

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**BOARD ORDER NO. R6V-2023-(TENTATIVE)
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR DAIRY AND OTHER CONFINED CATTLE FACILITIES**

_____Regionwide_____

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. Purpose

Discharges of animal waste and wash water to the ground surface and over application of manure at confined animal facilities (CAFs) have the potential to impact water quality. A CAF is defined in the California Code of Regulations, (CCR), title 27, section 20164, as any place where cattle, sheep, swine, horses, mules, goats, or other domestic animals are corralled, penned, tethered, or otherwise enclosed or held and where feeding is by means other than grazing. This General Waste Discharge Requirements for Dairy and Other Confined Cattle Facilities (General Order) requires Dischargers to manage waste to protect water quality and conduct monitoring and reporting of compliance actions.

2. Discharger

Owners and operators of CAFs and other confined cattle facilities that are discharging or proposing to discharge waste qualify for coverage under this General Order and are referred to as “Dischargers.”

3. Eligibility Criteria for Permit Coverage

New, expanding, or existing CAFs may be covered under the General Order. The Water Board may enroll a person discharging or proposing to discharge waste from a CAF under the General Order provided all the following criteria are met.

- a. Site Location: The facility is not located within an area prohibiting a discharge to land, per section 4.1 and section 5.2, Waste Discharge Prohibitions, of the *Water Quality Control Plan for the Lahontan Region* (Basin Plan).
- b. Operations and Capacity: The facility operates as a confined animal facility more than seasonally (more than three months per year).
- c. Waste Source: The waste originates from a facility housing cattle, such as dairy cows, heifers, or cattle for feeding or slaughter.

4. General Order Applicability

Dischargers meeting the eligibility criteria are eligible for enrollment under the General Order. A CAF with fewer than 50 animal units (AUs) are not required to

enroll in the General Order provided they comply with the prohibitions in sections I.A-F, K, N-P. For the purposes of this General Order, an animal unit equals 1,000 pounds weight of animal(s). Typically, a mature milk cow is equivalent to 1.4 AUs and beef cattle are each equivalent to 1 AU. The Regional Water Board Executive Officer may require a CAF with fewer than 50 animal units to enroll at any time if it is determined that the CAF violated the prohibitions or are otherwise determined to pose a threat to water quality.

If the Executive Officer determines that due to site-specific conditions and operations, coverage under this General Order will not be protective of water quality, the Water Board may issue an individual order for the discharge or seek enrollment in a different general permit.

5. Application Process

California Water Code (CWC), section 13260(a), requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system and that could affect the quality of the waters of the state, must file a report of waste discharge (ROWD), referred to for the purposes of the General Order as a Notice of Intent (NOI), to obtain coverage under Waste Discharge Requirements (WDRs) or a waiver of WDRs.

- a. Application and Annual Fees: Pursuant to CCR, title 23, Dischargers regulated by this General Order must pay annual fees.
- b. Existing Facilities: An **existing CAF** is a CAF that is constructed and operating as of the effective date of the General Order. Two existing operating dairies have individual Waste Discharge Requirements (WDRs); two additional dairies and two heifer ranches are not under any permit. The existing WDRs for dairies are not adequately protective of water quality and collected groundwater data indicates that the quality is affected by these operations, and, thereby, justifies rescission of the individual orders. All existing CAFs are required to file a NOI to provide additional water quality information.

Some existing CAFs need to improve their facilities to meet the General Order's requirements. The improvements will include design and construction of major infrastructure changes.

- c. New or Expanded Facilities: A **new CAF** is a CAF not yet operating as of the effective date of the General Order and an **expanded CAF** includes, but is not limited to, a facility with expanded or new corrals and/or impoundments, increased herd size by more than 15% from the existing herd size or expanded production areas beyond the size existing as of the effective date of or enrollment date under the General Order. Applicants for these facilities may submit their NOI directly to the Lahontan Water Board, or they may directly upload their NOI through a digital portal, as available. A complete application varies by category and includes all project-specific components of the NOI designated for each category as outlined in Attachment A, NOI, and made part of this General Order. The technical

report component of the NOI includes submittal of project background, wastewater characterization, wastewater treatment description, and project-specific supplemental reports.

Upon review of the NOI, Water Board staff will determine if coverage under the General Order is appropriate. The Executive Officer will issue a notice of applicability (NOA) when coverage under the General Order has been authorized and include any site-specific monitoring and reporting requirements.

6. Lahontan Basin Plan

The Water Board adopted the Basin Plan, which became effective on March 31, 1995. The Basin Plan contains beneficial use designations and water quality objectives for waters of the Lahontan Region, contains programs of implementation to achieve water quality objectives, and provides a strategy for protecting beneficial uses of groundwater and surface waters throughout the Lahontan Region. This General Order implements the Basin Plan, as amended.

7. Receiving Waters and Beneficial Uses

The receiving waters are the groundwaters and surface waters of the Lahontan Region. Existing and potential beneficial uses of groundwater in the Lahontan Region include:

- a. Municipal and domestic supply (MUN),
- b. Agricultural supply (AGR),
- c. Industrial service supply (IND),
- d. Freshwater replenishment (FRSH),
- e. Aquaculture (AQUA),
- f. Wildlife habitat (WILD), and
- g. Industrial Process Supply (PRO).

8. Water Quality Objectives

Chapter 3 of the Basin Plan contains water quality objectives established to protect groundwater beneficial uses. In particular, the Basin Plan requires that groundwaters not contain concentrations of chemical constituents that adversely affect the water for beneficial uses. The Basin Plan also requires all waters designated as MUN not contain concentration of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant levels (SMCL), as specified in CCR, title 22 and incorporated into the Basin Plan

9. Confined Animal Facilities

Chapter 4 of the Basin Plan, Implementation, section 4.10, Agriculture, page 4.10 - 6, Confined Animal Facilities, discusses the potential water quality impacts from CAFs. Potential water quality impacts are attributed to storm water runoff,

wash water, salt- and nutrient-laden leachate from animal feed and manure, sediment mobilization, and pathogens from manure. CAFs are identified as contributors to the increased salt and nutrient loading in groundwater basins.

Chapter 4.10 of the Basin Plan contains additional guidance on control actions for CAFs.

10. Antidegradation Analysis

State Water Board Resolution No. 68-16, the Statement of Policy with Respect to Maintaining High Quality of Waters in California (hereafter the Antidegradation Policy), requires that:

“Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high-quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.”

The General Order regulates discharges from CAFs, including historically unregulated discharges. These discharges are to numerous groundwater bodies in the Lahontan Region, each with its own specific characteristics. The primary constituents of concern (COCs) for groundwater from CAF discharges are salts (total dissolved solids), nutrients (e.g., nitrogen), and bacteria. In assessing baseline water quality and determining whether there are waterbodies in the Lahontan Region that are high quality for these constituents, a general assessment was conducted. The Lahontan Water Board is not required to develop a numeric baseline for potentially hundreds of waterbodies in the Lahontan Region and these waste constituents. However, due to the rural nature of the Lahontan Region and the minimal historic and current commercial agricultural activity in parts of the region, and in order to be protective of high-quality waters, it is likely that there are waterbodies in the Lahontan Region that are high quality for these waste constituents.

Nitrates and salts typically associated with animal wastewater effluent—after effective source control, treatment, and control measures are implemented—may occur in some high-quality groundwater basins. However, these changes are not expected to unreasonably affect present and anticipated beneficial use of such water and exceed water quality objectives, as further described below.

Degradation of high-quality water that results from discharges regulated by this General Order is consistent with the maximum benefit to the people of the State.

CAFs are typically found in the rural areas of the Lahontan region. The ongoing operation of existing CAFs, and the ability to expand or open new CAFs benefits the economic prosperity of rural communities. CAFs also play an important role in providing milk and food supplies to the people of California. Maintaining the industry and allowing new CAFs to open in the Lahontan Region provides economic support and value to local communities.

This Order establishes requirements and standards that will result in the implementation of best practicable treatment and control measures. The implementation of the measures outlined in the Order will limit degradation and will not result in water quality less than that prescribed in the Lahontan Water Board Basin Plan. Requirements in the General Order include:

Production Areas: Wash water must be collected and stored in lined impoundments, prior to use on cropland or proper disposal. The General Order also includes requirements associated with drainages, permeability of flooring in milk rooms, grading and compaction of certain surfaces that will result in the implementation of best practicable treatment and control (BPTC) measures associated with controlling impacts from manured areas.

Land Application Areas: The General Order limits the application of blended wash water mixed with groundwater to cropped area to a maximum TDS concentration of 1,000 milligram per liter (mg/L) or less. It also contains requirements for soil sampling below the crop roots at several depths for soil moisture content sampling and analysis of nitrate and TDS concentrations. This requirement is to ensure that overapplication of nutrients and salts does not occur and is protective of water quality. Additionally, the General Order requires submission and implementation of a Nutrient Management Plan that includes BMPs to maximize nutrient uptake by plants and minimize the passthrough and infiltration of nutrients and salts into the groundwater. To limit infiltration, application of manure and wastewater to disposal fields or crop lands must be at rates reasonable for the crop and location conditions. Dry manure must not be applied at a rate greater than 2.5 tons per acre per year, unless justified. Wastewater must not be applied to a land application area during periods when soil is saturated, within 24 hours of a forecasted precipitation event, or wind event, as specified in the General Order. Wastewater must be managed to minimize percolation to groundwater.

Impoundment Liners: Wastewater retention impoundments must meet a strict performance standard that must be in compliance with conservative design standards. This Order requires submittal of workplans to bring any deficient impoundment into compliance. Within five years, dischargers must remove unlined wash water impoundments and replace them with lined impoundments.

As stated in the Basin Plan, Chapter 4.10, Confined Animal Facilities, dischargers can utilize relevant NRCS Conservation Practice Standards, as further described in Finding 15.c, Table 2, as guidance for implementing water quality protection requirements. In addition, the General Order requires new CAFs to be located outside the floodplain of any river or stream and, at minimum, be located 1,000 feet away from any rivers. As the Mojave River Valley groundwater basin is a source of drinking water for several cities and communities, the General Order

prohibits new CAFs to develop within 1.5 miles to either side of the centerline of the Mojave River. The discharge of any waste – treated or untreated – to surface waters or surface water drainage courses is prohibited. In addition, the direct discharge of wash water into groundwater via backflow through water supply or irrigation supply wells is prohibited; the use of manure to construct impoundment structures or to repair, replace, improve, or raise existing impoundment structures is also prohibited. These requirements in combination with the specific requirements associated with production areas, land application areas, and impoundment lining constitute BPTC such that pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained, and the discharge will not unreasonably affect present and anticipated beneficial use of such water and will not result in exceedance of water quality objectives.

The efficacy of these BMP/BPTC measures will be tracked using groundwater monitoring and reporting and following required minimum setbacks from waterbodies. The General Order includes groundwater monitoring and reporting requirements for all treatment systems. CAFs must install groundwater monitoring wells both upgradient and downgradient of a facility to monitor groundwater quality and compliance with the General Order. These requirements allow the Water Board to monitor the continued capability of the waste management systems and BMPs at CAFs to act as appropriately protective source controls. The semi-annual monitoring reports must include an evaluation of data collected to date, an assessment of whether participating CAFs are implementing BMPs and BPTCs that minimize degradation of water quality, and assurances that the current BMPs and BPTCs are protective of beneficial uses.

Therefore, any degradation of high-quality water that results from discharges regulated by this Order is consistent with the Antidegradation Policy.

11. Privilege to Discharge

CWC, section 13263(g), states the discharge of waste into waters of the State is a privilege, not a right, and the General Order does not create a vested right to continue the discharge of waste.

12. Regulatory History

The following sections summarize the chronology of preceding water quality impact studies and Water Board regulation.

a. Original Studies

In 1983, the California Department of Water Resources conducted a Water Boards-funded study on the hydrogeology and groundwater quality of the Lower Mojave River area. The study evaluated the potential impact to local water resources of waste disposal from dairies and other animal facilities.

The Lower Mojave River study concluded water quality would be impaired. Additionally, the impairment would be spatially differential, based on distance from the river. Land extending up to 1.5 miles on either side of the

river centerline would be most rapidly impaired by percolating dairy waste. Groundwater outside that boundary could be impacted, but at a slower rate than in areas closer to the river.

b. Initial Regulation

In 1984, the Water Board began issuing individual WDRs to regulate dairies within ½ mile of the Mojave River, based on the study's predictions. The State Board's Dairy Waste Task Force issued guidelines in 1991 to facilitate consistent regulation of waste management at dairies throughout California. In the early 1990s, the Water Board issued WDRs for dairies in the El Mirage area due to shallow groundwater and concern with waste discharges.

c. Follow-up Monitoring

Between 2009 and 2016, Water Board staff conducted residential well sampling adjacent to CAFs to measure the impact of CAFs on groundwater quality. The sampling sites were adjacent to 10 of 13 dairies and heifer ranches in operation during that time. Water Board staff also conducted additional sampling downgradient of the Hinkley Dairy in 2021. Results from this sampling indicate the groundwater beneath and downgradient of eight studied CAFs contained higher concentrations of nitrate and TDS than groundwater upgradient of those CAFs. Additionally, all downgradient groundwater concentrations of nitrate and TDS exceeded WQOs at all eight CAFs.

The depth to groundwater at these eight facilities ranged from 15 to 70 feet below ground surface (bgs). At two facilities where Water Board staff observed small to no changes in the groundwater quality between the upgradient and downgradient monitoring locations, the depth to groundwater varied from 60 to 350 feet bgs. These data validated the predictions of the 1983 California Department of Water Resources study.

Initially, four CAFs were required by WDRs to sample groundwater monitoring wells installed to assess compliance with WDRs. Data provided in submitted monitoring reports indicated that nitrate and TDS concentrations were increasing with time.

d. 2010 Dairy Strategy

After reviewing monitoring data from existing CAFs, the Water Board considered a Dairy Strategy in May 2010, consisting of the following four components:

- i. Assess and address risk to downgradient receptors from exposure to polluted groundwater.
- ii. Identify appropriate source controls and require phased implementation of suitable waste minimization, control, and disposal practices under WDRs or a Conditional Waiver.

- iii. Ensure adequate monitoring to evaluate the extent of affected groundwater and the effectiveness of source control measures implemented.
- iv. Require groundwater remediation where groundwater beneficial uses are impaired.

13. California Water Code, Section 13241 Considerations

CWC, section 13263, states each regional board must consider the provisions of section 13241 when prescribing waste discharge requirements. Factors to be considered include, but are not limited to, the following:

“Past, present, and probable future beneficial uses of water”

The General Order identifies past, present, and probable future beneficial uses of groundwater in Finding 7. The best management practices and receiving water limitations in the General Order are based on water quality objectives and will not adversely affect present or probable future beneficial uses of groundwater, including municipal and domestic supply, agricultural supply, and industrial service supply, and freshwater recharge.

“Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto”

The Lahontan Region includes groundwater basins with diverse water quality conditions. Maps of significant groundwater basins are included as part of the Basin Plan. The water quality of some groundwater basins is of high quality; while it is, in other basins, impacted by natural and anthropogenic concentrations of constituents. The geology and soils of the Lahontan Region have been shaped by a variety of processes and are correspondingly diverse. The Lahontan Region is generally in a rain shadow; however, precipitation amounts can be high (up to 70 inches annually) at higher elevations and less at lower elevations (up to 3 inches annually). The varied topography, soils, and microclimates of the Lahontan Region support a corresponding variety of plant and animal communities.

The existing CAFs are in the southern portion of the Lahontan Region that is increasingly urbanizing and dependent upon groundwater from two primary aquifers, the Antelope Valley and Mojave groundwater basins.

“Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area”

The requirements of the General Order will result in the protection of existing and probable future beneficial uses to the maximum benefit to the people of the State of California. The requirements of the General Order will also result in the protection of water quality to continue to meet the standards prescribed in applicable existing policies. Separately, the Water Board is taking other regulatory actions to control discharges and coordinate with affected stakeholders. The two primary groundwater basins, Antelope Valley and Mojave are adjudicated. The Water Board coordinates with their respective watermasters, and others, regarding water quality issues.

“Economic considerations”

The Lahontan Region encompasses approximately one quarter of the state’s land mass and serves approximately two percent of the state’s population. CAFs are typically found in the rural areas of the region. The most economically efficient option for most CAFs is onsite discharge as land application to agricultural crop areas. CAFs with insufficient cropland area to dispose of waste onsite at crop agronomic rates must dispose their waste offsite. This practice will continue with no additional cost required.

