



Staff Report

TO: Water Resources Commission

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DATE: June 12, 2025

SUBJECT: Agenda Item F
Water Resources Commission

DIVISION 512 RULEMAKING UPDATE

I. Introduction

During this agenda item, staff will brief the Commission on the latest developments in the Division 512 Rulemaking. Discussions will focus on the Department's proposed rules to protect recharge in the uplands through classification, stabilize groundwater levels in the basin through a critical groundwater area (CGWA) designation, and achieve accountability in water use through designation of a serious water management problem area (SWMPA). Consideration of limiting the fiscal impact of the rules will also be discussed. The Department will be seeking adoption of the proposed rules in December 2025 and want to ensure that each commissioner has ample time to consider and discuss these rules and seek clarification if needed. Public comments received on this agenda item during this commission meeting will be included in the rulemaking record. *This is an informational report.*

II. Integrated Water Resources Strategy Recommended Action

- 1. A-C – Understanding water resources today
- 9. C – Partner with federal agencies, Tribes, and neighboring states in long-term water resources management
- 10. F – Provide an adequate presence in the field
- 11. E – Develop additional groundwater protections

III. Background

Through years of monitoring groundwater levels and concluding a cooperative USGS Groundwater Study, the Department determined that parts of the Harney Basin groundwater reservoir have declined excessively (greater than 50 feet of decline) or

are excessively declining (3 or more feet of decline per year for 10 or more years). Portions of the groundwater reservoir are also overdrawn which means that pumping exceeds recharge. In response to these serious groundwater conditions, the Department and those who live in or have an interest in the Harney Basin are working to stabilize groundwater levels, mitigate the impact of declining groundwater levels, and limit the potential economic impacts from the reduced pumping needed to stabilize groundwater levels. A critical step to these actions is updating the Division 512 rules, which are the basin program rules for the area. Other efforts include identifying and stopping illegal use, utilizing the Harney Domestic Well Fund, Place-Based Integrated Water Resources Planning, the Harney Valley Conservation Reserve Enhancement Program, voluntary agreements, and permit condition compliance.

Since April 2023, fifteen Rules Advisory Committee (RAC) meetings have been held to gather input on the proposed rules. In recent RAC meetings, the Department has proposed draft rule language outlining a strategy for stabilizing groundwater levels in the basin, supported by modeling results using the Harney Basin Groundwater Model. The Harney Basin Groundwater Model provides insight into impacts of the proposed rules on groundwater levels, domestic wells, natural discharge to streams and springs, and groundwater dependent ecosystems in the form of evapotranspiration.

To understand the possible economic impacts of the proposed rules, the Department contracted with ECONorthwest to evaluate the economic impacts of different groundwater management scenarios and reductions in pumpage across the basin. ECONorthwest presented the results to the RAC. OWRD prepared, presented and received feedback on a fiscal impact statement for the rules in part based on the ECONorthwest analysis.

IV. Discussion

The proposed Division 512 rules include a strategy for stabilizing groundwater levels within the Harney Basin. This strategy contains three main parts: (1) protect recharge in the uplands through classification, (2) reduce groundwater use through regulatory (i.e., critical groundwater area designation) or voluntary reductions in pumping, and (3) measure and report groundwater use to achieve water use accountability in the serious water management problem area (SWMPA.) Limiting economic impacts in the community has also been considered throughout the rule process. See Attachment 1 for the draft rules and Attachment 2 for maps and figures referenced in the rules.

Protect upland recharge - Classification

In 2016, the Commission classified the Greater Harney Valley Groundwater Area of Concern (GHVGAC, See Attachment 2, Exhibit 1) for exempt uses only, with one exception. A basin study was performed to better understand the basin's groundwater resource. The basin study identified that the mostly undeveloped uplands are the primary source of recharge to the basin's lowlands. The uplands are outside the current classification boundary. To protect recharge for the basin lowlands, the Department is proposing to expand the classification boundary and classify

groundwater for exempt uses and non-consumptive geothermal uses only (see Exhibit 4 in Attachment 2). This action will prevent the development of new groundwater rights across the Harney Basin within Harney and Grant counties, ensuring no additional recharge is captured by new groundwater development.

Reduce groundwater use – CGWA & Voluntary Measures

The primary areas of groundwater level decline in the Harney Basin are within the GHVGAC. This area is also where most of the groundwater pumping occurs within the basin. To stabilize groundwater levels, reductions in groundwater use must occur within the GHVGAC. The Department is working to achieve reductions through both voluntary and regulatory measures. The proposed rules provide a framework and target for reductions through regulatory curtailment along with a clear timeline for achieving reductions and the goal of stable groundwater levels. The rule framework can be used to inform voluntary agreements, acting both as an incentive for voluntary reductions and a backstop to ensure water use reductions are achieved on a timeline that limits further groundwater level declines, impacts to dry domestic wells, and impacts to natural discharge to streams, springs, and groundwater dependent ecosystems.

The regulatory process for curtailing groundwater use begins with the designation of a critical groundwater area and establishment of permissible total withdrawal (PTW) within rules adopted by the Commission. The Department then must follow the steps laid out in OAR 690-010, going through the contested case process, which provides due process to any water user being curtailed. Because the proposed rules reduce water use for nearly every water right from 3.0 to a duty of 2.5 acre-feet per acre, the Department anticipates almost every water right (approximately 670) being included in the contested case.

The proposed rules provide a framework for reviewing irrigation groundwater rights to reduce the duty to 2.5 acre-feet per acre and reduce the acreage authorized for irrigation based on historic beneficial use. Municipal rights will be allocated a total volume of water that is 110% of the largest single year's use in the previous six years, providing them with room to grow should they need it. The sum of the volumes from each groundwater right results in a total annual allocation volume. Reductions from this total allocation to begin reducing groundwater use down to the PTW will be scheduled in six-year steps for each subarea over a 24-year period.

An adaptive management plan is also laid out in the rules, proposing a modeled groundwater level trajectory for achieving success. The adaptive management plan also contains an evaluation of groundwater levels at six-year checkpoints with prescriptive adjustments based on the measured water level changes compared to the modeled trajectory (trajectories for water levels can be found on pages 14-19 of Attachment 2). If, at a six-year checkpoint, water levels are higher than expected, less of the scheduled curtailment would be implemented. Alternatively, if water levels are lower than expected, then more curtailment than is scheduled would be implemented at that checkpoint. This adaptive plan allows the regulatory reductions of use to adjust

to the actual, measured water level conditions, thereby providing a mechanism to prevent over or under-curtailment.

The Department also has been exploring the feasibility of voluntary agreements (ORS 537.745) as a means of reducing groundwater pumpage in the Harney Basin. Voluntary agreements must adhere to several statutory provisions (ORS 737.505 to 537.795, ORS 537.992) and must be approved by the Commission. The Department has been working with Harney Basin groundwater users and other interested parties to develop guidelines for the Commission to use when evaluating whether a proposed voluntary agreement is consistent with statute. This pilot effort also will help inform future voluntary agreements for groundwater in other basins across the state, either as guidance or through future rulemaking.

Some members of the RAC have stated that water users want to be able to set forth their own plan for stabilizing water levels and the proposed rules provide them with the basic information needed to do so in the form of a target, a timeline, and a quantity of pumping that should result in stable groundwater levels in their subarea. In a voluntary agreement, users who would otherwise be regulated off can partner with other water users to share water while reducing the overall use of the group in a manner that they control. Reductions could come in the form of fallowing lands, implementing irrigation conservation measures, growing less water intensive crops, water rotation, or other creative methods. While regulation must follow prior appropriation, voluntary agreements can share the burden of reductions across many users in a way that makes business sense for the group. The rules provide both an incentive for users to enter into voluntary agreements and the regulatory backstop to reduce pumping if voluntary agreements are unsuccessful or dissolve.

The Harney Valley conservation reserve enhancement program (HV CREP) provides another voluntary method for reducing groundwater use in the form of payments to landowners in exchange for voluntary cancellation of their water right (or of the portion enrolled in the program) and crop conversion. This program has federal and state funds to cancel water rights on up to 20,000 acres which corresponds to nearly 75% of the proposed reduction in use. Funding has been secured by OWRD and the Farm Service Agency (FSA). Payments are received from OWRD (~20%) and FSA (~80%), with a 15-year payment plan from FSA and a flexible payment plan from OWRD, which can be determined during the enrollment process. The limit to the number of enrolled landowners is dependent on OWRD's biennial budget. If demand is high, the department will seek increased funding in the next biennium to increase capacity.

Achieve accountable water use – SWMPA

For effective implementation of groundwater use reductions, water use measurement and reporting is needed. To do this, the Department is proposing designating a serious water management problem area within the Harney Basin in Harney and Grant counties (see Exhibit 3 in Attachment 2). This boundary is the same as the classification boundary and will monitor groundwater pumping in the areas of

recharge and the critical groundwater area where reductions are needed.

Comprehensive water use data within the basin will provide Department staff with data needed to better understand the relationship between groundwater pumping and water level changes. Water use measurement and reporting also serves as another tool for field staff to identify overuse or unauthorized use.

The proposed rules require a flowmeter to be installed on any well that is a point of appropriation on a valid water right by March 1, 2028. An exception is proposed for any well that is regulated off as part of the critical groundwater area reductions so that unnecessary cost is not incurred. The proposed rules also provide clear specifications for flow meters so that it is straightforward for water users to purchase and install the appropriate device.

Some members of the RAC advocated for alternate water use measurement options such as using satellite-based evapotranspiration data (OpenET), power meter readings, or tracking of the hours of irrigation operation. While these methods can be used for estimating water use, none are a direct measure of the water being pumped. Therefore, the Department has not proposed any alternatives to flow meters for measuring groundwater use.

Based on recent installations of flowmeters in the Harney Basin that were paid for with the Water Measurement Cost Share Program administered by the Department, the cost of purchasing and installing a totalizing flowmeter in the Harney Basin ranges between \$2,900 and \$3,400 per well. The Water Measurement Cost Share Program currently has approximately \$860,000 in funds available with \$50,000 requested for 2025-27. The program provides up to 75% of the cost of purchase and installation of a flow meter. Some water users within the Harney Basin have already begun to take advantage of this program. Funds are available on a first come, first served basis.

Limit economic impacts

The Department recognizes that curtailing groundwater use will result in economic impacts that will require adaptation and innovation. However, reducing groundwater use is necessary to achieve long-term sustainable water use in the basin. To limit the economic impact of regulatory curtailment on water users, the Department has listened to RAC and community feedback and modified the proposed rules. Some of these changes include:

- Setting the overall goal of stabilizing groundwater levels rather than requiring recovery, resulting in less curtailment.
- Setting the timeline for achieving the goal of stable water levels at 30 years, rather than as quickly as possible, resulting in less curtailment early in the process and time for adaptive management.
- Scheduling curtailment to phase in over 24 years in 6-year increments rather than implementing curtailment immediately, which provides an economic

adjustment period and time for adaptive management.

- Using a median success metric for groundwater level trends instead of a more stringent one, resulting in less curtailment.
- Establishing a process for adaptive management to respond to measured changes in the system, preventing over curtailment while achieving the goal.
- Allocating water based on historic use rather than paper water rights, distributing water to more of the people who have been using it.
- Only requiring flow meters on points of appropriation on valid water rights that have not been regulated off, preventing users from installing and maintaining flow meters on wells that won't be allowed to pump water and produce economic benefit.

Other economic impacts considered in the proposed rules relate to domestic well users, surface water right holders dependent on discharge to springs and streams, and ecosystems. Some of the changes to minimize these economic impacts include:

- Frontloading phased-in curtailment to achieve higher final stable groundwater levels which prevents more domestic dry wells and limits impacts to natural discharge to streams, springs, and groundwater dependent ecosystems.
- Requiring substantial recovery in the subarea with the most severe cone of depression (Weaver Springs) which reduces the impact on other parts of the basin with less severe declines.

The Department is also supporting the implementation of the Conservation Reserve Enhancement Program (CREP) to voluntarily cancel water rights in return for payments.

Next Steps

A mailing is being sent to all water right holders, all tax-lot owners not within a municipal or quasi-municipal water service area, and all well constructors licensed under ORS 537.747, informing them of the proposed rules and providing them with methods for getting more information. The Department will file the Notice of Proposed Rulemaking for the Division 512 rules with the Secretary of State by the end of May, with the public comment period extending from June 2, 2025, through August 7, 2025. A combination of informational sessions and public hearings will be held in each of the seven subareas in the basin and in Seneca. Tentatively, the planned dates are as follows:

1. Silvies (hybrid), June 23- informational session/public hearing
2. Northeast-Crane/Upper and Lower Blitzen Voltage (in person), June 24 – informational session/ public hearing

3. Silver Creek, Weaver Springs, and Dog Mountain (in person), June 25 – informational session/ public hearing
4. Seneca (in person), June 26 – informational session/ public hearing
5. Seneca (in person) August 4 – public hearing
6. Burns (hybrid), August 5 – public hearing

The Department is also working on communications materials to be posted online and shared with the public during in-person informational sessions hosted prior to each public hearing. From August through November, the Department will review and address public comments as needed before finalizing the rules. In September, the Department will update the Commission and, in December, seek Division 512 rule adoption.

