

Agricultural Drainage Channel Maintenance Program

» LEGISLATIVE REPORT: DEC. 15, 2021



EXECUTIVE SUMMARY

Since the passage of House Bill 2437 in the 2019 Legislative Session, state agencies have been working together with stakeholders to implement the Agricultural Drainage Channel Maintenance Program. Key accomplishments include adopting program administrative rules, undergoing rulemaking for phased compliance dates, signing an interagency Memorandum of Understanding among the Oregon Department of Agriculture (ODA), Oregon Department of State Lands (DSL), and Oregon Department of Fish and Wildlife (ODFW) and creating program forms and outreach materials. Oregon State University has also launched a study of agricultural channel maintenance projects.

So far, one notice has been submitted and approved under the program. The submitted notice maintained 0.9 linear miles of channel and removed 2400 cubic yards of material. A second notice was submitted, then withdrawn. We will continue to apply lessons learned as we receive additional notices in the future.

ODA is working closely with ODFW, DSL, landowners, and stakeholders to adapt the program throughout the biennium. As part of program rule making, a diverse Rule Advisory Committee was convened and influenced the body of rules passed. ODA shared rulemaking plans with Oregon's tribal nations which resulted in rule feedback from a subset of tribes. Increased engagement between and improved relationships with local, state, and other partners through this program may ensure greater access for landowners to incentive programs, including financial assistance.

Benefits of this program include: a streamlined, user-friendly program that encourages participation, increased exchange of information and ideas between natural resource agencies, landowners, and stakeholders, and an improved ability to evaluate environmental outcomes. Some impacts may include effects on wetland functions, impacts to fish and wildlife species, and temporary reduction of water quality.

No recommendations for legislative changes to the program are offered at this time. Future recommendations may be offered as the program matures, more notices are received, audits and inspections are conducted, and research conducted by Oregon State University progresses to help inform adaptive management.

This report fulfills the requirements of Oregon Revised Statutes (ORS) 196.906 to 196.919, Section 14. It was authored by the Oregon Department of Agriculture's Agricultural Water Quality Program in partnership with Oregon Department of State Lands, and Oregon Department of Fish and Wildlife. It can be found online at <https://oda.direct/ADCMReport2021>.

I. Purpose of Report

This joint report from ODA, DSL, and ODFW is the first of five reports to be submitted biennially during odd-numbered years through 2029.

As required, this report describes agricultural drainage channel maintenance program implementation activities including:

- Methods of implementation
- Compliance information and outcomes
- A discussion of
 - » Adaptive management opportunities
 - » The potential impacts and benefits to agricultural lands and ecological function
 - » Opportunities to provide incentives to landowners to improve or enhance the ecological functions of channels
 - » Other relevant information on program implementation and effectiveness, including the study by Oregon State University (OSU)

II. Introduction/Overview

A. Background

Maintenance of channels used for agricultural drainage is critical to the viability of Oregon's farms and ranches. There is a need for maintenance of channels used for agricultural drainage to be conducted in a manner that protects, maintains, or improves ecological function of the channels and that upholds state objectives for fish recovery.

As a result of legislation passed in 2019 (HB 2437) and codified in ORS 196.906 to 196.919, specific maintenance activities conducted by landowners and water districts are eligible for a notice from ODA instead of a Removal-Fill Permit from DSL.

A landowner/water district must have a valid notice or a DSL permit prior to maintaining channels with few exceptions. The notice provides a streamlined process by which landowners/water districts may, without paying a fee, maintain eligible agricultural channels while ensuring that wetlands, waterways, and fish and wildlife habitats are protected.

The landowner/water district submits a notice with the location(s) and amount of sediment that will be removed and other required information. Submittal of the notice means that the landowner/water district agrees to comply with requirements related to channel shape, vegetation, and presence of water; timing of work; equipment usage and location; wetland and waterway impacts; and others. The required conditions protect water quality, wetlands, and fish and wildlife habitat. ODA has 45 workdays in which to validate the notice. Both ODA and ODFW review the notice for eligibility and to determine if any additional conditions are needed to protect water quality, fish, and/or wildlife. A landowner may also seek a variance to the required conditions. If ODA does not reach a decision within 45 days, the notice is valid as submitted.

Once valid, the work described in the notice may be completed in compliance with all required conditions anytime within five years.

