Tualatin River Subbasin Agricultural Water Quality Management Area Plan

Developed by the

Tualatin River Subbasin Local Advisory Committee

and

Oregon Department of Agriculture

with assistance from

Tualatin Soil and Water Conservation District

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Acronyms

AgWQM Area Plan - Agricultural Water Quality Management Area Plan

AgWQM Area Rules - Agricultural Water Quality Management Area Rules

AgWQM Act - Agricultural Water Quality Management Act

BOA – Board of Agriculture

CAFO - Confined Animal Feeding Operation

CRP – Conservation Reserve Program

CREP - Conservation Reserve Enhancement Program

DEQ - Oregon Department of Environmental Quality

DMAs – Designated Management Agencies

ECREP – Enhanced Conservation Reserve Enhancement Program

EPA - United States Environmental Protection Agency

EQIP – Environmental Quality Incentive Program

FSA – Farm Services Agency

LAC - Local Advisory Committee

LMA - Local Management Agency

NRCS - Natural Resources Conservation Service

OAR - Oregon Administrative Rule

ODA - Oregon Department of Agriculture

ODFW – Oregon Department of Fish and Wildlife

ORS - Oregon Revised Statutes

OWEB – Oregon Watershed Enhancement Board

RUSLE - Revised Universal Soil Loss Equation

SWCD - Soil and Water Conservation District

TMDL - Total Maximum Daily Load

USDA - United States Department of Agriculture

WHIP – Wildlife Habitat Incentive Program

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Foreword

This Agricultural Water Quality Management Area Plan (Area Plan) provides guidance for addressing agricultural water quality issues in the Tualatin Subbasin Agricultural Water Quality Management Area (Management Area). The purpose of this Area Plan is to identify strategies to reduce water pollution from agricultural lands through a combination of educational programs, suggested land treatments, management activities and monitoring. The provisions of this Area Plan do not establish legal requirements or prohibitions. The Oregon Department of Agriculture (ODA) will exercise its enforcement authority for the prevention and control of water pollution from agricultural activities under administrative rules for the Tualatin Subbasin and Oregon Administrative Rules (OARs) 603-090-0120 through 603-090-0180.

The Administrative Rules for the Tualatin Subbasin set forth the requirements and/or prohibitions that will be used by ODA in exercising its enforcement authority for the prevention and control of water pollution from agricultural activities. In addition, OARs 603-090-0120 through 603-090-0180 describe the enforcement actions that may be triggered upon the finding of a violation by ODA.

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Introduction

This document is an update of the original 1996 Area Plan. The original Area Plan was created in response to the Agricultural Water Quality Management Act (The Act), which requires the reduction of non-point source pollution from agricultural sources. The original Area Plan was created with the assistance of a twelve member Local Advisory Committee (LAC). The LAC is composed primarily of local landowners, many of whom are farmers. The original Area Plan was finalized and the associated OARs were formally adopted in April of 1996. The Act requires the LAC to periodically review the Area Plan and Rules and make any changes necessary to achieve water quality goals. This is the fourth review of the original Area Plan and Rules. The original Area Plan has been modified only in those areas where changes were deemed necessary by ODA with additional LAC recommendations.

Background

The Tualatin River watershed is a 710 square mile drainage area encompassing most of Washington and small portions of Clackamas, Columbia, Multnomah, Tillamook, and Yamhill counties in northwest Oregon. The Tualatin River originates in northwest Oregon's Coast Range, and flows generally eastward, discharging into the Willamette River at West Linn. The Subbasin has a modified marine climate with a very definite winter rainfall pattern. Peak flows normally occur in January, receding to sluggish base flow conditions in the summer months. Summer flows are augmented with releases from Hagg Lake and Barney Reservoir.

Rural areas of the Tualatin River Subbasin are characterized by multiple land uses divided between forested and agricultural areas in the western third, densely urbanized areas in the eastern third, and rapidly urbanizing areas in between.

Agriculture is a significant land use within the watershed. Approximately one-fourth of the watershed's land base is used for production agriculture. Agriculture is very important to the economy of the area, and agricultural lands in the watershed provide a high dollar return per acre. Washington County ranked third for agricultural gross income in the state in 2007. Gross agricultural sales in Washington County alone exceeded $321,600,000 in 2007. Ag-related jobs in Oregon, including input suppliers, on-farm workers, food processing, transportation, warehousing, etc. account for approximately 150,000 jobs or eight percent of the state's workforce. This equates to 43 jobs per $1 million in agricultural sales.

Water Quality Issues

The quality of the Tualatin River's water has been found to be limited due to water quality standards violations for temperature, dissolved oxygen, pH, bacteria, biological criteria, and chlorophyll *a*, resulting in impairment of beneficial uses. The river has been declared Water Quality Limited by the Department of Environmental Quality (DEQ), under section 303 (d)(1) of the Clean Water Act. Additionally, there are concerns with sediment resulting from erosion. Water quality monitoring by DEQ, the U.S. Geological Survey, and cooperating designated management agencies (DMAs) during the past several years, indicates that concentrations of total phosphorus in the Tualatin River and many of its tributaries generally equal or exceed concentrations which lead to undesirable algal growth, elevated pH, and reduced dissolved oxygen levels that do not support beneficial uses.

Water pollution can be of two types: point source pollution and nonpoint source pollution. Point source pollution emanates from clearly identifiable discharge points such as wastewater treatment plants and industrial operations. Nonpoint source pollution emanates from the general landscape, and may or may not be traced to a single point. No permit under the Federal Clean Water Act is required for nonpoint source pollution. This type of pollution is addressed, for agricultural sources, through rules established under the state agricultural water quality management program.

Nonpoint sources of pollution in the Tualatin River watershed include: eroding agricultural lands, eroding streambanks and roadsides, erosion from developing urban areas, contaminated runoff from livestock and other agricultural operations, contaminated runoff from established urban areas, and septic systems. Pollutants from nonpoint sources are carried to the surface water or groundwater through the action of rainfall, irrigation runoff, and seepage.

Nutrients can occur naturally in streams and rivers, but elevated concentrations are often the result of pollution due to human activities. Phosphorus has been identified as the most important nutrient that should be kept from reaching surface water bodies. Nutrients, particularly phosphorus, promote the growth of algae, which can reduce beneficial uses of streams, the river, and impoundments. Biological processes (such as algal production) in surface waters are often controlled by the availability of phosphorus. Sources of phosphorus include animal and human waste, fertilizers, and other organic material or geologic sources.

Summer water temperatures in at least 19 stream segments in the Tualatin Subbasin exceed water quality criteria. Conditions that influence water temperature are riparian vegetation, water withdrawal, water releases from reservoirs, and changes in channel morphology, such as increased channel width with shallower depth.

While there may not be severe impacts on water quality from a single nonpoint source or activity, the combined effects from all sources contribute, along with impacts from other land uses and activities, to the impairment of beneficial uses of the Tualatin's waters. Pollutant loading of the Tualatin River Subbasin's waters from agricultural areas can occur through one of three means: in solution in rainfall runoff or irrigation return flows from agricultural lands, or attached onto soil particles and transported in association with erosion, or through solar loading due to lack of riparian vegetation.