V. Conclusion

The Department continues updating the Division 512 rules through a robust RAC process, substantial public outreach, and providing multiple opportunities for public comment on the proposed rules. The rules provide a strategy and framework for stabilizing groundwater levels in the basin that protects recharge through classification, achieves accountable water use through measurement and reporting with a SWMPA, and reduces groundwater pumping through regulatory (CGWA and curtailment) and voluntary measures. The Department has incorporated feedback to limit the economic impacts of the proposed rules and impacts of further groundwater level declines on water users, domestic well owners, and natural discharge to streams, springs, and groundwater dependent ecosystems. The strategies in the proposed rules will stabilize declining groundwater levels in the basin and achieve sustainable groundwater use for the future.

Attachments:

1. Proposed Division 512 Rule Language
2. Division 512 Exhibits 1-14

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**WATER RESOURCES DEPARTMENT
CHAPTER 690
DIVISION 512
MALHEUR LAKE BASIN PROGRAM**

690-512-0010 Definitions

Unless specified in these rules the definitions in OAR 690-300-0010 apply to the below rules:

- (1) "Adaptive Management Checkpoint" means the scheduled interval at which the Department evaluates changes in groundwater levels and determines if adjustments to scheduled reductions in groundwater use are required as described in OAR 690-512-0080.
- (2) "Exempt Groundwater Uses" are those defined in ORS 537.545.
- (3) "Groundwater Level Change Envelope" means the modeled trajectory for groundwater levels to achieve the target water level trend by 2058. A groundwater level change envelope is modeled for each subarea including the median, 10th, 25th, 75th, and 90th percentiles relative to the modeled groundwater levels in 2028. The envelope describes the range of values that will be used to inform the adaptive management process in OAR 690-512-0080. The trajectories are modeled using "Groundwater model of the Harney Basin, southeastern Oregon" by S.B. Gingerich, D.E. Boschmann, G.H. Grondin, and H.J. Schibel, 2024, U.S. Geological Survey Scientific Investigations Report 2024-5017.
- (4) "Initial Allotment" means the maximum annual volume of water that may be used by each groundwater right upon completion of the contested case.
- (5) "Permissible Total Withdrawal" is the annual volume of groundwater the Department has determined can achieve the target groundwater level trend by 2058 when following the schedule of reductions defined in OAR 690-512-0070. The Department may not reduce groundwater pumping through regulatory orders to a value less than the permissible total withdrawal. The unit of measurement for the permissible total withdrawal is acre-feet.
- (6) "Public Uses" are those uses defined in ORS 537.332.
- (7) "Subarea" means an administratively defined portion of the critical groundwater area to which corrective control provisions under ORS 537.735(3)(a)-(f) may be applied.
- (8) "Target Groundwater Level Trend" means the goal for the rate of change in groundwater levels within a subarea of the critical groundwater area.

- (9) "Totalizing flow meter" is an instrument used to measure and display both the instantaneous flow rate, and the total volume of groundwater produced from a well.

Statutory/Other Authority: ORS 537.545, ORS 537.735, OAR 690-300-0010,

Statutes/Others Implemented: ORS 536.300 ORS 536.027, ORS 537.332, ORS 537.780

Rule Summary: This rule replaces OAR 690-512-0010 (Classification), readopted as 690-512-0030; the rule defines terms used in OAR Chapter 690, Division 512, ORS 536.300, ORS 536.027, ORS 537.545, and ORS 537.735, including "Adaptive Management Checkpoint," "Exempt Groundwater Uses," "Groundwater Level Change Envelope," "Initial Allotment," "Permissible Total Withdrawal," "Public Uses," "Subarea," "Target Groundwater Level Trend," and "Totalizing Flow Meter."

690-512-0020 Administrative Boundaries

(1) The Greater Harney Valley Groundwater Area of Concern (GHVGAC) Boundary is defined for administrative purposes and is described and shown in Exhibit 1.

(2) The Malheur Lake Basin Boundary is delineated on the agency Map 12.6, dated January 1, 1966, and shown in Exhibit 2.

(3) The Serious Water Management Problem Area (SWMPA) Boundary is defined as the Harney Basin within the Malheur Lake Basin and within portions of Grant and Harney Counties as shown in Exhibit 3.

(4) The Groundwater Classification Boundary is defined as the Harney Basin within the Malheur Lake Basin and within portions of Grant and Harney Counties as shown in Exhibit 4.

(5) The Harney Basin is defined as the closed surface-water basin that drains into Malheur and Harney Lakes including the four National Watershed Boundary Dataset 8-digit hydrologic units Donner und Blitzen 17120003, Silver 17120004, Harney-Malheur Lakes 17120001, and Silvies 17120002 as shown in Exhibit 5.

(6) The Harney Basin Groundwater Reservoir Boundary is defined as the area coincident with the Harney Basin Boundary, as shown in Exhibit 5.

(7) The Harney Basin Critical Groundwater Area Boundary is defined as the area coincident with the Greater Harney Valley Groundwater Area of Concern Boundary as shown in Exhibit 1 and contains a portion of the Harney Basin Groundwater Reservoir. The boundary of the Harney Basin Groundwater Reservoir is shown in Exhibit 5.

Statutory/Other Authority: ORS 540.435, ORS 536.340, ORS 537.735

Statutes/Others Implemented: ORS 536.027, ORS 537.525, ORS 536.300, ORS 540.435, ORS 536.340, ORS 537.735, ORS 537.780

Rule summary: This rule replaces OAR 690-512-0020 (Groundwater use in the Greater Harney Valley Groundwater Area of Concern); the rule defines the administrative boundaries used in OAR, Chapter 690, Division 512, including those for the Greater Harney Valley Groundwater Area of Concern (GHVGAC), Malheur Lake Basin, Serious Water Management Problem Area (SWMPA), Groundwater Classification, Harney Basin, Harney Basin Groundwater Reservoir, and Harney Basin Critical Groundwater Area (CGWA); the rule includes boundary maps as Exhibits 1- 5.

690-512-0030

Classifications

- (1) Except as provided in section 2 of this rule, the groundwater and surface water of the Malheur Lake Basin are classified for direct appropriation of, or storage of surface water and use of, water for domestic, livestock, irrigation, municipal, quasi-municipal, industrial, mining, agricultural water use, commercial, power development, forest management, public uses, road watering, dust abatement, and wildlife refuge management.
- (2) Groundwater in the Groundwater Classification Boundary defined in OAR 690-512-0020(4) is classified for statutorily exempt groundwater uses as specified in ORS 537.545 and nonconsumptive geothermal uses.

Statutory/Other Authority: ORS 536.340, ORS 537.621(2), ORS 537.545,

Statutes/Others Implemented: ORS 536.027, ORS 536.300, ORS 537.621(2), ORS 536.340, ORS 537.780, ORS 537.545

Rule Summary: This new rule readopts the current rule OAR 690-512-0010; the rule retains the existing surface water classification for the Malheur Lake Basin and classifies groundwater use to exempt uses and nonconsumptive geothermal uses only within the boundary defined in 690-512-0020(4).

690-512-0041

Harney Basin Critical Groundwater Area

- (1) The target groundwater level trend within the Harney Basin Critical Groundwater Area is a median groundwater level decline rate of no more than 0 feet per year over a five-year period when calculated as described in OAR 690-512-0080(7).
- (2) The Department may access any well within the critical groundwater area that is authorized as a point of appropriation on a valid water right for the purpose of implementing these rules. The Department will provide notice to the groundwater right holder, well owner, or well operator prior to accessing the well.
- (3) A review of the Harney Basin Critical Groundwater Area rules shall be completed once every 3 years. The review shall be presented at a public meeting held within the basin at which

written and oral public comment shall be accepted. The review and a summary of public comments received shall then be presented at a Commission meeting which has been publicly noticed and provides opportunity for public comment.

- (4) A review of the conditions in the Harney Basin Critical Groundwater area shall be completed no less frequently than once every 10 years. The review shall be presented at a public meeting held within the basin at which written and oral public comment shall be accepted. The review and a summary of public comments received shall then be presented at a Commission meeting which has been publicly noticed and provides opportunity for public comment.
- (5) Except as defined in OAR 690-512-0030(2) Classifications, the Department will not accept new applications for groundwater permits within the Harney Basin Critical Groundwater Area.
- (6) The Harney Basin Critical Groundwater area defined in OAR 690-512-0020(7) shall be divided into seven subareas for the purpose of management as shown in Exhibit 6.
 - a. The Dog Mountain subarea is shown in Exhibit 7.
 - b. The Lower Blitzen-Voltage subarea is shown in Exhibit 8.
 - c. The Northeast-Crane subarea is shown in Exhibit 9.
 - d. The Silver Creek subarea is shown in Exhibit 10.
 - e. The Silvies subarea is shown in Exhibit 11.
 - f. The Upper Blitzen subarea is shown in Exhibit 12.
 - g. The Weaver Springs subarea is shown in Exhibit 13.

Statutory/Other Authority: ORS 537.735, OAR 690-010-0130(3)(a) – (c), OAR 690-217-0045
 Statutory/Others Implemented: ORS 536.027, ORS 537.525, ORS 537.780, ORS 536.300, ORS 537.735, OAR 690-010-0130(3)(a) – (c)

Rule Summary: The new rule specifies the target water level trend for the Harney Basin Critical Groundwater Area; the new rule requires static water level reporting starting in 2028, a Department review of the rules every three years, and a Departmental review of the conditions at least once every ten years; the new rule contains a provision closing the Harney Basin Critical Groundwater Area to any further nonexempt consumptive appropriation; the new rule defines the seven subareas within the Harney Basin Critical Groundwater Area; the new rule includes subarea maps as Exhibits 6-13.

690-512-0050 Permissible Total Withdrawal for Each Subarea Within the Harney Basin Critical Groundwater Area

- (1) The permissible total withdrawal for the Dog Mountain subarea shall be 4,200 acre-feet per year.
- (2) The permissible total withdrawal for the Lower Blitzen-Voltage subarea shall be 8,300 acre-feet per year.
- (3) The permissible total withdrawal for the Northeast-Crane subarea shall be 35,000 acre-feet per year.
- (4) The permissible total withdrawal for the Silver Creek subarea shall be 15,200 acre-feet per year.
- (5) The permissible total withdrawal for the Silvies subarea shall be 21,200 acre-feet per year.
- (6) The permissible total withdrawal for the Upper Blitzen subarea shall be 76 acre-feet per year.
- (7) The permissible total withdrawal for the Weaver Springs subarea shall be 4,800 acre-feet per year.

Statutory/Other Authority: ORS 537.735

Statutory/Others Implemented: ORS 536.027, ORS 537.780, ORS 537.525, ORS 536.300

Summary: This new rule specifies the permissible total withdrawal for the seven subareas in the Harney Basin Critical Groundwater Area. The permissible total withdrawal for each of the seven subareas is the annual volume of water that the Department has determined can achieve the target groundwater level trend by 2058 after implementing the scheduled reductions in OAR 690-512-0070. The Department may not reduce groundwater pumping through regulatory orders to a value less than the permissible total withdrawal.

690-512-0060 Determination of Initial Allotment for All Groundwater Rights

- (1) To establish a schedule for reductions in groundwater use, the Department will determine an initial allotment for each groundwater right within the critical groundwater area which will be implemented through an order after completion of the contested case process as required in OAR 690-010. The initial allotment shall not exceed the total rate or duty authorized on the water right.

(2) In determining the initial allotment for each groundwater right with an irrigation use, the Department will:

- a. Use a duty of 2.5 acre-feet per acre for primary and supplemental groundwater rights; and
- b. Consider the historic, beneficial use in the five-year period from 2020 to 2024 when identifying the number of acres that will be allotted water.

(3) The initial allotment for municipal and quasi-municipal rights shall be a quantity of water equal to 110% of the greatest single-year quantity reported to the Department in the five-year period from 2020 to 2024.

(4) In determining the initial allotment for each groundwater right with use types other than irrigation, municipal, and quasi-municipal, the department will consider:

- a. The limits of the groundwater rights;
- b. Historic beneficial use in the five-year period from 2020 to 2024;
- c. Whether or not a water user is physically capable of pumping and putting the allotted water to a beneficial use; and
- d. Any other factors deemed appropriate by the Department to determine historic beneficial use.

Statutory/Other Authority: ORS 537.742, ORS 537.735

Statutory/Others Implemented: ORS 536.027, ORS 537.780, ORS 537.525, ORS 536.300

Summary: This new rule describes how the Department will determine the initial allotment allowed for each irrigation, municipal, and quasi-municipal groundwater right and all other groundwater right uses within the Harney Basin Critical Groundwater Area; initial allotments will be determined for groundwater irrigation rights based on beneficial use, with a duty of 2.5 acre-feet for primary and supplemental rights; initial allotments for municipal and quasi-municipal groundwater rights will be set at 110% of the greatest single-year quantity reported to the Department between 2020 and 2024; all other groundwater use allotments will be determined by the Department as specified in this rule (OAR 690-512-0060(4)(a) – (d)).

