

May 1, 2003
revised June 25, 2003
revised August 4, 2003

**National Pollutant Discharge Elimination System
Fact Sheet and Permit Evaluation Report**

**Oregon Confined Animal Feeding Operations
General Permit**

Prepared by:

Lynda Horst, Oregon Department of Agriculture
Jamie Bansen, Oregon Department of Agriculture (503) 986-4780
Ranei Nomura, Oregon Department of Environmental Quality (503) 229-5657
For information, please contact ODA or DEQ staff.

NPDES Fact Sheet and Permit Evaluation Report Oregon CAFO General Permit

Table of Contents

1.0	Overview	1
1.1	Proposed permit action	1
1.2	Description of activity needing permit	1
1.3	Description of pollutants	1
1.4	Why is a permit needed?	2
1.5	Why is a general permit being issued?	2
1.6	When is an individual permit necessary?	2
1.7	Permitting options in designated groundwater management areas	3
2.0	Discussion of Proposed Permit	3
2.1	Outline of permit	3
2.2	Who needs a permit?	3
2.3	Application to Register (ATR)	6
2.4	Notification of registration (General Permit Summary)	7
2.5	Cancellation of coverage	7
2.6	Discharge limitations and prohibitions	8
2.7	Production area limitations	8
2.8	Land application limitations	9
2.9	Direct access by animals to surface water in the production area	9
2.10	Waste storage facilities	10
2.11	Prevention of system overloading	10
2.12	Handling of animal mortalities	10
2.13	Proper operation and maintenance	11
2.14	Maintain compliance if system fails	11
2.15	Setback requirement for large concentrated AFOs	11
2.16	Waste management plans	11
2.17	Monitoring requirements	12
2.18	Inspection requirements	13
2.19	Record keeping requirements	13
2.20	24-hour reporting requirement	14
2.21	Annual report requirement	14
2.22	Manure, litter, or process waste water transfers	15
2.23	Additional monitoring	15
2.24	General conditions	15
3.0	Environmental Concerns	15
3.1	Antidegradation policy review	15
3.2	Antidegradation policy: Special policies and guidelines (OAR 340-041-0470)	16
3.3	Total maximum daily loads (TMDLs)	16
4.0	What Happens Next?	17
4.1	Public comment period	17
4.2	Public hearings	17
4.3	Response to comments	17
4.4	Changes to the fact sheet and permit evaluation report	17

NPDES Fact Sheet and Permit Evaluation Report

Confined Animal Feeding Operations General Permit

1.0 Overview

1.1 *Proposed permit action*

The Oregon Department of Agriculture (ODA) and Department of Environmental Quality (DEQ) are proposing to issue a National Pollutant Discharge Elimination System (NPDES) general permit for confined animal feeding operations (CAFOs) in Oregon. CAFOs that meet the definition found in Oregon Administrative Rule (OAR) 603-074-0010(3) and confine for four months or more and have wastewater treatment works are required to register to a general permit or obtain an individual permit. In addition, any operation meeting the federal definition of a *concentrated* animal feeding operation must obtain coverage under this permit regardless of the length of confinement or existence of waste water control facilities.

1.2 *Description of activity needing permit*

The activity associated with CAFOs is the confinement of animals, including poultry, for meat, milk, or egg production, or stabling, in pens or houses, where the animals are fed or maintained at the place of confinement. Generally animals are congregated in confined areas along with their feed and manure. Some facilities also consolidate their dead animals in a central location. Feed is brought to the animals rather than the animals grazing or otherwise seeking feed in pastures.

ODA estimates that anywhere from 700 to 1,000 CAFOs may need to register under this general permit. Approximately 500 CAFOs are currently registered under the existing Water Pollution Control Facilities (WPCF) general permit #800.

1.3 *Description of pollutants*

Process wastes, consisting primarily of animal manure, wash down water, contaminated storm water, and silage leachate are the primary sources of wastes being regulated under this permit. ODA estimates that CAFOs registered under this permit may generate 10 million tons of waste on a yearly basis. A majority of these wastes are land applied at agronomic rates to crop ground under control of CAFO operators, while the remaining is exported off-site for use by other agricultural entities. The estimate of waste generated is based on 500 dairies (most of the CAFOs currently under permit; 6.5 million tons for dairy operations) and 250 additional facilities of different animal types, all of medium size (3 million tons for 220 beef operations and .5 million tons for 30 poultry operations).

Contamination of surface and ground waters can occur due to improper collection and storage of wastes, contamination of storm water runoff, undersized or leaking waste storage facilities, improper timing or over-application of wastes, or improper containment of silage effluent.

The most commonly recognized contaminants from CAFOs include biochemical oxygen demand (BOD), total suspended solids (TSS), organics, bacteria, and nutrients (nitrogen and phosphorous compounds).

Nutrients such as nitrogen and phosphorus can cause increased aquatic plant growth. Decomposition of algae and plants can decrease dissolved oxygen levels. In addition, the biochemical oxygen demand of

organic waste depletes dissolved oxygen in water. Low dissolved oxygen levels in streams and lakes can cause fish kills.

Inorganic forms of nitrogen are taken up by plants as nutrients when wastes are applied to cropland. Excessive or improper application of wastes and improper storage of wastes can cause runoff to surface water or leaching to ground water. Ammonia (a form of nitrogen) at high levels in surface water can be toxic to fish. High nitrate levels in drinking water can be toxic to humans.