Dischargers will incur costs to install and improve facilities for containing and properly disposing of dairy wash water and implementing BMPs or BPTC to ensure nutrients are not over applied.

“The need for developing housing within the region”

The General Order would not directly affect housing availability in the region. However, it is possible that new facilities may be built in response to the General Order, possibly generating job growth that may indirectly impact the need for developing housing within the region.

“The need to develop and use recycled water”

The General Order allows the discharge of cattle wastewater for irrigation of crops at agronomic rates. While this is a beneficial reuse of wastewater, this wastewater is not subject to the water recycling criteria adopted by the State Water Board, Division of Drinking Water, because it is not sourced from domestic sewage. The General Order will not directly affect the need to develop and use recycled water.

14. Human Right to Water

CWC, section 106.3 establishes a state policy that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes, and directs state agencies to consider this policy when adopting regulations pertinent to water uses described in the section, including the use of water for domestic purposes.

The Water Board considered this policy and concluded these WDRs implement BPTC requirements to meet established receiving water objectives and maintain designated beneficial uses of water, including the MUN beneficial use.

15. Justification for a General Order

CWC, section 13263(i), states the State Water Board or a regional board may prescribe general WDRs for a category of discharges if the State Water Board or that regional board finds or determines that all the following criteria apply to the discharges in that category:

- a. *The discharges are produced by the same or similar operations.* The General Order regulate discharges from very similar operations: cattle CAFs. Specifically, dairy CAFs include corral feeding and housing, other

holding pens, and milking parlors. Similarly, meat cattle CAFs include corral feeding and housing.

- b. *The discharges involve the same or similar types of waste.* The types of waste, threat to water quality, and constituents of concern are discussed in the following subsections.

i. Types of Waste

Cattle CAFs can generate a variety of waste: wash water, contaminated storm water, feed waste, manure (liquid and solid), dead animals, slaughterhouse wastes, and other organic materials.

ii. Threat to Water Quality

The threat to water quality from CAF waste correlates to onsite waste management. Waste not captured by collection and transfer systems or allowed to percolate into soils without enough opportunity for treatment (including by plant uptake) is most likely to impact groundwater quality. While waste production rates can correlate to the threat to water quality, the ability to capture, treat, and otherwise use waste materials on site are the most important factors in determining the threat to water quality.

CAFs producing the largest volumes of waste can pose greater threat to water quality when waste is mismanaged. Therefore, the complexity and scale of BMPs typically increases with herd size. As such, the General Order considers changes in herd size when determining the need for an updated NOI.

CAF herd sizes vary between facilities and with time. Specifically, the University of California Davis estimates that the normal variation in California dairy herd sizes ranges from about 10 to 15 percent. CAF herd sizes changing by greater than 15 percent have been defined as an expansion of a herd by the General Order (see definition of a CAF Attachment C, Definitions) and warrants submission of a revised NOI.

iii. Constituents of Concern

COCs in CAF wastewater include salts from cattle waste and feed additives (total dissolved solids or TDS), nutrients from cattle waste and fertilizers (nitrogen, phosphorus, etc.), bacteria from animals and animal waste (fecal coliforms, including *Escherichia coli* [E. coli]), other chemicals (pesticides, animal husbandry medical waste, etc.), and other waste materials (trash, animal mortalities, etc.).

These COCs, if not properly managed or treated, have the potential to degrade water quality. The Basin Plan has groundwater quality objectives for selected constituents, including TDS, nitrate, and total coliforms. The State Water Board, Division of Drinking Water, has established primary and secondary maximum contaminant levels

(MCLs and SMCLs) for nitrate and TDS and our Basin Plan reflects these water quality objectives. Additionally, the Water Board has sampled groundwater and wash water in the vicinity of existing CAF operations to determine existing impacts and potential for impact of wastewater on receiving waters. The General Order, therefore, contains maximum application concentrations for relevant constituents, such as TDS in liquid wastewater and rates for dry manure per acre when applied to cropland or pastureland, as shown in Table 1.

Table 1: Relevant Constituents.

Constituent	Water Quality Objectives
Nitrate as nitrogen (NO3-N)	10 mg/L (maximum)
Total dissolved solids	500 mg/L (recommended) 1000 mg/L (upper) 1500 mg/L (short-term)
Total coliforms	1.1 MPN/100 mL (maximum)

- c. *The discharges require the same or similar treatment standards.* There are a variety of BMPs (also known as Best Practicable Treatment and Controls (BPTC); see Attachment D – Acronyms and Abbreviations) available for waste management at CAFs. Many common BMPs have specific design standards adopted and propagated by the NRCS (aka conservation practice standards). The most applicable conservation practice standards are listed in Table 2. As stated in the Basin Plan, Chapter 4.10, Confined Animal Facilities, these standards as considered acceptable guidance for implementing water quality protection requirements.

Table 2: Relevant NRCS Conservation Practice Standards

NRCS Conservation Practice Standard	Intention
313 Waste Storage Facility	Protect water quality from stored waste.
319 On-farm Secondary Containment Facility	Protect water quality from petroleum products.
355 Groundwater testing	Determine the quality of groundwater.
359 Waste Treatment Lagoon	Decrease nutrients, biochemical oxygen demand (BOD), and odors.
378, 520, 521, and 522 Pond and Pond Liners	Protect water quality from materials stored in a pond (aka impoundment structure).
561 Heavy Use Area Protection	Collect wastewater from production areas to protect water quality.

NRCS Conservation Practice Standard	Intention
570 Storm Water Runoff Control	Lessen water quality and quantity impacts from storm water.
590 Nutrient Management	Ensure agronomic application of nutrient laden materials.
592 Feed Management	Decrease the nutrient and salt loads in manure.
629 Waste Treatment	Protect water quality using waste treatment systems.
632 Waste Separation Facility	Protect water quality through manure handling methods.
634 Waste Transfer	Protect water quality during waste transfer from production to storage.
635 Vegetated Treatment Area	Protect water quality through phytoremediation.

- d. *The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.* Dischargers regulated under the General Order have similar operations discharging similar waste. The discharges have certain common characteristics (e.g., similar potential impact from constituents, disposal techniques, and treatment standards). The discharges use similar BMPs for the waste management systems.

General WDRs are more appropriate than individual WDRs because the similarity of the discharge types and requirements are more efficiently and consistently regulated by general WDRs than numerous nearly identical individual WDRs. In addition, the BMPs and waste management practices used to control such discharges are also very similar for CAFs. Therefore, the discharges are more appropriately regulated under general WDRs than individual WDRs.

16. CCR, Title 27 Considerations

California regulations governing discharges from CAFs are contained in CCR, title 27, at sections 22560 et seq (Title 27). These regulations prescribe minimum standards for animal waste at CAFs. For surface water protection, Title 27 includes requirements for the design of containment facilities for both storm water and process wastewater and for adequate flood protection. For groundwater protection, the minimum standards in Title 27 require CAFs to minimize percolation of wastewater to groundwater in disposal fields, apply manure and wastewater to disposal fields at reasonable agronomic rates, and minimize infiltration of water into underlying soils in manured areas. Furthermore, retention impoundments shall be lined with, or underlain by, soils that contain at least

10 percent clay and no more than 10 percent gravel or artificial materials of equivalent impermeability (CCR, title 27, § 22562[d]) The General Order incorporates relevant criteria for CAFs pursuant to Title 27, sections 22560 through 22564. Those sections prescribe statewide minimum standards for discharges of animal waste at CAFs.

17. Technical and Monitoring Reports

CWC, section 13267, provides the Lahontan Water Board with the authority to require technical and monitoring reports. Such technical reports are required by the General Order, the notice of applicability (NOA), and the Monitoring and Reporting Program (MRP) that is specified as Attachment B.

The reports required as part of enrollment in the General Order are necessary to ensure the Discharger takes actions to demonstrate compliance and ensure water quality is protected. As such, the burden, including costs, of this monitoring bears a reasonable relationship to the need for that information and the benefits to be obtained from that information.

The Executive Officer, in issuing the NOA, may identify specific applicable sections of the MRP, or authorize additional or changes to monitoring and reporting requirements pursuant to CWC, section 13267.

18. California Climate Change Mitigation Strategy

The Water Board adopted Resolution No. R6T-2019-0277 (Climate Resolution) to address impacts of climate change. The four protection strategies stated in the Climate Resolution are addressed by the General Order in the manner described in the following subsections.

a. Protection of Wetlands, Floodplains and Headwaters

Support external efforts and initiate necessary regulatory actions to facilitate improved meadow, wetland, and floodplain conditions and stream flows in headwater areas to achieve greater levels of watershed resiliency.

CAFs are rarely, if ever, located within headwaters areas. While grazing activities often do occur in high elevation meadow areas, these activities occur seasonally, without prolonged confinement; those grazing activities do not involve livestock from CAFs, and upland grazing is not regulated by this order. This protection strategy is, therefore, not addressed in the General Order.

b. Infrastructure Protection

Support external efforts and initiate necessary regulatory actions to help build and maintain sustainably functioning infrastructure so built systems remain safe and reliable during extreme weather events including heat waves, extreme precipitation, severe droughts, and wildfires.

The General Order scope is limited to waste generated and disposed at cattle and dairy CAFs. The regulatory actions in the General Order have

the most potential to affect infrastructure related to precipitation. Specifically, the General Order requires proper management of contaminated storm water as part of the waste management system.

c. Protection of Groundwater Quality and Supply

Support external efforts and initiate necessary regulatory actions to protect groundwater quality and improve groundwater recharge for purposes of protecting source water and building sustainability and drought resiliency.

Within the Lahontan Region, groundwater is a primary source of drinking water. Climate change generally is decreasing mountain front recharge, which in turn reduces recharge of groundwater. The General Order protects groundwater quality by regulating otherwise unregulated discharges of animal waste to land. While the requirements contained in the General Order do encourage increased groundwater recharge activities, the quality of the water reaching groundwaters should be improved. Ultimately, the protections afforded by properly managed waste, including waste disposal, can help reduce the potential impact of wastewater infiltrating to dwindling aquifers, increasing drought resiliency by not relying on historical dilution to attenuate impacts.

d. Protection of Headwater Forests and Promoting Fire Resiliency

Support external efforts and initiate necessary regulatory actions to facilitate the pace and scale of projects implemented to build long-term resilience of headwater forests including those that (1) reduce vulnerability to catastrophic fires and pest infestations, and (2) support resilience in recovery efforts.

The General Order has no effect on headwater forests or fire resiliency.

19. California Environmental Quality Act

The General Order is intended to regulate new, expanded, and existing facilities. The Water Board considered the environmental impacts associated with the adoption of the General Order and prepared an initial study in accordance with CCR, title 14 section 15063.

Analysis in the initial study and early consultation with responsible and trustee agencies did not identify any significant impacts on the environment. The Lahontan Water Board adopted a Mitigated Negative Declaration on April 26, 2023.

20. Environmental Justice: Disadvantaged and Tribal Communities

When issuing or reissuing regional WDRs or waivers of WDRs, regional boards must make a concise, programmatic finding on potential environmental justice, tribal impact, and racial equity considerations related to the issuance (CWC, § 13149.2, effective Jan. 1, 2023). For reissuances, the finding may be limited to considerations related to any changes to the requirements of the prior WDRs or

waivers of WDRs. Existing CAFs are primarily located in the southern portion of the Lahontan Region, and there are several disadvantaged communities located near existing CAFs. It is unknown where new CAFs may be located in the future, but it is possible that new CAFs could be located near disadvantaged or tribal communities.

CAFs have the potential to generate sources of salts, nutrients, and bacteria that may discharge to and impact waters of the State. The General Order regulates CAFs for dairy and other cattle that generate wastes and sets requirements that are designed to protect beneficial uses. The General Order requires the installation, inspection, and maintenance of management practices to meet water quality objectives.

21. Public Notification

Water Board staff conducted meetings with facility operators of dairies and heifer ranches, and other interested parties, to discuss General Order requirements and monitoring programs. An administrative draft of the General Order was provided to the California Department of Food and Agriculture and the existing CAF owners/operators.

The Water Board has notified interested agencies and persons of its intent to prescribe WDRs in the General Order, has provided them with an opportunity to submit written comments, and provided notice of a public hearing. A notice of the availability of a draft General Order was also provided by posting a copy of the tentative WDRs to the Lahontan Water Board internet website.

22. Public Hearing

The Lahontan Water Board, in a public hearing, heard and considered all comments pertaining to this matter.

IT IS HEREBY ORDERED pursuant to CWC, sections 13260, 13263, and 13267 and in order to meet the provisions contained in division 7 of the CWC and regulations and polices adopted thereunder, all dischargers subject to this Order must comply with the following requirements.

I. PROHIBITIONS

- A. Creation of pollution or threatened pollution, contamination, or nuisance as defined by CWC, section 13050, is prohibited.
- B. The discharge of waste that causes violation of any numeric or narrative water quality objective contained in the Basin Plan is prohibited.
- C. The discharge of waste in violation of Basin Plan prohibitions is prohibited.

- D. Where any applicable numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation of pollution is prohibited.
- E. The discharge of waste classified as hazardous (CCR, title 22, section 66261) is prohibited.
- F. The discharge of any waste – treated or untreated – to surface waters or surface water drainage courses is prohibited.
- G. The discharge of waste that could affect the quality of waters of the state that is not authorized by the State or Regional Water Board through WRDs, waiver of WDRs, National Pollutant Discharge Elimination System permit, cease and desist order, certification of water quality compliance pursuant to federal Clean Water Act section 401, or other appropriate regulatory mechanism is prohibited.
- H. The discharge of pesticides to surface waters and groundwater is prohibited.
- I. The discharge of treated wastewater except to the disposal point(s) authorized in the NOA is prohibited.
- J. The Discharger must ensure that all discharges from the CAF occur in the manner specified in the NOI and, if applicable, technical reports and plans approved by the Water Board.
- K. The application of waste to land before, during, or after a storm event that would result in runoff from the land is prohibited.
- L. Discharge of waste to unlined waste impoundments at CAFs is prohibited, except as allowed at existing facilities until required lined waste impoundments have been constructed or until April 25, 2028, whichever occurs earlier.
- M. After April 26, 2028 (five years after General Order adoption), operation of existing unlined wash water impoundments and discharge of wash water to unlined impoundments at existing CAFs is prohibited.
- N. The land application of manure or wash water to cropland for other than providing nutrients or as a soil amendment is prohibited.
- O. The direct discharge of wash water into groundwater via backflow through water supply or irrigation supply wells is prohibited.
- P. The use of manure to construct impoundment structures or to repair, replace, improve, or raise existing impoundment structures is prohibited.

II. RECEIVING WATER LIMITATIONS

A. Regionwide Receiving Water Limits

The discharge must not cause the following in groundwater:

1. Bacteria – Groundwater designated as MUN must not contain a median concentration greater than or equal to 1.1 most probable number per 100 milliliters (1.1 MPN/100 mL) of coliform organisms during any seven-day period.
2. Chemical Constituents – Groundwater designated as MUN must not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the following provisions of CCR, title 22, which are incorporated by reference into the Basin Plan: Inorganic Chemicals, Table 64431-A of section 64431; Organic Chemicals, Table 64444-A of section 64444; SMCLs–Consumer Acceptance Limits, Table 64449-A of section 64449; and SMCLs – Consumer Acceptance Ranges, Table 64449-B of section 64449. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

Groundwater designated as AGR must not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes).

Groundwater must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

3. Radioactivity – Groundwater designated as MUN must not contain concentrations of radionuclides in excess of the limits specified in CCR, title 22, section 64442, Table 64442, and section 64443, Table 64443, which are incorporated by reference into the General Order. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.
4. Taste and Odors – Groundwater must not contain taste or odor-producing substances in concentrations that cause nuisance or that adversely affect beneficial uses. For groundwater designated as MUN, at a minimum, concentrations must not exceed adopted secondary maximum contaminant levels specified in CCR, title 22, Table 64449-A of section 64449 (SMCLs–Consumer Acceptance Levels; Table 64449-B of section 64449 (SMCLs – Consumer Acceptance Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

- B. Subbasin-specific Receiving Water Limits
1. The discharge must not alter taste and odor in the following groundwater basins:
 - a. Honey Lake Valley Basin, Eagle Drainage Hydrologic Area (Basin Plan, Figure 3-2)
 - b. Little Truckee River Hydrologic Unit (Basin Plan, Figure 3-4)
 - c. Truckee River Hydrologic Unit (Basin Plan, Figure 3-5)
 - d. Carson Valley Basin, Indian Creek Watershed (Basin Plan, Figure 3-7), and West Fork Carson River Hydrologic Unit (Basin Plan, Figure 3-7).
 2. The discharge must not cause groundwater in the Mojave Hydrologic Unit of the Mojave River Valley Basin to contain concentrations of nitrate and TDS in excess of the water quality objectives as listed in the Basin Plan, Table 3-20 and Figure 3-13.