690-512-0070 Scheduling Water Use Reductions to Meet the Permissible Total Withdrawal

- (1) Notwithstanding adjustments made by the adaptive management methodology defined in OAR 690-512-0080, upon consideration of all water rights and after determining the initial allotment for each:
- a. Water use within the Weaver Springs subarea will be scheduled to be reduced to the permissible total withdrawal with 75% of the total reduction being scheduled for 2028 and the remaining 25% of the reduction scheduled for 2034;
 - b. Water use within all remaining subareas of the Critical Groundwater Area will be scheduled for reduction to the permissible total withdrawal with 40% of the total reduction scheduled in 2028, 30% of the total reduction scheduled for 2034, 15% of the total reduction scheduled for 2040, 10% of the total reduction scheduled for 2046, and 5% of the total reduction scheduled for 2052;
 - c. The schedule for reductions will be based on the relative priority dates of the water rights within each subarea, with the most junior water rights being curtailed first;
 - d. Municipal and quasi-municipal water use will be evaluated at each adaptive management checkpoint, and the schedule of reductions may be adjusted so that the allotment for each municipal or quasi-municipal right is increased or decreased to 110% of the greatest single year quantity reported to the Department in the preceding 6 years. The allotment shall not exceed the total quantity of water authorized on the water right;
 - e. Uses exempt under ORS 537.545 are not subject to reduction;
 - f. Corrective control orders reducing use will not be enforced until the completion of the contested case process specified in OAR 690-010-0170 through 230;
 - g. If enforcement of corrective control orders reducing use does not occur as scheduled in 2028, then at such time as enforcement occurs, all reductions scheduled under OAR 690-512-0070(1)(a) and (b), including any adjustments that should have occurred at the adaptive management checkpoints defined in OAR 690-512-0080, will be included in the enforcement.

Statutory/Other Authority: ORS 537.742, ORS 537.735

Statutory/Others Implemented: ORS 536.027, ORS 537.780, ORS 537.525, ORS 536.300

Summary: This new rule describes the schedule for groundwater use reductions for the seven subareas defined within the Harney Basin Critical Groundwater Area and the process for enforcement of corrective control orders. The Weaver Springs Subarea will be scheduled for water use reductions starting in 2028 and the final reduction to permissible total withdrawal in 2034. For the other six subareas reductions may begin in 2028 and continue through 2052 with reductions happening every six years. All reductions will be done by relative priority date and

cannot be done until the contested case process is completed. Exempt uses will not be reduced. This rule also defines how municipal and quasi-municipal use will be adjusted.

690-512-0080 Adaptive Management of the Harney Basin Critical Groundwater Area

The purpose of this section is to define how the Department will adaptively manage the Harney Basin Critical Groundwater Area over a 30-year period starting in calendar year 2028 with adaptive management checkpoints in calendar years 2033, 2039, 2045, and 2051 which are the years immediately preceding the scheduled reductions in OAR 690-512-0070 of these rules.

- (1) Weaver Springs subarea is exempt from the adaptive management process as defined in section 2 through 5 of this rule.
- (2) For each subarea, if the contested case process is complete and corrective control orders reducing use can be implemented in 2028, the Department will:
 - a. Determine the 2027 median annual high groundwater level for each subarea and compare it with the median annual high groundwater level measured in 2022 using representative wells with sufficient data as determined by the Department;
 - b. Calculate the median groundwater level decline rate using the Sen's slope method using annual high measurements for representative wells with sufficient data as determined by the Department for years 2022 through 2027; and
 - c. If the median annual high groundwater level in 2027 is found to be greater than or equal to than the median annual high groundwater level measured in 2022 and the groundwater level decline rate calculated for 2022 through 2027 is found to be zero or above, then the regulatory reductions scheduled for 2028 will be reduced to zero.
- (3) Groundwater level changes will be evaluated using representative wells with sufficient data as determined by the Department.
 - a. For each representative well the groundwater level change will be evaluated based on a reference groundwater level determined by the Department. The reference groundwater level for a well shall be the annual high static water level measurement in calendar year 2028, if one exists. Otherwise, the Department may establish the reference groundwater level based on an analysis of water level data from that well or other water level data in nearby wells.
 - b. For each representative well, the groundwater level change will be calculated as the difference between the annual high static water level measured at the

adaptive management checkpoint being evaluated and the reference groundwater level.

- (4) The median groundwater level change for each subarea will be evaluated at each adaptive management checkpoint using representative wells with sufficient data as determined by the Department.
- (5) At each adaptive management checkpoint, the Department will compare the median groundwater level change for each subarea defined in OAR 690-512-0041 with the groundwater level change envelope defined Exhibit 14. If the median groundwater level change for a subarea is:
 - a. At or below the 10th percentile, the scheduled quantity of reduction will be doubled.
 - b. Between the 10th and 25th percentiles, the scheduled quantity of reduction will be increased by one and a half times.
 - c. From the 25th and through 75th percentiles, no adjustment will be made.
 - d. Between the 75th and 90th percentiles, the scheduled quantity of reduction will be halved unless 10% or more of the measured wells fall below the 10th percentile.
 - e. At or above the 90th percentile, the scheduled quantity of reduction will be reduced to zero unless 10% or more of the measured wells fall below the 10th percentile.
- (6) At the end of each adaptive management checkpoint evaluation and after the Department has completed sections 3 through 5 of this rule, the Department will hold at least one public meeting at a location within the critical groundwater area boundary at which the Department will present:
 - a. The findings of the evaluation of groundwater level changes.
 - b. The comparison to the groundwater level change envelope.
 - c. Any adjustments to the scheduled reductions.
- (7) No sooner than 2058, the Department will evaluate the groundwater level decline rate for each subarea to identify if the target groundwater level trend has been achieved. The groundwater level decline rate will be calculated using the Sen's slope method using annual high measurements for representative wells with sufficient data as determined

by the Department from the 6 years leading up to the evaluation. After the evaluation in this section, if:

- a. The target water level trend has not been achieved and all scheduled reductions have not been implemented, the Department will evaluate groundwater conditions and implement additional reductions as needed to achieve the target water level trend;
- b. The target water level trend has not been achieved and all scheduled reduction have been implemented, the Department will initiate a rulemaking process to adjust the permissible total withdrawal as needed to achieve the target water level trend; or
- c. The target water level trend has been achieved and all scheduled reductions have not been implemented, the Department will initiate a rulemaking process to adjust the permissible total withdrawal to match the implemented reductions.

Statutory/Other Authority: ORS 537.742, ORS 537.735

Statutes/Others Implemented: ORS 536.027, ORS 537.780, ORS 537.525, ORS 536.300

Rule Summary:

This new rule describes how the Department will adjust scheduled reductions in groundwater use based on the median measured groundwater level data as compared to modeled trajectories, shown in exhibit 14, for each subarea. The Weaver Springs subarea is excluded from this process. For the other six subareas, adaptive management will occur every 6 years for the 30-year management period. In 2058 the Department will evaluate the groundwater level decline rate to identify if the target groundwater level trend has been achieved. This rule also contains a provision for evaluating groundwater levels and the Sens's slope rate of decline in 2028, if certain conditions are met then the 2028 reductions will be reduced to zero.

690-512-0110 Serious Water Management Problem Area (SWMPA)

- (1) Groundwater conditions within the SWMPA boundary defined in OAR 690-512-0020(3) meet the criteria defined in OAR 690-085-0020(1)(a) and OAR 690-085-0020(1)(f).
- (2) By no later than March 1, 2028, each groundwater right holder, well owner, or well operator shall properly install and thereafter properly maintain a totalizing flow meter on each well listed as a point of appropriation on a valid groundwater right within the Harney SWMPA boundary as defined in OAR 690-512-0020(3). The Department may extend the deadline as needed. If the deadline is extended, the Department will notify each groundwater right holder, well owner, or well operator at least 60 days before March 1, 2028. Groundwater wells that are regulated off and disconnected from all water use infrastructure do not require a totalizing flow meter to be installed unless or until use is permitted to resume.

- (3) Totalizing flow meters shall be properly installed according to manufacturer specifications and must meet the specifications in section 6 of this rule.
- (4) Totalizing flow meters and the method of flow meter installation may be subject to approval by Department staff. Once installed, totalizing flow meters must be maintained in good working order. Department staff shall have reasonable access to the totalizing flow meters upon request pursuant to ORS 537.780(1)(e).
- (5) The groundwater right holder, well owner, or well operator shall keep a complete record of the volume of water appropriated each month. The groundwater right holder, well owner, or well operator shall submit annually a report that includes water use measurements to the Department by December 31 of each calendar year for water used between November 1st of the preceding year and October 31st of the current year. Reports shall be submitted using a form developed and maintained by the Department.
 - a. Groundwater wells regulated off are not required to report until use is permitted to resume.
 - b. Any governmental entity required to submit water use reports under OAR 690-085 is exempt from the reporting requirements of this rule.
- (6) A totalizing flow meter shall meet the following specifications:
 - a. A totalizing flow meter shall have a rated accuracy of plus or minus 2 percent of actual flow for all flow rates for which the meter is expected to measure;
 - b. A totalizing flow meter shall measure the entire discharge from the well;
 - c. A totalizing flow meter shall have a visual and recording, mechanical or digital totalizer located on or adjacent to the flow meter and shall be equipped with a sweep hand or digital readout so that instantaneous flow rate can be read;
 - d. The totalizing part of the flow meter shall have sufficient capacity to record at minimum the quantity of water authorized to be pumped over a period of 2 years. Units of water measurement shall be in acre-feet, cubic-feet, or gallons, and the totalizer shall read directly in one of these units. Flow meters recording in acre-feet shall, at a minimum, read to the nearest 1/10th acre-foot, and the decimal multiplier shall be clearly indicated on the face of the register head;
 - e. Totalizers on each meter shall not be field reset without notice to and written permission from the local watermaster. Prior to resetting the totalizers, the final reading must be recorded and reported;

- f. The totalizing flow meter shall be installed in accordance with all manufacturer specifications. There shall be no turnouts or diversions between the well and the flow meter; and
 - g. The totalizing flow meter shall be installed no more than 100 feet from the well head unless an exception is approved by the watermaster in writing.
- (7) A water user shall report broken flow meters to the local watermaster's office within 48 hours after determining that the flow meter is broken. A water user shall not appropriate water for more than 60 days without an operating flow meter.
- (8) While the flow meter is broken, the water user shall use other methods of reporting as defined under OAR 690-085-0015(5) until the flow meter is replaced or repaired. The water user shall keep the monthly data and mail the data to the local watermaster upon request. The data shall include a statement of the initial reading on the newly installed flow meter, the current power meter reading and the time of operation. The water user shall notify the local watermaster within 48 hours of installing the repaired or replacement flow meter.
- (9) Failure to have and maintain a properly installed, functioning totalizing flow meter by the deadline will result in the local watermaster regulating and controlling the unmetered well such that no groundwater may be pumped or appropriated until a flow meter is installed consistent with these rules.
- (10) Consistent with ORS 536.900, ORS 183.745, and OAR 690-260, the Department may assess civil penalties for violation of these rules.

Statutory/Other Authority: ORS 183.745, ORS 540.435, ORS 536.900, ORS 536.905, ORS 536.910, ORS 536.915, ORS 536.920, ORS 536.930, ORS 536.935, OAR 690-260, 690-085-0020(1)(a), OAR 690-085-0020(1)(f), OAR 690-085-0015(5)

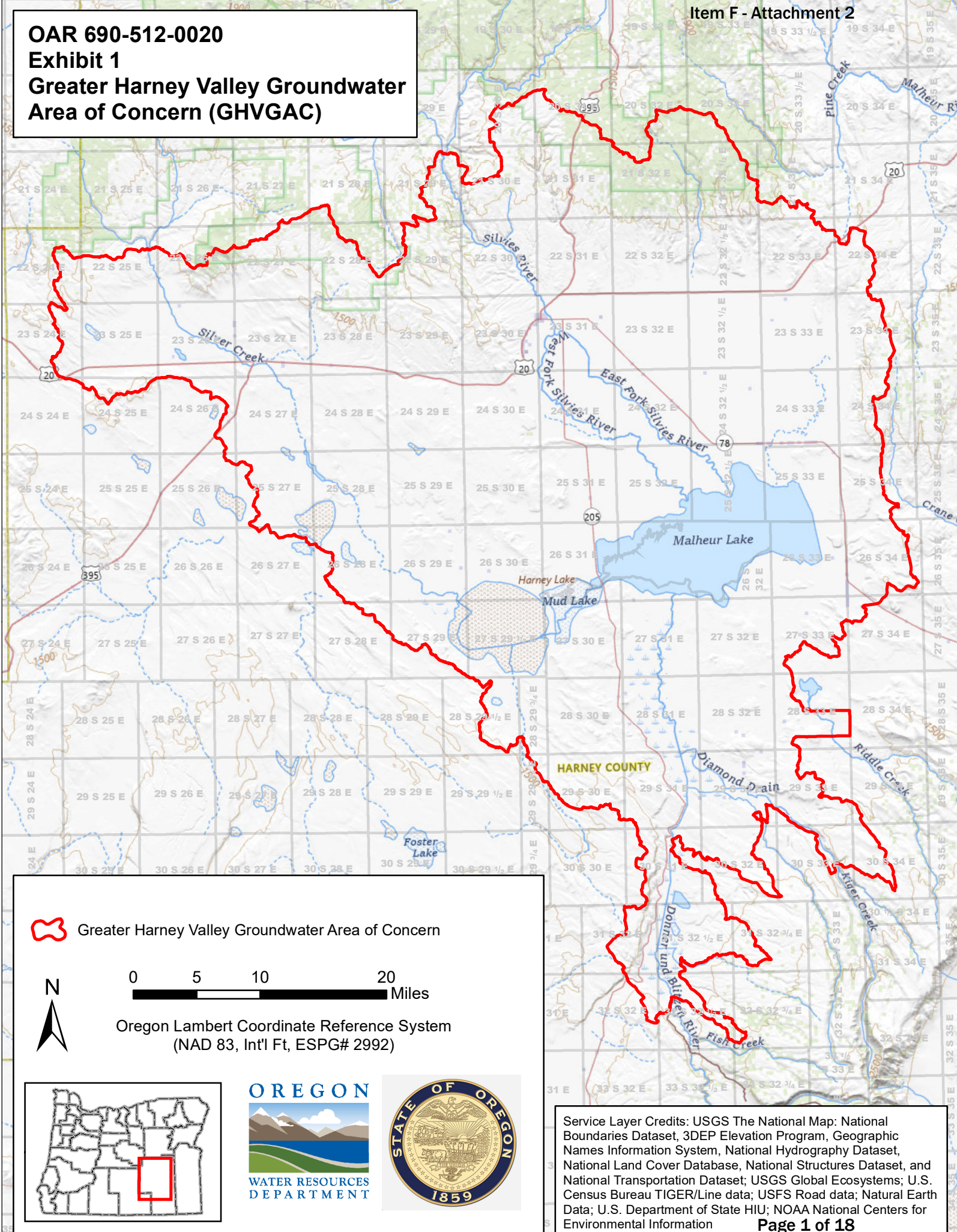
Statutes/Others Implemented: ORS 536.027, ORS 536.900, ORS 536.905, ORS 536.910, ORS 536.915, ORS 536.920, ORS 536.930, ORS 536.935, ORS 537.780, OAR 690-085-0020(1)(f), OAR 690-085-0015(5)