Bacteria, viruses, and parasites found in animal waste can increase the risk of waterborne diseases. Fecal coliform bacteria are used as a biological indicator to determine water quality impact. In fresh water, high fecal coliform levels can cause a threat to public health and restrict beneficial uses, such as recreational, industrial, domestic, and agricultural use of the water. In marine water, high fecal coliform levels necessitate the closure of shellfish beds restricting recreational use and causing adverse economic impact to shellfish growers.

1.4 Why is a permit needed?

Previously, ODA administered a WPCF general permit issued by the DEQ and issued individual WPCF permits as necessary. Most Oregon CAFOs are registered to the WPCF general permit. The federal Environmental Protection Agency (EPA) has since directed that *concentrated* AFOs must be covered under an NPDES permit instead of the WPCF permit. Federal regulations adopted in February 2003 now clarify application requirements and impose upon most *concentrated* AFOs an affirmative duty to apply for a Clean Water Act (CWA) NPDES permit. Because WPCF permits cannot provide CWA authorization for many CAFO discharges, this permit will replace the existing WPCF CAFO general permit. In addition, the 2001 Oregon Legislature, through House Bill 2156, has directed ODA to seek delegated authority from EPA to administer an NPDES program for CAFOs in accordance with the CWA.

1.5 Why is a general permit being issued?

Section 301(a) of the CWA provides that discharge of pollutants is unlawful except in accordance with an NPDES permit. Although such permits have been issued to individual operators, EPA's regulations authorize the issuance of "general permits" to categories of discharges when the point sources responsible for the discharge are located within the same geographic area and warrant similar pollution control measures; involve the same or substantially similar types of operations; discharge the same type of waste; require the same effluent limitations or operating conditions; require the same or similar monitoring requirements, and in the opinion of the permitting authority are more appropriately controlled under a general permit than under individual permits.

The use of a general permit for regulating Oregon CAFOs is appropriate because the waste characteristics from different CAFOs are substantially similar. In addition, the effluent limitation guidelines, best management practices and other requirements for CAFOs covered by this general permit are similar as well.

1.6 When is an individual permit necessary?

Any CAFO required to obtain coverage under this general NPDES permit may request issuance of an individual permit. Most facilities will be sufficiently regulated under this general permit; however, the director may decide that a particular operation must be covered by an individual permit. Pursuant to

Oregon Administrative Rule (OAR) 340-045-0033(9), situations where an individual permit would be required include:

- The discharge or activity is a significant contributor of pollution or creates other environmental problems;
- The operator is not in compliance with the terms and conditions of the general permit, submitted false information, or is in violation of any applicable law;
- A change occurs in the availability of demonstrated technology or practices for the control or abatement of pollutants being discharged;
- New effluent limitation guidelines are promulgated for point sources covered by this general permit and the guidelines are not already in the permit; or
- Circumstances have changed so that the discharge or activity is no longer appropriately controlled under a general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary.

1.7 Permitting options in designated groundwater management areas

Permitting options for CAFOs in groundwater management areas will be evaluated on a case-by-case basis. ODA expects that a majority of these operations will be adequately regulated by the general permit. In situations where a CAFO might affect groundwater quality, additional monitoring requirements may be required under the general permit or an individual permit may be required. CAFOs, including those in groundwater management areas, will need to submit an *Application to Register* discussed further in Section 2.3, p. 6.

2.0 Discussion of Proposed Permit

2.1 Outline of permit

The proposed NPDES permit is organized with a face page, a table of contents, and several pages of conditions. Special Conditions are followed by General Conditions. The Special Conditions are unique and particular to this CAFO permit, whereas the General Conditions are required in all NPDES permits.

2.2 Who needs a permit?

Any person who engages in, operates or conducts an animal feeding operation that meets the definition of a ***confined animal feeding operation*** is required to obtain coverage under this general permit, with some exceptions. Facilities that are not otherwise subject to regulation under the CWA (33 USC § 1342) and that confine for four months or less or that do not have wastewater treatment works are not required to have permit coverage.

Also, other operations that may under certain circumstances or in the future meet the definition of a confined animal feeding operation may opt for coverage under this permit. If such operations elect coverage they become subject to all terms and conditions of the permit.

Facilities subject to regulation under 33 USC § 1342 are those that meet the federal definition of a ***concentrated animal feeding operation***. To be a ***concentrated animal feeding operation***, one must first be an ***animal feeding operation (AFO)***. Under federal law, AFO means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

- Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period,
and
- Crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Concentrated animal feeding operation pursuant to 40 CFR §122.23 [68 FR 7176 (2/12/03)] means an *animal feeding operation* that meets the criteria below, or which has been designated by the director as a significant contributor of pollution. Two or more AFOs under common ownership are considered to be a single AFO for the purposes of determining the number of animals at an operation, if they adjoin each other or if they use a common area or system for the disposal of wastes.