III. SITING, DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE

The following general requirements are established such that CAFs must be sited, designed, constructed, operated, and maintained as required in this General Order.

- A. The Discharger must pay an annual fee to the State Water Board in accordance with the fee schedule set forth in CCR, title 23. Annual invoices are issued by the State Water Board.
- B. BMPs for CAFs should incorporate requirements that meet or exceed applicable NRCS conservation practice standards for California¹.
- C. The Discharger must ensure that all site operating personnel are familiar with the contents of the NOA and the General Order. A copy of the General Order, the NOA, and technical reports required by the General Order (not including previously submitted monitoring reports) must be kept on the CAF premises and be available to operating personnel and Water Board staff.
- D. Noncompliance with any part of the General Order may constitute a violation of the California Water Code and its regulations. Such noncompliance is grounds for enforcement action and/or permit termination, revocation and re-issuance, or modification of the authorization to discharge.

¹ Refer to NRCS website for Field Office Technical Guide applicable to California for conservation practice standards. Link: [California | Field Office Technical Guide | NRCS - USDA](#)

- E. Beyond the requirements of the General Order, the Discharger must take all other reasonable steps to minimize or prevent any discharge that has a reasonable likelihood to adversely affect human health or the environment.
- F. The construction or destruction of wells (such as monitoring or supply wells) must be in accordance with the standards under water wells and monitoring wells in the California Well Standards Bulletin 74-81 (December 1981) and Supplemental Bulletin 74-90 (June 1991), adopted by the California Department of Water Resources (DWR). Should any county or local agency have or adopt more stringent standards than that adopted by DWR, then these local standards must supersede the well standards of DWR, and the Discharger must comply with the more stringent standards.
- G. Each existing or new CAF must propose to install or have installed a minimum of three groundwater monitoring wells, one upgradient and two downgradient of the CAF, to monitor compliance with the General Order and the Basin Plan.
- H. For existing CAFs, new monitoring wells must be constructed within two years of the issuance of the General Order. New and expanded CAFs must have groundwater monitoring wells installed, as specified in Attachment B, MRP, section II, prior to issuance of an NOA.
- I. The Discharger must disinfect and repair all wells according to DWR's California Well Standards, Bulletins 74-81 and 74-90 (or most current version) and as described in Attachment B, MRP, section III.A.3.
- J. Licensed Professionals
 1. A California licensed professional civil engineer must prepare the waste management system design, including drawings and reports, and the operation and maintenance plans, as described in the NOI.
 2. A California licensed professional civil engineer must prepare plans and certify the as-built condition of any newly constructed waste management system component(s).
 3. A certified agronomist, certified crop advisor, or soil scientist must prepare Nutrient Management Plans required as part of the NOI and MRP.
 4. A California registered surveyor must establish permanent groundwater sampling locations.
 5. A California licensed professional geologist must prepare groundwater monitoring well installation work plans and certify as-built well completion reports.

K. Nutrient Management Plan

The Discharger must develop and implement an NMP, in accordance with the technical standards outlined in this General Order and Attachment B, MRP, section V. The discharger must submit a NMP to Water Board staff for review and acceptance with the NOI, prior to permit coverage.

L. Maintenance Records

The Discharger must retain a record of all service activities and maintenance records for a minimum of three years. Maintenance records must be retained for any treatment facility component, treatment control system, and monitoring device that have been installed to achieve compliance with the General Order and the NOA. At a minimum, a record must include the date, nature of service, service company name, and service company state contractor license number.

M. Emergency Preparedness Response

1. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of the General Order, the Discharger must employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.
2. Adequate spill response measures must be taken to prevent waste from entering surface waters or groundwater.

N. Title 27 Requirements for Design Storms, Flows, and Wastewater Management

1. CAFs must be designed and constructed to retain all facility wastewater generated, together with all precipitation on, and drainage through, manured areas during a 25-year, 24-hour storm (CCR, title 27, section 22562 [a]).
2. Retention impoundments and manured areas at CAFs in operation on or after November 27, 1984, must be protected from inundation or washout by overflow from any stream channel during 20-year peak stream flows (CCR, title 27, section 22562 [c.1]).
3. CAFs in operation on or after November 27, 1984, must be located away from and outside of inundation or washout by overflow from any stream channel during 100-year peak stream flows (CCR, title 27, section 22562 [c.2]).

O. General Waste Handling

1. All wastes such as manure, spoiled feed, bedding, silage leachate, waste milk, etc., must be contained, managed, and properly disposed such that it will not cause any threat to water quality.
2. Wash water must be discharged to a lined impoundment to be evaporated or applied to crops in accordance with application rate requirements.
3. Storm water runoff from corrals must be contained in a lined storm water impoundment in accordance with Attachment B, MRP, section IV. Lined Impoundments.
4. Veterinary medical waste must be removed from the CAF and disposed offsite at disposal sites approved to accept that type of waste.
5. Dischargers must implement BMPs in the collection, treatment, storage, discharge, or waste disposal system (aka waste management system) at a CAF to prevent odor pollution or nuisance.
6. All animal mortalities (animal carcasses) must be removed from the CAF and disposed in a timely manner by means prescribed by the California Department of Food and Agriculture, Division of Animal Industry (CCR, title 14, section 17823.5).

P. Setbacks

1. Setbacks or separation distances contained under Water Wells, Section 8, Part II, in DWR's California Well Standards, Bulletins 74-81 (December 1981) and 74-90 (June 1991), must be maintained for the installation of all monitoring wells and groundwater supply wells at existing CAFs:
 - a. Distance of 100 feet is required between supply wells and animal enclosures in the production area.
 - b. Distance of 100 feet, or other control structures (such as housing, berming, grading), is required for the protection of existing wells or new wells installed in the cropland.
2. If a county or local agency adopts more stringent setback standards than that adopted by the DWR, then these local standards shall carry precedence over the DWR Well Standards, and the Discharger must comply with the more stringent standards.
3. Manure and process wastewater must not be applied closer than 100 feet to open tile line intake structures, sinkholes, agricultural or domestic well heads, or other conduits to surface waters, unless a 35-foot wide vegetated buffer or physical barrier is substituted for the 100-foot setback or alternative conservation practices or field-

specific conditions will provide pollutant reductions equivalent or better than the reductions achieved by the 100-foot setback and is accepted by Water Board staff.

4. Waste discharges from new CAFs must not occur within 1.5 miles of the Mojave River. For any other surface water body, a new CAF must be located either 1,000 feet away from the stream banks of a surface water body or outside the 100-year floodplain of any river or stream, whichever is furthest away from the stream banks. This requirement does not apply to existing or expanding CAFs.

IV. REQUIREMENTS FOR FACILITY AREAS

A. Production Areas

1. All CAFs generating wash water must collect, transfer, and store wash water in lined impoundments for use on cropland at agronomic rates or for evaporation, and properly dispose of wash water in accordance with the General Order.
2. For dairy operations, wet wells must be planned and designed to have adequate storage capacity to handle inflow of wash water from the milking barns without being overtopped. Plan must include backup pump and generator that will be used in case of power failure or pump failure. Wet wells must be constructed by impervious material such as cement.
3. All precipitation and surface drainage outside of manured areas, including that collected from roofed areas, and runoff from tributary areas during the storm events must be diverted away from manured areas (CCR, title 27, section 22562 [b]).
4. All milk rooms and milk barns must be floored with concrete or other low permeability suitable material and be properly drained (CCR, title 3, sections 648[c] & 649[a]).
5. All drainage contacting wash water must be directed to the lined wash water impoundments.
6. Corrals and other manured outdoor access areas must be graded to ensure positive drainage of wastewater to the shortest side of the corrals and access area (CCR, title 3, section 646.1).
7. There must be no ponding in the corrals or outdoor access areas, and diversion runoff must go to the storm water impoundments.
8. New corrals must be appropriately compacted to minimize percolation of nitrate and salts into the soil below the hard pack and must have at least 2% slopes to drain storm water runoff toward nearest storm water impoundments.

9. The Discharger must prevent animals at a CAF from entering any surface water within the confined area (CCR, title 27, section 22561).

B. Feeding, Storage, and Distribution Areas

1. Feeding areas inside the corrals must be paved with concrete or similar impervious materials to prevent urine and liquid manure from penetrating into the ground. The concrete pad must be sloped toward the outside of the corrals and must be at least 10-feet wide (CCR, title 3, section 646.1).
2. The outdoor confinement feed storage area(s) must be designed and maintained to convey all water that has contacted animal wastes or feed to a wastewater storage facility, to minimize standing water within 72 hours after the last rainfall event, and to minimize the infiltration of water into the underlying soils.

C. Manure Areas

1. Manured and manure stockpile areas must be managed to minimize infiltration of water into underlying soils (CCR, title 27, section 22564).
2. Offsite storm water flows must be diverted away from manure areas.
3. Outdoor confinement manure areas must be designed and maintained to convey all water that has contacted animal wastes or feed to flow to storm water or wastewater impoundments, to minimize standing water within 72 hours after the last rainfall event, and to minimize the infiltration of water into the underlying soils and groundwater.
4. Manure must not, at any time, remain in a corral or outdoor areas at a depth greater than four inches.

V. WASTE IMPOUNDMENT STRUCTURES (IMPOUNDMENTS)

A. General Requirements

1. Prior to construction of new impoundments, the Discharger must submit design and construction plans and schedule proposals to Water Board staff for review and acceptance.
2. For existing CAFs, lined wash water impoundments must be constructed within 5 years of the issuance of the General Order. Impoundments at new or expanded CAFs must be lined and in-place prior to generating any wash water.
3. Within 60 days of completing an impoundment, the Discharger must submit an as-built construction report to the Water Board in

accordance with Attachment B, MRP, section II.D, Table B-1 Impoundment Construction Report.

4. Erosion controls must be implemented to ensure that small coves and irregularities are not created around the perimeter of a wastewater impoundment surface.
5. Side slopes of impoundments must have slopes of 2:1 or better.
6. Burrowing animals active in areas that may compromise the integrity of impoundment berms must be promptly controlled and repairs to the berms completed as soon as possible.
7. Waste impoundment structures must have the capacity to accommodate:
 - a. All influent waste (e.g., wash water, contaminated storm water, liquid manure) generated during the storage period,
 - b. Design seasonal precipitation,
 - c. Ancillary inflow/infiltration (I/I), and
 - d. Wind driven waves.

B. Vector Control

1. Dead algae, vegetation, and debris must be removed from impoundment surfaces.
2. Impoundments must be managed and maintained to prevent breeding of mosquitoes and other vectors.
3. Weeds must be minimized through control of water depth, a shoreline synthetic liner, harvesting, or herbicides.
4. The Discharger must coordinate with a local mosquito abatement or vector control district to supplement the measures described above in cases where other methods are infeasible.

C. Freeboard

1. Impoundments must have a marker that clearly indicates the depth of water in the impoundment and freeboard remaining.
2. Freeboard must be measured vertically from the lowest elevation of the impoundment berm to the impoundment water surface.
3. Freeboard must always be maintained in impoundments to provide adequate storage capacity and prevent wastewater spills.
4. If freeboard is less than two feet, the Discharger must immediately implement a contingency plan to prevent spills.
5. Design seasonal precipitation capacity must be maintained as the depth(s) equivalent to the combined 25-year, 24-hour storm runoff

volume captured by the impoundment(s) and two feet of freeboard in the impoundment(s).

D. Lined Wash Water and Storm Water Impoundments

1. Wash water impoundment structures must be designed by a California registered civil engineer or NCRS engineer.
2. Lined wash water impoundments (i.e., evaporation or storage impoundments) must attain one of the following criteria:
 - a. Be designed, constructed, operated, and maintained to meet a hydraulic conductivity of 1.0×10^{-6} centimeters per second or less,
 - b. Meet the equivalent requirements of NRCS conservation practice standard 313.
 - c. Meet the equivalent requirements in CCR, title 27, section 20330.
3. For equivalent design proposals, in lieu of (or as an engineered alternative to) the prescriptive standards of CCR, title 27, sections 20330, technical justifications demonstrating that the engineered alternative design is protective of groundwater quality must be provided to the Executive Officer for approval prior to installation.
4. Evaporation impoundments design must consider the accumulation of solids deposits between cleanup periods.
5. All visible portions of impoundment liners must be inspected at least weekly to ensure liner integrity and inspections documented in maintenance logs.
6. Storm water retention impoundment design and construction plans must be prepared by a California registered civil engineer, NCRS engineer, QSD, or QSP.
7. Storm water retention impoundments must be lined with a minimum of 10% clay and no more than 10% gravel (CCR, title 27, section 22562[d]).
8. Impoundment design reports must be prepared by, or under the direct supervision of, and certified by, a registered Civil Engineer pursuant to California law or other person permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work.
9. To ensure proper installation and performance of waste storage impoundments, a construction Quality Assurance and Quality Control (QA/QC) plan must be included as described in the United

States Environmental Protection Agency (USEPA) technical guidance document "Quality Assurance and Quality Control at Waste Containment Facilities," EPA/600/R-93/182 ([Document Display | NEPIS | US EPA](#))

10. Storm water retention impoundments must be placed and constructed near the corrals to capture runoff from corrals and outdoor access areas without backing any wastewater into the corrals.
11. Within 60 days of completing construction for all lined waste storage impoundments, a final Lined Impoundment As-Built Construction Report must be provided to the Water Board, as specified in Attachment B, MRP, section IV. Lined Impoundments. Wash water must not be placed into impoundment until Water Board staff notifies the Discharger in writing that the As-Built Construction Report is acceptable. The As-Built Construction Report must include: (1) verification that the impoundment meets the requirements of the General Order; (2) certification that the impoundment was constructed as designed; and (3) as-built plans for each impoundment constructed.

E. Existing, Unlined Waste Storage Impoundments

1. Existing CAFs enrolled in the General Order with unlined waste storage impoundments must decommission unlined impoundments or reconstruct the impoundments with a liner in accordance with the requirements contained in the MRP, Section V.A and must be constructed within 5 years of the issuance of the General Order.
2. An existing unlined impoundment removal work plan must be submitted to Water Board staff for review and acceptance 30 days prior to construction completion of a new lined impoundment. Discharge to existing unlined impoundments must be stopped and the unlined impoundment allowed to dry before any grading commences. The removal work plan must include restoration of the area of the current impoundments, including cleaning the impoundments of wash water and accumulated manure deposits and grading the impoundments back to pre-impoundment contour lines to promote runoff, prevent ponding, and minimize percolation. The annual report must contain details regarding any decommissioned impoundment work and include photographs of activities conducted before, during, and after removal.
3. After completion of construction of a new lined wash water impoundment or completion of alternative wash water management infrastructure, the Discharger must cease discharge to any unlined wash water impoundments.

VI. LAND APPLICATION AREA SPECIFICATIONS

A. Application Rates

1. Application of manure and wastewater to disposal fields or crop lands must be at rates which are reasonable for the crop, soil, climate, special local situations, management system, and type of manure (CCR, title 27, section 22563[a]).
2. Discharges of facility wastewater to disposal fields must not result in surface runoff from disposal fields and must be managed to minimize percolation to groundwater (CCR, title 27, section 22563[b]).
3. Land application of all waste to areas under a Discharger's control must be consistent with the technical standards in the NMP, as specified in Attachment B, MRP and the other application rate requirements in this section.
4. Wastewater, after mixing with irrigation water, must not exceed 1,000 milligram per liter of TDS at the point of discharge to cropland or pastureland.
5. To reduce receiving groundwater degradation from TDS, dry manure must not be applied at a rate greater than 2.5 tons per acre per year. If a Discharger applies more than 2.5 tons per acre per year of dry manure, the Discharger must submit a report to Water Board staff's review and acceptance from a certified agronomist or certified crop advisor to justify the higher application rate.

B. Precipitation and Wind

1. Wash water and wastewater must not be applied to a land application area within 24 hours of forecasted precipitation with a greater than 50-percent probability of occurring, during precipitation events, or when the soil is saturated.
2. Wastewater must not runoff from a land application area, and the area must be managed to minimize percolation to groundwater (CCR, title 27, section 22563 [b]).
3. Spray irrigation with treated wastewater is prohibited when wind speed (including gusts) exceeds 30 miles per hour. Wind speed may be measured onsite or at a nearby weather station operated by a governmental organization.

