

2022 LEGISLATIVE REPORT

SENATE BILL 1602 UPDATE



OREGON



WATER RESOURCES
DEPARTMENT



STATE OF OREGON

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Executive Summary

In June 2020, the Oregon Legislature passed [Senate Bill 1602](#) during the first special legislative session. The Governor signed the bill into law on July 7, 2020. This legislation resulted from efforts by conservation and timber industry groups to modernize Oregon's Forests Practices Act (FPA). In short, SB 1602 amends parts of [ORS 527](#) and directs the Governor's office to mediate talks between the conservation and timber industry groups to develop and recommend changes to the FPA. Senate Bill 1602 increases buffer widths for streams, dwellings, schools, and qualifying water intakes for helicopter pesticide applications. It also changes how forestry professionals provide notifications of helicopter pesticide spraying and requires notifying neighbors before spraying.

As part of the requirement to provide protection for qualifying water intakes, SB 1602 directs the Oregon Water Resources Department (OWRD) to provide Oregon Department of Forestry (ODF) with the locations of the points of diversion (POD) with a water use qualifying for a spray buffer as defined in the bill. ODF is required to periodically review OWRD's inventory of PODs and update the reporting system.

SB 1602 also requires ODF and OWRD to submit a joint report to the Legislative Assembly during the 2022 regular session that provides information on the number of PODs that have been recorded into the ODF reporting system, the number of PODs that are not mapped with sufficient precision to implement a spray buffer, and the resources needed by OWRD in order to map the remaining PODs with sufficient precision to allow for buffer implementation.

OWRD identified surface water **46,696 PODs** in the OWRD Water Rights Information System associated with a water use qualifying for spray buffer under SB 1602: **37,159 PODs** are mapped with sufficient precision and **9,537 PODs need further location refinement**.

A single water right may be associated with multiple PODs. Because water rights often have multiple PODs in the same location, OWRD conducts POD research at the water right scale; therefore, the analysis required for this report is based on water right counts, rather than POD counts. There are **5,456 surface water rights that require further research to better refine the location of the associated PODs**.

The remaining 5,456 water rights could be mapped within **3-4 years at a cost of between \$1.29 million to \$2.36 million and 6 FTE**. It may be possible for to complete the field work within 2 years; however, it is difficult to predict until work begins and, regardless, the mapping staff will need approximately 3 years for their portion of the work.

It is important to note several variables may result in unexpected and unquantifiable work for OWRD. These range from OWRD's inability to map exempt surface water uses ([ORS 537.141](#)), to increased field work that may result from increased water right research, to errors in mapping that may result in more field work than expected.

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Background

The Oregon Legislature passed [Senate Bill 1602](#) during the first special legislative session in June 2020. The Governor signed the bill into law on July 7, 2020. This legislation resulted from efforts by conservation and timber industry groups to modernize Oregon's Forests Practices Act (FPA).

In short, SB 1602 amends parts of [ORS 527](#) and directs the Governor's Office to mediate talks among the conservation and timber industry groups to develop and recommend changes to the FPA. Senate Bill 1602 increases buffer widths for streams, dwellings, schools, and qualifying water intakes for helicopter pesticide applications. It also changes how forestry professionals notify for helicopter pesticide spraying and requires neighborly communications before spraying. More specifically, the law increases buffers for helicopters spraying pesticides to a distance of at least 300 feet from schools, inhabited dwellings, and qualifying drinking water sources; at least 75 feet from fish-bearing streams or streams with domestic uses; and at least 50 feet from other streams with surface water present (Type N). Additionally, the law directs the Oregon Department of Forestry (ODF) to develop an e-notification system to improve communication among helicopter pesticide sprayers, neighbors, and water users. Qualified residents and water users will be able to register to receive notice from applicators when pesticides are sprayed within one mile.

