APPENDIX C

Merced County Regulation Pertaining to Dairies and Other Animal Confinement Facilities

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Chapter 18.48 ANIMAL CONFINEMENT FACILITIES

Note

* Prior ordinance history: Ords. 1099 and 1683.

18.48.010 Purpose.

To provide for the design, construction, operation and management of animal confinement facilities in Merced County by regulations contained in this chapter deemed to be necessary for the protection of the quality of the environment and safeguarding the health, safety, and general welfare of the population. It is the intent of this chapter to provide a single, comprehensive regulatory program that will meet all federal, state and local requirements. (Ord. 1746 § 1, 2005).

18.48.020 Definitions.

As used in this chapter:

"Agronomic rate" means an application rate, which matches the nutrient requirements for specific crop on an annual basis.

"Animal confinement facilities" are cattle, calves, horses, sheep, goats, swine, or rabbits, corralled, penned, or otherwise caused to remain in restricted areas for agricultural-commercial purposes where feeding is other than grazing for more than forty-five (45) days during the year. Range pastures for livestock are exempt from the definition of animal confinement facilities. School projects, 4-H, fairs and other individual educational projects are exempt from the definition of animal confinement facilities.

"Application area" means usable cropland area, including pasture, for the application of solid and liquid manure being utilized from the retention pond, corral areas, or other animal confinement areas.

"Background water quality" means the groundwater quality upgradient from the animal confinement facility.

"Board" is the board of supervisors of Merced County.

"California Comprehensive Nutrient Management Plan (CNMP)" is a grouping of conservation practices and management activities which, when combined into a system, will ensure that both production and environmental goals are achieved. It incorporates practices to utilize animal manure as a beneficial resource rather than a waste. The plan must be approved by the division of environmental health. The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), California CNMP or equivalent, including the Regional Water Quality Control Board and San Joaquin Valley Air District requirements, will be utilized. It is the intent of this chapter that only one document must be prepared to comply with federal, state and local environmental requirements. The property owner may be required to conduct groundwater and/or plant tissue monitoring as a condition of approval. The plan must be signed by the property owner and kept on-site.

"County" means and includes all of the unincorporated areas within the county of Merced, state of California.

"Dry manure" means manure that has had sufficient bedding or soil added, or has received sufficient air drying to raise the solids content to where it will stack with little or no seepage. Also known as solid manure.

"Facility" means and includes any animal confinement area, retention pond, settling basin, corrals, milk barn, freestalls, feed storage and mechanical separator.

“Liquid manure” means manure that by its nature, or after being diluted by water, can be pumped easily.

“Manure” means the fecal and urinary excretion of livestock. This material may also contain bedding, spilled feed, water or soil.

“Retention pond” means a constructed holding pond for temporary storage of solid and liquid animal manure, prior to cropland application.

“Settling basin” means a structure in which wastewater flow velocity is reduced to permit suspended solids to settle by gravity.

“Silage” means feed preserved by an anaerobic fermentation process.

“Tailwater” means surface water having fallen as rain or flowing through a field as irrigation collected through a series of ditches, pipes and pumping mechanisms for return to a reservoir or other holding structure.

“Tilewater system” means a series of buried perforated pipe designed to remove excess water from soils.

“Wastewater” means water that has been in contact with animal manure. This includes storm drainage water that has been in contact with animal manure. (Ord. 1746 § 1, 2005).

18.48.030 Land area and zoning.

A. Animal confinement facilities, retention ponds and settling basins are permitted on certain land parcels and in certain specified zones as listed in Table 18-4 of Chapter 18.02 of this code.

B. Applicability. The raising or keeping of animals as either an incidental or principal use shall comply with the requirements of this chapter, regardless of whether a land use permit is required. The following animal raising and keeping activities are separate land uses, and subject to a use permit. (See Section 18.01.020, Table 18-1, Zones/ Permitted Uses Guide, to determine in which zone these uses are allowed).

1. Animal hospitals;
2. Animal boarding facilities;
3. Animal confinement facilities;
4. Commercial apiaries (bees);
5. Horse boarding and training facilities;
6. Kennels;
7. Pet stores;
8. Veterinary clinics.

C. Limitation on Uses. The raising and keeping of specific types of animals shall be allowed in the following zones (See Table 18-21):

Table 18-21

ZONE DISTRICTS AND ALLOWED ANIMAL RAISING ACTIVITIES

KEY

X	Activity allowed
	Activity not allowed

	ZONE DISTRICTS

ANIMAL RAISING ACTIVITY	A-1 A-1-40 A-2	A-R[1]	R-1[2] R-1-5000	M-H	R-2 R-3 R-4	C-P	C-1 C-2 C-3	HIC	M-1 M-2	SPZ[3]	PD
Bee raising (apiaries)	X										
Birds (aviaries)	X	X									
Cattle	X	X									
Stables (boarding and training)	X										
Fowl and poultry[4]	X	X									
Goats and sheep	X	X									
Hogs and swine	X	X									
Horses	X	X									
Household pets	X	X	X	X	X	X	X	X	X	X	X
Llamas, ostriches and other exotics[5]	X	X									
Other small animals	X	X									
Fish farms	X										

1 Up to two large animals (i.e. horses, cows, ostriches, and swine) or up to five birds, other than household pets, are permitted per acre parcel. More require planning director approval. No commercial operations are allowed.