C. Mosquitoes

1. Land application areas must have no standing water 48 hours after application of wastewater.

2. Corrals must be maintained and leveled such that rainfall runoff be directed to a nearest storm water impoundment, and there shall be no standing water after 72 hours of a rainfall event in the corrals.
3. Tailwater ditches must be maintained essentially free of emergent, marginal, or floating vegetation.
4. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes must not be used to store wastewater.
5. The Discharger must coordinate with the local mosquito abatement or vector control district to supplement the measures described in this General Order, Section V, Vector Control, paragraphs B.2 and, B.4 when those methods are infeasible.

VII. REPORTING FACILITY CHANGES

A. Material Changes

Pursuant to CWC, section 13260(c), any proposed material changes in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, requires submittal of an updated NOI and Nutrient Management Plan (NMP). The Discharger must submit the updated NOI and NMP to the Water Board at least 170 days prior to making any material change. Material changes include, but are not limited to, any of the following:

1. Increase in area or depth used for waste disposal beyond that allowed in the NOA.
2. Significant change in disposal method, location, or volume (e.g., change from irrigation disposal to percolation inside an impoundment; this Board Order does not allow subsurface disposal).
3. Change in herd size of more than 15% from the number of head allowed in the NOA.

B. Transfer of Ownership

1. In the event of any change in control or ownership of the facility or wastewater disposal areas, the Discharger must notify the succeeding owner or operator of the existence of the General Order by letter at least 30 days in advance of such change, a copy of which must be immediately forwarded to the Executive Officer.
2. The General Order is not transferable to any person except after notice to the Lahontan Water Board. The Discharger must submit to the Water Board a notice in writing at least 30 days in advance of any changes in facility operation, including site operator, billing contact, facility owner, and landowner. The notice must include a copy of the written agreement between the existing and new owner containing a specific date for the transfer of this General Order's

responsibility and coverage between the current Discharger and the new owner. The Lahontan Water Board may require modification or revocation and reissuance of the NOA to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWC.

3. The succeeding owner or operator is not authorized to discharge under the General Order and is subject to enforcement until written approval of the coverage transfer (Board Order Transfer form) is received from the Executive Officer.

C. Termination and Closure

1. Dischargers who want to terminate coverage under the General Order must consult with Water Board staff as soon as possible. A Notice of Termination (NOT) letter must also be submitted 30 days in advance of CAF closure on either a temporary or permanent basis to the Water Board. Prior to termination, Water Board staff may inspect the CAF and request additional site-specific closure requirements.
2. Termination will not be granted until all discharges have ceased, and all waste removed (e.g., manure, wash water), or coverage has been obtained under other WDRs. Prior to termination, the Discharger must remove and properly dispose of waste in a manner that does not pose a threat to surface water or groundwater quality or create a condition of nuisance.
3. Prior to termination or closure, wash water and storm water impoundments must be cleaned after all water in the impoundment(s) has evaporated, manure removed, liners removed and properly disposed, and these areas graded back to the adjacent land topography elevation to prevent standing water during rainfall events.
4. Prior to termination and closure, all manure (packed or unpacked) must be removed from the corrals, animal housing areas, and CAF sites and the CAF must be graded back to pre-cleaned contour lines to eliminate water ponding in corrals and other affected areas.
5. After consulting with Water Board staff, agricultural wells, supply wells, and groundwater monitoring wells must be managed according to [DWR's California Well Standards Bulletin 74-81 \(December 1981\) and Supplemental Bulletin 74-90 \(June 1991\)](#). If wells will not be used in the future, they must be destroyed. If wells will be used in the future, then the well must be maintained in an inactive status, as required by DWR California Well Standards to prevent water quality impairment, have a closed well casing with secured cover, be marked and easily visible, and the surrounding area kept clear of brush, debris, and waste materials.

- 6. The Discharger must continue to pay the required annual fee until closure or termination approval is received from the Water Board.
- 7. Prior to termination or closure, soil sampling must be completed at representative locations (approved by Water Board staff) within the corrals, housing areas, outdoor access areas, and below the wash water impoundments. Samples should be taken at one-foot intervals for the first five feet below ground surface and every five feet thereafter, until sampling reaches the water table, or 25 feet below ground surface, whichever comes first, or as requested by Water Board staff. Sampling is required to show that residual material left in place will not cause water quality degradation.

Soil samples must be analyzed for the leachable fraction of TDS and total nitrogen. Analyses must be performed on samples prepared using the Waste Extraction Test methodology as required in CCR, title 22, section 66261.24(a)(2), Appendix II, except de-ionized water must be substituted for the citric acid buffer. Laboratory certificates of analysis (data reports) must be provided to the Water Board in a final self-monitoring report that must be submitted and accepted by Water Board staff prior to termination of coverage.

- 8. Upon approval of termination by the Water Board, a termination letter will be sent to the Discharger.

VIII. GENERAL PROVISIONS

The following General Provisions apply to the facilities listed in this section.

- A. Each of the following individual WDRs presented in Table 3 are hereby rescinded upon issuance of an NOA enrolling the corresponding facility in the General Order.

Table 3: Rescinded Orders

Facility	Individual Order No.
A & H Dairy	R6V-2002-022
B & E Dairy	6-96-9
Dutch Dairy	6-95-002

- B. The following existing and active CAFs presented in Table 4 are hereby scheduled for enrollment under the General Order upon issuance of an NOA. These CAFs must file an NOI by July 25, 2023, which is 90 days after order adoption. Any CAFs closed as of order adoption date do not need to enroll. All new facilities must file an NOI. Active facilities are those facilities that have cows or cattle on them at or after the date of adoption of the General Order.

Table 4: Active Facilities

Facility	WDID Number
Alamo Mocho Ranch	6B361105003
B & E Dairy	6B368010002
Dutch Dairy	6B368010001
Green Valley Farm GREEN VALLEY/CHAROLAIS RANCH	6B361105006
Harmsen Dairy	6B361105005
High Desert Dairy	6B191105004

- C. The CAFs presented in Table 5 are inactive facilities and do not have any animals in their facilities. Of these, only A & H Dairy is regulated by an individual WDR; the rest of the facilities are unregulated. Water Board staff recommend that prior to final closure, inactive facilities should follow the termination and closure requirements of this General Order.

Table 5: Inactive Facilities

Facility	WDID Number
DVD Heifer Ranch (former Desert View dairy and Ryken Heifer Ranch)	6B360409002
Former DVD Heifer Ranch	6B361105002
A & H Dairy	R6V-2002-022
Hinkley Dairy	6B360502003
Newberry Dairy	6B361105009

IX. STANDARD PROVISIONS

- A. Enforcement: The Lahontan Water Board may initiate enforcement action against a Discharger should the discharge of waste be in a manner that creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in the CWC, section 13050.
- B. Duty to Comply: The Discharger must comply with all conditions and requirements of this General Order, the NOA, and MRP, and implement the measures identified in the MRP as approved by the Executive Officer in the NOA. Any noncompliance with this General Order or MRP constitutes a violation of the CWC and is grounds for 1) enforcement action; 2) termination, revocation and reissuance, or modification of this General Order; or 3) denial of the NOI in application for new or revised WDRs.

- C. Other Regulatory Requirements: Obtaining coverage under this General Order does not alleviate the Discharger of the responsibility to obtain all other applicable local, state, and federal permits to construct and operate systems and facilities necessary for compliance with this General Order; nor does this General Order prevents imposition of additional standards, requirements, or conditions by any other regulatory agency.
- D. Entry and Inspection: The Discharger must allow representatives of the Lahontan Water Board and/or the State Water Board, upon presentation of credentials or other documents as may be required by law to:
1. Enter the Discharger's premises where wastes are treated, stored, or disposed of, and where records must be kept under the conditions of this General Order.
 2. Have physical access to and copy, at reasonable times, any records relating to the discharge or relating to compliance with this General Order.
 3. Inspect, at reasonable hours, monitoring and control equipment, practices, operations, or records required by this General Order.
 4. Sample or monitor discharges, photograph, and/or video record any discharge, waste material, waste treatment system, or monitoring device for the purposes of assuring compliance with this General Order or as otherwise authorized by the CWC.
- E. Property Rights: The General Order does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations, nor create a vested right for the Discharger to continue a waste discharge.
- F. Public Access: General public access must be effectively excluded from the waste management system.
- G. Civil Monetary Remedies: The CWC provides that any person who intentionally or negligently violates WDRs issued, reissued, or amended by the Lahontan Water Board must be liable civilly in accordance with CWC, section 13350 (d), (e), or (f).
- H. Penalties for Investigation, Monitoring, or Inspection Violations: The CWC provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this General Order or the NOA, or falsifying any information provided in the monitoring reports is guilty of a misdemeanor and is subject to a civil liability in accordance with CWC, section 13268.
- I. Endangerment of Health and Environment: The Discharger must report any noncompliance that may endanger health or the environment. Any such

information must be provided orally to the Lahontan Water Board within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Lahontan Water Board, or authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

- J. Corrective Action: The Discharger must take all reasonable steps to minimize or prevent any adverse impact on the environment resulting from noncompliance with this General Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
- K. Proper Operation and Maintenance: The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the General Order. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the General Order.
- L. Hazardous Releases: Any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State or on land, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State must immediately notify the local health officer or the director of environmental health in accordance with California Health and Safety Code, section 5411.5 and the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with section 8574.4) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the Lahontan Water Board of the discharge as soon as (a) the person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures.
- M. Petroleum Releases: Any person who, without regard to intent or negligence, causes or permits any oil petroleum product to be discharged in or on any waters of the State or on land, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, must, as or on land, must immediately notify the local health officer or the director of environmental health in accordance with California Health and Safety Code, section 5411.5 and the Office of Emergency Services of the discharge in accordance with the spill reporting provisions of the State toxic

disaster contingency plan adopted pursuant to Article 3.7 (commencing with section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the Lahontan Water Board of the discharge as soon as (a) the person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures.

- N. Authority of the Executive Officer: the Executive Officer is delegated the authority to:
1. Prescribe a site-specific MRP program for each authorized Discharger and to require the Discharger to submit technical reports associated with CAFs pursuant to CWC, section 13267.
 2. Determine that CAF discharges are better regulated under individual WDRs.
 3. Revoke coverage under this General Order at any time upon giving written notice to the Discharger.
- O. Order Revision: Coverage under this General Order may be modified, revoked and reissued, or terminated for cause including, but not limited to the following:
1. Violation of any of the terms or conditions in this General Order.
 2. Obtaining coverage under the General Order by misrepresentation or failure to disclose fully all relevant facts.
 3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
 4. Determination by the Executive Officer that CAF discharges are better regulated under individual WDRs.
- P. Incomplete Reports: Where the Discharger becomes aware that it failed to submit any relevant facts in an NOI or submitted incorrect information in an NOI or in any report to the Lahontan Water Board, it must promptly submit such facts or information.
- Q. Report Declaration: All applications, reports, or information submitted to the Lahontan Water Board must be signed and certified as follows:
1. The NOI must be signed and stamped by either a principal Executive Officer, a California-licensed Professional Engineer (Civil) or Professional Geologist.
 2. All other reports required by this General Order and other information required by the Lahontan Water Board must be signed by a person designated in paragraph 1 of this provision, or by a duly

authorized representative of that person. An individual is a duly authorized representative only if all of the following are true:

- i. The authorization is made in writing by a person described in paragraph 1 of this provision;
 - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity; and,
 - iii. The written authorization is submitted to the Lahontan Water Board.
3. Any person signing a document under this section must make the following certification:

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

- R. General Reporting Requirement: The Discharger must furnish to the Lahontan Water Board, within a reasonable time, any information that the Water Board may request to determine whether cause exists for modifying, revoking, reissuing, or terminating this General Order. The Discharger must also furnish to the Water Board, upon request, copies of records required to be kept by this General Order.
- S. Electronic Reporting Requirements: Pursuant to CCR, title 23, section 3893, all technical reports, laboratory analytical results (soil, soil vapor, groundwater, influent and effluent), groundwater monitoring well and injection well survey data, site maps, groundwater monitoring and injection well construction logs, boring logs, and depth to groundwater must be uploaded electronically over the internet to the State Water Board’s GeoTracker website.
- T. Severability: Provisions of this General Order are severable. If any provision of the requirements is found invalid, the remainder of the requirements must not be affected.

XI. CERTIFICATION

I, Michael R. Plaziak, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a General Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on April 26, 2023.

MICHAEL R. PLAZIAK, P.G.
EXECUTIVE OFFICER

Attachments: Attachment A: Notice of Intent
Attachment B: Monitoring and Reporting Program
Attachment C: Definitions
Attachment D: Acronyms and Abbreviations
Attachment E: Nutrient Management Plan

**California Regional Water Quality Control Board
Lahontan Region
NOTICE OF INTENT
Attachment A**

TO COMPLY WITH THE TERMS OF
ORDER NO. R6V-2023-TENTATIVE
GENERAL ORDER FOR DAIRY AND OTHER CONFINED ANIMAL FACILITIES (CAFs)

(PLEASE ATTACH ADDITIONAL PAGES IF NECESSARY)

SECTION I. FACILITY OWNER INFORMATION

A. Facility Owner Name:		Contact E-mail:	
Mailing Address:			
City:	State:		
Contact Person:		Contact Phone:	
B. Additional Facility Owners:		Contact E-mail:	
Mailing Address:			
City:	State:		
Contact Person:		Contact Phone:	

SECTION II. FACILITY/OPERATOR INFORMATION

A. Facility Name:		Contact E-mail:	
Mailing Address:			
City:	State:		
Contact Person:		Contact Phone:	
B. Facility Operator Name:		Contact E-mail:	
Operator Address:			
City:	State:		
C. Facility Location:		All Assessor's Parcel Numbers:	
Latitude:	Longitude:		

Legal Description (Section, Township, Range, Tier, Baseline & Meridian):				
Currently Owned:				
Currently Leased:				
D. Landowner Name:		Contact E-mail:		
Address:				
City:	State:	Zip Code:		
Contact Person:		Phone:		
<p>E. Maximum Size of Herd for Dairies and Heifer Ranches:</p> <p>Maximum design capacity of facility: _____</p> <p>Maximum # of dairy cows (milking): _____</p> <p>Maximum # of dairy cows (dry): _____</p> <p>Maximum # of dairy heifer: _____</p> <p>Maximum # of dairy calves: _____</p> <p>Maximum # of dairy beef (finishing): _____</p>				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>F. Facility Information:</p> <p>Total Acreage: _____</p> <p>Design capacity of CAF: _____</p> <p>Number of Barns: _____</p> <p>Number of Corrals: _____</p> <p>Number of indoor animal housing structures: _____</p> <p>Number of outdoor animal access areas: _____</p> <p>Number of Crop Fields: _____</p> <p>Number of Feeding Storage Areas: _____</p> <p>Number of Supply Wells: _____</p> <p>Number of Monitoring Wells: _____</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Number of Lined Ponds: _____</p> <p>Storage capacity of Line Ponds: _____</p> <p>Number of Stormwater Ponds: _____</p> <p>Storage capacity of Stormwater Ponds: _____</p> <p>Please include facility map including above features.</p> <p>Nutrient Management Plan: Yes _____ No: _____</p> <p>If yes, date of completion: _____</p> <p><i>Include a site map showing all CAF components, including waste generation, waste storage, and waste disposal areas.</i></p> </td> </tr> </table>			<p>F. Facility Information:</p> <p>Total Acreage: _____</p> <p>Design capacity of CAF: _____</p> <p>Number of Barns: _____</p> <p>Number of Corrals: _____</p> <p>Number of indoor animal housing structures: _____</p> <p>Number of outdoor animal access areas: _____</p> <p>Number of Crop Fields: _____</p> <p>Number of Feeding Storage Areas: _____</p> <p>Number of Supply Wells: _____</p> <p>Number of Monitoring Wells: _____</p>	<p>Number of Lined Ponds: _____</p> <p>Storage capacity of Line Ponds: _____</p> <p>Number of Stormwater Ponds: _____</p> <p>Storage capacity of Stormwater Ponds: _____</p> <p>Please include facility map including above features.</p> <p>Nutrient Management Plan: Yes _____ No: _____</p> <p>If yes, date of completion: _____</p> <p><i>Include a site map showing all CAF components, including waste generation, waste storage, and waste disposal areas.</i></p>
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SECTION III. RECEIVING WATER INFORMATION

<p>What watershed and sub-watershed is the facility located in?</p> <p>Is the facility more than 1,000 feet away from any stream bank?</p>

SECTION IV. BILLING ADDRESS

Name:		Contact E-mail:	
Address:			
City:	State:	Zip Code:	
Contact Person:		Phone:	

SECTION V FACILITY OPERATION

A. FACILITY / OPERATION MANAGEMENT (check if true)

[] All prohibitions in the General Order will be complied with while this facility is covered under the General Order.