Administrative Roles and Responsibilities

The DEQ is required by the federal Clean Water Act to establish Total Maximum Daily Loads (TMDLs) for pollutants in waters designated as not meeting water quality standards. In August 2001, the U.S. Environmental Protection Agency (EPA) approved the Tualatin Subbasin TMDL for phosphorus, ammonia, temperature, bacteria, and dissolved oxygen. Each DMA with jurisdiction in the Subbasin has been given pollutant allocations under the TMDL, representing the maximum amount of pollution that may be discharged daily from the lands managed by the respective jurisdiction to the Tualatin River and its tributaries. As the DMA responsible for pollution control activities on non-forested agricultural lands in the Tualatin River Subbasin, ODA facilitates implementation of a plan and rules to address the allocated loadings for pollution attributed to agricultural activities.

The Act, adopted by the Oregon State Legislature in 1993, and SB 502 adopted in 1995, granted primary responsibility for control of water pollution from agricultural sources to the ODA. This Act provides for the development of a program whereby ODA works with local farmers and ranchers to develop Area Plans for specific watersheds that have been identified as polluted from agricultural sources. Area Plans are expected to identify problems in the watershed that need to be addressed and outline ways to correct those problems. The Area Plans are developed by a LAC, reviewed by the state Board of Agriculture (BOA), and then implemented by associated OARs. The intent of these Area Plans is to focus on educational and technical assistance, while allowing flexibility to landowners in addressing agricultural water quality issues. In those cases where corrective actions are required to solve water quality problems and the landowner refuses to take action, the law allows ODA to utilize enforcement actions in order to achieve compliance.

The intent of this Area Plan is to meet the needs of the DEQ implementation plan for the TMDLs and avoid duplication of effort since the law requires the development of a separate stand alone plan for agriculture. To meet both requirements, the Area Plan must address the elements and load allocations identified in the TMDL.

The Area Plan will be incorporated by reference into the Tualatin River Basin Implementation Plan. The DEQ understands that when implementing the Area Plan, ODA and the Tualatin Soil and Water Conservation District (SWCD) acknowledge the goals, priorities, and pollution Load Allocations identified in the Implementation Plan, and will consider those when implementing the Area Plan. The DEQ included the Area Plan as an attachment when the TMDL and Water Quality Management Plan were submitted to the EPA for final approval. The Area Rules implementing Area Plans are included in OARs Chapter 603, Division 90, Agricultural Water Quality Management Program. Rules specific to the Tualatin River Subbasin are in OAR 603-095-0010 through 603-095-0180, and were adopted in April 1996.

Recognizing the adopted Area Rules need to be quantitatively evaluated in terms of Load Allocations in the TMDL and pursuant to the June 1998 Memorandum of Agreement between ODA and DEQ, the agencies conducted a technical evaluation in the summer of 2000. The agencies have established a relationship between the Area Plan and its implementing Area Rules and the load allocations in the TMDL to determine if the Area Rules provide reasonable assurance

that the TMDLs will be achieved. The LAC has been apprised and consulted during this evaluation. This adaptive management process provides for review of the Area Plan to determine if any changes are needed to the current Area Rules specific to the Tualatin River Subbasin.

As stated above, ODA is the DMA for nonpoint source pollution control activities on agricultural and nonforested rural lands in the Tualatin River Subbasin. In turn, through a Memoranda of Agreement, ODA has designated the local SWCD as its agricultural Local Management Agency (LMA) for implementation of the agricultural and rural water quality program and projects in the Tualatin River Subbasin.

Other Tualatin River Subbasin DMAs include the Oregon Department of Forestry, Oregon Department of Transportation, Clean Water Services, the City of Portland, the City of Lake Oswego, the City of West Linn, Clackamas County, and Multnomah County. Clean Water Services, Clackamas County, and the cities of Lake Oswego, Portland, and West Linn have instituted water quality programs and are currently assessing surface water management fees for properties within their jurisdiction.

The SWCDs have a long standing record of effectively identifying conservation concerns, developing action plans to address problems, and facilitating assistance to agricultural operators who voluntarily participate in conservation programs. SWCDs work cooperatively with the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), the USDA Farm Services Agency, and the OSU Extension Service. These agencies provide technical, financial, and educational assistance to individual agricultural operators for the installation of conservation and pollution control measures. SWCDs also play an important role in the development of partnerships between local agencies, volunteer organizations, and private landowners to address natural resource and conservation issues.

Mission, Goals, and Objectives

This document is the plan for the prevention and control of water pollution from agricultural activities and soil erosion in the Tualatin River Subbasin and was created through the joint efforts of the ODA and the Tualatin SWCD, with assistance from a LAC consisting predominantly of affected landowners residing within the subbasin.

Achievement of the Area Plan's mission, goals, and objectives is expected to contribute, along with similar efforts by other DMAs with responsibilities in the subbasin, to the restoration of the Tualatin's waters to a level of quality that will preserve and protect its beneficial uses.

Mission

The overall mission of implementation of this Area Plan is to achieve all applicable water quality standards.

Goals

Specific goals include:

- To prevent and control water pollution from agricultural activities and soil erosion using the TMDL and associated load allocations as targets.
- To create a high level of awareness and understanding of water quality issues among the agribusiness community and the rural public through education and technical assistance activities.
- To control pollution as close to its source as possible.
- To base actions on sound conservation planning.
- To ensure adequate funding and administration of the program to achieve the mission, goals, and objectives.

Objectives

Watershed objectives that have been identified as necessary to achieve Area Plan goals are the following:

➔ OBJECTIVE 1: Conduct educational programs to promote public awareness of water quality issues and their solutions.

➔ OBJECTIVE 2: Secure necessary resources to administer and implement the water quality program.

➔ OBJECTIVE 3: Reduce erosion and sediment delivery from agricultural and rural lands.

➔ OBJECTIVE 4: Reduce nutrient loading from agricultural and rural lands.

➔ OBJECTIVE 5: Control irrigation tailwater discharges to waters of the state.

➔ OBJECTIVE 6: Eliminate waste discharges to waters of the state.

➔ OBJECTIVE 7: Limit livestock access to streams, wetlands, and the riparian area.

➔ OBJECTIVE 8: Ensure proper animal waste storage and utilization or disposal.

➔ OBJECTIVE 9: Promote streambank stabilization and the restoration and enhancement of wetlands and riparian habitat.

➔ OBJECTIVE 10: Promote streamside planting to maximize stream shading.

➔ OBJECTIVE 11: Minimize off-site transport and maximize on-site retention and degradation of pesticide materials.

Geographic and Programmatic Scope

Operational boundaries for the land base coming under the purview of this Area Plan include all lands within the Tualatin River Subbasin in agricultural use and agricultural and rural lands which are lying idle or on which management has been deferred, with the exception of activities which are subject to the Forest Practices Act. Agricultural use means the use of land for the raising or production of livestock or livestock products, poultry or poultry products, milk or milk products, fur-bearing animals; or for the growing of crops such as, but not limited to, grains, small grains, fruit, vegetables, forage grains, nursery stock, Christmas trees; or any other agricultural or horticultural use or animal husbandry or any combination thereof. Wetlands, pasture, and woodlands accompanying land in agricultural use are also defined as in agricultural use.

Current productive agricultural use or profitability is not required for the provisions of the Area Plan to apply. Highly erodible lands with no present active use will be included under Area Plan jurisdiction.

