STATE OF CALIFORNIA
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (951) 782-4130 | FAX (951) 781-6288www.waterboards.ca.gov/santaana

ORDER NO. R8-2018-0001
NPDES PERMIT NO. CAG018001

GENERAL WASTE DISCHARGE REQUIREMENTS FOR CONCENTRATED ANIMAL FEEDING OPERATIONS (DAIRIES AND RELATED FACILITIES) WITHIN THE SANTA ANA REGION

Dischargers described below, who have complied with the requirements for coverage under this Order, are authorized to discharge wastes once permit coverage is effective, subject to the waste discharge requirements set forth in this Order:

Dischargers	Persons discharging dairy wastes or other similar kinds of wastes from an existing dairy or related facility to waters of the United States in any manner that may affect water quality are hereinafter referred to as "Dischargers" and may obtain coverage under this Order. Persons discharging wastes from other types of animal feeding operations must obtain coverage under a separate general permit or individual waste discharge requirements. Persons discharging wastes from a proposed or newly-constructed dairy or related facility must obtain coverage under individual waste discharge requirements

This Order was adopted by the Regional Water Quality Control Board on:	December 7, 2018
This Order shall become effective on:	March 17, 2019
This Order shall expire on:	March 15, 2024

IT IS HEREBY ORDERED that this Order shall supersede Order No. R8-2013-0001 except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted thereunder, the Dischargers shall comply with the requirements in this Order.

I, Hope A. Smythe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on December 7, 2018.

Hope A. Smythe, Executive Officer

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Glossary

Attachment G

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I. FINDINGS

A. CONCENTRATED ANIMAL FEEDING OPERATIONS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

1. Section 502 of the Clean Water Act (CWA) defines concentrated animal feeding operations (CAFOs) as point source discharges. All discharges of pollutants from point sources to waters of the U.S. should be regulated under an NPDES permit. 33 U.S.C. §§ 1342,1362(14). Discharges of wastes from CAFOs within the region are currently regulated under a General NPDES permit, Order No. R8-2013-0001, adopted by the Regional Board on June 7, 2013. Order No. R8-2013-0001 expired on June 6, 2018 but was administratively continued pursuant to Title 23 of the California Code of Regulations section 2235.4 and 40 C.F.R. § 122.6. Order No. R8-2018-0001 renews the expired permit.

B. DISCHARGE INFORMATION

2. An animal feeding operation (AFO) is considered a CAFO based on either a facility's animal population or if it is determined to be a significant contributor of pollutants to waters of the United States by the appropriate authority, regardless of population. 40 C.F.R. § 122.23(b)(4) and (6). The wastes generated by CAFOs are manure that the animals excrete, process wastewater (primarily wash water from the milk barn) and storm water runoff from manured areas. Approximately 10% of the manure that a milking cow excretes each day is excreted while in the milk barn, and approximately 90% of the manure excreted from the animals is deposited in the corrals[1]. CAFO owners/operators scrape and remove manure from the corrals generally twice per year[2]. The average moisture content of manure when it is removed from the corrals is 33% (all the manure numbers used in this Order refer to manure with 33% moisture content)[3]. In 2017, CAFOs removed approximately 186,000 tons of manure from their corrals in the region. This is equivalent to approximately 431,000 cubic yards of manure.

3. Wastes produced at CAFOs may contain pathogens, biochemical oxygen demand (an indicator of biodegradable materials), ammonia, nitrate, phosphorus, excreted pharmaceuticals and their metabolites, metals and

[1] Santa Ana Watershed Planning Agency, 1974. *Dairy waste management.* Albert A. Webb Associates, March 1974.
[2] Ibid.
[3] Ibid.

other salt compounds[4, 5, 6, 7]. Unless properly managed, these wastes could adversely impact the quality of receiving waters (both surface and groundwaters). Discharges of waste from CAFOs within the region could adversely impact water quality in the Santa Ana River, the San Jacinto River, and their tributaries. Impaired waterbodies located within these watersheds include Lake Elsinore, Canyon Lake, and Santa Ana River, Reach 3; Mill Creek (Prado Area); and Chino Creek, Reaches 1A, 1B, 2. As such, it is critical to regulate the discharge of wastes from all significant sources of pollutants to these waterbodies. The Santa Ana Regional Water Quality Control Board (Regional Board), as the designated authority, has determined that all AFOs with a herd size of more than 20 dry or milking cows or 50 heifers, calves, or cattle within the Santa Ana Region are a significant contributor of pollutants to waters of the U.S. As such, these facilities must be regulated under waste discharge requirements.

4. There are currently 109 dairy and dairy-related CAFOs within the Santa Ana Region. These CAFOs include dairies, heifer ranches and calf nurseries. As of December 31, 2017, these CAFOs contained approximately 126,000 animals. This population is comprised of 67,000 milking cows, 11,400 dry cows, 31,500 heifers (12 to 18-month-old cows), 13,000 calves (less than 12-month-old cows), and 3,100 other animals (beef cows, horses, bulls, etc.). Eighty-Four (84) of these facilities (with 78,000 animals) are in the Santa Ana River Basin and 25 of these facilities (with 48,000 animals) are in the San Jacinto River Basin.

5. This Order applies to owners and/or operators (hereinafter Dischargers) of any existing CAFOs that discharge pollutants to waters of the U. S. within the Santa Ana Region.

C. ELIGIBILITY FOR COVERAGE

6. Only those facilities that have coverage under Order No. R8-2013-0001 are eligible for coverage under this Order. New facilities that do not currently

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[4] USEPA, 2013. *Literature review of contaminants in livestock and poultry manure and implications for water quality.* EPA 820-R-13-002, July 2013; USEPA, 2004. *Risk management evaluation for concentrated animal feeding operetions.* EPA/600/R-04/042, Office of Research and Development, National Risk Management Research Laboratory, Cincinnati OH, May 2004

[5] Watanabe, N. *et al*, 2010. *Use and environmental occurrence of antibiotics in freestall dairy farms with manured forage fields.* Environmental Science and Technology. 2010, 44: 6591-6600.

[6] Watanabe, N. *et al*, 2008. *Environmental occurrence and shallow groundwater detection of the antibiotic monensin from dairy farms.* Journal of Environmental Quality. 2008, 37: S-78 – S-85.

[7] Zheng, W. *et al.* 2008. *Analysis of steroid hormones in a typical dairy waste disposal system.* Environmental Science and Technology. 2008, 42:2, 530-536.

exist must file a report of waste discharge to be covered under an individual order.

7. Dischargers who have submitted a completed Notice of Intent form (NOI, Attachment C), Engineered Waste Management Plan and a Nutrient Management Plan (where applicable) to discharge wastes under Order No. R8-2013-0001, but have not received an authorization, will be covered under this Order upon receipt of the discharge authorization letter from the Executive Officer. The Engineered Waste Management Plan and the Nutrient Management Plan should be prepared as specified under Sections IV.C. and IV.D. of this Order.

8. The following types of facilities are generally not required to obtain coverage under this Order.

   a. Dairies where the animal population is less than 20 (dry or milking cows).

   b. Heifer, calf, or cattle ranches where the herd size is less than 50.

   Such facilities are not authorized to discharge wastes which may affect water quality, or cause a nuisance or pollution as defined in Section 13050 of the California Water Code (Water Code). Persons proposing to discharge wastes from a newly constructed dairy or related facility must obtain coverage under individual waste discharge requirements.

D. ENROLLMENT REQUIREMENTS

9. To obtain authorization to discharge pollutants under this Order, existing Dischargers must submit a new completed Notice of Intent form within 45 days of the effective date of this Order. The Discharger may declare in the NOI their intent to continue to implement the approved Engineered Waste Management Plan and, if applicable, the approved Nutrient Management Plan for their facilities. If the Discharger does not intend to continue to implement the approved Engineered Waste Management Plan and Nutrient Management Plan, the Discharger must also include new plans with their NOI.

10. If a CAFO changes ownership or if a CAFO is relocated, the Discharger must submit a Notice of Termination form (NOT, Attachment F) for the old facility and a Notice of Intent form (NOI, Attachment C), an Engineered Waste

Management Plan, a Nutrient Management Plan (where applicable), and the first annual fee for the new facility. These documents are collectively referred to as permit registration documents.

11. Satellite corrals may occur at dairies where the milk parlor has been decommissioned but the corrals are still used to keep non-milking animals. These corrals may be on properties that have had Engineered Waste Management Plans (EWMPs) prepared and approved for the property. Unless a Discharger intends to prepare a new EWMP, they are required to implement all EWMPs approved for all properties where their herds are located. All applicable EWMPs must be reported in the Discharger's completed Notice of Intent form.

12. If an EWMP or Nutrient Management Plan has already been prepared and approved for a facility, the Discharger does not need to submit these documents if they expressly intend to implement them as identified in the NOI form or in separate written notice to the Regional Board.

13. All necessary permit registration documents must be submitted to the Regional Board office at the following address:

    Santa Ana Regional Board - Dairy Program
    3737 Main Street, Suite 500
    Riverside, CA 92501

14. Information regarding the availability of the NOI, Engineered Waste Management Plan and the Nutrient Management Plan will be posted for a minimum of 30 days for public comments. If conditions are included, a draft discharge authorization letter will also be posted for a minimum of 30-days for public comments. These documents will be made available to interested parties upon request. If no significant comments are received, a final discharge authorization letter will be issued by the Executive Officer of the Regional Board to all facilities that meet the requirements specified in this Order. If there are significant comments that cannot be resolved, the application package will be scheduled for consideration by the Regional Board. If the CAFO does not meet the requirements specified herein, the Executive Officer will notify the facility operator that they are required to submit a report of waste discharge. Individual waste discharge requirements will be developed for consideration by the Regional Board.

E. TERMINATION OF COVERAGE

15. Where a discharger ceases operating a permitted facility, the Discharger shall submit a written Notice of Termination form (NOT, Attachment F) to the Regional Board office. The Discharger shall indicate in the NOT how potential pollutants will be controlled or the party who will be responsible for controlling discharges from the facility following the termination of operations. If Regional Board staff determines that discharges of pollutants will be controlled, the Executive Officer will approve the NOT in writing and coverage under this Order will be terminated.

16. Where a facility is being closed, the Discharger must completely clean out the facility and ensure that there is no remaining potential for a discharge of pollutants (including, but not limited to, manure, litter and process wastewater) from the facility. The standard procedures may include, but are not limited to, scraping all manure from the corral areas and containment ponds, including any contaminated soil, and filling in the containment pond(s) with clean dirt.

17. Where a facility is being taken over by another eligible discharger or turned over for uses unrelated to dairies, the previous discharger may terminate coverage without cleaning the facility if the new discharger or the landowner takes responsibility for potential pollutants from the facility. This may be indicated by the new discharger submitting a completed NOI form for coverage under this Order, completing a NOI for coverage under the Construction General Permit, with expressed written agreement from the property owner, or some other form acceptable to the Executive Officer.

F. CHANGE OF OWNERSHIP

18. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger must submit a NOT as described above and notify the succeeding owner or operator of the existence of this Order by letter, and a copy of the notice must be immediately forwarded to the Regional Board.

G. CONVERSION FROM GENERAL PERMIT TO INDIVIDUAL PERMIT

19. The Executive Officer of the Regional Board or the Regional Administrator of the U.S. Environmental Protection Agency (USEPA) may require any person authorized to discharge wastes under this Order to subsequently apply for and obtain individual waste discharge requirements. Cases where individual waste discharge requirements may be required include the following:

    a. The Discharger is not in compliance with the conditions of this Order or the discharge authorization letter from the Executive Officer;

b. New effluent limitation guidelines are promulgated for point sources covered by this General NPDES permit;
c. Changes to the Basin Plan containing requirements applicable to the regulated facilities are approved;
d. The requirements of 40 C.F.R. 122.28(a) are not met; or
e. The discharge may adversely affect the water quality objectives of the receiving waters.

H. LEGAL AUTHORITY

20. This Order is issued pursuant to Section 402 of the CWA and implementing regulations adopted by the USEPA and Chapter 5.5, Division 7 of the California Water Code (Water Code, commencing with section 13370). This Order serves as an NPDES permit for point source discharges from CAFOs. This Order also serves as Waste Discharge Requirements pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with Section 13260). USEPA has promulgated Effluent Limitation Guidelines and Standards for CAFOs that are contained in 40 C.F.R. part 412. Additional guidelines and standards are contained in 40 C.F.R. §§122.23 and 122.42.

21. Regulations governing discharges from CAFOs, including dairies, are contained in California Code of Regulations (CCR), title 27, division 2, chapter 7, subchapter 2, article 1[8].

I. LEGAL BASIS AND RATIONALE FOR REQUIREMENTS

22. The Fact Sheet (Attachment D) contains the legal basis, background information and rationale for requirements contained in this Order. The Fact Sheet is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through G are also incorporated into this Order. However, the Executive Officer is authorized to make changes to the attached forms that are necessary to implement this Order, consistent with 40 C.F.R. part 412 and sections 122.23 and 122.42.

J. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

23. This Order is both an NPDES permit, issued pursuant to federal law, and WDRs, issued pursuant to State law. Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21000-21177. Requirements for "new sources" as defined in section 306 of the CWA are not covered by the exemption.

[8] Available at: http://www.calrecycle.ca.gov/Laws/Regulations/Title27/

24. The renewal of WDRs or NPDES permits for existing facilities is exempt from CEQA requirements under CCR, title 14, section 15301. This Order is only applicable to existing facilities that are or have been regulated under Order No. R8-2013-0001.

25. Food and Agricultural Code section 33487 exempts state agencies from any requirement to prepare a CEQA document for CAFOs under the following circumstances: (1) when the dairy will be constructed and operated in accordance with the minimum standards in Chapter 5 of the Food and Agricultural Code; (2) where the applicable local agencies have completed all necessary reviews and approvals including those that are required by CEQA; and (3) where a permit for construction was issued by a local agency on or after the effective date of Food and Agricultural Code section 33487 and construction has begun.

K. TECHNOLOGY-BASED EFFLUENT LIMITATIONS (TBELs)

26. CWA section 301(b) and its implementing regulations at 40 C.F.R. § 122.44 require that permits include applicable TBELs and any more stringent effluent limitation necessary to meet applicable water quality standards. As such, all Dischargers under this Order must meet the federal technology-based standards as per 40 C.F.R. Section 412.31 representing the application of Best Practicable Control Technology (BPT). 40 C.F.R. part 412, Subpart C – Dairy Cows and Cattle Other Than Veal Calves, contains effluent limitation guidelines for CAFOs. These requirements are incorporated into this Order in Section II.B.1.

L. WATER QUALITY-BASED EFFLUENT LIMITATIONS (WQBELs) AND TOTAL MAXIMUM DAILY LOADS (TMDLs)

27. CWA section 301(b) and 40 C.F.R. § 122.44(d) require that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving waters. Where numeric water quality criteria have not been established, 40 C.F.R. § 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria, a State policy that interprets narrative criteria supplemented with other relevant information, or an indicator parameter. 40 C.F.R. §§ 122.44(k)(3) and (4) allows the use of BMPs to control or abate the discharge of pollutants when numeric effluent limitations are infeasible or when practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. As supported in detail in the Fact Sheet (Attachment D), the Regional Board has determined that it is infeasible to include numeric WQBELs in this Order. Therefore, this Order requires CAFOs to implement

best management practices, such as developing and implementing Engineered Waste Management Plans and Nutrient Management Plans and performing focused monitoring.

28. Federal regulations [40CFR § 122.44(d)(1)(vii)(B)] require inclusion of effluent limits that are "consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the State and approved by EPA." Currently, there are two total maximum daily loads (TMDLs) that have waste load allocations for the CAFOs in the region. These TMDLs are (1) the Middle Santa Ana River Bacterial Indicator TMDLs and (2) Canyon Lake/Lake Elsinore Nutrient TMDLs. This Order includes requirements in Section IV necessary to achieve the waste load allocations by the deadlines specified in the approved TMDLs.

M. WATER QUALITY CONTROL PLANS

29. The Regional Board adopted a revised Water Quality Control Plan for the Santa Ana Region (Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the Santa Ana Region. Since 1995, the Basin Plan has been amended a number of times.

30. The existing and potential beneficial uses of the various surface waters that could be impacted by the discharge of wastes from dairy and/or dairy related facilities in the Santa Ana Region include one or more of the following:

    1. Municipal and Domestic Supply,
    2. Agricultural Supply,
    3. Industrial Service Supply,
    4. Groundwater Recharge,
    5. Water Contact Recreation,
    6. Non-contact Water Recreation,
    7. Warm Freshwater Habitat,
    8. Limited Warm Freshwater Habitat,
    9. Wildlife Habitat,
    10. Rare, Threatened or Endangered Species, and
    11. Spawning, Reproduction, and Development.

31. The existing and potential beneficial uses of groundwaters that could be impacted by the discharge of dairy wastes within the Santa Ana Region include one or more of the following:

    1. Municipal and Domestic Supply,

2. Agricultural Supply,
3. Industrial Service Supply, and
4. Industrial Process Supply

N. NATIONAL TOXICS RULE (NTR) AND CALIFORNIA TOXICS RULE (CTR) [Not Applicable]

O. STATE IMPLEMENTATION POLICY [Not Applicable]

P. COMPLIANCE SCHEDULES AND INTERIM REQUIREMENTS

32. The Basin Plan contains schedules for achieving compliance with waste load allocations for bacterial indicator (Middle Santa Ana River) and nutrients (Lake Elsinore and Canyon Lake watershed). This Order requires CAFOs within those watersheds to develop and implement control measures to comply with the waste load allocations as per the time schedules specified in the approved TMDLs.

33. The Basin Plan specifies that when the Regional Board determines that it is infeasible to achieve compliance with an effluent limitation specified to implement a new water quality objective, the Regional Board may establish a schedule for compliance in waste discharge requirements. The State Board adopted Resolution No. 2008-0025, Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits. Schedules specified in this Order are consistent with the Policy.

Q. ANTI-DEGRADATION POLICY

34. Federal regulations at 40 C.F.R. § 131.12 require that State water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's Anti-degradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal Anti-degradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in the Fact Sheet (Attachment D), the permitted discharge is consistent with the anti-degradation provision of 40 C.F.R. § 131.12 and State Water Board Resolution 68-16.

R. ANTI-BACKSLIDING REQUIREMENTS

35. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. § 122.44(l) prohibit backsliding in NPDES permits. These provisions

require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

S. PROVISIONS IMPLEMENTING STATE LAW

36. Provision II.D.2. implements state law only. Since this provision is not required or authorized under the CWA, violations of this provision are not subject to the enforcement remedies that are available for NPDES permit violations. State Water Code provides other enforcement remedies.

T. MONITORING AND REPORTING

37. Section 122.48 of 40 C.F.R. requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the Water Code authorize the Regional Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement these Federal and State requirements. The Monitoring and Reporting Program is provided in Attachment B.

U. STANDARD AND SPECIAL PROVISIONS

38. Standard Provisions, which, in accordance with 40 C.F.R. §§ 122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment A. The Regional Board has also included in this Order special provisions applicable to the Dischargers. The rationale for the special provisions contained in this Order is provided in the Fact Sheet (Attachment D).

V. NOTIFICATION OF INTERESTED PARTIES

39. The Regional Board has notified the Dischargers and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment D) of this Order.

W. CONSIDERATION OF PUBLIC COMMENT

40. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment D).

X. ALASKA RULE

41. On March 30, 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. § 131.21, 65 FR 24641, April 27, 2000). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

Y. STRINGENCY OF REQUIREMENTS FOR INDIVIDUAL POLLUTANTS

42. This Order includes both technology and water quality-based effluent limitations. The technology-based effluent limitations are based on the USEPA's effluent limitation guidelines for this industrial category. Water quality-based effluent limitations are scientifically derived to implement the water quality objectives specified in the Basin Plan.

IT IS HEREBY ORDERED that the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act, as amended, and regulations and guidelines adopted thereunder, must comply with the following:

II. PERMIT PROVISIONS

A. DISCHARGE PROHIBITIONS

1. The discharge of wastes to land or to surface waters, including storm water conveyance systems, shall be in accordance with the provisions of this Order. All other discharges of wastes to land and surface waters are prohibited.

2. The discharge of wastes to land or to surface waters shall not cause a condition of contamination, pollution or nuisance as defined in Water Code section 13050.

3. The discharge of wastes not generated by the dairy-related activities at the facility is prohibited except as authorized by the Executive Officer in a discharge authorization letter.

4. The disposal of any mortality (dead animals) in any process wastewater system, liquid manure or other facilities within the regulated CAFO is prohibited.

5. The discharge of process wastewater to a land application area before, during or after a storm event that would result in runoff of the applied water is prohibited.

6. The discharge of dairy waste or process wastewater to surface waters from cropland is prohibited. Irrigation supply water that comes into contact or is blended with waste or process wastewater shall be considered wastewater under this prohibition.

7. The discharge of storm water to surface waters from a land application area where manure or process wastewater has been applied is prohibited unless the land application area has been managed according to an approved Nutrient Management Plan and EWMP.

8. The discharge of wastes, including manure, process wastewater and/or storm water runoff from manured areas, to property not owned or controlled by the Discharger, except as authorized by this Order, is prohibited.

9. Temporary waste storage areas shall be designed and constructed in a manner to prevent runoff and leachate from entering surface or groundwater.

10. Waste storage or disposal facilities shall not be built within 400 feet of a public drinking water well.

11. Confined animals are prohibited from entering or directly contacting any surface water. CCR, title 27, § 22561, 40 C.F.R. § 122.42(e). The Discharger must prevent animals confined at the CAFP from entering any surface water.

12. The disposal of manure to any land within Chino Basin (Chino-North, Chino-East, and Chino-South Groundwater Management Zones) is prohibited unless a plan, acceptable to the Executive Officer, is implemented that offsets the effects of such application on the underlying groundwater management zone. The Optimum Basin Management Plan, discussed in the Fact Sheet, addresses the discharge of wastes from CAFOs within the Chino Basin area. Continued, effective implementation of the Optimum Basin Management Plan is an acceptable offset to manage CAFO waste discharges within the Chino Basin area.

13. Manure originating from outside of the Chino Basin is prohibited from being applied to land within the Chino Basin.

14. The application of manure, process wastewater, and/or storm water runoff from manured areas, on land in the San Jacinto River Basin that overlie groundwater management zones lacking assimilative capacity for TDS and/or nitrate-nitrogen is prohibited. This prohibition shall apply unless a plan, acceptable to the Executive Officer, is implemented that ultimately offsets the effects of such application on the underlying groundwater management zone according to the requirements of Section IV.J. below.

