meet the requirements of a scenic route or roadway.

Regional views in the western portion of Madera County are characterized by the broad plains of the Central Valley and the Sierra Foothills. Lower-elevation views in the region are generally rural in nature with concentrated pockets of small communities. Higher-elevation views in the region include the edge of the Coast Mountain range to the west, Sierra Nevada range to the east, and Tehachapi Mountains to the south. The primary scenic resources in the County include the ridgelines and steep slopes of the prominent major relief features, such as the mountain ranges listed above, as well as the undeveloped rural areas that have retained their natural and scenic integrity.

Land uses common in the Study Area include orchards, vineyards, vacant/fallow grazing land, scattered rural residential areas, existing dairy and agricultural structures/facilities, roadways, and the natural riparian habitat of the San Joaquin River and other local waterways.

The nearest scenic area is the San Joaquin River Parkway, which forms the western and southern boundaries of the Study Area. The major source of daytime and nighttime lighting for the area is that occurring from

vehicles and building lighting associated with small rural residences scattered throughout the Study Area.

Key Issues:

- Loss of scenic views due to new dairy construction.
- New dairy construction could produce new sources of light and glare.

2.3 Agriculture and Soils

As previously noted, agriculture represents the largest sector of the Madera County economy. Milk production and support businesses such as providing replacement heifers to the dairy industry have consistently ranked within the top five leading crops of the county. Since 2004, the combined monetary value of milk production and replacement heifers has exceeded $200 million per year. The dairy industry is a vital contributor to the prosperity of Madera County due to the high economic value of dairies and associated support industries. It follows, therefore, that one of the important goals of the Dairy element is to ensure that the County's dairy industry continues to grow and contribute to the economic health of the County.

The regional geology of the Study Area is influenced by the Great Valley, a topographically dominant northwest-trending valley approximately 50 miles wide and 400 miles long that formed between the Coast Range Mountains to the west and the Sierra Nevada Mountains to the east. The Great Valley itself is divided into northern and southern portions, named the Sacramento and San Joaquin valleys, respectively. The Study Area is located within the San Joaquin valley portion of the Great Valley. The western portion of Madera County, which consists of the rich alluvial bottom lands of the San Joaquin Valley, is predominantly agricultural. Most of the County's agricultural activities occur here, due to the level topography, prime cultivable soils, and excellent drainage.

Key Issues:

- Importance of Agriculture (particularly dairies) to the economy of Madera County.
- Removal of topsoil due to dairy construction and expansion.

2.4 Hydrology and Water Quality

The climate of the Study Area is characterized as Mediterranean, with cool, wet winters and hot, dry summers. Average rainfall is approximately 10 inches per year. This rainfall occurs primarily in the winter months, with 90 percent of the precipitation falling from November through April.

The major river in the area is the San Joaquin River. Significant rivers flowing through the area that empty into the San Joaquin River include the Fresno River and the Chowchilla River. There is also a large system of dams, weirs, channels, and other flood control structures within the Study Area and the surrounding vicinity. The San Joaquin River is regulated by the Friant Dam and the associated Millerton Reservoir, which has a capacity of 530,000 acre-feet (AF). River flow below the dam is reduced by dam and diversion operations. The U.S. Army Corps of Engineers operates Hidden Dam on the Fresno River, forming the 90,000 AF Hensley Lake, and Buchanan Dam on the Chowchilla River, forming the 150,000 AF Eastman Lake. The remaining smaller storage structures including Brenda Reservoir and Madera Lake have an estimated combined capacity of 33,000 AF.

Groundwater flow is generally towards the southwest, except in the southern portion of the Study Area where flow is toward the northwest, away from recharge along the San Joaquin River. Groundwater pumping and use has significantly altered the water levels in the Study Area. Concentration of groundwater pumping in specific areas has lead to the formation of groundwater depressions in several areas. Additionally, groundwater extraction, along with climatic variability, has caused significant fluctuations in the average groundwater levels.

There have been no significant problems with respect to surface water quality in the Study Area. However, since the surface water in the Study Area is primarily used for agriculture, the standards applied to the water are not as strict as those for drinking water. Surface water typically requires treatment before it can be used as a drinking water supply. Surface water and groundwater quality in the County is monitored by a number of agencies, mainly for the purposes of ensuring safe drinking water.

Key Issues:

- Potential groundwater contamination due to standard dairy operations.
- The potential for continued groundwater depletion.
- Potential effects on surface water quality due to standard dairy operations.