This Area Plan will address the following water quality issues and activities related to lands in agricultural use:

- Erosion and surface water management.
- Irrigation water management.
- Nutrient management.
- Pesticide management.
- Permitted Confined Animal Feeding Operations (CAFOs).
- Animal enterprises not subject to CAFO permits.
- Riparian area and wetlands vegetation.

The provisions outlined in this Area Plan and requirements indicated in the associated OARs 603-095-0100 through 603-095-0180 may be adopted by reference by DMAs with jurisdiction and responsibilities in other geographic areas of the Tualatin River Subbasin. For lands in agricultural use within other DMAs jurisdictions, the ODA and the SWCD will work with DMAs to assure that provisions of this Area Plan apply, and to assure that duplication of any services provided or fees assessed will not occur.

Strategies for Achieving Plan Mission, Goals, and Objectives

The ODA's and the SWCD's primary strategies to reduce amounts of pollution from agricultural and rural lands lie in the reduction of pollutants in runoff, the establishment of riparian vegetation, and the reduction of erosion through a combination of educational programs, land treatment, implementation of conservation practices and installation of structural measures. These strategies will be carried out at the local level by ODA's Local Management Agency (LMA) - the SWCD - in cooperation with landowners, other agencies, volunteer organizations and others.

In addition to the voluntary strategies above, regulatory backstops are included as a strategy in this Area Plan. The ODA will use these mechanisms where appropriate and necessary to gain compliance with prohibited conditions. Any enforcement action will be pursued only when reasonable attempts at voluntary solutions have failed.

Landowners have flexibility in choosing strategies and practices to address water quality issues on their lands. Landowners may choose to address problems on their own or they may choose to develop an approvable Voluntary Water Quality Farm Plan.

Reductions are needed in phosphorus, ammonia, bacteria and pollutants associated with dissolved oxygen to reach background levels or close to background levels. The allocation to address temperature is given as potential shading for each site along the river. This varies approximately from 40 percent to 90 percent effective shade, depending on the site capability.

To reduce loading of these parameters, the Area Plan and Rules focus on the primary sources and provide conditions to avoid and possible management techniques to prevent and control loading from agricultural activities. The sources of pollution include erosion, irrigation water discharges, inadequate riparian vegetation and waste discharges.

As stated earlier, the overall mission of this Area Plan is to achieve all applicable water quality standards. The TMDL allocations have been specifically designed so that when attained, the Tualatin River and its tributaries will meet water quality standards. The following recommendations may be used as a guide for landowners in meeting the prohibited conditions and TMDL allocations for agriculture.

Conservation Practices

Agricultural Conservation Practices for pollution control are those management practices and structural measures which are determined to be effective, practicable means of controlling and preventing pollution from agricultural activities. Conservation Practices are actions taken by each individual agricultural operation for the achievement of production and water quality goals. Appropriate management practices for individual farms may vary with the specific cropping, topographical, environmental, and economic conditions existing at a given site. Due to these variables, it is not possible to recommend any uniform Conservation Practices for farms in the Tualatin River Subbasin.

A detailed listing of a number of specific practices and management measures which can be employed to control or reduce the risk of agricultural pollution are contained in other documents such as the Field Office Technical Guide (FOTG) maintained by the NRCS. While not exhaustive or all-inclusive, the following is a limited listing of examples of NRCS practices typically used in the Tualatin River Subbasin for effective prevention and control of water pollution and near-stream area improvement.

For erosion control:

- Residue Management, Seasonal
- Residue Management (mulch till and no-till)
- Mulching
- Deep Tillage
- Conservation Crop Rotation
- Contour Farming
- Contour Orchard and Other Fruit Area
- Conservation Cover
- Grassed Waterway
- Underground Outlet
- Diversion
- Grade Stabilization Structure
- Sediment Basin
- Water and Sediment Control Basin

For prevention of irrigation return flow discharges:

- Irrigation Water Management
- Irrigation System Tailwater Recovery

For nutrient and pesticide management:

- Pest Management
- Nutrient Management

For prevention and control of adverse impacts to near-stream areas:

- Channel Vegetation
- Stream Channel Stabilization
- Streambank and Shoreline Protection
- Critical Area Planting
- Filter Strip
- Tree & Shrub Establishment
- Riparian Forest Buffer
- Use Exclusion
- Fence
- Watering Facility
- Animals Trails and Walkways

For prevention of waste discharges:

- Roof Runoff Management
- Waste Storage Facility
- Composting Facility
- Manure Transfer
- Heavy Use Area Protection
- Waste Management System
- Closure of Waste Impoundments
- Constructed Wetland
- Waste Utilization

For riparian habitat and wetland restoration and enhancement:

- Field Border
- Hedgerow Planting
- Windbreak/Shelterbreak Establishment
- Restoration and Management of Declining Habitats
- Wetland Creation
- Wetland Enhancement
- Wetland Restoration
- Wetland Wildlife Habitat Management
- Upland Wildlife Habitat Management
- Stream Habitat Improvement Management
- Critical Area Planting

Conservation Practices and land use changes are most effective when selected and installed as integral parts of a comprehensive resource management plan based on natural resource inventories and assessment of management practices. The result is an approach using the Conservation System concept. Conservation Systems use Conservation Practices and land use changes that are designed to be complementary, and when used in combination, are more technically sound than each practice separately.

Voluntary Measures

The ODA's and the SWCD's strategy for controlling nonpoint sources of pollution on agricultural and rural lands relies on existing and expanded programs, focusing on proactive planning activities for those conditions which are determined to be the most significant controllable sources of nutrients, sediment, bacteria, and other sources of pollution arising from agricultural use.

The SWCD intends to achieve the Area Plan's water quality goals and objectives through the volunteer efforts of cooperators. Prevention and control of nonpoint source pollution from agricultural and rural lands will be encouraged in a cooperative spirit through the voluntary efforts of individual landowners aided by the informational, technical, and financial assistance of local, state, and federal agencies and others.

Voluntary Water Quality Farm Plan and Conservation Practices

Landowners are afforded the opportunity to develop and implement farm plans, approved by the SWCD.

The SWCD policy for assisting land owners and operators with their water quality initiatives is to base all proper analyses of alternative actions to improve water quality upon a conservation plan. The conservation plan is a comprehensive land management plan formulated by the farm operator and used for making decisions about applying Conservation Practices to conserve soil, water, and related plant and animal resources on all or part of a farm unit. The conservation plan addresses

site-specific problems through the selection of individual Conservation Practices or Conservation Systems to be implemented for the protection of natural resources.

Generally, farm plans will incorporate Conservation Practices and will be designed to:

- Prevent and control cropland erosion exceeding the tolerable soil loss (T) for the subject field.
- Prevent and control active channel erosion.
- Prevent and control irrigation return flow discharges to waters of the state during the period of May 1 through October 31 annually.
- Prevent and control adverse impacts to near-stream areas.
- Prevent and control waste discharges to waters of the state.
- Avoid placement of wastes in a position where they are likely to be carried to waters of the state.
- Encourage riparian and wetland restoration and enhancement.

Farm plans may contain any or all of the following elements, depending on the site and the condition for which preventive or corrective measures are being implemented:

- Erosion control component
- Nutrient management component
- Pesticide management component
- Irrigation water management component
- Animal manure management component
- Near-stream management area component

Farm plans, to be recognized by the department in regard to the Tualatin Area Plan and Rules, may be drawn up by landowners or operators, consultants, or technicians available through the SWCD. At a minimum, farm plans will outline specific measures necessary to prevent and control the existence of prohibited conditions outlined below and will be subject to approval by the local SWCD.