Report Requirements

SB 1602 directs the Oregon Water Resources Department (OWRD) to provide ODF with the locations of the points of diversion (PODs) that have a water use qualifying for a spray buffer as defined in section 4(4) of the bill and that are mapped with sufficient precision to allow for the implementation of required spray buffers under section 16(2)(c). ODF is required to periodically review OWRD's inventory of PODs and update the reporting system.

Section 20b of the bill requires ODF and OWRD to submit a joint report to the Legislative Assembly during the 2022 regular session that provides information on the following:

1. The number of PODs that have been recorded into the ODF reporting system.
2. The number of PODs remaining to be recorded into the reporting system.
3. The resources required for OWRD to identify PODs, whether already inventoried or remaining to be inventoried, with enough precision to allow for buffer implementation.

This report provides an update on coordination work between ODF and OWRD as required under section 20b of SB 1602.

Implementation

Overview

A water right is necessary to use or store water in Oregon. Rights to use water specify the place where the water is used, what the water is used for, when it can be used, how much may be used, the source of the water, and the point that the water is diverted from the water source such as a stream, reservoir, or well. The Oregon Water Resources Department maintains records of all authorized water rights in the state's Water Right Information System (WRIS). WRIS was developed in the 1980s and is continually

updated with information allowing for the query of individual water rights and the POD mapped locations.

The quality of the data regarding the mapped location of water right PODs and places of use (POUs) largely varies. Until 1987, OWRD staff conducted a field survey and created a map of each water right applicant's POD and POU. Given technology constraints of the time, this methodology rendered water right maps and related documentation of varying degrees of accuracy (Figure 1).