An *animal feeding operation* is a large or medium *concentrated animal feeding operation* for purposes of federal law if it meets the following criteria:

An AFO is defined as a Large concentrated AFO if it stables or confines as many as or more than the numbers of animals specified in any of the following categories:

- (i) 700 mature dairy cows, whether milked or dry;
- (ii) 1,000 veal calves;
- (iii) 1,000 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs;
- (iv) 2,500 swine each weighing 55 pounds or more;
- (v) 10,000 swine each weighing less than 55 pounds;
- (vi) 500 horses;
- (vii) 10,000 sheep or lambs;
- (viii) 55,000 turkeys;
- (ix) 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system;
- (x) 125,000 chickens (other than laying hens) if the AFO uses other than a liquid manure handling system;
- (xi) 82,000 laying hens, if the AFO uses other than a liquid manure handling system;
- (xii) 30,000 ducks (if the AFO uses other than a liquid manure handling system); or
- (xiii) 5,000 ducks (if the AFO uses a liquid manure handling system)

An AFO is defined as a Medium concentrated AFO if the type and number of animals that it stables or confines falls within any of the following ranges:

- (i) 200 to 699 mature dairy cattle, whether milked or dry;
- (ii) 300 to 999 veal calves;
- (iii) 300 to 999 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs;
- (iv) 750 to 2,499 swine each weighing 55 pounds or more;
- (v) 3,000 to 9,999 swine each weighing less than 55 pounds;
- (vi) 150 to 499 horses;
- (vii) 3,000 to 9,999 sheep or lambs;
- (viii) 16,500 to 54,999 turkeys;
- (ix) 9,000 to 29,999 laying hens or broilers, if the AFO uses a liquid manure handling system;
- (x) 37,500 to 124,999 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system;
- (xi) 25,000 to 81,999 laying hens, if the AFO uses other than a liquid manure handling system); or
- (xii) 10,000 to 29,999 ducks (if the AFO uses other than a liquid manure handling system); or

- (xiii) 1,500 to 4,999 ducks (if the AFO uses a liquid manure handling system); and either one of the following conditions is met:
1. pollutants are discharged into waters of the United States through a man-made ditch, flushing system, or other similar man-made device; or
 2. pollutants are discharged directly into waters of the United States that originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

An AFO is a Small *concentrated AFO* if it is designated as a *concentrated AFO* and is not a Medium or Large *concentrated AFO*.

The state definition of ***confined animal feeding operation (CAFO)*** in OAR 603-074-0010(3) means

- (a) The concentrated confined feeding or holding of animals or poultry, including but not limited to horses, cattle, sheep, or swine feeding areas, dairy confinement areas, slaughterhouse or shipping terminal holding pens, poultry and egg production facilities and fur farms
 - (A) In buildings or in pens or lots where the surface has been prepared with concrete, rock or fibrous material to support animals in wet weather; or
 - (B) That have wastewater treatment works; or
 - (C) That discharge any wastes into waters of the state; or
- (b) An animal feeding operation that is subject to regulation as a concentrated animal feeding operation pursuant to 40 CFR §122.23 [68 FR 7176 (2/12/03)].

The federal definition identifies the acronym “CAFOs” as *concentrated* animal feeding operations, whereas the state definition refers to *confined* animal feeding operations. Because the state definition includes those operations meeting the federal definition [OAR 603-074-0010(3)(b)], the term *confined animal feeding operation* is used in this permit to describe both federal and state defined CAFOs. This means that any *concentrated animal feeding operation* is a *confined animal feeding operation* under Oregon law.

Any *confined animal feeding operation* that confines for more than four months and has waste water treatment works is required to obtain coverage under the permit. Operations that confine for four months or less or operations that do not have wastewater treatment works are not required to obtain permit coverage. Oregon Revised Statutes (ORS) 468B.215(2). Any operation meeting the federal definition of *concentrated animal feeding operation*, however, must obtain coverage under this permit regardless of the length of confinement or existence of wastewater treatment works.

Waste water control facility is defined in the permit to mean a “disposal system” or “treatment works” as defined in ORS that may cause pollution of surface water or groundwater and is used for collecting, conveying, treating, stabilizing or storing manure, litter, process waste water, or contaminated production area drainage (i.e., silage leachate, contaminated storm water runoff, etc.) at confined animal feeding operations.

Confinement area is defined in the permit as part of the *production area* and 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. EPA reiterates in the preamble to the revised rules that pasture and rangeland are not part of the confinement area; “in some pasture based operations, animals may freely wander in and out of particular areas for food or shelter; this is not considered confinement.” However, pasture and grazing-based operations may also have confinement areas, such as feedlots, barns, and pens.

The **production area** is defined to include not only the confinement area, but also the manure storage area, the raw materials storage area, and the waste containment areas. 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 areas include, but are 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 animal mortalities.

2.3 *Application to Register (ATR)*

All persons required to have coverage under this permit must submit an **application to register (ATR)** to the permit. The proposed schedule complies with the changes made to the EPA regulations that were published on February 12, 2003. The schedule is as follows:

- All newly constructed CAFOs
Newly constructed CAFOs, including “new sources” must submit an ATR at least 180 days prior to the time that the CAFO commences operation.
- Existing CAFOs that met the previous definition of concentrated AFOs:
CAFOs that were defined as *concentrated* under federal regulations in effect prior to April 14, 2003, must submit an ATR immediately.
- Existing CAFOs newly defined as concentrated AFOs as of April 14, 2003:
CAFOs that met the federal definition of *concentrated* as of April 14, 2003, that were not defined as *concentrated* in federal regulation prior to that date must submit an ATR by a date specified by the director, but no later than February 13, 2006.
- Existing CAFOs that become defined as concentrated AFOs after April 14, 2003:
CAFOs that become defined as *concentrated* after April 14, 2003, must submit an ATR within 90 days after becoming defined as a CAFO unless the change in operation that causes the AFO to be defined as a *concentrated* AFO would not have caused it to be defined as a *concentrated* AFO prior to April 14, 2003.
- All other existing CAFOs that are not concentrated AFOs:
Other existing CAFOs that are not *concentrated* AFOs covered by this permit must submit an ATR within 90 days of notification by the director that permit coverage is required.
- AFOs designated by the director:
AFOs designated by the director must submit an ATR by a date specified by the director but no later than 90 days after receiving notice of the designation.

