

Certification Programs for Water and Wastewater System Operators

Joint report of Oregon Health Authority, Drinking Water Services and Oregon Department of Environmental Quality, Water Quality Program



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Working to keep drinking water safe for Oregonians.

Submitted to:

Governor Kotek
Oregon Legislature
Oregon Environmental Quality Commission
Drinking Water Advisory Committee

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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



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The Oregon Health Authority and the Oregon Department of Environmental Quality prepared this report in accordance with the requirements of Oregon Revised Statute 448.409. The report describes the activities of OHA and DEQ under their respective water and wastewater operator certification programs from July 1, 2022 to June 30, 2024.

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Executive Summary

Oregon law requires owners of drinking water and wastewater systems (public and private) to operate their systems under the responsible control and direction of certified operators. Trained and certified operators ensure that the systems function in a manner that protects public health and the environment. Certified operators also improve facility operation and compliance, protect the public's investment in the facilities, and instill public confidence in the safety and certainty of services. The Oregon Health Authority's Center for Health Protection, Drinking Water Services (OHA-DWS) administers the certification program for drinking water system operators, and the Oregon Department of Environmental Quality (DEQ) administers the program for domestic wastewater system operators. This report provides an overview of program activities and accomplishments and notes several initiatives to improve program efficiency.

OHA-DWS and DEQ coordinate activities to benefit their respective certification programs. Coordination efforts include, but are not limited to, representation and input at advisory committee meetings on program activities, effectiveness and rulemaking, and general program administration in areas such as testing, efficiencies, and the sharing of operator work experience records. Another important area of coordination includes input to trainers and educators through the Oregon Environmental Services Advisory Council (OESAC) for workforce training and continuing education. Program staff also work with Water Professionals International (WPI), formerly known as Associated Boards of Certification (ABC), which is a national accreditation organization on issues relevant to certification program operation. Both programs contract with WPI for computer-based testing. OHA-DWS and DEQ eliminated paper-and-pencil exams offered once a year, replacing them with computer-based exams offered year-round, statewide, and up to six days a week. This approach provides examinees with immediate exam results and improves program efficiency and service delivery. Moreover, utilization of standardized WPI exams, which are used by over 40 states, aids in granting certification via reciprocity.

Since the last report, DEQ's Wastewater Operator Certification program has transitioned from paper applications to Your DEQ Online, a web-based platform for storing, processing and displaying data from numerous DEQ programs and regulated facilities. This centralized platform standardizes and automates business processes to support agency permitting, invoicing, e-reporting, inspections and other program work. Your DEQ Online is increasing efficiency in protecting the environment and improving public access to environmental data that DEQ manages. Through the rulemaking process, certification application, renewal, and annual program support fees have increased by three percent, and the new fees became effective on November 1, 2024. Furthermore, DEQ's Wastewater Operator Certification program completed a rulemaking to update Oregon Administrative Rules Chapter 340, Division 049, and details are provided in the Wastewater Program Activities section of this report.

Table 1: OHA-DWS and DEQ Operator Certification Programs, 2022-2024*				
CATEGORY	OHA DRINKING WATER		DEQ WASTEWATER	
Total Persons Certified	1820		1166	
Holding Two Certificates OHA-DWS or DEQ	175 (10%) (Distribution & Treatment)		387(33%) (Collection & Treatment, Provisional not included)	
Certified by OHA-DWS and DEQ**	N/A		N/A	
Certificate Applications Reviewed ¹	1563		644 (includes 44 post-exam apps)	
Applications Denied (not including fails)	0		2	
Certificates Issued by Reciprocity	50		17	
Examinations (scheduled)	1358		658	
Failed Exams	106		171	
Continuing Education Required	2.0 CEUs every two years		2.0 CEUs every two years	
Certification Renewal Period	Biennial		Biennial	
Certificates	Distribution	Treatment	Collection	Treatment
Provisional Grade I Certificate	N/A	N/A	2	1
Small System Certificate	847		8	
Grade I Certificate	584	309	282	238
Grade II Certificate	519	246	270	172
Grade III Certificate	240	115	91	102
Grade IV Certificate	145	119	82	138
Filtration Endorsement	N/A	188	N/A	N/A
Total Certificates by Type	1488	789	727	651
Total Certificates	2271		1378	
Systems Where Certified Operators Required	Distribution	Treatment	Collection	Treatment
Class I	196	136	137	119
Class II	137	132	127	89
Class III	30	28	39	64
Class IV	15	9	26	36
Total Systems by Type	378	305	329 ²	308
Small Water / Wastewater Systems	901		29	
Total Entities	367³		393	
Certificate Fee (application, exam & license document)	One cert. \$90.00 to \$195.00 Filtration Endorsement: \$90.00		One cert. \$247.00 to \$350.00 (2 yrs.) ⁴ Grade I combined \$412.00 (2 yrs.)	
Renewal Fee — One Certificate	All grades \$140.00 for two years		All Grades \$164.00 for two years	
Renewal Fee — Two Certificates	All grades \$210.00 for two years		No Additional Fee	
Reciprocity Fee	\$100.00		\$164-267.00 Grades I-IV	
Program Staffing	1.0 Compliance Specialist 2		1.0 Natural Resource Specialist	
			1.0 Administrative Specialist	

* Due to DEQ's transition to Your DEQ Online in March 2023, this data set is incomplete for wastewater. A complete two-year data set will be provided in the next report.

