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ARCHIVES DIVISION
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SALEM, OR 97310
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NOTICE OF PROPOSED RULEMAKING
INCLUDING STATEMENT OF NEED & FISCAL IMPACT

CHAPTER 603
DEPARTMENT OF AGRICULTURE

FILED
10/31/2025 8:36 AM
ARCHIVES DIVISION
SECRETARY OF STATE

FILING CAPTION: Rules governing agricultural activities in the Lower Umatilla Basin Groundwater Management Area

LAST DAY AND TIME TO OFFER COMMENT TO AGENCY: 12/22/2025 5:00 PM

The Agency requests public comment on whether other options should be considered for achieving the rule's substantive goals while reducing negative economic impact of the rule on business.

CONTACT: Sunny Summers
503-400-4196
rulemaking@oda.oregon.gov

635 Capitol St NE
Salem,OR 97301

Filed By:
Sunny Summers
Rules Coordinator

HEARING(S)

Auxiliary aids for persons with disabilities are available upon advance request. Notify the contact listed above.

DATE: 12/15/2025
TIME: 5:30 PM - 7:00 PM
OFFICER: Sunny Summers

IN-PERSON HEARING DETAILS
ADDRESS: SAGE Center, 101 Olson Rd NE, Boardman, OR 97301
SPECIAL INSTRUCTIONS:
An informational session will start at 5:30. That will be followed by the formal public comment hearing.

REMOTE HEARING DETAILS
MEETING URL: Click here to join the meeting
PHONE NUMBER: 503-446-4951
CONFERENCE ID: 2745071307390
SPECIAL INSTRUCTIONS:
Meeting ID: 274 507 130 739 0
Passcode: wD7nb9dM
Dial in by phone
+1 503-446-4951,,167483367#

DATE: 12/16/2025
TIME: 5:30 PM - 6:30 PM
OFFICER: Sunny Summers

REMOTE HEARING DETAILS
MEETING URL: Click here to join the meeting
PHONE NUMBER: 503-446-4951

CONFERENCE ID: 2822868136977
SPECIAL INSTRUCTIONS:
Meeting ID: 282 286 813 697 7
Passcode: cS6jM2Ga
Dial in by phone
+1 503-446-4951,,540814150#

NEED FOR THE RULE(S)

The proposed rules implement the Umatilla and Willow Creek Agricultural Water Quality Management Area Plans as those plans address agricultural activities and nitrate pollution in groundwater within the Lower Umatilla Basin Groundwater Management Area. The rules contain those actions necessary to prevent or minimize nitrate leaching to groundwater.

DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE

Multiple - https://www.oregon.gov/oda/agriculture/Documents/Rulemaking/References_10_24_25.pdf

STATEMENT IDENTIFYING HOW ADOPTION OF RULE(S) WILL AFFECT RACIAL EQUITY IN THIS STATE

The Lower Umatilla Basin Groundwater Management Area (LUBGWMA) was designated because nitrate levels in groundwater exceed federal drinking water standards and present serious health risks to vulnerable populations that depend on domestic wells for their drinking water needs. The rules describe best management practices for agricultural activities within the LUBGWMA to eliminate or reduce nitrate leaching to groundwater that is used by vulnerable populations.

FISCAL AND ECONOMIC IMPACT:

The rules require pre-planting soil testing to determine plant-available nitrogen in the soil. Soil tests provide information on the amount of nitrogen and other nutrients available for crop consumption. This information is valuable to producers if used to avoid the application of more nitrogen fertilizer than can be used by a crop. Eliminating excess fertilizer reduces crop production cost if fertilizer savings exceed the cost of soil testing.

The rules also require those growing crops on irrigated lands of 500 acres or more to conduct deep soil testing at the five foot depth on their fields. Soil tests shall be collected and analyzed for nitrate at the deeper soil horizon to determine whether the best management practices are decreasing nitrate loading in the soil. The fiscal impact of this soil testing regime was decreased by requiring growers to test only 10 percent of their irrigated acreages, by allowing a significant lead time before sampling and reporting to address soil lab capacity and to prevent soil shipping costs and by requiring sampling only once every five years.

COST OF COMPLIANCE:

(1) Identify any state agencies, units of local government, and members of the public likely to be economically affected by the rule(s). (2) Effect on Small Businesses: (a) Estimate the number and type of small businesses subject to the rule(s); (b) Describe the expected reporting, recordkeeping and administrative activities and cost required to comply with the rule(s); (c) Estimate the cost of professional services, equipment supplies, labor and increased administration required to comply with the rule(s).

(1) Identify any state agencies, units of local government, and members of the public likely to be economically affected by the rule(s):

a. State agencies: The rules will not incur any additional costs to state agencies.

b. Units of Local government and members of the public: The rules do not impose any additional requirements on local governments or members of the public. Insofar as the rules do prevent additional nitrate pollution in groundwater, they may increase protection of the public who rely on domestic wells for drinking water.

(2) Effect on small businesses: (a) estimate the number and type of small businesses subject to the rule(s); (b) Describe the expected reporting, recordkeeping and administrative activities and cost required to comply with the rule(s); (c) Estimate the cost of professional services, equipment supplies, labor and increased administration required to comply with the rule(s).
a. Estimate the number and type of small businesses subject to the rules:

Small family farms may be considered a small business. Small family farms are subject to the rules. According to the USDA, there are approximately 94 small family farms in Umatilla County and approximately 93 small family farms in Umatilla County.

b. Expected reporting, recordkeeping and administrative activities and cost required to comply with the rules:

The rules will require fertilizer application recordkeeping, but the records may be kept on a worksheet provided by the department or according to a format otherwise used by the grower. Records are to be kept and used by growers with the goal of improving nitrogen use efficiency.

c. Estimate the cost of professional services, equipment supplies, labor and increased administration required to comply with the rule(s).