Existing agricultural management plans that meet the Agricultural Water Quality Management Act requirements traditionally qualify as authorized farm plans upon review by the local SWCD. These generally include current NRCS whole farm plans and nursery areas operating under an approved tailwater recovery plan.

Near-Stream Management Area Recommendations

Streamside landowners are strongly advised and encouraged to plant and maintain trees and shrubs near streams. Trees and shrubs beside streams enhance water quality in four fundamental and critical ways.

1. Shade reduces thermal loading reaching the stream.
    a. Cooler water holds more dissolved oxygen for salmonids and trout.
    b. Salmon and trout eggs and fry require water that is less than 55 degrees to survive.
    c. Cool water reduces the growth of bacteria and other microorganisms.
2. Shade reduces the growth of harmful algae.

3. Roots of trees and shrubs stabilize streambanks, reducing erosion and protecting the land base.
4. Roots of trees and shrubs filter harmful nutrients from groundwater moving towards a stream.

Landowners are strongly encouraged to plant and maintain trees and shrubs beside streams to provide these multiple benefits to water quality and wildlife habitat.

Prohibited Conditions

OAR 603-095-0140, as amended in 2003, provides for the following prohibited conditions.

OAR 603-095-0140
All landowners or operators conducting activities on lands in agricultural use shall be in compliance with the following criteria. A land occupier shall be responsible for only those prohibited conditions caused by activities conducted on land managed by the landowner or occupier. Criteria do not apply to conditions resulting from unusual weather events or other exceptional circumstances, which could not have been reasonably anticipated. These rules are effective upon adoption unless otherwise indicated.

Erosion
(1) Sheet and rill erosion:
(a) No agricultural land management or soil disturbing activities shall be conducted in such a way that the estimated sheet and rill erosion rate exceeds the soil loss tolerance factor.
(2) Active channel erosion: no agricultural land management or soil disturbing activity shall cause active channel erosion. A land occupier shall be responsible for only that portion of the active channel erosion that is caused by agricultural land management or soil disturbing activities conducted on land managed by the landowner or occupier.

Indicators of Non-Compliance

Clear non-compliance
- Visible sediment that enters natural stream areas.
- Visible erosion from drainage ways as a result of livestock grazing, tillage or the destruction of riparian vegetation by the landowner or occupier.
- Underground drainage tile outlets either improperly installed or maintained allowing soil or bank erosion to actively occur.
- Visible formation and/or expansion of channels, gullies or rills.

Likely non-compliance, requires further investigation
- Sheet and rill erosion greater than "soil loss tolerance factor".
- Visible pedestals on bare or sparsely vegetated ground.
- Eroding road ditches, drainage ways and field borders.
- Field swales with high water flow and without crop residues, grass cover or sediment control structures.
- Highly erodible land with minimal cover.
- Sediment deposits left from flowing water that are visible away from the ditch or channel.
- Lack of vegetation in and around drainage ditch.

Potentially impacted TMDL parameters
Phosphorus, bacteria, dissolved oxygen

OAR 603-095-0140
Near-Stream Management Areas
(3) Near-Stream management area:
(a) No agricultural land management or soil disturbing activities within near-stream management areas in agricultural use shall be conducted in a manner that results in the placement or delivery, of suspended solids (i.e., nutrients, soil, manure) into waters of the state. The technical standards to be used to determine compliance with OAR 603-095-0140(3)(a) are:
(A) The affected landowner shall establish and maintain an adequate vegetative buffer, or an equally effective pollution control practice, in the near-stream management area. When a vegetative buffer is established, the plant variety or seed mixture shall be one of those listed in field office technical guide for Critical Area Planting. If any activity disturbs a vegetative buffer in the near-stream management area, the landowner shall replant or restore the disturbed area to an adequate vegetative buffer as soon as practicable.
(B) Pastures shall comply with field office technical guide standard for Prescribed Grazing.
(C) Livestock barnyards, feedlots, drylots and other non-pasture areas cannot be located within the near-stream management area unless a barnyard runoff control system is installed and maintained meeting field office technical guide standard for Waste Management System.
(D) Agricultural lands within the near-stream management area that receive manure and other nutrients through application of sludge, commercial fertilizer and other added nutrient inputs shall meet field office technical guide standard for Nutrient Management.
(b) Field office technical guide standards referred to in OAR 603-095-0140(3)(a) are those standards that are current as of the date of the adoption of these rules. Copies shall be made available to the public upon request to ODA through its central office location.
(c) A landowner shall not be considered out of compliance with OAR 603-095-0140(3)(b) and 603-095-0140(4) if ODA determines that a failure to meet the standards is a result of land use or actions by another landowner.
(d) Except for operations governed by the Forest Practices Act, no activities related to the conversion of woodland to non-woodland agricultural uses that require removal of the majority of woody material from a parcel of land such that the land no longer meets the definition of woodland, shall be conducted in a manner which results in the placement of soil, the delivery of sediment, the initiation or aggravation of streambank erosion, or compromises the conditions described in 603-095-0140(3)(a) and 603-095-0140(4).
(e) Limited duration activities related to construction, restoration, or maintenance may be exempted from OAR 603-095-0140(3) subject to prior written approval by ODA.

Indicators of Non-Compliance
Clear non-compliance

- ❖ Active streambank erosion in conjunction with tillage, grazing, or destruction of vegetation by the landowner or occupier.
- ❖ Removal or destruction of vegetation in the near-stream management area that compromises the goal of bank stability and filtration of material carried by overland flow of water during storm events.

Potentially impacted TMDL parameters
Dissolved oxygen, bacteria, phosphorus

OAR 603-095-0140

Stream Temperature

(4) By January 1, 2005 agricultural activities along a perennial stream must allow for the natural or managed regeneration and growth of vegetation, consistent with the site capability, that is adequate after sufficient growth, to provide erosion control, streambank stability and minimization of direct solar heating.

(a) Minimal breaks in shade vegetation for essential management activities are allowed.
(b) Management within the vegetated area is allowed provided it does not compromise achieving the conditions described in 603-095-0140(3)(a) and 603-095-0140 (4).
(c) Drainage and irrigation ditches subject to ORS 196.600 to 196.905 (Removal Fill laws) are exempt from 603-095-0140 (4).

Indicators of Non-Compliance
Clear non-compliance

- ❖ Removal or destruction of vegetation that hinders the riparian area from providing filtration, bank stability and shade.

Potentially impacted TMDL parameters
Temperature, dissolved oxygen, bacteria, phosphorus

OAR 603-095-0140

Irrigation Water Discharges

(5) Irrigation water discharges: no activities shall result in irrigation water discharges to waters of the state during the period May 1 through October 31 annually, except as provided in OAR 603-095-0140(5)(a).

(a) Irrigation water discharges may be allowed upon submittal and written approval by ODA of a monitoring program to be conducted by the landowner or operator. Such monitoring program shall provide reasonable assurance that the quality of the irrigation water discharge meets all applicable water quality standards.

Indicators of Non-Compliance

Clear non-compliance
- ❖ Irrigation water discharge entering waters of the state.
- ❖ Irrigation water exiting underground tile outlets.