2.5 Biological Resources

There are approximately 200 acres of valley foothill riparian in the Study Area, mainly along the San Joaquin River and other water courses. This habitat type occurs in the Central Valley and the lower foothills of the Cascades, Sierra Nevada, and Coast ranges of California from sea level to 3,000 feet. Valley foothill riparian is important habitat and migration corridors for several wildlife species.

There are small areas of alkali desert scrub in the western portion of the Study Area, totaling approximately 200 acres. This habitat type occurs throughout the Mojave Desert, parts of the Colorado Desert, parts of northeastern California within the Great Basin, and in the southern San Joaquin Valley. Wildlife species of this habitat type are mainly reptiles and rodents, such as pocket mice and kangaroo rats.

There are several areas of fresh emergent wetland scattered throughout the Study Area, totaling approximately 700 acres. Fresh emergent wetland is characterized by erect, water dependent plant species. Fresh emergent wetland is among the most productive wildlife habitat in California and is important habitat for wildlife species

Approximately 47,000 acres of annual grasslands occur in the Study Area, mainly in the western and central portions of the Study Area. The majority of this area is covered by non-native introduced annual plants and often referred to as non-native annual grassland. Several bird species are typical of this habitat.

There is approximately 500 acres of riverine and other water habitat in the Study Area. Streams in and adjacent to the Study Area include the Chowchilla River, Fresno River, and San Joaquin River and associated tributaries, such as Cottonwood Creek, Dry Creek, and Berenda Creek. There are also several sloughs and canals that may also serve as open water habitat for wildlife species.

Agriculture in the Study Area consists of cropland, orchard/vineyard, and pasture. Approximately 260,000 acres of agriculture and pasture occur in the Study Area. This habitat makes up the majority of the Study Area. Typical crops consist of fruit and nut crops, field crops, and livestock.

Approximately 7,500 acres of urban developed lands occur in the Study Area. This is comprised mainly of the cities of Madera and Chowchilla.

Key Issues:

- New dairy construction potentially effecting, either directly or through habitat modifications, species identified as Threatened or Endangered by the CDFG or USFWS.
- Potential loss of important riparian habitat due to new dairy construction.
- Potential for new dairy facility construction to substantially effect "federally protected" wetlands.

2.6 Air Quality

The Study Area lies within the San Joaquin Valley Air Basin (SJVAB), basically a flat area bordered on the east by the Sierra Nevada Mountains; on the west by the Coast Ranges; and to the south by the Tehachapi Mountains. Airflow in the SJVAB is primarily influenced by marine air that enters through the Carquinez Straits where the San Joaquin-Sacramento Delta empties into the San Francisco Bay (SJVAPCD, 2002). The region's topographic features restrict air movement through and out of the basin. As a result, the SJVAB is highly susceptible to pollutant accumulation over time (SJVAPCD, 2002). Frequent transport of pollutants into the SJVAB from upwind sources also contributes to poor air quality.

Key Issues:

- Grading, earthmoving, and excavation relating to new dairy construction generate the most PM10 and PM2.5 emissions from fugitive dust.
- Construction equipment, construction-worker commute vehicles, and haul trucks would generate criteria air pollutant emissions (ROG, NOx, PM10, PM2.5, CO_2, and CO) during short-term development of new and expanded dairies.
- Dairy facilities operating pursuant to the Proposed Project could increase PM10 air pollutant emissions from fugitive dust, exhaust from agricultural and dairy equipment, vehicular traffic exhaust, and formation of secondary PM2.5.
- Dairy facilities operating pursuant to the Proposed Project would generate ozone precursor (ROG and NOx) emissions from cattle manure and combustion engine exhaust.
- Dairy facilities operating pursuant to the Proposed Project would generate ammonia emissions from cattle manure.

CHAPTER 3
Goals, Policies, and Programs

3.0 Introduction

This chapter identifies the goals, policies, and implementation programs of the County as they relate to the location, design, and monitoring of dairies. This chapter also describes the process for the review of new dairies, expansion of existing dairies, and provides guidance on the County's approval process for these new and expanding existing dairies (including compliance with the California Environmental Quality Act).

3.1 Dairy Location and Siting

GOAL DLS 1	***To site new dairies and facilitate the expansion of existing dairies to those areas of the County where they are most compatible with surrounding land uses.***

Policy DLS-1.1 Buffer Zones for Sensitive Land Uses

The County shall require new dairies and associated facilities (including but not limited to corrals, barns, feed and manure storage areas, and lagoons) to be located outside a one mile buffer zone around any residential zone (land zoned or designated for residential uses by Madera County or any city General Plan or zoning ordinance). However, the transportation and use of manure (used for fertilizer) and dairy process water (used to irrigate cropland) may occur within a residential buffer zone.