[] Manure ponds and manure containment facilities will be managed in accordance with the General Order.

[] All non-manure wastes such as silage, leachate, dead animals, waste milk, veterinary medical waste, spoiled feed, bedding, etc., will be contained and managed in accordance with the General Order.

[] All other requirements of the General Order will be followed.

B. Is your CAF California Dairy Quality Assurance Program (CDQAP) certified? Yes / No _____

If yes, please enclose a copy of certification. Facilities that are certified under CDQAP will receive a 50 percent annual fee reduction.

SECTION VI. ADDITIONAL INFORMATION

Additional information may be required to complete this application. All information and correspondence should be sent to Lahontan@waterboards.ca.gov.

Remember to include a check for the first annual fee, as determined by CCR Title 23 Division 3 Chapter 9 Article 1 Section 2200, with your filing. Checks should be made payable to: State Water Resources Control Board. Checks should be mailed to: Lahontan Water Board, 15095 Amargosa Rd., Building 2, Suite 210, Victorville, CA 92394.

SECTION VII. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the GWDR, including the implementation of a Monitoring and Reporting Program, will be complied with."

Printed Name: _____

Signature: _____

Title: _____ Date: _____

SECTION VIII. INTERNAL USE ONLY

WDID:	CIWQS Place ID:	GeoTracker ID:
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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

BOARD ORDER NO. R6V-2023-TENTATIVE

**GENERAL WASTE DISCHARGE REQUIREMENTS
FOR DAIRIES AND OTHER CONFINED CATTLE FACILITIES**

ATTACHMENT B: MONITORING AND REPORTING PROGRAM

This Monitoring and Reporting Program (MRP) requires regular monitoring, sampling, record-keeping, and reporting for Confined Animal Facilities (CAFs), required by General Order No. R6V-2023-Proposed (General Order). Monitoring requirements include monitoring of discharges of manure, wash water, storm water from the production areas, land application areas, soil, and groundwater. Monitoring requirements also include analyses of plant tissue samples from crops grown with wastewater generated from a CAF, and monitoring of nutrients applied to and removed from land application areas in order for a Discharger to develop and implement a Nutrient Management Plan (NMP) that will minimize leaching of nutrients below the crop root zone and, therefore, into groundwater. The NMP requirements are provided in Attachment E of the General Order.

Pursuant to CWC, section 13267, the General Order requires technical and monitoring reports to verify regulatory compliance. Monitoring and reporting is conducted to ensure that a CAF is in compliance with the General Order, that the discharges of waste are effectively controlled by best management practices (BMPs) implemented at a CAF and are protective of water quality, and that the beneficial uses of the groundwater and surface water are not adversely affected by discharges from a CAF. As such, the burden, including costs, of required reports bears a reasonable relationship to the need for that information and the benefits to be obtained from that information.

I. GENERAL REQUIREMENTS

A. Compliance with the MRP

The Discharger must comply with the monitoring and reporting requirements.

B. MRP Modification and Effective Date

This MRP may be modified at the discretion of the Water Board's Executive Officer. Further, if after Water Board staff conduct an inspection of a CAF and find that BMPs or planned BMPs are deficient, the Executive Officer may specify additional monitoring requirements or BMPs in the NOA. This MRP, and any subsequent modification, is effective on the date it is signed by the Executive Officer.

C. MRP General Provisions

The Discharger must comply with the *General Provisions for Monitoring and Reporting*, dated September 1, 1994, which is made part of this MRP as Attachment 1.

D. GeoTracker Database and Electronic Submittals

Pursuant to CCR, title 23, section 3890, the Discharger must submit reports, including soil and water data, prepared for the purpose of subsurface investigation or remediation of a discharge of waste to land electronically over the internet to the State Water Resources Control Board's GeoTracker system. This requirement is in addition to, and not superseded by, any other applicable reporting requirement. The Discharger must provide all reports to the Lahontan Water Board, as specified in this MRP, and upload the full report into GeoTracker, as stipulated by CCR, title 23. The Discharger is responsible for setting up an account for uploading reports and data to the State Water Board's [GeoTracker database](#).²

1. The Discharger must provide electronic submittals of required reports, correspondence, letters, maps, charts, tables, and graphs, etc., as searchable portable document format (PDF) via upload to the GeoTracker database.
2. All EDF data related to groundwater monitoring wells and supply wells must be uploaded to the GeoTracker database. The GeoTracker Global Identification number is assigned to each CAF and may be accessed at <http://geotracker.waterboards.ca.gov>.
3. Any sample collection location must be identified in the database as a non-surveyed or surveyed (for groundwater monitoring wells) field sampling point.
4. The Annual Report must include a statement that all required GeoTracker data have been uploaded. Information on how to upload data is found at the State Water Board website².
5. The following information must be uploaded to GeoTracker one-time for each existing and newly constructed wells' sampling point:
 - a. Boring Logs and Well Screen Intervals: For existing groundwater monitoring wells and new monitoring wells or any other type of wells sampled within a CAF site, boring logs must be prepared by an appropriate registered professional and submitted in PDF format. If a monitoring well is installed, the depth to water, total well depth, screen

² http://www.waterboards.ca.gov/ust/electronic_submittal/index.shtml

depth, and screen interval must be reported. For existing wells that will be sampled (residential wells, agricultural wells, and supply wells), any and all available well construction information must be submitted in PDF format.

- b. Locational Data: Permanent groundwater sampling locations must be surveyed by a California registered surveyor before the due date of the first Semi-annual Report. The surveyed locational information for these sampling points must be submitted using the Geo_XY and Geo_Z file.
- c. Site Map: A site map must be prepared and submitted with the Semi-annual Report and uploaded into the GEO_MAP file to display site features, well locations, barn and corral locations, impoundment locations, crop areas, feed storage areas, adjacent streets, and sampling locations for all groundwater monitoring samples.

- 6. The following data must be uploaded each time a well is sampled:
 - a. Laboratory Analyses: Analytical data (including geochemical data) for all groundwater samples that are collected as required by this MRP must be submitted in EDF format.
 - b. Depth to Water Data: All wells need to have the depth-to-water information reported in the GEO_WELL file whenever the data is collected, even if the well is not actually sampled during a sampling event.
 - c. Elevation Data: Groundwater elevation measurements (as related to the top of groundwater well casing elevation [measuring point]) must be reported as elevation relative to mean sea level and submitted as part of the GEO_Z file.

E. Sampling and Analysis Plan

Within 90 days issuance of the NOA, the Discharger must submit a written Sampling and Analysis Plan (SAP) to the Water Board for review and acceptance, including procedures for sampling and analysis of all the types of wells to be monitored pursuant to this MRP, Attachment 1, *General Provisions for Monitoring and Reporting*. Dischargers and anyone performing sampling on behalf of a Discharger must be familiar with the SAP must follow the accepted SAP unless directed otherwise by the Executive Officer. Any updates needed to the SAP must be provided to the Water Board for review and acceptance prior to implementation. The SAP must include a detailed description of procedures and techniques for the following:

- 1. Sample collection methodology, sample locations, sampling equipment, and decontamination procedures for sampling equipment.

2. Sample containers, preservatives, hold times, and shipment.
3. Analytical methods and procedures to be used.
4. Chain-of-custody forms and documentation of control of samples.
5. Quality assurance and quality control (QA/QC) methods.
6. Frequency of calibration for any onsite field equipment (e.g., pH meter, electrical conductivity meter, flow meter, etc.).
7. Measurement of static groundwater levels and total depths of wells.
8. Description of how onsite measurements and field analyses are performed.
9. Procedures for sampling and purging wells (differentiated by type of well sampled).
10. Description of the well purging method(s) to be used during each groundwater monitoring event. The recommended method is low flow purging and sampling procedures, as described by the United States Environmental Protection Agency (USEPA), to minimize drawdown when collecting samples³.

The Discharger must also keep the most recent version of the SAP at the CAF and accessible to personnel performing sampling and analyses. The SAP is subject to review during Water Board staff's compliance inspections.

F. Sampling and Analysis Methodology

All samples collected in accordance with this MRP, except for field parameters, are to be analyzed by a California state-certified laboratory using USEPA analytical methods or the most recently approved SW-846 USEPA method or other equivalent USEPA method. An alternative method may be proposed and used if acceptable to the Executive Officer.

II. GROUNDWATER MONITORING WELL INSTALLATION

A. Groundwater Monitoring Well Network

1. Within 6 months of NOA issuance, an existing facility's Discharger must submit a Groundwater Monitoring Well Network Plan (Network Plan) for Water Board staff's acceptance prior to construction of any groundwater monitoring wells. The Network Plan must identify any existing groundwater monitoring wells constructed and installed in accordance with DWR's California Well Standards, Bulletins 74-81 and 74-90 or other suitable wells meeting these same standards that can monitor the groundwater surrounding the CAF. The

³ <https://www.epa.gov/sites/production/files/2015-06/documents/EQASOP-GW001.pdf>

Network Plan must include a minimum of three groundwater monitoring wells; one well upgradient of the CAF and two wells downgradient of the primary waste discharge locations in the CAF area installed to monitor the quality of the groundwater within the CAF site, to determine the direction of groundwater flow and the groundwater gradient, and to monitor the effectiveness of pollution reduction (source) controls. Care must be taken to avoid installing monitoring wells that would be influenced by adjacent municipal, agricultural, or domestic supply wells and any septic systems. If new monitoring wells need to be installed, the Network Plan must include a work plan for groundwater monitoring well installation, construction, development, and initial sampling. The Network Plan must be certified by a California professional engineer or a California professional geologist.

A map of the CAF with the locations of the wells (monitoring network) or proposed locations for new groundwater monitoring wells (one upgradient, two downgradient of a CAF) must be included in the Network Plan. The map must also include a North arrow, legend, and applicable map scale.

2. Within two years of NOA issuance, existing facility's Discharger must complete the installation of all required groundwater monitoring wells and initial sampling of the well.
3. Groundwater monitoring wells must be constructed and operated to meet or exceed the standards stated in the California Well Standards Bulletin 74-81 (December 1981) and Supplemental Bulletin 74-90 (June 1991) adopted by the Department of Water Resources (DWR). Should any county or local agency have or adopt more stringent standards than that adopted by DWR, then those local standards must supersede the well standards of DWR, and the Discharger must comply with the more stringent standards, unless deviation is approved by the Water Board's Executive Officer.
4. Pursuant to CCR, title 27, section 20415, subdivision (e)(2), all monitoring wells and all other borings installed to satisfy the requirements of an MRP must be drilled by a licensed drilling contractor and must be logged during drilling under the direct supervision of either a California-licensed professional geologist or civil engineer with expertise in stratigraphic well logging. Such logs must be submitted to the Water Board within 90 days following completion of well installation.
5. The Network Plans submitted to the Water Board for acceptance must be signed by a California licensed professional civil engineer or professional geologist.

6. The Network Plan must include diagrams showing the proposed well construction information, including as much of the following information as is available:
 - a. Well location,
 - b. Soil lithology,
 - c. Depth to groundwater,
 - d. Size of boring,
 - e. Well casing diameter,
 - f. Well casing type,
 - g. Total depth of monitoring wells,
 - h. Screen slot size, and
 - i. Length and depth of well screens.
 7. Network Plans must include a schedule with proposed dates for completing construction activities. Water Board staff must be notified of any schedule changes to facilitate Water Board staff oversight of well installation activities.
 8. Groundwater monitoring well networks may include other types of wells (such as residential, agricultural, and supply) that were constructed in accordance with California Well Standards (DWR Bulletins 74-81 and 74-90), located near the CAF and can reasonably be expected to monitor the quality of water hydraulically upgradient or downgradient of a CAF's discharge areas, and screened across the water table at similar depths and screen lengths to meet the data requirements of the MRP. In the event that such a well qualifies to be part of the groundwater monitoring well network, the well construction details, location map, and access permission agreement from the well owner, must be submitted to the Water Board.
- B. Groundwater Monitoring Well Construction Report
1. Within 90 days of completing groundwater monitoring well construction and installation, the Discharger must submit an as-built Groundwater Monitoring Well Construction Report (Well Construction Report), including as-built well diagrams, to Water Board staff for review and acceptance.
 2. The Well Construction Report (including use of any existing qualified groundwater wells meeting the requirements detailed in MRP, Section III.A. 8 Groundwater Monitoring Well Network), must include, at minimum, the following information:

- a. Maps showing the well locations,
- b. Cross-sections and well logs with construction details,
- c. Well survey coordinate information certified by a California registered land surveyor, and
- d. The depth to and elevation above or below mean sea level of groundwater.

III. GROUNDWATER MONITORING PROGRAM

The groundwater monitoring program monitors the quality of groundwater upgradient, cross-gradient, and downgradient of a CAF through the collection of groundwater samples for laboratory analysis and field measurement of water quality parameters.

A. Depth to Groundwater

Prior to purging and sampling, the Discharger must measure and record the depth below the ground surface of the static groundwater elevation (feet below ground surface [bgs]) in all groundwater monitoring wells. The measurements must be accurate to the nearest 0.01 foot.

B. Groundwater Purging and Sampling

Prior to sampling, all groundwater monitoring wells must be purged using either standard or low-flow techniques until temperature, electrical conductivity, and pH of extracted well water have stabilized. These parameters will be considered stable when three consecutive readings have pH values within +/- 0.1 pH units, temperature values within +/- two (2) degrees Celsius, and electrical conductivity values within +/- three (3) percent.

C. Field Parameters, Monitoring Parameters and Constituents of Concern

The Discharger must monitor, at each groundwater monitoring well, all field parameters, monitoring parameters, and constituents of concern (COCs) in accordance with the frequencies listed in Tables B.4, B.5, and B.6.

D. Aquifer Characteristics

The Discharger must calculate, and illustrate on a site plan and/or aerial photograph, the following aquifer characteristics: the depth to groundwater (feet bgs) in each groundwater monitoring well; the static water level (feet above mean sea level) in each groundwater monitoring well; the slope of the groundwater gradient (feet/feet); the direction of the groundwater gradient beneath and around the CAF (degrees from true north); the velocity of groundwater flow (feet/year); and the current groundwater isocontours for that monitoring period.

E. Calibration Documentation

Annually, the Discharger must submit documentation of instrument calibration and performance checks to verify proper operation of the field monitoring equipment.

F. Initial Well Sampling for Groundwater Monitoring Wells

After a newly installed groundwater monitoring well has been developed in accordance with DWR's Bulletins 74-81 and 74-90, an initial sample of groundwater must be collected from each well and analyzed for the following constituents, at minimum: total coliform, field parameters (MRP, Table B.4), general minerals suite (MRP, Table B.5), and general metals (MRP, Table B.5). Results of the initial well sampling must be included in the first Semi-annual Report to the Water Board.

G. Groundwater Sampling Frequency

Groundwater sampling must be conducted semi-annually during the second (April to June) and fourth (October to December) quarters of a year.

IV. LINED IMPOUNDMENTS

A. Lined Impoundment Design and Installation Work Plans

1. Lined Impoundment Design and Installation Work Plans (Lined Impoundment Work Plans): For existing CAFs, lined impoundments must be completed by April 26, 2028; lined impoundments at new CAFs must be completed prior to discharge of waste.
2. At least 6 months prior to construction of a lined impoundment or reconstruction of any unlined impoundment to retrofit it with a liner, the Discharger must submit a Lined Impoundment Work Plan to the Water Board for review and acceptance for the design and installation of the lined impoundment and any related appurtenances such as detailed information on wet well sizing; specify the pump size required to pump the wash water from the wet well to the wash water impoundments; size of any piping needed to convey wash water between the corrals and wet well(s), from wet well(s) to wash water impoundments, and from wash water impoundments and/or storm water impoundments to irrigation fields. The lined impoundment designs must be prepared and signed by a California-licensed Professional Engineer (Civil). A map showing location of all appurtenances must be included with the design.
3. Criteria for Lined Impoundments: Lined impoundments (i.e., wash water or storm water impoundments for evaporation or storage of wash water or storm water) must be designed, constructed,

operated, and maintained in accordance with the requirements of the General Order, Section V. Waste Impoundment Structures.