** Unavailable due to privacy issues related to DEQ and OHA's transition away from Licensing 2000 (L2K), the licensing software previously utilized by both OHA and DEQ.

¹ "Application" count does not include continuing education evaluations for renewal or reinstatement eligibility.

² This total does not include "satellite" wastewater collection systems that provide effluent to a nearby treatment facility through a connection.

³ This total does not include small water systems.

⁴ These fees do not include the additional 4% Your DEQ Online technology fee.

Certification Program for Drinking Water System Operators

Program Activities

The following is an outline of the Operator Certification Program activities for the past two years.

Water System Classification:

- Classify systems in the areas of distribution, treatment, and filtration method to determine operator certificate grade level requirements.

Operator Certification for Grades 1- 4 and Filtration Endorsement:

- Review, evaluate, and verify applications for certification. This includes exams and reciprocity for applicants in the four levels of treatment, four levels of distribution, and the filtration endorsement.
- Manage data, receipts, refunds, and reports.
- Manage renewal and verify continuing education units (CEU's).
- Manage CEU Audits.
- Determine Compliance.
- Secure exam sites in Oregon through PSI/AMP.
- Manage the operator certification database.
- Provide information on examination study materials.
- Notify examinees of exam results; issue certificates.
- Quarterly unit report to Management.
- Terminate certificates based on non-renewal, retirement, and moved or no longer in the water industry.

Small Water System Operator Certification:

- Review, evaluate, and verify SWS operator designation application with required training.
- Update training materials and documents.
- Manage the renewal process.
- Manage the database and reports.
- Issue certificates.
- Determine Compliance.

Compliance and Enforcement:

- Track compliance with requirements for qualified and certified operators.
- Report performance measures quarterly.
- Respond to complaints and investigate allegations of fraud, misconduct, or false reporting.
- Track professional growth for individual operators.
- Initiate enforcement against non-compliers.
- Revoke/suspend certificates when necessary.

Technical Assistance and Training:

- Respond to inquiries on certification requirements and procedures.
- Provide lists of qualified operators to systems recruiting for vacancies and for professional training.
- Provide technical assistance and data management support to OHA-DWS staff regarding system operator and certification compliance.
- Update desk manual as needed.
- Update contact information.
- Attend and present at industry sponsored training conferences.
- Provide technical assistance and record support for the OESAC Continuing Education Committee.

Efficiency and Service Improvements:

- Work with Data Information Services program staff to implement and customize the new licensing database.
- Provide detailed updates to the operator certification procedural manuals.
- Perform exam analysis for training needs.
- Ensure certification program staff work with field staff to monitor compliance and assure proper system classification.
- Update/request new exam locations.
- Work with OHA Information Services program staff to implement and customize electronic renewal payment.
- Attend quarterly meetings with DEQ staff.
- Submit articles to the DWS Pipeline newsletter.
- Update forms and language for operator certification website.

Coordination and Development:

- Network with other certifying authorities, organizations, and states.
- Review and amend Water Operator Certification Rules.
- Manage services agreement contract for exams and grading by the Association of Boards of Certification.
- Manage services agreement contract for computer-based exams and grading by the Applied Management Professionals through Association of Boards of Certification.
- Participate in the activities of the Oregon Environmental Services Advisory Council, which evaluates and assigns Continuing Education Units (CEUs) to courses offered for professional growth and assists in coordinating statewide training in environmental technology.
- Provide staff support for the Certification Subcommittee of the Drinking Water Advisory Committee
- Develop forms and guidance materials.

Overview of Drinking Water Operator Certification

Beginning in August 2022, Oregon implemented a new written certification exam for small water system operators. This exam was developed in partnership with Clackamas Community College (CCC) and consists of 50 multiple choice and true or false questions. The test bank of questions has been reviewed and scientifically validated by CCC, and exams are offered at the end of each small

water system training class. Additionally, exams are offered on a scheduled basis at each OHA Drinking Water Program office (Pendleton, Portland, and Springfield, Oregon). Future developments for this small water system operator certification exam will include an electronic exam option as part of a planned expansion of online services for operators in Oregon.