The rules also require small farms to conduct pre-planting soil testing for plant-available nitrogen. According to the USDA, laboratory analysis of soil samples will cost about $7.00 - $10.00 per sample. However, studies have shown that soil tests reduce nitrogen applications and improve per acre farm profit. The “apply only what you need” nutrient management practice prompted by soil testing should result in cost savings for growers.

DESCRIBE HOW SMALL BUSINESSES WERE INVOLVED IN THE DEVELOPMENT OF THESE RULE(S):

Representatives from small family farms participated on the rules advisory committee and advised the development of the rules to have minimal fiscal impact on small family farms that are operated for profit. The rules instruct implementation of best practicable management practices meaning that growers must implement the rules according to the site specific attributes and needs of each agricultural operation and to employ practices as they are economically feasible.

Eight rules advisory committee meetings were held over the course of eight months. The rules advisory committee included representatives from small farms, large farms, public interest and environmental organizations, the Oregon Department of Environmental Quality, the Oregon Water Resources Department and Oregon State University.

WAS AN ADMINISTRATIVE RULE ADVISORY COMMITTEE CONSULTED? YES

RULES PROPOSED:
603-095-5000, 603-095-5005, 603-095-5010, 603-095-5015, 603-095-5020, 603-095-5025, 603-095-5030, 603-095-5035, 603-095-5040, 603-095-5045, 603-095-5050, 603-095-5055, 603-095-5060, 603-095-5065, 603-095-5070, 603-095-5075, 603-095-5080, 603-095-5085

ADOPT: 603-095-5000

RULE SUMMARY: States the purpose and authority of the rules governing agricultural activities within the Lower Umatilla Basin Groundwater Management Area (LUBGWMA).

CHANGES TO RULE:

603-095-5000
Purpose and Authority
(1) In 1990, the Oregon Department of Environmental Quality designated approximately 550 square miles in northern Morrow and northeastern Umatilla counties as a groundwater management area because levels of nitrate in groundwater exceed federal drinking water standards and present serious health risks to vulnerable populations. This area is referred to as the Lower Umatilla Basin Groundwater Management Area (LUBGWMA).¶
(2) Understanding that agriculture within the LUBGWMA provides valuable food and fiber products to communities worldwide, these area rules are intended to prevent or minimize nitrate leaching to groundwater as a result of agricultural activities, while also maintaining the economic viability of agriculture within the LUBGWMA.¶
(3) These area rules implement the Umatilla and Willow Creek Agricultural Water Quality Management Area Plans as those plans address nitrate pollution in groundwater and contain actions necessary to prevent or minimize nitrate leaching to groundwater.¶
(4) The Oregon Department of Agriculture's authority for these area rules is ORS 561.191 and ORS 568.900 - 933.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5005

RULE SUMMARY: Contains the geographic and programmatic scope of the rules governing agricultural activities within the LUBGWMA.

CHANGES TO RULE:

603-095-5005
Geographic and Programmatic Scope
(1) The operational boundary for the agricultural land subject to these area rules is in Appendix A and includes all agricultural land within the LUBGWMA that is not otherwise subject to a National Pollution Discharge Elimination System or Water Pollution Control Facility permit issued by the Oregon Department of Agriculture or the Oregon Department of Environmental Quality.¶
(2) Unless otherwise required by law, these area rules do not apply to land owned or managed by federal agencies, land that makes up the Reservation of the Confederated Tribes of the Umatilla Indian Reservation, and land or activities subject to the Oregon Forest Practices Act.¶
(3) A landowner conducting agricultural activities on land in agricultural use within the LUBGWMA shall employ best practicable management practices to implement these area rules according to the site-specific attributes and needs of each agricultural operation.¶
(4) The provisions of these area rules apply to all agricultural land whether or not in current productive agricultural use.¶
(5) These area rules do not authorize violation of any federal, state, or local law or regulation.¶
(6) These area rules do not constitute a National Pollutant Discharge Elimination System Permit or Water Pollution Control Facilities Permit issued pursuant to the Federal Clean Water Act (33 USC §1251 et seq.) or ORS 468B.050. Compliance with these area rules does not exempt a landowner from the Federal Clean Water Act or state water pollution control laws.¶
(7) The fact that it is necessary to halt or reduce activities contributing to the placement of wastes into waters of the state shall not be a defense for violation of these area rules.¶
(8) The requirements in these area rules do not authorize the commission of any act causing injury to property of another or protect the landowner from liabilities under other federal, state, county, or local laws. ¶
(9) These area rules do not apply to conditions resulting from unusual weather events or other exceptional circumstances beyond the reasonable control of the landowner. Beyond the reasonable control of the landowner means that technically sound and economically feasible measures are not available or adequate to address conditions described in these area rules.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

RULE ATTACHMENTS MAY NOT SHOW CHANGES. PLEASE CONTACT AGENCY REGARDING CHANGES.

Appendix A

Lower Umatilla Basin Groundwater Management Area

Lower Umatilla Basin Groundwater Management Area

Oregon Department of Agriculture Agricultural Water Quality Management Area

Columbia River

Boardman

Irrigon

Hermiston

84

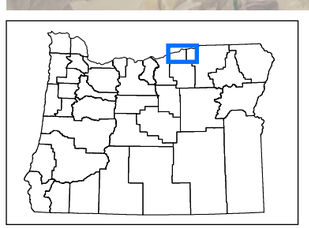
82

Willow Creek Agricultural Water Quality Management Area

Umatilla Agricultural Water Quality Management Area

0 2.5 5 10 Miles

Oregon Statewide Imagery Program (OSIP) - Oregon Imagery Framework Implementation Team



Prepared By: ODA GIS Team
Date Saved: 6/24/2024
Date Printed: 6/24/2024
Path: V:\NRPA\Ag_LUB_GWMA_2023\LUB_GWMA.arpx

N W E S

OREGON DEPARTMENT OF AGRICULTURE
635 Capitol St NE
Salem, OR 97301-2532 USA

ADOPT: 603-095-5010

RULE SUMMARY: Defines the terms used in the rules governing agricultural activities within the LUBGWMA.