4. Lined Impoundment Work Plans must include, but are not limited to, the following:
 - a. Appropriate siting with regard to flood and storm water controls,
 - b. Calculations demonstrating that adequate storage capacity for wash water containment will be achieved, plus two feet for freeboard,
 - c. Details on the proposed liner,
 - d. Details on the embankment side slopes,
 - e. Engineering design specifications,
 - f. Construction plans and schedules,
 - g. Liner and sub-grade construction quality controls and assurances describing testing and observations needed to document construction of the impoundments in accordance with CCR, title 27, sections 20323 and 20324, and
 - h. Operations and maintenance.
5. Liner Materials: Impoundments may be lined with clay, flexible membrane liners, or engineered alternative designs/materials in accordance with the requirements specified in the General Order, section V. Waste Impoundment Structures.
6. Impoundment design must consider the accumulation of solids deposits between cleanup periods and how clean up will be performed to ensure any liner material is not damaged.
7. The Lined Impoundment Work Plan must include a proposed construction field schedule to allow Water Board staff to observe impoundment construction activities.
8. Water Board staff must conduct final inspection of lined impoundments construction prior to any discharge into an impoundment.

B. Lined Impoundments As-Built Construction Report

Within 60 days of completing construction of lined impoundments or reconstruction of an unlined impoundment to retrofit it with a liner for a CAF, a Lined Impoundments As-Built Construction Report must be provided to the Water Board. The Lined Impoundments As-Built Construction Report must include: (1) verification that each impoundment meets the requirements of the General Order; (2) certification that the

impoundment was constructed as designed; and (3) as-built diagrams for each impoundment constructed; (4) a description of any installed modifications deviating from the plans, and (5) a quality assurance (QA/QC) report for each lined impoundment constructed.

C. Removal of Unlined Impoundments Work Plan

1. At least 30 days prior to planned removal of an existing unlined impoundment, a Removal of Unlined Impoundments Work Plan (Removal Work Plan) must be submitted to Water Board staff for review and acceptance.
2. An unlined impoundment must be allowed to dry before any removal, cleaning and grading work may commence.
3. A Removal Work Plan must include restoration of the area of the current impoundments, including cleaning the impoundments of wash water and accumulated manure deposits and grading the impoundments back to pre-impoundment contour lines to promote runoff, prevent ponding, and minimize percolation. Should fill material be required for returning the impoundment area to pre-impoundment contour lines, only clean fill dirt (not fill mixed with manure) may be used.
4. Discharge to existing unlined impoundments must be stopped once a lined impoundment is completed and approved by Water Board staff.
5. The annual report must contain a narrative description of the work related to the removal of an unlined impoundment and include photographs of activities conducted before, during, and after removal.

D. Impoundments Monitoring Program

1. Visually inspect each of the impoundment berms and exposed liners weekly to determine if there are any indication of loss of integrity. Should the inspections indicate that any unauthorized discharge has occurred, or may occur, the Discharger must notify the Water Board within 24 hours of the inspection, followed by confirmation in writing within 7 days.
2. Impoundments must have a marker that clearly indicates the depth of water in the impoundment and freeboard remaining.
3. Measure freeboard (in feet) vertically from the top of the berm surrounding the impoundment to the impoundment water surface elevation in each impoundment. The measurement must be done at a regular frequency (such as daily) to determine if sufficient freeboard exists and to provide information on the operation of the impoundment system.

4. Freeboard must always be maintained in impoundments to provide adequate storage capacity and prevent wastewater spills.
5. If freeboard is less than two feet, the Discharger must immediately implement a contingency plan to prevent spills.
6. Design seasonal precipitation capacity must be maintained as the depth(s) equivalent to the combined 25-year, 24-hour storm runoff volume captured by the impoundment(s) and two feet of freeboard in the impoundment(s).
7. If wastewater from an impoundment will be mixed with fresh groundwater for application to crops, the Discharger must visually inspect the piping and appurtenances to ensure that no spills or leaks occur from the piping to the locations where the blended water is applied to crops.
8. After appropriate lined impoundments have been installed, the Discharger must submit certification to Water Board staff that the facility has no unlined wash water impoundments and is in compliance with the requirements of the General Order, Section VI.E.

V. NUTRIENT MONITORING

The Discharger must monitor wash water, manure, and plant tissue produced at the CAF, soil in each land application area, and blended irrigation water used on each land application area for TDS prior to watering crops. This information aids in evaluating nutrient management on the individual land application areas and at the CAF on the whole. This information must be recorded, reported in the Annual Reports, and used to develop and implement the NMP. Dischargers are encouraged to collect and use additional data, as necessary, to refine and assist with nutrient management.

A. Blended Irrigation Water Applied to Crops

1. The NMP must include a detailed description of how the Discharger plans to mix wash water and/or storm water from impoundments with fresh groundwater; and how the blended water will be conveyed to the fields for crop irrigation. Description should include mixture and application methods, such as mixing wash water and/or storm water with fresh water in a concrete or lined structure before transporting to crop fields, or other methodology.
2. Record the volume of wash water and/or storm water in gallons and the volume of groundwater blended with wastewater that are applied to each cropped area from plant to harvest and include the site name or number for each land application area. The Discharger must install a flow meter or other device capable of measuring both wash water/storm water and freshwater volumes prior to application.
3. Prior to irrigating crops with wash water or storm water from impoundments that has been blended with fresh groundwater, a

sample of the blended irrigation water must be collected and analyzed by either a California certified laboratory or by properly calibrated and maintained field analytical instruments for TDS only. Provided the TDS concentration of the blended water is 1,000 mg/L or less, the blended water may be used to irrigate crops. If the blended water TDS concentration exceeds 1,000 mg/L, the Discharger may continue to add additional fresh groundwater until the TDS concentration does not equal or exceed this concentration. The blended sample analytical results or documentation of field analytical instrument readings must be reported in the Annual Report.

B. Manure

Report annually the dry weight (tons) of manure applied to each land application area and the total dry weight (tons) of manure exported offsite. The location where manure has been exported offsite must also be reported annually.

C. Plant Tissue Monitoring

At harvest, record the percent moisture and total weight (tons) of harvested plant material removed from each land application area. Laboratory analyses of a representative crop sample must be sampled and reported annually per Table B.1, as follows:

Table B.1 – Plant Tissue Monitoring

Constituent	Frequency	Method
Crop weight (tons)	Representative sample from each field at each harvest	Field Determination
Crop moisture (%)	Representative sample from each field at each harvest	Standard Methods
Nitrogen, total (expressed on a dry weight basis)	Representative sample from each field at each harvest	Standard Methods
Solids, fixed (ash)	Representative sample from each field at each harvest	Standard Methods

D. Soil Sampling

Soil sampling must be conducted in each cropped area at a minimum of one sample per ten acres of area, not to exceed 20 samples per cropped area every five years. At a minimum, one sample from each soil type

within each cropped area must be collected. The sample collection location must be recorded on a map and the soil monitoring data and map reported in the Annual Report per Table B.2:

Table B.2 – Soil Sampling

Constituent	Depth	Frequency	Method
Nitrate as nitrogen	1 and 3 feet beneath field surface	Every five (5) years	Standard Methods
Organic matter	1 foot beneath field surface	Every five (5) years	Standard Methods
Total dissolved solids	1 and 3 feet beneath field surface	Every five (5) years	Standard Methods

The first soil sampling must be conducted and submitted with the first Annual Report after the issuance of the NOA and sampled during the fourth quarter (October to December) every five years thereafter.

E. Storm Water and Offsite Discharge Monitoring

Storm water monitoring must be conducted, and the results included in the Annual Report as follows.

1. Map showing storm water impoundment locations and any sample locations.
2. Date (day), amount (inches), and duration of rainfall events producing storm water runoff into storm water impoundments. Site-specific rain gauge data may be reported provided National Weather Service standards for equipment, siting, and exposure have been followed for rain gauges.
3. Approximate volumes of storm water runoff produced (gallons) or approximate depth of water in storm water impoundments (feet) after each storm event.
4. Should storm water overtop or spill from storm water impoundments or land application areas into a surface water, provide the dates, time, and estimate of volume spilled in gallons for each event.
5. If there were no storm events for the prior year, report as such.
6. If there was any discharge from the CAF to a surface water, collect a sample upstream of the discharge, the discharge itself into the surface water, and downstream of the discharge point and analyze

the samples for fecal coliform, nitrate as nitrogen, TDS, and total Kjeldahl nitrogen at each outside discharge location using USEPA methods. A report of the spill or discharge event to a surface water must be included in the Annual Report.

V. MRP REPORTING REQUIREMENTS

A. Cover Letter and Certification

1. A cover letter transmitting the monitoring reports must accompany each report and include the following:
 - a. Name and contact information of individual who can answer questions about the report,
 - b. The monitoring and reporting program number, and
 - c. Waste discharge identification (WDID) number.
2. The cover letter must report all violations found during the reporting period, actions taken or planned to correct the violations, and prevent future violations.
3. The cover letter and any reports required by this MRP must contain the penalty of perjury statement and be signed by the Discharger or the Discharger's duly authorized representative per the General Order, Section IX., Standard Provisions, Q. Report Declaration, paragraph 3:

B. Required Submittals

Table B.1 summarizes the required submittals, as applicable.

Table B.1: Required Submittals Summary

Submittal	Due Date	Applicability
GeoTracker Database Account Setup	Create a GeoTracker account by or before first annual report due date	Applicable to all CAFs
Sampling and Analysis Plan (SAP)	SAP due 90 days after NOA issuance	Applicable to all CAFs
Groundwater Monitoring Well Network Plan	Plan due within 6 months after issuance of the NOA for existing CAFs; Plan due with NOI submission for new CAFs	Applicable to all CAFs

Submittal	Due Date	Applicability
Groundwater Monitoring Well Construction Report	Report and as-built well diagrams due within 90 days of well construction completion	Applicable to all CAFs constructing groundwater monitoring wells
Lined Impoundment Design and Installation Work Plan	For existing CAFs, lined impoundments must be completed by April 26, 2028; lined impoundments at new CAFs must be completed prior to discharge of waste. Work Plan due 6 months before impoundment construction begins for Water Board staff acceptance	Applicable to all CAFs that are constructing or reconstructing lined impoundments
Lined Impoundment As-Built Construction Report	Report for lined impoundments, including as-built drawings, due within 60 days after construction completion	Applicable to all CAFs that are constructing or reconstructing impoundments
Removal of Unlined Impoundments Work Plan	Plan due 30 days prior to construction completion of new lined impoundment. A summary of the activities conducted during the removal of unlined impoundments is due with the Annual	Applicable to existing CAFs with unlined impoundments

C. Incident Report

Within 24 hours of becoming aware of any noncompliance with the General Order the Discharger must report the occurrence to the Water Board. Life threatening emergencies must be reported by telephone to 9-1-1. Spills of hazardous substances require reporting to the California Office of Emergency Services (Cal OES) at 1-800-852-7550.

1. During non-business hours, the Discharger must leave a message on the Water Board's general telephone number listed below. The message must include the time, date, place, and nature of the noncompliance, and the name and number of the reporting person.

Victorville office: 760-241-6583

South Lake Tahoe office: 530-542-5400

2. Within two weeks of becoming aware of the incident the discharger must submit a written report to the Water Board. The report must contain a description of the noncompliance, its causes, duration, associated volumes of discharges, and the actual or anticipated time for achieving compliance. The report must include complete details of the steps that the Discharger has taken or intends to take, to prevent recurrence.

3. The Discharger must collect a sample of any discharge from the CAF to a surface water. In addition, the surface water that the discharge has entered must be sampled upstream of where the discharge enters the water and immediately downstream of the entrance point. The samples must be analyzed using USEPA methods for the following constituents at a California certified laboratory and reported to Water Board within 72 hours of laboratory results with the incident report. A report of the spill or discharge event to a surface water must also be included in the Annual Report.
 - a. Coliform, fecal
 - b. Nitrate-nitrogen
 - c. Total suspended solids
 - d. Total Kjeldahl nitrogen

D. Recurring Reports to be Filed with the Water Board

Table B.3 summarizes required report submittals, as applicable, that must be submitted on a scheduled, recurring basis.

Table B.3: Recurring Reports Summary

Submittal	Sampling and Reporting Period	Report Due Date
First Semi-annual Groundwater Monitoring Report	Second quarter (April 1 to June 30)	July 31
Second Semi-annual Groundwater Monitoring Report	Fourth quarter (October 1 – December 31)	January 30
Annual Report for the CAF	January 1 to December 31	Annual report is for the previous calendar year, due March 31

Submittal	Sampling and Reporting Period	Report Due Date
Waste Management Plan	Plan due every five years from the issuance of NOA on May 15 Plan due 90 days after any degradation found from the existing water quality concentrations	Describes management of liquid waste and nutrient disposal.

E. Semi-annual Groundwater Monitoring Reports

The First Semi-annual Groundwater Monitoring Report covers sampling that occurs during the second quarter of the calendar year, from April 1 to June 30 and the report is due by July 31 of each calendar year. The Second Semi-annual Groundwater Monitoring Report covers sampling that occurs during the fourth quarter of the calendar year, from October 1 to December 31, and the report is due by January 30 of the following calendar year. The results of the semi-annual sampling events must include, but not be limited to the following information.

1. All data collected during the applicable reporting period in accordance with the approved SAP for the groundwater monitoring network, as outlined in MRP, Section III.
2. Tabulated results of sampling and laboratory analyses for each groundwater monitoring well, including historical (last five years at minimum, as data is collected) and current reporting period data, as well as the concentration limit for each monitoring parameter and an identification of each sample that exceeds its respective concentration limit by a measurably significant amount at any given monitoring well.
3. A map and/or aerial photograph showing the well locations, impoundments, irrigated crop areas, and CAF facility.
4. Describe, calculate, and illustrate on a map and/or aerial photograph the static groundwater surface elevation (feet above mean sea level) in each groundwater monitoring well, the groundwater gradient (feet/feet) and the direction of the groundwater gradient beneath and around the CAF site, the velocity of groundwater flow (feet/year), and the current groundwater isocontours for that monitoring period.
5. Copies of all field monitoring and well sampling data sheets.
6. A letter transmitting the essential points of each report, including a discussion of any violations found since the last report was

submitted and description of actions taken or planned for correcting those violations.

- a. If the Discharger has previously submitted a detailed time schedule for correcting violations, a reference to the correspondence transmitting this schedule will suffice.
- b. If no violations have occurred since the last submittal, this must be stated in the letter of transmittal.

F. Annual Report for the CAF

The Annual Report for a CAF site must satisfy applicable requirements in the following subsections. The Discharger must monitor and report operational items, such as wash water, manure, slaughterhouse waste and disposal site, and plant tissue produced at the facility; soil data in each land application area; storm water run on and off for the facility; irrigation water usage for each land application area; and groundwater monitoring well sampling data. Monitoring must be conducted at the frequency and for the constituents specified in the following subsections.

1. General

- a. The Discharger must submit annual reports for the previous calendar year's monitoring activities, reporting period from January 1 to December 31, due by March 31 of the following year.
- b. A CAF site map must be prepared and submitted with the annual report and uploaded into the GEO_MAP file (or equivalent, if not directed to use GeoTracker) to display site features, well locations, barns and corral locations, indoor housing, slaughterhouses, impoundment locations, crop areas, feeds storage areas, adjacent streets, and sampling locations for all groundwater samples.
- c. Information on the status of facility upgrade and improvement projects. When upgrades and improvement projects occur, the Discharger must provide updated status of these projects with each submitted report.
- d. The Discharger must include a narrative description of all operation and maintenance inspections and activities completed during the reporting period.
- e. The Discharger must include a work plan (signed by a California licensed professional civil engineer) for any identified maintenance needs. The Discharger must report the following information for each maintenance project:
 - i. Name of the project,

- ii. Project description,
 - iii. Project purpose,
 - iv. Scheduled start construction date,
 - v. Scheduled end construction date,
 - vi. Scheduled attainment of operation date, and
 - vii. Reason for changes in scheduled dates from the previous report.
- f. A letter transmitting the essential points of each report, including a discussion of any violations found since the last report was submitted and description of actions taken or planned for correcting those violations.
- i. If the Discharger has previously submitted a detailed time schedule for correcting violations, a reference to the correspondence transmitting this schedule will suffice.
 - ii. If no violations have occurred since the last submittal, this must be stated in the letter of transmittal.

2. Animals

The maximum number, average number, and types of animals at the CAF (dairy lactating, dairy dry, beef (finishing), heifer, calves, during the past year, etc., must be included in each report.