Likely non-compliance, requires further investigation
- ❖ Irrigation application that creates surface runoff.
- ❖ Irrigation water applied at a rate that creates surface water turbidity.
- ❖ Irrigation water applied at a rate that results in ponding.
- ❖ Water exiting underground tile outlets.

Potentially impacted TMDL parameters
Temperature, dissolved oxygen, phosphorus, ammonia

OAR 603-095-0140

Waste

(6) Waste discharges:

(a) No person conducting agricultural land management or earth disturbing practices shall cause pollution of any waters of the state or place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means.

(b) No person conducting agricultural land management or earth disturbing practices shall discharge any wastes into the waters of the state if the discharge reduces the quality of such waters below the water quality standards established by rule for such waters by the Environmental Quality Commission.

(c) No person conducting agricultural land management or earth disturbing practices shall violate the conditions of any waste discharge permit issued under ORS 468B.050.

Indicators of Non-Compliance

Clear non-compliance
- ❖ Runoff flowing through areas of high livestock usage and entering waters of the state.
- ❖ Livestock waste located in drainage ditches or areas of flooding.
- ❖ Fill material (loose soil) placed in or near waters of the state with a visible discharge of sediment entering waters of the state.
- ❖ Livestock feed placed in or near waters of the state with a visible discharge entering waters of the state.
- ❖ Agricultural products with high nutrient residues placed in or near waters of the state with a visible discharge entering waters of the state.
- ❖ Dead animals deposited in or near waters of the state.

Likely non-compliance, needs further investigation
- ❖ Animal confinement areas or waste from agricultural land management or earth disturbing practices located where there is a likelihood of pollutant transport to waters of the state.

- ❖ Animals confined but manure is not collected and stored in a manure storage facility that meets the requirements of field office technical guide standard for Manure Storage Facility or equivalent pollution control system.
- ❖ Animals confined in a unroofed pen that does not meet field office technical guide standard for Heavy Use Protection Area and Filter Strip or equivalent pollution control system.
- ❖ Fill material (loose soil) placed near waters of the state.
- ❖ Livestock feed placed near waters of the state.
- ❖ Agricultural products with high nutrient residues placed near waters of the state.

Potentially impacted TMDL parameters

Ammonia, bacteria, temperature, dissolved oxygen, phosphorus

Resolution of Complaints

Complaints against operators or landowners alleged to be conducting land management activities resulting in prohibited conditions will be investigated by the ODA in conjunction with the appropriate SWCD. Formal complaints will be investigated by ODA who will determine if a prohibited condition exists, and based on this determination, appropriate action will be taken to remedy the prohibited condition as outlined above. In order to be considered as a formal complaint, the complaint must relate to a specific site, must be submitted in writing and must be filed with ODA.

Enforcement Action

In those cases where corrective actions are required to solve water quality problems and the landowner refuses to take action, the law allows ODA to utilize enforcement actions to achieve compliance.

If ODA determines that a violation of OAR 603-095-0140 has occurred and an approved farm plan exists and the operator is making a reasonable effort to comply with the plan, ODA will inform the landowner and the LMA of the noncompliance with OAR 603-095-0140, acknowledge the existence of the farm plan, and direct the landowner to seek appropriate technical assistance and revise the plan and its implementation in a manner necessary to eliminate the violation.

If ODA determines that a violation of OAR 603-095-0140 has occurred and an approved farm plan exists and the operator is not making a reasonable effort to comply with the plan, that a violation of OAR 603-095-0140 has occurred, and an approved farm plan does not exist, or that a landowner has not revised a plan per OAR 603-095-0180(5) within the time specified by ODA, the landowner will be subject to the enforcement procedures of ODA outlined in OARs 603-090-0060 through 603-090-0120 and ODA will inform the LMA of its determination that a violation has occurred.

Inventory and Implementation Targeting

In order to make maximum use of available resources in addressing the natural resource issues of greatest concern in priority order, educational and technical assistance implementation activities must be carried out in stages. Following is a listing of a number of tools that are available to assist in the prioritization and phasing process.

Erosion

ODA has developed an Erosion Vulnerability Screening Tool. This is a process for inventorying and identifying soils of greatest potential to contribute sediment to the waters of the Tualatin River Subbasin. This process incorporates:

- Erodibility of soils
- Slope
- Rainfall intensity

Existing information that was used in this process includes GIS layers for soil types, digital elevation models, and rainfall erosivity factors. Currently, the tool is ready for use; however, it is anticipated that ODA will add land use GIS layers in the future.

Specific sites may be further prioritized based on ranking of soils with respect to phosphorus loading or potential contribution to in-stream phosphorus levels.

Nutrients

Potential nutrient loss through leaching to groundwater or surface water loading through separation of nutrients from soil particles is highly variable from site to site due to differing abilities of soils to retain nutrients and other site specific criteria. A preliminary process for identifying relative vulnerability of sites for phosphorus loss has been developed and may provide guidance for initial targeting of nutrient management outreach and implementation efforts. Using this tool, sites may be characterized for relative potential nutrient loss by the interaction of the following factors:

- Soil erosion potential
- Irrigation induced erosion potential
- Site runoff class
- Soil phosphorus test
- Fertilizer application rate
- Fertilizer application method
- Organic phosphorus source application rate
- Organic phosphorus application method

The Tualatin SWCD and NRCS staff is using this tool when developing conservation plans for agricultural producers to measure the risk for phosphorus loss to water resources.

Pesticides

The goal of pesticide management is to foster effective and safe use of pesticides without causing degradation to the environment. By following label directions and maximizing on-site retention of pesticides, the likelihood of pesticides reaching surface water through runoff or reaching groundwater through leaching is minimized. Pesticide movement to surface or groundwater is

influenced by many factors. There are several tools available through NRCS and OSU Extension Service to assist landowners in minimizing off-site transport of pesticides. Some of the concepts reflected in those tools include:

- Soil sensitivity - soil's tendency to allow a chemical to be transported through soil profile
- Soil erosion potential
- Surface runoff potential
- Pesticide persistence
- Pesticide mobility
- Pesticide application rate
- Pesticide application method
- Pesticide application timing
- Reduction in pesticide use through integrated or alternative pest management strategies

Landowners are encouraged to implement integrated pest management practices to ensure proper pesticide applications. The Tualatin SWCD staff, when helping landowners develop farm plans, will evaluate landowners' pesticide application practices, and address pesticide application as needed.Permitted Confined Animal Feeding Operations (CAFOs)

To the greatest degree possible, ODA endeavors to achieve voluntary compliance with provisions of the CAFO program. Through an aggressive environmental education and outreach effort, ODA believes that awareness of potential problems has been heightened, and that CAFO owners and operators are better able to identify practices that may be contributing to water quality problems. Once CAFO owners and operators have an understanding of potential problems, they can take a proactive role in developing solutions. The required development and implementation of Animal Waste Management Plans provides owners and operators a way to embrace agricultural sustainability and the ethic of land stewardship.

The ODA's CAFO program relies heavily on routine inspections to raise the bar of understanding, and is committed to the inspection of all permitted CAFOs at least once every year. Inspections are conducted to determine compliance with water quality laws and to provide education to the owners and operators. Inspections that reveal noncompliance are handled expeditiously to ensure that violations are corrected.