The ATR form will be provided by ODA. Applicants must provide the following information:

- (a) Name and address of applicant and name of owner, if different
- (b) Information about the corporate structure of the applicant and owner
- (c) Facility information, including name, address, and latitude and longitude of production area or entrance to production area;
- (d) Identity of receiving streams;

- (e) A topographic map of the geographic area in which the CAFO is located showing the specific location of the production area;
- (f) Specific information about the number and type of animals, whether in open confinement and housed under roof (beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, ducks, turkeys, other);
- (g) The type of containment and storage (anaerobic lagoon, roofed storage shed, storage ponds, underfloor pits, above ground storage tanks, below ground storage tanks, concrete pad, impervious soil pad, other), and total capacity for manure, litter, and process wastewater storage (tons/gallons);
- (h) The total number of acres under control of the applicant available for land application of manure, litter, or process wastewater;
- (i) Estimated amount of manure, litter, and process wastewater generated per year
- (j) Estimated amount of manure, litter, and process wastewater transferred to other persons per year (tons/gallons); and
- (k) For CAFOs that must apply to register after December 31, 2006, certification that a waste management plan has been completed and will be implemented upon the date of permit coverage.

Applicants must certify that all of the information provided was properly gathered and evaluated by the applicant and is true, accurate and complete.

2.4 Notification of registration (General Permit Summary)

Once an *application to register* (ATR) is received, evaluated, and approved by ODA, a notice of registration entitled *Notice of Registration and Oregon CAFO General Permit Summary* will be issued to the applicant. The *Notice of Registration and Oregon CAFO General Permit Summary* will contain the operation name, address, and contact information as provided to the department. It will include the effective date of registration, maximum number of animals the operation is permitted to allow at the facility based on the information provided in the ATR, and regulatory status of the CAFO (e.g., whether the CAFO is considered a Large or Medium *concentrated* animal feeding operation, state CAFO, etc.). The *Notice of Registration and Oregon CAFO General Permit Summary* also provides a summary of permit terms and conditions to be used as a quick reference guide for registered operators.

2.5 Cancellation of coverage

A registrant may request that coverage under this permit be cancelled, providing certain criteria are met:

- Conditions or standards have changed so that the source or activity no longer qualifies for general permit coverage;
- The facility no longer has animals on site and waste storage facilities have been properly decommissioned; or
- The registrant certifies that it will not commence operations at the same location without making a new application for registration under this permit or applies for an individual permit.

The department will respond to a written request for cancellation by conducting a site inspection and a review of the operator's file. A written determination on the request will be provided to the registrant after due consideration by the department.

2.6 Discharge limitations and prohibitions

The general permit prohibits the discharge of process wastes to surface water or groundwater except as allowed by federal regulation and provided the discharges during these exception events do not cause or contribute to a violation of state water quality standards. See Section 2.7 and 2.8, pp. 8 and 9. **Discharge** is defined in the permit to mean:

- The discharge of a pollutant;
- Any addition of any pollutant or combination of pollutants to waters of the state from any point source;
- A discharge of pollutants into waters of the state through a manmade ditch, flushing system or similar manmade conveyance, or
- The application of process wastes to land not consistent with the times and/or rates specified in the waste management plan in a manner that is likely to result in contamination of waters of the state.

Types of discharges that are prohibited include contaminated runoff from confinement areas or waste accumulation areas; overflow from waste storage facilities; discharges due to improper land application from surface drains, field tile outlets, or seepage below the root zone. Also prohibited are discharges due to equipment failure or leakage or seepage from the production area in excess of the approved design. Any storage or application of wastes that results in contamination of surface or ground water is expressly prohibited.

Direct animal contact with surface waters in the *production area* of the CAFO is prohibited. *Direct contact* means any situation where animals in the production area have free access and are allowed to loiter or drop waste in surface waters. Direct animal contact with surface waters by animals on pasture or rangeland is not, by itself, a violation of the permit.

Production area is defined in the permit to mean that part of the facility 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 animal mortalities

2.7 Production area limitations

All operations must comply with the effluent limitation guidelines in 40 CFR §412 and 40 CFR §§122, 123 and 412 [68 FR 7176 (2/12/03)]. These include requirements for applicable control technologies, performance standards, pretreatment standards, additional measures required for manure, litter, and process wastewater management at CAFOs.

There are several production area limitations proposed in the general permit. The first two prohibit discharge to surface water except when rainfall events cause an overflow of process waste water from a facility designed, constructed, operated, and maintained to contain all process-generated waste water plus the runoff and direct precipitation from a 25-year, 24-hour rainfall event (as defined by the National

Weather Service). For new source swine, poultry, and veal large concentrated AFOs, facilities must be designed, constructed, operated, and maintained to contain all process-generated wastewaters plus the runoff from a 100-year, 24-hour rainfall event for the location of the facility. This means that if a facility is designed, constructed, operated, and maintained according to these requirements, a discharge from the facility would not automatically be a permit violation provided it does not cause or contribute to an instream violation of state water quality standards. However, if the facility is designed correctly, but not properly managed, such a discharge may be considered a permit violation. It is not enough to have the facility constructed and designed correctly; it must be managed and maintained correctly as well. This means operators must be vigilant in assuring that the waste management system is sufficient and operating properly in order to comply with the permit conditions.