2 Agricultural uses permitted in the A-R zone maybe allowed in the R-1 and R-1-5000 zone only until surrounding parcels are subdivided with the smaller lots normally found in these zones and homes are being built on them. The planning director may also permit FFA, 4-H, and other educational projects in the R-1 and R-1-5000 zones, subject to certain standards.

3 Animals in SPZ zones are covered by the standards in each SPZ zone.

4 Up to two roosters are permitted. More shall be subject to the animal confinement facilities requirements. An exception may be made by the planning director for FFA, 4-H and other educational poultry projects.

5 Wild animals may require state and/or federal permits.

D. Operation and Maintenance Standards. Requirements and standards for odor and insect control shall be as required by the environmental health department.

E. Specific Types and Number of Animals Permitted. Requirements and standards for the keeping or raising of specific types of animals shall be as required by the environmental health department.

F. For other uses refer to Chapter 18.02. (Ord. 1746 § 1, 2005; Ord. 1684 § 1, 2002; Ord. 1586, 1977).

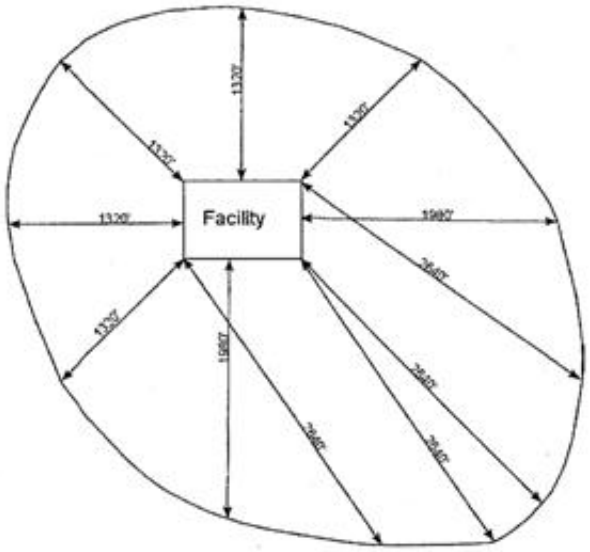
18.48.040 Locational criteria.

A. Windshed Diagram.

1. Plot plan review approval is allowed for the expansion of an existing facility with a maximum ten (10) percent increase in the number of animal units.

2. Administrative permit approval is required for new or expanded facilities where there are no more than five offsite dwellings in the windshed.

3. Conditional use permit approval is required for new or expanded facilities where there are more than five offsite dwellings within the windshed.



Note: The distance within the windshed shall be measured from the periphery of the animal confinement facility and not the property line.

B. Other Locational Criteria.

1. New Facilities.

a. The new facility shall be located more than one-half mile from the nearest boundary of the following: specific urban development plan, rural residential center, highway interchange center, or agricultural services center; residentially designated property in the general plan or residentially zoned property; sensitive uses such as schools, hospitals, jails, public or private recreational areas, parks, or all wildlife refuges; or concentrations of five or more offsite residences, provided that to qualify as a "concentration," residences must be legally established, occupied, located within a contiguous area and must equal or exceed a density of one dwelling unit per acre.

Any of the previously mentioned urban boundaries shall not include areas for municipal uses such as wastewater treatment facilities, airports, or solid waste recycling or disposal facilities located outside urban areas.

b. The new facility shall be located at least one thousand (1,000) feet from any federal wildlife area, state wildlife area or offsite residence, except that any new facility may locate closer than one thousand (1,000) feet from an offsite residence with written permission from the offsite property owner(s). New goat facilities shall be located at least five hundred (500) feet from any offsite residences, federal or state wildlife areas.

c. An application for a new facility or modification of an existing facility which has submitted a complete land use permit application to planning and community development shall be exempt from the setbacks in subsection (B)(1)(b) of this section from offsite residences, provided the new offsite single-family residence obtained the building permit after the facility submitted a complete application for a land use permit.

2. Existing Facilities. For an existing facility, if the separation distances are less for the uses or boundaries described in subsection (B)(1) of this section, modification or expansion of the facility must not decrease the existing separation distance, except that expansion or modification of existing facilities may occur if the separation distance is less than one thousand (1,000) feet from on offsite residence and if the offsite property owner(s) provides written permission.

3. Offsite Residences.

a. New single-family residences, not a part of an existing animal confinement facility are prohibited within one thousand (1,000) feet of an existing facility with any of the following exceptions:

i. The animal facility owner gives written permission for locating the offsite residence closer than one thousand (1,000) feet; or

ii. The existing residence is being remodeled; or

iii. The existing residence is replaced with another dwelling no closer than the existing separation distance. (Ord. 1803 §§ 1, 2, 2007; Ord. 1746 §§ 1, 2, 2005; Ord. 1684 § 1, 2002: Ord. 1586, 1997).