Non-Permitted Livestock Operations

Livestock operations that are not subject to CAFO permit requirements are also a potential source of nutrients, sediment, and bacteria. An inventory of these operations will be pursued and used along with other sources of information on livestock operations to prioritize education and outreach activities to groups and organizations of livestock owners. This information is also used to focus technical assistance activities and develop grant applications for education, cost share, and technical assistance funding.

Near-Stream Management Areas

Given the large number of properties in the Tualatin River Subbasin, which lie within 25 feet of a stream (estimated at 5,000-6,000 properties), it is necessary to identify activities within the 25-foot zone that pose the highest potential for generating water quality problems, in order to appropriately target educational and technical assistance planning resources.

Near-stream activities within 25 feet of a perennial stream include:

- Annual soil disturbance
- Removal of, or failure to maintain, adequate ground cover or shading vegetation
- Livestock grazing and pasturing
- Livestock holding
- Application of nutrients
- Activities which degrade the integrity of the streambank

The Tualatin SWCD has completed watershed assessments for the entire Tualatin River Watershed. These documents are available at the district office. Information gathered in the assessments was used to help focus the stream prioritization matrix currently being developed by the Tualatin River Watershed Council. This matrix will provide a numerical priority for restoration work in Dairy, McKay, Gales and part of Rock Creek. Combined with water quality monitoring data for the mainstem and tributaries, the watershed assessments and stream prioritization matrix will aid in the prioritization of geographic areas for targeting of educational efforts, technical assistance for development of farm plans and grant applications.

Streamside plantings for shade are recommended and encouraged by: the Tualatin Subbasin LAC, Tualatin SWCD, ODA, DEQ, EPA, the Oregon Department of Forestry, the Tualatin River Watershed Council, Clean Water Services, the Oregon Department of Fish and Wildlife (ODFW), the U.S. Fish and Wildlife Service, and numerous other groups, agencies and offices.

Technical Assistance

As resources allow, in the Tualatin River Subbasin, the SWCD and USDA NRCS staff are available to assist landowners in evaluating effective practices for reducing runoff and soil erosion on their farms and incorporating these practices into farm plans. Personnel in these offices can also design and assist with implementation of practices, and assist in identifying any sources of cost-sharing funds for the construction and/or use of some of these practices.

Technical and cost-sharing assistance for installation of certain Conservation Practices may be available through traditional USDA conservation programs or through SWCD, grant, or other funding sources. Coordination of agricultural nonpoint source pollution control activities with federal programs created under the Food Security Act and other federal, state, local, and private initiatives will be critical to the success of the agricultural nonpoint source pollution control implementation activities.

Financial Assistance

Financial assistance is available to individual landowners for implementing practices necessary to achieve the goals and objectives of the Tualatin River Subbasin Area Plan. The following is a list of opportunities available at the time of this update. This is not a comprehensive list. The reader is cautioned to inquire about the programs **prior** to implementing practices if interested in financial assistance.

Conservation Reserve Enhancement Program (CREP) and Enhanced (ECREP)

This program, administered by Farm Service Agency (FSA), focuses on anadromous fish bearing streams and provides cost share money for the implementation of riparian fencing and planting on a specified buffer. A rental payment on the riparian buffer, based on the USDA soil rental rate, is dispersed annually for 10 to 15 years. The USDA NRCS, Farm Service Agency, Clean Water Services and the Tualatin SWCD recently initiated a partnership to provide increased incentives and technical assistance in the Tualatin Basin. Contact the Tualatin SWCD or NRCS for information.

Conservation Reserve Program (CRP)

This program, administered by the USDA NRCS and Farm Service Agency, includes streams whether or not they are habitat for anadromous fish. This program also provides cost share to landowners willing to establish an appropriate riparian buffer. A rental payment is also dispersed annually over a 10 to15 year period. Contact the NRCS for information.

Environmental Quality Incentives Program (EQIP)

This program, administered by the USDA NRCS, provides assistance to farmers and ranchers in complying with Federal, State, and Tribal environmental laws, and encourages environmental enhancement. Through this program a conservation plan that includes structural, vegetative, and land management practices on eligible land is implemented. Cost-share payments may be made to implement eligible structural or vegetative practices. Five- to ten-year contracts are made with eligible producers. Contact the NRCS for information.

Wildlife Habitat Incentives Program (WHIP)

This program, administered by the USDA NRCS, provides financial incentives to develop habitat for fish and wildlife on private lands. Contact the NRCS for information.

Oregon Watershed Enhancement Board Small Grant Program

This program is administered jointly by the local SWCD and Watershed Councils. Funds are available for specific practices. Landowners may be responsible for a certain percentage of the total cost. Contact Tualatin SWCD for details.

Oregon Riparian Tax Incentive Program

This program, administered by the ODFW, offers a property tax incentive to property owners for improving or maintaining qualifying riparian lands. Under this program, property owners receive complete property tax exemption for their riparian property. This can include land up to 100 feet from a stream. For riparian land to qualify for this program, it must be outside adopted urban growth boundaries, and planned and zoned as forest or agricultural lands (including rangeland), or must have met these criteria as of July 1, 1997. If a riparian area is already in good shape it may also qualify for the program. For more information contact the local ODFW office or their website (http://www.dfw.state.or.us/wildlife/diversity/improve_habitat.asp).

Oregon Wildlife Habitat Conservation and Management Program

This program, administered by ODFW, is specifically for property zoned exclusive farm use or mixed farm and forest use that are managed for wildlife habitat. The landowner who qualifies and successfully completes the required steps will receive a tax benefit. For more information, contact the local ODFW office or their website (http://www.dfw.state.or.us/wildlife/diversity/improve_habitat.asp).

Nonpoint Source Pollution Control Facilities Tax Credit

This program, administered by the Oregon DEQ), is intended to cover expenditures for "on-the-ground" management practices and improvements. Possible eligible practices must be consistent with the implementation of any of a number of state approved plans including the local Area Plan and the TMDL implementation plan. For more information contact the Portland DEQ office or their website (http://www.deq.state.or.us).

Strategies for Assuring Implementation of Necessary Measures

The ODA and the SWCD intend to encourage participation in this water quality improvement program by:

- Providing educational programs to raise public awareness and understanding of water quality issues and solutions.
- Providing incentives for the development and implementation of farm plans.
- Offering technical assistance for the development and implementation of farm plans.
- Inventorying and surveying the watershed for potential prohibited conditions.
- Pursuing water quality complaints.
- Verifying the existence of prohibited conditions based on complaints and/or inventory and survey information.

- When the ODA has determined that a prohibited condition exists, the Department may take appropriate enforcement actions as outlined in Oregon Administrative Rules 603-090-0060 through 603-090-0120.

Public Involvement

The director of the ODA appointed a Tualatin River Subbasin LAC representing local agricultural producers and/or landowners, a local environmental organization, local agencies, the Tualatin SWCD, and the state Board of Agriculture (BOA), for the purpose of assisting with the development of the 1996 Area Plan and the associated OARs. The Area Plan and Rules resulting from the LAC's and ODA's efforts were presented to the state BOA for their review and consultation in August 1995. Public information meetings and public hearings were held within the agricultural and rural portions of the Tualatin River Subbasin in September 1995. Testimony was reviewed by ODA staff and the LAC. Recommended modifications were presented to the state BOA and the director of ODA. The final OARs were adopted through the Administrative Rules process by the Director of ODA in April 1996.