CHANGES TO RULE:

603-095-5010
Definitions
For the purposes of these area rules unless the context requires otherwise.¶
(1) "Agricultural activities" means engaging in any generally accepted, reasonable and prudent method of raising or producing livestock or livestock products or growing or harvesting agricultural crops or commodities.¶
(2) "Agricultural land" means land in agricultural use.¶
(3) "Agricultural operation" means: (a) all agricultural land, whether or not contiguous, that is under the effective control of a landowner engaged in producing livestock or livestock products or the growing or harvesting of agricultural crops; or (b) a "farm" as defined in ORS 30.930(1).¶
(4) "Agricultural use" means the use of land for raising or producing livestock or livestock products including poultry or poultry products, milk or milk products, fur-bearing animals; or for growing crops such as, but not limited to, grains, small grains, fruit, vegetables, forage grains, nursery stock, Christmas trees; or for any other agricultural or horticultural use or animal husbandry or any combination thereof.¶
(5) "Agronomic application rate" or "agronomic rate" means the application rate or range of application rates of fertilizer required to achieve estimated crop yield with no or minimal leaching of nitrate beyond the crop root zone. ¶
(6) "Area Plan" or "Agricultural Water Quality Management Area Plan" means a plan for the prevention and control of water pollution from agricultural activities and soil erosion in a management area that has been designated under ORS 568.909.¶
(7) "Area Rules" means OAR 603-095-5000 - 5085 adopted by the Oregon Department of Agriculture, in consultation with the Oregon Board of Agriculture and the Oregon Department of Environmental Quality, for the implementation of the area plans referenced in these area rules.¶
(8) "Certifier" means a qualified irrigation and nitrogen management plan specialist as provided in OAR 603-095-5060.¶
(9) "Compost" has that meaning given in ORS 633.311(5).¶
(10) "Department" means the Oregon Department of Agriculture.¶
(11) "Estimated crop yield" means the near-maximum or optimum crop yield estimated for each field according to sources such as recommendations by land grant universities, the Natural Resources Conservation Service, commodity groups, Certified Crop Advisers, or according to site-specific knowledge based on previous experience.¶
(12) "Fertilizer" has the meaning given in ORS 633.311(12) except that for the purposes of these area rules, fertilizer includes "Exceptional Quality Biosolids" as that term is defined in OAR 340-050-0010(14), includes "compost" as that term is defined in ORS 633.311(5), includes manure, and includes "agricultural amendments" as that term is defined in ORS 633.311(1).¶
(13) "Field" means an area of land that is used for agricultural activities and enclosed or otherwise distinguished by physical characteristics of the property such as roads, fences, topography or other barriers and is characterized by a uniform irrigation system, crop type and system of nutrient management measures. A center pivot is one field.¶
(14) "Field capacity" means the content of water, on a mass or volume basis, remaining in a soil two or three days after having been wetted with water and after free drainage is negligible.¶
(15) "Groundwater" or "groundwater of the state" means water that is in a saturated zone or stratum beneath the surface of land or below a surface water body.¶
(16) "Irrigated agricultural land" or "irrigated agriculture" means agricultural land irrigated to produce crops or pasture and including land that is planted to crops that are not yet marketable such as vineyards and tree crops. Irrigated land includes nurseries.¶
(17) "Landowner" includes any person or public body as defined in ORS 174.109 shown by records of the county to be the owner of land or having such land under contract to purchase and includes a "land occupier", "occupiers of land" or "operator."¶
(18) "Land occupier" or "occupiers of land" includes any person who is in possession of any agricultural land, whether as lessee, renter, or tenant.¶
(19) "Manure" means solids or liquids excreted from an animal.¶
(20) "Nitrate" means a readily soluble form of nitrogen, easily taken up by plants, but also prone to leaching, with the chemical formula NO3 (NO-3-N).¶
(21) "Nitrogen Management Measures" means measures to match fertilizer and nitrogen applications to

agronomic demands and includes a determination of the appropriate agronomic application rate. Nitrogen management measures include those measures in Natural Resources Conservation Service (NRCS) Conservation Practice Standard Nutrient Management Code 590 (2019).¶
(22) "Operator" means any person, including a landowner or land occupier engaged in any commercial activity related to the growing or harvesting of agricultural crops or the production of agricultural commodities.¶
(23) "Pasture" means land that sustains vegetative growth in the normal growing season that is primarily used to grow forage for grazing livestock where the livestock are not confined in pens or lots or on a prepared surface and where waste is not managed using a waste water control facility.¶
(24) "Plant Available Nitrogen" means a form of nitrogen in the soil that plants can readily absorb and utilize for growth, with the chemical formula NO3 (NO3-N) and NH4 (NH4-N).¶
(25) "Pollution" or "water pollution" has the meaning given in ORS 468B.005.¶
(26) "Saturated soil" means soil with all available pore space filled that it is at or exceeding 100 percent of field capacity.¶
(27) "Synthetic Nitrogen" means a fertilizer, agricultural mineral, or other material containing ammoniacal nitrogen, nitrate nitrogen, urea nitrogen, other water soluble nitrogen, and / or water insoluble nitrogen manufactured through human controlled chemical reactions. Synthetic nitrogen includes both dry and liquid formulations.¶
(28) "Waste" or "wastes" has that meaning given in ORS 468B.005 with the clarification that "waste" or "wastes" includes but is not limited to fertilizer, pesticides, fumigants or nitrate (NO-3-N) that enters groundwater.¶
(29) "Water" or the "waters of the state" has the meaning given in ORS 468B.005.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5015

RULE SUMMARY: Contains prohibited acts.