Rule Summary: This new rule establishes water use measurement and reporting requirements within the Serious Water Management Problem Area boundary defined in OAR 690-512-0020(3). Each groundwater right holder, well owner, or well operator shall install a totalizing flowmeter by March 1, 2028, according to the specifications in this rule. Water use between November 1st of the preceding year and October 31st of the current year is required to be reported to the Department by December 31st each year. Failure to install a flowmeter or report use will result in the local watermaster shutting off the well and potential assessment of civil penalties.

OAR 690-512-0020

Exhibit 1

Greater Harney Valley Groundwater Area of Concern (GHVGAC)

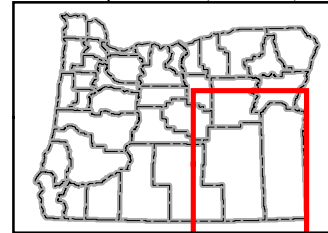


OAR 690-512-0020
Exhibit 2
Malheur Lake Basin

Item F - Attachment 2
Malheur Lake Basin

0 10 20 40 Miles

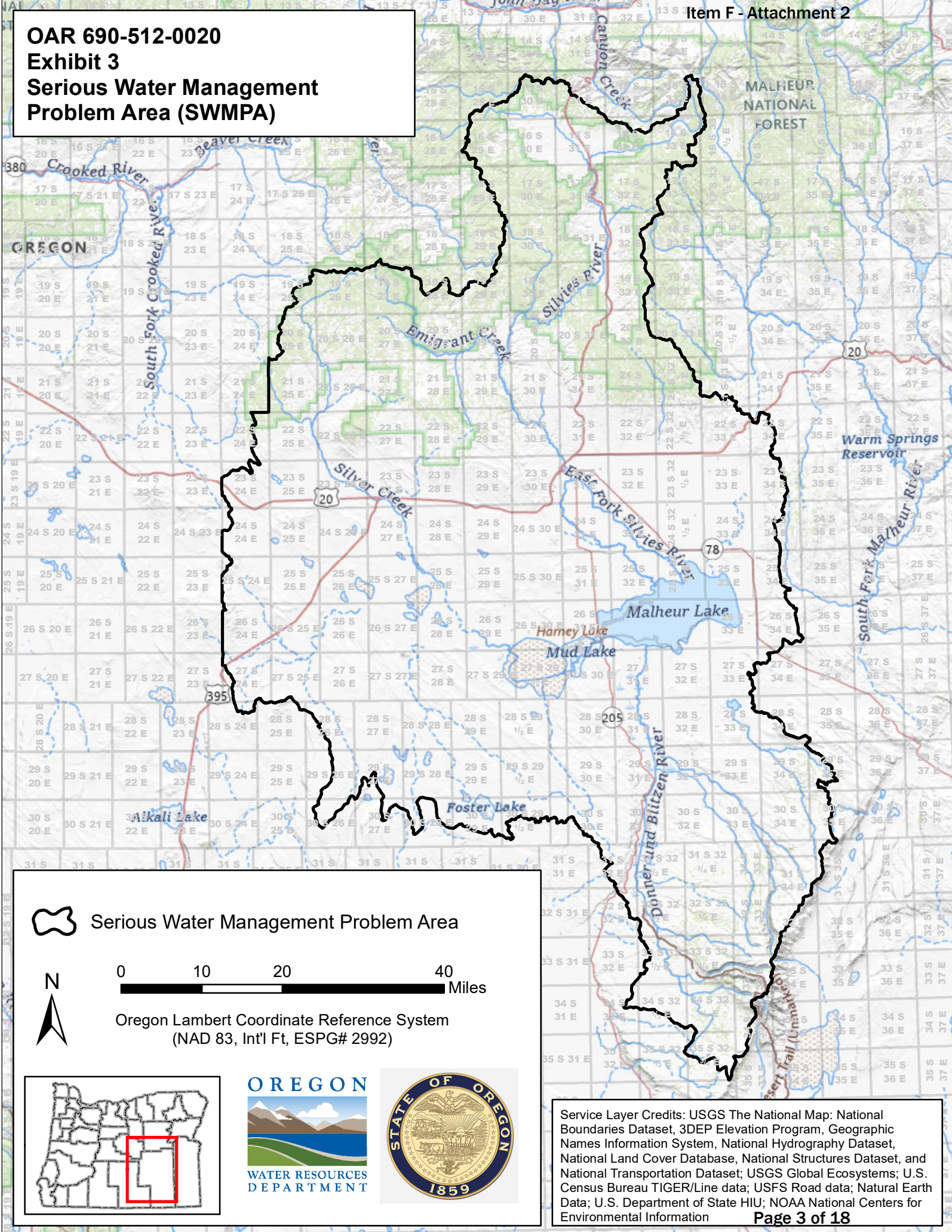
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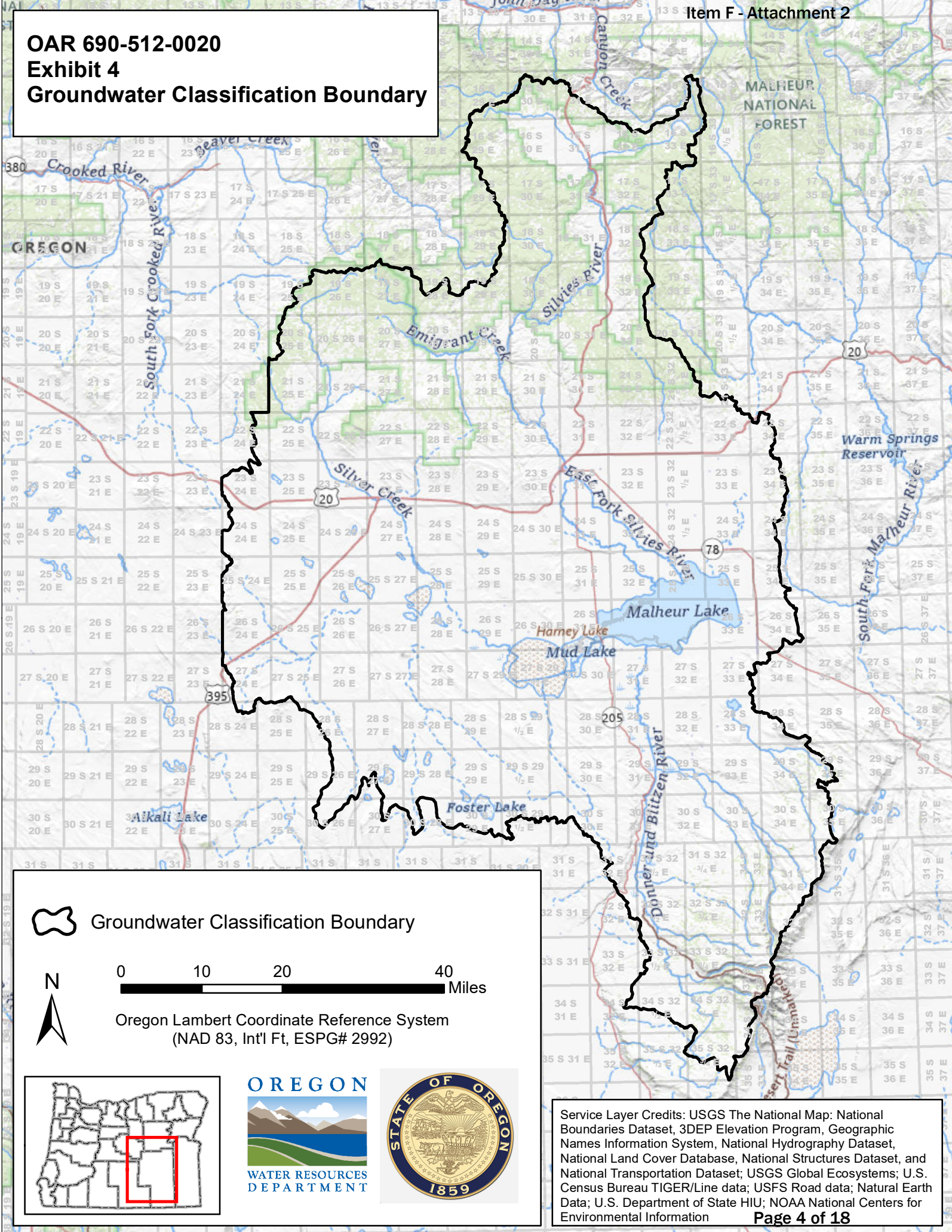
Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information

OAR 690-512-0020

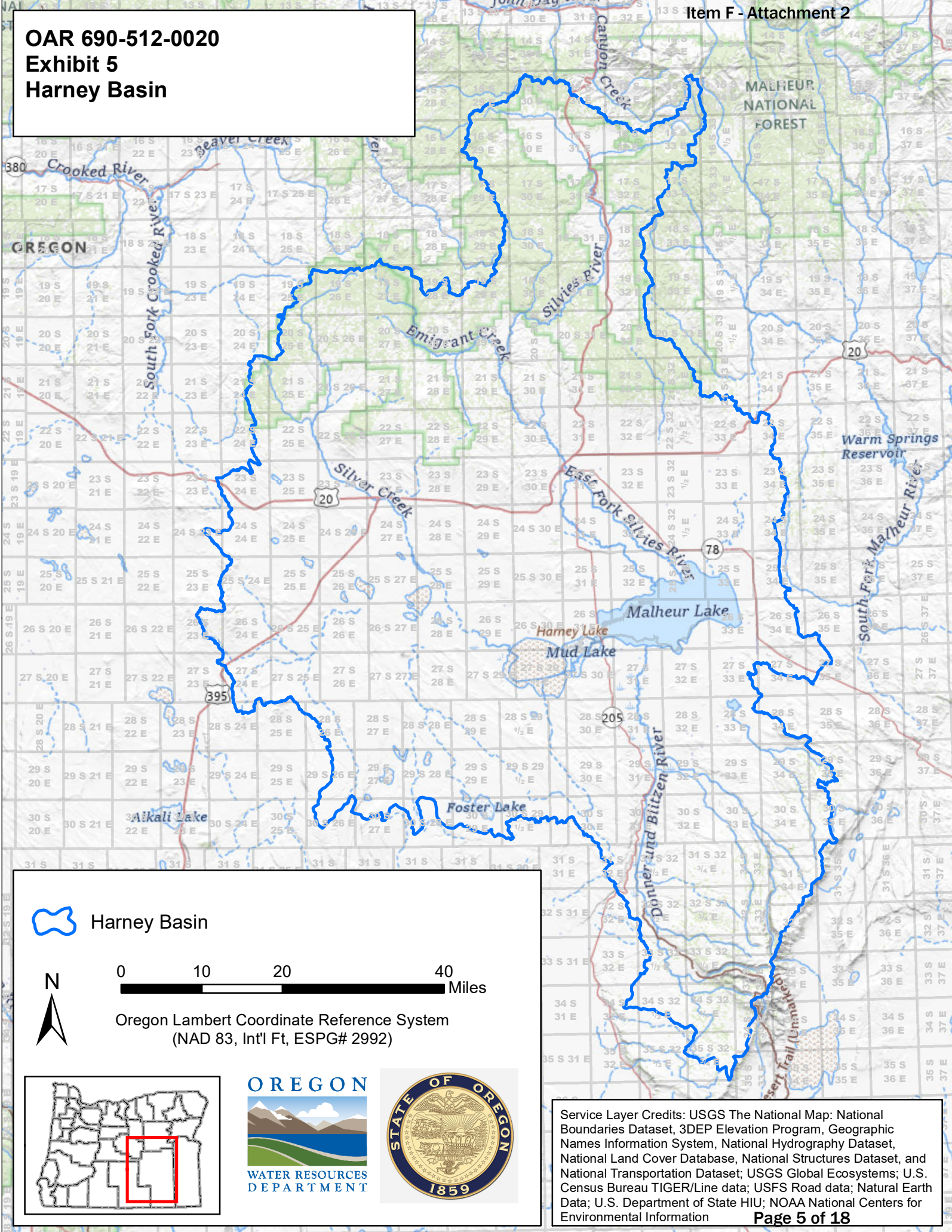
Exhibit 3

Serious Water Management
Problem Area (SWMPA)