18.48.050 General.

All animal confinement facilities shall conform to the following requirements:

A. Dead animals shall be removed from the site within three business days and be disposed at a licensed rendering facility or by other methods approved by the division of environmental health. Dead animals should be shielded from public view and not constitute a nuisance.

B. The animal confinement facility, including manure (liquid and dry) handling, storage areas, feed areas, corrals, water troughs, and washout systems, shall be managed in such a manner as to minimize a nuisance caused by fly or mosquito breeding, dust and/or odors.

C. Feed storage facilities shall be designed, constructed and managed in such a manner as to minimize air emissions and restrict entry, harborage, or breeding of rodents and/or vectors.

D. The state requirements contained in the California Code of Regulations, Title 27, Division 2, Chapter 7, Subchapter 2, Article 1, Sections 22560—22565 or its revisions and the requirements in the latest edition of the water quality control plan (basin plan) for the Sacramento River Basin and the San Joaquin River Basin or its revisions shall be met.

E. All stormwater that is or has been in contact with manure and wastewater shall be maintained onsite and directed to the manure management system or on to properties with a signed written agreement between the owner of the animal confinement facility and property owner receiving the stormwater/manure. All grading operations on the property shall result in no storm drainage that has been in contact with manure, or wastewater, being allowed to flow or seep onto adjacent properties or public roads, or into any waterway.

F. Application of manure (liquid and dry) to fields or crop lands shall be at rates and times which are reasonable for the crop, soil, climate, special local situations, management system and type of

manure. Applications shall be timed and managed to minimize nitrogen movement below the root zone and to minimize percolation of waste constituents to groundwater.

G. The operator shall notify the division of environmental health and regional board within twenty-four (24) hours of any off-property discharge of facility wastewater. This notification will be followed by a written report that shall be submitted to the division of environmental health within fourteen (14) days of the discharge. The written report shall contain:

1. The date the discharge began;

2. Duration and estimated volume of the discharge;

3. Point of discharge;

4. Specific source of discharge (e.g., overflow from holding pond, rainfall runoff from manure storage areas, etc.);

5. Steps taken to mitigate the effects of the discharge;

6. Steps taken to prevent such a discharge in the future.

H. Liquid manure utilized for irrigation purposes shall be managed so that it does not stand in the application field for more than twenty-four (24) hours.

I. If liquid manure is applied on property not under the control of the operator or owner, a copy of the written agreement regarding use of the application area shall be included in the CNMP.

J. Offsite property owners with property identified in the CNMP and a written agreement to accept liquid manure from an animal confinement facility owner, shall agree to apply the liquid manure or other fertilizers at rates and times which are reasonable for the crop, soil, climate, special local situations, management system and type of manure, unless the written agreement states that the generator of the liquid manure is responsible for proper application.

K. Neither the storage nor the discharge of manure shall create a condition of nuisance or pollution as defined by Section 13050 of the California Water Code.

L. New facilities shall be protected from one hundred (100)-year peak stream flows as determined by the Federal Emergency Management Agency, Flood Insurance Rate Map.

M. New and existing structures shall have gutters to prevent rainwater from entering canals or areas of manure storage unless adequate storage capacity for the additional rainwater is provided in the retention pond.

N. Each animal confinement facility shall conduct the following routine inspections and maintenance of the facility.

1. Between November through April, all channels that convey stormwater such as roof gutters, shall be free of debris that could interfere with the diversion of clean stormwater.

2. All stormwater channels that convey contaminated stormwater to manure storage and waste containment structures, are properly constructed and free of debris, thereby ensuring that contaminated stormwater reaches the storage or waste containment structure.

3. Water lines providing drinking water to the animals shall be free of leaks that could contribute an unnecessary volume to liquid storage systems or cause dry manure to become too wet.

4. Retention ponds and settling basins shall be visually inspected for seepage, erosion, vegetation, animal access and reduced freeboard. Any deficiencies found as a result of these inspections shall be expeditiously corrected. Records of inspection activities shall be kept in the CNMP.

O. Manure (liquid or dry) shall not be applied, stored or accumulated within one hundred (100) feet of any domestic well, irrigation well or surface water body. Application of manure (liquid or dry) maybe closer than one hundred (100) feet to a surface water body or irrigation well if adequate protection to the surface water body or irrigation well is provided. Surface water bodies include creeks, streams, lakes and reservoirs, but does 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.

P. Manure application equipment must be calibrated annually if used for land application of dry manure and/or wastewater.

Q. If dry or liquid manure is transported offsite, the most recent analysis shall be provided, in writing, to the recipient.

R. If an animal confinement facility is permanently closed, all liquid and dry manure must be removed from the facility within one hundred twenty (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. The specific constituents to be sampled, number of samples and sample depths will be determined by the division of environmental health on a site-specific basis.

