Attachment B

Waste Discharge Requirements
For McClelland Dairy West
Order No. R1-2016-0011
Definitions

25-year, 24-hour rainfall event: means precipitation events with a probable recurrence interval of once in twenty five years as defined by the National Weather Service in Technical Paper No. 40, "Rainfall Frequency Atlas of the United States," May 1961, or equivalent regional or State rainfall probability information developed from this source.

Agronomic rates: is the land application of irrigation water and nutrients (which may include animal manure, bedding, litter, or process wastewater) at rates of application in accordance with a nutrient management plan that will enhance soil productivity and provide the crop or forage with needed nutrients for optimum health and growth.

Aquifer: is ground water that occurs in a saturated geologic unit that contains sufficient permeability and thickness to yield significant quantities of water to wells or springs.

Artificial recharge area: an area where the addition of water to an aquifer is by human activity, such as putting surface water into dug or constructed spreading basins or injecting water through wells**.**

Bioaccumulative pollutants: are those substances taken up by an organism from its surrounding medium or from food, and is subsequently concentrated and retained in the body of the organism.

Carcinogenic: pollutants are substances that are known to cause cancer in living organisms.

Catastrophic rainfall event: means a rainfall event greater than the 25-year, 24-hour rainfall event, and includes events like tornadoes, hurricanes or other catastrophic conditions that would cause an overflow.

Confined area: is the area where cows are confined within the production area.

Cropland: is the land application area where dry or solid manure and/or process wastewater is recycled for the purpose of beneficially using the nutrient value of the manure and/or process wastewater for crop production.

Design volume: for a liquid storage structure includes allowances for the volume of manure, process wastewater, and other wastes accumulated during the storage period; volume of "normal precipitation" minus evaporation; volume of runoff from the facility's drainage area during normal rainfall events; volume of precipitation from the 25-year, 24-hour storm event on the storage structure area; volume of runoff from the facility's drainage area for the 25-year, 24-hour storm event; volume of solids; necessary freeboard

requirements; and any additional storage requirements, such as to meet management goals, or the minimum treatment volume for anaerobic lagoons.

Discharger: is the property owner and/or the operator of an existing milk cow dairy subject to this Order.

Facility: is the property identified as such in the Order.

Fecal coliform: a type of coliform bacteria that live in the intestines of warm-blooded animals (humans, pets, farm animals, and wildlife) and are associated with human or animal wastes.

Field moisture capacity: is the upper limit of storable water in the soil once free drainage has occurred after irrigation or precipitation.

Freeboard: is the elevation difference between the process wastewater (liquid) level in a pond and the lowest point of the pond embankment before it can overflow.

Groundwater: is water stored underground in rock crevices and in the pores of geologic materials that make up the Earth's crust; and water that flows downward and saturates soil or rock, supplying wells and springs. The upper surface of the saturated zone is called the water table.

Incorporation into soil: is the complete infiltration of process wastewater into the soil, the disking or rotary tiller mixing of manure into the soil, shank injection of slurries into soil, or other equally effective methods.

Inland Surface Waters: are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Irrigation return flow: has the same meaning as return flow from irrigated agriculture in Section 502 (14) of the federal Clean Water Act, and for purposes of this Order is defined as surface and subsurface water that leaves a field following application of irrigation water, where the irrigation water is not a wastewater <u>and</u> where such irrigation water has been applied in accordance with a site specific nutrient management plan. "Tailwater" may be considered an irrigation return flow if it meets the conditions in this paragraph.

Irrigation water: is water that is applied to fields to grow crops.

Land application: means the application of manure, litter, or process wastewater onto or incorporated into the soil.

Land application area: is land under control of the cow dairy owner or operator, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling.

Liquid manure handling system: means a system that collects and transports or moves waste material with the use of water, such as in washing of pens and flushing of confinement facilities. This would include the use of water impoundments for manure and/or wastewater treatment.

Manure: is the fecal and urinary excretion of livestock and other commingled materials. Manure may include litter, bedding, compost, raw materials, and waste feed.

Manured solids: is manure that has sufficient solids content such that it will stack with little or no seepage.

Mature dairy cow: For the purposes of this Order, 'mature dairy cow' is a dairy cow that has produced milk at any time during her life (milking + dry).

Multi-year Phosphorus Application: means phosphorus applied to a field in excess of the crop needs for that year. In multi-year phosphorus applications, no additional manure, litter, or process wastewater is applied to the same land in subsequent years until the applied phosphorus has been removed from the field via harvest and crop removal.

Not Detected (ND): are those sample results less than the laboratory's MDL.

Normal Precipitation: is the long-term average precipitation based on monthly averages over the time that data has been collected at a particular weather station. Normal precipitation is usually taken from data averaged over a 30-year period (e.g. 1971 to 2000) if such data is available.

Nuisance: is defined in section 13050 of the Porter-Cologne Water Quality Control Act as "*…anything which meets all of the following requirements:*
(1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
(2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
(3) Occur during, or as a result of, the treatment or disposal of wastes."

Nutrient: is any element taken in by a plant which is essential to its growth and which is used by the plant in elaboration of its food and tissue.