OAR 690-512-0020 Exhibit 4 Groundwater Classification Boundary

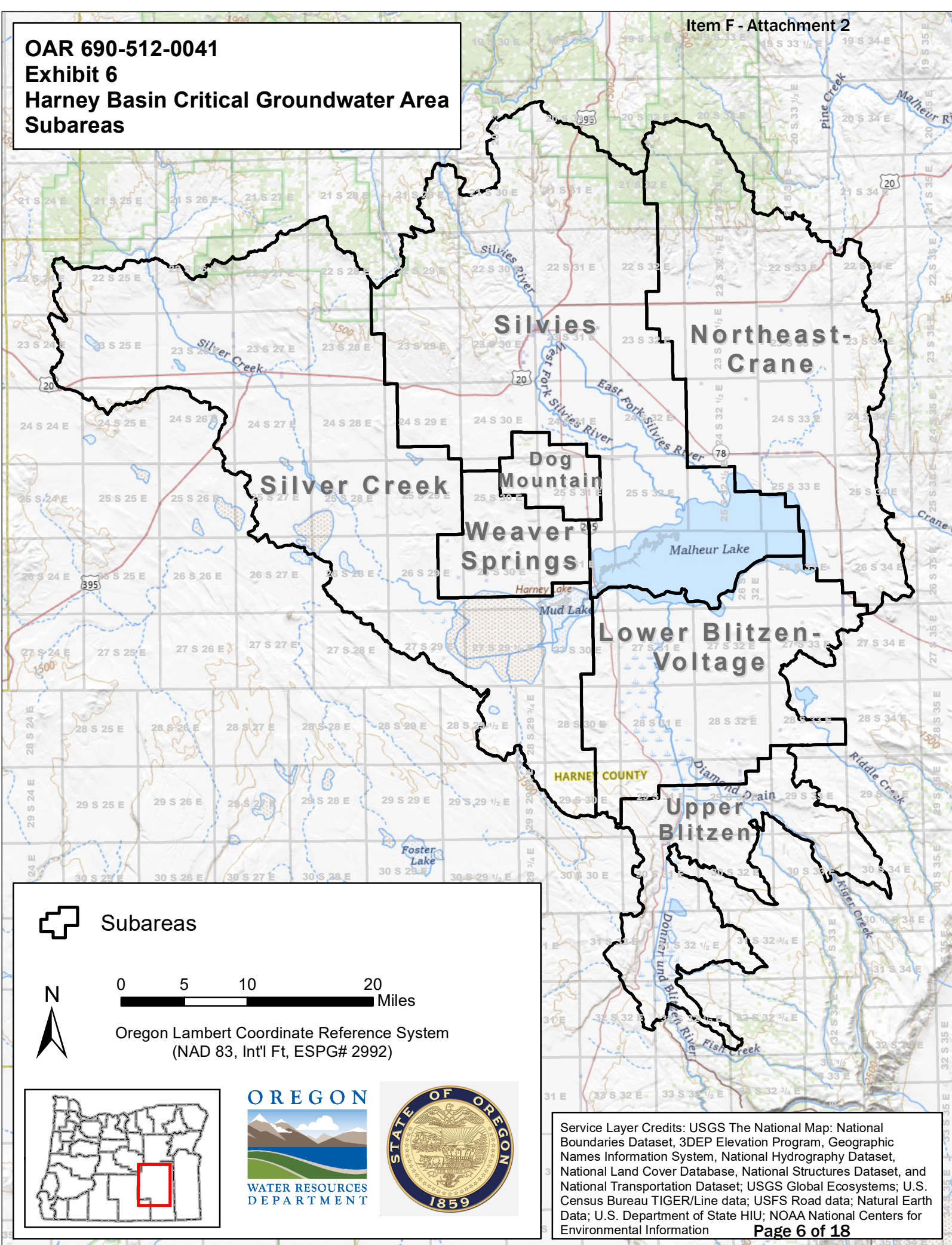


OAR 690-512-0020 **Exhibit 5** **Harney Basin**

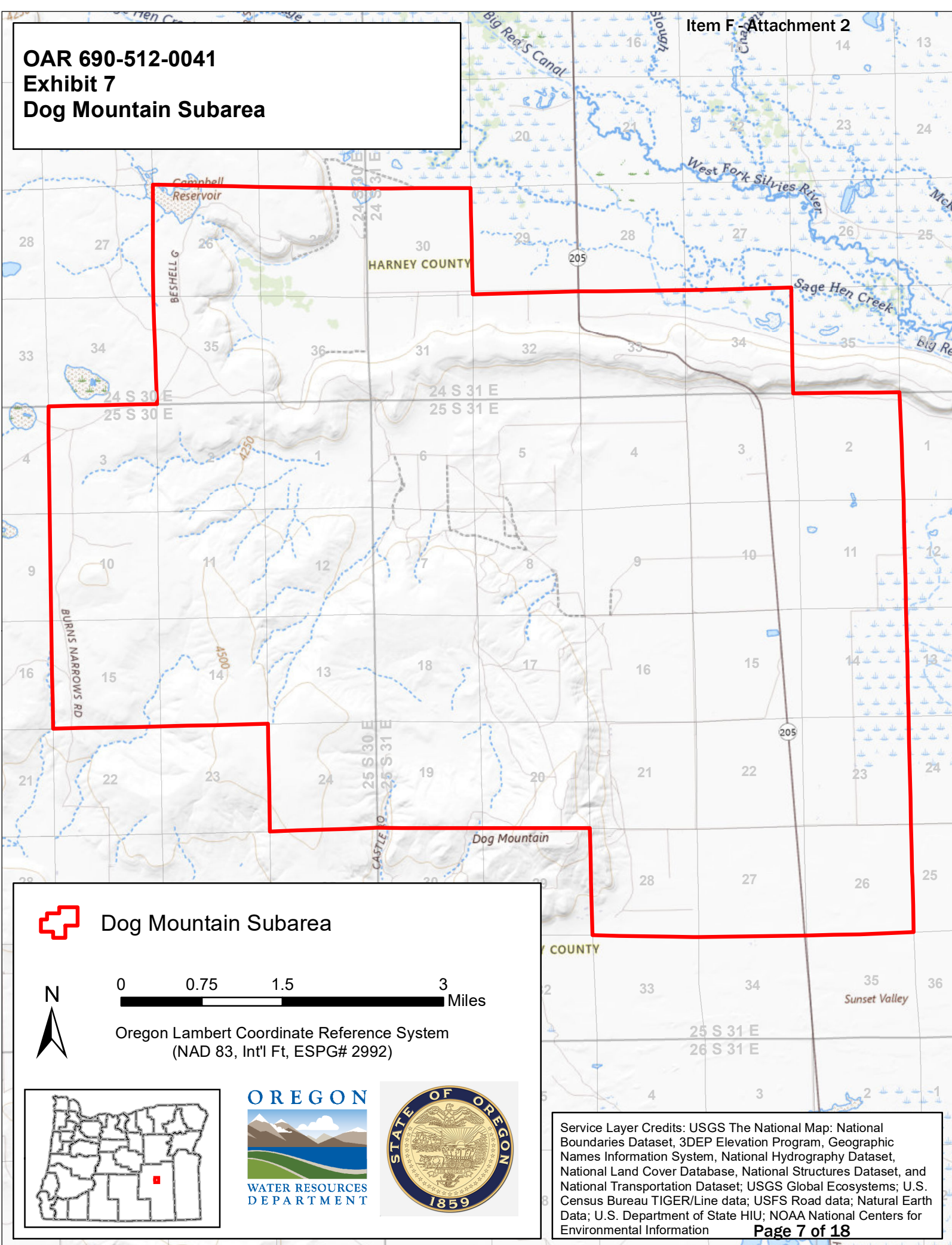


OAR 690-512-0041

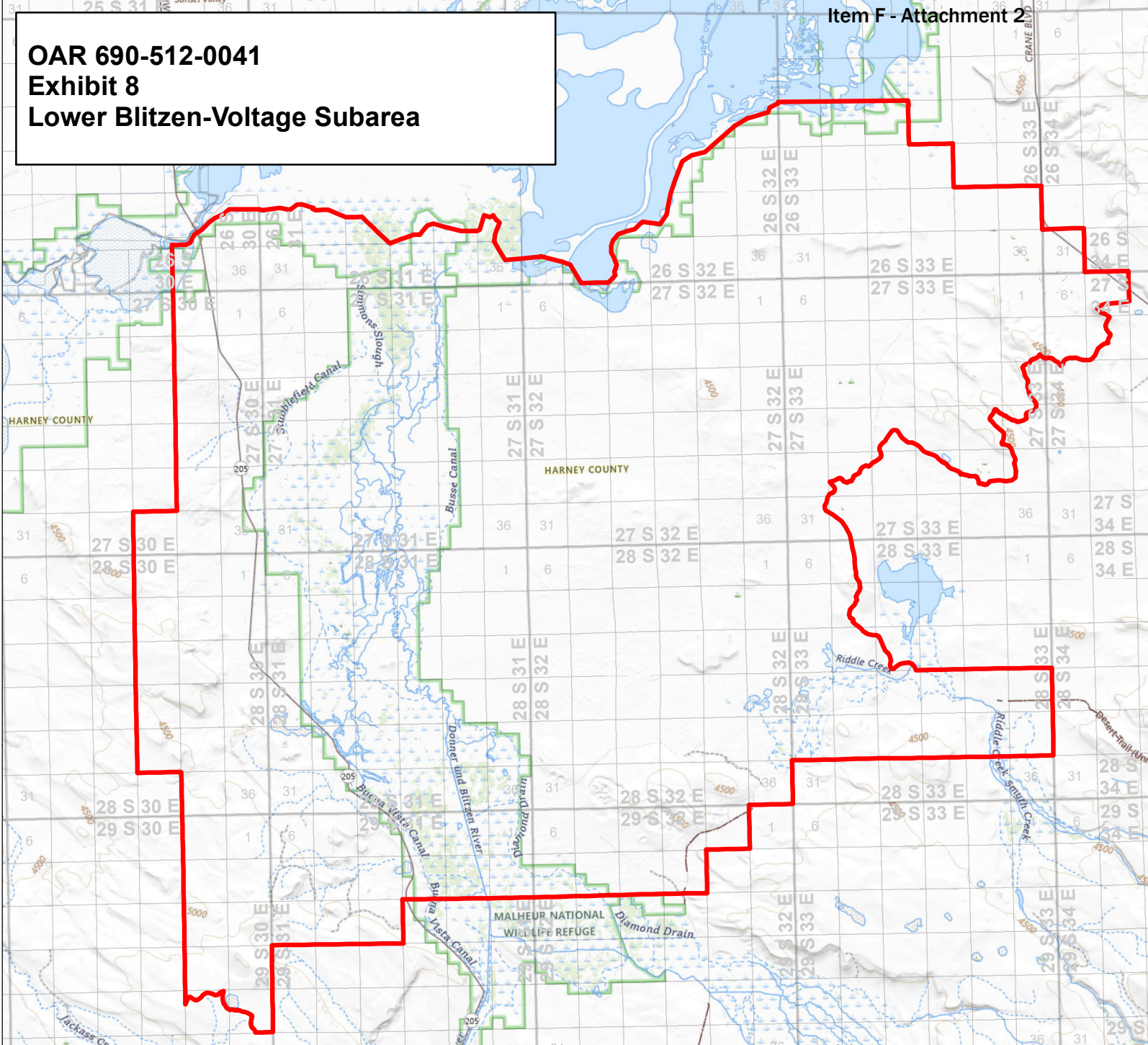
Exhibit 6

Harney Basin Critical Groundwater Area
Subareas

OAR 690-512-0041
Exhibit 7
Dog Mountain Subarea



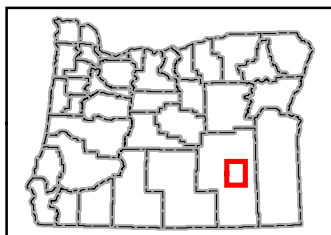
OAR 690-512-0041
Exhibit 8
Lower Blitzen-Voltage Subarea