The LAC will continue to participate in biennial reviews of the Area Plan and Rules implementation progress. If any future amendments to the Administrative Rules are recommended, they will be subject to the public participation process outlined in Oregon law.

Remove extra spacesPublic outreach has been a focus for the LMA since the original adoption of the Area Plan and Rules in 1996. The LMA for this subbasin, the Tualatin SWCD, continues to make public presentations to interest groups including small acreage farmers and equine operations, whose numbers are steadily increasing in this region. One-on-one site visits provide personalized technical assistance for landowners while monthly articles on agricultural water quality published in the local newspapers reach a wider audience with outreach information.

Additional outreach includes LMA participation in the Tualatin Basin Public Awareness Committee. This committee is working on a bilingual watershed education project and is continuing the popular Naturscaping program. The Tualatin SWCD also maintains a website containing information about the SWCD and the services they provide, downloadable fact sheets on conservation practices, outreach event dates, and contact information on SWCD staff and directors. And as always, there is continual partnering with local agencies, watershed councils, and citizen groups to stretch funds and accomplish more on-the-ground conservation.

Implementation Costs and Funding Sources

In the absence of detailed, site-specific inventories of resource problems, quantification of nutrient and sediment loadings and other water quality issues of concern, and unknown workload associated with the development of farm plans, it is difficult to accurately estimate the annual administrative cost of implementing this Area Plan.

To carry out their responsibilities as the LMA, the SWCD needs support for staff to work on implementation of this Area Plan. Staffing is needed to:

- Conduct educational programs.
- Identify high priority areas for implementation targeting.
- Provide technical assistance for development of farm plans.
- Investigate water quality complaints.
- Provide ongoing evaluation of Area Plan progress toward achieving water quality goals.
- Coordinate planning and implementation activities with other DMAs that have responsibilities for portions of the water quality improvement program.

Resources are also needed to:

- Aid in the identification of areas of high pollutant contribution.
- Conduct a water quality monitoring program.
- Produce educational materials.

In addition, availability of funds for a cost-sharing incentive program would catalyze implementation and aid in the adoption of measures that go beyond the minimum requirements.

The SWCD, the ODA, and other cooperating agencies plan to avail themselves to all opportunities to obtain grants, cost-sharing funds, assessments, and moneys from any other sources that can be used to accelerate the installation of nonpoint source pollution control practices through the formulation of farm plans. The NRCS's Hydrologic Unit Area Program, EPA's Clean Water Act Section 319 grants, the Oregon Watershed Enhancement Board (OWEB) grants, and other federal and state programs are potential sources of these funds. Traditional loan and grant programs include the Farmers Home Administration's rural and agricultural loan programs and the Resource Conservation & Development Program, administered by USDA. Other potential sources include state revolving loan funds and the new Small Grants Program through OWEB that assist landowners in implementing conservation practices.

In addition to the USDA grant and cost share opportunities traditionally available to the agricultural community (as well as other grants potentially available such as the OWEB and EPA's nonpoint source implementation grants), stable, long -term funding will be required to operate an agricultural base program for water quality management.

Responsibilities for Plan Implementation

The day-to-day implementation of this Area Plan will be accomplished through Memoranda of Agreements between the Clackamas County, West Multnomah, Tualatin, and Yamhill SWCDs and the ODA. Under such agreements, the Tualatin SWCD will act as the primary LMA.

Implementation priorities will be established on a periodic basis through annual work plans developed jointly by the SWCDs and the ODA.

Any activities related to determination of violations of prohibited conditions or enforcement will be taken up directly by the ODA, as outlined in the applicable Administrative Rules, OARs 603-090-0000 through 603-090-0120, and OARs 603-095-0100 through 603-095-0180.

Evaluation of Progress and Plan Modifications

Attaining compliance with the TMDL requirement has proven to be challenging. The establishment of the temperature TMDL and the adjustment of the previous phosphorus TMDL provide new and more reasonable goals for landowners in the Tualatin River Subbasin. The progress and success of implementation efforts will be assessed through determination of changes in land use practices and the measurement of water quality changes over time.

By the next biennial review, the ODA, with the cooperation and assistance of the SWCD, the LAC, and the DEQ, will assess the progress of the Area Plan implementation toward achievement of Area Plan goals and objectives. These assessments will include:

1. An accounting of the numbers and acreage of operations operating under LMA approved farm plans.
2. A summary of available mainstem and tributary ambient water quality monitoring data.
3. Identification of the potential remaining agricultural sources of sediment, nutrient loadings, and other contributors to non-attainment of all applicable water quality standards.
4. A review of additional water quality studies and technical information that is available.

Based on these assessments, ODA, the SWCD, the LAC, and the state BOA will consider making appropriate modifications to the Area Plan and/or the associated Oregon Administrative Rules.

The ODA and the SWCD intend to implement this Area Plan in mutual cooperation with private landowners, the DEQ, the USDA NRCS, the Farm Services Agency, the OSU Extension Service, and federal, state, and local agencies, and private organizations.

Appendix A. - Definitions

The Oregon Administrative Rules contain OARs filed through November 14, 2008

DEPARTMENT OF AGRICULTURE

DIVISION 95

AGRICULTURAL WATER QUALITY MANAGEMENT PROGRAM

603-095-0010

Definitions

Unless otherwise required by the context, as used in this Division:

(1) "Active Channel Erosion" means gullies or channels which at the largest dimension have a cross sectional area of at least one square foot and which occur at the same location for two or more consecutive years.

(2) "Adequate vegetative buffer" means an area that is maintained in vegetative cover that maintains at least 70 percent ground cover.

(3) "Agency of this state" has the meaning given in ORS 568.210(1).

(4) "Agricultural use" means the use of land for the raising or production of livestock or livestock products, poultry or poultry products, milk or milk products, fur-bearing animals; or for the growing of crops such as, but not limited to, grains, small grains, fruit, vegetables, forage grains, nursery stock, Christmas trees; or any other agricultural or horticultural use or animal husbandry or any combination thereof. Wetlands, pasture, and woodlands accompanying land in agricultural use are also defined as in agricultural use.

(5) "Agricultural Water Quality Management Area Plan" or "area plan" means a plan for the prevention and control of water pollution from agricultural activities and soil erosion in a management area whose boundaries have been designated under ORS 568.909.

(6) "Approved Voluntary Water Quality farm plan" or "approved voluntary plan" means a Voluntary Water Quality Farm Plan which has been developed according to standards and specifications developed by the department and which has been approved by the Local Management Agency with jurisdiction in the area for which the plan was developed.

(7) "Best Management Practice" means a practice, or combination of practices, that is determined to be the most effective practicable (including technological, economical, and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources of pollution to a level compatible with water quality goals. Best Management Practices

may include structural and nonstructural practices, conservation practices, and operation and maintenance procedures.

(8) "Confined Animal Feeding Operation" has the meaning given in ORS 468.687.

(9) "Department" means the state Department of Agriculture.

(10) "Designated Management Agency" means a public agency which possesses the legal authority, technical competence, organizational ability, and financial resources to carry out all or part of the nonpoint source control program as stipulated in an agreement with the Department of Environmental Quality

(11) "District" or "soil and water conservation district" has the meaning given in ORS 568.210.

