

Public Workshop on Update of Board Order R7-2008-0800

NPDES Permit and Waste Discharge Requirements for Concentrated Animal Feeding Operations (CAFOs)

May 8, 2013



What Changed?

- Permit applicability
- Antidegradation justification
- General clarifications
- Effluent limits and discharge prohibitions
- Nutrient management plan (NMP) requirements
- Monitoring and reporting requirements

Look here for permit
references and page



Permit Applicability

(Handout #1)

- CAFOs that discharge (except agricultural stormwater)
- Removed
 - “Propose to discharge”
 - Designation of small and medium operations
- Existing enrollees automatically enrolled
- File NOT to terminate coverage



Permit Applicability: Unpermitted CAFOs

- Unpermitted CAFOs are liable for any discharge, even because of an emergency or natural disaster
- Nutrient management planning required for agricultural stormwater exemption
 - Site-specific conservation practices to control pollutant runoff
 - Appropriate manure and soil testing
 - Protocols to apply at agronomic rates
 - Records of the above



Antidegradation Revisions

- **Antidegradation???** Review process for activities that could increase pollutant loads or degrade water quality
- **Why?** *Asociacion De Gente Unida Por El Agua et al. v. Central Valley RWQCB*
- Permit revisions
 - Antidegradation analysis for new or expanded facilities (VII.C.3.f [p. 32])
 - EWMP proposed measures for CAFOs that do not meet soil and siting requirements (Att. B, #3 [p. B-1])
 - Nitrogen leaching assessment (Att. C)



Clarification Revisions

- Do not create new requirements
- Cross referencing (Throughout)
- Production area additional measures (incl. mortality management) and records required for allowable discharge (V.A.2.c and d [p. 11], V.C.1.e [p. 14])
- Clean water diversion – added must divert from raw materials, products, or by-products including feed, milk, eggs, or bedding (VII.C.3.a.ii [p. 2])



Revised Effluent Limits and Prohibitions

- New Source Performance Standards
 - Swine, poultry, and veal calf CAFOs constructed after January 19, 2009
 - Zero discharge from production area
 - May request design standard based on site-specific technical evaluation
 - Soil Plant Air Water Hydrology Model
 - Animal Waste Management software
 - 2008 federal CAFO rule revision

V.B [p. 11]
Att. B. #5 [p. B-2]



Revised Effluent Limits and Prohibitions (*cont.*)

- Surface receiving water limitations
 - Numeric criteria: DO, pH, TDS
 - Narrative criteria
 - Receiving water upstream/downstream monitoring (for discharges)
 - Revised to reflect Basin Plan requirements



VI.A [p. 16]

MRP, VIII.A [p. E-6]

Revised Effluent Limits and Prohibitions (*cont.*)

- No discharge of trash to New River (IV.J [p. 10])
 - New River Trash TMDL
- Changes based on permit template
 - Discharge of waste to land not owned or controlled by CAFO is prohibited (IV.H [p. 10])
 - Disposal of wastes must not cause condition of pollution or nuisance (IV.I [p. 10])



Revised NMP Requirements

- Area covered by NMP
 - Existing: *Croplands* under the CAFO's *ownership or operational control*
 - Proposed: *Land* under the CAFO's *control*
 - All areas where manure or wastewater is applied (not just where crops are grown)
 - Only land under CAFO's control
 - Better conformance with federal CAFO regulations



Revised NMP Requirements (*cont.*)

- Nutrient Management Plan submittal
 - New Enrollees: With NOI
 - Existing Enrollees: By permit effective date
 - Existing Order requires update at least once every 5 years
 - Update existing NMPs to reflect revised permit requirements.

VII.C.3.b.vi(a) [p. 25]

VII.C.3.b.x [p. 27]



Revised NMP Requirements (*cont.*)

(*Handout #2*)

- Nutrient Management Plan “terms”
 - Certain NMP elements will become enforceable permit conditions
 - Narrative rate approach provides flexibility
 - NMP must include certain projections (not terms)
 - Annually recalculate of amount of manure to apply

VII.C.3.b.iv(d), (e), and (f)
[pp. 23 - 25]



Example Manure Application Calculation

Sudangrass (3 cuttings, 7 tons/acre), feedlot wastewater, N-based

1. Crop N need <i>Guidelines for Field Crops</i> –Bulletin 104-F	200 lb N/acre
2. N credits NMP or sampling	Prior legume: 0 lb/acre Prior manure: 6.5 lb/acre
3. Other N sources	Irrigation water: 0 lb/acre Commercial: 50 lb/acre
4. N needed from wastewater	$200 - 6.5 - 50 = \mathbf{143.5 \text{ lb/acre}}$
2. Wastewater N content	NH ₄ : 71 lb/acre-inch Organic: 8 lb/acre-inch
3. Available N content (all inorganic, 40% of organic [8 * 0.4])	NH ₄ : 71 lb/acre-inch <u>+ Organic: 3.2 lb/acre-inch</u> Available: 74.2 lb/acre-inch
4. Rate needed to supply 143.5 lb N/acre $143.5 \text{ lb/acre} \div 74.2 \text{ lb/acre-inch}$	1.9 inches/acre <i>Planned application rate</i>