S. The construction of any part of a new facility shall not start until the appropriate land use permit is approved.

T. When groundwater pollution or the discharge of manure from the operation of an animal confinement facility or application area causes groundwater to contain manure constituents in concentrations statistically greater than background water quality the property owner shall submit a plan for review and approval to the division of environmental health for:

1. Determining the source and the lateral and vertical extent of the degradation;

2. Identifying steps to prevent further degradation;

3. Abating the groundwater impacts (if necessary). Statistical concentrations greater than background will be determined by statistically evaluating groundwater monitoring results in monitoring wells down gradient of potential sources relative to background groundwater quality as represented by monitoring wells up gradient of potential sources.

U. The animal confinement facility and access roads shall meet the requirements of the San Joaquin Valley Unified Air Pollution Control District.

V. The animal confinement facility shall meet the requirements of the appropriate irrigation and/or drainage

district for issues related to the animal confinement facility operation including, but not limited to, meeting discharge requirements of drainage water from cropland application areas.

W. The following Merced County department of public works, road division requirements shall be applicable to animal confinement facilities:

1. New animal confinement construction, construction of a dairy milk barn, or expansion of more than ten (10) percent of herd size of an existing facility (based on the number of mature animals existing on the facility on the adoption date of the ordinance codified in this chapter) will be subject to road impact evaluation by the Merced County department of public works, road division. A truck route plan shall be submitted to the road division. The facility owner may be required to contribute funds for public road improvements such as road widening paving and intersection improvements, identified during the land use permit process. Prior to issuance of a building permit, the owner shall dedicate road right-of-way, if required. The facility owner shall obtain an encroachment permit from the road division or the state of California Department of Transportation (Caltrans) and construct driveway approaches at all access points subject to truck traffic.

2. For all other animal confinement facility-related construction subject to building permits, the dairy owner shall obtain an encroachment permit from the road division or Caltrans, and construct driveway approaches at all access points subject to truck traffic.

3. Road right-of-way shall not be used for the operation of the animal confinement facility, including but not limited to feeding activities.

4. A minimum setback of fifty (50) feet from the ultimate road right-of-way line shall be maintained for barns, corrals, pens, feed lanes and milk barns.

X. The project shall meet the requirements of the Merced County Mosquito Abatement District.

Y. The storage of silage or composting materials shall be located at least three hundred (300) feet from any pre-existing offsite residence.

Z. Manure solids shall be stored on impervious surfaces and protected from stormwater run-on. Corrals are excluded from this requirement.

AA. Manure shall be removed from corrals at least two times per year (spring and fall) and freestall exercise pens at least once a year.

BB. Dry manure shall be uniformly applied and incorporated into the soil (excluding pasture) at the appropriate agronomic rates. Dry manure shall be stored and applied in a manner that prevents a vector or odor nuisance and/or groundwater or surface water contamination.

CC. Dry manure with less than seventy-five (75) percent moisture shall not be applied during periods when the surface wind speed exceeds twenty-five (25) miles per hour.

DD. Manure removed from the bottom of a settling basin or retention pond shall be analyzed at a frequency determined by the division of environmental health for total dissolved solids, total nitrogen and other constituents as determined by the division of environmental health.

EE. 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. This also applies to off-property parcels receiving water containing manure under agreement.

FF. Salt and other mineral feed supplements shall be limited to that required to maintain animal health and optimum production according to the National Research Council.

GG. Vegetative barriers may be required by the division of environmental health to filter suspended air particles from animal confinement facilities.

HH. New or expanding animal confinement facilities shall provide and maintain one or more of the following dust control measures on unpaved roads within the facility area:

1. A uniform layer of washed gavel; or

2. Chemical/organic dust suppressants; or

3. Vegetative materials; or

4. Paving; or

5. Any other method that effectively limits visible dust emissions to twenty (20) percent capacity.

II. Any violation of a National Pollutant Discharge Elimination System (NPDES) permit, state regulations relating to animal confinement facilities or state waste discharge requirements is a violation of this chapter.

JJ. Corrals shall have a slope of at least three percent where the available space for each animal is four hundred square feet or less. The slope in areas more than four hundred square feet per animal may be reduced proportionately to not less than one and one-half percent at eight hundred square feet or more per animal and drain to the waste management system.

KK. Tailwater from cropland irrigated with liquid manure shall be returned to the animal confinement facility liquid manure management system.

LL. Tile drainage discharges from liquid manure application areas, corrals, retention ponds, settling basins, or feed storage areas shall be: (1) discharged into the animal confinement facility liquid manure management system; or (2) the tile drainage water discharged offsite shall be monitored for total dissolved solids, nitrate, selenium and any other constituents as determined by the division of environmental health and/or the appropriate irrigation/drainage district. The frequency of testing and specific types of constituents shall be included in the CNMP.

MM. The offsite discharge of tailwater or tile drainage water shall meet the discharge and receiving water standards of the appropriate irrigation or drainage district and Regional Water Quality Control Board.