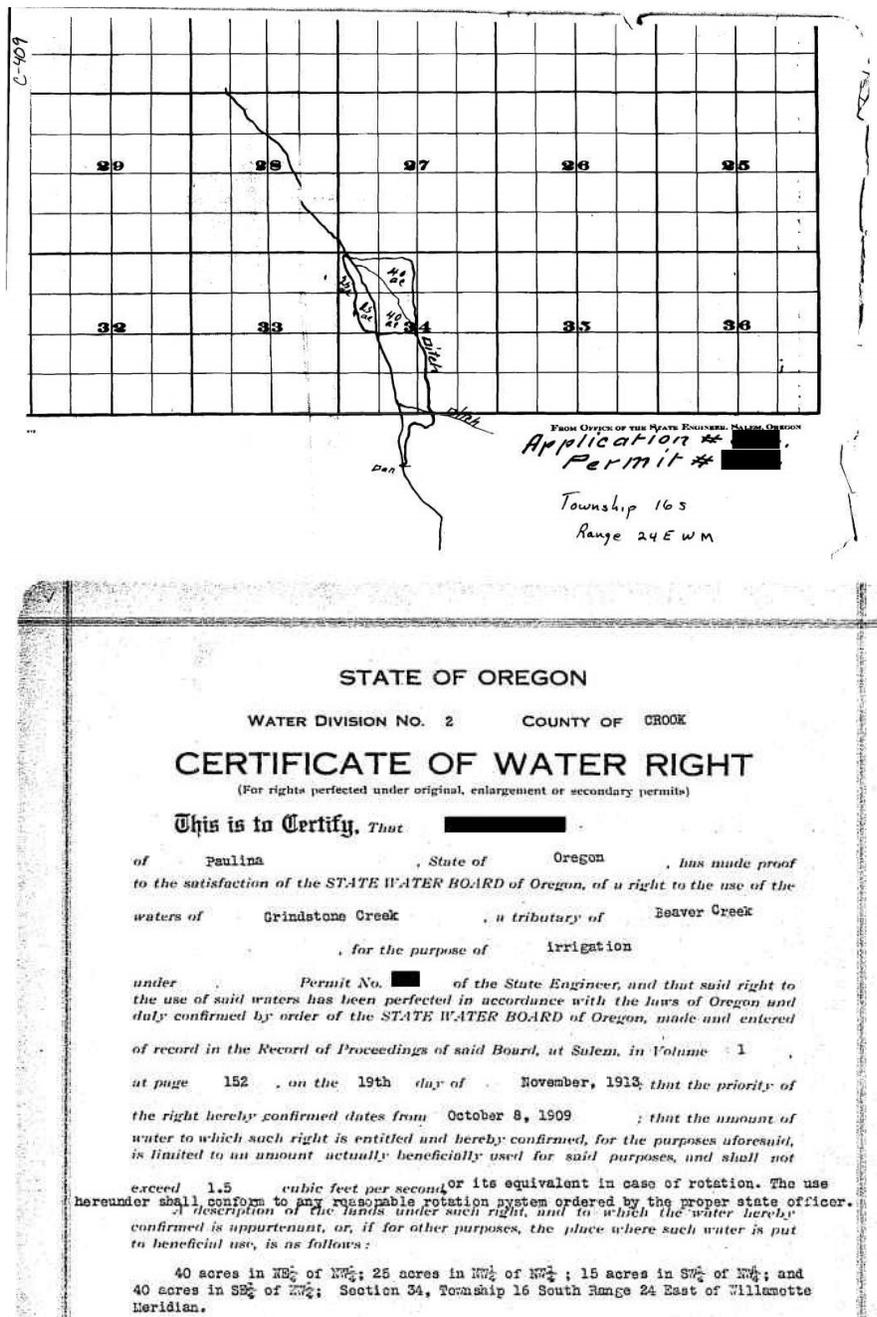


Figure 1. Water right with priority date of 1909 (mapped 1913) with ambiguous point of diversion and place of use information.

After 1987, the Certified Water Right Examiners (CWRE) program was created. This resulted in an increased number of trained professionals mapping water rights in the field, which improved the accuracy of the maps. OWRD also began using geographic information systems (GIS) in 1990, which allowed GIS staff to display multiple water rights on the same map. However, throughout the 1990s base data, such as the Public Land Survey and tax lots, were not always available across the state, or at asufficient resolution to precisely digitize POU and PODs in the GIS.

By 2004, GIS water right mapping architecture and workflows were updated at OWRD which allowed for better integration with WRIS and an overall higher quality of paper maps submitted by water right applicants. Base data has undergone significant improvements in availability and quality, including the addition of statewide imagery. Department staff also added feature quality codes (FQC) to the online maps. The FQCs enable the tracking of relative quality of source materials from each water right file, which helps determine the overall quality and accuracy of an online representation of a POD/POU location on the map. Advancements in GIS, satellite imagery and computer technology has allowed for better representation of water rights over time.

Water Uses under SB 1602

SB 1602 requires that ODF record water uses qualifying for a pesticide spray buffer into the ODF reporting system and requires OWRD to provide POD information for all relevant water uses, as defined in the bill. Section 4(4) (a-e) “water uses qualifying for a spray buffer” include water uses:

- (a) For watering not more than one-half acre of lawn or noncommercial garden.
- (b) By one or more dwelling units for domestic animal consumption ancillary to residential or related use of a property.
- (c) By one or more dwelling units for household purposes or human consumption.
- (d) For livestock watering; or
- (e) Supplied for community purposes through a municipal water system, a system operated by a federally recognized Indian tribe or a system operated by a private corporation. As used in this paragraph, “community purposes” includes, but is not limited to, uses described in paragraphs (a) to (d) of this subsection, commercial or industrial use, fire protection, watering of public parks and street cleaning.

It should be noted that, in some cases, water uses (a) through (d) may be exempt from the need to obtain asurface water right. Exempt uses are not mapped or recorded by OWRD, and in many instances the Department is not made aware of the use. For this reason, OWRD does not believe it is feasible to inventory these PODs or to estimate the resources needed to inventory these uses. See **Exempt Surface Water Uses** section below for more information.

Inventory of OWRD Points of Diversions

ODF identified a total of **46,696 surface water PODs** from the OWRD Water Rights Information System with a POD associated with a water use qualifying for spray buffer under SB 1602.