Revised NMP Requirements (*cont.*)

- NMP Review and Approval Process
 - EO/staff review to identify NMP terms
 - Public notice NMP and terms
 - Public comment and hearing if needed
 - Authorization letter
 - Little change from existing
 - Review for terms
 - Entire NMP no longer incorporated

VII.C.3.b.viii [p. 26]

II.A.2 [p. 5]



Revised NMP Requirements (*cont.*)

(Handout #2)

■ NMP Revision Process

- Submit all changes (90 days in advance)
- Review for change to terms
 - No change – EO notify CAFO, okay to proceed
 - Non-substantial change – Public notice, okay to proceed
 - Substantial change – Public notice and comment

■ Substantial changes to terms

- New land application areas
- Maximum amount of N and P to apply
- New crop
- Change likely to increase risk of N or P loss

VII.C.3.b.xii [27]
MRP XI.F [E-17]



Revised Technical Standards for Nutrient Management

(Handout #3)

- Analytical requirements: Added use of CDQAP procedures
- Crop nutrient requirement: Document use of historic records in NMP
- Added N mineralization rates
- Yield goal based on site records:
average top 3 of last 5 actual yields

Att. C:
Analytical Requirements; Crop Nutrient
Requirements [p. C-3]



Revised Technical Standards (cont.)

- Nitrogen Index
 - Added to support antidegradation justification
 - Management recommendations based on leaching potential
 - Not prescriptive
 - Tool available in eFOTG (Handout #4)



Revised Technical Standards (cont.)

- Include irrigation water in nitrogen budget
- Phosphorus Index
 - Required for all fields (not only where known P impairment)
 - Minor language revisions to reflect 2010 CA P Index update



Revised Technical Standards (cont.)

- Multi-year phosphorus application
- Clarifications
 - P Index Very High: Prohibited
 - P Index High: According to conservation plan
 - No additional P until single year application removed through uptake and harvest



Revised Monitoring and Reporting

(Handouts #5 and #6)

- Clarified application equipment inspection frequency
 - At least annual
 - Daily during liquid application
- Discharge notification
 - Immediate: RWQCB and Emergency Services
 - 24 hours: Certification to RWQCB
 - 5 days: Written report to RWQCB

V.C.2.b.iii [p. 15]

MRP, IX.C.1 [p. E-9]; MRP, X.C [p. E-14]

MRP XI.D [p. E-16]



Revised Monitoring and Reporting (*cont.*)

- Revised discharge monitoring parameters
 - Removed: BOD₅ and total coliform
 - Added:
 - E. coli (all discharges)
 - Enterococcus (New River discharges)
- Receiving water monitoring to support limits
- Manure monitoring, added % moisture

MRP, IV.A.1 [p. E-5]

MRP, VIII.A [p. E-6]

MRP, IX.C.1 [p. E-9]



Revised Monitoring and Reporting (*cont.*)

- NMP documentation
 - Federal regs require NMP for all CAFOs
 - RWQCB requires NMP only for CAFOs that land-apply manure
 - Clarified that certain records constitute NMP for those that do not land-apply
 - Added records for:
 - Chemical disposal
 - Production area conservation practices



Revised Monitoring and Reporting (*cont.*)

- New Annual Report elements (Handout #7)
 - Crop and yield for each field
 - N and P content of applied manure
 - Results of manure application rate calculations
 - Amount of manure applied to each field
 - Soil test results, if taken during last 12 months
- Due by February 15



Questions on permit revisions?



Clarification of Existing Requirements

- Depth Markers
 - All open surface liquid impoundments
 - Mark storage capacity for 25-year, 24-hour storm
- Use of manure to construct or improve structures is prohibited
- Composting site survey if not previously submitted



V.C.1.c [p. 14]

VII.C.4.c [p. 32]

VII.C.3.b [p. 21]

Clarification of Existing Requirements (cont.)

- NMP Applicability (Handout #8)
 - CAFOs that land apply manure, litter, or process wastewater
 - Manure includes: manure, litter, bedding, **compost** and raw materials or other materials commingled with manure or set aside for land application or other use.



Permit Effective Date

- Some EWMPs need to be revised
- NMPs need to be revised or developed
- Need to set permit effective date to accommodate
- Range: July 1, 2012 to September 30, 2014
- What is realistic?

VII.C.3.c.i [p. 29]

Cover page, Table 2

II.A.1 [p. 4]



Questions?

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