In addition, all authorized discharges from the production area must be properly land applied or otherwise handled in a way that minimizes impacts on surface water or groundwater of the state, and seepage to groundwater from waste storage or animal confinement facilities must not exceed design rates as approved by ODA or violate state groundwater quality protection standards.

New source swine, poultry, and veal large *concentrated* AFOs

EPA has determined that designs for the 100-year, 24-hour storm are “technologically feasible and will not pose a barrier to entry” into the swine, poultry and veal industry. EPA found that it is common for such operations to construct facilities that keep animals in total confinement (covered housing) that is not exposed to rainfall or storm water runoff. In addition, many new operations are based on manure handling systems that greatly reduce or eliminate water use, such as hog and poultry high-rise houses, or that contain manure in covered or indoor facilities, such as underhouse pit storage systems and litter storage sheds. New facilities may also choose flush systems with lagoons that are covered or sited and designed to achieve total containment.

2.8 *Land application limitations*

There are several requirements for land application. When applying wastes, the operator must apply at agronomic rates in accordance with proper agricultural practices. If a waste management plan has been approved by ODA, applications must also be performed as specified in that plan. Waste applications must not exceed the capacity of the soil and crops to assimilate nutrients and minimize water pollution, must be quantifiable (based on nutrient testing of wastes, soils, and crops), must be based on the most limiting nutrient (e.g., nitrogen or phosphorus), and must account for all other nutrient sources.

In addition, discharges to groundwater due to seepage below the root zone of the crop or by other means must not violate state groundwater quality protection, and if discharge to surface water or groundwater sources will result, application to flooded, saturated, frozen or snow covered land is prohibited. Land application of wastes or wastewater during rainfall events that are expected to result in saturated soils or surface runoff is prohibited.

2.9 *Direct access by animals to surface water in the production area*

Direct animal contact with surface waters of the state in the production area of a CAFO is prohibited. Animals that graze on rangeland and come into contact with surface waters while grazing is not prohibited by the permit.

2.10 Waste storage facilities

The facility must have the capacity to store liquid and solid wastes at all times so that land application occurs only during periods when soil and weather conditions allow for agronomic application and are in compliance with the land application effluent limitations as described in Section 2.8 above. While the permit does not require a minimum amount of storage for any facility, it is required that the facility be managed in such a way so that the storage available is sufficient to prevent over application, runoff or discharge. The permittee with a Large *concentrated* AFO must also have depth markers in all surface impoundments to indicate the maximum design volume, minimum capacity necessary to contain the applicable rainfall event, and the depth of manure and process waste water.

All waste storage facilities constructed after the effective date of this permit that are required to be addressed in a new or updated waste management plan must be sited, designed, constructed, operated and maintained consistent with the waste management plan developed as provided in the permit.

New and modified construction of waste facilities likewise must be sited, designed, constructed, operated and maintained consistent with the waste management plan and must comply with the terms and conditions outlined in OAR 603-074-0018.

All facilities are subject to the provisions of OAR chapter 340, division 51, relating to the use of best practicable waste control technology and review and approval of facility location, design, construction, operation and maintenance.

The department will accept design and post-construction certification by a licensed engineer for:

- Earthen impoundments (e.g., ponds, basins and lagoons with permeable or impermeable liners)
- Earthen conveyances (e.g., ditches)
- Animal holding areas (e.g., lots, pens, exercise yards, alleys, and earthen-floored buildings within the production area)
- Primary storage structures for liquid and solid manure (e.g., concrete or steel tanks, earthen- or concrete-surfaced solid manure storage facilities). A primary storage structure is any storage structure intended to hold an operation's waste for a period of five or more days.

For facilities intending to use experimental or unproven treatment methods or technology, design and post-certification by a licensed engineer is not allowed. In these cases, the operator must contact the department prior to construction for approval on a case-by-case basis.

For all other modifications or new construction, no approval will be required. However, any such modification or construction must be described in the current, approved waste management plan, or a revised plan must be prepared and submitted to the department for approval prior to construction.

2.11 Prevention of system overloading

The permittee may not increase the number of animals over 10% or 25 animals, whichever is greater, of the maximum number assigned by ODA in the *Notice of Registration and General Permit Summary* until an updated plan is approved in writing by ODA. In addition, animal numbers must not exceed the capacity of the waste storage facilities or the maximum number of animals assigned by ODA.

2.12 Handling of animal mortalities

The permittee must not dispose of animal mortalities in liquid manure or waste water control facilities. Animal mortalities must be handled in such a way as to prevent discharge of pollutants to surface water or groundwater.

2.13 Proper operation and maintenance

The permittee must at all times properly operate and maintain all facilities and systems used for process waste collection, storage and utilization, and correct any deficiencies found as soon as possible.

2.14 Maintain compliance if system fails

The permittee must control all applications and discharges upon reduction, loss or failure of the waste storage or utilization facilities until the facilities are restored or an alternative method of storage or utilization is provided. This requirement applies where the primary source of power is reduced, lost, or fails.