CHANGES TO RULE:

603-095-5015
Prohibited Acts
(1) Fertilizer may not be applied to agricultural land within the LUBGWMA in a manner that causes pollution of the groundwater of the state or in a manner that places wastes in a location where such wastes are likely to escape or be carried into the groundwater of this state.¶
(2) The placing of fertilizer, fumigants or pesticides into groundwater via back flow devices or well casings is prohibited.¶
(3) A landowner conducting agricultural activities on agricultural land within the LUBGWMA may not violate any provision of OAR 603-095-5000 - 5070.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5020

RULE SUMMARY: Sets out the land application rates and restrictions governing landowners and landowners growing agricultural crops and commodities on agricultural land within the LUBGWMA.

CHANGES TO RULE:

603-095-5020
Land Application Rates and Restrictions
(1) A landowner growing agricultural crops or commodities on agricultural land within the LUBGWMA shall employ nitrogen management measures when applying fertilizer.¶
(2) Prior to the first application of fertilizer each calendar year, a landowner growing agricultural crops or commodities on agricultural land within the LUBGWMA shall:¶
(a) Except as provided in subsection (2)(c), take soil samples consistent with OAR 603-095-5065(1) to determine plant available nitrogen existing in the soil; and¶
(b) Take into consideration existing plant available nitrogen levels, plant uptake, and estimated crop yields when making an application of fertilizer.¶
(c) A landowner taking post-harvest soil samples pursuant to OAR 603-095-5055(4) need not take pre-planting soil samples but may instead use post-harvest soil sample results to determine pre-planting levels of plant available nitrogen.¶
(3) A landowner growing agricultural crops or commodities on agricultural land within the LUBGWMA shall document on a worksheet provided by the department or according to a format otherwise used by the landowner, the following information for each field to which fertilizer is applied:¶
(a) The date(s) and location(s) of all fertilizer applications containing nitrogen;¶
(b) The weather conditions and soil moisture at the time of application; and¶
(c) The agronomic application rate used.¶
(4) Records required in section (3) shall be retained by the landowner for five calendar years and made available to the department upon request by the department.¶
(5) A landowner within the LUBGWMA may not apply fertilizer:¶
(a) To fields with a frozen surface crust two inches or deeper, or if the soil is at or below zero degrees Celsius (32 degrees Fahrenheit);¶
(b) To fields that are snow covered;¶
(c) To fields with soils that are or will become saturated with forecasted precipitation prior to infiltration or incorporation;¶
(d) If the water table is within 12 inches or less to the surface.¶
(6) A landowner growing agricultural crops or commodities on agricultural land within the LUBGWMA may not apply synthetic nitrogen to a field that is bare unless the landowner is preparing the bare field for the current calendar year's annual crop or cover crop planting and the application is within 60 days of planting.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5025

RULE SUMMARY: Sets out standards for managing irrigated agricultural land to minimize the downward movement of nitrate in the soil.

CHANGES TO RULE:

603-095-5025
Irrigation Water Management
(1) A landowner within the LUBGWMA shall manage irrigated agricultural land to minimize the downward movement of nitrate in the soil by managing irrigation water so that the amount of water applied from the combination of precipitation and irrigation does not exceed the field capacity of the soil beyond the crop root depth. ¶
(2) As consistent with applicable water rights of record, a landowner irrigating agricultural land within the LUBGWMA shall base the rate and volume of water needed for each irrigation event on at least the following information as practicable:¶
(a) Field capacity of the soil for the crop rooting depth;¶
(b) Management allowed soil water depletion;¶
(c) Current soil moisture status of the soil for the crop rooting depth;¶
(d) Distribution uniformity of the irrigation event;¶
(e) Water table contribution if applicable;¶
(f) Computerized irrigation scheduling recommendation.¶
(3) A landowner irrigating agricultural land within the LUBGWMA shall plan the rate and volume of irrigation water to prevent the transport of nitrates to groundwater by:¶
(a) Controlling the rate and volume of water application to limit the transport of nitrate through the soil profile to groundwater; and¶
(b) Matching irrigation application quantities and rates to the crop, soil type, soil moisture content, and agronomic demands of each crop type such that irrigation does not exceed the soil's infiltration rate or field capacity below the crop root zone.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5030

RULE SUMMARY: Sets out standards for grazing livestock on pasture within the LUBGWMA.

CHANGES TO RULE:

603-095-5030
Animal Pasturing
(1) A landowner grazing livestock on pasture within the LUBGWMA shall rotate livestock and limit livestock numbers to prevent bare ground and shall promote and maintain adequate vegetative cover.¶
(2) To determine an appropriate stocking rate for livestock grazing on pasture, a landowner grazing livestock on pasture within the LUBGWMA shall match livestock requirements with the available forage and frequently monitor forage growth and adjust the stocking rate and grazing period to prevent runoff or overgrazing.¶
(3) Where animals are concentrated to a distinct heavy use area so that the soil is prone to compaction, or when inadequate forage growth would result in over-grazing, a landowner grazing livestock on pasture within the LUBGWMA shall:¶
(a) Remove manure and waste feed from heavy use areas; and¶
(b) Cover accumulated manure and waste feed to prevent exposure to precipitation, and if spreading during the growing season, spread at an agronomic application rate.¶
(4) A landowner applying fertilizer to pasture shall first conduct a soil test consistent with the soil sampling protocol in OAR 603-095-5065(1) to determine plant available nitrogen in the soil.¶
(5) A landowner irrigating pasture within the LUBGWMA shall minimize the downward movement of nitrate in the soil by managing irrigation water so that the amount of water applied from the combination of precipitation and irrigation does not exceed the soil's field capacity within the forage root depth.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5035

RULE SUMMARY: Defines provisions of the rules that apply to agricultural activities on agricultural land where the total land acreage is greater than 500 acres.