Existing legally established dairies that do not meet the separation required from residential zones may only be expanded after the approval of a conditional use permit by the Planning Commission. However, the nonconformity in the separation shall not be increased by further encroachment of the actual Dairy Facility toward the residential zone.

Policy DLS-1.2 Buffer Zones between Dairy Facilities

The County shall require that a minimum 1,000 foot separation or buffer zone be established between a dairy and other dairy facilities or confined animal feeding operations. This restriction includes only the actual dairy facilities (including but not limited to corrals, milk barns, feed storage areas, and manure storage areas) but not cropland used to spread dairy process water and manure. These buffer zones are required to avoid potential nuisance problems, potential inter-herd disease transmission, soil and groundwater contamination, and cumulative air quality degradation.

An existing dairy which proposes to decrease the separation between its dairy facilities and another dairy's facilities to less than the 1,000 foot separation may do so only after approval of a conditional use permit by the Planning Commission. If the existing separation between the expanding dairy's facilities and the other dairy is not proposed to be reduced to a distance of less than ¼ mile, the site plan review process may be utilized.

Policy DLS 1.3 Buffer Zones for Existing Dairy Expansions

When nearby rural residences not associated with the dairy are within a 1,000 foot separation of a proposed expansion of an existing Dairy Facility, the County shall require that these new improvements or expansions be located so that the existing separation shall not be reduced.

Policy DLS 1.4 Minimizing Construction Noise

If construction is taking place within a half mile of a sensitive receptor, in order to avoid noise-sensitive hours of the day and night, construction contractors shall comply with the following:

Construction activities shall be limited to the hours of 7:00 a.m. and 8:00 pm from Monday through Saturday. No construction activity shall be permitted on Sundays. Construction noise during the allowed construction hours shall be exempt from specific noise level thresholds.

GOAL DLS 2 *To restrict the siting of new dairies or the expansion of existing dairies to those locations which avoid existing environmental constraint areas within the County.*

Policy DLS-2.1 Flood Zone Areas

The County shall require that new or expanding dairies avoid flood zone areas. These zones are areas of the County that are subject to periodic flooding. New dairy facilities, including corrals, barns, manure storage areas, feed storage areas, dairy lagoons, etc., shall not be located on any territory designated on the latest adopted National Flood Insurance Program, Flood Insurance Rate Maps (FIRM) as Special Flood Hazard Areas Inundated by 100-Year Flood, Zones A, AE, AO and AH, Floodway.

Policy DLS-2.2 High Groundwater Areas

The County shall require that new or expanding existing dairies avoid areas of high groundwater. New dairies or the expansion of existing dairies is prohibited in shallow or perched groundwater areas of the County where the minimum vertical distance between proposed lagoon bottoms/corral surfaces and highest anticipated groundwater levels is at least five feet.

Policy DLS-2.3 Excessive Slope Areas

The County shall prohibit the development of new dairy facilities in areas of excessive slopes. Areas with excessive slope (i.e., slopes exceeding 5%) are to be avoided since sloping gradient is not conducive to contain manure and dairy process water on the site.

Policy DLS-2.4 Wetlands and Wildlife Habitat for Sensitive Species

The County shall discourage the development of new dairy facilities on wetlands (that meet the criteria of "waters of the United States") or designated habitats for sensitive plant and wildlife species.

3.2 Dairy Review Process

GOAL DRP 1 *To promote the continued economic vitality of the dairy industry in Madera County and facilitate the appropriate siting of new or expanded dairies.*

Policy DRP-1.1 Streamline the Dairy Approval Process

New dairies or the expansion of existing dairies may be approved through the Site Plan Review process if all of the following conditions are met:

- The new dairy or the expansion portion of the existing dairy complies with all of the dairy design standards in this Element.
- The new dairy or the expansion portion of the existing dairy will not exceed the Dairy Herd Capacity (DHC) identified herein.

Policy DRP-1.2 Compliance with SWRCB and RWQCB Permitting Requirements

The County shall require that project applicants comply with SWRCB and RWQCB requirements including permits. Permitting compliance will be documented in writing to the Director of Planning by the project applicant prior to issuance of any building permits for a new dairy or expansion of an existing dairy.