15. The discharge of any substances in concentrations that are toxic to animal or plant life is prohibited.

B. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

1. Technology-based Effluent Limitations (TBELs)

Discharges of waste in storm water runoff from production areas and in process wastewater are authorized only under the following conditions:

a. The principal cause of the discharge is due to a precipitation event;

b. Containment structures have been designed, constructed, operated and maintained to contain all manure, litter, process wastewater, and the runoff and the direct precipitation from all rainfall events up to and including a 25-year, 24-hour rainfall event from the production area[9];

c. All provisions of an Engineered Waste Management Plan (EWMP), approved by the Executive Officer, are fully implemented; and

d. The operations at the facility are conducted according to the additional measures required by 40 C.F.R. § 412.37(a) and (b) and according to the requirements of this Order and the Monitoring and Reporting Program (Attachment B).

2. Water Quality-Based Effluent Limitations (WQBELs)

[9] See Glossary for the definition of Production Area

Water quality-based effluent limitations are included in Section IV. These consist of limitations designed to cause the Discharger to attain waste load allocations for CAFOs found in adopted Total Maximum Daily Loads (TMDLs).

C. RECLAMATION SPECIFICATIONS [Not Applicable]

D. RECEIVING WATER LIMITATIONS

1. Surface Water Limitations

a. The discharge of wastes from the regulated facilities to surface waters shall not cause or contribute to an exceedance of any applicable water quality objectives in the receiving waters specified in the Basin Plan.

b. The discharge of wastes shall not cause receiving waters to contain floating materials, foam, or scum in quantities that cause nuisance or adversely affect beneficial uses.

c. The discharge of wastes shall not cause bottom deposits in the receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.

d. The discharge of wastes shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses of receiving waters.

e. The discharge of wastes shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses of receiving waters.

f. The discharge of wastes shall not cause bioaccumulation of pesticides, fungicides, or other toxic pollutants in bottom sediments or in aquatic life to levels which are harmful to human health or aquatic organisms.

2. Groundwater Limitations

The discharge of wastes to the ground shall not cause or contribute to an exceedance of any applicable water quality objectives specified in the Basin Plan.

III. GENERAL PROVISIONS

A. GENERAL

1. This Order expires on March 15, 2024. However, coverage under the Order shall continue in force and effect until a new order replaces this Order. Only those Dischargers authorized to discharge under this Order are covered if this Order is continued. Upon reissuance of a new order, the Dischargers shall file a new application not more than 45 days following the effective date of the new order and obtain a new authorization to discharge from the Executive Officer.

2. The Executive Officer shall, if necessary, specify any additional conditions necessary to protect the beneficial uses of the receiving waters in the Discharge Authorization Letter, and shall specify the Self-Monitoring Program for the proposed discharge in accordance with this Order. If the Executive Officer includes additional conditions, a draft Discharge Authorization Letter will be posted for public comment 30-days prior to the final letter being issued. The Discharger shall comply with all the requirements of this Order and the terms and conditions of the final Discharge Authorization Letter. The authorization to discharge may be terminated or revised by the Executive Officer at any time. The Authorization Letter shall be incorporated as terms and conditions of the Order for the Discharger.

3. The Discharger shall give advance notice to the Regional Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order.

4. The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order shall not be affected thereby.

5. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from the facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, State, or federal law enforcement entities.

6. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, discharge limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Board by

telephone (951) 782-4130. Notification must be provided within 24 hours of having knowledge of noncompliance where it may endanger public health or the environment. The Discharger shall confirm this notification in writing within five days, unless Regional Board staff waives the written notification. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. All other noncompliance should be reported in the Annual Report. Also see Standard Provisions, Attachment A, Section V.E.

7. This Order shall serve as a general NPDES permit pursuant to Section 402 of the Federal CWA and amendments thereto, which shall become effective upon its adoption provided the Regional Administrator of the USEPA has no objection. If the Regional Administrator objects to its issuance, the Order shall not serve as a general NPDES permit until such objection is withdrawn.

8. The Executive Officer shall determine whether the proposed discharge is eligible for coverage under this order, after which, the Executive Officer may:

    a. Authorize the proposed discharge by transmitting a discharge authorization letter to the Discharger authorizing the discharge under the conditions of this Order and any other conditions consistent with this Order that are necessary to protect the beneficial uses of the receiving waters; or,

    b. Require the Discharger to submit a report of waste discharge to obtain individual waste discharge requirements prior to any discharge to waters within the Regional Board's jurisdiction.

9. All discharges from the facility must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other courses under their jurisdiction.

10. The Discharger must comply with all Federal, State, County and local laws and regulations pertaining to the discharge of wastes from the facility.

11. The Discharger must comply with all requirements of this Order and, in addition, all terms, conditions, and limitations specified in the discharge authorization letter issued by the Executive Officer.

B. MONITORING AND REPORTING

1. The Discharger must comply with the Monitoring and Reporting Program requirements in Attachment B, as later amended or revised, of this Order.

C. REOPENER PROVISIONS

1. This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by a Discharger for modification, revocation and reissuance, or termination of this Order or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

2. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, or amendments thereto, the Regional Board may revise and modify this Order in accordance with such standards.

3. This Order may be reopened to address any changes in State or Federal statues, plans, policies or regulations that would affect the requirements for the discharges covered by this Order including newly adopted TMDLs.

IV. SPECIAL PROVISIONS

A. REQUIREMENTS FOR DISCHARGES FROM CONTAINMENT STRUCTURES

1. Containment structures must be designed, constructed, operated and maintained to contain all manure, litter, process wastewater, and the runoff and the direct precipitation from all rainfall events up to and including a 25-year, 24-hour rainfall event from the production area.

2. New wastewater containment facilities constructed after the effective date of this Order must be lined with, or underlain by, soils which contain at least 10% clay and not more than 10% gravel or artificial materials of equivalent impermeability.

3. A level marker shall be placed within each pond or impoundment. The markers must individually or in combination indicate the minimum capacity necessary to contain the runoff and direct precipitation from a 25-year, 24-hour rainfall event.

a. Indicators on a level marker for the minimum capacity must be placed by a licensed surveyor or similarly-qualified person.

b. The Discharger must confirm in the facility's annual report that the markers are valid indicators of the required minimum capacity.

4. Following a storm event, the Discharger must initiate substantive work to restore the minimum holding capacity of containment structures within 48 hours. No work is necessary if observations show that containment structures will restore their minimum holding capacity within 48 hours with no intervention by the operator. The minimum holding capacity is represented by the minimum freeboard indicated by a valid marker in Provision IV.A.3.

5. The Discharger must use effective measures to monitor and control threats to the integrity of containment structures. Such threats include but are not limited to burrowing rodents, penetration or displacement by plant roots, and erosion.

6. Containment structures must be equipped with an emergency outlet (e.g. spillway or overflow pipe) to prevent catastrophic failure of the structure in the event of overflow.

7. Containment structures and manured areas at CAFOs in operation on November 27, 1984, shall be protected from inundation or washout by overflow from any stream channel during 20-year peak stream flows. Facilities existing before November 27, 1984 that are protected against 100-year peak stream flows shall continue to be provided such protection. New facilities (built after November 27, 1984) shall be protected from 100-year peak stream flows (CCR title 27, § 22562(c)).

8. No containment structures shall be constructed of manure and manure shall not be used to improve or raise existing containment structures.

9. Manure scraped from the corrals shall be removed from the facility within 180 days. Any manure remaining at the facility after 180 days of being scraped from the corrals is considered to be disposal of manure and is prohibited. A manifest of the manure hauled away (Form 4) shall be prepared and submitted with the annual report in accordance with Monitoring and Reporting Program (Attachment B).

10. Prior to transferring manure, litter or process wastewater to other persons, the Discharger shall provide the recipient of the manure, litter or process wastewater with the most current nutrient analysis of the manure. The analysis provided must be consistent with the requirements of 40 C.F.R. part 412, and, in addition, must include analysis for constituents specified in Attachment B. The CAFO operators shall collect representative samples of manure at least once per calendar year during a corral cleaning event, analyze for nutrients (nitrate-nitrogen and phosphorus), and retain the records for five years.

11. All surface drainage from outside of the facility (such as, but not limited to, from streets or neighboring property) shall be diverted away from any manured areas unless drainage from the manured areas are fully contained on site.

12. Chemicals and other contaminants handled on-site shall not be disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.

B. REQUIREMENTS FOR DISCHARGES FROM NON-PRODUCTION AREAS

1. The Discharger must implement effective measures to prevent storm water from contacting manure, feed, and other potential sources of pollutants in non-production areas where storm water runoff is conveyed off-site. The Discharger must:

    a. Divert storm water runoff away from areas where potential pollutants may be mobilized and carried off-site.

    b. Implement effective housekeeping.

    c. Not allow track-out of manure and other potential pollutants from the production area onto non-production areas or off-site.

2. The Discharger must implement effective measures to identify and eliminate the discharge of pollutants in non-storm water from non-production areas of the facility.

C. ENGINEERED WASTE MANAGEMENT PLAN

1. The Discharger must control the discharge of waste from production and non-production areas according to an Engineered Waste Management Plan that has been approved by the Executive Officer and prepared according to this Order. Where there is a conflict between the approved plan and the requirements of this Order, this Order shall prevail.

2. Except for inconsequential grammatical corrections, updates to the Discharger's name and contact information, and technical corrections, an approved Engineered Waste Management Plan may not be amended without the approval of the Executive Officer.

3. A copy of the approved Engineered Waste Management Plan must be maintained on-site and the person responsible for the operation of the dairy must be familiar with its content. The approved plan must be made available to Regional Board, State Board, USEPA staff and/or their authorized representatives (including an authorized contractor acting as their representative), upon request.

4. Engineered Waste Management Plans must be prepared by, or under the direction of, a registered professional engineer or other similarly-qualified individual in conformance with California Code of Regulations (CCR), title 27, division 2, chapter 7, subchapter 2, article 1. The registered professional engineer shall affix their stamp and signature to the plan.

5. Upon completion of construction of all structures identified in the approved Engineered Waste Management Plan, the Discharger must submit a certification from the engineer or the similarly-qualified individual responsible for the preparation of the plan. The certification must establish that all structures have been constructed according to the specifications in the plan.

6. Engineered Waste Management Plans must be updated where there is a substantial change in a facility's operations that may affect the capacity of containment structures to discharge according to the requirements of this Order.

7. Engineered Waste Management Plans must fully and accurately represent all structures, controls, and practices necessary to allow a discharge of waste from production areas in accordance with the requirements of this Order.

8. An Engineered Waste Management Plan must include:

    a. Specifications for the location and construction of containment structures;

    b. Specifications for the placement of overflow outlets and minimum capacity markers;

    c. Controls to prevent manure, litter, and process wastewater from being applied or accumulate closer than 100-feet to any down-gradient surface water, open tile line intake structures, sinkholes, well heads, or other conduits to surface or groundwater.

    d. Controls to prevent erosion of soil that may diminish the capacity of containment structures;

    e. A site plan depicting a through d above; and

    f. Calculations for the volume of containment structures

    g. Procedures for restoring the minimum holding capacity represented by the minimum freeboard indicated by a valid marker in Provision IV.A.3.; and

    h. A schedule of operation and maintenance practices necessary to maintain compliance with this Order and the Engineered Waste Management Plan.

9. The Executive Officer is authorized to, with written notice, direct a Discharger to amend the facility's Engineered Waste Management Plan to correct or clarify the contents of the plan or to comply with the requirements of this Order. A directive must be complied with by a deadline specified in the notice. The Executive Officer is authorized to waive Provision IV.C.4. to allow a Discharger to make amendments where technical expertise is not needed.

10. A new or amended Engineered Waste Management Plan will be subject to public review for 30 days prior to its approval by the Executive Officer.

D. NUTRIENT MANAGEMENT PLAN

1. The application of manure and other dairy-related waste to cropland at the dairy facility must be carried out in accordance with this Order and a nutrient management plan that has been approved by the Executive Officer. Where there is a conflict between the approved plan and the requirements of this Order, this Order shall prevail.

2. A copy of the approved nutrient management plan must be maintained on-site and the person responsible for the operation of the dairy must be familiar with its content. The approved plan must be made available to Regional Board, State Board, USEPA staff and/or their authorized representatives (including an authorized contractor acting as their representative), upon request.

3. Except for inconsequential grammatical corrections and technical corrections, an approved nutrient management plan may not be altered without the approval of the Executive Officer.

4. Nutrient management plans must be prepared by a Certified Nutrient Management Planner meeting competency and knowledge requirements established by the Natural Resource Conservation Service (NRCS).

5. Nutrient management plans must be in substantial conformance with NRCS Conservation Practices Standard 590[10].

6. The nutrient management plan must specify application rates and controls for manure, litter, and process wastewater applied to land. The controls must minimize the transport of wastewater, phosphorous and nitrogen to waters of the state.

    a. Application rates must be informed by annual analysis of nitrogen and phosphorous in the applied manure and by an analysis of nitrogen and phosphorous in the land's soil. The analysis of soil must be performed a minimum of once every five years.

[10] Available at: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1192371.pdf

b. Application rates must take into consideration the nutrient needs of cover crops and harvested crops and consider other sources of nutrients other than applied manure and other dairy-related wastes.

c. Manure, litter, and process wastewater shall not be applied, or allowed to accumulate, closer than 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, production well heads, monitoring wells, or other similar conduits to surface or ground waters.

7. The Executive Officer is authorized to, with written notice, direct a Discharger to amend the facility's nutrient management plan to reflect substantial changes to operations, to correct or clarify the contents of the plan, or to comply with the requirements of this Order[11]. A directive must be complied with by a deadline specified in the notice. The Executive Officer is authorized to waive Provision IV.D.4. to allow amendments where technical expertise is not needed.

8. A new or amended nutrient management plan will be subject to public review for 30 days prior to its approval by the Executive Officer.

E. ANIMAL MORTALITIES

1. Animal mortalities shall be handled in such a way as to prevent the discharge of pollutants to waters of the State.

2. All dead animals shall be disposed of off-site within three (3) days according to local and state regulations.

3. Records of mortality management shall be kept for five years.

F. SPECIAL STUDIES

[This Section is being kept as a placeholder.]

[11] See 40 C.F.R. § 122.42(e)(6)(iii) for a list of changes that would constitute a substantial change.

G. REGION-WIDE SALT AND NUTRIENT MANAGEMENT REQUIREMENTS

The following requirements apply to all Dischargers and their dairies and related facilities in the Santa Ana Region subject to this Order:

1. If not prohibited, a Discharger may apply, or cause to be applied, manure and dairy-related waste to cropland not owned or controlled by them only with the written permission of the operator or land owner receiving the waste for beneficial agricultural use or a valid exemption issued in accordance with Riverside County Ordinance 427.

    a. The Discharger must provide a copy of the written permission or a valid exemption to the Regional Board within 60 days of the date of their discharge authorization letter.

    b. The written permission must include:

        i. The signature of the agricultural operator or land owner;

        ii. Valid contact information for the agricultural operator or land owner. Persons enrolled under a conditional waiver of waste discharge requirements for agricultural discharges may use the unique identifier assigned under that program for their contact information;

        iii. The assessor's parcel number(s) of the land and county where the waste is authorized to be applied;

        iv. The expiration date of the written permission, if applicable. If there is no expiration, this must be indicated; and

        v. Any conditions on the timing, quantity, or limits of waste application imposed by the agricultural operator or landowner, including specification of dates during which manure may be applied; upper limits on the quantity of waste permitted; specified application rates; and excluded areas of the property.

    c. The Discharger must notify the Regional Board in writing where an agricultural operator or land owner rescinds or amends their written

permission. The notification must be provided within 30-days of the Discharger becoming aware of the rescission or amendment.

d. If a written permission is amended or new letter is obtained, the Discharger must provide a copy of the amended or new permission to the Regional Board within 60-days of its date.

e. The Discharger must include, in their Annual Report, a confirmation that the written permission(s) in Regional Board records is valid and in full effect.

H. BACTERIAL INDICATOR TMDLs REQUIREMENTS FOR CHINO BASIN

The following requirements of this Subsection IV.H. shall apply only to those Dischargers and their dairies and related facilities that are tributary to the Middle Santa Ana River:

1. The Discharger must implement, or cause to be implemented on their behalf, the water quality monitoring plan approved by the Regional Board on June 29, 2007 in Resolution No. R8-2007-0046, as subsequently amended or revised.

a. The Discharger must submit, or cause to be submitted on their behalf, the results of the water quality monitoring to the Regional Board by May 31 of each year. The Discharger may satisfy this provision through cooperation with the Middle Santa Ana River TMDL Task Force.

b. The results of the water quality monitoring must include an analysis designed to demonstrate achievement, or progress towards achievement, of the CAFO bacterial indicator waste load allocations pursuant to the Middle Santa Ana River Bacterial Indicator TMDLs.

c. If the analysis of the water quality monitoring results is inconclusive or reveals opportunities for improvements to the monitoring plan, the Discharger, in cooperation with other stakeholders, must include recommendations to improve the effectiveness of the monitoring program in the annual report.

d. If the analysis of the water quality monitoring results does not indicate that the CAFO waste load allocations are being met; that waste load allocations are not likely to be met by December 31, 2025; and that water quality objectives are not being attained, the Discharger, in cooperation with other stakeholders, must propose improvements to watershed-wide projects or programs that may improve water quality.

e. After December 31, 2025, if the Discharger does not comply with the provisions of this Subsection IV.H.1., the Discharger must immediately comply with the following water quality-based effluent limit during *wet weather conditions* (November 1 through March 31):

Escherichia coli waste load allocation (WLA): The 5-sample, 30-day logarithmic mean of *Escherichia coli* in discharges from the facility must be less than 113 organisms/100 mL and not more than 10% of the samples may exceed 212 organisms/100 mL for any 30-day period.

Water quality objectives for water-contact recreation are temporarily-suspended in freshwater streams which have had their streambed or banks engineered so that they have been armored and made resistant to erosion. The temporary suspension applies if the average vertical flow velocity is greater than 8 feet per second; if the product of stream depth and average flow velocity is greater than 10 square feet per second; or if site-specific, alternative flow criteria has been approved by the Regional Board and the criteria is met. Suspension of water quality objectives for water-contact recreation in the receiving water is deemed to indicate that the wet-weather waste load allocation at the Discharger's outfall is also suspended. Unless measured flow indicates otherwise, water quality objectives are presumed restored 24 hours after the end of the storm event which produced the runoff.

2. If the Discharger does not comply with the requirements of Subsections IV.A. and IV.B., the Discharger must immediately comply with the following water quality-based effluent limit during *dry-weather conditions* (April 1 through October 31):

Escherichia coli WLA: The 5-sample, 30-day logarithmic mean of *Escherichia coli* in discharges from the facility must be less than 113 organisms/100 mL and not more than 10% of the samples may exceed 212 organisms/100 mL for any 30-day period.

I. SALT MANAGEMENT REQUIREMENTS FOR CHINO BASIN

The following requirements of this subsection IV.I. shall apply only to those Dischargers and their dairies and related facilities that overly the Chino Basin and the groundwater management zones located there:

1. The Discharger must cause, or have caused on their behalf, an effective program that offsets the addition of dissolved solids (salt) in discharges of waste to the Chino Basin groundwater management zones from the Discharger's overlying facilities. The program is subject to the approval of the Regional Board. The program is currently being carried out through the Optimum Basin Management Program. The Regional Board expects that continued implementation of the Optimum Basin Management Program, or an approved alternative, will provide the required salt offset.

2. The Discharger must perform an evaluation, or have an evaluation performed on their behalf, of the offset program in Provision IV.I.1. above.

    a. The evaluation must assess the effectiveness of the program to remove dissolved solids from the underlying groundwater management zone at a rate that equals the rate of dissolved solids added in discharges from dairies and related facilities. Facilities may be evaluated collectively or individually as necessary.

    b. The evaluation must be based on a reliable combination of theoretical and empirical data using published and generally-accepted methods.

    c. The Discharger must submit, or cause the submission on their behalf, a report on the results of the evaluation to the Regional Board by January 31 of each year for the previous calendar year. The Chino Basin Watermaster currently provides the evaluation report annually.

J. SALT AND NUTRIENT REQUIREMENTS FOR SAN JACINTO BASIN

The following requirements of this subsection (IV.J) shall apply only to those Dischargers and their dairies and related facilities that overly the San Jacinto River Basin and the groundwater management zones located there:

1. The Discharger must perform, or have performed on their behalf, groundwater monitoring of wells under their ownership or control to evaluate the potential impact of dairy operations on the underlying groundwater.

2. To the extent practicable, the Discharger must:

    a. reduce manure and wastewater application to croplands;

    b. reduce salt content in the source water;

    c. implement on-site wastewater treatment processes;

    d. consider implementing regional wastewater treatment systems; and

    e. participate in local groundwater improvement projects.

3. The Discharger must implement, or cause to be implemented on their behalf, the Lake Elsinore/Canyon Lake Nutrient TMDLs water quality monitoring plan approved by the Regional Board on March 3, 2006 in Resolution No. R8-2006-0031, as subsequently amended or revised.

a. The Discharger must submit, or cause to be submitted on their behalf, the results of the water quality monitoring plan to the Regional Board by August 15 of each year. The Discharger may satisfy this provision through cooperation with the Lake Elsinore/Canyon Lake TMDL Task Force.

    b. The results of the water quality monitoring plan must include an analysis designed to demonstrate achievement, or progress towards achievement, of the CAFO waste load allocation for Canyon Lake and the water quality objectives of the lakes.

    c. If the analysis of the water quality monitoring results is inconclusive or reveals opportunities for improvements to the monitoring plan, the

Discharger, in cooperation with other stakeholders, must include recommendations to improve the effectiveness of the monitoring program in the annual report.

d. If the analysis of the water quality monitoring results does not indicate that the CAFO waste load allocation is being met and that water quality objectives are not being attained, the Discharger, in cooperation with other stakeholders, must propose improvements to watershed-wide projects or programs that may improve water quality.

e. After December 31, 2020, if the Discharger does not comply with the provisions of this Subsection IV.J.3., the Discharger must comply with the following water quality-based effluent limits:

Total Phosphorous WLA: Discharges from CAFOs must not transport more than 132 kg/year of total phosphorous to Canyon Lake, based on a 10-year running average.

Total Nitrogen WLA: Discharges from CAFOs must not transport more than 1,908 kg/year of total nitrogen to Canyon Lake, based on a 10-year running average.

V. DETERMINING COMPLIANCE

A. Compliance determination with the terms of this Order shall be based on the following:

1. Periodic inspections by Regional Board staff and/or USEPA or its authorized representatives;

2. Evaluation of the Annual Report of Animal Waste Discharge and Annual Summary Report of CAFO Storm Water Management Structure Inspections submitted according to the Monitoring and Reporting Program (Attachment B);

3. Evaluation of Workplans and other reports required for compliance with the TMDLs, salt and nutrient management; and

4. Any other information deemed necessary by the Executive Officer.

ATTACHMENT A

Standard Provisions
For
Order No. R8-2018-0001
NPDES Permit No. CAG018001

Table of Contents

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of Order No. R8-2018-0001. Any noncompliance constitutes a violation of the CWA and the Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or denial of a permit renewal application. [40 C.F.R. § 122.41(a)].