Water System Classification

Water systems are classified as small water, water distribution, or water treatment, depending on their size and complexity. A water system is classified as a Small Water System if it has fewer than 150 connections and either uses only groundwater as its source or it purchases water that needs no further treatment once reaching the purchasing system. Water Distribution systems, with four levels of complexity, are classified based on population served. Water systems are only classified for water treatment when they are not identified as a small water system and are treating for specific contaminants. Water treatment plant classification, also with four levels of complexity, is based on a point system assigned to reflect the complexity of the treatment process used at the plant. A filtration endorsement is required for treatment plant operators who work in facilities that use conventional and direct filtration in which the plant requires a Level 2 operator. Oregon is the only State which requires a Filtration Endorsement. These water system classifications are used to determine the qualifications required of personnel in direct responsible charge of each water system. There are 378 water systems that require Level 1-4 certified distribution operators, and 305 water systems requiring Level 1-4 treatment operators, and 901 systems classified as Small Water Systems. Small water system operators are separated from the larger public water supplier group because small water system operators have unique characteristics: (there are no fees for small water system certification, and the certifications are valid for three years).

Requirements: Education and experience requirements related to certification is consolidated in one location and included as a table rather than as written text (See Appendix B).

Operator Certification for Grades 1- 4, Filtration Endorsements, and Reciprocity

Certification exam applications are reviewed and administered by program staff. All exams are offered as computer-based exams at multiple locations around the state. During this reporting period, 1563 applications for exams were reviewed and 1358 exams were scheduled. 106 operators failed their exam. 50 reciprocity applications were also reviewed and approved.

Examination: Oregon utilizes Water Professionals International (WPI) to provide exams for operators seeking certification. WPI contracts with PSI to proctor the exams, which are all computer-based exams, and which are generally provided at local H & R Block centers. Currently, Oregon has eight testing locations, with the newest exam site located in Wilsonville.

Application review fees are based on the level of certification being sought. Once approved for an exam, applicants work directly with PSI/AMP to schedule their exams and are required to pay the relevant exam fees directly to PSI/AMP. Applicants are provided 90 days to complete their exams once they receive approval to sit for the exam. Successful applicants who score 70% or above on their exam(s) may become certified. All candidates are provided with individualized exam results noting the area(s) of deficiency. DWS staff receive the exam scores from AMP electronically in weekly batches, and new certificates and wallet cards are processed accordingly. OHA-DWS staff evaluate exam content and test results, and then work with trainers to develop training intended specifically to improve areas of deficiency.

Reciprocity certificates are granted on a case-by-case basis when an operator's experience, education, and examination results meet established criteria. The criteria closely follow the Model Certification Program Standards developed by WPI, whose membership consists of over 100 certifying authorities representing more than 40 states and 10 Canadian provinces and several international programs. Program standards, uniform testing, and networking among certifying authorities help enable operators certified in Oregon to receive reciprocity in other states or provinces.

Renewal: Certifications are valid for two years and expire on December 31. Certifications are staggered based on the first letter of the last name; operators whose last name initial begins with the letters A to K will renew their certification in even-numbered years, and individuals whose last name initial begins with the letters L to Z in odd-numbered years. Renewal notices are mailed every November.

Renewal requires an applicant to submit a renewal application, pay the renewal fee, and submit proof that the applicant has completed two continuing education units (CEUs) of professional training. To ensure professional growth, operators are not allowed to utilize the same class training to be credited twice in a renewal period. Oregon currently has 1820 certified operators, with 1488 operators certified in distribution and 789 are certified as treatment operators. Additionally, 175 of these operators maintain certification in both treatment and distribution activities. 188 operators have a Filtration Endorsement rating, and these have no renewal requirement. Biennial renewals began in 2016.

Operators who fail to renew their certification on time have a one-year grace period where they may pay a late fee and have their expired certification re-instated. Operators who fail to meet this extended deadline legally forfeit their certificate. After forfeiture, operators who wish to be certified again are required to follow the process for initial certification, including successfully passing the appropriate exam. Operators who allow their certificates to expire are disqualified to be the Direct Responsible Charge (DRC) for any water system. Operators who want to voluntarily terminate their certification may complete a termination request and submit it to the program.

Continuing Education Units: Certified Operators are required to demonstrate professional growth in the field by completing 20 contact hours / 2.0 Continuing Education Units (CEUs) every two years. Certified operators are required to submit an affidavit when they renew their certificates attesting to completing the requisite CEUs. Completion of CEUs requires participating in valid training activities relating to technical, managerial, and financial topics relevant to drinking water production activities. Continuing education ensures that operators maintain and enhance their skills and keep pace with changing regulations and technology. Training opportunities are plentiful in the state and well-attended. Training is available from a wide variety of educational programs, and both local and out-of-state training is acceptable.