Lower Blitzen-Voltage Subarea



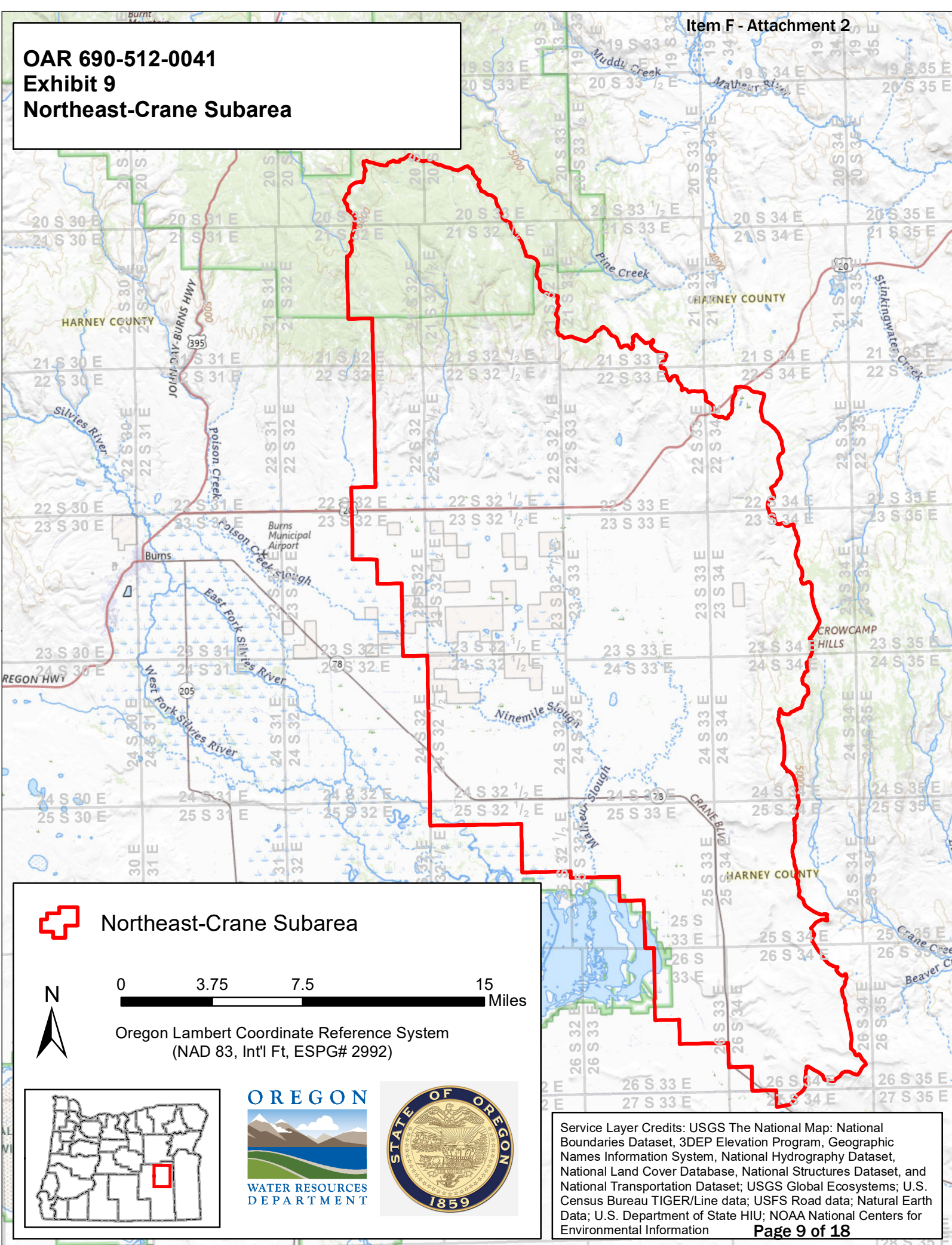
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Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information

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OAR 690-512-0041
Exhibit 9
Northeast-Crane Subarea

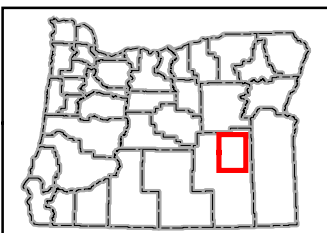


Northeast-Crane Subarea



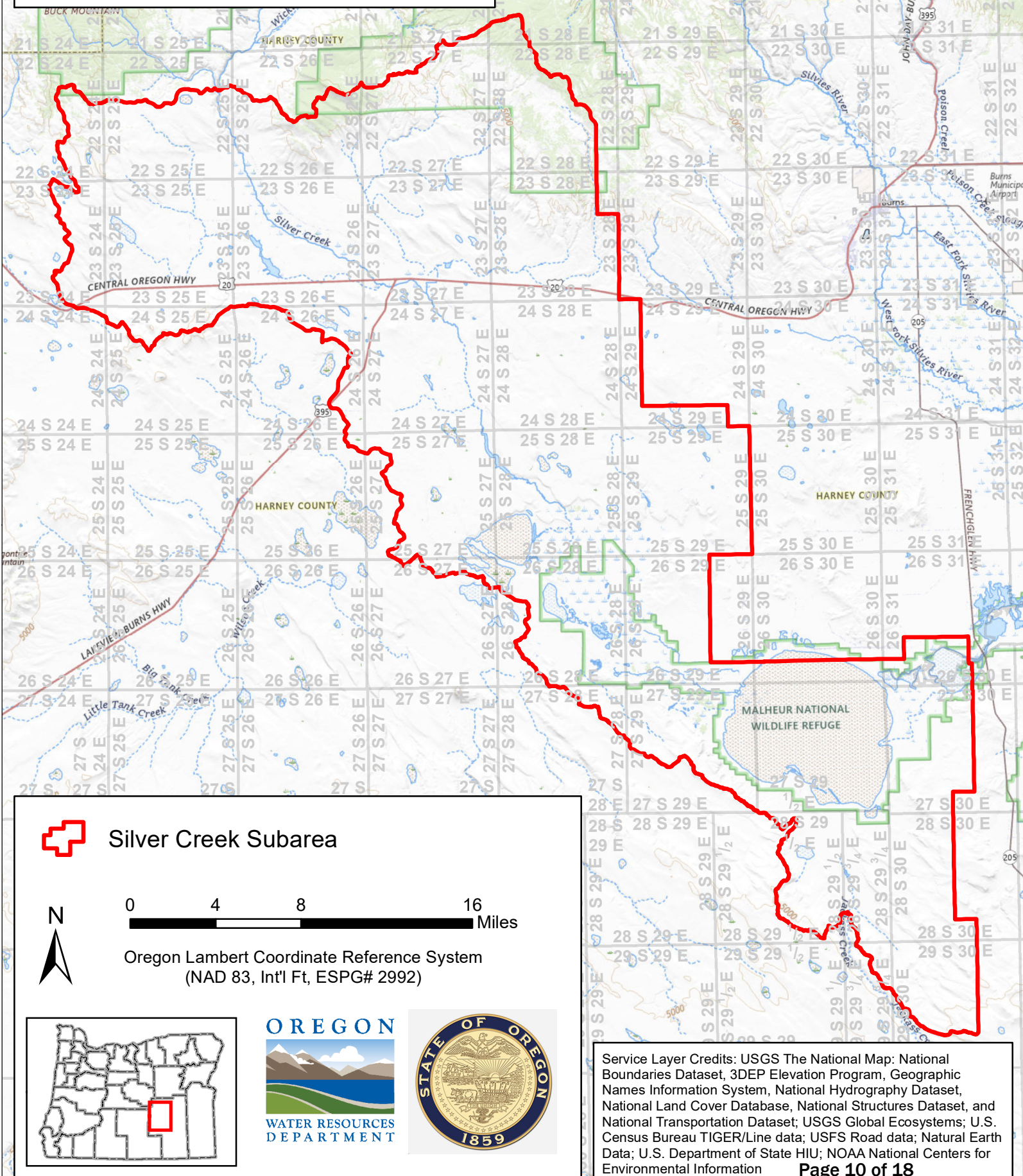
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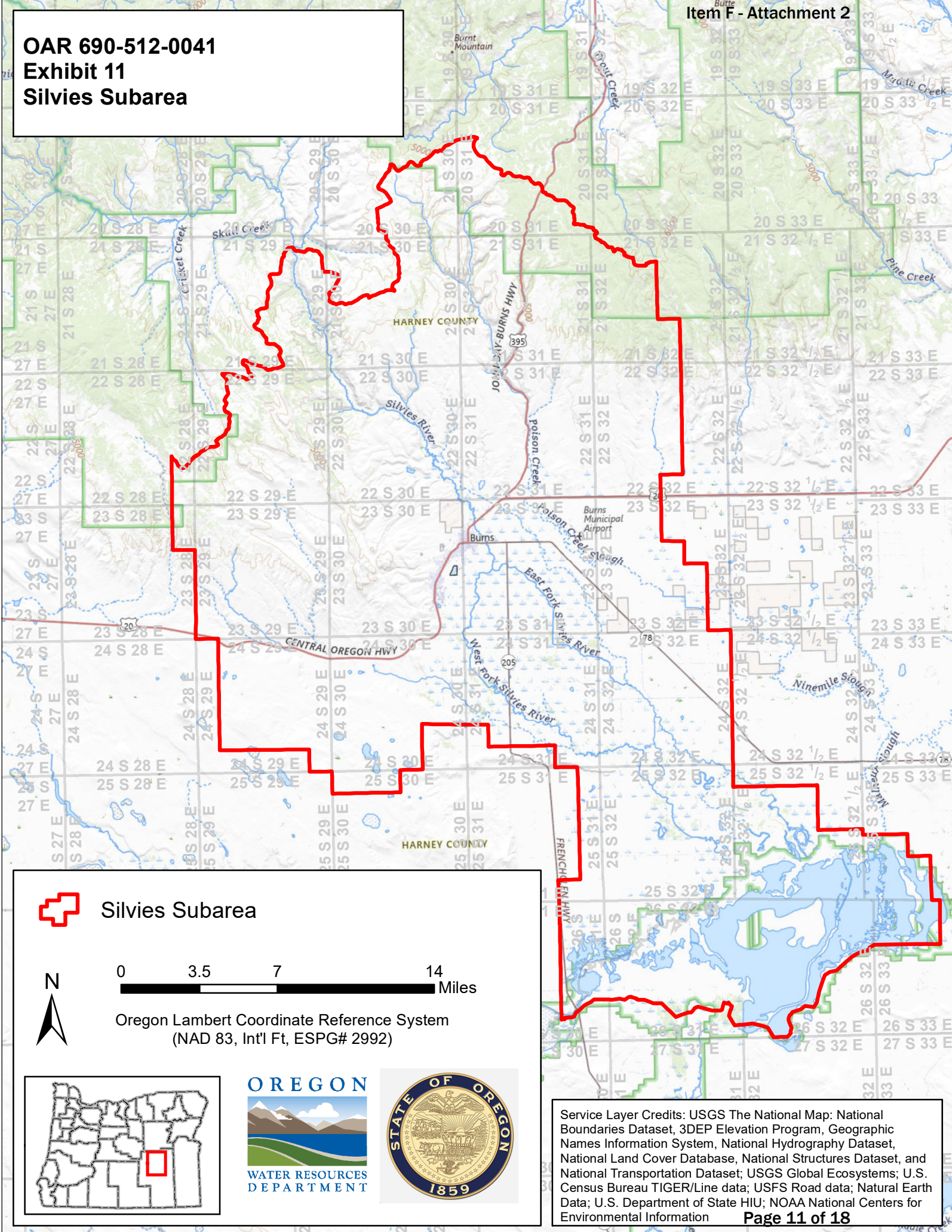


Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information

OAR 690-512-0041
Exhibit 10
Silver Creek Subarea



**OAR 690-512-0041
Exhibit 11
Silvies Subarea**

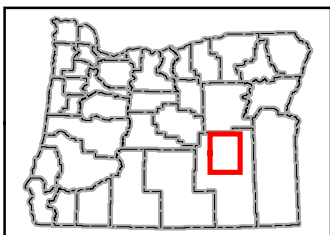


Silvies Subarea



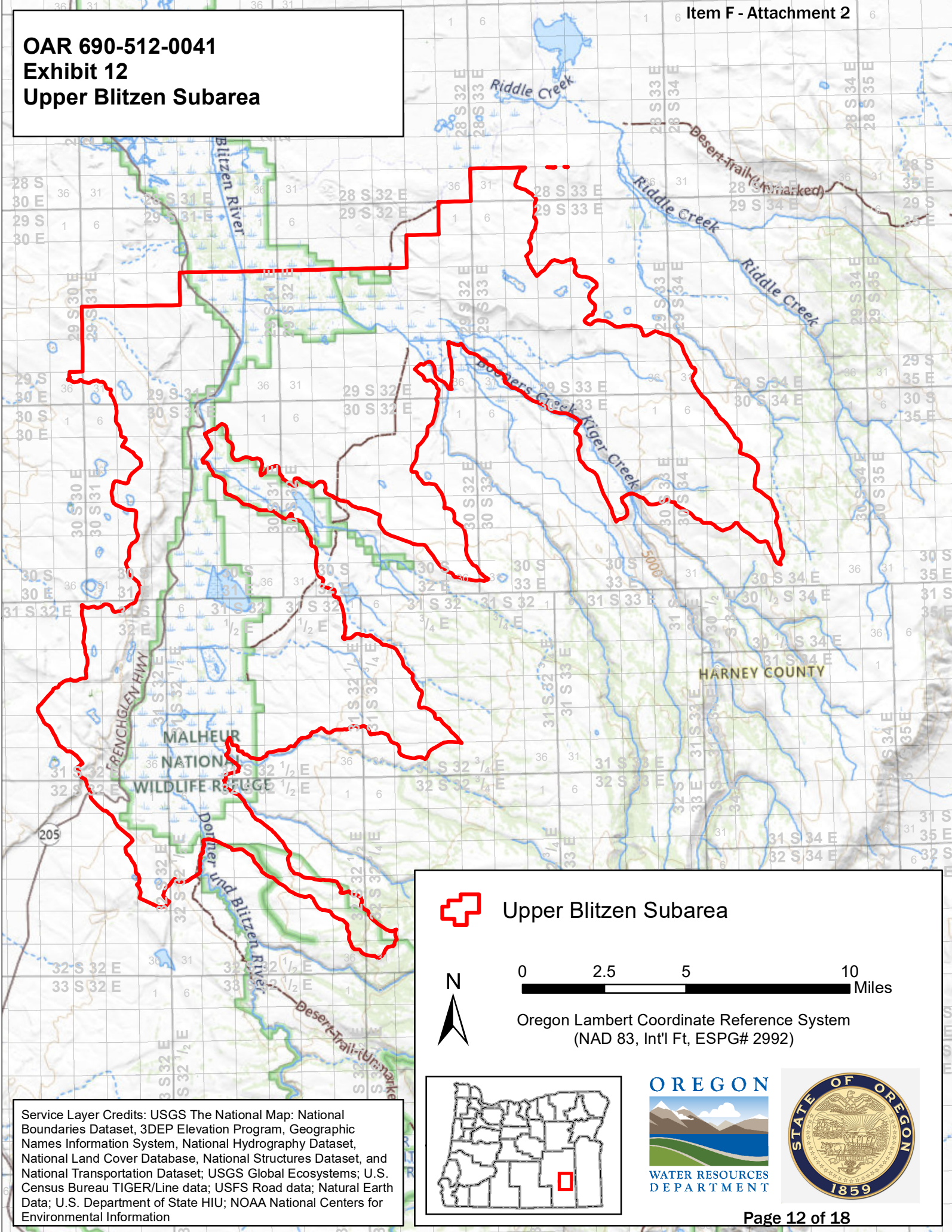
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Oregon Lambert Coordinate Reference System
(NAD 83, Int'l Ft, ESPG# 2992)