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if Order No. R8-2018-0001 has not been modified to incorporate the requirement. [40 C.F.R. § 122.41(a)(1)].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of Order No. R8-2018-0001. [40 C.F.R. § 122.41(c)].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or disposal in violation of Order No. R8-2018-0001 that has a reasonable likelihood of adversely affecting human health or the environment. [40 C.F.R. § 122.41(d)].

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities, systems of treatment and control mechanisms (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of Order No. R8-2018-0001 and the discharge authorization letter from the Executive Officer. Proper operation and maintenance also include regular maintenance and inspection of all systems, record keeping and adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of Order No. R8-2018-0001. [40 C.F.R. § 122.41(e)].

E. Property Rights

1. Order No. R8-2018-0001 does not convey any property rights of any sort or any exclusive privileges. [40 C.F.R. § 122.41(g)].

2. Order No. R8-2018-0001 does not authorize the commission of any act causing injury to persons or property or invasion of other private rights, or any

infringement of state or local law or regulations nor guarantee the Discharger a capacity right in the receiving waters. [40 C.F.R. § 122.5(c)]

F. Inspection and Entry

The Discharger shall allow the Regional Board, State Board, USEPA and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [40 C.F.R. § 122.41(i)][Water Code section 133839c)]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of Order No. R8-2018-0001 [40 C.F.R. § 122.41(i)(1)];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of Order No. R8-2018-0001 [40 C.F.R. § 122.41(i)(2)];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under Order No. R8-2018-0001 [40 C.F.R. § 122.41(i)(3)]; and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location [40 C.F.R. § 122.41(i)(4)].

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. [40 C.F.R. § 122.41(m)(1)(i)].

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. [40 C.F.R. § 122.41(m)(1)(ii)].

2. Bypass not exceeding limitations - The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3 and I.G.5, below. [40 C.F.R. § 122.41(m)(2)].

3. Prohibition of bypass. Bypass is prohibited, and the Regional Board may take enforcement action against a Discharger for bypass, unless [40 C.F.R. § 122.41(m)(4)(i)]:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [40 C.F.R. § 122.41(m)(4)(i)(A)];

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [40 C.F.R. § 122.41(m)(4)(i)(B)]; and

c. The Discharger submitted notice to the Regional Board as required under Standard Provisions – Permit Compliance I.G.5 below [40 C.F.R. § 122.41(m)(4)(i)(C)].

4. The Regional Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. [40 C.F.R. § 122.41(m)(4)(ii)].

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible, at least 10 days before the date of the bypass. [40 C.F.R. § 122.41(m)(3)(i)].

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). [40 C.F.R. § 122.41(m)(3)(ii)].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. [40 C.F.R. § 122.41(n)(1)].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2, below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. [40 C.F.R. § 122.41(n)(2)].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [40 C.F.R. § 122.41(n)(3)]:

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 C.F.R. § 122.41(n)(3)(i)];

   b. The permitted facility was, at the time, being properly operated [40 C.F.R. § 122.41(n)(3)(ii)];

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b, below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C, above. (40 C.F.R. § 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

Order No. R8-2018-0001 may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any order condition. [40 C.F.R. § 122.41(f)].

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by Order No. R8-2018-0001 after its expiration date, the Discharger must obtain a new permit. [40 C.F.R. § 122.41(b)]. However, coverage under the Order shall continue in force and effect until a new order replaces Order No. R8-2018-0001. Only those Dischargers authorized to discharge under the expiring Order are covered by the continued order. Upon reissuance of a new Order, the Dischargers shall file a new application within 45 days of the effective date of the new order and obtain a new authorization to discharge from the Executive Officer.

C. Transfers

Order No. R8-2018-0001 is not transferable to any person except after notice to the Regional Board and with written authorization from the Executive Officer. The Regional Board may require modification or revocation and reissuance of the Order

to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. [40 C.F.R. § 122.41(l)(3)] [40 C.F.R. § 122.61].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 C.F.R. § 122.41(j)(1)].

B. Monitoring results must be conducted according to test procedures under Part 136, unless other test procedures have been specified in Order No. R8-2018-0001. [40 C.F.R. § 122.41(j)(4)] [40 C.F.R. § 122.44(i)(1)(iv)].

IV. STANDARD PROVISIONS – RECORDS

A. Records Retention

The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by Order No. R8-2018-0001, and records of all data used to complete the application for Order No. R8-2018-0001, for a period of at least five (5) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Board Executive Officer at any time. [40 C.F.R. § 122.41(j)(2)].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [40 C.F.R. § 122.41(j)(3)(i)];

2. The individual(s) who performed the sampling or measurements [40 C.F.R. § 122.41(j)(3)(ii)]

3. The date(s) analyses were performed [40 C.F.R. § 122.41(j)(3)(iii)];

4. The individual(s) who performed the analyses [40 C.F.R. § 122.41(j)(3)(iv)];

5. The analytical techniques or methods used [40 C.F.R. § 122.41(j)(3)(v)]; and

6. The results of such analyses [40 C.F.R. § 122.41(j)(3)(vi)].

C. Claims of confidentiality for the following information will be denied [40 C.F.R. § 122.7(b)]:

1. The name and address of any permit applicant or Discharger [40 C.F.R. § 122.7(b)(1)]; and

2. Permit applications and attachments, permits and effluent data [40 C.F.R. § 122.7(b)(2)].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Board, State Board, or USEPA within a reasonable time, any information which the Regional Board, State Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating Order No. R8-2018-0001 or to determine compliance with Order No. R8-2018-0001. Upon request, the Discharger shall also furnish to Regional Board, State Board, USEPA staff and/or their authorized representatives (including an authorized contractor acting as their representative) copies of records required to be kept by Order No. R8-2018-0001. [40 C.F.R. § 122.41(h)] [Water Code 13267].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Board, State Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5, below. [40 C.F.R. § 122.41(k)].

2. All permit applications shall be signed by a general partner or the proprietor, respectively. [40 C.F.R. § 122.22(a)(2)].

3. All reports required by Order No. R8-2018-0001 and other information requested by the Regional Board, State Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2, above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2, above [40 C.F.R. § 122.22(b)(1)];

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [40 C.F.R. § 122.22(b)(2)]; and

   c. The written authorization is submitted to the Regional Board and State Board [40 C.F.R. § 122.22(b)(3)].

4. If an authorization under Standard Provisions – Reporting V.B.3, above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3, above must be submitted to the Regional Board and State Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. [40 C.F.R. § 122.22(c)].

5. Any person signing a document under Standard Provisions – Reporting V.B.2, or V.B.3, above shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or 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 for knowing violations." [40 C.F.R. § 122.22(d)].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment B) in Order No. R8-2018-0001. [40 C.F.R. § 122.22(l)(4)].

2. Monitoring results must be reported on a Self-Monitoring Report (SMR) form or forms provided or specified by the Regional Board or State Board for reporting results of any surface water discharges, manure nutrient monitoring and manure use or disposal practices. [40 C.F.R. § 122.41(l)(4)(i)].

3. If the Discharger monitors any pollutant more frequently than required by Order No. R8-2018-0001 using test procedures approved under Part 136, or as specified in Order No. R8-2018-0001, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the SMR or manure reporting form specified by the Regional Board. [40 C.F.R. § 122.41(l)(4)(ii)].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in Order No. R8-2018-0001. [40 C.F.R. § 122.41(l)(4)(iii)].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of Order No. R8-2018-

0001, shall be submitted no later than 14 days following each schedule date. [40 C.F.R. § 122.41(l)(5)].

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger public health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall 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 reoccurrence of the noncompliance. [40 C.F.R. § 122.41(l)(6)(i)].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 C.F.R. § 122.41(l)(6)(ii)]:

   a. Any unanticipated bypass that exceeds any effluent limitation in Order No. R8-2018-0001. [40 C.F.R. § 122.41(l)(6)(ii)(A)].

   b. Any upset that exceeds any effluent limitation in Order No. R8-2018-0001. [40 C.F.R. § 122.41(l)(6)(ii)(B)].

3. The Regional Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24. hours. [40 C.F.R. § 122.41(l)(6)(iii)].

F. Planned Changes

1. The Discharger shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [40 C.F.R. § 122.41(l)(1)]:

   a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. § 122.29(b) [40 C.F.R. § 122.41(l)(1)(i)]; or

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in Order No. R8-2018-0001 [40 C.F.R. § 122.41(l)(1)(ii)]; or

   c. The alteration or addition results in a significant change in the Discharger's manure use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or

disposal sites not reported during the permit application process or not reported pursuant to an approved Nutrient Management Plan [40 C.F.R.§ 122.41(l)(1)(iii)].

2. Any other business operations being conducted on the facility that are not related to the operation of the dairy or wastes that are imported from off-site sources must be covered under a separate individual permit.

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Board of any planned changes in the permitted facility or activity that may result in noncompliance with the requirements of Order No. R8-2018-0001. [40 C.F.R. § 122.41(l)(2)].

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E, above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. [40 C.F.R. § 122.41(l)(7)].

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Regional Board, State Board, or USEPA, the Discharger shall promptly submit such facts or information. [40 C.F.R. § 122.41(l)(8)].

VI. STANDARD PROVISIONS – ENFORCEMENT

The Regional Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial (i.e. dairies, heifer or calf ranches), mining, and silvicultural Dischargers shall notify the Regional Board as soon as they know or have reason to believe [40 C.F.R. § 122.42(a)]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in Order No. R8-2018-0001, if that discharge will exceed the highest of the following "notification levels" [40 C.F.R. § 122.42(a)(1)]:

   a. 100 micrograms per liter (µg/L) [40 C.F.R. § 122.42(a)(1)(i)];

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [40 C.F.R. § 122.42(a)(1)(ii)];

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 C.F.R. § 122.42(a)(1)(iii)]; or

d. The level established by the Regional Board in accordance with 40 C.F.R. § 122.44(f) [40 C.F.R. § 122.42(a)(1)(iv)].

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in Order No. R8-2018-0001, if that discharge will exceed the highest of the following "notification levels" [40 C.F.R. § 122.42(a)(2)]:

a. 500 micrograms per liter (µg/L) [40 C.F.R. § 122.42(a)(2)(i)];

b. 1 milligram per liter (mg/L) for antimony [40 C.F.R. § 122.42(a)(2)(ii)];

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 C.F.R. § 122.42(a)(2)(iii)]; or

d. The level established by the Regional Board in accordance with 40 C.F.R. § 122.44(f) [40 C.F.R. § 122.42(a)(2)(iv)].

B. Publicly-Owned Treatment Works (POTWs) (Not Applicable)

ATTACHMENT B

Monitoring & Reporting Program
For
Order No. R8-2018-0001
NPDES Permit No. CAG018001

Table of Contents

Section 122.48 (40 CFR § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Specific record-keeping, monitoring, and reporting requirements applicable to CAFOs are specified in Section 122.41, 122.42(e)(2)-(4) and 412. California Water Code Sections 13267 and 13383 also authorize the Regional Board to require technical and monitoring reports. This Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements, which implement the Federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. All monitoring data must be maintained for at least five years and must be made available to Regional Board, State Board, USEPA staff and/or their authorized representatives (including an authorized contractor acting as their representative), upon request.

B. Dischargers must inspect water lines, including drinking water or cooling water lines, daily and document records of those inspections.

C. All containment structures, including, but not limited to, ponds, berms, and wastewater distribution systems (pumps, pipes, and other mechanical devices) must be inspected at least once each week during the entire year and at least once each 24-hour period during a storm event in which rainfall exceeds 0.5 inches in 24 hours. The findings of these inspections must be documented on a completed CAFO Weekly Storm Water Management Structure Inspections Log Sheet (Form 1). If sufficient space is not available on the form provided, the Discharger must provide supplemental attachment sheets, as needed. Information documented on this form and any attachments must include:

1. An estimate of the freeboard[1] for each pond or impoundment as indicated by the required depth marker.

2. Any action taken to correct deficiencies noted as a result of facility inspections. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.

3. The approximate time of each storm-related discharge that results in an off-property discharge of storm water commingled with process wastewater and/or manure, along with its approximate duration.

D. Any deficiencies found as the result of visual inspections of containment structures or water lines must be corrected as soon as possible. Records must document any actions taken to correct deficiencies. Records indicating deficiencies that are not corrected within 30-days must include an explanation of the factors that prevented immediate correction.

[1] Freeboard of a pond or impoundment is the vertical separation between the liquid level and the lowest elevation of the containment or impoundment that allows an overflow or outflow from the pond or impoundment.

E. The Discharger(s) must record each manure-hauling event on a completed Manure Tracking Manifest Form (Form 4).

F. The Discharger must retain for five years records of nutrient analysis for manure. The Discharger must make these records available on request by the Regional Board, USEPA, and its authorized representatives.

II. MONITORING LOCATIONS

A representative grab sample of the discharge must be collected for any discharge of wastes from the waste containment structures to surface waters. Each discharge event must be sampled and the samples must be collected within the first hour of discharge or soon thereafter.

III. INFLUENT MONITORING REQUIREMENTS [NOT APPLICABLE]

IV. EFFLUENT MONITORING REQUIREMENTS

The samples collected according to Section II above must be analyzed for total dissolved solids (filterable residue), *Escherichia coli*, total nitrogen, total phosphorus and total suspended solids.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS [NOT APPLICABLE]

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Land Application System Monitoring: The Discharger must conduct inspections of wastewater distribution systems on an as-needed basis, at least as frequently as cited in Section I. Any leaks or other operational problems must be corrected promptly. Records of the inspections and corrective actions must be included in the annual report.

VII. RECLAMATION MONITORING REQUIREMENTS [NOT APPLICABLE]

VIII. RECEIVING WATER MONITORING REQUIREMENTS [NOT APPLICABLE]

IX. OTHER MONITORING REQUIREMENTS

A. The Dischargers must collect a representative sample of manure, at least on an annual basis, during a corral cleaning event. The Discharger must have the sample analyzed for nitrate (as nitrogen), sodium, chloride, calcium, sulfate, potassium, total phosphorus, and total dissolved solids (filterable residue). Sample results must be retained for at least five years and must be provided to representatives of the Regional Board or USEPA upon request. The most recent manure nutrient analysis must be provided to the manure haulers.

B. Dischargers subject to an approved Nutrient Management Plan must periodically inspect equipment used for land application of manure, litter, or process wastewater

C. The Dischargers that overly the San Jacinto River Basin and the groundwater management zones located there must perform, or have performed on their behalf, groundwater monitoring of wells under their ownership or control to evaluate the potential impact of dairy operations on the underlying groundwater.

D. The Dischargers that are tributary to the Middle Santa Ana River must implement, or cause to be implemented on their behalf, the water quality monitoring plan approved by the Regional Board on June 29, 2007 in Resolution No. R8-2007-0046, as subsequently amended or revised.

1. The Discharger must submit, or cause to be submitted on their behalf, the results of the water quality monitoring to the Regional Board by May 31 of each year.

2. The results of the water quality monitoring must include an analysis designed to conclusively demonstrate achievement, or progress towards achievement, of the CAFO bacterial indicator waste load allocations pursuant to the Middle Santa Ana River Bacterial Indicator TMDLs.

3. If the analysis of the water quality monitoring results is inconclusive or reveals opportunities for improvements to the monitoring plan, the Discharger, in cooperation with other stakeholders, must include recommendations to improve the effectiveness of the monitoring program in the annual report.

X. RECORD KEEPING REQUIREMENTS

A. The Discharger must maintain records of the following on site according to the requirements of this Order:

1. Records of mortality management (Provision IV.E.)

2. Records of nutrient analysis of transferred manure (Provision IV.A.10.)

3. Records of inspections of containment structures and corrective actions (Forms 1 and 2) (Provisions I.A. and VI of Attachment B)

4. Records of inspections of water lines (Provision I.B. of Attachment B)

5. Records of manure hauling events (Form 4) (Provision IV.A.9. and Provision I.C. of Attachment B)

6. Analyses of samples of discharges to surface water (Provision II of Attachment B)

7. Annual Reports (Form 3) (Provision XI.A.3. of Attachment B)

8. Records of inspections of land application equipment as part of an NMP (Provision IX. B. of Attachment B)

9. Letters of Permission or valid exemptions pursuant to Riverside County Ordinance 427 (Provision IV.G.1.)

XI. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements/Self-Monitoring Reports

1. The Discharger must comply with Standard Provisions (Attachment A) related to monitoring, reporting, and recordkeeping.

2. At any time during the term of this Order, the State Board or the Regional Board may notify the Discharger to electronically submit reports and notices required by this Order. Until such notification is given, the Discharger must submit a hard copy of the reports and notices.

3. By January 15 of each year, the Discharger must submit an Annual Report of all previous year activities at the facility. Annual Reports must be submitted as indicated below or using an electronic method, specified by the Executive Officer, after the Executive Officer notifies the Discharger to do so in a written Notice. The Annual Report must include the following:

   a. A cover letter that clearly identifies violations of the Order; discusses corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation;

   b. A completed Summary Report of Weekly Storm Water Management Structure Inspections Form (Form 2);

   c. Completed Annual Report Form (Form 3);

   d. Sampling and analyses results of any surface discharges and manure nutrient analyses;

   e. Confirmation that written permission from agricultural operators or landowners of cropland where the Discharger's manure waste is applied is valid and in full effect;

   f. The Discharger's confirmation that markers in containment structures are valid indicators of the required minimum capacity (See Section IV.A.); and

   g. Completed Manure Tracking Manifest(s) (Form 4).

4. The Discharger must notify the Regional Board by telephone within 24 hours of any unauthorized discharge of wastes. This notification must be followed by a written report which must be submitted to the Regional Board within two weeks of the discharge. The written report must contain:

    a. The approximate date and time of the discharge;

    b. The estimated flow rate and duration of the discharge;

    c. The specific type and source of the waste discharges (e.g., overflow from holding pond, rainfall runoff from manure storage areas, etc.); and

    d. A time schedule and a plan to implement necessary corrective actions to prevent the recurrence of the discharge.

5. All reports must be signed by a responsible officer or duly authorized representative of the Discharger(s) and must be submitted under penalty of perjury.

B. Self-Monitoring Reports (SMRs) (see Section A, above)

Form 1: CAFO Weekly Storm Water Management Structure Inspections Log Sheet

Reporting Period: _____

Facility Information (Please make corrections directly on this form)
Operator's Name:
Facility Name:
Facility Address:

Instructions: Use this form to keep track of weekly visual inspections of your manure, litter, and process wastewater impoundments; storm water diversion devices; runoff diversion structures; and devices channeling contaminated storm water. Document the findings of daily storm event inspections. List the structure items that need to be inspected below (refer to your Engineered Waste Management Plan).

Keep track of your inspections in the following table by completing one row each week when you inspect your process wastewater and storm water containment structures. Provide the following information: date of inspection, initials of the person performing the inspection, check "OK" box if no problems were found, use the "Notes" column to describe problems, if you find any, and how they were fixed, record the estimate of the wastewater containment pond(s) freeboard, fill in the "Date Corrected" column with the date when you correct the problem. If a deficiency takes more than 30-days to correct, indicate the factors that prevented immediate correction.

Reporting Period: _____

Facility Name: _____

Week	Date	Initials	OK(?)	Notes (Indicate any problems and how they were remedied.)	Waste Pond Freeboard	Date Corrected
1						
2						
3						
4						
5						
6						
7						
8						

Reporting Period: _____

Facility Name: _____

Week	Date	Initials	OK(?)	Notes (Indicate any problems found and how they were remedied.)	Waste Pond Freeboard	Date Corrected
9						
10						
11						
12						
13						
14						
15						
16						
17						

Reporting Period: _____

Facility Name: _____

Week	Date	Initials	OK(?)	Notes (Indicate any problems found and how they were remedied.)	Waste Pond Freeboard	Date Corrected
18						
19						
20						
21						
22						
23						
24						
25						
26						

Reporting Period: _____

Facility Name: _____

Week	Date	Initials	OK(?)	Notes (Indicate any problems found and how they were remedied.)	Waste Pond Freeboard	Date Corrected
27						
28						
29						
30						
31						
32						
33						
34						
35						

Reporting Period: _____

Facility Name: _____

Week	Date	Initials	OK(?)	Notes (Indicate any problems found and how they were remedied.)	Waste Pond Freeboard	Date Corrected
36						
37						
38						
39						
40						
41						
42						
43						
44						

Reporting Period: _____

Facility Name: _____

Week	Date	Initials	OK(?)	Notes (Indicate any problems found and how they were remedied.)	Waste Pond Freeboard	Date Corrected
45						
46						
47						
48						
49						
50						
51						
52						

Form 2: Summary Report of Weekly Storm Water Management Structure Inspections

Reporting Period: January 1, 20 __ through December 31, 20 __

Facility Information (Please make corrections directly on this form)
Operator's Name
Facility Name
Facility Address

Was the CAFO Weekly Storm Water Management Structure Inspections Log Sheet completed for the entire year? Yes ☐ No ☐

If **No**, please explain why the log sheet was not completed for the entire year.

_____

_____

_____

Were water lines inspected daily? Yes ☐ No ☐

Do the level markers in all containment structures correctly indicate the minimum capacity to contain the runoff and direct precipitation from a 25-year, 24-hour storm event? Yes ☐ No ☐

Were there any discharges from the facility during the year? Yes ☐ No ☐

If **Yes**, please provide: the date of discharge, how it was discovered (was it during a routine site inspection?), how long did the discharge last, and how it was stopped. _____

Date of incident	How was it discovered?	How long did it last and volume?	How was it stopped?

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or 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 for knowing violations.