3. Manure

- a. Amount of manure (tons) generated by the facility during the annual reporting period.
- b. Amount of manure (tons) applied to each land application area between seeding and harvest periods and during the annual reporting period; and a calculation of the total nitrogen and TDS applied for each scenario.
- c. Explanation of any manure discharges applied to the crop production area or to other land areas (land application areas or otherwise) when not in accordance with the facility's NMP that occurred during the annual reporting period including date, time, location, and approximate volume.
- d. Discharger must report total dry manure weight (tons) generated during the year.
- e. The amount of manure applied to each land application area (total and ton/acre/year).

- f. The amount of manure (tons) exported offsite with site name and address. If no address, please include latitude and longitude of the site.
 - g. The amount of manure (tons) retained onsite.
 - h. The Discharger must collect a representative sample of dry manure annually in October. The samples must be analyzed and reported by standard methods. The sampling must occur before the first annual report and be analyzed for percent moisture, total nitrogen, and TDS.
4. Wash Water
- a. Amount of wash water (gallons) generated by the facility during the annual reporting period.
 - b. Map showing locations of all wash water impoundments (unlined and lined) and any sample locations.
 - c. Approximate volumes of wash water produced (gallons) per day that is discharged to lined impoundments and irrigation fields.
 - d. Approximate depth of water in wash water impoundments (feet) measured once a year in December.
 - e. Volume of wash water if pumped from wash water impoundment(s) to onsite or offsite fields (gallons, date, fields).
 - f. Should wash water overtop or spill from wash water impoundments into a surface water, provide the dates, time, and estimate of volume spilled in gallons for each event.
 - g. Samples of wash water from each impoundment must be collected during the fourth quarter of every year and analyzed by either a California certified laboratory or by properly calibrated and maintained field analytical instruments. The sample collection location(s) must be stated, and the results included in the annual report:
 - i. Ammonia using standard USEPA methods,
 - ii. Electrical conductivity using field instruments,
 - iii. Nitrate using standard USEPA methods,
 - iv. pH using field instruments or standard USEPA methods,
 - v. TDS using standard USEPA methods, and

- vi. Total Kjeldahl nitrogen using standard USEPA methods.

5. Storm Water

- a. All storm water data collected and analyzed must be included in the Annual Report.
- b. Map showing storm water retention impoundments locations and any sample locations.
- c. Date (day), amount (inches), and duration of rainfall events producing storm water runoff into retention impoundments. Site-specific rain gauge data may be reported provided National Weather Service standards for equipment, siting, and exposure have been followed for rain gauges.
- d. Approximate volumes of storm water runoff produced (gallons) or approximate depth of water in storm impoundments (feet) after each storm event.
- e. Volume of storm water if pumped from storm water impoundment(s) to onsite or offsite fields (gallons pumped, date, fields where applied).
- f. Should storm water overtop or spill from storm water impoundments or land application areas into a surface water, provide the dates, time, and estimate of volume spilled storm water in gallons for each event.
- g. If there were no storm events for the prior year, report as such.

6. Soil

Soil sampling at cropped areas must be done annually after the last crop cuts in October or November. This helps to demonstrate the use of wastewater at agronomic rates (i.e., proper phytoremediation of nutrients and salts through crop irrigation). The Discharger must conduct soil sampling at depths and for the constituents as described in MRP, Table B.2 Soil Sampling

- a. The sampling must occur before the first annual report submittal and at least once every five years during the fourth quarter (October 1 to December 31).
- b. The soil samples must be collected from locations identified in the Water Board accepted site-specific NMP.
- c. At a minimum, one sample from each soil type within each cropped area must be collected.

- d. The sample collection locations must be identified, recorded and shown on a map included in the Annual Report.
 - e. In addition to any soil analyses for evaluating crop nutrient or mineral need, collect and analyze soil samples at a California certified laboratory using standard USEPA methods for the following constituents:
 - i. Nitrate-nitrogen
 - ii. Organic matter
 - iii. TDS
 - iv. Other minerals, as desired by the Discharger.
 - f. Soil samples must be analyzed for the leachable fraction of TDS and total nitrogen. Analyses must be performed on samples prepared using the Waste Extraction Test methodology, as required in the CCR, title 22, section 66261.24(a)(2), Appendix II, except de-ionized water must be substituted for the citric acid buffer. Laboratory certificates of analysis must be provided to the Water Board.
 - g. Soil moisture monitoring probes and recording sensor systems must be installed in at least one representative crop field at four representative locations at depths of three, five, and eight feet at each location. An electronic data logger must record data from each location every 4 to 6 hours. Report a graph of each depth location with the Annual Report.
7. Visual/Infrastructure Inspections and Reporting
- Visual inspections of the CAF must be conducted as described below. Results of all visual inspections must be provided in the Annual Report.
- a. The Discharger must inspect their facility quarterly for any maintenance needs, including vector mitigation features (e.g., fencing, netting).
 - b. Facility inspection, operation, and maintenance logs must be maintained at the facility. All monitoring and reporting data must be recorded in a permanent logbook.
 - c. Quarterly, and after each storm event, measurements must be taken and recorded of freeboard in holding impoundments. Freeboard is the vertical distance from the impoundment surface to the lowest elevation of the surrounding berm.

- d. Monthly, visual inspections must be conducted of cropland on which wash water or manure is applied. Any unauthorized releases from the cropland or excessive erosion, either off property or to a surface water drainage course must be recorded (including estimate of volume of material discharged).
 - e. Monthly, visually inspect the condition of the corrals and manured areas to evaluate the depth of manure and determine whether cleaning is necessary.
 - f. Prior to, during, and after anticipated storm events, visually inspect corral areas and outdoor access areas for ponding water and runoff; visually inspect each holding impoundment for storage capacity.
8. Noncompliance
- a. The Discharger must catalogue any noncompliance during the previous year, including submitted incident reports.
 - b. The Discharger must report whether any nutrients or TDS are applied at greater than the allowed rates from the General Order, sections VII.B.4 and VII.B.5.b, Application Rates, including date, location, and approximate volume.
 - c. The Discharger must report whether any groundwater sample results exceed Basin Plan water quality objectives or other public health standards.
 - d. The Discharger must report instances of adverse conditions or noncompliance found during these inspections. Noncompliance includes, but is not limited to, (1) freeboard less than two feet for impoundments, and (2) wash water releases offsite. Dates, occurrences, location, and estimated amounts of discharge must be stated in the report.
 - e. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and shall submit a timetable for correction.
 - f. Explanation of any discharges from the land application area to surface waters that occurred during the annual reporting period, including the date, time, approximate volume, location, and source of discharge (i.e., tail water, wash water, storm water, or blended process wash water); a map showing the discharge and surface water sample locations; rationale for sample locations; and method of measuring discharge flows.

- g. The approximate date, location, and the cause of the noncompliance including a description of the ultimate destination of any unauthorized discharge and the flow path of such discharge to a receiving water body.
- h. The flow rate, volume, and duration of any discharge involved in the noncompliance.
- i. The period of noncompliance, including dates; if the noncompliance has not been corrected, include the anticipated time it is expected to be corrected.
- j. A time schedule and a plan to implement corrective actions necessary to prevent the recurrence of such noncompliance.

VI. Waste Management Plan

Dischargers must prepare and implement waste management plans (WMPs), as described herein. The WMP specifies the management of waste, including disposal offsite and nutrient usage onsite. The site-specific NMP is a component of the WMP. The WMP must include the following, at minimum.

A. General

1. Within 90 days of completing any applicable improvements or construction described in the WMP, the Discharger must submit an as-built report to the Water Board. That report must include certification that the improvements were installed according to the submitted plans or a description of any installed modifications deviating from the plans.
2. Every five years, the Discharger must resubmit the WMP with evaluation of the nutrient management plan effectiveness and identification of any substantial changes in crop types, acreages, locations, or waste.
3. Within 90 days of monitoring data showing degradation in groundwater quality since the previous report, the Discharger must modify and resubmit the WMP to prevent further degradation of receiving water.

The Discharger must describe the management of liquid and dry waste through the nutrient management plan in the WMP.

B. Liquid Waste

Any CAFs generating waste in liquid form must comply with the following requirements.

1. If new construction is proposed in a Waste Management Plan, the Discharger must submit a construction plan and schedule that

includes construction details, design drawings and specifications, and operational details for any improvements or construction of:

- a. Pumps,
 - b. Flow meters,
 - c. Solids separation,
 - d. Wet well(s),
 - e. Wash water distribution pipelines to croplands,
 - f. Storage tanks,
 - g. Storage volume, and
 - h. Number of lined impoundments.
2. The Discharger must ensure the construction plan demonstrates:
 - a. No liquid waste (including wash water) is discharged to an unlined percolation impoundment
 - b. Adequate tank or lined impoundment storage capacity for wash water
 - c. Plans for routine maintenance of wash water infrastructure
 3. Methods to mix and apply wash water simultaneously with pumped groundwater at the crop agronomic rate.

C. Nutrient Management Plan

Any CAF disposing of nutrient-laden material onsite must comply with the following requirements.

1. The Discharger must record volume (gallons) of water applied, dates applied, and source of the water applied for each irrigation land application area.
2. The Discharger must sample irrigation water source (well water) for the proceeding listed constituents. The sampling must occur before the first annual report and at least once per year in November or December. These samples must be analyzed at a California certified laboratory using standard USEPA methods for nitrate as nitrogen, and TDS.
3. Total number of acres and the Assessor Parcel Numbers for each land application area that was used for application of manure or wash water during the reporting period.
4. Volume of wash water (gallons) applied to each land application area between seeding and harvest periods and during the annual reporting period; and a calculation of the total nitrogen and TDS

applied for each scenario and include the site name or number for each land application area.

5. At a location upstream of blending with any other waters (fresh or waste), samples of wash water must be collected and analyzed by either a California certified laboratory or by properly calibrated and maintained field analytical instruments. The sample collection location(s) must be stated, and the results must be collected for the following, annually in the fourth quarter (October 1 to December 31), for inclusion in the annual report:
 - a. Ammonia using standard methods,
 - b. Electrical conductivity using field instruments,
 - c. Nitrate using standard methods,
 - d. pH using field instruments,
 - e. Total dissolved solids using standard methods, and
 - f. Total Kjeldahl nitrogen using standard methods.
6. The Discharger must sample wash water after blending with irrigation groundwater or other wastewaters but prior to application. If wash water and irrigation water is not blended prior to application, then the samples must be taken from both from wash water and irrigation water and analyzed for the following constituents. The ratio of the application of wash water and irrigation water must be recorded for reporting. Samples of wash water must be collected and analyzed by either a California certified laboratory or by properly calibrated and maintained field analytical instruments. The sample collection location(s) must be stated, and the results must be collected for the following, annually in the fourth quarter (October 1 to December 31), for inclusion in the annual report:
 - a. Ammonia using standard methods,
 - b. Electrical conductivity using field instruments,
 - c. Nitrate using standard methods,
 - d. pH using field instruments,
 - e. Total dissolved solids using standard methods, and
 - f. Total Kjeldahl nitrogen using standard methods.
7. Plant Tissue: The Discharger must record and analyze representative sample parameters for each harvest. Analysis must be conducted at a California state-certified laboratory using standard methods for the following constituents:

- a. Crop moisture (%) by standard methods
 - b. Nitrogen, total (expressed on a dry weight basis) by standard methods.
8. Ratio of total nitrogen applied to each land application area and total nitrogen removed by crop harvest (nitrogen uptake) from each land application area during the reporting period.
 9. Total number of acres and the Assessor Parcel Numbers for each land application area under the control of the Discharger that were not used for application of manure or wash water during the reporting period.
 10. Crop weight (tons) as field determination.
 11. Include a statement in the Annual Report indicating if the NMP has been updated and whether the current version of the facility's NMP was developed or approved by a certified nutrient management specialist. If updated, a copy of the revised NMP must be submitted to the Water Board for review and acceptance prior to implementation.
 12. Tabulated analytical data for samples of manure, wash water, irrigation water, soil, and plant tissue. The data must be tabulated to clearly show sample dates, constituents analyzed, constituent concentrations, and laboratory detection limits.
 13. The Discharger must include the nutrient balancing (e.g., production, usage, monitoring) components in the NMP.
 14. The revised NMP must include plans and time schedules to implement necessary modifications to bring the discharge into compliance with the General Order.
 15. The NMP must demonstrate that a Discharger has adequate land to utilize the generated wastewater nutrients at specified crop agronomic rates or other plans to transport manure offsite.

VII. Onsite Records

The following information must be retained onsite in a permanent logbook or other record keeping system for a period of five years. Any of the following information not required in the Annual Report need not to be reported with the Annual Report but must be made available to Water Board staff during inspections and upon request by the Water Board.

- A. The Discharger must retain a copy of General Order, all attachments, and NOA.
- B. The Discharger must furnish to the Lahontan Water Board's staff upon request, copies of records required to be kept by the General Order.

- C. The Discharger must retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, record of visual observations, copies of all reports required by the General Order, and records of all data used to complete the NOI for the General Order. Records must be maintained for a minimum of 3 years from the date of the sample, measurement, report, or application. This period may be extended due to any unresolved litigation regarding this discharge or when requested by the Executive Officer.
- D. The Discharger must retain a copy of submitted Annual Reports.
- E. The Discharger must retain information related to spill incident or 24-hour non-compliance reports and a copy of the Spill Prevention and Emergency Response Plan.
- F. The Discharger must retain all information necessary to document implementation and management of the WMP.
- G. The Discharger must retain production area records, including:
 - 1. Records of the visual inspections.
 - 2. Records of the date, time, and estimated volume of any overflow or bypass of the wash water storage or conveyance structures.
 - 3. Records documenting any corrective actions taken to correct deficiencies noted because of the inspections. Records of deficiencies not corrected in 30 days and an explanation of the factors preventing immediate correction must be recorded.
 - 4. Records of monitoring activities and laboratory analyses conducted as required by the General Order.
 - 5. Records of herd mortality management and practices.
- H. The Discharger must retain the dates and locations of each field where crops are irrigated with blended wastewater and retain the following records, including:
 - 1. Expected and actual crop yields.
 - 2. Identification of crop, acreage, and dates of planting and harvesting for each field.
 - 3. Dates, locations, and approximate weight and moisture content of manure applied to each field.
 - 4. Dates, locations, and amount of manure and other nutrient applied to each field.
 - 5. Dates, locations, and test methods for soil, manure, wash water, irrigation water, and plant tissue sampling.

- I. Laboratory and field test results from manure, wash water, irrigation water, soil, plant tissue, any discharge (including tail water), and storm water sampling.
- J. Explanation of the basis for determining manure or wash water application rates.
- K. Calculations showing the total nitrogen to be applied to each field, including sources other than manure or wash water (commercial fertilizer).
- L. Total amount of nitrogen applied to each field, including documentation of calculations for the total amount applied (nutrient application calculations).
- M. The method(s) used to apply manure and/or wash water.
- N. The Discharger must retain a copy of the Discharger’s site-specific NMP.
- O. The Discharger must retain all calculations and detailed notes related to the NMP, production, land application, and other CAF operational areas.
- P. The Discharger must retain tracking manifest forms for offsite exports of manure or wash water, which includes information on the manure hauler, destination of the manure, dates hauled, amount hauled, and certification.
- Q. The Discharger must retain laboratory analytical data for all analyses of manure, wash water, irrigation water, soil, plant tissue, surface water, storm water, groundwater, and electronic data logs of soil moisture monitoring system recordings.