CHANGES TO RULE:

603-095-5035
Control Measures for Irrigated Agriculture on Large Acreages
(1) The provisions of OAR 603-095-5035 - 5070 govern agricultural activities on agricultural land where the total land acreage under the ownership or control of a landowner is equal to or greater than 500 acres and where irrigation is used to grow crops on those acreages.¶
(2) In addition to conducting agricultural activities consistent with OAR 603-095-5000 - 5030, a landowner subject to this rule shall prepare an annual nitrogen plan as described in OAR 603-095-5040 and OAR 603-095-5045, prepare annual post-harvest summary records as provided in OAR 603-095-5050, evaluate performance under an annual nitrogen plan and implement adaptive management measures as described in OAR 603-095-5055, certify plans as specified in OAR 603-095-5060, collect soil samples according to the protocol in OAR 603-095-5065, and collect and submit residual soil sample results as described in OAR 603-095-5070.¶
(3) Documents created as specified in OAR 603-095-5040 - 5055 and OAR 603-095-5070(3)(b) shall be retained for five calendar years at the agricultural operation and made available for inspection at the request of the department.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5040

RULE SUMMARY: Sets out the standards governing annual nitrogen plans.

CHANGES TO RULE:

603-095-5040
Annual Nitrogen Plan
(1) Each calendar year, prior to the first application of fertilizer, a landowner subject to this rule shall prepare an annual nitrogen plan that demonstrates that fertilizer will be applied only at the agronomic application rate necessary to support estimated crop yield.¶
(a) An annual nitrogen plan shall cover the entire growing season and include double-crops and cover crops.¶
(b) An annual nitrogen plan shall be prepared on a worksheet provided by the department or according to a format otherwise used by the landowner.¶
(2) Actual conditions may differ from those forecasted in an annual nitrogen plan and so necessitate adjustment of a plan to reflect unanticipated changes in weather, water availability or other agronomic circumstances. A landowner shall document adjustments to an annual nitrogen plan and the reasons for the adjustments. ¶
(3) Proof of certification of an annual nitrogen plan as described in OAR 603-095-5060 shall be submitted to the department by May 1 of each calendar year.¶
(4) A landowner's inability to follow an annual nitrogen plan may not result in enforcement by the department. However, failure to submit proof of certification of an annual nitrogen plan by May 1 of each calendar year may result in enforcement by the department and conditions that indicate a violation of ORS 468B.025(1) may result in enforcement by the department.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5045

RULE SUMMARY: Contains the required elements of an annual nitrogen plan.

CHANGES TO RULE:

603-095-5045
Annual Nitrogen Plan Contents
An annual nitrogen plan shall include each of the following elements.¶
(1) Landowner Name. Record the name of the landowner and the name of the operator if operator is not the owner of the land. If a certifier prepares the form, then the name of the certifier shall also be included.¶
(2) Crop Year. Record the crop year for the calendar year that the crop will be harvested.¶
(3) Field Identification and Acreage. Identify the location and the acreage for each field and label field location and the field identifier for each field on a map or aerial photograph.¶
(4) Soil Type and Nitrogen. For each field, identify and label the soil type on a map or aerial photograph and record pre-planting levels of plant available nitrogen in the crop root zone.¶
(5) Crop Type(s). For each field, identify and label on a map or aerial photograph the crop type(s) for the upcoming season.¶
(6) Estimated Crop Yield. For each field, estimate yield per acre for each crop type. ¶
(7) Nitrogen Management Measures. For each field, record anticipated nitrogen management measures and specify the anticipated agronomic application rate for each crop.¶
(a) An agronomic application rate shall account for existing plant-available nitrogen in the soil and include plant-available nitrogen to be applied from all sources including irrigation water.¶
(b) A Landowner may use OSU Organic Fertilizer & Cover Crop Calculator: Predicting Plant-available Nitrogen. (EM 9235) (2019) to determine the agronomic application rate for a crop.¶
(c) An agronomic application rate for mid- or late-season fertilizer application shall account for the need for plant available nitrogen as obtained from soil and/or petiole sampling or as consistent with land grant university guidance for management of a specific crop type.¶
(8) Anticipated Total Nitrogen. For each field, record estimated total nitrogen to be applied during the growing season from all sources.¶
(9) Irrigation Water Management Measures. For each field, record the irrigation method(s) that will be used to meet the objectives in OAR 603-095-5025(3).¶
(10) Adaptive Management Measures. For each field, record any applicable adaptive management measures according to Table 1 in OAR 603-095-5055(8).¶
(11) Certification. A landowner shall provide proof of certification of an annual nitrogen plan as described in OAR 603-095-5060.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5050

RULE SUMMARY: Contains the required elements of a post-harvest summary record.