Upon refining water rights based on the quality of the mapped PODs, **37,159 PODs** with water uses qualifying for a spray buffer were mapped with enough precision to meet the needs of SB 1602. This leaves **9,537 PODs needing further location refinement**.

It is important to note that mapped water rights may have a 40 to 160-foot margin of error (see **Mapping Errors**).

Resource Needs for Additional Work

Point of Diversion Refinement

As noted above, **9,616 PODs need further location refinement**. One water right can often be associated with multiple PODs and multiple types of water use. SB 1602 directs OWRD to report resources required to identify and locate PODs, whether already inventoried or remaining to be inventoried, with enough precision to allow for buffer implementation. Because water rights may have multiple PODs in the same location, OWRD conducts POD research at the water right scale and the resources analysis required for this report will be based on water right counts, rather than POD counts. There are **5,456 water rights that require further research**.

In order to refine and map a water right in OWRD's Water Right Information System, OWRD information services staff conduct a full review of the water right and decree information on file and update the database system to reflect the water right as well as mapped location, if available. Typically, review of a water right information and then mapping the right takes one-hour. Each mapped water right is subject to a peer review for quality assurance and quality control, which also takes roughly one-hour.

In some cases, the information service staff are not able to further refine the POD location information based on information contained in the paper files or decree information. From there, field staff may attempt to contact the water right holder to obtain information on the POD and POU locations. If the water right holder cannot be reached, field staff must research ownership information, travel to the location, and conduct a field survey to locate a POD on the ground. The amount of time for each field survey varies by water right; however, this adds significantly to the time required to determine the location of the POD.

OWRD approximates that between 42-56 percent of remaining water rights to be refined (5,456) will need to be located via field survey. In summary,

- 2,378 – 3,171 water rights can be mapped by information service specialists and
- 2,285 – 3,077 water rights will likely need a field survey before being mapped.

Staff Needs

Each water right will require roughly 2 hours of an information service specialist's time to assess, map, and peer review. As a result, refinement of water right POD locations will take around 10,900 hours to complete.

The OWRD estimates that 2 FTE Information Service Specialists (ISS 2) would be needed to map the remaining 5,456 water rights and conduct QA/QC within approximately 3 years (Table 1).

It will require considerable resources to clarify POD locations for water rights that require field surveys. The amount of time required to research and locate each water right is largely dependent upon the information available to a field staff, which is widely variable by right. To conduct a field survey, staff take the following steps:

1. Review researched information on the water right to understand general location and identify helpful information that will help locate POD.
2. Determine ownership information of the lands covered by the water right.
3. Contact the owner (if possible), and seek detailed POD location information, if available.
4. Schedule a site visit with landowner.
5. Travel to the location.
6. Locate POD on the ground, which could be difficult to find due to terrain and vegetation.
7. Analyze, record, and share findings/results.

While water right research and mapping in the field has a well-defined procedure, staff-time required for research and associated fieldwork can be highly variable depending on several factors:

- **Type of water right and location information:** The age of the water right and the information provided on the POD location varies. For example, an older decreed water right may only have a POD mapped to a quarter-quarter section (about 40 acres). This will take significantly more time to locate in the field than a newer water right certificate that may provide GPS coordinates or a metes and bounds description from public land survey corners.
- **Ownership information:** Ownership information allows field staff to connect with a landowner, learn more about where a POD may be located, and obtain consent to access private property, if needed. However, ownership and contact information are frequently out of date on water right files, as the water right is generally “appurtenant” or goes with the land when sold. As a result, field staff must often pull county tax records and other documents to identify the proper contact information. The accuracy of this information can either expedite the research process or pose a large hurdle.
- **Distance from field office:** In some rural parts of the state, PODs may be up to a half-day drive from a regional office, in some cases requiring overnight travel to complete the entire trip and survey.