Name of person making this report (please print): _____

Title: _____

Signature: _____

Date: _____

Form 3: **ANNUAL REPORT FORM**

Reporting Period: January 1, 20__ through December 31, 20__
Report Due Date: **January 15, 20__**

FACILITY INFORMATION (Please make any corrections directly on this form)
CAFO Operator's Name
CAFO Facility Name
Facility Address
Mailing Address
Telephone Number

ANIMAL POPULATION (Please provide the number of animals in each category)

Milking Cows _____ Dry Cows _____ Heifers _____ Calves _____

Others (specify type and number) _____

MANURE INFORMATION Units Used : Tons _____ Cubic Yards _____

Manure Produced _____ Manure Spread on Cropland at Facility_____

Manure Spread on Other Cropland_____

Manure Stockpiled on Site as of 12/31/_____ _____

Manure Hauled Away (Also provide Manure Tracking Manifests, Form 4) _____

Has the most current nutrient analysis been provided to the recipient of the manure?
Yes _____ No_____ N/A_____

Was Manure Amount Calculated Using the Following Factors? Yes____ No ____

1 Milking cow produces approximately 4.1 tons of manure per year
1 Dry cow produces approximately 4.1 tons of manure per year
1 Heifer produces approximately 1.5 tons of manure per year
1 Calf produces approximately 0.6 tons of manure per year

*1 ton of corral manure equals 2.32 cubic yards and 1 cubic yard of corral manure equals 0.43 tons

NUTRIENT MANAGEMENT PLAN (NMP) AND NUTRIENT ANALYSIS
NMP is Certified Yes_____ No_____

CROP GROWING ACTIVITY
Number of cropland acres where manure has been applied (Cropland is contiguous to the dairy, where manure was applied and a crop was harvested).
Cropland acres:_____ No. of plantings per year: One ___ Two ___ Three ___
Type of crops grown:
Sudan grass_____ Alfalfa_____ Winter wheat_____
Barley_____ Bermuda grass_____ corn_____ Oats_____ Turf Grass_____
Vegetables_____ Others_____
Actual crop yields_____
Manure application rates_____
Amount of manure spread on each field_____

Number of Milkings per day (Dairies only): One_____ Two_____ Three_____

COMMENTS:

CERTIFICATION:

I certify under penalty of law that this document and all attachments were prepared under my direction or 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 for knowing violations.

Name of person making this report (please print): _____

Signature: _____

Date: _____

Title: _____

Form 4 — Manure Tracking Manifest

INSTRUCTIONS:

1. Complete one manifest for each hauling event and for each destination. A hauling event may last for several days, as long as the manure is being hauled to the same destination.
2. If there are multiple destinations, complete a separate form for each destination.
3. The CAFO operator must obtain the signature of the hauler upon completion of each manure hauling event.
4. The CAFO operator shall submit manure tracking manifest(s) with the Annual Report to Regional Board.

OPERATOR'S INFORMATION

CAFO Operator's Name

CAFO Facility Name

Facility Address

Mailing Address

Telephone Number

MANURE INFORMATION

Manure analyzed for nutrients? Yes ☐ No ☐

Most current nutrient analysis of manure provided to the recipient of the manure? Yes ☐ No ☐

MANURE HAULER INFORMATION

Name and Address of Hauling Company

Phone Number:

Contact Person Name:

MANURE DESTINATION INFORMATION

Hauled to (please check):

- ☐ Composting Facility
- ☐ Regional Treatment Facility
- ☐ Croplands in Riverside County
- ☐ Croplands in San Bernardino County
- ☐ Croplands in other Counties _____
- ☐ Out of State

Amount delivered: Tons or Cubic Yards
(Please enter the amount in the box below and circle the appropriate units)

Dates Hauled:

Destination of Haul: _____

GPS Coordinates of Destination
Latitude: _____
Longitude: _____

Destination Receiver of Manure: _____

Written permissions or exemptions from the recipient of the manure are valid and in full effect and have been provided to the Regional Board: ☐

Approximate Acreage (If Destination is Cropland) _____

Crop(s) Grown on Cropland _____

CERTIFICATION:

I certify under penalty of law that this document and all attachments were prepared under my direction or 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 for knowing violations.

Operator's Signature: _____ Date: _____

Hauler's Signature: _____ Date: _____

ATTACHMENT C California Regional Water Quality Control Board
Santa Ana Region

NOTICE OF INTENT

TO COMPLY WITH THE TERMS AND CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE WASTES FROM CONCENTRATED ANIMAL FEEDING OPERATIONS (DAIRIES AND RELATED FACILITIES)
(Order No. R8-2018-0001, NPDES No. CAG018001)

PERMITTEE (*Person/Agency Responsible for Discharge*)

Owner/Operator Name: _____

Mailing Address: _____
Street *City* *State* *ZIP*

Contact Person: _____ Phone (_____)_____

E-mail _____

FACILITY (Physical Address)

Name: _____

Location: _____
Street *City* *State* *ZIP*

Contact Person: _____ Phone (_____)_____

FACILITY INFORMATION

Latitude: _____ Longitude: _____

Topographic Map of Facility ____Yes ____No

Total area (acres)_____ Cropland (acres)_____ Corrals (acres)_____

Disposal/Pasture (acres) _____ Number of acres contributing drainage _____

ANIMAL POPULATION (*specify number*)

Milking Cows_____ Dry Cows_____ Heifers_____

Calves_____ Other (specify type) _____

MANURE, LITTER AND/OR WASTEWATER PRODUCTION AND USE

How much manure, litter, and wastewater is produced annually? _____tons _____gallons

If land applied, how many acres of land under the control of permittee are available for applying manure/litter/wastewater? _____acres

How many tons of manure or litter or gallons of wastewater produced will be transferred annually to other persons? _____tons _____gallons

TYPE OF CONTAINMENT AND CAPACITY

Holding Ponds (gallons) _____ Evaporation Ponds (gallons) _____

Lagoons (gallons) _____ Other (specify type) _____

TYPE OF STORAGE

Anaerobic Lagoon:	Total number of days _____	Total capacity _____
Storage Lagoon:	Total number of days _____	Total capacity _____
Evaporation Pond:	Total number of days _____	Total capacity _____
Aboveground Storage Tanks:	Total number of days _____	Total capacity _____
Belowground Storage Tanks:	Total number of days _____	Total capacity _____
Roofed Storage Shed:	Total number of days _____	Total capacity _____
Concrete Pad:	Total number of days _____	Total capacity _____
Impervious Soil Pad:	Total number of days _____	Total capacity _____
Other (specify):	Total number of days _____	Total capacity _____

NUTRIENT MANAGEMENT PLAN (NMP)

Will you comply with an existing, approved NMP for this facility? _____Yes _____No

Date of last approved review/revision of the NMP Date: _____

Are you submitting a new or amended NMP for approval for this facility? _____Yes _____No

Is the new or amended NMP enclosed? _____Yes _____No

If no, please explain_____

ENGINEERED WASTE MANAGEMENT PLAN (EWMP)

Will you comply with an existing, approved EWMP for this facility? _____Yes _____No

Date of last approved review/revision of the EWMP Date: _____

Are you submitting a new or amended EWMP for approval for this facility? _____Yes _____No

Is the new or amended EWMP enclosed? _____Yes _____No

If no, please explain_____

CERTIFICATION:

I certify under penalty of law that this document and all attachmants were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property 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 for knowing violations

SIGNATURE OF OWNER OF FACILITY

PRINT OR TYPE NAME

TITLE AND DATE

SIGNATURE OF OPERATOR OF FACILITY

PRINT OR TYPE NAME

TITLE AND DATE

ATTACHMENT D

FACT SHEET

For

General Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit, NPDES NO. CAG018001

For

Concentrated Animal Feeding Operations (Dairies and Related Facilities)

Order No. R8-2018-0001

I. INTRODUCTION

This Fact Sheet provides the legal basis and the technical rationale for requirements specified in Order No. R8-2018-0001, General NPDES Permit No. CAG018001.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Unless a section or subsection of this Order is specifically identified as "not applicable", the section or subsection is fully applicable to the Dischargers. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined to not apply to the Dischargers.

II. FEDERAL CLEAN WATER ACT AND CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOS)

The requirements specified in this Order are based on the federal Clean Water Act (CWA) and its implementing regulations contained in the Code of Federal Regulations (C.F.R.); the California Water Code (Water Code) and its implementing regulations; and plans and policies adopted by the State Water Resources Control Board (State Board) and the Santa Ana Regional Water Quality Control Board (Regional Board), including the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan).

In 1972, the Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) permit program for point source discharges. Chapter 5.5, Division 7 of the California Water Code incorporates requirements necessary for the state to implement portions of the Clean Water Act, including the NPDES permit program. The State Board and the nine regional water quality control boards are the permitting authorities that administer the NPDES permit program in California with the approval of the U.S. Environmental Protection Agency (USEPA).

The NPDES program allows the permitting authority to issue a permit for the discharge of any pollutant or combination of pollutants. 33 U.S.C. § 1342(a)(1). The CWA prohibits the discharge of pollutants to surface waters. 33 U.S.C. § 1311. If a facility requests a permit, it can discharge in accordance with the permit conditions and will be treated as a discharge from a point source. 33 U.S.C. §§ 1342,1362(14).

It is appropriate to regulate CAFOs under an NPDES permit. Federal regulations define Animal Feeding Operations (AFOs) as operations where 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 where vegetation is not sustained in the confinement area during the normal growing season. 40 C.F.R. § 122.23(b)(1)(i). Federal regulations define a CAFO as any AFO that either meets a certain animal population threshold, or, regardless of population, is determined to be a significant contributor of pollutants to waters of the United States by the appropriate authority. 40 C.F.R. § 122.23(b)(4) & (6). Section 502 of the CWA states that all CAFOs from which

pollutants are or may be discharged are point sources and thus are subject to NPDES permitting requirements.

When considering designating an AFO as a CAFO, as the result of being a significant contributor of pollutants, the appropriate authority must consider certain factors. These factors include, in part, the location of the AFO relative to surface waters, the slope, rainfall and other factors that increase the likelihood or frequency of discharges, and the impact of the aggregate amount of waste discharged from multiple AFOs in the same geographic area.

The Regional Board, as the designated authority, has determined that it is appropriate to designate all AFOs with a herd size of more than 20 cows or 50 heifers or calves within the Region as significant sources of pollutants subject to waste discharge requirements. The discharge of wastes from the AFOs within the Region are to waterbodies that are tributary to the Santa Ana River or the San Jacinto River. Therefore, the acronym "CAFO" will be used to describe all facilities regulated under Order No. R8-2018-0001.

Water Code Section 13263(i) and 40 C.F.R. § 122.28 allow the Regional Board to issue general permits to regulate discharges of wastes that meet the following criteria.

a. Waste discharges involving the same or substantially similar types of operations;
b. Discharge the same types of wastes;
c. Require the same or similar operating conditions;
d. Require the same or similar monitoring; and
e. Are more appropriately regulated under a general permit rather than an individual permit.

The discharges regulated by Order No. R8-2018-0001 satisfy the criteria in 40 C.F.R. § 122.28 and the Water Code. As such, this Order is being issued as a general NPDES permit.

CAFO facilities within the region have been regulated under a general NPDES permit since 1994. Currently, the CAFOs are regulated under General NPDES No. CAG018001, Order No. R8-2013-0001, adopted by the Regional Board on June 7, 2007. Order No. R8-2013-0001 expired on June 7, 2018. Order No. R8-2018-0001 renews the expired General NPDES permit.

III. APPLICABLE FEDERAL AND STATE CAFO REGULATIONS

The USEPA enacted CAFO regulations in 1976, 2003, 2008, and 2012. The 1976, 2003 and the 2008 regulations were challenged in the U.S. District and/or Appellate courts. The revised CAFO regulations issued by the USEPA in 2003, 2008 and 2012 were in response to the various court decisions. On July 19, 2012, the USEPA issued its final rule revising the CAFO permit regulations. The CAFO regulations are contained in 40 C.F.R. §§122.21, 122.23, 122.28, 122.42, 122.62 and 412.

The 2003 rule required all CAFOs to apply for an NPDES permit whether or not they discharged unless a "no potential to discharge" determination was approved by the permitting authority. The Second Circuit court vacated the 2003 rule's "duty to apply" and held that the permitting authority cannot require the CAFOs to apply for a permit based on a "potential to discharge." In this decision, the Second Circuit upheld USEPA's exclusion of agricultural storm water runoff from the NPDES permit requirements. This decision also indicated that the Nutrient Management Plans that were required under the 2003 rules were essentially "effluent limits" that required the permitting authority's review to determine compliance with the permit.

On November 20, 2008, the USEPA published the 2008 rule that required among other things: (1) a Nutrient Management Plan with the NPDES permit application for any application of manure and/or process wastewater to cropland. The Plan must be incorporated into the permit as enforceable effluent limitations; and (2) all CAFOs that "propose to discharge" must apply for an NPDES permit unless a voluntary certification is made by the CAFO that the facility is designed, constructed, operated and maintained to prevent any discharge. This 2008 rule essentially established a "duty to apply" liability scheme. The 2008 rule was petitioned by a number of the industry groups.

These petitions were consolidated and on March 15, 2011, the Court of Appeals for the Fifth Circuit issued its ruling regarding the 2008 rule. It held that the USEPA has no authority to require a CAFO without a discharge to apply for an NPDES permit. Furthermore, the Court also invalidated the "duty to apply" liability scheme.

On July 19, 2012, USEPA issued its final rule to revise the CAFO permit regulation. In the 2012 rule, the USEPA removed the requirement that CAFOs that "propose to discharge" must seek NPDES permit coverage. This Order implements the federal CWA, USEPA regulations, and state laws and regulations applicable to CAFOs.

This General NPDES permit does not require CAFOs that do not discharge to surface waters to seek NPDES permit coverage. However, CAFO operations could adversely impact surface and groundwater quality. Those CAFOs that discharge pollutants to surface waters but do not get coverage under this General NPDES Permit, alternatively must obtain individual waste discharge requirements pursuant to state law. At the October 26, 2012 Regional Board meeting, Regional Board staff discussed the status of the dairy permit and the trade associations representing the CAFOs expressed their support for reissuance of the existing permit as a general NPDES permit.

Title 27 of the California Code of Regulations, Division 2, Subdivision 1, Chapter 7, Subchapter 2, Article 1 prescribes minimum standards for discharges of animal waste at confined animal facilities to protect both surface and ground water. Section 22562 of Title 27 also requires CAFOs to design and construct retention ponds to retain all facility wastewater generated, together with all precipitation on, and drainage through, manured areas during a 25-year, 24-hour storm. The retention ponds are to be lined with, or underlain by, soils which contain at least 10 percent clay and not more than 10 percent gravel or artificial materials of equivalent impermeability. Title 27, section 22562(d). In addition, there are flood protection requirements for CAFOs. Title 27, section 22562(c).

IV. DAIRY WASTES AND THEIR IMPACTS ON WATER QUALITY

According to Regional Board records of Annual Reports submitted for the 2017 reporting period, there are approximately 109 dairy related AFOs in the Santa Ana Region. Of these, 84 are in the Santa Ana River Basin and 25 are in the San Jacinto River Basin. There are approximately 126,000 animals on dairy facilities in the Region. These animals consist of 67,000 milking cows; 11,400 dry cows; 31,500 heifers; 13,000 calves; and 3,100 others (beef cows, bulls, horses, etc.).

CAFO operations produce wastes consisting of manure and urine excreted by the animals, wastewater from the milk barn, litter and storm water runoff through manured areas. These wastes generally contain high levels of bacteria; nutrients (including nitrogen, phosphorus, potassium and ammonia compounds); salts (total dissolved solids, TDS); hormones; and biochemical and chemical oxygen demands (indicators of decomposable materials).

A study conducted by the University of California Committee of Experts for the Central Valley Region recommends using an average nitrogen excretion rate of 462 grams/head/day for lactating cows and 195 grams/head/day for dry cows[1]. An adult cow typically spends 305 days per year lactating and 60 days per year dry[2]. Therefore, 1,000 adult cows will produce approximately 339,000 pounds (169.5 tons) of nitrogen per year. Between 20% and 40% of nitrogen from wastewater and manure in storage lagoons and corrals is emitted to the atmosphere as ammonia[3]. Additional emissions will occur as part of land application of wastewater and manure.

In addition to nitrogen, the average adult dairy cow will excrete 427 pounds per year of salts as sodium, potassium, and chloride[4]. The total excreted salts are typically 50% higher and up to 100% higher than the combination of sodium, potassium and chloride[5]. Assuming typical conditions of 50%, 1,000 adult cows will produce approximately 641,000 pounds (320 tons) of salt per year in addition to nitrogen. Unlike nitrogen, no losses occur with these salts in the handling of manure or wastewater.

If nutrients and decomposable materials from the CAFOs enter waterways, they can deplete dissolved oxygen which could adversely impact aquatic life. High bacteria levels could impact recreational activities and ammonia could cause aquatic toxicity. Bacteria, salts and nitrates in the dairy wastes could infiltrate into groundwater from waste containment facilities. In groundwater, nitrate levels can increase to unhealthy levels, which can cause Blue Baby Syndrome, a potentially fatal blood disorder, if the water is consumed.

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[1] Committee of Experts on Dairy Manure Management, 2003. *Managing dairy manure in the central valley of California*, University of California, Division of Agriculture and Natural Resources, September 2003 (revised June 2005).
[2] *Ibid.*
[3] *Ibid.*
[4] *Ibid.*
[5] *Ibid.*

Dairies also produce atmospheric emissions. Dairy wastewater is generally stored in waste storage lagoons or other containment structures. Bacterial decomposition of wastes in the storage lagoons also produces methane and ammonia gas. This Order does not regulate the operation of new sources of atmospheric emissions.

Discharges to waters of the U.S. from the CAFOs can occur in storm water runoff from the production area or from the land application area[6]. Discharges to groundwater can occur in wastewater and precipitation that percolates into the soil underlying waste containment structures and waste stockpiles at the facility. Proper management of wastes from CAFOs is essential to protect surface and groundwater resources of the Region. If left unregulated, these discharges of wastes in storm water runoff and wastewater from CAFOs in the Chino Basin (Chino-North, Chino-East, and Chino-South Groundwater Management Zones) have a potential to affect Chino Creek, Mill Creek and Reach 3 of the Santa Ana River. Pursuant to CWA section 303(d), these surface waterbodies are listed as impaired due, in part, to bacterial indicators.

The Chino Basin was once considered to have the highest concentration of dairy animals in the world, with approximately 350 dairies and over 300,000 animals[7]. During the past 20 years, however, the dairies have been steadily leaving this area. According to the dairy operators' 2017 annual reports, there are currently 84 facilities in the Chino Basin with a total of 78,000 animals. Although the waste loading from the dairies has decreased significantly, historic application of manure and process wastewater to the ground in the Chino Basin has resulted the accumulation of salts in the underlying soils and groundwater. The result has been significant groundwater degradation, specifically due to high levels of total dissolved solids (TDS) and nitrate.

There are an additional 25 CAFO facilities in the San Jacinto River Basin, with a total of 48,000 animals. Wastes from CAFOs in the San Jacinto River Basin have a potential to affect the San Jacinto River, Canyon Lake and Lake Elsinore if left unregulated. Canyon Lake and Lake Elsinore are included on the CWA section 303(d) list of impaired water bodies due to nutrients. Nitrate and phosphorus from various sources, including CAFOs, is considered to be the primary cause of algae blooms in Lake Elsinore, the largest natural freshwater lake in Southern California. These algae blooms deplete oxygen in the lake, creating fish kills and other conditions that affect the recreational uses of the lake and aesthetics of the area. Excessive nutrient discharges to Canyon Lake have also resulted in algae blooms and reduced oxygen levels.

Prior to 1994, Regional Board's regulatory approach was to issue individual waste discharge requirements. However, frequent changes in the herd size, location, and operators or owners of such facilities combined with the related demand for permit rescission and issuance far exceeded the available staff resources. Therefore, in 1994, the Regional Board adopted Order No. 94-7, the first general NPDES for these facilities. Order No. 94-7 was replaced by Order No. 99-11 which was later replaced by Order No. R8-2013-0001. Order No. R8-2013-0001 expired on June 1, 2018. Adoption

[6] Land application area is any area under the control of a CAFO owner or operator where manure, bedding, or process water is applied. 40 C.F.R. § 122.23(b)(3).
[7] Santa Ana Watershed Planning Agency, 1974. Dairy waste management. Albert A. Webb Associates, March 1974.

of Order No. R8-2018-0001 is an appropriate way to continue regulatory oversight of the CAFOs within the Region.

V. PERMIT COVERAGE/NOTIFICATION REQUIREMENTS

The purpose of this Order is to regulate the discharge of pollutants from CAFOs so that the water quality standards of receiving waters are attained and maintained. To obtain coverage under this Order, the Discharger must submit a completed Notice of Intent (NOI) form, an Engineered Waste Management Plan (EWMP) for all facilities where the herd is kept, a Nutrient Management Plan (NMP) if the facility is proposing to apply CAFO biomass to cropland owned or controlled by the Discharger, and the first annual fee. All facilities currently regulated under Order No. R8-2013-0001 have approved EWMPs and NMPs (where applicable). These plans need to be updated only if there are substantial changes in its operations that affect the Discharger's ability to comply with this Order or if the Discharger does not intend to implement them.

VI. DISCHARGE DESCRIPTION

(See Section IV, above)

A. Description of Wastewater and Biosolids Treatment or Controls [Not Applicable]

B. Discharge Points and Receiving Waters

The CAFO facilities within the Region are located either within the Santa Ana River Basin or the San Jacinto River Basin. Discharges from these facilities could impact Santa Ana River and its tributaries, San Jacinto River, Canyon Lake, Lake Elsinore and the groundwater management zones within these areas.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Order No. R8-2013-0001, which this Order replaces, prohibited discharges to surface waters other than from facilities designed and maintained to contain process wastewater, including runoff and direct precipitation resulting from a 25-year, 24-hour storm event, or equivalent. In addition, Order No. R8-2013-0001 required the Dischargers to develop and implement an EWMP and an NMP, where applicable. The Dischargers were also required to submit an Annual Report.

D. Compliance Summary

The Annual Reports submitted by the Dischargers indicate that the CAFOs within the Region are mostly in compliance with the permit requirements.

The Dischargers have submitted EWMPs and those who land-apply CAFO biomass have also submitted their NMPs.

E. Planned Changes

Any change in ownership of the facility and changes in the herd size, treatment and containment systems and cropland acreage could trigger a need to update the EWMPs and the NMPs.

VII. APPLICABLE PLANS, POLICIES, AND REGULATIONS

A. Legal Authorities

(See Sections II and III for applicable state and federal laws and regulations)

B. California Environmental Quality Act (CEQA)

This Order is both an NPDES permit, issued pursuant to federal law, and waste discharge requirements (WDRs), pursuant to State law. This Order only regulates existing facilities that are currently regulated under the 2013 General Permit (Order No. R8-2013-0001). California Code of Regulations, Title 14, Section 15301 exempts existing facilities from CEQA requirements.

Furthermore, the action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21000-21177, under Water Code Section 13389. Requirements for "new sources" as defined in Section 306 of the CWA are not covered by the exemption. A "new source" must demonstrate that it qualifies as an existing facility under the CEQA Guidelines to be considered for coverage under this Order.

Food and Agricultural Code Section 33487 exempts state agencies from any requirement to prepare a CEQA document for CAFOs under the following circumstances: (1) when the dairy will be constructed and operated in accordance with the minimum standards in Chapter 5 of the Food and Agricultural Code; (2) where the applicable local agencies have completed all necessary reviews and approvals including that required by CEQA; and (3) where a permit for construction was issued by a local agency on or after the effective date of Food and Agricultural Code section 33487 and construction has begun.