Policy DRP-1.3 Environmental Review

The County shall require the preparation and submittal of technical reports (as appropriate to each

location) with each application for a new or expanded dairy to address specific environmental and dairy siting issues. These reports shall include the following:

- Drainage Study,
- Stormwater Management Plan (SMP),
- Geotechnical Report,
- Groundwater Evaluation,
- Soils Evaluation,
- Hydrogeologic Sensitivity Assessment (HSA),
- Comprehensive Nutrient Management Plan (CNMP),
- Comprehensive Dairy Process Water Application Plan (CDPWAP),
- Odor Management Plan (OMP),
- Irrigation Management Program (IMP),
- Hazardous Materials Business Plan (HMBP),
- Pest and Vector Management Plan (PVMP),
- Dead Animal Management Plan (DAMP),
- Biological Resources Survey,
- Cultural Resources Evaluation by the California Historic Resources Information System (CHRIS),
- Traffic Impact Study,
- Fugitive Dust Emissions Control Plan (FDECP), and
- Light, Glare, and Noise Assessment.

DRP 1.4 Outdoor Lighting and Glare Technical Report

The County shall require the preparation of a technical report addressing outdoor light and glare impacts for new and expanded dairies. The technical report shall include a design of the outdoor lighting of the Dairy Facility which ensures that the outdoor lighting is so arranged as to reflect light away from adjoining properties.

Policy DRP 1.5 Cultural Resources Technical Report

The County shall require the preparation and submittal of a Cultural Resources Technical Report for new or expanding dairies. This report shall include documentation that a review of records of known cultural resources has been completed by the California Historical Resources Information System (CHRIS) and that no significant cultural (historic or archaeological) resources would be disturbed by the proposed dairy development. In addition, the report shall document that a Sacred Lands File Check has been completed by the Native American Heritage Commission (NAHC). If CHRIS or NAHC indicates that known resources are present or suspected within the construction area of the proposed dairy development, the Cultural Resources Technical Report shall include an evaluation of the resource by an archaeologist qualified under the Secretary of the Interior's Standards which includes an appropriate preservation plan (consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings) that will be implemented by the dairy developer.

Policy DRP-1.6 Discovery of Archaeological Resources

In the event that archaeological/paleontological resources are discovered during site excavation, the

County shall require that grading and construction work on the project site be suspended until the significance of the features can be determined by a qualified archaeologist/paleontologist. The County will require that a qualified archeologist/paleontologist make recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recovery, excavation, analysis, and curation of archaeological/paleontological materials. County staff shall consider such recommendations and

implement them where they are feasible in light of project design as previously approved by the County.

Policy DRP-1.7 Discovery of Human Remains

Consistent with the CEQA Guidelines (Section 15064.5), if human remains of Native American origin are discovered during project construction, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). If any human remains are discovered or recognized in any location on the project site, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

a. The Madera County Coroner/Sheriff has been informed and has determined that no investigation of the cause of death is required; and

b. if the remains are of Native American origin,

    1. The descendants of the deceased Native Americans have made a timely recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98,

    2. The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission, or

    3. The landowner or his or her authorized representative rejects any timely recommendations of the descendent, and mediation conducted by the Native American Heritage Commission has failed to provide measures acceptable to the landowner.

Policy DRP-1.8 Traffic Impact Study

The County shall require the preparation of a Traffic Impact Study by a qualified traffic engineer in conformance with guidelines provided by the California Department of Transportation, which demonstrates that a proposed new dairy or dairy expansion will not result in degradation of the level of service of adjacent roadways to below Level of Service (LOS) D on County roadways or LOS C on State highways. Additionally, the Traffic Impact Study shall demonstrate that the proposed dairy project will not result in significant safety hazards.

Policy DRP-1.9 Roadway Encroachment and Improvements

The County shall continue to require that all applications for new dairies or expansions of existing dairies shall continue to be submitted to the Madera County Public Works Department and Caltrans for a determination as to whether encroachment permits or other site specific transportation improvements are required by those agencies.

Policy DRP-1.10 Noise Study

The County shall require the preparation of a site specific noise study for all new dairies or for the expansion of an existing dairy within two miles of an airport. The project applicant shall incorporate into the dairy project (i.e., such as the location of facilities in relation to the flight paths or requirements for personal hearing protection) any recommended noise mitigation, if necessary, to reduce all potential noise impacts to dairy workers.