OWRD estimates that 1 FTE assistant watermaster (Natural Resource Specialist 2) can research and locate between 1-6 water rights per day, depending upon the factors previously discussed. Most of these water rights fall in the Northwest, East, and Southwest [regions](#) of the state.

OWRD estimates that 4 FTE assistant watermasters could map the remaining 2,285 - 3,077 water rights within 2-4 years (Table 1).

Table 1. Staffing costs associated with mapping the remaining PODs.

Position Title	FTE	Total Funds for 2023-2025	Total Funds for 2025-2027
Information Service Specialist 2	2	\$317,318	\$355,915
Natural Resource Specialist 2	4	\$796,832	\$892,307
Total	6	\$1,114,150	\$1,248,222

Overall, OWRD estimates the remaining 5,456 water rights could be mapped within 3-4 years at a cost of between \$1.29 million to \$2.36 million. These are estimates and it may be possible for the assistant watermaster positions to complete their work within 2 years; however, it is difficult to predict until work begins.

Workload Factors Not Accounted for in this Report

It is important to note several variables that could require additional work for OWRD that are not quantified in this report. These range from the lack of information on exempt water uses, to field work or enforcement actions that may result from increased water right research, to errors in mapping that may result in more field work than expected.

Exempt Surface Water Uses

Exempt uses are not mapped or recorded by OWRD, and the Department is not necessarily made aware of when uses are occurring under an exemption. For this reason, OWRD does not believe that it is feasible to inventory these PODs or estimate the resources that would be needed if the Department were to attempt to inventory these PODs. Ultimately, the best way to inventory these uses for the purposes of SB 1602 would be for users to self-register through the notification system operated by ODF. Users should make sure they fully understand the exemptions as registration through the notification system could result in OWRD discovering the unauthorized use of water if the use is not in fact exempt (see section below on unauthorized uses). Note that in this case, water users would need to apply to OWRD for a water right.

Some of the more commonly cited exempt surface water uses, are identified in [ORS 537.141](#) and ORS 537.800. For example, properties that have creeks flowing directly through them do not need a right to either divert water to a trough or storage tank for stock if certain requirements are met or to allow livestock to drink directly from the water source. OWRD does not have location information for these uses. Similarly, uses of water from exempt springs ([ORS 537.800](#)) are also generally not maintained in agency records. It is important to note that, pursuant to case law, most springs do not qualify for the exemption in ORS 537.800, as the springs must not naturally run off the property to be eligible. It is uncommon to find springs that meet the hydrological requirements to be able to make use of this exemption from the need to obtain a water right.

Potential Discovery of Unauthorized Uses and Associated Enforcement Actions

As ODF collects water use registrations for those wishing to receive pesticide spray notification, it is likely that unauthorized uses of surface water will be reported as “exempt water use.” Additionally, as OWRD assistant watermasters conduct water right research, it is likely that they will discover unauthorized water use or water right holders inappropriately using water. Depending on the volume of unauthorized uses discovered and the willingness of individuals to voluntarily get into compliance without enforcement action, this may impact watermaster and assistant watermaster workloads. The resources needed to manage the potential increased volume will be largely dependent upon the number of registrants in the ODF system, which is currently unknown.

Mapping Errors

As previously mentioned, mapped water rights may have a 40 to 160-foot margin of error due the precision of mapping at the time it was recorded. Another factor that must be considered is that the law does allow for changes in the POD location of 500 feet if the change is to follow the stream in select instances. OWRD is not required to be notified in those cases and, therefore, POD locations in these instances could be off by 500 feet, in addition to the 40 to 160-foot margin of error. In cases where a water right authorizes animals to drink directly from a stream, typically a POD is mapped based on the pump or ditch location. The relative accuracy of these locations are estimates. For these

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reasons, it is possible that some PODs may not be where department records indicate, which could lead to some operators being unable to locate the POD in the field before pesticide spray application. This may result in OWRD staff needing to follow up on POD locations, potentially increasing fieldwork for OWRD assistant watermasters. The degree to which this may occur is unknown.