

The background of the cover is a photograph of a rural landscape. In the foreground, a dark, semi-circular drainage pipe is partially buried in a dirt and gravel channel. The channel is flanked by dry grass and some green weeds. In the background, there are more green fields, tall grasses, and a line of trees under a cloudy sky. Overlaid on the top left and middle of the image are three large, overlapping leaf-like shapes in dark green, yellow, and blue. The title text is positioned in the upper right quadrant.

# Agricultural Drainage Channel Maintenance Program

2023 LEGISLATIVE REPORT

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# 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 undergoing rulemaking for phased compliance dates and continuing outreach. Oregon State University has continued a study of agricultural channel maintenance projects.

So far, 14 Notices have been submitted. 9 notices with 38 project sites have been submitted and approved under the program. The submitted Notices request to maintain nearly 10 linear miles of channel and remove roughly 11,000 cubic yards of material. Two Notices were submitted and denied as they were in an undisturbed wetland. Two were withdrawn. One was submitted but not needed for the work requested. 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 rules regarding phased implementation of the program that 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 previously altered 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, additional Review of Work site visits 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/ACDMPLegislativeReport2023>.

## I. PURPOSE OF REPORT

This joint report from ODA, DSL, and ODFW is the second 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 or water district submits a Notice with the location(s) and amount of sediment that will be removed along with other required information. Submittal of the Notice means that the landowner or

water district agrees to comply with requirements related to channel shape, vegetation, presence of water, timing of work, equipment usage and location, wetland and waterway impacts, and more. The required conditions protect water quality, wetlands, and fish and wildlife habitat. ODA has 45 days 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 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 within five years. The work must be done within a Regional Dry Maintenance Time Period (RDMTP) designated by ODFW. A variance process is available to request alternate work periods.

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. 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.

In addition, special consideration is taken for wetlands. Removed material cannot be placed on an undisturbed wetland, either temporarily or permanently. The location of channel maintenance work cannot occur in a wetland.

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.

### III. DESCRIPTION OF PROGRAM IMPLEMENTATION ACTIVITIES

ODA, DSL, and ODFW have worked with stakeholders for the past four years to implement ORS 196.906 to 196.919 as the Agricultural Drainage Channel Maintenance (ADCM) Program. With funding authorized by the legislature, ODA and ODFW each hired a full-time staff member for this program.

#### A. Legal Framework

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 has described the phased approach, and it is now established in OAR 603-095-4010.

ODFW initiated rulemaking to designate RDMTs and published temporary rules in October 2020 and April 2021. The permanent rules are now established in 635-418-0110.

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, landowners adjacent to a change (addition or deletion) in ESH and interested members of the public who have requested updates are notified and given the opportunity to provide comment.

### B. Process

Metric	Number	Notes
# type of applicant	12 landowners, 2 water districts	
# Notices validated	Project sites validated: 30 Project sites denied: 11	Reasons denied: proposed channel maintenance in a wetland. Proposed channel maintenance was not in an area which was historically maintained. One Notice was withdrawn due to issues with scheduling a field visit during harvest season within the 45-day deadline.
# miles of work	Proposed: 9.1 miles Removed: 1.47 miles	
# cubic yards removed	Proposed: 15,582 cubic yards Removed: 3,064 cubic yards	
# times agencies met 45-day deadline	9	
# times DSL review requested	0	
# site visits with other agencies	4	

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.

Four variances were received prior to December 2023, all accompanying a Notice. Three were validated; one was resubmitted with a different Notice. Two were requests to perform work when the channel was dry within one month of the end of the RDMT. One requested to be able to work from both sides of the channel.

ODFW recommended that any variances for RDMTs 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 2019-December 2023 (Total number = 14)**

Metric	Number	Notes
# type of applicant	3 landowners; 1 water district	
# types of conditions	3 RDMTPs; 1 Mandatory Condition	Reasons denied: proposed channel maintenance in a wetland. Proposed channel maintenance was not in an area which was historically maintained. One Notice was withdrawn due to issues with scheduling a field visit during harvest season within the 45-day deadline.
# approved	3	The water district resubmitted under an individual person

## 1. 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. In 2021, ODA continued outreach with SWCDs and began outreach with 12 commodity groups. ODA, ODFW, and DSL staff also worked in tandem with OSU study staff to provide information and outreach to landowners currently in the study. In 2022, ODA continued outreach with SWCDs and commodity groups. In addition, outreach was conducted with large grass seed farms, NRCS staff, county Farm Bureau chapters, and private agricultural drainage businesses. A field day outreach event was conducted with Tualatin SWCD to provide real-time examples and answers for interested landowners.