(12) "Erosion, soil" means the general process by which soils are removed from the surface of the land by the action of water, wind, ice, or gravity.

(13) "Erosion rate, sheet and rill" means the annualized amount of soil material lost from a field or parcel of land due to sheet and rill erosion, expressed in tons of soil eroded per acre per year, and calculated according to the Universal Soil Loss Equation (USLE) or the Revised Universal Soil Loss Equation (RUSLE).

(14) "Erosion, rill" means an erosion process in which numerous small channels only several inches deep are formed and which occurs mainly on recently disturbed soils. The small channels formed by rill erosion would be obliterated by normal smoothing or tillage operations.

(15) "Erosion, sheet" means the removal of a fairly uniform layer of soil from the land surface by runoff water.

(16) "Erosion, streambank" means erosion within a perennial stream or river which is caused by the action of water flowing in a concentrated stream acting against the soil confining its flow.

(17) "Excessive soil loss" means soil loss that is greater than the standards set forth in Oregon Administrative Rules adopted by the Oregon Department of Agriculture to implement any Agricultural Water Quality Management Area Plan adopted pursuant to ORS 568.900 through 568.933. Excessive soil loss may be evidenced by sedimentation on the same parcel of land, on adjoining land, in wetlands or a body of water, or by ephemeral, active channel, or streambank erosion; or by calculations using the USLE or RUSLE showing soil loss exceeding the soil loss tolerance factor.

(18) "Field Office Technical Guide" means the localized document currently used by the soil and water conservation district and developed by the United States Department of Agriculture, Natural Resources Conservation Service which provides:

(a) Soil descriptions;

(b) Sound land use alternatives;

(c) Adequate conservation treatment alternatives;

(d) Standards and specifications of conservation practices;

(e) Conservation cost-return information;

(f) Practice maintenance requirements;

(g) Soil erosion prediction procedures; and

(h) A listing of local natural resource related laws and regulations.

(19) "Formal complaint" means a complaint against a landowner or operator alleging a violation of a requirement of any Water Quality Management Area Plan adopted pursuant to ORS 568.900 through 568.933 at a specific site. The complaint shall be submitted in writing stating the nature and location of the violation and shall be filed with the department or by agreement with the department, with the Local Management Agency with jurisdiction over the site in question.

(20) "Highly erodible lands" means soils with a potential erodibility of eight times the soil loss tolerance factor.

(21) "Informal complaint" means a water pollution complaint, not formally filed with the department.

(22) "Irrigation water discharge" means the release of irrigation return flows to surface waters.

(23) "Land disturbing activity" means any activity not directly related to general farming resulting in a disturbance of the natural condition or vegetative covering of the earth's surface.

(24) "Landowner" includes any landowner, land occupier or operator as defined in ORS 568.903.

(25) "Load allocation" has the meaning given in OAR 340-041-0006(19).

(26) "Local Management Agency" means any agency of this state, including but not limited to a soil and water conservation district, which has been designated by the department through an interagency agreement to undertake activities within a management area whose boundaries have been designated under ORS 568.909.

(27) "Near-stream management area" means the area extending 25 feet as measured along the ground surface from the top of the streambank of a perennial stream or river, or the ordinary high-water mark of a pond or a lake.

(28) "Nonpoint sources" has the meaning given in OAR 340-041-0006(17).

(29) "Operator" has the meaning given in ORS 568.900(2).

(30) "Ordinary high-water mark" means the point on the streambank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other recognizable characteristics.

(31) "Pasture" means land with a permanent, uniform cover of grasses or legumes used for providing forage for livestock. A pasture does not include any area where supplemental forage feeding is provided on a regular basis.

(32) "Perennial stream" means a natural channel in which water flows continuously and which is shown on a United States Geological Survey quadrangle map.

(33) "Point source pollution" means water pollution, which emanates from a clearly identifiable discharge point.

(34) "Pollution" or "water pollution" has the meaning given in ORS 468B.005(3).

(35) "Prohibited condition" means a condition of the land which is not allowed under division 95 rules.

(36) "Riparian vegetation" means plant communities consisting of plants dependent upon or tolerant of the presence of water near the ground surface for at least part of the year.

(37) "Runoff" means the portion of rainfall, other precipitation, or irrigation water that leaves a location in the form of surface water.

(38) "RUSLE" means the Revised Universal Soil Loss Equation, which is a method used to estimate soil loss by sheet, rill, and wind erosion.

(39) "Sediment" means soil particles, both mineral and organic, that are in suspension, are being transported, or have been moved from the site of origin by flowing water or gravity.

(40) "Sewage" has the meaning given in ORS 468B.005(4).

(41) "Sloughing" means a slip or downward movement of an extended layer of soil resulting from the undermining action of water or the earth disturbing activity of man.

(42) "Soil" means unconsolidated mineral or organic material that overlies bedrock, on the immediate surface of the earth, that serves as a medium for the growth of plants.

(43) "Soil disturbing activity" means any agricultural use resulting in a disturbance of the natural condition of vegetative surface or soil surface exceeding 10,000 square feet in area, including, but not limited to tilling, clearing, grading, excavating, grazing, and feedlot usage, but not including such minor land disturbing activities as home gardens and individual landscaping and maintenance.

(44) "Soil loss" means soil moved from a given site by the forces of erosion and redeposited at another site, on land or in a body of water.

(45) "Soil loss tolerance factor" or "T" means maximum average annual amount of soil loss from erosion, as estimated by the Universal Soil Loss Equation (USLE) or the Revised Universal Soil Loss Equation (RUSLE), and expressed in tons per acre per year, that is allowable on a particular soil. This represents the tons of soil (related to the specific soil series) which can be lost through erosion annually without causing significant degradation of the soil or potential for crop production.

(46) "Streambank" means the boundary of protected waters and wetlands, or the land abutting a channel at an elevation delineating the highest water level which has been maintained for a sufficient period of time to leave evidence upon the landscape; commonly that point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. For perennial streams or rivers, the streambank shall be at the ordinary high-water mark.

(47) "Surface drainage field ditch" is a graded ditch for collecting excess water in a field.

(48) "Total Maximum Daily Load" or "TMDL" has the meaning given in OAR 340-041-0006(21).

(49) "USLE" means the Universal Soil Loss Equation, which is a method used to estimate soil loss by sheet, rill, and wind erosion.

(50) "Vegetative cover" means grasses or other low growing plants grown to keep soil from being blown or washed away.

(51) "Voluntary Water Quality farm plan" or "voluntary plan" means a plan for the prevention or control of water pollution from agricultural activities and soil erosion for an individual landowner.

(52) "Wasteload allocation" or "WLA" has the meaning given in OAR 340-041-0006(20).

(53) "Wastes" has the meaning given in ORS 468B.005(7) and includes but is not limited to commercial fertilizers, soil amendments, composts, animal wastes, vegetative materials or any other wastes.

(54) "Waste discharge" or "waste discharges" means the discharge of waste, either directly or indirectly, into waters of the state.

(55) "Water" or "waters of the state" has the meaning given in ORS 468B.005(8).

(56) "Water quality limited" has the meaning given in OAR 340-041-0006(30).

(57) "Woodland" means an area with a stand of trees that has a canopy cover as shown on the most recent aerial photographs of at least 50 percent, being at least one acre in size and having a minimum width measured along the ground surface of at least 132 feet.