As such, the issuance of this Order complies with CEQA requirements.

C. Basin Plan

The Regional Board adopted a revised Water Quality Control Plan for the Santa Ana Region (Basin Plan) that became effective on January 24, 1995 (Resolution No. 94-1). The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the Santa Ana Region. Sections I.M.30 and 31 of the Order list the

designated beneficial uses of the receiving waters that could be impacted by the CAFO discharges.

On January 22, 2004, the Regional Board adopted Resolution No. R8-2004-0001, amending the existing Basin Plan for the Santa Ana River Basin. The amendment (TDS/Nitrogen Basin Plan Amendment) included revised groundwater sub-basin boundaries (now called groundwater management zones), revised TDS and nitrate-nitrogen quality objectives for groundwater, revised TDS and nitrogen waste load allocations (WLAs) and changes to specific surface water objectives. The changes to surface water objectives include revised TDS and nitrogen objectives, revised reach designations and revised beneficial use designations. This Order implements relevant provisions of the approved N/TDS Basin Plan Amendment.

As part of the update of the TDS/Nitrogen Management plan in the Basin Plan, the Chino Basin Watermaster and the Inland Empire Utilities Agency (IEUA) proposed that alternative, less stringent TDS and/or nitrate-nitrogen water quality objectives be adopted for the Chino-North and Cucamonga Groundwater Management Zones. These proposals were based on additional consideration of the factors specified in Water Code section 13241 and the requirements of the State's antidegradation policy (State Board Resolution No. 68-16). Since the less stringent objectives would allow a lowering of water quality, the aforementioned agencies were required to demonstrate that their proposed objectives would protect beneficial uses, and that water quality consistent with maximum benefit to the people of the state would be maintained.

Appropriate beneficial use protection/maximum benefit demonstrations were made by the Chino Basin Watermaster/Inland Empire Utilities Agency (IEUA) to justify alternative "maximum benefit" objectives for the Chino-North and Cucamonga Groundwater Management Zones. These "maximum benefit" proposals entail commitments by the agencies to implement specific projects and programs. While these agencies' efforts to develop these proposals indicate their interest to proceed with these commitments, unforeseen circumstances may impede or preclude progress. To address this possibility, the 2004 Basin Plan Amendment includes both the "antidegradation" and "maximum benefit" objectives for the subject waters. Fulfillment of the commitments by the agencies equates to maximum benefit, and the "maximum benefit" objectives included in the Basin Plan Amendment for these waters apply for regulatory purposes. Failure to fulfill the commitments, as determined by the Regional Board in its discretion, means that the prerequisite "maximum benefit" has not been provided and that accordingly the "antidegradation" objectives for these waters will apply. To date, these agencies have been implementing the commitments necessary to demonstrate maximum benefit, so the maximum benefit water quality objectives apply for regulatory purposes of this Order.

The application of the "maximum benefit" objectives relies on implementation of a specific program of projects and requirements, which are a part of the Chino Basin Optimum Basin Management Program (OBMP), by the Chino Basin Watermaster and the IEUA. The OBMP was developed by the Watermaster under the supervision of the

San Bernardino County Superior Court. The OBMP is a comprehensive, long-range water management plan for the Chino Basin, including the Chino-North and Cucamonga Groundwater Management Zones. The OBMP includes the use of recycled water for basin recharge, initially in the Chino-North Groundwater Management Zone. The OBMP also includes the capture and recharge of increased quantities of storm water runoff, recharge of imported water when its TDS concentrations are low, improvement of water supply by desalting poor quality groundwater, and enhanced wastewater pollutant source control programs. The OBMP seeks to provide enhanced yield for the Chino Basin and to provide reliable water supplies for development expected to occur within the Basin. The OBMP also includes management activities that would result in the hydraulic isolation of Chino Basin groundwater from the Orange County Management Zone, thus insuring the protection of downstream beneficial uses and water quality. Wastewater discharges and some manure from CAFOs in the Chino Basin have been factored into the OBMP.

Order No. 99-11 was adopted by the Regional Board with a prohibition on the disposal of manure in the Chino Basin through land application. The use of manure as a fertilizer was also prohibited in the Chino Basin "unless a plan, acceptable to the Executive Officer, is implemented which mitigates the effects of that use on the underlying groundwater sub-basin". This prohibition was necessitated in part by the lack of assimilative capacity of the underlying groundwater and by the lack of progress in developing a program to offset salt loading from dairies.

Shortly after adopting Order No. 99-11, the Regional Board adopted Cease and Desist Order (CDO) No. 99-65. CDO No. 99-65 modified the prohibition in Order No. 99-11 to allow the land application of manure at agronomic rates provided that progress was being made "toward the construction and operation of a second desalter within the Chino Basin". Among other things, CDO No. 99-65 established time schedules for the affected Dischargers to comply with other requirements of Order No. 99-11.

When the maximum benefit objectives were adopted by the Regional Board with Resolution No. 2004-0001, they effectively created assimilative capacity in the groundwater management zones where the remaining dairies are located. This assimilative capacity, as noted above, is generally conditioned upon the success of the OBMP. Among its accomplishments, the OBMP has since resulted in the construction and operation of a second desalter in the Chino Basin. This second desalter, along with the assimilative capacity, allowed the Regional Board to approve nutrient management plans for dairies in the Chino Basin shortly after the General CAFO Permit, Order No. 2007-0001, was adopted.

D. National Toxics Rule (NTR) and California Toxics Rule (CTR). [Not applicable]

USEPA adopted the National Toxics Rule (NTR) on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the California Toxics Rule (CTR). The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. The CTR and NTR contain water

quality criteria for priority pollutants in discharges to surface water. However, the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* adopted by the State Water Resources Control Board (State Implementation Policy or SIP) states that the Policy does not apply to regulation of storm water discharges. The Regional Board believes that compliance with Water Quality Standards through implementation of BMPs is appropriate for regulating dairy discharges. The USEPA articulated this position on the use of BMPs in storm water permits in the policy memorandum entitled, "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits" (61 FR 43761, August 9, 1996). The USEPA also has articulated this position with respect to implementing TMDLs in their policy memorandum entitled *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on those WLAs*, November 22, 2002. This Order is consistent with the SIP and the USEPA's November 22, 2002 memorandum.

E. State Implementation Policy. [Not Applicable]

(See Section D above)

F. Alaska Rule

(See Finding I.X.41. of the Order)

G. Antidegradation Policy

Federal regulations at 40 C.F.R. § 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings.

The federal anti-degradation policy as set forth in 40 C.F.R. § 131.12 and the state's antidegradation policy as set forth in State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality Waters in California" are applicable to NPDES permitting process, including permit renewals. The federal policy only applies to surface water quality and it protects existing beneficial uses, includes special provisions for waters designated as an "outstanding natural resource" and establishes baseline water quality as the best water quality that existed since the adoption of the policy in 1975.

The State anti-degradation policy is more inclusive. It is applicable to both surface and groundwaters; incorporates the federal policy, protects existing and reasonable potential beneficial uses and establishes the baseline water quality as the best water quality that existed since 1968, unless subsequent lowering was due to regulatory action consistent with Resolution No. 68-16.

The state has developed guidance for the implementation of its anti-degradation policy in the Administrative Procedures Manual, APU Number 90-004 and in a February 16, 1995 Questions and Answers document[8]. The USEPA has provided guidance through its "Questions and Answers on Antidegradation" and Guidance on implementing the Antidegradation Provisions of 40 C.F.R. § 131.12" [9, 10]. The State Board also published an October 7, 1987 legal memorandum, "Federal Antidegradation Policy" [11]. The following antidegradation analysis is based on these regulations and guidance documents.

An antidegradation analysis is required if the proposed action (in this case renewal of the NPDES permit) causes a lowering of water quality in "high quality" receiving waters. "High quality waters" are those where the baseline water quality is better than the prescribed water quality objective. The baseline water quality is the best quality of the receiving water that has existed since 1968, minus any degradation due to regulatory action consistent with state and federal anti-degradation policies.

Based on the water quality objectives and the existing water quality, there are three tiers to be considered with respect to water quality objectives and existing water quality in applying federal antidegradation principles:

1. Tier I: Existing water quality is lower than the water quality objectives.

2. Tier II: Where the baseline water quality is better than the water quality objectives (high quality waters).

3. Tier III: Specially designated as "Outstanding National Resource Waters" (there are no Tier 3 waters within the Santa Ana Region; Lake Tahoe and Mono Lake are the two Tier III waterbodies in California).

For Tier I (where the existing water quality is lower that the water quality objectives) or Tier III (outstanding national resource waters) waterbodies, if the proposed discharge causes a lowering of the existing water quality, that discharge should be prohibited.

For Tier II (high quality waters, where the baseline water quality is better than the prescribed water quality objective), any lowering of water quality has to be consistent with the maximum benefit to the people of the state.

Generally, a lowering of water quality is triggered by:

1. New discharges;
2. Expansion of existing facilities;
3. Reduction in the level of treatment for an existing discharge;
4. Relocation of outfalls; and/or

[8] http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/apu_90_004.pdf
[9] Water Quality Standards Handbook, Second Draft, USEPA, June 1989
[10] All these documents are available at: http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/apu_90_004.pdf
[11] Available at: http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/apu_90_004.pdf (Some of the State Board decisions related to antidegradation is also available at this website.)

5. Substantial increases in mass emissions of pollutants.

For high quality waters, if a discharge of waste would lower the baseline water quality, then antidegradation requirements must be met. Resolution 68-16 establishes a two-step process to comply with the policy. In the first step, an antidegradation analysis should demonstrate: (1) beneficial uses would continue to be protected; (2) the established water quality objectives would be met; and (3) any lowering of water quality would be consistent with maximum benefit to the people of California. In the second step, any discharges to high quality waters must implement best practicable treatment or control to assure that a pollution or nuisance will not occur and to assure the highest water quality consistent with maximum benefit to the people of California. Best practicable treatment or control means levels that can be achieved using best efforts and reasonable control methods.

The proposed Order does not permit new discharges; the level of waste treatment required under the proposed Order is not any less stringent than the existing Order; the outfalls are not being relocated; and the Order does not authorize any increases in mass emissions of pollutants. In fact, there is approximately a 25% reduction in the mass emissions from the previously permitted discharges due to a reduction in the total number of animals at the dairies.

This Order covers only existing facilities. Although these facilities may change ownership and the herd size may vary, the overall waste load is not increasing. The waste load has been steadily decreasing as these operators relocate their facilities outside of the Region. It is anticipated that this trend will continue. The proposed Order merely renews the general NPDES permit for existing dairies within the Santa Ana Region. It is not applicable to any new facilities.

Order No. R8-2013-0001, the existing NPDES permit for the CAFOs in the Region, regulated 127 CAFO facilities with a total animal population of 172,000. According to Annual Reports submitted by the dairy operators for 2017, the number of CAFOs has been reduced to 109 and the total animal population has reduced to 126,000. Any new discharges that will result in additional waste loads will not be able to seek coverage under this general permit. Those discharges will need to be addressed under an individual permit and an appropriate antidegradation analysis may need to be conducted at that time.

There are no high-quality waters in the San Jacinto Watershed, and as such the antidegradation policy does not apply to discharges in that area. Dischargers in the San Jacinto Watershed are required to meet the applicable water quality objectives, or more stringent limitations if such limitations could be met by the use of "best efforts."

A full antidegradation analysis may not be necessary in this case for the following reasons.

1. The permit is only applicable to existing facilities. There is no reason to believe that existing water quality will be lowered due to the proposed action, namely

renewal of an existing NPDES permit for a reduced number of existing facilities. There is a substantial reduction in the number of animals and consequently in the mass emissions of pollutants. As such, the discharges from the existing CAFOs are not expected to lower water quality in the receiving waters. According to APU 90-004, "if the Regional Board has no reason to believe that existing water quality will be reduced due to the proposed action, no antidegradation analysis is required." (APU 90-004, Page 2).

2. With respect to surface waters, a discharge is allowed only in case of severe storm events (25-year, 24-hour storm or higher intensity storms). Therefore, any reduction in water quality from such a discharge will be temporary and will not result in any long-term deleterious effects on water quality as the discharges will cease after the storm event. (APU 90-004, Page 2, Item 2). No antidegradation analysis is required.

3. The CAFOs regulated by this Order are located either within the upper Santa Ana Basin (Chino Basin) or the San Jacinto Watershed. During the adoption of the water quality objectives for some of the groundwater management zones within these basins, a maximum benefit analysis was conducted for the Chino North and San Jacinto upper pressure groundwater management zones. The maximum benefit programs include implementation strategies for the Chino Basin and the San Jacinto upper pressure ground water management zones that are outlined in Tables 5-8a and 5-11, respectively, of the Basin Plan. The Chino Basin Optimum Basin Management Program and Hemet/San Jacinto Water Management Plan are designed to address water quality problems from various types of discharges into these groundwater management zones. The Program and Plan have been approved by their respective agencies and have been adequately subjected to environmental and economic analyses in an environmental impact report. The Program and Plan consider all discharges and offset programs to prevent water quality degradation and/or to restore water quality. As such, a separate analysis is not necessary during this permit renewal process[12].

[12] State Water Resources Control Board. Administrative Procedures Update No. 90-004, effective date: July 2, 1990 (p 2, item 4).

The CAFOs regulated by this Order are located within the following groundwater management zones (see Table 1, below):

Table 1
Location of Dairies and the Respective Groundwater Management Zones

Groundwater Management Zone	Number of Dairies	Max Benefit?	High Quality Water?
San Jacinto Upper Pressure	7	Yes[13]	No
San Jacinto Lower Pressure	1	No	No
Lakeview/Hemet North	16	No	No
Menifee	1	No	No
Elsinore	1	No	No
Chino North	79	Yes	Yes for TDS. No for NO^3-N
Chino South	1	No	No
Chino East	1	No	No
Prado Basin (Wetland)	1	No	No
Arlington	1	No	No

(The table above only identifies high quality waters that are listed in the Basin Plan.)

Table 1 indicates that 86 dairies in the region are located within a groundwater management zone for which a complete "maximum benefit analysis", including anti-degradation analysis, has been completed. The Chino Basin Optimum Basin Management Program includes specific programs and projects that the Chino Basin Watermaster and the Inland Empire Utilities Agency are required to implement. The Optimum Basin Management Program also considered waste discharges from the CAFOs in Chino Basin. The dairies that are located within other groundwater management zones are prohibited from discharging wastes into those basins that would lower the water quality unless a program is being developed that would offset all discharges of waste exceeding the water quality objective.

There are a number of operating and proposed offset programs to address salt and nutrient problems in the groundwaters of the region. In the Chino Basin area, there are two desalters operated by the Chino Basin Desalter Authority. The Chino Basin

[13] The Regional Board approved the Maximum Benefit Analysis for this groundwater management zone; other approvals are pending for this Analysis.

Desalter Authority is a Joint Exercise of Powers Agency formed between Jurupa Community Services District, the Santa Ana River Water Company, the Cities of Chino, Chino Hills, Norco and Ontario, Western Municipal Water District and the Inland Empire Utilities Agency. The Chino Desalters pump groundwater from lower Chino Basin, purify it through reverse osmosis or ion exchange processes, and distribute the product water to member agencies. The brine wastes from the treatment processes are discharged into a regional brine line where they are ultimately conveyed to the ocean. Chino Desalter I extracts groundwater from 14 wells and has a treatment capacity of 14.2 million gallons per day. Chino Desalter II pumps water from 8 wells and has a capacity of 10 million gallons per day. The Regional Board considers these desalters as acceptable offset projects for waste discharges to the various groundwater management zones where the CAFO facilities are located.

The CAFO facilities within the Chino Basin area, represented by the Chino Basin Overlying Agricultural Pool, are signatories to an agreement: "Agreement Regarding an Alternative Water Supply Source for the Replenishment Obligation of the Chino Basin Desalter", July 10, 1996. This is an agreement between the Regional Board, the Chino Basin Watermaster, the Chino Basin Appropriative Pool, the Chino Basin Overlying (Agricultural) Pool and the Chino Basin (Non-Agricultural) Pool. This agreement mandates salt offset requirements on the Overlying Agricultural Pool members.

The Arlington Desalter extracts and treats groundwater from the Arlington Groundwater Management Zone. There are no operating dairies that impact this Zone.

Eastern Municipal Water District (Eastern) operates two desalters in the San Jacinto watershed: (1) Perris I; and (2) Menifee. These facilities have a combined capacity of 8 million gallons per day. Eastern is also proposing to construct another desalter, Perris II, with a design capacity of 5.4 million gallons per day.

On behalf of the CAFO operators in the San Jacinto Basin, the Western Riverside County Agriculture Coalition has submitted a Dairy Salt Offset Proposal to Eastern Municipal Water District[14]. The proposed Order requires the Dischargers to participate in the offset programs for any discharge of wastes in excess of the water quality objectives to these basins as further discussed in Section VII.

The second step of an anti-degradation analysis, the Regional Board must consider best practicable treatment or control (BPTC) of the discharge necessary to avoid a pollution or nuisance and to maintain the highest water quality consistent with the maximum benefit to the people of the State. In considering BPTC, costs for the treatment or control should be considered. The analysis must compare the proposed method to existing proven technology; evaluate performance data, and compare alternative methods of treatment or control. The Regional Board must also consider USEPA-promulgated best available technology economically achievable

[14] Dairy Salt Offset Proposal to EMWD, by the Western Riverside County Agriculture Coalition (by Pat Boldt, WRCAC Executive Director)

(BAT). The USEPA had not promulgated any BAT that is applicable to groundwater protection for the CAFOs. Nevertheless, the state's Anti-Degradation Policy applies to both surface and groundwater.

The proposed Order requires the Dischargers to continue to maintain and properly operate the existing waste containment structures. One option to ensure groundwater protection from these waste ponds is to fully line these ponds with impermeable liners, such as high-density polyethylene liners (HDPE) or clay liners. Regional Board staff has considered cost estimates for projects within the region.

Approximately ten years ago, the Natural Resources Defense Council (NRDC) sued Glenn Gorzeman Dairy and entered into a settlement agreement that included stipulations for lining the dairy's ponds. According to information provided by Mr. Gorzeman to Board staff, the total cost of the liner installation was approximately $200,000. Mr. Gorzeman indicated that, due to the financial burden from this requirement, the dairy could not continue in business. The dairy discontinued its operations within two to three years of lining the ponds.

Western United Dairymen indicated that the approximate cost of HDPE liners today is $100,000 to $200,000 (depending upon the size of the ponds) and the additional cost of cleaning the existing ponds and lining them would be from $100,000 to $150,000. Consequently, the total cost of retrofitting the existing ponds with liners (or installing new ponds with liners) would be from $200,000 to $350,000.

A cost estimate of liners was conducted by Washington State University[15]. The cost of constructing a lagoon with a liner and, if native soil is unsuitable to support the liner, imported fill, ranges between $90,000 to $625,000. This cost does not include the cost of cleaning existing lagoons and regrading.

The dairies are currently under financial distress and uncertainty due to global competition for commodities, fluctuation in global demand, and reduced federal price supports[16, 17, 18]. The added cost of such a regulatory requirement would force many dairies to entirely discontinue their operations. This would have economic impacts such as loss of local and state jobs, energy and environmental concerns related to long distance hauling of dairy products, and loss of tax revenue for local municipalities.

For reasons explained above, the Dischargers' participation in the salt offset programs should be considered as best practicable controls under the circumstances. The dairies are also implementing other control measures such as

[15] Liu, Q., Shumway, C.R., Myers Collins, K. 2003. The economics of dairy nutrient management. Washington State University Cooperative Extension. Available at: https://research.wsulibs.wsu.edu:8443/xmlui/bitstream/handle/2376/5261/EB1947E.pdf?sequence=1
[16] Haldon, H. 2017. Got milk? Too much of it say U.S. dairy farmers. The Wall Street Journal, May 20, 2017. Available at: https://www.wsj.com/articles/got-milk-too-much-of-it-say-u-s-dairy-farmers-1495278002
[17] Smith, T. 2018. As milk prices decline, worries about dairy farmer suicides rise. National Public Radio (NPR), February 27, 2018. Available at: https://www.npr.org/2018/02/27/586586267/as-milk-prices-decline-worries-about-dairy-farmer-suicides-rise
[18] Laughton, C. 2018. Challenging outlook for dairy industry. Farm Credit East. January 16, 2018. Available at: https://www.farmcrediteast.com/knowledge-exchange/Blog/todays-harvest/2018-dairy-webinar-outlook

reduced application of manure and process wastewater to cropland according to their Nutrient Management Plans and better control of source water through substitution of low-quality groundwater with higher-quality recycled water. These controls are being implemented and carefully monitored to ensure water quality protection.

The Chino Basin Watermaster, the Inland Empire Utilities Agency, Eastern Municipal Water District, Western Municipal Water District and other water purveyors and stakeholders in the region carry out regular monitoring of the groundwater management zones indicated in Table 1, above, and other groundwater management zones within the region. These are watershed-based comprehensive monitoring programs.

During the triennial review of the Basin Plan, all the monitoring information that is generated is considered to determine water quality trends. These triennial reviews include a comprehensive review of all monitoring data using sophisticated computer modeling programs. The implementation plan in the Basin Plan describes actions by various entities necessary to enhance and/or maintain water quality in the region. The triennial review also considers the existing control measures and evaluates the need for any additional control measures to ensure continued protection of water quality consistent with the adopted water quality objectives. These monitoring programs, control measures and continued evaluation of the effectiveness of these programs should ensure protection of ground and surface water quality in the region.

The monitoring programs, control measures and offset programs described above should ensure that any degradation of high quality waters is consistent with the antidegradation policies, that there is no degradation of other groundwater management zones, and any degradation of surface waters will be temporary and will not result in any long-term deleterious effects.

A technical report, *Addressing Nitrate in California's Drinking Water*s, was submitted to the Legislature in February 2013[19]. The report was based on a study conducted by the University of California, Davis with a focus on Tulare Lake Basin and Salinas Valley Groundwater. The report describes recommendations to address nitrate in groundwater. The Santa Ana Regional Water Quality Control Board has been implementing a number of the recommendations. One of the recommendations (Recommendation 6) in this Report is for the Water Boards to define and identify nitrate high-risk areas in order to prioritize regulatory oversight and assistance efforts in these areas. The Santa Ana Regional Board has been implementing such a program. The proposed Order requires participation in groundwater monitoring and reporting programs under Section IV.J. designed to continue such identification and remedial activities.

As discussed above, the discharges covered by this Order are not permitted to adversely affect water quality and therefore are consistent with the antidegradation provisions of 40 C.F.R. § 131.12 and State Board Resolution No. 68-16.