CHANGES TO RULE:

603-095-5050
Post-Harvest Summary Records
(1) Each calendar year, following implementation of an annual nitrogen plan, a landowner subject to this rule shall prepare a post-harvest summary record on a worksheet provided by the department or according to a format otherwise used by the landowner. The post-harvest summary record shall be used to evaluate the effectiveness of an annual nitrogen plan.¶
(2) A post-harvest summary record shall include each of the following elements.¶
(a) Landowner Name. Record the name of the landowner and the name of the operator if operator is not the owner of the land.¶
(b) Crop Year (harvested). Record the crop year for the calendar year that the crop is harvested.¶
(c) Crop Type. For each field, record the type of crop(s) harvested.¶
(d) Crop Harvest Yield. Record the crop harvest yield in crop production units per acre and include all harvested materials from primary harvest, secondary crop harvests, and crop residue or other materials (lb/acre).¶
(e) Irrigation Water Management Measures. For each field, record the irrigation method(s) used and assess whether the goal in OAR 603-095-5025(1) was met.¶
(f) Nitrogen Management Measures. Record nitrogen management measures implemented, including the agronomic application rate used for each crop. ¶
(g) Total Nitrogen Applied (lbs/acre). For each field, record the total nitrogen applied as follows:¶
(A) Total nitrogen applied through irrigation water;¶
(B) Total nitrogen applied through fertilizer; and¶
(C) If applicable, total nitrogen from crop residues or cover crops.¶
(h) Annual Nitrogen Plan Evaluation. For each field, using a methodology described in OAR 603-095-5055 record a determination of whether the annual nitrogen plan was met or followed or not, and a description of the methodology(ies) used to make this conclusion.¶
(i) Adaptive Management Measures. For each field, describe any applicable adaptive management measures from Table 1 in OAR 603-095-5055(8) to be employed in the following calendar year's annual nitrogen plan.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5055

RULE SUMMARY: Sets out the methodologies for evaluating an annual nitrogen plan and contains adaptive management measures.

CHANGES TO RULE:

603-095-5055
Annual Nitrogen Plan Evaluation
(1) A landowner subject to this rule has met or followed an annual nitrogen plan if, for each field, application of fertilizer at an agronomic application rate has resulted in achieving a crop's estimated yield, post-harvest soil nitrate levels are low or decreasing and nitrate leaching is minimized or prevented.¶
(a) A landowner may estimate post-harvest soil nitrate levels using any one or more of the methodologies provided in sections (2) - (5) of this rule.¶
(b) A landowner has minimized or prevented nitrate leaching only as consistent with section (6).¶
(2) A/R Ratio. Especially when evaluated over multiple years, the A/R ratio may provide a reliable measurement of the nitrogen left in the field post-harvest. In each consecutive year, the nitrogen left in the field from the prior year as approximated by the A/R ratio will either be utilized by the next crop or move further down the soil with the potential of leaching into the groundwater. A landowner has met or followed their annual nitrogen plan if for each specific crop type, the A/R ratio is low or dropping.¶
(a) The A/R ratio is calculated as the ratio of total nitrogen applied divided by the total nitrogen removed. (A/R = All nitrogen added to a field from any source/ All nitrogen removed from a field in harvested or other materials).¶
(b) Total nitrogen applied shall be the sum total of all nitrogen from any source applied to a field (lbs/unit).¶
(c) Total nitrogen removed shall be calculated by multiplying crop yield (lbs/acre) by the specific nitrogen coefficient (CN) (lbs/unit) for that crop. (Nitrogen removed (lbs/acre) = Crop Yield (units/acre) x CN (lbs/unit)). Crop yield includes the harvested crop removed from the field and other materials. Other materials include wheat straw, crop residues, and orchard prunings that are removed from a field.¶
(3) A-R Difference. A landowner may estimate post-harvest soil nitrate levels as the A-R difference (A - R = storage of N in soil). An annual nitrogen plan is met or followed if a landowner is approaching or meeting a steady-state condition, i.e., soil nitrogen storage is within an acceptably small value for the crop type. The A-R difference may also be paired with the A/R ratio, especially where use of only the A/R ratio may mask significant quantities of nitrogen left in the field.¶
(a) The A - R difference is calculated as the sum total of nitrogen (lbs/acre) added to a field from any source minus the sum total of all nitrogen removed (lbs/acre) from a field. (Nitrogen Applied minus Total Nitrogen Removed = Change in Soil N storage).¶
(b) Total nitrogen applied (lbs/acre) is calculated as the sum total of nitrogen added to a field from any source.¶
(c) Total nitrogen removed (lbs/acre) is calculated as actual crop yield (units/acre) multiplied by the specific nitrogen coefficient (CN) (lbs/unit) of the harvested crop. (Nitrogen removed (lbs/acre) = Crop Yield (units/acre) x CN (lbs/unit)). Crop yield includes the harvested crop removed from the field and other materials. Other materials include wheat straw, crop residues, and orchard prunings that are removed from a field. (Nitrogen Removed (lbs/acre)) = Crop Yield (units/acre) x CN (lbs/unit)).¶
(4) Post-harvest soil nitrate samples. A landowner may determine post-harvest nitrate levels using soil nitrate levels derived from post-harvest soil samples taken consistent with the soil sampling protocol in OAR 603-095-5065(2).¶
(a) Low or decreasing post-harvest soil nitrate concentrations may indicate that a landowner has applied fertilizer at an agronomic application rate and the risk of nitrate leaching is lowered.¶
(b) Increasing post-harvest soil nitrate concentrations may indicate an increased risk of nitrate leaching.¶
(5) Estimated Crop Yield. A landowner may estimate post-harvest soil nitrate levels by determining whether they met or exceeded their estimated crop yield.¶
(a) If a landowner has met or exceeded their estimated crop yield this is an indication that a landowner has applied fertilizer at an agronomic application rate and post-harvest soil nitrate concentrations are low.¶
(b) If a landowner has not met or exceeded their estimated crop yield, this may be an indication that a landowner has not applied fertilizer at an agronomic application rate and excess plant available nitrogen remains in the soil at the crop root depth.¶
(6) Nitrate leaching is prevented or minimized if a landowner has followed their irrigation water management plan and has achieved the goal in OAR 603-095-5025(1) for each irrigation event.¶
(7) For each field, a landowner shall determine and record in their post-harvest summary report whether they met or followed an annual nitrogen plan or not.¶
(8) Adaptive Management Measures. For each field where an annual nitrogen plan was not met or followed, a landowner shall record in the following calendar year's annual nitrogen plan, the adaptive management measures

they will employ according to Table 1 Adaptive Management Measures.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

RULE ATTACHMENTS MAY NOT SHOW CHANGES. PLEASE CONTACT AGENCY REGARDING CHANGES.