CEU values are determined in a variety of ways. Nationally accredited schools and universities may assign a CEU value to training they create in accordance with their accrediting standards. Training created by non-accredited industry partners may need to be reviewed by an independent agency for review. In Oregon, OHA-DWS and the Oregon Environmental Services Advisory Council (OESAC) typically review training content and assign CEUs.

DWS holds a position with the Oregon Environmental Services Advisory Council (OESAC) CEU committee and reviews training created by industry and assigns CEUs based on its relevance to drinking water. OESAC evaluates educational programs monthly and maintains records of those

courses that meet CEU criteria in the area of environmental technology. These class offerings are also maintained on the OESAC website which is updated monthly. The OESAC committee uses the standards of the International Association for Continuing Education and Training (IACET) to review and assign CEU values to training. 570 courses have been reviewed for training this reporting period, with 380 courses representing 333.7 CEUs being approved for drinking water.

Operators may also choose to attend training that has not been pre-evaluated by OESAC. If an operator selects training that has not already had an independent review of content, DWS certification staff will review the training and assign a CEU value on an as-needed-basis.

Audit: In March 2023, 209 operators were selected for a CEU compliance audit, and in March 2024, 196 operators were selected. Each selection represents approximately 25% of the renewal pool. Those selected for audit were notified by mail and were required to submit proof of obtaining the mandatory 20 contact hours / 2 CEUs worth of training. The training must have been completed within their two-year renewal period. Operators who fail to provide proof of their training within the allotted response time are advised that they are not in compliance with the CEU requirements and are added to the next audit cycle. Subsequent failures to comply with the audit requirements, and/or failing to obtain the minimum number of CEUs within the appropriate certification period will result in additional enforcement actions, which may include the revocation of their certification.

Reinstatement: Operators have a 30-day grace period to renew their delinquent certification without incurring a late fee. Operators who renew their certificates after this 30-day grace period may be assessed a \$50.00 late fee. An operator whose certification is delinquent may not be in the “Direct Responsible Charge” of a water system. Certifications that “are delinquent for more than one calendar year will be forfeited. 309 operators received reinstatement notices this reporting period.

Forfeiture and Voluntary Termination: An operator who wishes to reclaim their certification after having their certification terminated are required to meet all requirements of an initial applicant, including applying for and successfully passing the appropriate level written examination.

Technical Assistance and Training

During the reporting period, program staff responded to thousands of requests for assistance from system owners, operator personnel, training providers, vocational counselors, and regional staff regarding operator certificate qualifications, application forms, continuing education, system classification, and rule interpretation. Access to the list of qualified operators is maintained on the DWS website and is available to the public. This data is also provided upon request to facilitate trainer outreach for continuing education opportunities and to assist water systems with recruitment efforts. DWS staff routinely provide educational presentations at industry-sponsored conferences to facilitate better understanding of program goals and requirements. These presentations are generally well-received by industry groups.

Compliance

Water system compliance is measured by documentation of persons in “Direct Responsible Charge” recorded in Safe Drinking Water Information System (SDWIS) database, with assurance of up-to-date active certification recorded in the Certification Database. The total number of certified operators for the level 1-4 water systems is 1820. There are currently 378 water systems that

require a certified operator to be assigned as the distribution direct responsible charge, and 305 water systems that require a certified operator to be assigned as the treatment direct responsible charge. For this reporting period, Level 1- 4 compliance for distribution certification is 89%, and 92% for treatment certification.

For level 1-4 certifications, there was a total of 8 certification terminated for failure to renew effective January 01, 2023. There were 0 certifications terminated for failure to renew effective January 01, 2024.

For small water system certifications, there have been as many as 333 water systems without an appropriately certified operator during this reporting period. Currently, the average compliance rate for small water systems is 63%.

As noted previously, Oregon implemented a new written certification exam for small water system operators in August 2022. While this data is preliminary, OHA is observing what appears to be a statistically significant spike in non-compliance with small water system certification requirements. While we are evaluating a more robust data query for DRC compliance, these elevated numbers may also be an unintended consequence of the new exam requirements for small system operator certification. While we are still collecting data, OHA staff have received numerous complaints from experienced small system operators about the need to take an exam to qualify for renewing their certifications after August 2022. It is also worth noting that this is the second renewal period that requires candidates to successfully pass a written exam to obtain certification for small water system operators. Further, because Oregon's small water system operator certification period is three years, we expect a spike in non-compliance annually until all SGWO operators have renewed their certifications with the new written certification exam requirement in SFY 2025.

Outreach and follow up activities do occur with non-compliant water systems, often leading to increased levels of compliance, albeit later than required. Enforcement actions are prioritized based on the level of threat to public health.