[19] Harter, T. *et al*, 2012. Addressing nitrate in California's drinking water. Center for Watershed Sciences, University of California, Davis, January, 2012. Available at: http://groundwaternitrate.ucdavis.edu/files/138956.pdf

H. Anti-Backsliding Requirements

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. § 122.44(l) prohibit backsliding in NPDES permits. Federal regulations limit the circumstances under which modified or reissued NPDES permits may set less stringent effluent limitations than required by previous permits. 40 C.F.R. §§ 122.44(1), 122.62. The Water Quality Act of 1987 includes provisions intended to clarify the Clean Water Act's anti-backsliding requirements. Clean Water Act § 402(o), 33 U.S.C. §1342(0).

The anti-backsliding provisions generally prohibit relaxation of effluent limitations previously established on the basis of best professional judgment. CWA § 402(o)(J); 33 U.S.C. § 1342(o)(l). But the prohibition does not apply if any of five listed exceptions is applicable. CWA § 402(o)(2), 33 U.S.C. § 1342(o)(2). These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Other standards and conditions (such as monitoring requirements) must be as stringent as those in the previous permit, unless there is a material and substantial change in circumstances that would constitute cause under 40 C.F.R. § 122.62. 40 C.F.R. § 122.44(l). As described below, all effluent limitations in this Order are at least as stringent as those in the previous Order.

The Dischargers in the Prado Basin Management Zone were required to demonstrate that the Chino Basin Optimum Basin Management Program addressed the discharges from the CAFOs. The Chino Basin Optimum Basin Management Program includes specific programs and projects that the Chino Basin Watermaster and the Inland Empire Utilities Agency are required to implement in collaboration with other entities. These programs are being implemented by these agencies. Order No. R8-2007-0001 required the Dischargers to develop and submit a plan. There were 14 CAFOs located in this area at the time the 2007 Order was adopted. These CAFOs developed and submitted a plan as required; however, there is now only one active dairy in the Prado Basin Management Zone.

Order No. R8-2013-0001 prohibited the discharge of wastes from the CAFOs containing TDS and/or nitrogen concentrations in excess of the underlying groundwater management zone objectives for those constituents unless adequately offset to the satisfaction of the Executive Officer. The CAFO dischargers, in collaboration with other stakeholders in the area, have implemented salt and nutrient offset programs and other control measures consistent with the 2013 Permit requirements. This Order requires the Dischargers to continue to implement those programs, evaluate their effectiveness, and to participate in the monitoring programs to ensure that the control measures that are being implemented are protective of water quality objectives. These requirements are fully explained in Section VIII of the Fact Sheet and they are at least as stringent as the 2013 Permit requirements. As such, the provisions in the 2013 Permit are consistent with the anti-backsliding requirements.

I. Impaired Water Bodies on CWA 303(d) List and TMDL Implementation

The CAFO facilities within the Region are located either in the Santa Ana River or the San Jacinto River watersheds. Waste discharges from the CAFOs have a potential to impact the Santa Ana River, Reach 3, Chino Creek, Cucamonga Creek/Mill Creek, Lake Elsinore and Canyon Lake, which are listed as impaired, under Section 303(d) of the CWA. The Santa Ana River, Reach 3, is impaired due to pathogens (bacteria); Chino Creek and Cucamonga/Mill Creek are impaired due to pathogens and nutrients; Lake Elsinore is impaired due to nutrients, and toxic constituents; and Canyon Lake is impaired due to pathogens and nutrients.

Federal regulations require that a total maximum daily load (TMDL) be established for 303(d) listed waterbodies for each pollutant of concern. The Regional Board adopted TMDLs for indicator bacteria for Middle Santa Ana River Watershed and nutrient TMDLs for Canyon Lake/Lake Elsinore. Federal regulation requires NPDES permits to include effluent limits that are "consistent with the assumptions and requirements of any available waste load allocation (WLA) for the discharge." 40 C.F.R. § 122.44(d)(1)(vii)(B). The following is a detailed discussion of the WLAs and TMDLs and how this Order implements the approved TMDLs.

Pursuant to 40 C.F.R. § 122.44(k)(3), best management practices are the tools used to implement the TMDLs in this Order. The tasks identified below are based on the TMDL implementation plans. These tasks were identified during the development of the TMDLs as necessary steps to meet the WLAs specified in the TMDLs by the deadlines specified in the TMDLs.

1. Middle Santa Ana River Watershed Bacterial Indicator TMDLs

Pursuant to the Middle Santa Ana River Watershed Bacterial Indicator TMDLs (Resolution No. R8-2005-0001), the following WLAs apply to CAFO facilities in the Middle Santa Ana River Watershed that drain, directly or indirectly, to Chino Creek, Cucamonga/Mill Creek and/or the Santa Ana River, Reach 3. The allocations apply to these CAFO facilities as a group.

a. **Dry Summer Conditions:** April 1 through October 31, compliance needs to be achieved as soon as possible, but no later than December 31, 2015.

> *Escherichia coli* WLA
> 5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.

These WLAs are applicable to dry weather conditions. The Order prohibits any discharge of wastes to surface waters during dry weather conditions. Federal regulations at 40 C.F.R. § 122.47(a)(1) state, "Any schedules for compliance under this section shall require compliance as soon as possible, but not later than the applicable statutory deadline under the CWA." As such, the Order requires immediate compliance with the above WLAs.

b. Wet Winter Conditions: November 1 through March 31, compliance needs to be achieved as soon as possible, but no later than December 31, 2025.

Escherichia coli WLA

5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.

The Order includes specific implementation activities, source controls, monitoring requirements, and annual progress reports. Since the final compliance date is beyond the expiration date of this Permit, these interim measures are designed to meet the WLAs by the schedules specified in the TMDLs. In addition to the CAFOs, there are other stakeholders who are collaborating in the implementation of this TMDL. A number of these tasks are collaborative efforts of all stakeholders.

c. TMDL Monitoring Requirements and Control Measures

1) Watershed-wide Bacterial Indicator TMDL Water Quality Monitoring Program:

Pursuant to Task 3 of the Middle Santa Ana River Watershed Bacterial Indicator TMDLs, CAFO facilities were required to propose a watershed-wide monitoring program that will provide data necessary to review and update the Middle Santa Ana River Bacterial Indicator TMDLs by November 30, 2007. Data to be collected and analyzed were to be used to determine compliance with the TMDLs and WLAs for bacterial indicators.

On behalf of specific dischargers named in the Bacterial Indicator TMDLs, including CAFO operators, the middle Santa Ana River TMDL Task Force submitted a monitoring program for Regional Board consideration. The Regional Board approved the proposed monitoring program on June 29, 2007 (Resolution No. R8-2007-0046). The Taskforce continues to implement this approved bacterial indicator TMDL monitoring program. The Order requires the Dischargers to continue their participation in all activities related to the Middle Santa Ana River Watershed Bacterial Indicator TMDL implementation.

2) Agricultural/CAFO Discharges

Pursuant to Task 5 of the Middle Santa Ana River Watershed Bacterial Indicator TMDLs, CAFO facilities were required to develop an Agricultural Source Evaluation Plan (AGSEP) for bacteria specific to CAFOs by November 30, 2007. These plans were to include steps needed to identify specific activities, operations, and processes that contribute bacterial indicators to Middle Santa Ana River Watershed waterbodies with a schedule for completion of each of the steps identified.

Irrigated agricultural operators and CAFO operators submitted the final AGSEP in March 2008. Regional Board approved the AGSEP in April 2008.

The Dischargers started implementing and monitoring of AGSEP in the winter of 2009 and the final AGSEP report was submitted in July 2009. Implementation of the plan included a wet weather monitoring program that was also completed in 2009.

The agricultural dischargers developed an Agricultural Bacteria Source Management Plan under Task 5.2. In October 2012, Regional Board staff completed the task of identifying non-CAFO agricultural operators. The CAFO facilities continue to cooperate in the TMDL Taskforce activities related to the Middle Santa Ana River Bacterial Indicator TMDL including the watershed wide monitoring program since 2007.

The CAFO Dischargers in the middle Santa Ana River Watershed are required to submit interim reports that include an evaluation of the effectiveness of their bacteria source control measures and progress towards meeting the WLAs. This report is mandated by this Order but may be prepared and submitted in collaboration with the TMDL Taskforce.

2. Lake Elsinore and Canyon Lake Watershed – Nutrient TMDLs

Pursuant to the Lake Elsinore and Canyon Lake Nutrient TMDLs (Resolution No. R8-2004-0037), the following WLAs apply to CAFO facilities in the San Jacinto River watershed that drain, directly and indirectly, to San Jacinto River, Salt Creek and/or Canyon Lake. The allocations apply to these CAFO facilities as a group.

a. **Total Phosphorous WLA**: Compliance needs to be achieved as soon as possible, but no later than December 31, 2020.

   132 kilograms/year (10-year running average)

b. **Total Nitrogen WLA**: Compliance needs to be achieved as soon as possible, but no later than December 31, 2020.

   1,908 kilograms/year (10-year running average)

c. TMDL Monitoring Requirements

1. Nutrient TMDL Water Quality Monitoring Program

   Pursuant to Task 4 of the Lake Elsinore/Canyon Lake Nutrient TMDLs, (Resolution No. R8-2004-0037), CAFO facilities were required to develop and implement a watershed-wide, Canyon Lake in-lake and Lake Elsinore in-lake nutrient monitoring program to develop data necessary to review and update the Nutrient TMDLs. Data so developed could also be used for determination of compliance with the TMDLs and WLAs for nitrogen and phosphorus.

   On behalf of specific dischargers named in the Nutrient TMDLs including dairy operators, the Lake Elsinore and San Jacinto Watershed Authority submitted a

monitoring program for Regional Board consideration. The Regional Board approved the proposed monitoring program on March 3, 2006 (Resolution No. R8-2006-0031) and was later modified in March 2011 (Resolution No. R8-2011-0023) and October 2012 (Resolution No. R8-2012-0052). This Order requires the dairy operators, in collaboration with other stakeholders, to continue to implement the updated Nutrient TMDL monitoring program.

2. Agricultural/CAFO Discharges – Nutrient Reduction Plan

   Pursuant to Task 5 of the Lake Elsinore/Canyon Lake Nutrient TMDLs, CAFO facilities were required to develop Agricultural Nutrient Management Plan (AgNMP) specific to CAFOs by September 30, 2007. These plans were to include steps needed to identify nutrient sources and to develop nutrient reduction strategies, including time schedules for implementation.

   A coalition of CAFO operators and farmers in the San Jacinto River Basin have formed the Western Riverside County Agricultural Coalition (WRCAC). WRCAC submitted a plan for development of Agricultural Nutrient Management Plan (AgNMP) for Regional Board consideration. The Regional Board approved the proposed plan in November 2007 in Resolution No. R8-2007-0083. A draft AgNMP was submitted in December 2011 for Regional Board comments. Regional Board provided comments in a letter dated May 16, 2012. Final AgNMP was due on July 21, 2012. Because the stakeholders conducted additional model analysis to identify appropriate nutrient control measures, an extension to the AgNMP was granted to WRCAC. In January 2013, the Municipal Separate Storm Sewer System (MS4) permittees, in collaboration with other non-agricultural stakeholders, submitted a revised final Comprehensive Nutrient Reduction Plan.

   Non-point source agricultural dischargers are regulated under Order No. R8-2016-0003, *Conditional Waiver of Waste Discharge Requirements for Discharges from Agricultural Operations in the Watersheds of the San Jacinto River and its Tributaries, and Canyon Lake and Lake Elsinore and their Tributaries, Collectively "The San Jacinto River Watershed", Riverside County* (CWAD), adopted on June 3, 2015. This Order continues the Regional Board's efforts for agricultural dischargers to collectively develop solutions to control pollutants in the San Jacinto River watershed through vehicles such as the AgNMP. Dairy operators are not part of the non-point source agricultural dischargers. However, the TMDL provisions of this Order allow dairy operators to comply through cooperative monitoring and other actions coordinated with agricultural, municipal and other stakeholders.

3. Lake Elsinore In-Lake Sediment Nutrient Reduction Plan

   Pursuant to Task 9 of the Lake Elsinore/Canyon Lake Nutrient TMDLs, CAFO facilities were required to develop a proposed plan and schedule for in-lake sediment nutrient reduction for Lake Elsinore by March 31, 2007. The proposed plan was to include an evaluation of the applicability of various in-lake treatment

technologies to prevent the release of nutrients from lake sediments to support development of a long-term strategy for control of nutrients from the sediment. The submittal was also to contain a proposed sediment nutrient monitoring program to evaluate the effectiveness of any strategies that were to be implemented.

This task has been completed and approved by the Regional Board in November 2007 (Resolution No. R8-2007-0083).

4. Canyon Lake In-Lake Sediment Treatment Evaluation

Pursuant to Task 10 of the Lake Elsinore/Canyon Lake Nutrient TMDLs, CAFO facilities were required to develop a proposed plan for evaluating in-lake sediment nutrient treatment strategies for Canyon Lake by March 31, 2007. The proposed plan was to include an evaluation of the applicability of various in-lake treatment technologies to prevent the release of nutrients from lake sediments in order to develop a long-term strategy for control of nutrients from the sediment. The submittal was also to contain a proposed sediment nutrient monitoring program to evaluate the effectiveness of any strategies that are implemented.

This task has been completed through a Proposition 50 grant obtained by the San Jacinto River Watershed Council. The final report was submitted to the Regional Board on August 3, 2007. Draft Canyon Lake sediment reduction plan was submitted to the Regional Board in December 2011 (as part of Comprehensive Nutrient Reduction Plan (CNRP)[20] and AgNMP submittal). Regional Board provided comments on CNRP and AgNMP in March 2012 and May 2012, respectively. Final revised CNRP has been submitted in Jan 2013 and was approved by the Regional Board (Resolution No. R8-2013-0044).

5. Canyon Lake and Lake Elsinore in-lake Model Updates

Pursuant to Task 11 of the Lake Elsinore/Canyon Lake Nutrient TMDLs, CAFO facilities were required to develop a proposal and schedule for updating the existing Lake Elsinore/San Jacinto River Nutrient Watershed Model and the Canyon Lake and Lake Elsinore in-lake models by March 31, 2007. The plan and schedule was to consider additional data and information generated from the respective TMDL monitoring programs. In order to facilitate any needed update of the numeric targets and/or the TMDLs/WLAs, the proposed schedule was to take into consideration the Regional Board's triennial review schedule.

This plan was approved by Regional Board in November 2007 (Resolution No. R8-2007-0083). A Model update was submitted in August 2011.

6. Other Lake Elsinore/Canyon Lake TMDL Activities

[20] The Riverside County stormwater co-permittees have submitted for Regional Water Board approval, a Comprehensive Nutrient Reduction Plan (CNRP) that provides a plan and a schedule for how the co-permittees will achieve compliance with the Lake Elsinore/Canyon Lake Nutrient TMDLs and WLA. The AgNMP was developed in coordination with the CNRP.

The CAFO operators in the San Jacinto watershed are pursuing a number of other options. These include conducting pilot studies to determine the effectiveness of those control measures, including waste-to-energy projects. If the pilot projects prove successful, some of these projects could be implemented to address any adverse impacts from CAFO discharges to surface and groundwaters. Further, the CAFO operators, as part of the larger watershed-wide stakeholder group, are working with Regional Board staff on a revision to the TMDLs. Revisions to the TMDLs are likely to result in changes to the CAFOs' TMDL Waste Load Allocations and TMDL compliance dates.

J. Plain Language

California Government Code Section 6219(a) states that "Each department, commission, office, or other administrative agency of state government shall write each document that it produces in plain, straightforward language, avoiding technical terms as much as possible, and using a coherent and easily readable style." This requirement is more commonly known as the State's "plain language requirement". Order No. R8-2018-0001 and this Fact Sheet have been prepared with careful consideration of the plain language requirement.

There are a variety of indicators for measuring the 'readability' of a document. These indicators include the Flesch Kincaid Reading Ease, Flesch Kincaid Grade Level, and the Gunning Fog Score. These first two indicators are widely available in common word-processing software and were applied to the Order and Fact Sheet. The results indicate that a person that has achieved a college sophomore level of education should be able to readily understand these documents. Given the technical and legal subject matter, the readability of the Order and this Technical Report is appropriate and satisfies the State plain language requirement.

K. Other Plans, Polices and Regulations [Not Applicable]

VIII. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Wastes from CAFOs contain high concentrations of salts (total dissolved solids and nitrates). These wastes originate from the excretion of manure in corrals and milk barns. Wash water that is discharged from the milk barn as a result of milk barn and cow cleaning operations contains approximately 10 percent of the daily manure excreted from a cow. Wash water is flushed from the milk barn, generally into on-site wastewater containment ponds. Also, rainfall runoff that contacts manure in the corrals carries manure from the corrals into the wastewater containment ponds.

Previous studies conducted by the Regional Board have shown that cow manure produced in the Region contains approximately 160 pounds of salt per (dry) ton of manure (110 pounds of salt per ton of manure @ 33% moisture)[21]. In addition, the Regional Board's 1990 report, "Dairies and Their Relationship to Water Quality Impacts

[21] Santa Ana Watershed Planning Agency, 1974. Dairy waste management. Albert A. Webb Associates, March 1974.

in the Chino Basin", (1990 Dairy Report) showed that the use of manure as a fertilizer results in two to four times more salt reaching groundwater (up to 10 times more non-nitrate salts) than the use of non-manure commercial fertilizers[22]. For this reason, it is vital to make sure that all applications of manure and process wastewater to land are regulated, so they will not adversely impact the quality of groundwater and surface water in the Region.

The 1990 Dairy Report mostly dealt with dairies in the Chino Basin area. However, the recommendations for the dairy regulatory program in that report are equally applicable to dairies in the San Jacinto watershed. Most elements of the dairy regulatory program recommendations in the Report have been implemented through the 1994 (Order No. 94-7), 1999 (Order No. 99-11), 2007 (Order No. R8-2007-0001), and 2013 (Order No. R8-2013-0001) general NPDES permits. The recommendations in the 1990 Dairy Report include the following:

1. Prohibit the discharge of dairy wastes to land unless an acceptable offset program is developed and implemented to offset the impacts of salt and nutrient discharges. (Offset programs have been developed and the CAFOs are participating in those programs.)
2. Control the discharge of dairy wastes to surface waters by requiring the CAFOs to properly design, construct, operate and maintain waste containment structures that are designed to contain a 25-year, 24-hour storm runoff along with process wastewater. (Staff developed requirements for the design of Engineered Waste Management Plans. All CAFOs in the region have developed and implemented Engineered Waste Management Plans. Staff also developed a Weekly Inspection Log that the CAFOs are required to complete and submit to the Regional Board with the annual report.)
3. Monitor the impact of dairy waste discharges on surface and groundwaters. (The CAFOs are participating in comprehensive monitoring programs to determine the impacts of their discharges on surface and groundwaters.)
4. Regulate land application at agronomic rates. (All CAFOs that apply dairy biomass to land have developed and implemented Nutrient Management Plans. Staff developed a tracking system to track manure application, Form 3.)
5. Track manure management. (Staff developed a Manure Tacking Manifest and an Annual Report Form to collect information about manure management and overall dairy operations.)
6. Encourage Innovative approaches to dairy waste management. (Regional Board staff has helped the dairy industry to obtain grants for research projects to better manage their waste products.)

The proposed Order requires the CAFOs to continue their participation in the salt and nutrient offset programs, in the monitoring programs, and to manage storm water and process wastewater in accordance with the requirements of their approved Engineered Waste Management Plans, and land application in accordance with the approved Nutrient Management Plans. In addition, there are requirements to comply with CAFO waste load allocations.

[22] http://www.waterboards.ca.gov/santaana/water_issues/programs/dairies/docs/chino_dairies.pdf

Provisions II. A. 13 & 15 in the proposed Order prohibits the discharge of dairy biomass unless an offset program to offset the impacts of salt and nutrient discharges is implemented. In accordance with the requirements in the 2013 Permit, the Dischargers, in collaboration with other stakeholders in the area, have developed and implemented an offset program in the Chino Basin. They are in the process of developing an offset program in the San Jacinto River Basin.

Salt and nutrient management in dairy biomass (manure, litter, bedding, and process wastewater) continues to be a major challenge for dairy waste management. The Chino Basin Optimum Basin Management Program addresses salt and nutrient management programs in the Chino Basin, where 72% of the CAFOs are located. The offset programs in the Chino Basin have been implemented and appear to be working well.

In the San Jacinto Basin, Eastern Municipal Water District has two operating desalters and an additional one is proposed. Studies have been completed in the area to evaluate options for salt and nutrient management in the basin and to develop comprehensive management programs. The Dischargers in the San Jacinto area, in collaboration with the San Jacinto Resource Conservation District, developed a "Final Workplan to Offset the Impacts of Dairy Process Wastewater Discharge and Manure Land Application within the San Jacinto River Basin" (Final Workplan). The San Jacinto Watershed Integrated Regional Dairy Management Plan (San Jacinto Plan) was developed as a subset of this Final Workplan.

The Final Workplan and the San Jacinto Plan were developed to assist dairy operators in the San Jacinto watershed in their efforts to implement management practices necessary to help solve groundwater, surface water, air quality, TMDL and salt and nutrient offsets to meet regulatory requirements. These Plans recognize a number of control practices that each dairy facility should be able to implement in addition to participating in local groundwater improvement projects.

The USDA-ARS Salinity Laboratory[23] conducted a pilot nutrient management project on a San Jacinto dairy (Transport and Fate of Nutrients and Indicator Microorganisms at a Dairy Lagoon Water Application Site by Scott Bradford, March 2011) to investigate the efficacy of implementing an NMP that included applying dairy wastewater to cropland. The study demonstrated that with carefully controlled water application and selection of appropriate crops, very little leaching of the salts occurred below the root zone. However, the salts remain stored in the vadose zone where infiltrating precipitation can eventually carry the salt into the groundwater. This process can take decades, depending on the soil chemistry, precipitation events, soil transmissivity, and depth to groundwater. In the Chino Basin, the process has been estimated to take between 10 and 50 years[24].

Extensive computer modeling studies on TDS and nitrate have been conducted to determine acceptable salt loading rates to groundwater from various sources,

[23] http://nepis.epa.gov/Adobe/PDF/P100DOTV.pdf
[24] Santa Ana Watershed Planning Agency, 1974. Dairy waste management. Albert A. Webb Associates, March 1974.

including CAFOs. These studies are the basis of the TDS and nitrogen management plan presented in the 1995 Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) and its most recent amendment (Regional Board Resolution No. R8-2004-0001, hereinafter referred to as the Basin Plan Amendment).