Eligible channels must be:

1. Traditionally maintained = segment, set of segments, or an entire drainage ditch, intermittent stream, or perennial stream that:
 - a. Has been routinely maintained to facilitate drainage related to agriculture, and
 - b. Has facilitated drainage within the past five years, AND
2. Dry at time of work = no flowing or standing water present in the area to be maintained at the start of or during the maintenance activity, other than small quantities of water that may occur in low areas of the channel as a direct result of active maintenance activities, AND
3. Non-ESH (Essential Indigenous Anadromous Salmonid Habitat) = streams not designated as necessary to prevent the depletion of indigenous anadromous salmonid species during spawning and rearing. ESH includes any adjacent off-channel rearing or high-flow refugia habitat with a permanent or seasonal surface water connection to an ESH stream.

Work must be done during Regional Dry Maintenance Time Periods (RDMTPs) designated by ODFW. A variance process is available to request alternate work periods.

Removed material cannot be placed on an undisturbed wetland, either temporarily or permanently.

Compliance with ODA's Agricultural Water Quality Rules will decrease the need to maintain channels by minimizing field erosion and maintaining vegetation that stabilizes banks and filters sediment out of overland flows.

Opportunities and incentives are available to landowners to enhance ecological functions of maintained channels. Soil and Water Conservation Districts are the primary source for this assistance.

III. Description of Program Implementation Activities

ODA, DSL, and ODFW have worked with stakeholders for the past two years to implement ORS 196.906 to 196.919 as the Agricultural Drainage Channel Maintenance (ADCM) Program. In addition, with funding authorized by the legislature, ODA and ODFW each hired a full-time person for this program. However, program implementation was slowed by multiple rulemakings and ODA staff turnover that limited outreach activities.

ODA provided updates to the Legislative Commission on Indian Services (LCIS) Natural Resources Work Group and Cultural Resource Cluster Tribal representatives and sought guidance on the best way to communicate on rulemaking and program implementation. Three tribes accepted invitations to meet and discuss the rules, ODA's authority, and ways to address cultural resource concerns. As a result, ODA added information to the program website and forms that describes landowner's legal responsibilities around tribal cultural resources. ODA continues to provide updates to tribal representatives as it navigates through the implementation phase.

A. Legal Framework

A Rules Advisory Committee (RAC) made up of diverse stakeholders (conservation groups, farm organizations, and farmers) helped craft Oregon Administrative Rules (OAR 603-095-4000 to 603-095-4060), which became effective in September 2020. The committee met again to provide input on an additional rule specifically crafted to address concerns around wetland protections, which became effective in March 2021. HB 3185 was signed during the 2021 legislative session and aligns with the wetland protections already in rule.

The original OARs had envisioned a five-year phased approach to implementing the program statewide, starting in the Willamette Valley and ending in far eastern Oregon. HB 2032 was introduced and signed in 2021 to provide that authority. ODA is in the process of convening a RAC to describe the phased process.