NN. Silage storage areas shall be constructed of impervious materials to prevent groundwater degradation with leachate drainage conveyed to the wastewater collection system. Silage storage areas shall be protected from stormwater run-on.

OO. Animal confinement facilities constructed and expansions of existing facilities resulting in more than a ten (10) percent increase in mature animals, after the effective date of the ordinance codified in this chapter that exceed the significance threshold for new sources for either reactive organic gases (ten (10) tons/year) or PM_{10} (fifteen (15) tons/year) established by the San Joaquin Valley Unified Air Pollution Control District, shall reduce air emissions for these compounds to a level below the significance threshold. Air emission thresholds will be determined by the inclusion of the total air emissions from the facility. The schedule for compliance is as follows: (1) Submit plans and calculations showing compliance no later than January 1, 2007. (2) Construction of improvements and/or implementation of reduction measures must be completed no later than January 1, 2008. (3) New animal confinement facilities constructed after January 1, 2008 shall submit plans as part of the CNMP indicating compliance to the PM_{10} and reactive organic gas (ROG) threshold criteria. If the San Joaquin Valley Unified Air Pollution Control District adopts regulations for the control ROG and/or PM_{10} emissions for animal confinement facilities, Chapter 18.48.050 OO is void.

PP. The division of environmental health shall make a final inspection of the new or expanding facility to confirm compliance to the requirements of this chapter.

QQ. Spreading of manure (liquid or dry) on soil, when frozen or saturated soil conditions, is prohibited.

RR. Any violation of the San Joaquin Valley Air Pollution Control District rules and regulations related to animal confinement facilities is a violation of this chapter. (Ord. 1746 § 1, 2005).

18.48.055 Comprehensive nutrient management plan.

A. Before applying for a building permit for a new facility, significantly expanding (i.e., a ten (10) percent

increase in mature animals or equivalent animal units) an existing facility, adding or deleting manure application areas, or constructing a retention pond(s) or settling basin(s) the property owner or operator shall submit to the county division of environmental health, a new or revised comprehensive nutrient management plan (CNMP) in a format approved by the division of environmental health. The baseline for the ten (10) percent increase will be based on the number of mature animals or animal units existing on the facility on the adoption date of the ordinance codified in this chapter.

B. All existing animal confinement facility operators and/or owners must have completed a comprehensive nutrient management plan by December 31, 2006. The plan must be reviewed and approved by the division of environmental health. The preparer of the CNMP, if other than the owner/operator, must be appropriately certified through an USDA-recognized certification organization within California. For calculations in the CNMP for existing facilities, the actual nitrogen and salt content of liquid and dry manure shall be determined by a state-certified laboratory using EPA approved test methods or other methods approved by the division of environmental health. The values obtained from the laboratory analysis shall be used to assure proper application to crops at agronomic rates.

C. The CNMP shall contain the following components and other information as required by the division of environmental health:

1. Facility and Owner/Operator Information.

a. Names, addresses and phone numbers of the owner and operator;

b. Site address and assessor's parcel numbers;

c. An emergency action plan covering: fire, personal injury, manure storage and handling and land application operations.

2. Production and Nutrient Information.

a. Animal types and numbers;

b. Calculated manure and wastewater volumes for the facility.

3. Applicable Permits or Certifications.

a. Local use permit, state permit;

b. Record of inspections or site assessments;

c. Changes made to the CNMP.

4. Land Application Site Information.

a. Written manure application agreements (if required);

b. Dry and liquid manure application worksheets indicating how manure will be applied at agronomic rates;

c. Assessors parcel number of all land application sites;

d. Crop types, yields and expected nutrient uptake amounts;

e. Soil analysis results;

f. Manure analysis results;

g. Groundwater analysis results (if required);

h. Plant tissue analysis results (if required);

i. Methods of application;

j. Weather conditions during application;

k. Soil types;

l. Highest groundwater depth, groundwater elevation and elevation of the bottom of the retention pond and settling basin;

m. Floodplain designation.

5. Liquid manure/irrigation application.

6. Dry manure application.

7. Dead Animal Disposal. Describe how dead animals are disposed and frequency of removal.

8. Operation and Maintenance of the Facility.

a. Describe odor control measures;

b. Describe dust control measures;

c. A vector control plan. This plan shall follow the guidance listed in the Merced County Dairy Operation Guidance document and include the following: a description of how often corrals, retention ponds, settling basins, milk barn, watering areas, calf areas, freestalls, flush lanes, shades, feed storage and feeding areas are checked for vectors, frequency of cleaning feeding areas, a description of types of vector control that will be utilized (biological, chemical or cultural) and other information needed to prevent vector problems;

d. An irrigation management plan for the storage and application of wastewater to cropland at agronomic levels. (Include size of retention ponds/settling basins, mixing procedures, expected application times and amounts of nitrogen applied, etc.);

e. A manure (liquid and dry) monitoring program (see subsections D and K of this section);

f. A soil monitoring program (see subsections E and K of this section);

g. A groundwater monitoring program (if required, see subsection F of this section);

h. A plant tissue monitoring program (if required);

i. The CNMP shall have a scaled site plan or aerial photograph which shows the following information:

(A) Buildings, corrals, lanes, retention ponds/settling basins, irrigation ditches and pipelines (private and community), silage storage, manure solids storage areas, and tailwater return system,

(B) Onsite and offsite wastewater and manure application areas,

(C) Surface waterways on or near the facility, such as rivers, canals, sloughs and intermittent streams,

(D) The location of onsite and adjacent water wells within one hundred (100) feet of the property line for application fields,

(E) Slope of the land, by field,

(F) USGS and Assessor's parcel maps (division of environmental health to provide),

(G) A list of all locations from which wastewater, stormwater runoff and irrigation runoff can leave the property under control of the operator/owner,

(H) Public facilities such as roads and easements,

(I) Access points to public roads.

9. Feed management/diet optimization plan.

10. Activity Records. Activity records include, but are not limited to, manure production, recommended and actual application rates, dates and location of application, crops planted, harvest dates, crop yields.

11. Other Utilization Options. Other utilization options include a description of air emission controls and composting information.

The California CNMP format in the Merced County Dairy Operation Guidance document contains all of the elements listed above and provides guidance for the preparation of the CNMP.

D. A manure monitoring program shall be prepared and submitted for approval to the division of environmental health and shall address the following points:

1. Liquid manure shall be sampled and analyzed at least three times a year by a state-certified laboratory or

other methods approved by the division of environmental health.

2. Dry manure shall be sampled and analyzed at least twice a year prior to land application by a state-certified laboratory or other methods approved by the division of environmental health.

3. Specific constituents required for analysis and locations shall be determined by the division of environmental health and listed in the Merced County Dairy Operation Guidance document. At a minimum, liquid manure shall be analyzed for total Kjeldahl nitrogen, ammonia-nitrogen, phosphorus, potassium, electrical conductivity and pH. At a minimum, dry manure shall be analyzed for moisture, organic nitrogen, nitrate-nitrogen, phosphorus, potassium, electrical conductivity, total dissolved solids, selenium and pH.

4. Sampling techniques, equipment, sample preservation, analysis, the name of the laboratory, name of the sampler, and other information shall be provided as required by the division of environmental health.

E. A soil monitoring program shall be prepared and submitted, for review and approval to the division of environmental health and shall address all of the following points:

1. Maps and drawings that identify the locations of soil sampling at the following areas:

a. Existing or proposed uncovered animal housing (corrals),

b. Manure storage areas,

c. Cropland that will receive manure;

2. A description of how representative soil samples will be collected from each location and at what depth;

3. Specific constituents required for analysis, number of samples and sampling frequency shall be as determined by the division of environmental health and listed in the Merced County Dairy Operation Guidance document. At a minimum, soil samples for cropland shall be sampled for ammonium, calcium, magnesium, potassium, sodium, nitrate, cation exchange capacity, percent base saturation, soluble salts, selenium, total Kjeldahl nitrogen, phosphorus and pH. At a minimum, soil samples for non-cropland shall be sampled for ammonium, nitrate, soluble salts, total Kjeldahl nitrogen and pH;

4. Sampling shall follow EPA procedures and test methods or the procedures identified in the California CNMP guidance document for soil sampling and analysis;

5. The time of year when sampling will take place and who is responsible for taking the samples shall be identified;

6. Soil sample results, for the initial sampling, shall be submitted within ninety (90) days of the start of operations at the site;

7. Sampling techniques, equipment, sample preservation, analysis, the name of the laboratory and the name of the sampler shall be provided.

F. Groundwater monitoring may be required by the division of environmental health as part of the CNMP, on a site-specific basis. Monitoring will be based on the following criteria: soil type(s), groundwater depth, existing groundwater quality, the number of animal units, location and construction of water supply wells and previous test results. Groundwater monitoring will be required in high sensitivity areas identified in the Merced County Dairy Operation Guidance document. The groundwater monitoring program shall be prepared and signed by a civil engineer or geologist registered in California. The groundwater monitoring program shall be prepared and submitted for review and approval to the division of environmental health and shall address the following points:

1. A description of groundwater conditions beneath the site including expected depths to the uppermost zone of groundwater and the next zone of groundwater, expected direction(s) of groundwater flow, and the source of groundwater information (irrigation/water district maps, measurements of onsite wells, and highest anticipated groundwater elevation).

2. Provide a map showing the location of all the proposed monitoring wells and existing onsite wells relative to operations. Provide a separate map showing wells within one thousand (1,000) feet of the site.

3. Monitoring well permits must be obtained from the division of environmental health and comply with

Merced County Code Chapter 9.28 (Wells).

4. Sampling techniques, equipment, sample preservation, analysis, the name of the laboratory and the name of the sampler, shall be provided.

5. The minimum frequency of groundwater monitoring is biannual. Samples shall be taken six months apart (during high and low groundwater periods) and analyzed at a state-certified laboratory.