Policy DRP-1.11 Hazardous Materials Studies

The County shall ensure that the proponents of new dairy development projects address hazardous materials concerns through the preparation of Phase I or Phase II hazardous materials studies for each identified site as part of the design phase for each project. Recommendations required to satisfy federal or State cleanup standards outlined in the studies will be implemented as part of the construction phase for each project.

DRP-1.12 Biological Resource Technical Report

On sites that have the potential to contain critical or sensitive habitats or special-status species, the County shall require the preparation and submittal of a Biological Resources Technical Report for new or expanding dairies. As part of the technical report, a survey of the project site shall be conducted by a qualified wildlife biologist and shall be conducted in compliance with the procedures of resource organizations and regulatory agencies (i.e., USFWS, CDFG, etc.) with jurisdiction over biological resources. Where necessary, mitigation standards shall also be developed in compliance with the same organizations and regulatory agencies. The technical report shall provide recommendations on ways to minimize or reduce potential direct and indirect impacts to biological resources resulting from the proposed dairy project.

DRP-1.13 Air Quality Technical Report

The County shall require the preparation and submittal of an Air Quality Technical Report for new or expanding dairies. The technical report shall include an analysis of potential air quality impacts (including any health risk associated with toxic air contaminants and greenhouse gas emissions) and as necessary reduction measures associated with dairy developments through the environmental review process. Preparation of the technical report should be coordinated with the SJVAPCD and shall identify compliance with the SJVAPCD's New Source Review and Best Available Control Technology requirements, as appropriate. The technical report shall also identify all project emissions and mitigation measures (as appropriate) designed to reduce significant emissions.

GOAL DRP 2 *To maintain dairy standards that reflect current regulatory and technical updates that affect the dairy industry.*

Policy DRP-2.1 Consistency with Federal/State Water Quality Regulations

The County shall ensure that the Dairy Element and the Dairy Standards shall be consistent with state and federal water quality regulations, including the following:

a. EPA regulations governing CAFOs (40 CFR 122.23, 40 CFR Part 412);

b. Title 27 California Code of Regulations (CCR), Division 2, Chapter 7, Subchapter 2, sections 22560-22565; and

c. The 2006 Central Valley RWQCB Water Quality Control Plan (Basin Plan) for the Central Valley Region or as amended.

Policy DRP-2.2 Consistency with RWQCB Basin Plan Updates

The County shall ensure that the 2006 Central Valley RWQCB Basin Plan or as updated pursuant to State law, is incorporated by reference in the Dairy Standards.

3.3 Dairy Design Standards

GOAL DDS 1 *Water Quality – Development of New and Expanding Dairies that promote the protection of regional surface and groundwater quality resources.*

Policy DDS-1.1 Dairy Design that Minimizes Water Contamination

The collection, treatment, storage, or disposal of wastes at a dairy shall not result in a discharge of waste constituents in a manner that could cause a) degradation of surface water or groundwater (except as allowed by state and federal law), b) contamination or pollution of surface water or groundwater, or c) a condition of nuisance (as defined by the California Water Code Section 13050).

Policy DDS-1.2 RWQCB Basin Plan Objectives

Dairy waste discharges shall not violate water quality objectives or standards as set forth in the 2006 RWQCB Basin Plan for the Sacramento River Basin and the San Joaquin River Basin or any updated versions of the Plan.

Policy DDS-1.3 Dairy Facility Setbacks

The County shall ensure that surface water bodies and irrigation/domestic wells shall be protected to prevent degradation of the water sources from manure and associated constituents. Unless other facilities and engineered systems are designed, documented, and operational, minimum dairy facility setbacks from water wells and water bodies shall be required.

Policy DDS-1.4 Protect Groundwater Resources

Manure waste discharges at the dairy shall not degrade underlying groundwater sources to such a degree that water quality objectives are exceeded, beneficial uses are unreasonably affected, or a condition of pollution or nuisance is created.

Policy DDS-1.5 Comply with CNMP Requirements

The County shall require that project applicants comply with CNMP requirements. The WMP element of the CNMP shall be prepared to document the dairy operations management of liquid and solid waste and other activities in the production area designed to prevent water quality impacts.

Policy DDS-1.6 Retention Ponds that Meet RWQCB Standards

Based on the most recent USDA SCS (United States Department of Agriculture Soil Conservation Service) soil survey maps, areas with highly permeable soils designated in soil permeability Group I or Group II must have liquid manure storage ponds lined with a compacted clay liner that meets RWQCB Standards for these types of retention ponds. Variance from the RWQCB Standards will require a specific engineering report to document an equal level of protection.