Enforcement

OHA-DWS staff respond to allegations of fraud or misconduct of water system operators regarding compliance with applicable rules and standards. The program is typically able to resolve these issues by contacting the appropriate parties to clarify the regulatory requirements. Compliance with Operator Certification requirements is included with any administrative orders generated by Drinking Water Services. The program revoked on certification from an operator due to improper behavior, and the program is currently investigating one report of fraud in exam application submittal, and one additional complaint alleging improper behavior of a DRC.

Small Water System Operator Certification

Oregon's small ground water operator certification is based on EPA guidelines. This element of the certification program was formerly supported by a grant from the Environmental Protection Agency (EPA) that was allotted to states to fund the training and certification for the operators of Small Water Systems. Small water systems are defined as community or non-transient non-community water systems serving fewer than 150 connections from a groundwater source.

Applicants for certification must have a minimum of a high school education or equivalent and submit an application from the owner assigning the applicant as the “Direct Responsible Charge” for the system. Applicants must also attend a small water system operator training course and provide a copy of their completion certification. This training course was developed on contract for DWS and was based on a document created by drinking water stakeholders, operators, and DWS staff. The training materials consist of a manual with individual, fact sheets on various program elements. These materials were last updated in 2015.

The classroom instruction of the small water system training course is provided under contract by The Oregon Association of Water Utilities (OAWU). The current contract is valid for 5 years and will end on or about 08/30/2029.

Efficiency and Service Improvements

The License 2000 (L2K) certification database used for operator certification has been replaced by a new database that now houses all DWS certification data.

Coordination and Development

Drinking Water Services engages stakeholders in a variety of settings. These groups include:

The Drinking Water Advisory Committee (DWAC) advises and assists DWS on policies related to the protection, safety and regulation of public drinking water in Oregon. The committee consists of representatives from served communities, advocacy groups and professional organizations and meets quarterly.

The Oregon Environmental Services Advisory Committee (OESAC) reviews proposed training for qualifications of instructors, determines relevancy of course material, assigns continuing education units, and coordinates training opportunities around the state. OESAC is composed of representatives from community colleges, professional organizations in the water and wastewater industry, OHA-DWS, and DEQ.

Water Professionals International (WPI) (formerly known as Association of Boards of Certification) provides the knowledge-based exam testing for operator certification in Oregon. The passing score for all exams in Oregon is 70%. The distribution, treatment and filtration need-to-know criteria are available as a study guide on the DWS website. These tests are given throughout North America and internationally under strict standards set by WPI.

PSI (formerly known as AMP) contracts with WPI to provide exam sites and proctoring for the exclusively electronic certification exams in Oregon. This agreement allows operators to take exams via computer at eight testing centers throughout Oregon. Examinees value computer-based testing as a convenient alternative to the paper and pencil exams, enabling them to schedule the exams anytime during the month and then access score reports when complete. This service also reduces overhead and workload and provides faster compliance for water systems.

The lead operator certification personnel at DEQ’s Wastewater Program and DWS meet quarterly to discuss current issues for operator certification.

Certification Program for Wastewater System Operators

ORS 448 requires DEQ to certify persons supervising the operation of domestic sewage treatment works (wastewater systems). Wastewater systems include publicly or privately owned collection-only systems, treatment-only systems, and combined collection and treatment systems. The Wastewater System Operator Certification Program, as adopted in rule by the Oregon Environmental Quality Commission, requires DEQ to:

- Assist permit writers in classifying systems and defining requirements of system owners
- Certify persons qualified to operate and supervise systems
- Set forth a system of penalties for rule violations
- Revoke or refuse to issue certificates for established grounds
- Provide for variances to the rules
- Establish certification fees based on the principle of cost recovery

Program Activities

In March 2023, DEQ transitioned to an agency-wide electronic environmental data management system called “Your DEQ Online” (YDO). This updated system allows electronic application and payment submission, and each certified operator has a profile that stores uploaded applications and attachments, exam scores, certifications, and contact information. Despite the transition from paper to electronic, which required extensive training for staff and operators, the DEQ Operator Certification Program has remained fully operational and provides timely replies to all inquiries and form submissions. More information about this agency-wide move to the cloud-based system can be found here: <https://www.oregon.gov/deq/permits/Documents/YDOInvestmentFS.pdf>.