Table B.4 – Field Parameters for Groundwater Sampling

Parameter	Units	Sampling Frequency	Reporting Frequency
Acidity/basicity	pH units	Semi-annually	Semi-annually
Electrical conductivity (EC)	microSiemens per centimeter (µS/cm)	Semi-annually	Semi-annually
Depth to Groundwater	Feet below ground surface	Semi-annually	Semi-annually
Oxidation reduction potential	millivolts	Semi-annually	Semi-annually
Temperature	degree Fahrenheit or Celsius	Semi-annually	Semi-annually
Turbidity	NTU	Semi-annually	Semi-annually

Table B.5: List of General Minerals Series

Mineral	Units	Sampling Frequency	Reporting Frequency
Anion sum	milliequivalents per liter	Semi-annually	Semi-annually
Bicarbonate	mg/L	Semi-annually	Semi-annually
Calcium	mg/L	Semi-annually	Semi-annually
Carbonate	mg/L	Semi-annually	Semi-annually
Cation sum	milliequivalents per liter	Semi-annually	Semi-annually
Chloride	mg/L	Semi-annually	Semi-annually
Electrical conductivity	µS/cm	Semi-annually	Semi-annually
Fluoride	mg/L	Semi-annually	Semi-annually
Magnesium	mg/L	Semi-annually	Semi-annually
Nitrate as nitrogen	mg/L	Semi-annually	Semi-annually
Potassium	mg/L	Semi-annually	Semi-annually
Sodium	mg/L	Semi-annually	Semi-annually
Sulfate	mg/L	Semi-annually	Semi-annually
Total dissolved solids	mg/L	Semi-annually	Semi-annually
Total alkalinity	mg/L	Semi-annually	Semi-annually
Total Hardness	mg/L	Semi-annually	Semi-annually

Table B.6: List of Metals Series

Metal	Units	Sampling Frequency	Reporting Frequency
Aluminum	mg/L	Semi-annually	Semi-annually
Arsenic	mg/L	Semi-annually	Semi-annually
Barium	mg/L	Semi-annually	Semi-annually
Cadmium	mg/L	Semi-annually	Semi-annually
Chromium, hexavalent	mg/L	Semi-annually	Semi-annually
Chromium, total	mg/L	Semi-annually	Semi-annually

Metal	Units	Sampling Frequency	Reporting Frequency
Cobalt	mg/L	Semi-annually	Semi-annually
Copper	mg/L	Semi-annually	Semi-annually
Iron	mg/L	Semi-annually	Semi-annually
Lead	mg/L	Semi-annually	Semi-annually
Mercury	mg/L	Semi-annually	Semi-annually
Molybdenum	mg/L	Semi-annually	Semi-annually
Nickel	mg/L	Semi-annually	Semi-annually
Selenium	mg/L	Semi-annually	Semi-annually
Silver	mg/L	Semi-annually	Semi-annually
Thallium	mg/L	Semi-annually	Semi-annually
Vanadium	mg/L	Semi-annually	Semi-annually
Zinc	mg/L	Semi-annually	Semi-annually

Ordered by: _____ Dated: _____

MICHAEL R. PLAZIAK P.G.
EXECUTIVE OFFICER

Attachment 1: *General Provisions for Monitoring and Reporting*, September 1, 1994,

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. **SAMPLING AND ANALYSIS**

- a. All analyses must be performed in accordance with the current edition(s) of the following documents:
 - i. Standard Methods for the Examination of Water and Wastewater
 - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses must be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences must be reported with the sample results. The methods used must also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
- d. The Discharger must establish chain-of-custody procedures to ensure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis must be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP must be kept at the facility.
- e. The Discharger must calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements or must insure that both activities will be conducted. The calibration of any wastewater flow measuring device must be recorded and maintained in the permanent logbook described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
- g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample must be proportional to the discharge flow rate at the time of sampling. The sampling period must equal the discharge period, or 24 hours, whichever period is shorter.

2. **OPERATIONAL REQUIREMENTS**

- a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger must maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records must be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log must be maintained at the facility. All monitoring and reporting data must be recorded in a permanent logbook.

3. REPORTING

- a. For every item where the requirements are not met, the Discharger must submit a statement of the actions undertaken or proposed that will bring the discharge into full compliance with requirements at the earliest time and must submit a timetable for correction.
- b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results must be made available to the Regional Board upon request. Results must be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- c. The Discharger must provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities must be included in this summary.
- d. Monitoring reports must be signed by:
 - i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;
 - ii. In the case of a partnership, by a general partner;
 - iii. In the case of a sole proprietorship, by the proprietor; or
 - iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
- e. Monitoring reports are to include the following:
 - i. Name and telephone number of individual who can answer questions about the report.

- ii. The Monitoring and Reporting Program Number.
- iii. WDID Number.
- f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation under Section 13268 of the Water Code.

x: PROVISIONS WDRS

file: general pro mrp

DEFINITIONS

The California Water Code (CWC), section 13050(d) defines “person,” “waste,” “regional board,” “waters of the state,” and other applicable terms.

For the purposes of the General Waste Discharge Requirements for Dairy and Other Confined Cattle Facilities (Dairy/Cattle Order), the following terms are defined:

Agronomic rates refer to the land application of irrigation water and nutrients (which may include animal manure, bedding, or process wash water) at rates of application that will enhance soil productivity, limit applied nutrients to optimum plant health and growth, and limit downward leaching of water and chemicals past the root zone.

Animal unit equals 1,000 pounds weight of animal(s). Typically, a mature milk cow is equivalent to 1.4 animal units and beef cattle are each equivalent to 1 animal unit.

Assimilative capacity is the amount of degradation groundwater may accommodate without causing the concentration of any constituent to be greater than the water quality objective for that constituent.

Best management practices (BMPs) and **best practicable treatment or controls (BPTCs)** refer to the technologies, infrastructure, practices, or combination of practices used at a CAF to prevent, reduce, or mitigate the amount of pollution in surface water or groundwater.

Confined Animal Facility (CAF) is defined in California Code of Regulations (CCR), title 27, section 20164, as any place where cattle, sheep, swine, horses, mules, goats, or other domestic animals are corralled, penned, tethered, or otherwise enclosed or held and where feeding is by means other than grazing.

This Dairy and other Cattle Order (General Order) will address the following three types of CAFs:

- An **existing CAF** is a CAF that is constructed and operating as of the effective date of the General Order and which have subsequently not expanded their herd size 15% beyond the existing herd size or reported in a previous Notice of Intent (NOI), or not expanded the size of their physical facilities beyond the size existing as of the effective date of the General Order. For existing dairies and heifer ranches, existing sizes are enumerated in Attachment A.
- An **expanded CAF** includes, but is not limited to, a facility with expanded or new corrals and/or impoundments, increased herd size by more than 15% from the existing herd size or expanded production areas beyond the size existing as of the effective date of or enrollment date under the General Order.
- A **new CAF** is a CAF not yet operating as of the effective date of the General Order.

Cropland is defined as the land application area where dry or solid manure and/or wastewater is applied for the purpose of beneficially using the nutrient value of the manure and/or wastewater for crop production. This General Order regulates the discharge of liquid wash water and solid manure waste to cropland near or immediately adjacent to the CAF that is owned, leased, or controlled by the discharger.

Dairies refer to dairy cow facilities where dairy cows are housed, milked, fed, or engaged in other activities that are expected to generate waste.

Discharger refers to a person or entity discharging or proposing to discharge waste.

Existing Confined Animal Facility refers to any facility that is presently in operation and houses dairy cows, heifers, and slaughterhouse facilities.

Facility refers to the locations, within the Lahontan Region, where waste is generated or where part of the waste management system is located. This includes locations either where waste is disposed in accordance with the General Order or with the potential for incidental discharge.

Feedlot refers to CAFs that are not dairies where cattle are housed and fed for the purpose increasing their weight to breed, slaughter, or sell.

Freeboard is defined as the elevation difference between the wastewater (liquid) level in an impoundment and the lowest point of the impoundment embankment or unsealed pipe through the embankment which would allow overflow or uncontrolled release of wastewater.

Grab sample is an individual sample collected in less than 15 minutes.

Groundwater includes, but is not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

Manure is defined as the fecal and urinary excretion of animals and other commingled materials. Manure may include litter and waste feed.

Notice of Intent (NOI) refers to a notice given to the Water Board of a discharger's intent to file for regulatory coverage under the General Order. For purposes of the General Order, the NOI and accompanying Form 200 serve as a report of waste discharge (ROWD) pursuant to Water Code section 13260

Nuisance is defined in Water Code section 13050(m), 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.

Pollution is defined in the CWC, section 13050(l) as an alteration of the water quality to a degree that unreasonably affects either beneficial uses or facilities that serve those beneficial uses.

Production areas include, but are not limited to, corrals, pens, hutches, housing, outdoor access areas, manure/litter and feed storage areas, and any other areas of the CAF that may generate waste from animals or animal operations.

Qualified Storm Water Pollution Prevention Plan Developers (QSDs) prepare storm water plans.

Qualified Storm Water Pollution Prevention Plan Practitioners (QSPs) oversee plan implementation. Certification training for both QSDs and QSPs are provided by the [California Storm Water Quality Association](http://www.casqa.org)¹. The [State Water Resources Control Board Fact Sheet](http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/training/cbpelsg_fs.pdf)² describes QSD professional certification requirements.

Receiving waters are the surface waters and groundwater of the Lahontan Region (Department of Water Resources, Groundwater Basins; Basin Plan, Plates 2A and 2B).

Seasonally refers to situations when animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Storage period is the maximum time anticipated between beginning to use a site as a storage area and removal of the stored material from the site. (e.g., storing manure in a storage area to be used during crop season).

Impoundments refer to structures impounding water on the ground surface and include treatment, storage, and percolation ponds; constructed wetlands; and land application areas that eliminate runoff via an impoundment structure.

Surface waters include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

Wash water is the waste from a dairy milking barn containing liquid and solid manure from the udder cleaning activities.

¹ Link: <http://www.casqa.org>

² Link: http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/training/cbpelsg_fs.pdf

Waste is defined in CWC, section 13050 and includes, but is not limited to, manure, leachate, wash water, precipitation or rainfall runoff that contacts raw materials, products, or byproducts such as manure, compost piles, dead animals, veterinary medical waste, waste feed, silage leachate, waste milk, or bedding.

Wastewater is defined as any runoff generated from rainfall events, human-generated wastewater, and runoff generated from other activities at or within the production areas other than wash water.

Waste Management Plan describes how liquid and solid wastes (wash water, manure, etc.) will be collected, transferred, and disposed, including through application to plants as nutrients (in conjunction with any chemical fertilizers).

Waste management system means the collection system, treatment equipment, pumping stations, treatment ponds, clarifiers, manure separator, manure storage areas, storage ponds, and other systems associated with the collection, treatment, storage, and disposal of CAF wastewater.

Waste storage facility refers to a structure where wastes are housed until disposed, which can include evaporated, disposed properly offsite, or used agronomically onsite.

Attachment D
Acronyms and Abbreviations

Abbreviation	Explanation
AB	Assembly Bill
Basin Plan	<i>Water Quality Control Plan for the Lahontan Region</i>
BMPs	Best management practices
BOD	Biological Oxygen Demand
BPTCs	Best practicable treatments and controls
CARB	California Air Resources Board
CCR	California Code of Regulations
CDPH	California Department of Public Health
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH ₄	Methane
Clean Water Act	Federal Water Pollution Control Act of 1972
CO ₂	Carbon dioxide
CWC	California Water Code
DWR	Department of Water Resources
EIR	Environmental Impact Report
ESA	Environmental Species Act
CAF	Confined animal facility
gpd	gallons per day
GHG	Greenhouse gases
H ₂ S	Hydrogen sulfide
Lahontan Water Board	Lahontan Regional Water Quality Control Board
LAMP	Local Area Management Plan
LLA	Land application area
NOA	Notice of Applicability
NOI	Notice of intent (i.e., report of waste discharge)

Abbreviation	Explanation
NRCS	Natural Resource Conservation Service
OPR	Office of Planning and Research
OWTS Policy	Water Quality Control Policy for Siting, Design, and Operation and Maintenance of Onsite Wastewater Treatment Systems
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1969
RWD	Report of waste discharge (i.e., notice of intent)
RWQCB	Regional Water Quality Control Board
SB	California Senate Bill
TDS	Total dissolved solids
USFW	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDRs	Waste Discharge Requirements
WQO	Water Quality Order

ATTACHMENT E

Nutrient Management Plan

The Confined Animal Facility (CAF) General Order requires owners and operators of CAFs (Dischargers) who apply manure or wash water to land for nutrient recycling to develop and implement a Nutrient Management Plan (NMP). The purpose of the NMP is to budget and manage the nutrients applied to the land application area(s), considering all sources of nutrients, crop requirements, soil types, climate, and local conditions, in order to prevent adverse impacts to surface water and groundwater quality. The NMP must take the site-specific conditions into consideration in identifying steps that are protective of water quality and will minimize nutrient movement through surface runoff or leaching past the root zone of crops. The NMP must be updated annually, or as needed, in response to changing conditions, monitoring results, and other factors.

Nutrient Management Plan Principles

The NMP must be developed by a specialist who is certified in developing nutrient management plans. A certified specialist is a Professional Soil Scientist, Professional Agronomist, or Crop Advisor certified by the American Society of Agronomy or a Technical Service Provider certified in nutrient management in California by the Natural Resources Conservation Service (NRCS). The following steps are critical components of the NMP:

1. Wash water application should be based on the nutrient needs of the crop, the daily water uses of the crop, and the water-holding capacity of the soil. Avoid excessive wash water application when soil is saturated and there is excessive nitrate on the ground.
2. The timing of nutrient application must correspond as closely as possible with plant nutrient uptake characteristics, weather and climatic conditions, and land application area accessibility.
3. The NMP must provide detailed information showing that the growing crops will be able to use nutrients contained in wash water during the colder months of November through March. If the crops cannot use the generated wash water nutrients, the NMP must specify what measures will be taken to reduce or eliminate wash water application (e.g., by water conservation practices, herd size reduction, use of storage tanks or vessels, or construction of lined retention (evaporation) pond(s) to store wash waters during the colder months).

Nutrient Management Plan Contents

The NMP must identify the name and address of the CAF, the CAF operator, legal owner of the CAF property and must contain all of the following elements.

- I. Land Application Area Information

Provide information for each land application area (under a Discharger's control, whether it is owned, rented, or leased, to which manure or wash water from the production area is or may be applied for nutrient recycling) on a published map (topographic map or aerial photo) at an appropriate scale which includes the following information:

1. A field identification system such as Assessor's Parcel Number; land application area by name or number; total acreage of each land application area; soil type; crops grown; indication if each land application area is owned, rented, or leased by the Dischargers; indication of what type of waste is applied (solid manure only, wash water only, or both solid manure and wash water); drainage flow direction in each field; nearby surface waters; irrigation supply wells; and groundwater monitoring wells.
2. Wash water conveyance structures, pumping facilities, flow meter locations, discharge points, discharge mixing points with irrigation water supplies, drainage ditches, drainage controls structures (berms, levees, etc.), and drainage easements.
3. Type of crops grown, crop rotation schedule, and locations.
4. Identify each field that is not in the CAF area but that is under the control of the Discharger or any field utilizing wash water from the Discharger that is within the same hydrologic unit or sub-unit (consult Water Board staff or Lahontan Water Board Basin Plan) of the CAF and indicate if wash water is applied.
5. Information on who owns and/or leases the field.
6. Copies of written agreements with third parties that receive wash water or manure for their own use from the Dischargers' CAFO.
7. All potential surface waters or conduits to surface waters, and residential and agricultural wells that are within 100 feet of any land application area.

II. Nutrient Budget

The NMP must describe a nutrient budget for each land application area. The nutrient budget must establish planned rates of nutrient applications for each crop based on soil test results, manure, wash water, irrigation water analyses, and crop nutrient requirements. The Nutrient Budget must include the following information:

- a) The amount of application of manure, wash water, and other fertilizers for each crop in each land application area.
- b) The method of manure, wash water, and other fertilizers applied to each crop in each land application area.

- c) The timing of applications for each crop in each land application area and the basis for the timing.

III. Nutrient Application Rates

The NMP must describe the proposed nutrient application rates. Nitrogen application rates to each application area should not exceed 1.4 times the anticipated nitrogen removal in forage, unless specifically recommended by a certified agronomist that finds such application will be in a manner protective of groundwater.

IV. Nutrient Removal Calculations

The NMP must describe the method and information that will be used to calculate nitrogen removal. The NMP must also describe how the Annual Report calculations will be adjusted based on seasonal circumstances and yearly data. The discharger must keep records of the types of crops raised in each location; date and types of crops; number of harvests from each crop; total dry weight of each harvest in tons; and crop tissue sampling results per harvest for total nitrogen where manure or wash water is applied for each year. Nutrient management plan summary report tabulation sheet is on the page four of NMP. Any collected data must be kept for minimum of five years.

V. Risk Assessment

The NMP must describe how the agronomic application for the prior year will be assessed in the Annual Reports, including method for determining the nutrient balance for each field for the prior year, and making any adjustments in nitrogen application or crop rotations for the upcoming year.

VI. Statement and Certification

- a) The NMP must include the signature of a certified specialist and a statement certifying the preparer is qualified to make crop nutrient management recommendations and the NMP uses current best management practices. Authorized specialists include Professional Soil Scientists, Professional Agronomists, Authorized Crop Advisors certified by the American Society of Agronomy, or Technical Service Providers certified in nutrient management in California by the Natural Resources Conservation Service (NRCS).
- b) The Agronomist must certify the NMP and the Discharger or representative must certify that they will follow the certified NMP.