Policy DDS-1.7 Water Quality Response Plan

The County shall ensure that dairies have a documented plan in place to respond to water quality emergencies, such as the failure of a dairy waste containment system. Employees must be trained to identify and report emergencies.

Policy DDS-1.8 Clean Water Storage

Dairy siting and management practices shall include collecting and containing clean water in water storage areas such as lagoons. Clean water includes rainfall falling on roofs of facilities and runoff from adjacent lands, or other sources. If the clean water comes into contact with the production or any other manure area, including, but not limited to, corrals, pens, freestalls, feeding lanes and areas, feed storage areas, interiors of barns and milking parlors, manure storage and handling areas, dead animal storage areas, and other areas exposed to manure, feed, or dead animals, it will be considered dairy process water and the capacity of the process water storage facilities (i.e., lagoons) shall be sufficient to collect the additional runoff. All precipitation and surface drainage from outside of the dairy (i.e., "run on") shall be diverted away from any manure areas unless such drainage is fully contained.

Policy DDS-1.9 Onsite Stormwater Management

A Stormwater Management Plan shall be prepared by a licensed Civil Engineer prior to approval of a new or expanding dairy. The Dairy Operator shall contain all storm water that has contacted manure areas or commingled with process wastewater.

Policy DDS-1.10 Dairy Waste or Process Wastewater Management

Solid and liquid dairy waste or process wastewater in the production area will be managed in a manner that is consistent with the WMP element of the CNMP and as required by the RWQCB.

Policy DDS-1.11 Dairy Waste Land Application Requirements

Manure, process-generated wastewater, or process wastewater to the land application area must be disposed of in a manner that is consistent with a certified NMP element of the CNMP and as required by the RWQCB.

Policy DDS-1.12 Backflow Prevention

Backflow Prevention is required and connections between water supply and waste streams must be protected by proper installation of an approved backflow prevention device or be properly air-gapped (Title 3 CCR, Division 2, Chapter 1, Article 22, Sections 622 and 665) (see Prohibition A.11)), and be consistent with Madera County Codes.

Policy DDS-1.13 Unlined Ditches/Channels

Unlined ditches, swales, and/or earthen-berm channels shall only be used for temporary control of accidental spills, transport of runoff to manure storage facilities, or rainfall-induced overflows.

Policy DDS-1.14 Onsite Disposal of Contaminants

Chemicals and other contaminants handled at the facility shall not be disposed of in any manure or process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.

Policy DDS-1.15 Removal of Dairy Waste at Closed Dairy Facilities

If a dairy facility is permanently closed, all liquid and dry manure must be removed from the facility within 120 days (weather conditions permitting) and soil samples taken beneath the retention pond, settling basin, and corral areas to determine the levels of nitrogen in the soil. If levels of immobile nitrogen beneath the retention facility or confinement area are elevated to the degree that continued degradation of underlying soil and groundwater could occur, the nitrogen-impacted soil shall be removed and properly disposed of in an area with low leaching potential.

Policy DDS-1.16 Hydrogeologic Sensitivity Assessment (HSA)

Whenever groundwater is being pumped from a hydrogeologic setting within one-half (½) mile of a proposed dairy site, or an expanding dairy, which is underlain by karst, fractured bedrock, or gravel, the applicants shall retain a qualified Certified Hydrogeologist or Professional Engineer to conduct a HSA.

Policy DDS-1.17 Hazardous Materials

Dairy operators shall conform to all applicable laws and regulations controlling the management of hazardous materials, including fuels, pesticides, and other agricultural chemicals.

Policy DDS-1.18 Pest and Vector Management Plan

The County shall ensure that a Pest and Vector Management Plan (PVMP) shall be submitted with each application to either establish a new dairy or expand an existing dairy. The PVMP (sometimes referred to as a fly and mosquito control plan) shall include methods of controlling flies, mosquitoes, and rodents under various conditions.

The PVMP shall include, but not be limited to, measures that ensure good drainage of manured areas, frequent lane flushing, clean-up and maintenance along fence lines, and prompt repair of all leaking pipes and fixtures. When housekeeping controls prove ineffective (or have provided limited effectiveness), chemicals (i.e., pesticides) may supplement the program. When chemicals are used, special care shall be taken to select and apply chemicals that are compatible with existing biological controls that may be in use (i.e., those that do not kill the parasitic wasps). Other measures that may be considered in the PVMP are biological

controls, including, but not limited to, the use of parasitic beetles and mites (to control egg and larvae populations) and parasitic wasps (to control fly pupae populations).