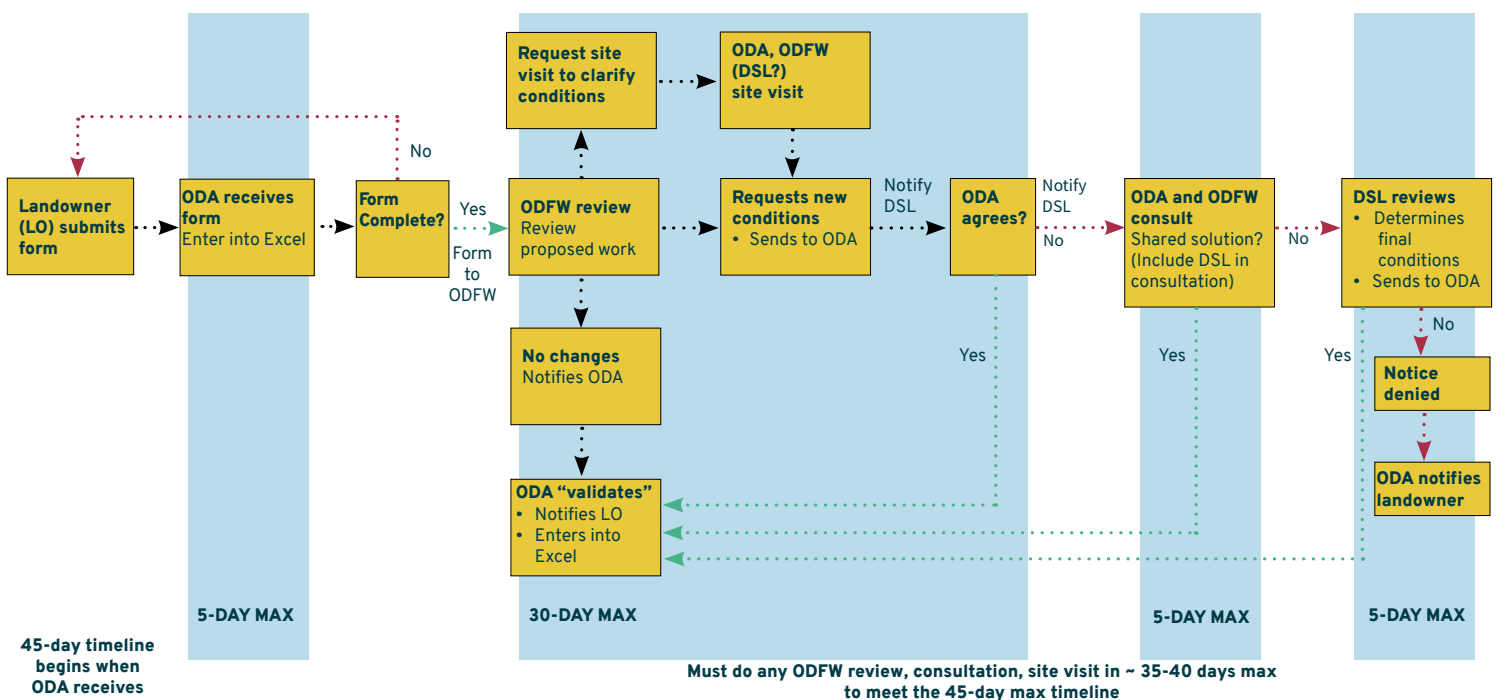
ODFW initiated rulemaking to designate RDMTs and published temporary rules in October 2020 and April 2021. They are in the process of developing permanent rules and have formed a work group to provide input prior to the public review process. The permanent rules should be effective in spring 2022.

DSL initiated rulemaking in September 2020 to make updates to ESH designations and to change its process for designating ESH steams. Formerly, rulemaking was required to make changes to ESH designations, and updates typically occurred every five years. Under changes to OAR 141-102, the ESH map is updated on February 1 of each year, as long as new or updated data are available from ODFW. Prior to the update, tribes and interested members of the public who have requested updates are notified and given the opportunity to provide comment.

B. Interagency Agreement

As required by ORS 196.919, the three partner agencies signed a Memorandum of Understanding to describe their complex and intertwined roles in the program. The activities are summarized in Figure 1.

Figure 1: Notice review process for maintaining traditionally maintained agricultural channels



C. Process

1. Application Forms

Four forms were developed for landowners/water districts to describe the proposed work and to request variances or expedited reviews. Both the notice application and supporting documents include a reminder that Oregon protects archaeological objects and sites of tribal cultural importance and refer the reader to additional information.

a. Notice

The notice is a proposal for work to be done. It also includes a section in which the applicant certifies that they will comply with all requirements.

b. Variance Request

At times a landowner/water district may need a variance from the default mandatory conditions in the notice. Once a complete variance request is filed, ODA will consult with ODFW to consider the request. The variance must be approved by ODA before that work begins.

c. Expedited Review

An emergency is a natural or human-caused circumstance that poses an immediate threat to public health, safety, or substantial property. When an emergency occurs and a landowner/water district requires a quick review of a notice, they may request an expedited review. This form accompanies their notice request.

d. ESH Review Request

If a landowner/water district does not agree with the ESH designation on DSL's current map, they may submit the ESH review request form to ODA. ODA coordinates with DSL and ODFW, who make the final determination, during the review.

Only two notices were received prior to November 1, 2021; both were in the Willamette Valley (tables 1 and 2). One was validated; the second will be resubmitted.

**Table 1. Characteristics of notices received August 9, 2019- October 31, 2021
(Total number = 2)**

Metric	Number	Notes
# type of applicant	1 landowner; 1 water district	
# validated	1	Reasons denied: none. The second notice was withdrawn due to issues with scheduling a field visit during harvest season within the 45-day deadline.
# miles of work (proposed)	7	
# cubic yards removed (proposed)	6,200	
# times agencies met 45-day deadline	1	
# times DSL review requested	0	
# times ODFW issued additional conditions	1	
# site visits with other agencies	1	

Additional conditions required by ODFW and ODA were related to protecting aquatic animals encountered during maintenance work, depth of permanent disposal of soils, and a deadline for seeding bare ground.