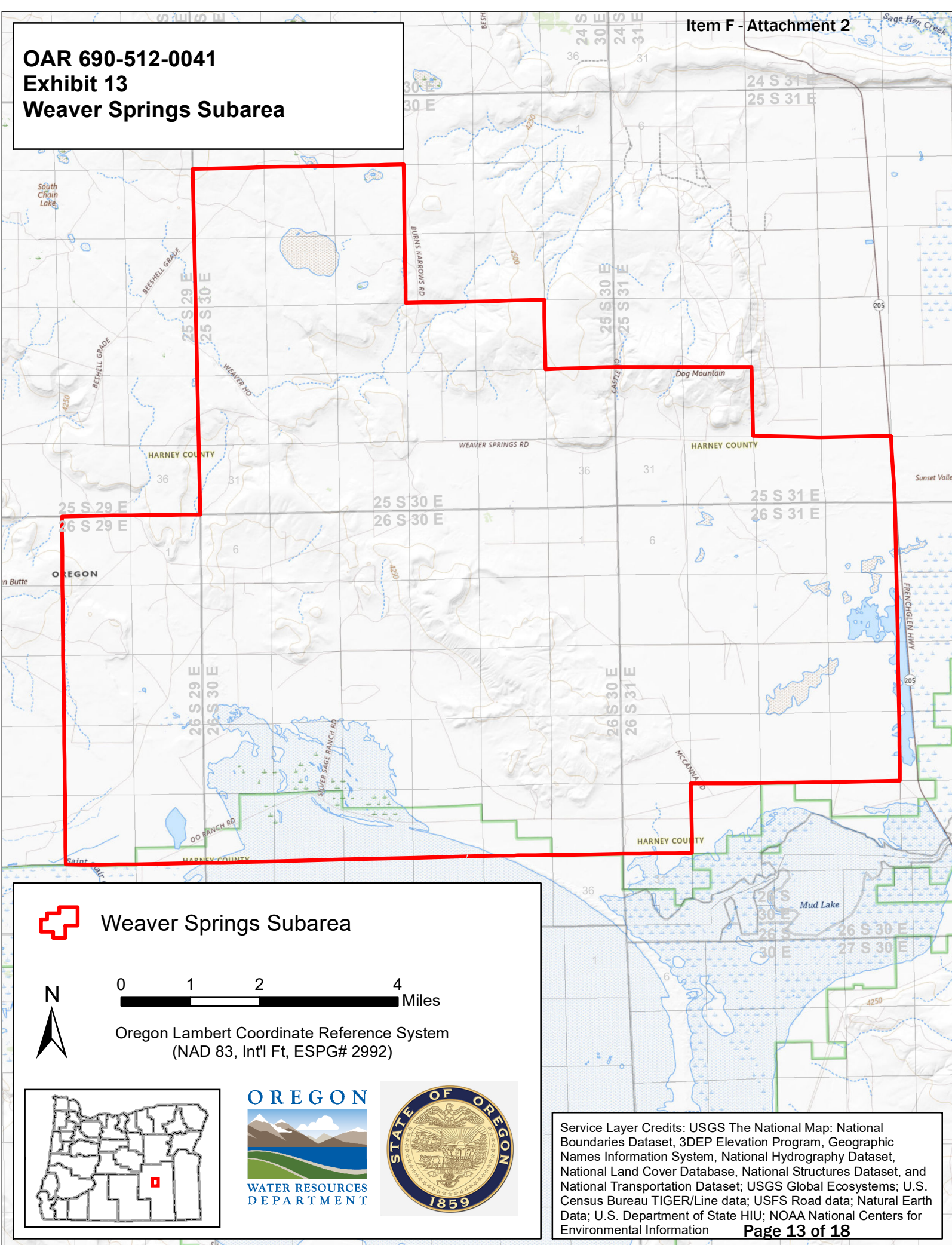


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OAR 690-512-0041
Exhibit 12
Upper Blitzen Subarea



OAR 690-512-0041
Exhibit 13
Weaver Springs Subarea

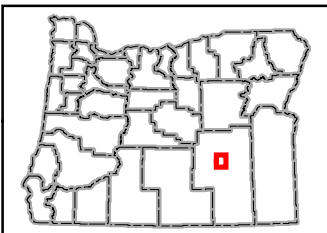


Weaver Springs Subarea



0 1 2 4 Miles

Oregon Lambert Coordinate Reference System
 (NAD 83, Int'l Ft, ESPG# 2992)



Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information

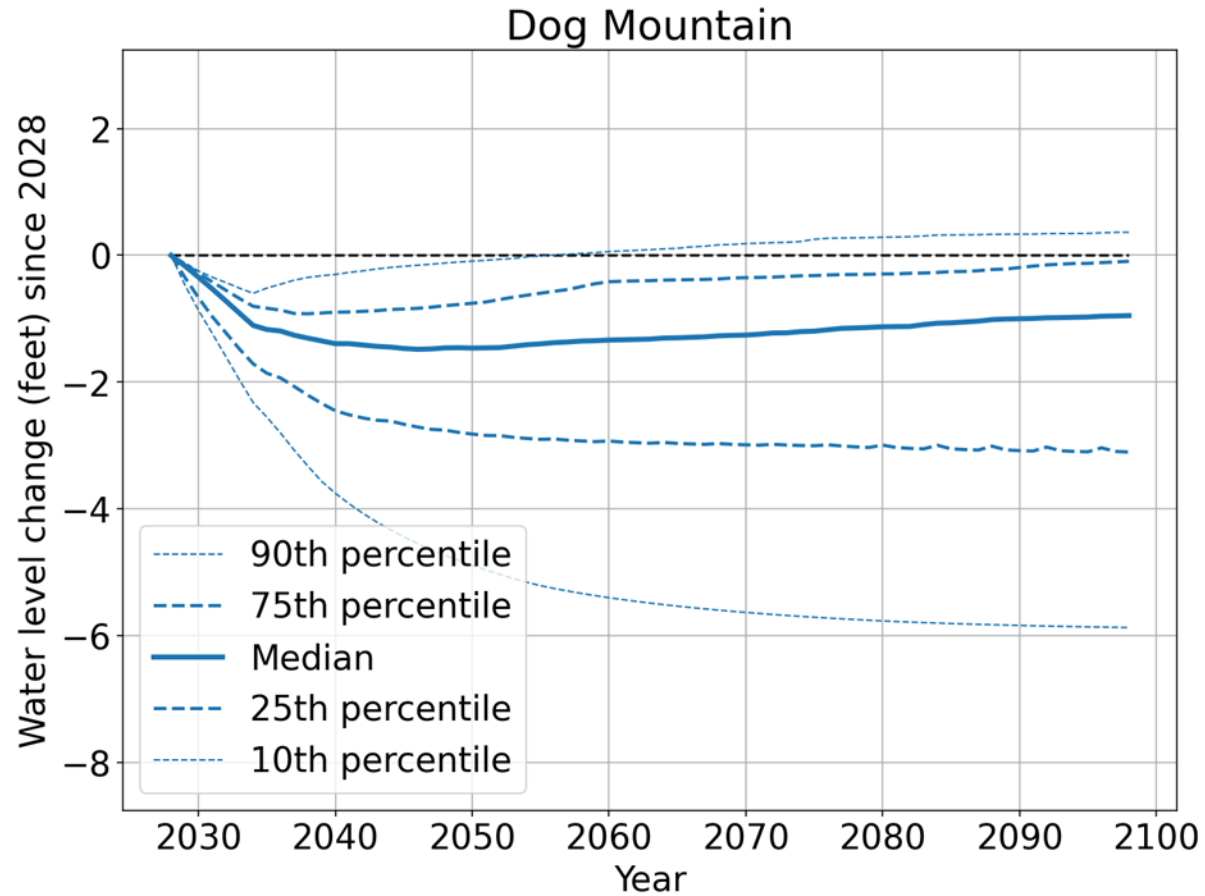


Table 1: Magnitudes of changes in annual high water levels (feet) compared with year 2028 in the Dog Mountain subarea. Each column represents a particular year when water level changes may be evaluated. Each row represents a percentile of water level changes within the subarea.

Percentile	2028	2033	2039	2045	2051	2057
90	0	-0.5	-0.3	-0.2	-0.1	0
75	0	-0.7	-0.9	-0.8	-0.7	-0.5
50	0	-0.9	-1.4	-1.5	-1.5	-1.4
25	0	-1.5	-2.3	-2.7	-2.8	-2.9
10	0	-2	-3.6	-4.4	-5	-5.3

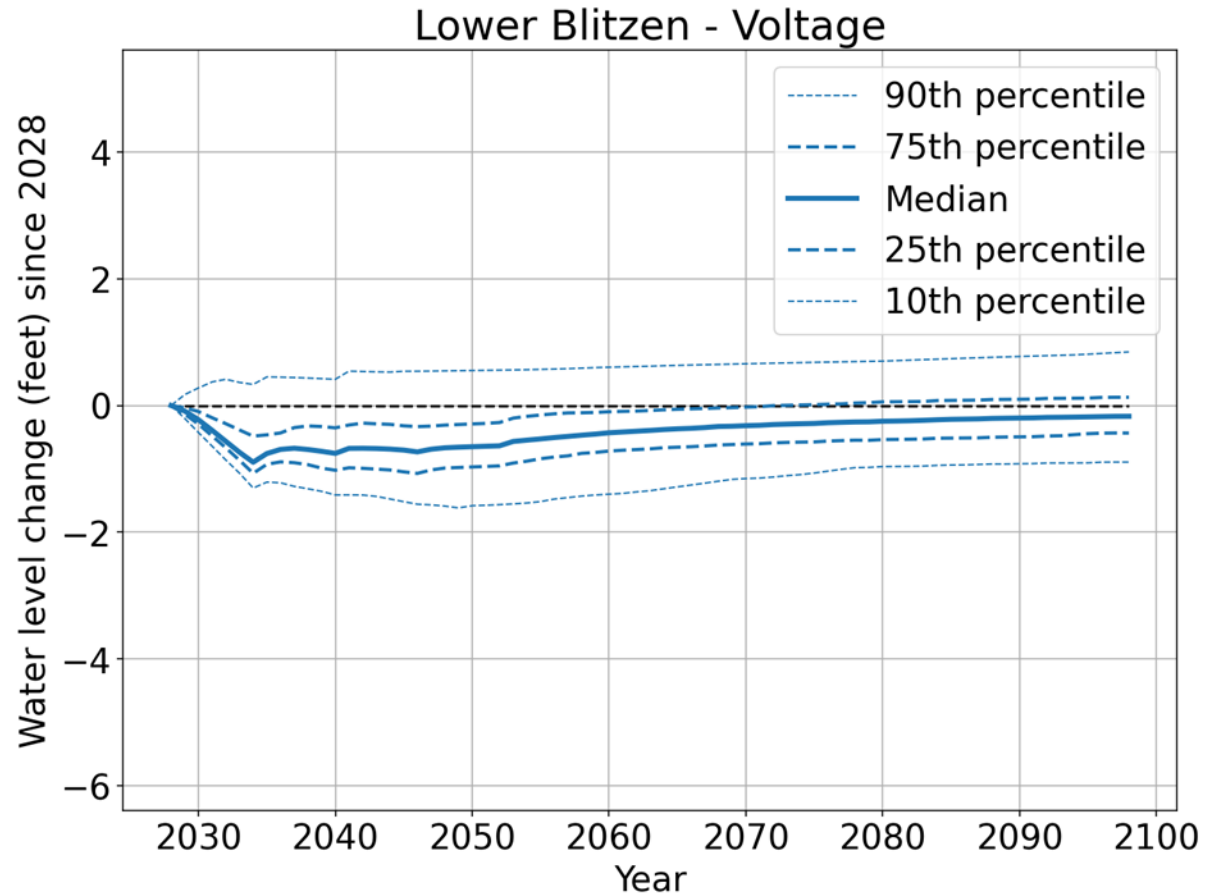


Table 2: Magnitudes of changes in annual high water levels (feet) compared with year 2028 in the Lower Blitzen - Voltage subarea. Each column represents a particular year when water level changes may be evaluated. Each row represents a percentile of water level changes within the subarea.