Policy DDS-1.19 Mosquito Abatement District Requirements

The County shall require that all dairy operators follow all Madera County Mosquito Abatement District requirements concerning vector control at the Dairy Facility.

Policy DDS-1.20 Dead Animal Management Plan Requirements

A DAMP is required for all new or expanding dairies. The Dairy Operator will keep and maintain a DAMP on file at the facility. Dead animals must be rendered. The rendering facility must collect the animal within three days of its death. Dairies must contact the County immediately in the event of catastrophic mortality due to disease. The disposal of dead animals in any liquid manure or process wastewater system is prohibited. The disposal of dead animals at a dairy facility is prohibited except when federal, state or local officials declare a State of Emergency and where all other options for disposal have been pursued and failed and the onsite disposal complies with all state and local policies for disposal of dead animals. In an emergency, such as a high volume of cattle mortality due to a heat wave, guidance is provided by the 2004 Cal-EPA Emergency Animal Disease Regulatory Guidance for Disposal and Decontamination as referenced in the RWQCB 2007 Waste Discharge Requirements Order.

GOAL DDS 2

AIR QUALITY - Promote protection of the San Joaquin Valley Air Basin's air quality through the reduction of potential adverse air emissions from dairy operations.

Policy DDS-2.1 Coordinate with San Joaquin Valley Air Pollution Control District

The County shall coordinate with the San Joaquin Valley Air Pollution Control District (SJVPCD) and other local and regional agencies to develop air emissions control guidelines for agricultural uses, including dairy operations.

Policy DDS-2.2 SJVAPCD Dust Control Measures

The County shall require that project applicants address PM10 and PM2.5 air quality impacts through the implementation of applicable SJVAPCD Regulation VIII measures and additional control measures during construction-related activities. These measures include:

- Each dairy applicant shall submit a Dust Control Plan subject to review and approval of the SJVAPCD at least 30 days prior to the start of any construction activity on a site that includes 5 acres or more of disturbed surface area.

Specific control measures for construction, excavation, extraction, and other earthmoving activities required by the SJVAPCD include:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover in order to comply with Regulation VIII's 20 percent opacity limitation.
- All onsite unpaved roads and offsite unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When materials are transported offsite, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. However, the use of blower devices is expressly forbidden, and the use of dry rotary brushes is expressly prohibited except where preceded or accompanied by

sufficient wetting to limit the visible dust emissions.

- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

Enhanced and additional control measures for construction emissions of fugitive dust shall be implemented where feasible. These measures include:

- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.
- Install wind breaks at windward side(s) of construction areas.
- Suspend excavation and grading activity when winds exceed 20 mph.
- Limit area subject to excavation, grading, and other construction activity at any one time.

Policy DDS-2.3 Equipment Exhaust Reduction Measures

The County shall require that dairy project applicants implement control measures contained in the SJVAPCD GAMAQI during construction to mitigate exhaust emissions from construction equipment. These measures include:

- Use of alternative fueled or catalyst equipped diesel construction equipment, where feasible.
- Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).
- Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use.
- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways.
- The idling time of all construction equipment used at the site shall not exceed 10 minutes.
- Implement activity management, such as rescheduling activities to reduce short-term impacts.

Policy DDS-2.4 PM10 and PM2.5 Reduction Measures

The County shall ensure that dairy operators implement the following particulate matter reduction measures as part of all dairy operations:

- A Fugitive Dust Emissions Control Plan (FDECP) shall be submitted with all applications for new dairies and dairy expansions. The plan shall describe and demonstrate compliance with SJVAPCD fugitive dust emissions control requirements.
- The dairy operator shall minimize fugitive dust emissions from cattle movement in and out of corrals using soil stabilizers that are safe for both the ambient environment and cattle.
- In addition to daily flushing of paved areas, manure shall be removed from all cattle

areas as required to prevent pulverization of dried manure.