2.15 Setback requirement for large concentrated AFOs

EPA developed a setback requirement for Large *concentrated* AFOs. Large *concentrated* AFOs must, in the land application area(s), maintain a setback area within 100 feet of any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters where manure, litter, and other process waste waters are prohibited. As a compliance alternative, and if demonstrated to the satisfaction of the department, the permittee may:

1. Establish a 35-foot vegetated buffer where manure, litter, and other process waste waters are prohibited; or
2. Demonstrate that a setback or vegetated buffer is not necessary or may be reduced.

2.16 Waste management plans

Everyone registered to the permit must develop and implement a waste management plan. Newly constructed and new source CAFOs must submit their plan to ODA with the ATR. Existing CAFOs must submit a current plan upon notification by the department or by July 1, 2006, whichever occurs first. Updates to plans must be submitted to ODA for approval at least 45 days before the facility expansion, production increase or process modification is to be implemented unless a different schedule is allowed by ODA in writing.

All plans must be implemented upon receipt of notification by ODA or by December 31, 2006, whichever occurs first. The final permit clarifies that the plan may include a schedule for projects, but that absence of a plan or absence of ODA approval of a plan does not allow the permit to violate the provisions of S2 Discharge Limitations and Operating Requirements or other permit requirements.

Permittees must prepare their waste management plan in accordance with the terms and conditions of the permit and guidelines contained in OAR chapter 340, division 51 and chapter 603, division 74. In addition, plans must conform to the Natural Resource Conservation Service (NRCS) conservation practice standard guidance 590 for Oregon, dated May 2001, and entitled *Nutrient Management*. ODA will accept plans from NRCS-certified Comprehensive Nutrient Management Plan (CNMP) writers and may approve such plans without review.

Basic elements of a plan include:

- An inventory of animals, facilities, and lands, including lands owned or leased and lands available for land application, whether on- or off-site;
- Drawings and maps showing all facilities and lands;
- Calculations of required and necessary storage capacity;
- Calculations of volumes and nutrient contents of generated wastes and wastewater;

- Guidelines for land application of wastes and wastewater;
- Operation and maintenance guidelines;
- Monitoring and record-keeping guidelines;
- Plans and specifications for proposed new or modified waste handling facilities.

To the extent applicable, the waste management plan must also:

- Ensure adequate collection, handling, and storage of manure, litter and process wastewater;
- Include procedures to ensure proper operation and maintenance of the storage facilities;
- Ensure proper management of animal mortalities to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities;
- Ensure that clean water is diverted, as appropriate, from the production area;
- Prevent direct contact of confined animals with waters of the United States;
- Ensure that chemicals and other contaminants handled on-site are not 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;
- Identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to surface water and groundwater;
- Establish protocols to land apply manure, litter or process waste water in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process waste water. For Large *concentrated* AFOs, these protocols must be based on actual testing data. For other CAFOs, data or “book values” from established reference sources (e.g., Oregon Animal Waste Management program) may be used instead of actual testing;
- For Large *concentrated* AFOs, also identify protocols for appropriate testing of manure, litter, process waste water, and soil. For other CAFOs, identify the references used instead of actual testing data or test protocols if testing; and
- Identify specific records that will be maintained to document the implementation and management of the minimum elements described above.

The need for additional or alternative plan information will be established on a case-by-case basis for plans required as part of a corrective order, or to account for extraordinary circumstances. The level of detail of information required in the various plan sections will depend on the size, complexity, and other specifics of each CAFO.

Waste management plans must show, when applicable, how the CAFO will achieve an agronomic balance of nutrients land-applied with nutrients removed in harvested crops. ODA will typically require an agronomic balance for nitrogen, but in some cases for phosphorus. Phosphorus balance will be required when the CAFO is within a watershed that has been designated by the state as water quality limited for phosphorus, and when the NRCS phosphorus index for the land application soils is exceeded.

Once the plan has been submitted to and approved by ODA, the facility must be managed in compliance with the plan at all times. The application of process wastewater more frequently than specified in the waste management plan or at a concentration in excess of plan specifications or at times not specified in the waste management plan will constitute a violation of the permit.

2.17 Monitoring requirements

Discharge Monitoring

Any discharge or runoff that is not allowed by the permit must be recorded and reported to the department. The record must contain a description and cause of the discharge; the period of discharge, including exact dates, times, and duration of discharge; an estimate of the volume of the discharge; name or location of receiving water, and corrective steps taken to reduce, eliminate or prevent recurrence. In the event a discharge occurs, the department must be notified within 24 hours of the event. A written report must be submitted to the department within five days. In the event of equipment failure, the department must be notified within 24 hours.

Analytical Monitoring

At least once during the term of this permit, the permittee must collect and analyze representative soil samples for phosphorus and nitrogen content from all fields where manure, litter, and other process waste waters are applied. The testing is a requirement of NRCS *Nutrient Management* conservation practice guidance 590 and the results from this testing will assist the permittee in developing the waste management plan. The permittee with a Large *concentrated* AFO must also collect and analyze manure, litter, and other process waste waters annually for nutrient content, including nitrogen and phosphorus.

2.18 Inspection requirements

Permittees are required to conduct inspections to ensure proper operation of activities associated with waste management at the production and land application areas. The permittee must:

- Periodically inspect of all storm water diversion devices, runoff diversion structures, animal waste storage structures, and devices channeling contaminated storm water to the waste water and manure storage and containment structure. The permittee with a Large *concentrated* AFO must conduct and record these inspections weekly.
- Periodically inspect water lines, including drinking water or cooling water lines. The permittee with a Large *concentrated* AFO must conduct and record these inspections daily.
- Periodically conduct leak inspections of equipment used for land application of manure, litter, or process waste water. The permittee with a Large *concentrated* AFO must record the results of these periodic inspections.
- The permittee with a Large *concentrated* AFO must inspect liquid impoundments for manure and process waste water on a weekly basis and record the depth of manure and process waste water in those impoundments as indicated by the depth marker.