Table 1. Adaptive Management Measures

Annual Nitrogen Plan Met or Followed?	Required Actions
Yes	(1) No changes to current practices required.
No **Year 1**	(1) Document reason(s) for not following an annual nitrogen plan in post-harvest summary record. (2) Reevaluate nitrogen plan assumptions for estimated crop yield. (3) Verify actual agronomic application rates and recalibrate application equipment as necessary. (4) Review irrigation water management and determine how to achieve the standard in OAR 603-095-5025(3). (5) Consider planting a fall/winter cover crop.
No **Year 2**	(1) Continue Required Actions for "No" Year 1.
No **Year 3**	(1) Continue the Required Actions for "No" Year 1 and 2; and (2) Adjust nitrogen application timing so nutrient availability aligns with peak crop uptake; (3) Stop nitrogen application after peak crop uptake; and (4) Plant a fall/winter cover crop.
No **Year 4**	(1) Continue the actions in the Required Actions column for "No" Year 1 through Year 3; and (2) Reduce nitrogen application to fields; and (3) Hire a Certified Crop Advisor to develop annual nitrogen plan and agronomic application rates.

Table 1. Adaptive Management Measures

No Year 5	(1) Continue the actions for "No" Year 3; and (2) Enhance residual nitrogen removal via cropping; and (3) Reduce nitrogen application.
No Year 6 And 6+	(1) Stop further nitrogen application until you have hired a Certified Crop Advisor to develop an annual nitrogen plan and develop appropriate agronomic application rates for each crop and then apply nitrogen according to the recommendations of the Certified Crop Advisor. (2) To determine progress after taking the measures in (1) above, collect post-harvest soil samples consistent with the protocol in OAR 603-095-5065(2)(a) at the 12 - 24 inch, 24 - 36 inch, 36 - 48 inch, and 48 - 60 inch depth or until refusal or groundwater is reached and analyze for nitrate.

ADOPT: 603-095-5060

RULE SUMMARY: Sets out the standards for certification of annual nitrogen plans.

CHANGES TO RULE:

603-095-5060
Certification of Annual Nitrogen Plans
Annual nitrogen plans shall be certified in one of the following ways:¶
(1) Certified by an irrigation and nitrogen management plan specialist.¶
(a) Specialists may include Certified Professional Soil Scientists by the Soil Science Society of America, Certified Crop Advisers by the American Society of Agronomy, or Technical Service Providers certified in nutrient management by the Natural Resource Conservation Service (NRCS).¶
(b) In certifying a plan, a specialist shall attest that the record accurately reflects the conditions and management of the agricultural operation, that they can answer questions relevant to the document certified, and are competent and proficient by education and experience relevant to the development of the document.¶
(2) Self-certified by the landowner who attests that the document adheres to a site-specific recommendation from the Natural Resources Conservation Services (NRCS) or from a land grant university, provided the specific NRCS recommendations or land grant university recommendations are documented along with the certification.¶
(3) Self-certified by the landowner if the landowner states that they apply no fertilizer to any field on the agricultural operation.¶
(4) Each certification shall include:¶
(a) The name of the operator if different than the landowner;¶
(b) The name of the certifier;¶
(c) The date of plan certification;¶
(d) The certification method used; and¶
(e) The acreage category of the agricultural operation as follows:¶
(A) Acreage Category A with a range of 500 - 900 irrigated acres.¶
(B) Acreage Category B with a range of 1000 - 1999 irrigated acres.¶
(C) Acreage Category C with a range of 2000 plus irrigated acres.¶
(4) Each submission of proof of certification shall be on a form provided by the department and shall contain a statement that under penalty of law, the certified record is true, accurate, and complete.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5065

RULE SUMMARY: Sets out soil sampling protocols for pre-plant and post-harvest soil sampling.

CHANGES TO RULE:

603-095-5065
Soil Sampling Protocol
(1) Pre-planting soil samples or soil samples taken prior to mid- or late-season fertilizer application shall be collected at the depth of the crop root zone according to the applicable protocol in Oregon State University Extension Service Publication, A Guide to Collecting Soil Samples for Farms and Gardens (EC628) (2022) and Soil Testing Lab Selection and Recommended Analytical Methods for Oregon (EM 9423) (2024).¶
(2) Post-harvest soil samples shall be collected after harvest of annual crops, before three inches of rainfall accumulates, and before significant post-harvest irrigation. October 31 shall be the start date for tallying the accumulation of rainfall.¶
(a) Separate composite soil samples shall be collected at the 0 - 12 inch depth, the 12 - 24 inch depth and the 24 - 36 inch depth according to the protocol contained in Oregon State University Extension Publications Postharvest Soil Nitrate Testing for Manured Grass and Silage Corn (West of the Cascades)(EM 8832-E) (2021) and Soil Testing Lab Selection and Recommended Analytical Methods for Oregon (EM 9423) (2024) for post-harvest nitrate-nitrogen. ¶
(b) If soil samples are taken after three inches of rainfall accumulates, a landowner shall collect an additional composite soil sample for the 36 - 48 inch depth to account for nitrate leaching.¶
(3) Soil samples shall be processed at a laboratory accredited by the North American Proficiency Testing (NAPT).
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5070

RULE SUMMARY: Sets out the standards and soil sampling protocols for residual soil nitrate soil sampling.