DEQ engages regularly with the Wastewater Operator Certification Advisory Committee, which consists of operators, system owners, educators, and representatives from industry associations, in order to ensure program needs are being met. Additionally, given the current challenges of recruiting and retaining operators for wastewater systems and their communities, DEQ embarked on a rulemaking to propose rule changes to the Operator Certification Program OARs. Ensuring there is a sustainable, certifiable workforce to operate and maintain Oregon's wastewater utilities is important, and without revision to the existing rules, communities may end up with an increased number of wastewater systems run by uncertified and unqualified operators. In turn, this increases the risk of discharge of untreated or insufficiently treated wastewater, non-compliance, and threats to water quality and public health. Furthermore, more uncertified and unqualified operators may lead to the improper operation and breakdown of facility equipment, which could increase costs to utilities and rate payers. This rulemaking effort included proposals for updating the qualification pathways to certification for wastewater system operators, facilitating operator certification reciprocity among states, modernizing and simplifying the way wastewater systems are classified, and expanding options for attaining compliance when a supervisory operator is not available. Rules were developed in conjunction with the programs standing advisory committee, a public hearing was held in August 2024, public comments were responded to, and proposed rules were presented to the Environmental Quality Commission (EQC). The proposed rules were adopted by the EQC in November 2024 and updates include: defining full-time and part-time supervision; facilitating certification reciprocity among

states; expanding pathways to certification; including an operator-in-training option for small wastewater system operators; simplifying the way wastewater treatment systems are classified; and adding a compliance extension request option for systems whose classification increases. Additional materials on this rulemaking process and outcomes can be found here: [Department of Environmental Quality : Wastewater Operator Certification 2024 : Rulemaking at DEQ : State of Oregon](#).

The following is an outline of the Wastewater Operator Certification Program activities for the past two years.

Program Coordination and Development:

- Develop and maintain forms and guidance materials, particularly for Your DEQ Online, including user guides and video tutorials, and internal Standard Operating Procedure (SOP) documents
- Manage data, invoicing, collection, receipts, refunds, and reports
- Manage contract for testing services by WPI and PSI
- Review and amend rules, including fees
- Coordinate meetings and provide staff support for DEQ's Operator Certification Advisory Committee
- Communicate with trainers to assess training needs and career development ladders, and participate with OESAC for workforce training and continuing education
- Act as liaison with WPI, North American certifying authorities, and organizations that represent wastewater system operators, owners, vocational-technical educators and the water quality control industry

Wastewater System Classification:

- Compile, evaluate, and interpret design summary, operation, maintenance, and operational compliance information for wastewater systems statewide
- Assist permit writers in the process of classifying systems to determine operator or supervisor certificate grade requirement
- Coordinate system classification notification to system owners

Operator Certification and Examination:

- Evaluate education, training, and experience qualifications for certification, including: Operator-In-Training, Provisional and standard certificates, certificates by reciprocity, continuing education, renewals, and reinstatements
- Evaluate and provide examination accommodations for the disabled
- Distribute exam study guidance to exam candidates
- Approve candidates for self-scheduling of computer-based exams
- Provide written notice of exam results
- Issue certificates and renew validation documents for certificate validation
- Review and amend Wastewater Operator Certification Rules as needed

Technical Assistance, Training, and Continuing Education:

- Respond to inquiries and provide guidance and interpretation of certification requirements regarding system owner, supervisor, operator, and contractor operability issues
- Provide technical assistance and record support for the OESAC Continuing Education Committee

- Present program information at conferences, schools, and other events statewide each year
- Provide technical assistance and data management support to DEQ staff regarding system owner and operator certification compliance

Compliance, Variance, and Enforcement

- Track compliance of system owners and operators
- Respond to complaints and inquiries, including evaluation of compliance investigations and actions, and certificate sanction or revocation
- Evaluate and prepare responses to variance applications

Efficiency and Service Improvements

- Technology updates, including transition to an electronic certification data management and payment system, Your DEQ Online (YDO)
- Regular transition to the newest version of the computer-based WPI standardized exam as they are released
- Improvement of Program webpage: [Department of Environmental Quality : Wastewater Operator Certification Program : Water Quality Permits : State of Oregon](#)
- Creation of Fact Sheets and other guidance for clarity and simplicity regarding various program elements

Program Coordination and Development

The objectives of DEQ's Wastewater System Operator Certification Program are to help protect public health, Oregon's environment/water resources, and capital investment in infrastructure through safe and effective operation of Oregon's domestic wastewater collection and treatment systems. The program helps ensure there are an adequate number of qualified persons available to provide these services throughout the state. Some of the emerging challenges wastewater certification helps to meet are those of an aging operator workforce, where the recruitment of new operators is critical to sustaining the continued level of service for Oregon communities. Additionally, the wastewater certification program supports educators to equip operators with the knowledge and experience required for the operation of systems that are becoming increasingly complex in their engineering and technological components. Certification has established a much-needed minimum standard for education, training, and experience that helps ensure an effective and efficient workforce that properly operates and maintains facilities to minimize adverse effects on water quality.

DEQ rules require a standing Operator Certification Advisory Committee to provide advice and make program recommendations. DEQ's director appoints Advisory Committee members who represent wastewater system owners and operators, professional technical educators and trainers, industry associations, and interested parties. DEQ schedules advisory committee meetings at least twice a year.