Any deficiencies found as a result of these inspections must be corrected as soon as possible. The permittee with a Large *concentrated* AFO must record any actions taken to correct these deficiencies and, if deficiencies are not corrected within 30 days, provide an explanation of the factors preventing immediate correction.

2.19 Record keeping requirements

All required records must be kept and maintained at the facility for a period of five years, and must be available to ODA upon request.

Upon approval of the waste management plan, the permittee must record and maintain the following information at the facility for at least five years and make this information available to the department upon request. If any of the following information is provided in the permittee's waste management plan,

a separate record keeping effort is not required.

- Expected crop yields.
- Date, amount, and nutrient loading of manure, litter, or process waste water applied to each field;
- For large CAFOs, weather conditions at the time of application and 24 hours before and after application;
- Explanation of the basis for determining annual manure application rates, as provided in the technical standards established by the department;
- Calculations showing the total nitrogen and phosphorus to be applied annually to each field, including sources other than manure, litter, or process waste water;
- Total amount of nitrogen and phosphorus actually applied annually to each field, including documentation of calculations of the total amount applied;
- Method(s) used to apply the manure, litter, or process waste water; and
- Total amount of manure or waste water transferred to other persons. For large CAFOs, include the date and amount of each transfer and the name and address of each recipients.

In addition to the requirements above, the Large *concentrated* AFO must also keep records of animal mortalities management and practices. This record keeping requirement begins when the Large *concentrated* AFO obtains general permit coverage.

2.20 24-hour reporting requirement

As discussed previously in Section 2.17 Monitoring Requirements, p. 12, if a discharge to surface water or groundwater occurs that is not allowed by the permit, the permittee must notify ODA within 24 hours of the discharge. The permittee must also submit a written report within five days to ODA. The information to be submitted is listed in Section 2.17. The permittee must also report to ODA within 24 hours of becoming aware of any significant physical failure at any time of a waste water control facility required under this permit.

2.21 Annual report requirement

All facilities must provide an annual report to ODA. The annual report must be submitted by March 15 of each year. This report may be consolidated and incorporated into the annual inspection process, but the operator has the obligation to create and maintain the record and submit it to ODA unless instructed by the department to do otherwise (e.g., the inspector may collect the report during an annual inspection). The annual report must include the following for the previous calendar year:

- Maximum number and type of animals, whether in open confinement or housed under roof (i.e., beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, ducks, turkeys, other);
- Estimated amount of total manure, litter and process waste water generated by the CAFO (tons/gallons);
- Estimated amount of total manure, litter and process waste water transferred to other persons by the CAFO (tons/gallons);
- Total number of acres for land application covered by the waste management plan developed in accordance with the terms of this permit;
- Total number of acres under control of the CAFO that were used for land application of manure, litter and process waste water in the previous 12 months;
- Summary of all manure, litter and process waste water discharges from the production area that have occurred, including date, time and approximate volume; and
- If the CAFO has a current waste management plan, a statement indicating whether the current

version of the CAFO's waste management plan was developed or approved by a certified waste management planner.

2.22 *Manure, litter, or process waste water transfers*

Federal regulations require that prior to transferring manure, litter, or process waste water to other persons, Large *concentrated* AFOs must provide the recipient of manure, litter, or process wastewater with the most current nutrient analysis available.

2.23 *Additional monitoring*

Specific monitoring requirements may be established on a case-by-case basis for certain facilities, such as those located in groundwater management areas, or those that have been issued a corrective order relating to waste management. ODA may establish these requirements by administrative order.

2.24 *General conditions*

General conditions are standard permit conditions required by 40 CFR §122.41 and 122.42 in every NPDES permit and are not repeated in this fact sheet. The applicable general conditions have been detailed in the permit, but the remaining conditions have only been referenced because they are not directly applicable to this permit or are stated elsewhere in the permit. (Note: The reference is required by federal regulation.)

3.0 Environmental Concerns

3.1 *Antidegradation policy review*

The antidegradation policy in OAR 340-041-0026 requires that degradation of existing water quality be prevented unless necessary for economic and social benefit. DEQ has determined that issuance of the NPDES CAFO general permit is consistent with the antidegradation policy and will not degrade existing water quality because: 1) it is replacing an existing general permit and is not considered a new or increased discharge load; 2) it prohibits discharge in most cases, and when discharges are allowed, they must not cause or contribute to a violation of state water quality standards, and 3) there is no on-going discharge.

The NPDES CAFO general permit will be replacing an existing WPCF general permit for CAFOs (WPCF #800). The proposed NPDES permit continues to prohibit the discharge of process wastes to surface waters except when rainfall events cause an overflow of process waste water from a facility designed, constructed, operated, and maintained to contain all process-generated waste water plus the runoff and direct precipitation from a 25-year, 24-hour rainfall event. (For new source swine, poultry, and veal large concentrated AFOs, facilities must be designed, constructed, operated, and maintained to contain all process-generated wastewaters plus the runoff from a 100-year, 24-hour rainfall event for the location of the facility.) This is essentially a "no discharge" technology-based effluent limit required by the federal EPA.