Percentile	2028	2033	2039	2045	2051	2057
90	0	0.4	0.4	0.5	0.6	0.6
75	0	-0.4	-0.3	-0.3	-0.3	-0.1
50	0	-0.7	-0.7	-0.7	-0.6	-0.5
25	0	-0.9	-1	-1	-1	-0.8
10	0	-1.1	-1.4	-1.5	-1.6	-1.5

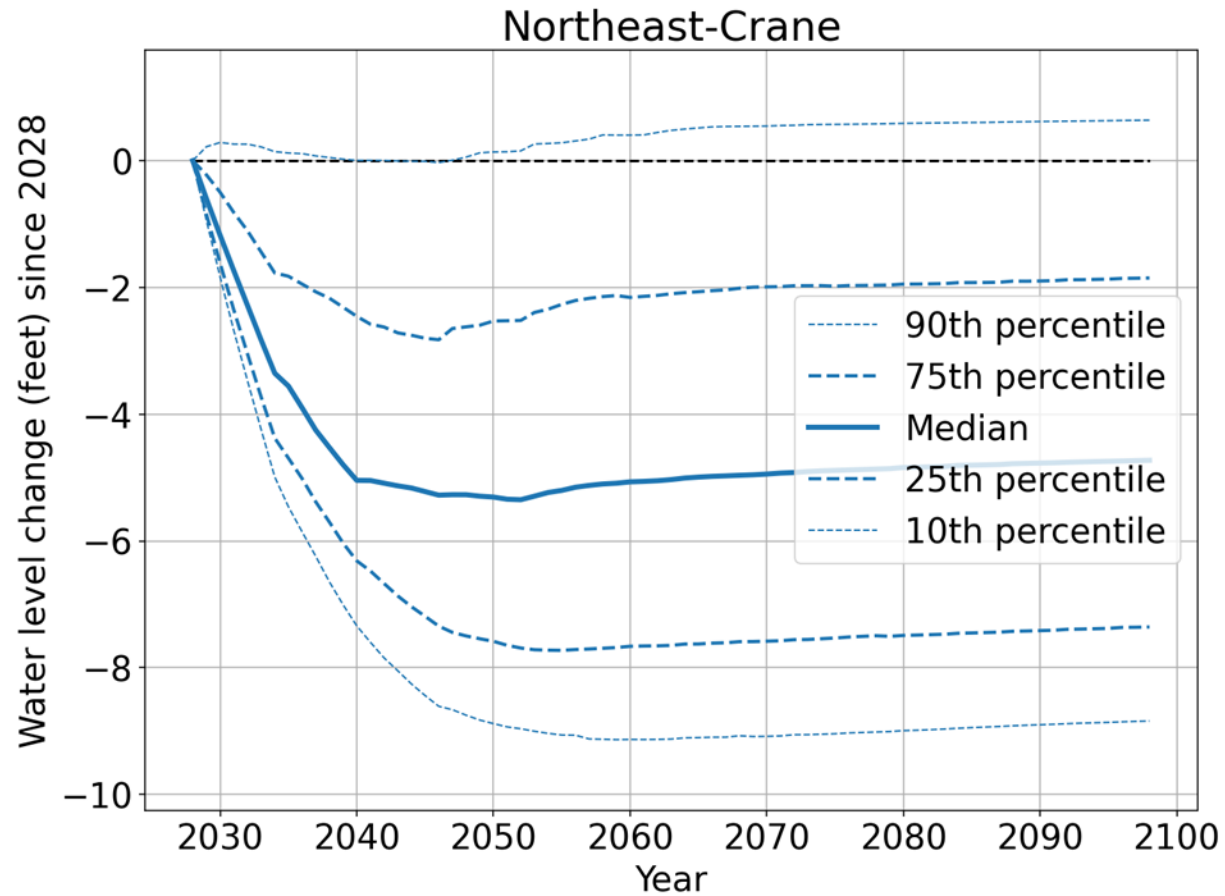


Table 3: Magnitudes of changes in annual high water levels (feet) compared with year 2028 in the Northeast - Crane subarea. Each column represents a particular year when water level changes may be evaluated. Each row represents a percentile of water level changes within the subarea.

Percentile	2028	2033	2039	2045	2051	2057
90	0	0.2	0	0	0.1	0.3
75	0	-1.4	-2.3	-2.8	-2.5	-2.2
50	0	-2.8	-4.8	-5.2	-5.3	-5.1
25	0	-3.7	-6	-7.2	-7.6	-7.7
10	0	-4.2	-7	-8.4	-8.9	-9.1

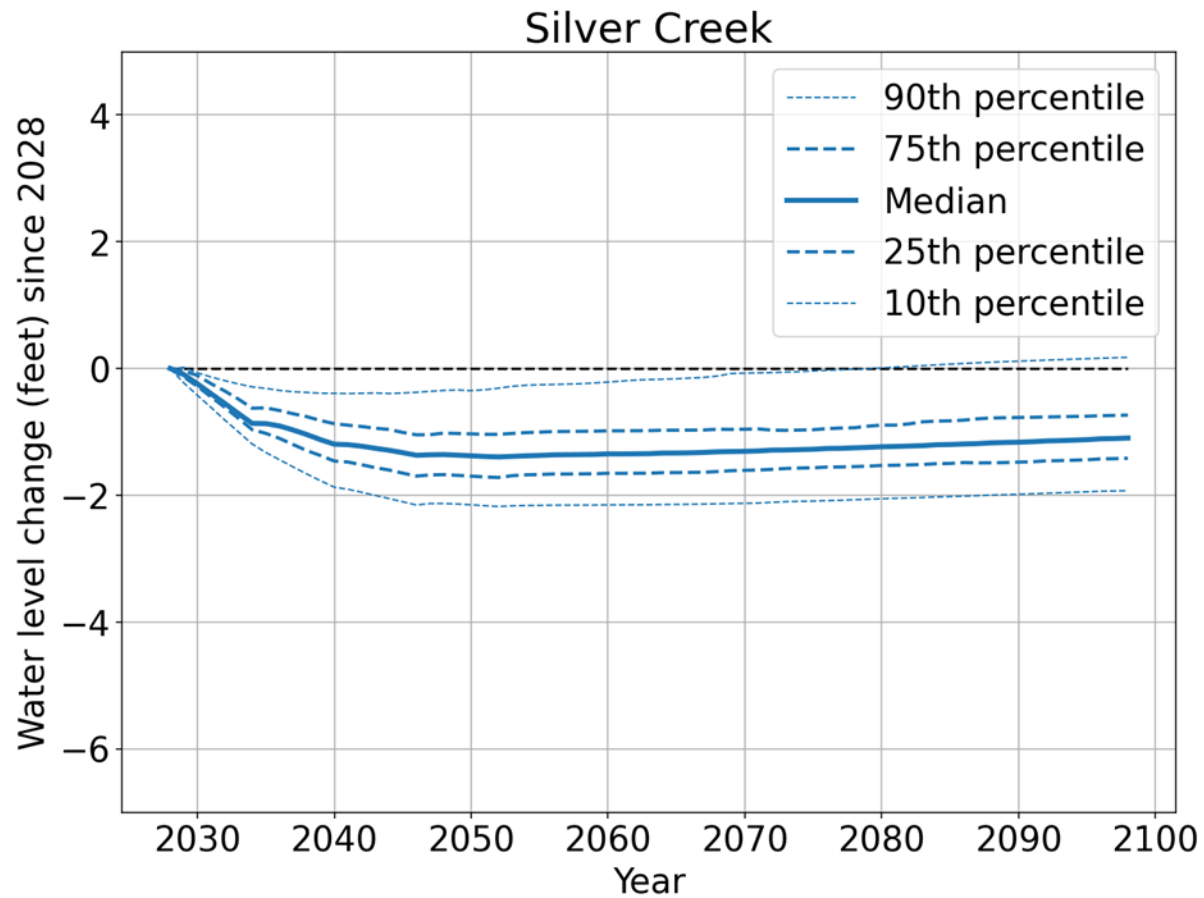


Table 4: Magnitudes of changes in annual high water levels (feet) compared with year 2028 in the Silver Creek subarea. Each column represents a particular year when water level changes may be evaluated. Each row represents a percentile of water level changes within the subarea.

Percentile	2028	2033	2039	2045	2051	2057
90	0	-0.2	-0.4	-0.4	-0.3	-0.2
75	0	-0.5	-0.8	-1	-1	-1
50	0	-0.7	-1.1	-1.3	-1.4	-1.4
25	0	-0.8	-1.4	-1.7	-1.7	-1.7
10	0	-1	-1.8	-2.1	-2.2	-2.2

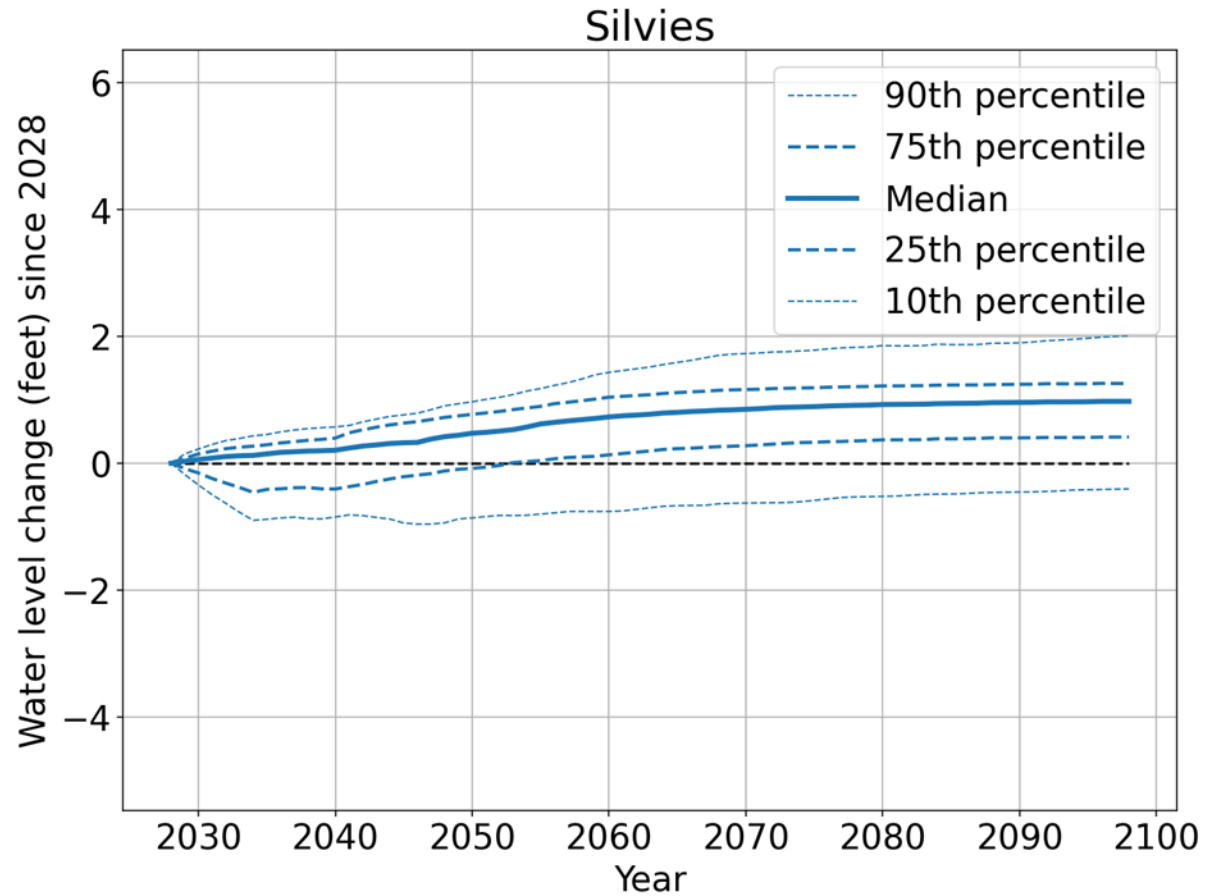


Table 5: Magnitudes of changes in annual high water levels (feet) compared with year 2028 in the Silvies subarea. Each column represents a particular year when water level changes may be evaluated. Each row represents a percentile of water level changes within the subarea.

Percentile	2028	2033	2039	2045	2051	2057
90	0	0.4	0.6	0.8	1	1.3
75	0	0.3	0.4	0.6	0.8	1
50	0	0.1	0.2	0.3	0.5	0.7
25	0	-0.4	-0.4	-0.2	-0.1	0.1
10	0	-0.8	-0.9	-0.9	-0.8	-0.8