CHANGES TO RULE:

603-095-5070
Residual Soil Nitrate Levels
(1) A landowner subject to this rule shall determine residual soil nitrate levels for ten percent of the irrigated fields under a landowner's ownership or control using the soil sampling protocol in section (2).¶
(a) Initial residual nitrate soil samples shall be taken one calendar year following the effective date of these area rules in the fall, post-harvest.¶
(b) Thereafter, residual soil nitrate samples shall be taken in the fall, post-harvest, once every five calendar years.¶
(c) Samples shall be taken at the same GPS locations (Lat/Long) with the sample locations marked on a map or aerial photograph.¶
(2) To determine residual soil nitrate levels:¶
(a) Separate composite soil samples shall be collected at the 60 inch (five foot) depth according to the protocol in, Postharvest Soil Nitrate Testing for Manured Grass and Silage Corn (West of the Cascades)(EM 8832-E) (2021) and Soil Nitrate Testing for Willamette Valley Vegetable Production (EM9221) (2019) for post-harvest nitrate-nitrogen.¶
(b) Soil samples shall be processed at a laboratory accredited by the North American Proficiency Testing (NAPT).¶
(3) A landowner shall record residual soil nitrate levels and sample location identifiers on a worksheet supplied by the department and shall also record the GPS location where each sample was taken on a map or aerial photograph.¶
(a) A Landowner shall submit completed worksheets to the department by May 1 of each reporting year.¶
(b) GPS locations for each sample as recorded on a map or aerial photograph shall be retained by the landowner and made available to the department for inspection upon request by the department.¶
(4) Notwithstanding whom the operator is, a landowner shall assure that residual soil nitrate samples are taken, recorded, and sample results submitted consistent with this section.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5075

RULE SUMMARY: Contains the content and timing for the Oregon Department of Agriculture's evaluation of agricultural operations with large irrigated acres (500 acres and greater).

CHANGES TO RULE:

603-095-5075
Large Irrigated Acreages Program Evaluation
(1) The department shall conduct an evaluation of agricultural operations with large irrigated acreages as described in OAR 603-095-5035(1) to determine whether and to what extent the nitrogen management measures and annual nitrogen plans have been implemented and adaptive management measures adopted. ¶
(a) The department shall not conduct an evaluation under this section for at least three calendar years subsequent to the effective date of these area rules where the total irrigated acres for an agricultural operation is 1,000 or more.¶
(b) The department shall not conduct an evaluation under this section for at least five calendar years subsequent to the effective date of these area rules where the total irrigated acres for an agricultural operation is between 500 and 999 acres.¶
(2) The department's evaluation shall include an on-farm audit of documents required pursuant to OAR 603-095-5020(3), OAR 603-095-5040 - 5055 and OAR 603-095-5070(3)(b) which documents shall remain with the landowner at the agricultural operation.¶
(a) The department may use the results of any audit to determine the percentage of landowners participating in the program and to determine whether landowners are recording and keeping information as required.¶
(b) The department may inspect any portion of the agricultural operation and fields as necessary to determine the extent of participation in the program.¶
(3) The department's evaluation may include a determination of the trends of residual soil nitrate levels if the department has a sufficient data set for a scientifically acceptable analysis.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5080

RULE SUMMARY: Sets forth provisions governing specific action requirements.

CHANGES TO RULE:

603-095-5080
Specific Action Requirements
(1) A landowner conducting agricultural activities on agricultural land may be required to undertake additional, site-specific practices designed to prevent waste from entering the groundwater of the state if after inspection of an agricultural operation, the department determines that a landowner is in compliance with the rules of this chapter but there still exists the potential for waste to enter the groundwater of the state.¶
(2) A landowner may appeal a specific action requirement as provided in OAR 603-090-0040 - 0050.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)

ADOPT: 603-095-5085

RULE SUMMARY: Sets forth provisions governing complaints and investigations by the Oregon Department of Agriculture.

CHANGES TO RULE:

603-095-5085
Complaints and Investigations
(1) When the department receives notice of an alleged occurrence of pollution resulting from agricultural activities on agricultural land within the LUBGWMA through a written complaint, its own observation, through notification by another agency, or by other means, the department may conduct an investigation.¶
(2) Each notice of an alleged occurrence of pollution resulting from agricultural activities on agricultural land within the LUBGWMA shall be evaluated in accordance with the criteria in ORS 468B.025, ORS 568.900 to 568.933 and OAR 603-095-5000 - 5070 to determine whether an investigation is warranted.¶
(3) Any person allegedly being damaged or otherwise adversely affected by pollution resulting from agricultural activities on agricultural land within the LUBGWMA or alleging any violation of ORS 468B.025, ORS 568.900 to 568.933 or OAR 603-095-5000 - 5070 may file a complaint with the department.¶
(4) The department will evaluate or investigate a complaint filed by a person under OAR 603-095-0380(3) if the complaint is in writing, signed and dated by the complainant and indicates the location and description of:¶
(a) The waters of the state allegedly being damaged or impacted; and¶
(b) The property allegedly being managed under conditions violating ORS 468B.025, ORS 568.900 to 568.933 or OAR 603-095-5000 - 5070.¶
(5) As used in section (4) of this section, "person" does not include any local, state or federal agency.¶
(6) If the department determines that a violation of ORS 468B.025, ORS 568.900 through 568.933 or OAR 603-095-5000 - 5070 has occurred, the department may proceed with the enforcement procedures provided in OAR 603-090-0060 through 603-090-0120.
Statutory/Other Authority: ORS 561.191, ORS 568.900-933
Statutes/Other Implemented: ORS 568.900-933, 468B.025(1)