Nutrient Management Plan (NMP): is a description of site-specific nutrient management practices that ensure appropriate agricultural utilization of manure, litter, or process water, as specified in this Order. See MRP, Appendix 2, NMP.

Nutrient recycling: is the application of nutrients at agronomic rates for crop production.

Off-property discharge: is the discharge or release of waste beyond the boundaries of the property of the dairy's production area or the land application area or to water bodies that run through the production area or land application area.

Open tile line intake structure: is an air vent for a subsurface (tile) drain system.

Order: is the Waste Discharge Requirements Order.

Overflow: means the discharge of manure or process wastewater resulting from the filling of wastewater or manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structure.

Persistent pollutants: are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant: is defined in Title 40 Code of Federal Regulations Section 122.2 as "*…dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.*"

Pollution: is defined in Section 13050(l)(1) of the Porter-Cologne Water Quality Control Act as *"…an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: (A) The waters for beneficial uses. (B) Facilities which serve these beneficial uses."* "Pollution" may include "contamination".

Pollutant Minimization Program (PMP): means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention: means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental

benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Pond: is defined as retention ponds, storage ponds, settling ponds, or any structures used for the treatment, storage, disposal, and recycling of process wastewater. Ponds are differentiated from sumps, which are structures in a conveyance system used for the installation and operation of a pump.

Process wastewater: is water directly or indirectly used in the operation of a cow dairy for any or all of the following: spillage or overflow from animal watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other dairy facilities; washing or spray cooling of animals; or dust control, and includes any water or precipitation and precipitation runoff which comes into contact with any raw materials, products, or byproducts including manure, feed, milk, or bedding.

Production area: is that part of a cow dairy that includes the animal confinement area, the manure storage area, wastewater, litter, waste containment area, the raw materials storage area such as feed, silage, and bedding materials. The animal containment area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. The raw materials storage area includes but is not limited to feed silos, silage bunkers, and bedding materials. Also included in the definition of production area is any area used in the storage, handling, treatment, or disposal of mortalities.

Riparian areas: are defined as a vegetated ecosystem along a water body through which energy, materials, and water pass. Riparian areas characteristically have a high water table and are subject to periodic flooding and influence from the adjacent water body. These systems encompass wetlands, uplands, or some combination of these two landforms.

Salt: is defined as the sodium chloride and any added minerals (such as calcium, phosphorus, potassium, sulfur, iron, selenium, copper, zinc, or manganese) in the animal ration. Salts commonly break up into cations (sodium, calcium, etc.) and anions (chloride, sulfate, etc.) when dissolved in water. Total dissolved solids is generally measured as an indication of the amount of salts in a water or wastewater.

Setback: means a specified distance from waters of the State or United States or potential conduits to waters of the State or United States where manure, litter, and process wastewater may not be land applied. Examples of conduits to surface waters include but are not limited to: Open drainage ditches, tile drainage lines, intake structures, sinkholes, and agricultural well heads.

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Significant storm event: is a precipitation event that results in continuous runoff of storm water for a minimum of one hour, or intermittent discharge of runoff for a minimum of three hours in a 12-hour period.

Sole-source aquifer: is an aquifer that supplies 50 percent or more of the drinking water of an area.

Source of Drinking Water: any water designated or potentially suitable as municipal or domestic supply (MUN) in the Water Quality Control Plan for the North Coast Basin (Basin Plan).

State: the State of California.

State Water Board: the State Water Resources Control Board.

Stormwater: stormwater runoff, snowmelt runoff, and storm water surface runoff and drainage.

Subsurface (tile) drainage: water generated by installing and operating drainage systems to lower the water table below irrigated lands. Subsurface drainage systems, deep open drainage ditches, or drainage wells can generate this drainage.

Surface water: includes essentially all water that is on the Earth's surface, such as in a stream, lake, river, reservoir, or ocean. Surface waters include waters of the United States and their tributaries such as interstate waters and their tributaries, intrastate waters, all impoundments of these waters, and all wetlands hydrologically connected to lakes, streams, or rivers. Manure ponds are not considered surface waters in the context of this Regional Water Board Order.

Tailwater: the runoff of irrigation water from an irrigated field.

Vegetated buffer: a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching waters of the United States.

Waste: is set forth in Water Code Section 13050(d), and includes manure, leachate, process wastewater and any water, precipitation or rainfall runoff that came into contact with raw materials, products, or byproducts such as manure, compost piles, feed, silage, milk, or bedding. The Basin Plan states that "waste" includes sewage and any and all other substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature, including such waste placed within containers of whatever nature prior to, and for purposes of, disposal.

Waters of the state: is defined in Section 13050 of the California Water Code as "*…any surface water or groundwater, including saline waters, within the boundaries of the state*." Note this includes isolated wetlands.

Waters of the United States: is defined in 40 CFR § 122.2 as (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition; (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial sea; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Note: Waste treatment systems including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland.

Wet season: is the period of time with regular rainfall some time between October 1 and April 30 of each year and especially includes the period of time when soils are saturated and runoff is occuring.