6. Sampling constituents required for analysis shall be as determined by the division of environmental health and listed In the Merced County Dairy Operation Guidance document. At a minimum, groundwater sampling shall include the following constituents: ammonium, calcium, potassium, magnesium, sodium, chloride, bicarbonate, selenium, nitrate, sulfate, ammonia, total dissolved solids, total Kjeldahl nitrogen and pH. The division of environmental health may add or delete specific constituents based on previous sampling results.

7. At least three monitoring wells will be required, one of which is up gradient and two down gradient of the facility, screened at the shallowest aquifer.

8. Sampling shall follow EPA procedures and test methods (or Standard Methods for Examination of Water and Wastewater 18^{th} edition or its revisions).

9. Groundwater depth, groundwater elevation and direction of flow shall be determined.

10. For new dairies, initial water samples shall be taken prior to the start of operation to establish background water quality information.

11. Within thirty (30) days after completion of the monitoring system, a report signed by a registered geologist or civil engineer must be submitted to the division of environmental health that includes the following:

a. A map showing the location of all wells (including monitoring, domestic and irrigation wells) and all offsite wells within one thousand (1,000) feet of the facility;

b. Well logs of the monitoring wells and onsite wells, if available;

c. A description of how the wells were developed;

d. The surveyed elevation of each monitoring well taken from a clearly marked and adequately described benchmark (including GPS coordinates);

e. Lithologic logs, if available.

12. In site-specific cases, where the water table is more than one hundred (100) feet below ground surface, the division of environmental health may allow soil monitoring to be substituted for groundwater monitoring.

G. Plant tissue monitoring may be required by the division of environmental health as part of the CNMP, on a site specific basis. Monitoring will be based on the following criteria: soil type(s), groundwater depth, existing groundwater quality, the number of animal units, application area and previous test results. Sampling constituents shall be determined by the division of environmental health and listed in the Merced County Dairy Operation Guidance document.

H. Water, soil, manure and plant tissue monitoring results shall be kept at the facility for at least five years and available to the division of environmental health or regional board upon request.

I. Based upon review of the CNMP, the division of environmental health will provide a recommendation to the planning and community development department on whether a negative declaration or environmental impact report is required and any mitigation measures and/or conditions of approval.

J. Animal confinement facilities shall submit an annual report by February 1st for each preceding year, beginning in the year 2004. The report shall include information required by the division of environmental health and be on the annual report form included in the Merced County Dairy Operation Guidance document.

K. If conflicts exist between the California CNMP Technical Guidance Document or the Regional Water Quality Control Board regulations and this chapter related to manure or soil monitoring, the Regional Water Quality Control Board regulations shall be followed. This does not preclude the division of environmental health from requiring

additional monitoring of soil or manure on a site-specific basis. (Ord. 1746 § 1, 2005).

18.48.060 Retention ponds and settling basins.

New or modified retention ponds (modified means an increase in capacity) and settling basins shall conform to the following construction requirements:

A. The total retention pond(s) and settling basin(s) capacity shall be designed and constructed for at least a one hundred twenty (120)-day storage capacity for liquid manure generated at the facility and a twenty-five (25)-year, twenty-four (24)-hour storm. The retention pond/settling basin capacity shall also be adequate to store tail or tile drainage water (if returned to the retention pond/settling basin) and liquid manure to assure that the timing of the land application is appropriate for the nitrogen needs of the crop.

B. The retention pond(s) and settling basin(s) shall be surrounded by a road at least fourteen (14) feet wide and suitable for safe passage of vector control vehicles and equipment. The road should be accessible at all times to provide for the use of vehicle-mounted mosquito control equipment.

C. The inside banks of all pits, sumps, retention ponds and settling basins shall be maintained free of vegetative growth in order to prevent a breeding habitat for mosquitoes or other vectors.

D. Retention ponds and settling basins shall be constructed according to the United States Department of Agriculture (USDA), Natural Resource Conservation Service guidelines, specifically, USDA National Engineering Handbook, Part 651-Agricultural Waste Management Field Handbook, Appendix 10D- Geotechnical, Design, and Construction Guidelines effective at the time of construction and shall comply with the additional design criteria contained in this chapter.

E. The bottom of the retention pond and sealing basin, including liner, shall be at least two feet above the highest anticipated groundwater table. In sensitive groundwater areas, the separation shall be at least five feet, unless a synthetic liner or equivalent, approved by the division of environmental health, is constructed.

F. A retention pond or settling basin must maintain a minimum set back pursuant to Section 18.48.040.

G. The property owner shall apply for and obtain a permit from the division of environmental health prior to the construction of a new or modified retention pond or settling basin. An inspection and approval of the retention pond and/or settling basin by the division of environmental health is required prior to discharging into the retention pond or settling basin.