- Maintain a manure pack less than 2 inches deep.
- Refrain from spreading dry manure on nutrient application areas when wind speeds exceed 10 miles an hour.
- Disc dry manure into nutrient application fields immediately after spreading.
- Field perimeter roads and onsite dairy facility roads shall be paved or stabilized with gravel, decomposed granite, or equivalent dust control treatment such that no visible dust clouds extend beyond the site boundary from manure spreading or agricultural vehicles using these roads.
- Mud or dirt on public roads adjacent to the dairies that originates from dairy operations shall be removed within 24 hours of deposition.
- Dry feed storage shall be protected on three sides to prevent material loss and transport due to wind erosion.
- All dairies shall comply with the control measures for fugitive dust from agricultural sources established by the most recently adopted SJVAPCD Regulation VIII. The FDECP shall specify these control measures to be implemented during dairy operation.
- Conduct AERMOD dispersion analysis using the 24-hour 10.4 µg/m3 PM10 threshold on a case-by-case basis, to be submitted with a new dairy or dairy expansion application.

Policy DDS-2.5 ROG Reduction Measures

The County shall ensure that dairy operators implement the following ROG reduction measures as part of all dairy operations:

The Proposed Project shall comply with SJVAPCD Rule 4570 (Confined Animal Facilities), which provides dairies with several options for reducing ROG, including:

- feed manipulation,
- improvement of manure and manure-water collection and treatment,
- capture and treatment of effluent gases using high-technology treatment systems , and,
- enhanced dispersion of manure and manure wastewater.

All animals shall be fed in accord with the National Research Council (NRC) guidelines (NRC, 2001), utilizing routine dairy nutritionist analyses of rations and maintaining feed analyses onsite for regulatory agency monitoring.

Feed lanes shall be cleared daily.

Silage piles shall be covered with tarps.

Proposed Project dairy facilities design and construction shall include concrete-base freestalls and walk lanes, as well as water drainage to separator facilities.

Manure water shall be either injected subsurface or placed on the surface in thin layers, blending such manure water with irrigation water at a ratio in compliance with the nutrient management plan that shall be required for each dairy.

Design and construction of the Proposed Project's lagoons shall comply with the specifications set forth in National Conservation Practice Standard 359 (Natural Resources Conservation Service, 2003).

Policy DDS-2.6 NOx Reduction Measures

The County shall ensure that dairy operators implement control measures contained in the SJVAPCD *GAMAQI* during dairy operations to mitigate exhaust emissions from agricultural equipment and on-road vehicles. These measures may include:

- Use of alternative fueled or catalyst equipped diesel equipment, where feasible.
- Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).
- Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
- The idling time of all heavy-duty equipment used at the site shall not exceed 10 minutes.
- Employees shall be encouraged to carpool to and from the Proposed Project site.

Policy DDS-2.7 Odor Management Plan

The County shall ensure that dairy operators develop and implement an Odor Management Plan (OMP) as part of the each application submitted to either establish a new dairy or expand an existing dairy. The OMP would include standard operating practices for cattle handling, and manure collection, treatment, storage, and land application. The development of the odor management plan would have four basic steps (Schmidt, 2001).

- Create a list of the potential odor sources on the farm.
- Determine which of the odor sources are the most likely to bring about odor complaints.
- List one or two odor control strategies for each of the significant odor sources.
- Develop a protocol to respond to odor complaints.

Policy DDS-2.8 Methane Digesters

The County shall encourage the use of methane digesters at new or expanding dairies and shall pursue available grants to help fund the construction of these digesters for individual dairies.

Policy DDS-2.9 Energy Conservation Measures

The County shall review the design of individual dairy proposals and shall encourage the installation and implementation of all feasible energy reduction or alternative energy measures, which may include:

- "Cool" roofing materials for all animal facilities;
- Solar hot water systems; and/or
- Solar panels or wind turbines for electricity generation.

3.4 Dairy Monitoring Program

Program DMP-1.1 Water Quality Monitoring

The County shall require groundwater and surface water quality monitoring as determined by the RWQCB. The RWQCB will use a risk-based decision process to develop site-specific monitoring requirements.

Program DMP-1.2 Public Complaint Procedures.

All public complaints regarding dairy operations and facilities shall be recorded with the Code Compliance division. It is the responsibility of that office to authenticate the conditions cited in the complaint through inspection of the subject dairy. As necessary, the Code Compliance personnel shall rely on the expertise of other County Departments to verify the basis and severity of a complaint and establish appropriate corrective action. Timely performance of necessary corrective action shall be required of dairy operators and verified by the Code Compliance personnel.

All applications for new or expanded dairies shall include the name of, and contact information for, the person(s) responsible for responding to complaints regarding that dairy.

Code Compliance personnel shall notify dairy operators of complaints and provide them opportunity to participate in the development of corrective action, if required.