The State Board approved the Basin Plan Amendment on September 30, 2004. The groundwater components of the amendment became effective upon approval by the Office of Administrative Law (OAL) on December 23, 2004. The USEPA approved the surface water standards and related provisions of the Amendment on June 20, 2007. The Basin Plan Amendment incorporates an updated TDS and Nitrogen Management Plan for the Santa Ana Region, which includes revised groundwater sub-basin boundaries (referred to as groundwater management zones), revised TDS and nitrate-nitrogen quality objectives for groundwater, revised TDS and nitrogen WLAs and changes to specific surface waters; including revised reach designations, revised TDS and nitrogen objectives and modifications to beneficial use designations.

The Eastern Municipal Water District developed a Salt Management Plan for the San Jacinto Watershed and requested the Regional Board to revise the groundwater objectives for the San Jacinto Upper Pressure Management Zone based on a maximum benefit analysis. On October 29, 2010 the Regional Board approved a Basin Plan amendment (Resolution No. R8-2010-0039) to accommodate this request. On April 23, 2012, the Office of Administrative Law approved this Basin Plan amendment.

As indicated above, the Regional Board is actively involved in managing the TDS and nitrogen issues in the region and the stakeholders are active participants in these efforts.

The previously adopted general waste discharge requirements (Orders No. 99-11 and R8-2013-0001) included three significant changes from the Regional Board's prior CAFO regulatory program. First, they prohibited the disposal of corral manure anywhere in the Region and prohibited the use of corral manure as a fertilizer in any groundwater sub-basin lacking assimilative capacity for salts, including the Chino Basin, thereby prohibiting the application of any corral manure in the Chino Basin for any reason (previously disposal of manure was limited to 4.4 tons/acre on disposal land, and use of corral manure as a fertilizer on cropland was limited to 17.6 tons/acre).

Second, corral manure was required to be hauled from the facility within 180 days of being removed from the corrals, thereby preventing the long-term accumulation of manure stockpiles on-site (before, some facilities were increasingly stockpiling manure on-site rather than hauling it away). Third, CAFOs were required to develop and implement engineered waste management plans (prior to the adoption of these permits comprehensive waste management containment structure design, construction or operation plans for CAFOs did not exist).

As required under the 2007 permit (R8-2013-0001), the Dischargers have developed and implemented EWMPs that are generally consistent with federal and state

regulations [40 C.F.R. § 122.23(b)(7), 40 C.F.R. §§ 122.23(b)(8), 412.2(d) and 412.2(h); and Title 27, California Code of Regulations, section 22562]. In addition, they have also developed NMPs (where applicable) and participated in activities of the taskforces organized to collaboratively implement the TMDLs. These taskforces have developed and implemented a number of monitoring programs and other plans.

A. Chino Basin (Chino-North, Chino-East, and Chino-South Groundwater Management Zones)

Seventy three percent of the CAFOs in the Region are located in the Chino Basin. Based on data collected from the 2017 CAFO Annual Reports, approximately 186,000 tons of manure were removed from the corrals in the Chino Basin. Of this, at least 7,000 tons (4%) were hauled out of the Region and 179,000 tons (96%) were disbursed inside the Region. Of that applied within the Region, 115,000 tons were applied to cropland and 64,000 tons were sent to composting facilities.

The Chino Basin desalter program is a key feature of the salt management strategy that includes the Optimum Basin Management Plan (OBMP). It is integrated into the OBMP along with other groundwater management activities (enhanced recharge, plume management, monitoring, etc.) to assure water quality enhancement, yield management, hydraulic control, and the maximum beneficial use of the Chino Basin groundwater. Waste discharges (including those from CAFOs) in the Chino Basin have been addressed in this integrated plan. The desalter capacity and groundwater extraction well locations have been established to assure that the total salt removal from the Chino Basin is in sufficient quantity to mitigate all the salt added using recycled water, ongoing discharges (including those from CAFOs), and legacy sources. Currently, there are two desalters in operation in the Chino Basin (Chino I and Chino II).

Currently, there are no dairies in the Chino-South Groundwater Management Zone and the Chino-East Groundwater Management Zone. Since the operation of the hydraulic control wells has reversed the gradient of the Chino-South and Chino-East Groundwater Management Zones to drain towards the Chino-North Groundwater Management Zone, groundwater being intercepted by these wells, and thus hydraulic control is achieved. Since waste discharges from CAFOs within the Chino Basin have been addressed in the OBMP, this order does not restrict discharges to land from these facilities, as long as the Chino Basin Watermaster and IEUA are continuing their efforts of implementing the commitments to meet the max benefit water quality objectives in the Basin Plan Amendment.

B. Prado Basin Management Zone

Order No. R8-2013-0001 required the CAFO operators to demonstrate by September 2008 that CAFO discharges were addressed by the OBMP facilities and programs. Further, in case the CAFO operators that could not demonstrate that CAFO discharges are addressed by OBMP facilities and programs, they were to formulate and implement an acceptable offset or cease the discharge of wastes in the Prado Basin Management Zone within five years.

CAFO operators in the Prado Basin Management Zone determined that CAFO discharges were not covered under the OBMP facilities and programs. Consequently, they submitted a conceptual workplan to offset the impact of their discharges (March 2009) and the final Work Plan with a proposed time schedule (November 2009).

At the time of adoption of Order No. R8-2013-0001, only one dairy was in the Prado Basin Management Zone.

C. San Jacinto River Basin

Historically, manure has been used to supplement the use of commercial chemical fertilizer on agricultural fields in the San Jacinto River Basin. When the Regional Board prohibited the disposal of corral manure anywhere in the Region and prohibited the use of corral manure as a fertilizer in the Chino Basin, most of the manure produced in the Chino Basin was then hauled to the San Jacinto River Basin for use as fertilizer. Currently, it is estimated that there are about 59,000 acres of land under cultivation in the San Jacinto River Basin[25].

Basin Plan Amendment (Resolution No. R8-2004-0001) indicates that all the groundwater management zones in the San Jacinto River Basin, except for the Canyon Groundwater Management Zone, lack assimilative capacity for additional salt inputs. In addition, all the groundwater management zones within the San Jacinto River Basin, except for the Canyon and Perris North Groundwater Management Zones, lack assimilative capacity for additional nitrate inputs.

Consequently, discharges of manure, wash water, and storm water to land must be prohibited unless Total Dissolved Solids (TDS) and nitrogen loadings from these discharges are adequately offset. Order No. R8-2007-0001, in part, prohibited the discharge of wastes containing TDS and/or nitrogen concentrations more than the underlying groundwater management zone objectives, unless the discharge of waste is adequately offset to the satisfaction of the Executive Officer.

The Regional Board recognized that it was not feasible for this waste discharge prohibition to be implemented immediately. Therefore, a time schedule for compliance was provided in Order No. R8-2007-0001 that required full compliance with the prohibition by September 6, 2012. Order No. R8-2007-0001 required that the CAFO operators submit a Work Plan to offset the impacts of discharge of process wastewater and land application of manure within the San Jacinto River Basin.

On behalf of CAFO operators and farmers, San Jacinto Basin Resource Conservation District (SJBRCD) submitted a conceptual Work Plan on January 2, 2008. The final Work Plan and proposed time schedule was submitted by SJBRCD for Regional Board consideration on September 18, 2008. The Regional Board

[25] Staff Report for the Conditional Waiver of Waste Discharge Requirements, Order No. R8-2016-0003.

approved the final Work Plan and the proposed time schedule on October 29, 2008.

The final Work Plan and its supplement (the San Jacinto Watershed Integrated Regional Dairy Management Plan, IRDMP) provided several recommendations to control and/or offset the discharge of salts and nutrients to the San Jacinto River Basin. Appendix F of the IRDMP contains a report for "Salt Offset Options for the San Jacinto River Basin Dairies" (Salt Offset Options Report). Collectively, the Work Plan, the IRDMP, and the Salt Offset Options Report identify numerous options to address the salt and nutrient loadings into the San Jacinto Basin. While some of these options may not directly pertain to salt and nutrient off-sets, they could be considered as elements of an overall Region-wide plan for water quality improvements. The following recommendations have been implemented:

1. Conducted a pilot study for a Comprehensive Nutrient Management Plan (CNMP) at a San Jacinto dairy facility.
2. Conducted a demonstration project of a Vibratory Shear Enhanced Processing (VESP) system at a San Jacinto dairy facility.
3. Conducted a partial watershed monitoring program for run-off to Mystic Lake.
4. Conducted a Canyon Lake and Lake Elsinore in-lake nutrient monitoring program.
5. Developed a Lake Elsinore in-lake nutrient reduction plan.
6. Conducted a Canyon Lake in-lake sediment treatment evaluation.
7. Developed a CAFO Ag-Nutrient Management Plan to identify nutrient sources and to develop nutrient reduction strategies.
8. Conducted a watershed-wide sampling program for dairy wastewater and manure.
9. Conducted a watershed-wide sampling and analysis program to determine dairy salt loads and to develop a dairy salt load report.
10. Developed and implemented a Nutrient Management Plan (NMP) for specific dairy sites that land apply manure to cropland (9 dairy sites).
11. Developed an Integrated Regional Dairy Management Plan (IRDMP) addressing water quality issues related to dairy wastes including salts, nutrients, and pathogens.
12. Developed a Manure Manifest Tracking System for the San Jacinto Basin for local and imported manure.
13. Developed a manure composting program that could be considered on a regional scale or on a site-specific scale to stabilize raw manure for cropland application and/or export out of the San Jacinto Basin.
14. Developed a program to encourage manure export from the Basin.
15. Started negotiations with other stakeholders, such as Eastern Municipal Water District (EMWD), to reduce salts in dairy source water. Initiated a full-scale demonstration project for conversion of manure waste to diesel fuel at a San Jacinto dairy.

The Salt Offset Options Report states that manure applied to cropland as a fertilizer contributes more than 90% of each dairy's salt and nutrient loads. A limited study at one of the San Jacinto CAFOs by the University of California Riverside, Salinity

Laboratory indicated that a properly managed and implemented Nutrient Management Plan can significantly limit salt to the root zone with little leaching to groundwater. Nine of the San Jacinto dairy facilities are now implementing Nutrient Management Plans for croplands. For manure applied to non-dairy related cropland, farmers in the San Jacinto Basin are required to implement an Agricultural Nutrient Management Plan. In addition, there is an increase in the manure export from some of the dairies to locations outside the region.

To monitor dairy salt and nitrate loading, a dairy sampling program for dairy wastewater and manure has been implemented. In conjunction with this sampling program, a watershed-wide sampling and analysis program for dairy salt loads has been implemented to develop a dairy salt load report.

The IRDMP is considered a working document for the San Jacinto CAFOs. There continues to be additional studies and pilot projects to demonstrate other feasible alternatives to address waste loads in addition to the sixteen control measures (listed above) that have been already implemented. With the implementation of these options and natural recharge, the Groundwater Management Zones have the potential to reduce the concentrations of salt and nutrients.

The Dischargers in the San Jacinto Basin have indicated that the above control measures have reduced the salt and nutrient loadings to the Basin and no further offsets might be needed. The proposed Order includes requirements for the Dischargers to collect and analyze groundwater monitoring data to confirm that discharges from the CAFO facilities have not impacted groundwater quality in the San Jacinto Basin. If these analyses indicate statistically significant impacts from the CAFO discharges, additional control measures must be developed and implemented.

The proposed Order requires the CAFO's in the area to continue to implement the control measures and evaluate their effectiveness in addressing salt and nutrient problems and to propose additional measures, if needed.

As previously noted, Canyon Lake and Lake Elsinore are on the 303(d) list of impaired water bodies due, in part, to the effects of excessive amounts of nutrients, including nitrogen and phosphorous. The TMDL adopted by the Regional Board and approved by USEPA requires the reduction of nutrients from all sources in the watershed, including CAFOs. The Nutrient TMDLs specify CAFO WLAs for both nitrogen and phosphorus. The Dischargers are working with the TMDL taskforces to help implement the TMDLs.

There are a number of other research projects and pilot studies, including a waste-to-energy project, that are being conducted or proposed. The requirements specified in the proposed Order are consistent with the state and federal laws and regulations pertaining to CAFOs. Based on the results of the pilot studies and the research work, these requirements may be revised.

D. Discharge Prohibitions

The Order includes the following prohibitions:

1. The discharge of wastes to land or to surface waters, including storm water conveyance systems, shall be in accordance with the provisions of this Order. All other discharges of wastes to land and surface waters are prohibited (40 C.F.R. § 412.37(a)).

2. The discharge of wastes to land or to surface waters shall not cause a condition of contamination, pollution or nuisance as defined in Water Code section 13050.

3. The discharge of wastes not generated by the dairy-related activities at the facility is prohibited except with written authorization from the Executive Officer.

4. The disposal of any mortality (dead animals) in any process wastewater system, liquid manure or other facilities within the regulated CAFO is prohibited (40 C.F.R. § 412.37(a)(4)). Mortalities shall be handled in such a way as to prevent the discharge of pollutants to waters of the State. All dead animals shall be disposed of within three days. Records of mortality management shall be kept for five years (40 C.F.R. §§ 122.42(e)(1)(ii) and 412.37(b)(4)).

5. The discharge of process wastewater to a land application area before, during or after a storm event that would result in runoff of the applied water is prohibited.

6. The discharge of wastewater to surface waters from the cropland is prohibited. Irrigation supply water that comes into contact or is blended with waste or process wastewater shall be considered wastewater under this prohibition.

7. The discharge of storm water to surface waters from a land application area where manure or process wastewater has been applied is prohibited unless the land application area has been managed consistent with an approved Nutrient Management Plan.

8. The use of manure to construct containment structures is prohibited.

9. The discharge of wastes, including manure, process wastewater and/or storm water runoff from manured areas, to property not owned or controlled by the Discharger, except as authorized by this Order, is prohibited (40 C.F.R. § 412.31(a)).

10. There shall be no discharge of chemicals, or other wastes that are not associated with the CAFO operations to the waste management facilities and/or the waste handling facilities (40 C.F.R. § 122.42(e)(1)(v)).

11. Temporary waste storage areas shall be designed and constructed in a manner to prevent runoff and leachate from entering surface or groundwater.

12. Waste storage or disposal facilities shall not be built within 400 feet of a public drinking water well.

13. All confined animals shall be prohibited from entering or directly contacting any surface water (Title 27 CCR Section 22561, 40 C.F.R. § 122.42(e)(iv)).

14. The disposal of manure to land within Chino Basin (Chino-North, Chino-East, and Chino-South Groundwater Management Zones) is prohibited. The application of manure, process wastewater, and/or storm water runoff from manured areas, on cropland outside of the Chino Basin that overlie groundwater management zones lacking assimilative capacity for TDS and/or nitrate-nitrogen is also prohibited unless a plan, acceptable to the Executive Officer, is implemented that offsets the effects of such application on the underlying groundwater management zone.

15. Manure applied to non-CAFO related croplands in any area that may affect a groundwater management zone that has TDS and nitrate-nitrogen assimilative capacity shall not exceed agronomic rates. In addition, the manure shall be incorporated into the soil immediately after application. For any application of manure to these croplands in excess of 12 dry tons per acre per year (or 17.5 tons per acre per year @ 33% moisture), an explanation of the type of crop and the number of times it is harvested per year shall also be included in the Annual Report (Form 3).

16. Manure originating from outside of the Chino Basin is prohibited from being applied to land within the Chino Basin.

17. The discharge of any substances in concentrations toxic to animal or plant life is prohibited.

18. The discharge of waste containing TDS and/or Nitrogen concentrations in excess of the underlying groundwater management zone objectives for those constituents is prohibited, unless adequately offset to the satisfaction of the Executive Officer.

E. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

CWA Section 301(b) and federal regulations 40 C.F.R. § 122.44 require that TBELs be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically

achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and the cost-effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop Effluent Limitations Guidelines and Standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. § 125.3 of the NPDES regulations authorize the use of Best Professional Judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in 40 C.F.R. § 125.3.

2. Applicable Technology-Based Effluent Limitations

The Order requires the Discharger to meet technology-based effluent limitations as per 40 C.F.R. § 412.31. The effluent limitations guidelines do not require numeric effluent limits. In order for treatment controls to reliably meet numeric effluent limits, both the quality and quantity of the effluent should have limited variability. However, the quality and quantity of storm water runoff from dairy facilities vary considerably. The Regional Board has determined that it is not feasible to establish numeric effluent limitations for pollutants in discharges from CAFOs at this time because of this variability. This Order requires the Discharger to develop and implement best management practices (BMPs), including the development and implementation of EWMPs to contain waste and storm water up to and including runoff from the 24-hour, 25-year storm event, consistent with the federal regulations. These and requirements for Nutrient Management Plans and other measures are expected to control and abate the discharge of pollutants to surface waters and achieve compliance utilizing BPT to achieve applicable water quality standards.

Whenever precipitation causes an overflow of manure, litter, or process wastewater, pollutants in the overflow may be discharged from the facility, provided all provisions of an Engineered Waste Management Plan (EWMP), accepted by the Executive Officer, are fully implemented, and:

a. The production area[26] is designed, constructed, operated and maintained to contain all manure, litter, and process wastewater including the runoff and the direct precipitation from a 25-year, 24-hour rainfall event; and (40 C.F.R. § 412.31(a)(1)(i))

b. The operations at the facility are conducted in accordance with the additional measures required by 40 C.F.R. § 412.37(a) and (b) with respect to inspection, corrective actions, monitoring and record keeping as specified in the Monitoring and Reporting Requirements of this Order (Attachment B) (40 C.F.R. § 412.31(a)(1)(ii)).

F. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

As specified in 40 C.F.R. § 122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, achieve applicable water quality objectives and criteria contained in state plans and policies, and meet water quality criteria contained in the CTR and NTR.

2. Applicable Water Quality-based Effluent Limitations (WQBELs)

a. Participation in the TMDL taskforces including the monitoring programs, workplan development and implementation activities either by each individual Discharger or by all the Dischargers represented by a trade association shall be considered in assessing compliance with the waste load allocations in the TMDLs.

b. All Dischargers within the Lake Elsinore and Canyon Lake watershed shall comply with the Lake Elsinore and Canyon Lake Watershed Nutrient TMDL requirements specified in Section IV.J. of the Order.

c. All Dischargers within the Santa Ana watershed shall comply with the Middle Santa Ana River Bacterial TMDL requirements including the time schedules, Section IV.H. of the Order.

3. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The designated beneficial uses of the receiving waters are listed in Sections I.L. 31 and 32. The requirements specified in this Order are necessary to protect water quality standards in the receiving waters.

4. Determining the Need for WQBELs

[26] See Glossary for a definition of "production area".

NPDES permits apply to discharges of waste to surface waters. These permits must meet all applicable provisions of sections 301 and 402 of the Clean Water Act. These provisions require controls of pollutant discharges that utilize Best Available Technology and Best Conventional Technology to reduce pollutant and any more stringent controls necessary to meet water quality standards.

Since portions of this order will serve as an NPDES permit and will allow discharges to surface waters that are impaired, albeit only during extreme weather conditions, federal regulations require the order to include WQBELs for those discharges.

The permit requirements are protective of water quality. The only discharges to surface waterbodies, or tributaries thereof, that are permitted are those from rainfall events that cause an overflow from facilities designed, constructed and operated to contain all process wastewater plus the runoff and the direct precipitation (that have been commingled with manure) from a 25-year, 24-hour rainfall event. The water quality standards allow for infrequent excursions consistent with the expected frequency of discharges from dairy facilities. Due to the catastrophic nature of such events and the significant volume of runoff involved, treatment of these discharges to meet numeric effluent limitations would be impractical. If the requirements specified in the order are met, water quality of the Region is not expected to degrade as a result of discharges authorized under this Order.

Therefore, the effluent limitations contained in this Order are narrative and include compliance with TMDL implementation plans. 40 C.F.R. §122.44(k)(3) allows the use of BMPs to control and abate the discharge of pollutants when "numeric effluent limitations are infeasible; or the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA."

Regional Board has adopted TMDLs that address pollutants of concern in the two watersheds where the CAFOs are located: Middle Santa Ana (bacterial indicators) and Lake Elsinore and Canyon Lake (nutrients). These TMDLs include WLAs for CAFOs. Pursuant to the Middle Santa Ana River Bacterial indicator TMDLs CAFO compliance with the Dry Season WLA is to be achieved no later than December 2015.

Compliance with the Middle Santa Ana River Bacterial indicator TMDLs Wet Season WLA is to be achieved by December 2025. Since this Order will expire in December 15, 2023, final effluent limits, based on those allocations that are to be achieved beyond this permit term are not included in this Order. However, control measures are to be implemented for all TMDLs. See Section IV.D. of this Fact Sheet for a more detailed discussion of these TMDLs.

The TMDLs require water quality monitoring to be performed and pollution reduction plans to be developed by specified dates. The TMDL tasks applicable to CAFOs have been incorporated into this Order. CAFO operators can choose

to complete the tasks individually, or they may participate with the stakeholder group (TMDL Taskforces) to achieve compliance with the TMDLs.

5. WQBEL Calculations [Not Applicable]

6. Whole Effluent Toxicity (WET) [Not Applicable]

G. Final Effluent Limitations [Not Applicable]

H. Interim Effluent Limitations [Not Applicable]

I. Land Discharge Specifications

The discharge of waste containing TDS and/or Nitrogen concentrations in excess of the underlying groundwater management zone objectives for those constituents is prohibited, unless adequately offset to the satisfaction of the Executive Officer. Basin Plan Amendment, R8-2004-0001.

J. Reclamation Specifications [Not Applicable]

IX. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Order includes receiving water limitation for surface waters based on Basin Plan prohibitions and/or objectives.

B. Groundwater

The Order includes prohibitions on discharge of wastes from CAFOs that could adversely impact groundwater based on Basin Plan prohibitions and/or objectives.

X. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 C.F.R. § 122.48 requires all NPDES permits specify recording and reporting monitoring results. Sections 13267 and 13383 of the Water Code authorize the Regional Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment B), establishes monitoring and reporting requirements to implement federal and state requirements.

A. Influent Monitoring [Not Applicable]

B. Effluent Monitoring

To assure compliance with Permit limitations and requirements, the Dischargers are required to sample and analyze any discharge of wastes to surface waters for total

dissolved solids (filterable residue), total coliform bacteria, E. coli, total nitrogen, total phosphorus and total suspended solids (40 C.F.R. § 122.44(i)).

C. Whole Effluent Toxicity Testing Requirements [Not Applicable]

Whole effluent monitoring is not required in this Order because there is no indication that discharges contain toxicants that threaten water quality.

D. Receiving Water Monitoring [Not Applicable]

E. Other Monitoring Requirements

This Order requires monitoring to determine compliance with the WLAs in the TMDLs. The nutrient content of manure can vary significantly between dairies due to variations in animal diet and manure handling and storage procedures[27]. Consequently, this Order also requires chemical analysis for manure. The purpose of this chemical analysis is to assist agricultural operators to apply manure to cropland at rates that closely meet the nutrient needs of the specific crop. Monitoring of manure nutrient content is also indicated in 40 C.F.R. § 412.4(c)(3).