In addition to the Operator Certification rulemaking effort described above, DEQ also completed a fee increase rulemaking that involved multiple DEQ Water Quality programs. The proposed 3% fee increase was adopted for the Operator Certification program, and the new fees went into effect on November 1, 2024.

Continued acceptance and support of the program is evidenced by increased employer preference for certification, recruiting preferences, promotional and pay incentives, and increased employer support for continuing professional skills training. Another indicator of support is the high number of certification and renewal fees paid for operators by their employers.

Wastewater System Classification

Wastewater systems are classified by DEQ as collection or treatment, and at one of five levels (small and I-IV) based on a system's size, complexity, and degree of difficulty to operate. These classifications establish the certificate type and grade level requirement for the designated supervisory operator. Some entities have both a collection and treatment system classification, while others have only one type of system. As of September 2024, there were a total of 393 classified systems where certification of operators is required. DEQ conducts classification reviews for a system whenever a permit action occurs (new permit, permit renewal, or permit modification) or a technical evaluation is required (plan review).

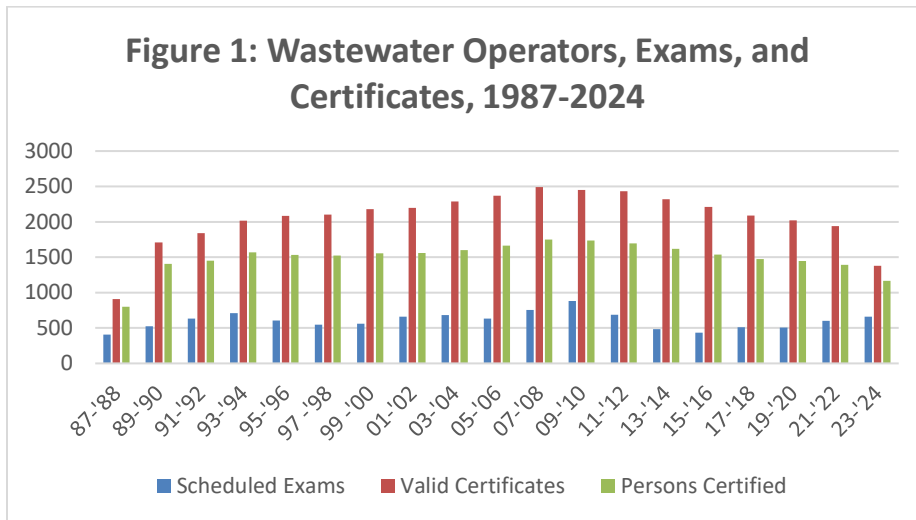
Operator Certification and Examination

Oregon operators must meet minimum standards for education and operator work experience, as well as pass an examination, to obtain a renewable certificate. DEQ examinations are standardized, closed-book tests of 100 questions for both collection and treatment system operation. Computer-based exams entirely replaced paper-based exams as of March 2013, except by special ADA request. Test questions are developed and validated by WPI and administered by PSI.

Unlike paper-based testing that was only offered a few times per year, computer-based testing is available year-round, Monday through Friday, and also on Saturdays at select test sites. Approved candidates schedule their tests with WPI contractor PSI, which provides a network of over 170 secured and proctored testing centers across the United States, including at least nine locations in Oregon. The wastewater certification program allows operators to take exams at any of the PSI locations, including in other states, in order to increase the ease of access to testing services. Computer-based testing provides immediate exam results to the examinee and reduces resources from the certification program that would otherwise be required to administer paper-based exams. However, the reduction in program resources required to arrange and proctor paper-based exams is partially offset by increased contractor fees. Overall, computer-based exams provide greater access to testing services with a lower expenditure of program staff resources. Many states and certifying organizations have transitioned to computer-based testing. During this reporting period, DEQ scheduled 658 examinations.

As of June 30, 2024, 1166 persons were certified in wastewater system operation, including 3 holding provisional certificates that require on-the-job training to achieve grade I certification. The total number of valid certificates on this date was 1378, and about 33 percent or 387 persons hold both a certificate in collection system operation and a certificate in treatment system operation.

Figure 1: Oregon's Wastewater Operator Certification Program, 1987- 2024



* Due to DEQ's transition to Your DEQ Online in March 2023, this data set is incomplete for wastewater. A complete two-year data set will be provided in the next report.

Technical Assistance, Training, and Continuing Education

During this reporting period, program staff responded to requests for assistance from system owners, operator personnel, training providers and DEQ regional staff, regarding operator certificate qualifications, application forms, continuing education, system classification, and rule interpretation. DEQ also provides certified operator and classified system information to system owners (employers), operators, vocational counselors, organizations, etc., to help with operator training, recruiting and job placement.