Two variances were received prior to October 1, 2021, both accompanying a notice. One was validated; the second will be resubmitted with a new notice. Both were requests to perform work when the channel was dry within one month of the end of the RDMTP.

ODFW recommended that any variances for RDMTPs be good for only one year. This has been incorporated into the Memorandum of Understanding.

No requests for expedited reviews or ESH reviews were received.

Table 2. Characteristics of variances received August 9, 2019 - October 31, 2021 (Total number = 2)

Metric	Number	Notes
# type of applicant	1 landowner; 1 water district	
# types of conditions	2 RDMTPs	
# approved	1	The second will be resubmitted with a new notice.
# times ODFW issued additional conditions	1	
# site visits with other agencies	1	Part of site visit for notice.

2. Outreach

ODA initiated outreach in 2019 aimed at Soil and Water Conservation Districts (SWCDs) and landowners in the first expected region for the phased approach (Willamette Valley) (Table 3). ODA reached out to all SWCDs in western Oregon and invited people to request presentations and trainings.

ODA set up a webpage specifically for this program (<https://oda.direct/AgChannelMaintenance>). The webpage includes all background information, application forms, and the ability to request emailed updates via GovDelivery.

GovDelivery was also used to provide periodic updates on the program, reaching almost 2,000 individuals.

Table 3. Outreach (August 9, 2019 - October 31, 2021)

# group presentations	13
# landowners at presentations	Not yet tracked

3. Compliance and Outcomes

The single notice issued resulted in a call from a concerned neighbor. The caller's concern was resolved upon learning that the observed activity was under a notice with ODA. The same site was audited, and outcomes are reflected in Tables 4 and 5.

Table 4. Compliance (August 9, 2019 - October 31, 2021)

Metric	Number
# complaints	0
# investigations	0
# triggers for investigations (complaint, agency, etc.)	0
# audits and results	1: outcomes complied with mandatory and additional conditions
# types of violations (mandatory conditions/prohibitions)	0
# achieving compliance w/o enforcement	N/A
# turned over to DSL for enforcement	N/A

Table 5. Outcomes (August 9, 2019 - October 31, 2021)

# channel miles maintained	0.9
# cubic yards removed (best estimate)	2,400

4. Oregon State University Study

The Legislature charged OSU with conducting a five-year study to assess "...the benefits and impacts of maintenance activities...on habitat complexity and other biological parameters, including the benefits and impacts of maintenance activities for fish and wildlife that inhabit the channels" (ORS 196 Sec. 10). Although the effects of channel drainage on aquatic organisms, channel erosion and water quality are likely to be temporary, one of the goals of this monitoring project is to determine how long their recovery period may be.

ODA, DSL, and ODFW provided input on study design and questions when consulted by Oregon State University (OSU). ODA has provided support by communicating with SWCDs and landowners on research activities and have sought landowner participation in the study.

IV. Benefits and Impairments

Because there are few data yet related to this program, benefits and negative impacts stated below are based on best professional judgement.

1. Program

The program has multiple potential benefits.

- A streamlined, regulatory, user-friendly program that will encourage landowners and water districts to participate.
- Improved communications between agricultural operators and natural resource agencies, which helps to achieve a balance among landowner goals, expectations for public resources (water quality, habitat protection, etc.), and opportunities and incentives for ecological uplift (improvements).

- Increased opportunity to adaptively manage agricultural landowner needs and public resources through:
 - » Improved ability to evaluate environmental outcomes.
 - ◊ Short term (five-year OSU study): Scientific study to quantify and evaluate outcomes.
 - ◊ Long term (Ongoing ODA field inspections and audits): Collect implementation data, make observations about outcomes.
 - » Support data and observation-influenced decision making about adaptive management.
- Increased understanding of agricultural practices and outcomes amongst a broad range of stakeholders
- Opportunity to define the community of agricultural producers who engage in agricultural channel maintenance activities and allow for exchange of information and ideas, shared education and growth, expanded understanding of miles of managed versus unmanaged channels.
- Ability to set site-specific conditions to protect ecological functions for individual notices and adapt to unique farm and ranch conditions.

2. Effect of activities on ecological functions

Channels are complex and interconnected systems and the effects of channel maintenance activities on ecological functions will vary depending on geographic location and scale of vegetation and soil disturbance in the landscape. In addition, channel maintenance benefits to one function (i.e. channel hydrology) may impact another ecological function (i.e. biodiversity of fish and wildlife or specific life history functions of fish species).