XI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which in accordance with 40 C.F.R. §§ 122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment A.

B. Special Provisions

1. Reopener Provisions

This provision is based on 40 C.F.R. Part 123. The Regional Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, or adoption of new regulations by the State Board or Regional Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

This Order includes a requirement for the Dischargers to participate in special studies that may be required to determine compliance with the WLAs in the TMDLs.

3. Best Management Practices and Pollution Prevention

[27] Pettygrove, G. et al, 2009. *University of California manure technical guide series for crop management professionals.* http://manuremangement.ucdavis.edu

In compliance with the CWA and the California Code of Regulations, this Order prohibits discharges to any surface water bodies, or tributary thereof, unless rainfall events cause an overflow of process wastewater from a facility designed, constructed and operated to contain all process wastewater plus the runoff and the direct precipitation (that have been commingled with manure) from a 25-year, 24-hour rainfall event (Title 27, Chapter 7, Subchapter 2, Article 1, Section 22562(a), California Code of Regulations and 40 C.F.R. Part 412). To insure that compliance with these requirements is achieved, all CAFOs are required to develop and implement EWMPs. EWMPs are to be developed in accordance with the Guidelines for the Development of EWMP for CAFOs (Dairies and Related Facilities). It is intended that the guidelines can be revised, as necessary, by the Executive Officer. This Order authorizes the Executive Officer to make necessary revisions to the guidelines.

In March 1999, the United States Department of Agriculture (USDA) and the USEPA finalized their unified national strategy for AFOs. In general, the national strategy recommended the development of nutrient management plans (NMPs) that were intended to bring each CAFO into compliance with the requirements of the CWA and to minimize the impacts to groundwater and surface water from dairy wastes by the implementation of best management practices. In general, a NMP would assure that appropriate dairy wastewater facilities were developed, constructed and maintained to comply with the requirements of the CWA, and that the use and application of wastewater and manure (i.e. nutrient management) was managed to minimize impacts to groundwater and surface water. The most recent revisions to the NPDES and Effluent Limitation Guidelines and Standards for CAFO regulations, published on February 12, 2003, support this national strategy by requiring the CAFOs to develop and implement NMPs.

Consistent with the federal regulations, this Order requires CAFO operators who apply manure, litter, or process wastewater to croplands under their ownership or operational control to develop and fully implement a NMP in addition to the EWMPs. The NMP shall be prepared in accordance with 40 C.F.R. § 122.42(e)(1) and 40 C.F.R. § 412.4, and should follow the guidelines developed by Natural Resources Conservation Service (NRCS), Conservation Practices Standard 590. The Discharger shall also comply with the recordkeeping requirements as described in 40 C.F.R. § 412.37(c). The NMP will be made available for public review for 30 days prior to its approval. If there is no objection after the reviewing period, the Executive Officer will approve the NMP and authorize the Discharger to start implementing the approved NMP within 90 days.

All Dischargers in the Region have complied with the requirements for developing and implementing EWMPs and NMPs.

4. Compliance Schedules

See Section VII.C.4 of the Order for a more detailed discussion of the compliance schedules.

5. Construction, Operation, and Maintenance Specifications

The Dischargers are required to use qualified professionals for the development and implementation of EWMPs and NMPs.

6. Special Provisions for Municipal Facilities (POTWs Only) [Not Applicable]

7. Other Special Provisions [Not Applicable]

XII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Santa Ana Region (Regional Board) is considering the renewal of waste discharge requirements (WDRs) that will serve as a General National Pollutant Discharge Elimination System (NPDES) permit for CAFOs. A draft of the General NPDES permit with all supporting documentation has been prepared and is available for public review and comments at:

http://www.waterboards.ca.gov/santaana/water_issues/programs/dairies/index.shtml

A. Notification of Interested Parties

The Regional Board has notified the Dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through: posting of the Notice of Public Hearing at the Regional Water Board website: http://www.waterboards.ca.gov/santaana

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning this draft Permit. Comments should be submitted either in person or by mail to: Jawed Shami, Regional Water Quality Control Board, 3737 Main Street, Suite 500, Riverside, CA 92501. Comments can also be submitted by email at Adam.Fischer@waterboards.ca.gov.

C. Public Workshop/Hearing

Status report on the development of a new dairy permit was discussed at the following Regional Board meeting:

Date: **November 3, 2017**
Time: **9:00am**
Location: **City Council Chambers of Loma Linda**
25541 Barton Road
Loma Linda, CA 92354

First public workshop was held at the following location:

Date: **April 17, 2018**
Time: **9:00am**
Location: **City of Norco – City Hall**
2870 Clark Avenue
Norco, CA

Second public workshop was held at the following location:

Date: **April 19, 2018**
Time: **9:00am**
Location: **Eastern Municipal Water District**
2270 Trumble Road
Perris, CA

A third public workshop was held following the public release of a draft Order on July 23, 2018. The workshop was held at the following location:

Date: **August 20, 2018**
Time: **9:00am**
Location: **Eastern Municipal Water District**
2270 Trumble Road
Perris, CA

All comments received during the public workshops and the comment period have been considered in the formulation of the final draft presented to the Board for its consideration.

The Regional Board will hold a public hearing for consideration of the final draft Permit during its regular Board meeting on the following date and time and at the following location.

Date: **December 7, 2018**
Time: **9:00 a.m.**

Location: **City Council Chambers of Loma Linda**
25541 Barton Road
Loma Linda, CA

Interested persons are invited to attend the public workshop and the hearing. At the public workshop and the hearing, the Regional Board will hear testimony, if any, pertinent to the discharge, the draft Permit and related documents. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Additional workshops and/or public hearing may also be scheduled if the Regional Board, stakeholders or Regional Board staff determines a need for them. Please refer to the following website for most recent information regarding public workshops and public hearing. You may also contact Jawed Shami at 951-782-3288 (Jawed.Shami@waterboards.ca.gov).

Please be aware that dates and venues may also change. Our Web address is http://www.waterboards.ca.gov/santaana where you can access notices of public workshops and hearing and the board meeting agenda, including any changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Board regarding the adopted permit. The petition must be submitted within 30 days of the Regional Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

All documents related to this Order, any comments received, and other information are on file and may be inspected at the address above any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Board by calling (951) 782-4130.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the NPDES permit should contact the Regional Board, reference this Permit, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Jawed Shami at (951) 782-3288 (Jawed.Shami@waterboards.ca.gov).

ACRONYMS AND ABBREVIATIONS

AB, Assembly Bill

AFO, Animal Feeding Operations

AgNMP, Agricultural Nutrient Management Plan

AGSEP, Agricultural Source Evaluation Plan

APU, Administrative Procedures Manual

ARS, Agricultural Research Services

BAT, Best Available Technology

BCT, Best Conventional Pollutant Control Technology

BMP, Best Management Practices

BOD, Biological Oxygen Demand

BPJ, Best Professional Judgment

BPT, Best Practicable Control Technology

CAFO, Concentrated Animal Feeding Operations

CCR, California Code of Regulations

CEQA, California Environmental Quality Act

CFR, Code of Federal Regulations

CIWQS, California Integrated Water Quality System

CNRP, Comprehensive Nutrient Reduction Plan

CTR, California Toxics Rule

CWA, Federal Clean Water Act

CWC, California Water Code

ELG, Effluent Limitations, Guidelines and Standards

EWMP, Engineered Waste Management Plan

GPS, Global Positioning System

IEUA, Inland Empire Utilities Agency

IRDMP, Integrated Regional Dairy Management Plan

MRP, Monitoring and Reporting Program

N/TDS, Nitrogen/Total Dissolved Solids

NMP, Nutrient Management Plan

NOI, Notice of Intent

NOT, Notice of Termination

NPDES, National Pollutant Discharge Elimination System

NRCS, Natural Resources Conservation Service

NSPS, New Source Performance Standards

NTR, National Toxics Rule

OAL, Office of Administrative Law

OBMP, Optimum Basin Management Plan

PBMZ, Prado Basin Management Zone

POTW Publicly Owned Treatment Works

PTP, Pollutant Trading Plan

REC-1, Water Contact Recreation

RWD, Report of Waste Discharge

RWQCB, Regional Water Quality Control Board

SJBRCD, San Jacinto Basin Resource Conservation District

SMR, Self-Monitoring Report

SWRCB, State Water Resources Control Board

TBEL, Technology-Based Effluent Limitations

TDS, Total Dissolved Solids

TMDL, Total Maximum Daily Load

TSS, Total Suspended Solids

USC, United States Code

USDA, United States Department of Agriculture

USEPA, United States Environmental Protection Agency

WDR, Waste Discharge Requirements

WET, Whole Effluent Toxicity

WLA, Waste Load Allocations

WQBEL, Water Quality-Based Effluent Limitations

WRCAC, Western Riverside County Agricultural Coalition

ATTACHMENT F

California Regional Water Quality Control Board
Santa Ana Region

NOTICE OF TERMINATION

TO COMPLY WITH THE TERMS AND CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE WASTES FROM CONCENTRATED ANIMAL FEEDING OPERATIONS (DAIRIES AND RELATED FACILITIES)
(Order No. R8-2018-0001, NPDES No. CAG018001)

PERMITTEE (*Person/Agency Responsible for the Discharge*)

Owner/Operator Name: _____

Mailing Address: _____
Street *City* *State* *ZIP*

Contact Person: _____ Phone (_____)_____

FACILITY (Physical Address)

Name: _____

Location: _____
Street *City* *State* *ZIP*

Contact Person: _____ Phone (_____)_____

BASIS FOR TERMINATION

1. **Facility Closed:** The facility is closed and all CAFO (Dairies and Related Facilities) activities terminated.

   Date of closure ____/____/____

2. **Facility Cleaning:**

   Have all ponds/wastewater holding lagoons been drained, scrapped, and solids removed? Yes ____ No ____

   Has all manure been removed from Corrals (please provide manure tracking manifests)? Yes ____ No ____

   Has all stockpiled manure been removed (please provide manure tracking manifests)? Yes ____ No ____

3. **New Facility Operator.** Is there a new operator at this facility? Yes ____ No____

   Date facility was transferred to new operator ____/____/____

   Have you notified the new operator, in writing, of the NPDES Permit requirements? Yes ____ No____
   (If so, please provide a copy of notification)

   Have you provided a copy of EWMP and NMP (if applicable) to the new operator? Yes ____ No ____

   Please provide new operator's Name, Address, and Phone number _____

   _____

CERTIFICATION:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I believe that the information submitted is true, accurate and complete. I am also aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I also understand that the submittal of this Notice of Termination does not release the facility operator from liability for any violations of Order No. R8-2018-0001.

_____ _____
SIGNATURE OF OWNER OF FACILITY SIGNATURE OF OPERATOR OF FACILITY

_____ _____
PRINT OR TYPE NAME PRINT OR TYPE NAME

_____ _____
TITLE AND DATE TITLE AND DATE

ATTACHMENT G

Glossary
For
Order No. R8-2018-0001
NPDES Permit No. CAG018001

GLOSSARY

This Glossary has been prepared for the convenience of the reader. This Glossary is not an exhaustive catalog of terminology used in this Order. Additional terminology is defined in the Clean Water Act, USEPA regulations, and the California Water Code; all such terms not appearing below are incorporated into this Permit by reference.

Basin Plan – The Water Quality Control Plan for the Santa Ana River Basin (1995) and subsequent amendments.

Beneficial Uses – The uses of water necessary for the survival or well-being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. "Beneficial Uses" that may be protected against include, but are not limited to: domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or groundwater on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law (California Water Code Section 13050(f). Beneficial Uses for the Receiving Waters are identified in the Basin Plan.

Best Management Practices (BMPs) – Also known as storm water control measures. BMPs means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage (40 CFR § 122.2).

Bioaccumulate – The progressive accumulation of contaminants in the tissues of organisms to a higher concentration than in the surrounding environment.

Bioaccumulation may occur through any route, including respiration, ingestion, or direct contact with contaminated water, sediment, pore water, or dredged material. Bioaccumulation occurs with exposure and is independent of the trophic level of the organism.

California Toxics Rule – Numeric water quality criteria for certain Priority Toxic Pollutants and other water quality standards provisions promulgated by the USEPA for waters in the state of California. The California Toxics Rule is found in 40 CFR § 131.

Clean Water Act Section 402(p) – The federal statute, codified at 33 USC 1342(p), requiring municipal and industrial Co-permittees to obtain NPDES permits for their discharges of storm water.

Clean Water Act Section 303(d)-Listed Water Body – An impaired water body; a water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology-based pollution controls required by the CWA.

Contamination – An impairment of the quality of waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste whether or not waters of the State (inclusive of waters of the U.S.) are affected. (California Water Code Section 13050(k))

Co-permittee(s) – Entities regulated under Phase 1 municipal separate storm sewer system permits, inclusive of the Principle Co-permittee.

Criteria – The numeric values and the narrative standards that represent contaminant concentrations that are not to be exceeded in the receiving environmental media (surface water, groundwater, sediment) to protect beneficial uses.

Dry Weather – Weather in which there is no precipitation.

Duly Authorized Representative (DAR) – All reports required by this permit, and other information by the Executive Officer shall be signed by the legally responsible party (LRP) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- The authorization is made electronically submitted by either a principal executive officer or ranking elected official; and,
- The authorization specifies either an individual or a position having

responsibility for the overall operation of the regulated activity such as a position of plant manager, superintendent, position of equal responsibility, or an individual or position having overall responsibility for environmental matters for the municipality (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

Effluent – Any discharge of water containing pollutants either to the receiving water or beyond the property boundary controlled by the discharger.

Effluent Limit/Limitation – Means any restriction on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into Waters of the United States, waters of the "contiguous zone," or the ocean. (40 CFR §122.2)

Emergency – A sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services (Public Resources Code Section 21060.3).

Environmentally Sensitive Area (ESA) – An area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments (Public Resources Code Section 30107.5). These areas include, but are not limited to: water bodies designated with the RARE beneficial use in the Basin Plan (Water Quality Control Plan for the Santa Ana River Basin [1995] and amendments); an area designated in the Ocean Plan as an Area of Special Biological Significance; Marine Protected Areas designated as such pursuant to the Marine Life Protection Act; a water body listed as being impaired pursuant to CWA Section 303(d); areas designated as preserves or their equivalent under the Natural Communities Conservation Program (Multiple Species Habitat Conservation Plan, MSHCP) within the Cities and Counties of Orange, Riverside and San Bernardino; or any area designated as such by a public agency with designation powers.

Executive Officer – The Executive Officer of the Santa Ana Regional Water Quality Control Board or delegated staff.

Hazardous Substance – Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity; any substance designated under 40 CFR §116 pursuant to Section 311(b)(2) of the Clean Water Act (40 CFR § 122.2).

Illicit Discharge – Any discharge to a municipal separate storm sewer that is not

composed entirely of storm water. This does not include discharges that occur pursuant to an NPDES permit, other than the MS4 Permit, and discharges resulting from fire-fighting activities (40 CFR § 122.26(b)(2)).

Impaired Water Body – Section 303(b) of the CWA requires each of California's Regional Water Quality Control Boards to routinely monitor and assess the quality of waters of their respective regions. If this assessment indicates that Beneficial Uses are not met, then that water body must be listed under Section 303(d) of the CWA as an Impaired Water Body.

Impervious Surface – That part of a developed parcel that has been modified to reduce the land's natural ability to absorb and hold rainfall. It includes hard surfaces which cause water to run off the surface in greater quantities or at an increased rate of flow from the flow that existed under natural conditions prior to development. For example, common impervious surfaces include, but are not limited to, rooftops, walkways, patios, courtyards, driveways, parking lots, storage areas, concrete or asphalt paving, gravel roads, or any cleared, graded, graveled, paved, or compacted surfaces, or other surfaces which similarly impede the natural infiltration of surface water into the soil.

Infiltration – The flow of water into the soil by crossing the soil surface.

Legally Responsible Person (LRP) – For a municipality: a principal executive officer or ranking elected official. The LRP designates the duly authorized representative.

Load Allocations (LA) – Distribution or assignment of TMDL pollutant loads to entities or sources for existing and future nonpoint sources, including background loads.

Monitoring and Reporting Period – For purposes of this Order, the monitoring and reporting period is the calendar year from January 1 to December 31 with a reporting deadline of the following January 15th of each year for Annual Reports.

Municipal Storm Water Conveyance System – (See Municipal Separate Storm Sewer System or MS4).

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances designed to collect and/or transport urban runoff (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes; (ii) Designated or used for collecting of conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR § 122.2 (40 CFR § 126.26(b)(8)).

Most Probable Number (MPN) – The most probable number (MPN) of coliform or fecal coliform bacteria per unit volume of a sample. It is expressed as the number of organisms which are most likely to have produced the laboratory results noted in a particular test.

National Pollutant Discharge Elimination System (NPDES) Permit – A national program under section 402 of the Clean Water Act for regulation of discharges of pollutants from point sources to waters of the United States. Discharges of pollutants are prohibited unless specifically exempted or authorized by an NPDES permit.

Non-Storm Water – Non-storm water consists of all discharges to and from a storm water conveyance system that do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water). Non-storm water includes illicit discharges, prohibited discharges, and NPDES permitted discharges.

Nuisance – 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) Occurs during, or as a result of, the treatment or disposal of wastes (CWC Section 13050(m)).

Outfall – A *point source*, as defined by 40 CFR 122.2, at the point where an MS4 discharges to waters of the United States. An outfall does not include open conveyances connecting two municipal separate storm sewers. An outfall does not include pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the U.S. and are used to convey waters of the U.S. (40 CFR 122.26(b)(9)).

Party – Defined as an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof (40 CFR § 122.2).

Permit Registration Documents (PRDs) – Include the Notice of Intent, the appropriate filing fee and, if applicable, an Engineered Waste Management Plan and Nutrient Management Plan necessary to authorize a discharge under general waste discharge requirements.

Person – A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof (40 CFR § 122.2).

pH – An indicator of the acidity or alkalinity of water.

Point Source – Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, runoff from concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant – Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated. It includes any type of industrial, municipal, and agricultural waste discharged into water. The term "pollutant" is defined in section 502(6) of the Clean Water Act as follows: "The term 'pollutant' means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." It has also been interpreted to include water characteristics such as toxicity or acidity.

Pollution – The alteration of the quality of the Waters of the U.S. by waste, to a degree that unreasonably affects either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses. Pollution may include contamination (CWC Section 13050(l)).

Pollution Prevention – Practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

Priority Toxic Pollutant – A pollutant identified in the California Toxics Rule.

Process Wastewater - Water directly or indirectly used in the operation of the CAFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other CAFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs, or bedding (40 CFR 412.2(d)).

Production Area – That part of an Animal Feeding Operation that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons,

runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes but is not limited to feed silos, silage bunkers, and bedding materials. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities (40 CFR 412.2(h)).

Receiving Waters – Waters of the United States.

Receiving Water Limitations – Waste discharge requirements issued by the Regional Board typically include both: (1) "Effluent Limitations" (or Discharge Limitations) that specify the technology-based or water-quality-based effluent limitations; and (2) "Receiving Water Limitations" that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the "Receiving Water Limitations" provision is the provision used to implement the requirement of CWA SECTION 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Sediment – Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human-induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally-occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

State Implementation Plan (SIP) – Formally known as the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The SIP implements the California Toxics Rule.

State Board – California State Water Resources Control Board

Storm Water – Storm water runoff, snowmelt runoff and surface runoff and drainage (40 CFR § 122.26(b)(13)).

Storm Water General Permits – Industrial General Permit (State Board Order No. 2014-00057-DWQ, NPDES No. CAS000001), and Construction General Permit (State Board Order No. 2009-0009-DWQ, NPDES No. CAS000002).

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

Total Dissolved Solids (TDS) – A measure of the total dissolved minerals in the water; the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR § 136 (40 CFR § 122.2)

Total Maximum Daily Load (TMDL) – The maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under Clean Water Act § 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

TMDL Implementation Plan – Component of a TMDL that describes actions, including monitoring, needed to reduce pollutant loadings and a timeline for implementation. TMDL implementation plans can include a monitoring or modeling plan and milestones for measuring progress, plans for revising the TMDL if progress toward cleaning up the waters is not made, and the date by which water quality standards will be met (USEPA Final TMDL Rule: Fulfilling the Goals of the CWA, EPA 841-F-00-008, July 2000).

Toxicity – Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Turbidity – The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU)

Uncontaminated Groundwater – Groundwater that is not impaired by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease

Urban Runoff – Urban runoff is defined as all flows in a storm water conveyance system from urban areas which include residential, commercial, industrial, and construction areas. Urban runoff consists of the following components: (1) storm water runoff and (2) authorized non-storm water discharges (See Section III of this Order). Urban runoff does

not include runoff from undeveloped open space, feedlots, dairies, farms, and agricultural fields.

Waste – Waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal (CWC Section 13050(d)). Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system which applies to solid and semi-solid waste which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, nonhazardous solid waste, and inert waste.

Waste Discharge Requirements (WDR) – As defined in section 13374 of the California Water Code, the term "Waste Discharge Requirements" is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually uses the terms "permit" and "Order" to refer to Waste Discharge Requirements for discharges to Waters of the U.S.

Waste Load Allocations (WLA) – WLA is the distribution or assignment of pollutant loads to entities or sources for existing and future point sources according to a TMDL; the maximum quantity of pollutants a discharger is allowed to release into a particular waterway, as set by a regulatory authority. Discharge limits usually are required for each specific water quality criterion being, or expected to be, violated.

Water Quality Assessment – An assessment conducted to evaluate the condition of water bodies which receive process wastewater, storm water and non-storm water discharges.

Water Quality Objective – The limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area [California Water Code Section 13050(h)).

Water Quality Standards – Consist of beneficial uses, water quality objectives to protect those uses, an anti-degradation policy, and policies for implementation. Water quality standards are found in Regional Water Quality Control Plans and statewide water quality control plans. The USEPA has also adopted water quality criteria (the same as objectives) for California in the National Toxics Rule and California Toxics Rule.

Waters of the State – Any surface water or groundwater, including saline waters, within the boundaries of the State (California Water Code Section 13050(e)). Waters of the State include waters of the United States.

Waters of the United States – Waters of the United States can be broadly defined as navigable surface waters and tributaries thereto. Groundwater is not considered to be Waters of the United States. As defined in 40 CFR § 122.2, the Waters of the U.S. are defined as: (a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

Watershed – That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers; a drainage area, catchment, or river basin.

Wet Season – The period of October 1st through May 31st of each year, except where specifically defined otherwise in an approved TMDL Implementation Plan.