H. The liner of the retention pond or settling basin shall be designed and constructed with a permeability of 1 x 10^{-6} cm/s or less. The minimum design standard of 1 x 10^{-6} cm/s shall not include credit for sealing of the retention pond or settling basin by manure. USDA-NRCS criteria specifically, USDA National Engineering Handbook, Part 651-Agricultural Waste Management Field Handbook, Appendix 10D-Geotechnical, Design, and Construction Guidelines, shall be utilized to determine compliance to the 10^{-6} cm/s sealing standard.

I. Plans for retention ponds and settling basins shall be designed and signed by a California-registered civil engineer or a California registered engineering geologist and shall have a maintenance plan, approved by the division of environmental health. As-built drawings, signed by a California-registered civil engineer or a California-registered engineering geologist certifying that the retention pond/settling basin was constructed as designed are required to be submitted to the division of environmental health within thirty (30) days of completion of the retention pond or basin.

J. Settling basins shall not exceed sixty (60) feet in width and retention ponds shall not exceed one hundred (100) feet in width, unless reviewed by the Merced County Mosquito Abatement District. The district may charge the owner/operator for the cost of mosquito control.

K. Any liner installed by importing soil shall have a thickness of at least one foot.

L. Natural and constructed liners shall be protected from the erosive forces of waste liquid entering the pond or settling bash and damage due to cleaning operations and scour due to agitation equipment.

M. Retention ponds and settling basins located near an irrigation or drainage district facility must maintain a minimum fifty (50)-foot separation between the outside toe of the retention pond or settling basin bank and the nearest irrigation district facility (either physical facility or right-of-way), and maintain a drainage area between the two facilities that will ensure that all water generated on the animal confinement facility is maintained on site.

N. Retention ponds, settling basins and ditch conveyances must maintain a minimum fifty (50)-foot separation from the ultimate public road right-of-way line.

O. A minimum twenty (20)-foot separation must exist between the outside toe of the retention pond or settling basin bank and the facility property boundary.

P. A retention pond must have a marker on the inside slope which clearly indicates the design volume and the minimum freeboard necessary to allow for the twenty-five (25)-year, twenty-four (24)-hour rainfall event. A minimum of two feet of freeboard is required for new and existing retention ponds.

Q. Retention ponds and settling basins shall be protected against one hundred (100)-year stream flows.

R. New and existing retention ponds and settling basins shall not create obnoxious odors, excessive vector breeding or create a condition of nuisance or pollution as defined by Section 13050 of the California Water Code.

S. New facilities shall install a flow meter and associated plumbing on the effluent line from the retention pond or describe how flow rates to application fields will be accurately determined.

T. Synthetic liners shall meet the guidelines established by NRCS Conservation Practice Standard, Pond Sealing or Lining-Flexible Membrane No. 521-A or its revisions. (Ord. 1746 § 1, 2005).

18.48.070 Enforcement.

A. It shall be the duty of the director of the planning and community development department or designee to enforce the requirements of the County Zoning Code, Title 18, relating to animal confinement facility zoning issues.

B. It shall be the duty of the director of public works or designee to enforce the provisions of this chapter pertaining to the location and/or construction of buildings and/or structures upon the property as shown on the plot plan approved and dated by the planning and community development department, planning commission or division of environmental health.

C. It shall be the duty of the director of the department of public health or designee to enforce the provisions of this chapter pertaining to management practices relating to the production of insect vectors, rodents, obnoxious odors, dust, and surface and groundwater pollution. The division of environmental health shall inspect each animal confinement facility at least once every three years. Facilities located in sensitive zones shall be inspected once every two years. Facilities not in compliance will be subject to a corrective action schedule and an enforcement order issued by the division of environmental health and/or state or federal regulatory agency. The division of environmental health shall maintain the Merced County Dairy Operation Guidance document (which includes the format for the CNMP and annual report) to assist animal confinement facility operators in complying with federal, state and local regulations. All division of environmental health staff who review and/or approve CNMP shall be appropriately certified through an USDA-recognized certification program within California, when such a program is available.

D. Any person authorized to enforce this chapter shall follow the procedures in Merced County Code Chapter 1.16, Right of Entry for Inspection.

E. Any person authorized to enforce this chapter shall follow the biosecurity guidelines as established by the state Department of Food and Agriculture. (Ord. 1746 § 1, 2005).

18.48.080 Conflicting regulations.

Where there is a conflict between the regulations of this chapter and any other chapter of local, state or federal regulation, the greater or more stringent regulation or restriction shall apply and shall be enforced by persons

authorized in this chapter. (Ord. 1746 § 1, 2005).

18.48.090 Penalties.

A. It is unlawful and constitutes a misdemeanor for any person to violate or fail to comply with any provisions of this chapter. A misdemeanor shall be punishable by a fine not exceeding one thousand dollars ($1,000.00) or by imprisonment in the county jail for not exceeding six months, or by both such fine and imprisonment.

B. Each person is guilty of a separate offense each and every day during any portion of which any violation of any provision of the ordinances of the county is committed, continued or permitted by any such person, and any such person shall be punished accordingly. (Ord. 1746 § 1, 2005).

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