Potential benefits of activities regulated under this program

- Revegetation of bare banks, either through natural recruitment or by plantings.
- Opportunities to replace invasive plant species with native plant species.
- Unblocked tile drains¹ will improve agricultural drainage, creating less field erosion and therefore less sediment input to the channel.
- Limiting work to dry channels reduces the risk of downstream sediment transport where maintenance exposes bare soil on the stream bed and banks.

Potential impacts of agricultural channel maintenance

- Maintenance work continues to maintain simplified channel habitat conditions that may reduce the number of fish and wildlife species that can be supported.
- Disturbance of streamside vegetation can temporarily reduce function of supporting water quality (shade, filtration of runoff, bank stability).
- Removal of vegetated channel substrate reduces the number of fish species in that channel.

¹A type of drainage system that removes excess water from the soil below its surface, an important agricultural practice.

- Long-term loss of habitat complexity, hydrology, cover, and fauna.
- Continued disturbance of waters of the state and fish and wildlife habitat.
 - » Recently managed channels have increased risk of sediment delivery to downstream waters of the state and important fish and wildlife habitat.
 - » Disturbance and temporary removal of streamside vegetation due to equipment work adjacent to channels.
- Dredging channels can affect the function of wetlands and floodplains.
- Continued risk of contribution of contaminated drainage water to waters of the state (subsurface contributions of excess nutrients, fertilizer, pesticides, etc.) through tile-drains to maintained channels.
- Maintains agricultural use of former wetlands.
- Bare ground may be taken over by invasive vegetation.

3. Effect of activities on agricultural lands

ODA is exploring metrics to quantify the benefits of the work conducted under this program. In the meantime, ODA identified the following potential benefits and impacts that are a likely result of this program.

Potential Benefits

- Lower water surface elevation after work reduces flooding of adjacent agricultural lands.
- Reduces sediment in channels, which allows for increased drainage off lands that would otherwise be too wet to support agricultural practices and production.
 - » Reduced risk of soil compaction and erosion due to agricultural equipment on wet soils.
 - » Expanded growing season due to broader range of dry soil conditions.
- Expanded opportunities to implement additional conservation practices such as cover crops and improved manure management.
- Helps to support the function of tile drained fields which may be more adaptable to increasing fluctuations in climate.
- Supports functioning tile systems because the outlets are unplugged from sediment and functioning as designed.
- Reduced soil erosion from channels flooding.

Potential Impacts

- Agricultural channel maintenance alters landscape hydrology by increasing flows in receiving water bodies, which can contribute to downstream erosion and channel destabilization.

V. Incentives

This program provides a streamlined, simpler process for maintaining agricultural channels than applying for a permit from DSL. It also allows landowners to:

1. Store spoils temporarily along channels, including on adjacent hydric soils and previously managed wetlands.
2. Increase sediment removal limits to 3,000 cubic yards/linear mile of channel.

Increased engagement between and improved relationships with local, state, and other partners through this program may ensure greater access for landowners to incentive programs. This can include financial incentives for engaging in ecological uplift through programs administered by the Natural Resources Conservation Service, SWCDs, and other conservation partners.

VI. Biennial adaptive management review

ODA has worked closely with ODFW, DSL, landowners, and stakeholders to adaptively adjust the program as it has been built. As part of program rule making, a diverse RAC was convened and influenced the body of rules passed. In response to continued stakeholder concerns about wetlands protections, an additional rulemaking effort was initiated shortly after the larger body of rules was passed to tailor-craft rule language in response.

ODA shared rulemaking plans with Oregon's tribal nations through emails and LCIS cluster meetings. This resulted in specific contacts with and rule feedback from a subset of tribes.

Additional statutory authority was granted to ODA by the 2021 legislature to phase in the program across the state; a RAC is being convened to inform the subsequent rulemaking process. Similarly, tribes have again been informed of rulemaking plans through LCIS cluster meetings.

Draft versions of forms were circulated amongst SWCDs, landowners, and stakeholders to improve the final customer experience. Form modifications occurred again after being tested by the first official notice customer. In response to the concerned citizen call regarding the first notice, ODA crafted signage that can be posted at road crossings or other public locations to clearly indicate that ongoing work is being conducted under a valid notice.

Both applicants and agencies have had challenges scheduling site visits during the 45-day review period; stakeholders are discussing how to address this.

VII. Recommendations to the Legislature, if any

No recommendations are offered at this time. Future recommendations may be offered as the program matures, more notices are received, audits and inspections are conducted, and the OSU study progresses to help inform adaptive management.