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 2019-December 2023)**

# group presentations	48
# landowners at presentations	116
# total people reached	596

## 2. Compliance and Outcomes

Since 2019, there has been one inquiry regarding Notice maintenance work. A concerned neighbor called, and the concern was resolved upon learning the observed activity was under a Notice with ODA. Two other complaints came into ODA’s Water Quality program regarding channel maintenance activities. Those two complaints were resolved after staff communicated with landowners and Notices were submitted. Another compliance violation was found when ODA and ODFW staff were on a location for a Notice application site visit.

The violations found were for work being done outside of the Regional Dry Maintenance Time Period and working without a Notice. The landowners were provided with information on obtaining a Notice on file prior to the maintenance work being completed. Due to the nature of the violations, there is no retroactive compliance.

**Table 4. Compliance (August 2019-December 2023)**

# complaints	0
# investigations (staff initiated)	4
# audits and results	1: In Compliance 3: Working to achieve compliance
# types of violations (mandatory conditions/prohibitions)	4: Without a Notice
# achieving compliance w/o enforcement	1
# turned over to DSL for enforcement	0

**Table 5. Outcomes (August 2019-December 2023)**

# channel miles maintained	1.47 miles
# cubic yards removed (best estimate)	3,064 cubic yards

### 3. 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.

OSU has provided the following summary of the study:

OSU is in year three of five of the study. The study started the monitoring project with 12 volunteer landowners. Each landowner granted access to at least one channel, and some provided up to three channels, for a total of 15 different channels (in two cases landowners shared the same channel). These channels have been subjected to different agricultural practices and, as a result, they are in different physical conditions. There is only one channel in the study that has been maintained under a Notice.

Based on the natural variability of conditions affecting studied channels in terms number of species and numbers of organisms found during winter, the minimum number of sampling sites (i.e., maintained and non-maintained) needed for adequate statistical power in support of the study findings was estimated at 60. To date, having access to only one maintained channel renders any results about the effects of channel maintenance inconclusive.

No statistical analysis could be performed on fish species richness or numbers of fish caught data having had access to only one channel that was maintained. Data on macroinvertebrates and water quality are still being analyzed. However, the preliminary results show that although channel maintenance may impact both fish species richness and fish numbers in these channels, having only one maintained site renders any interpretation of the data speculative rather than conclusive. The very limited landowner participation in this study has diminished the usefulness of a study intended to shed light on the

effects of the new channel maintenance rules authorized under HB 2437.

## 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).
- Improved water quality using Best Management Practices during channel maintenance work.
- Increased opportunity to adaptively manage agricultural landowner needs and public resources through:
  - » Improved ability to evaluate environmental outcomes via:
    - ◇ 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, growth, and 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 drains 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). This work may conflict with Total Maximum Daily Load goals set by the Department of Environmental Quality.
- Removal of vegetated channel substrate reduces the number of fish species in that channel.
- 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 has identified the following potential benefits and impacts that are a likely result of this program.

#### Potential Benefits

- Lower water surface elevation in the channel after maintenance 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, simple process for maintaining agricultural channels. It also allows landowners to:

1. Apply for maintenance with no cost
2. Maintain their channels with less frequency.
3. Store spoils temporarily along channels, including on adjacent hydric soils and previously managed wetlands.
4. 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 and tax incentives for engaging in ecological uplift through programs administered by the Natural Resources Conservation Service, SWCDs, and other conservation partners.

Opportunities and incentives are available to landowners to enhance ecological functions of maintained channels. Soil and Water Conservation Districts (SWCDs) are the primary source for this assistance. SWCDs are notified when a validated Notice is approved in their region. This allows for increased technical assistance, habitat and watershed resources, and integration with ODA's Agricultural Water Quality Management Plans.

## 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 was 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.