3.2 Antidegradation policy: Special policies and guidelines (OAR 340-041-0470)

To preserve or improve the existing high quality water for municipal water supplies, recreation and preservation of aquatic life in the Clackamas River, McKenzie River (above Hayden Bridge) and North Santiam River subbasins, OAR 340-041-0470 *Special Policies and Guidelines* prohibits new or increased waste discharges in these subbasins.

As discussed in the previous section, the proposed NPDES CAFO general permit is replacing the WPCF CAFO general permit. Existing CAFOs currently registered under the WPCF permit will be transferred to the NPDES general permit. OAR 340-041-047(4) allows renewal or transfer of permits within these three basins provided there is no increase in discharge load. Since the proposed permit requires that wastes be irrigated on land at agronomic rates and discharge is essentially prohibited, there will be no environmentally significant increase in discharge load. New CAFOs also will be allowed to register under the proposed general permit provided that their waste loads are irrigated on land at agronomic rates, which is not considered an increase in wasteload pursuant to OAR 340-041-0470(4)(c).

3.3 Total maximum daily loads (TMDLs)

OAR 340-045-0035(3) requires DEQ to explain whether the NPDES CAFO general permit allows the discharge of pollutants that affect parameters for which a waterbody may be water quality limited under Section 303(d)(1) of the Clean Water Act, and if so, how the department can allow these permittees to discharge these pollutants to these waterbodies.

The CAFOs to be covered by this general permit have the potential to discharge to a variety of receiving streams. Many of these streams are listed as water quality limited for dissolved oxygen and temperature and many for bacteria. While CAFOs have the potential to discharge a variety of pollutants as discussed in the previous section, the CAFO general permit only allows the discharge of waste or wastewater to surface waters when rainfall events cause an overflow of process wastewater from a facility designed, constructed, operated, and maintained to contain all process-generated wastewater plus the runoff from a 25-year, 24-hour storm event (100-year, 24-hour storm event for swine, poultry, and veal calf operations). In addition, the general permit does not allow discharges that will cause or contribute to the violation of water quality standards.

The Department does not expect waterbodies to fail to meet water quality standards as a result of CAFO discharges during large rainfall events because of high flows in the receiving waterbody and the diluted nature of the wastewater at the time of discharge. Discharges are also not expected during summer months (when waterbodies are typically limited for these parameters) because of fewer rain events.

Permit coverage under the NPDES CAFO general permit may be terminated if TMDLs are established and a CAFO's discharge during large rainfall events is determined to be a contributor to a stream that is water quality limited. In these situations, an individual permit or different general permit may be required that would include waste load allocations.

4.0 What Happens Next?

4.1 Public comment period

The initial public comment period opened on October 1, 2002 and was scheduled to close on November 15, 2002. However, on December 15, 2002, the administrator of EPA signed revised rules that directly affected *concentrated* animal feeding operations and confined animal feeding operations indirectly. As a result, ODA and DEQ extended the comment period to allow for comments concerning the incorporation of the federal rule changes and additional clarifications into the permit and related documents. The extension ended on February 20, 2003. During this time period, ODA and DEQ held four public hearings and received both written and oral comments on the proposed permit. The departments determined that a second public notice period was warranted since the proposed permit was significantly revised to respond to federal regulation and public comment. This comment period opened on May 1, 2003 and closed on June 6, 2003 at 5 p.m.

4.2 Public hearings

Four public hearings during the first comment period were held as follows:

- November 7, 2002 at Eagle Crest Resort, High Desert Room, 1522 Cline Falls Highway, Redmond, Oregon 97556, from 9:00 a.m. until 11:00 a.m.
- November 13, 2002 at the OSU Extension meeting room, 2203 4th Street, Tillamook, Oregon 97141, 7:00 p.m.
- November 14, 2002 in the basement hearings room at ODA, 635 Capitol St. NE, Salem, Oregon 97301, 1:00 p.m.
- February 13, 2003 in conference room D at ODA, 635 Capitol St. NE, Salem, Oregon 97301, 4:00 p.m.

A hearing for the second comment period was held on June 4, 2003, in the basement hearings room at ODA, 635 Capitol St. NE, Salem, Oregon 97301, at 10:00 a.m.

Informational sessions were provided at the beginning of each hearing with the opportunity for the public to ask questions about the permit and proposed rules. Oral and written comments were accepted at the hearings. The public hearings were tape recorded but not transcribed. At the conclusion of the comment periods, the presiding officers prepared a report summarizing all comments received.

4.3 Response to comments

In accordance with ORS 183.335(13), no comments were accepted after the deadline for submission of comments. ODA and DEQ received and evaluated comments received during both comment periods. In response to comments, the departments revised the fact sheet and permit evaluation report, permit, and other proposed rules. A response to comments document was also prepared.

The Environmental Quality Commission will consider DEQ and ODA's recommendation for rule adoption during one of their regularly scheduled public meetings. The targeted meeting date for consideration of this rulemaking proposal is August 14 or 15, 2003. ODA's director will consider ODA's recommendation for rule adoption thereafter.

4.4 Changes to the fact sheet and permit evaluation report

This fact sheet was revised to incorporate changes related to the February 2003 revision of the federal CAFO regulations and to provide further clarification to permit terms and conditions. Further revisions were made to this fact sheet and permit evaluation report to respond to comments received during the two comment periods.