To be eligible to renew a certificate, an operator is required to accumulate a minimum of two (2.0) continuing education units (CEUs) or equivalent, or community college, college or university credit in acceptable subjects during the two years leading up to the certificate's two year expiration date. Operators may reinstate an expired certificate for up to one year after it expires by submitting the renewal application materials and a late fee of \$124. OESAC provides evaluation and approval of courses and trainings offered for operators in Oregon. One CEU equals 10 contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instruction. Courses must have direct application to wastewater system (collection or treatment) operator job tasks and required knowledge. Continuing education promotes professional growth, helps ensure that operators maintain their skills in keeping with changing technology and regulations, and ultimately enhances safe and effective practices in the field. Recently added CEU options include: 1. granting 2.0 CEUs for passing a WPI exam during the specified renewal period, which is done by many other states; and 2. offering up to 0.5 CEUs to operators that do career outreach to community and school groups, to generate interest in the field.

Training of operators is accomplished by a host of non-profit organizations, community colleges, foundations, public and private sector consultants, and professional trainers. In addition to classroom and formalized on-the-job training, numerous opportunities exist for traditional correspondence and distance learning, such as over the Internet. Since 2020, many additional virtual/remote CEU options have been submitted to OESAC in response to the pandemic and accepted by DEQ, which enables operators to acquire the required CEUs to maintain certification

without attending in-person events. The OESAC website (www.oesac.org) lists available courses approved for operator continuing education opportunities for certificate renewal or advancement. DEQ staff also deliver training topics including registering and applying for certification in Your DEQ Online, certification requirements, system operation, and compliance issues. DEQ staff assisted with, or made presentations at, sixteen of these events statewide during this reporting period.

Additionally, the wastewater certification program supports educators in their role to equip operators with the knowledge and experience required for the operation of systems that are becoming increasingly complex in their engineering and technological components. Although Linn Benton Community College no longer offers a Water Environment Technology (WET) certificate or Associate's degree (AAS), Umpqua Community College now has a Water Quality Technician certificate and AAS that is also approved by DEQ as acceptable training for provisional certificates and operators-in-training. Clackamas Community College continues to offer a WET one-year certificate and AAS that are also DEQ-approved training for provisional certificates and OIT as well.

Compliance, Variance, and Enforcement

DEQ determines permit compliance by reviewing self-monitoring reports, written operator designations and file records, and through field inspections, surveys, and other investigative techniques. DEQ has enforcement authority to compel compliance should it be needed, and program rules call for DEQ's director to revoke or refuse to issue an operator's certificate for grievous acts.

DEQ investigates complaints alleging operator violations of permit conditions for various acts such as failure to perform proper sampling and testing, improper facility operation, false or fraudulent records or reports, or failure to obtain proper certification. DEQ works with system owners and operators who are out of compliance, as well as those where compliance is in question, to help them find efficient and cost-effective ways to ensure compliance. DEQ encourages and often recommends a course of action to ensure both operator and operator training deficiencies are corrected in the shortest possible time. When there is an unexpected loss or departure of a system-supervising operator, upon written request, DEQ may grant a conditional time extension to allow for recruiting or for securing a contract with a certified operator. DEQ also monitors compliance of current and accurate designated system supervisor operator forms. Once DEQ's Permitting program goes live in YDO, system owners will have registered accounts and will be able to update supervisory operator designations electronically. Until then, operators may designate themselves, as long as they are authorized by the owner as a representative of the system. Many wastewater system owners meet the requirement to designate a certified supervisory operator through some type of contractual agreement that includes the services of a certified operator.

Efficiency and Service Improvements

As described previously, the Operator Certification program transitioned to an online application and payment platform called Your DEQ Online in March 2023. A program coordinator and a program assistant currently staff DEQ's Operator Certification Program. The program mostly uses phone and email for communication, guidance, and other document distribution, although renewal reminders are still sent via postal mail. The program's web page also includes a database for operators who passed the exam and those who hold current certification, including expiration date

and county of residence. Increased use of the program's web page reduces the number of telephone inquiries and the volume of material needed to be sent.

DEQ's staggered certificate expiration dates and corresponding two-year continuing education reporting distributes workload and revenue flow over the biennium. DEQ anticipates that all computer-based testing will continue to increase program efficiency and customer service to operators. The move to computer exams also benefits operators in scheduling their exams at any time of the year, on short notice, and in obtaining their certificate(s) faster.

Conclusion

The objectives of DEQ's Wastewater System Operator Certification Program are to help protect public health, Oregon's natural resources, and capital investment in infrastructure through safe and effective operation of Oregon's domestic wastewater collection and treatment systems. The program helps ensure there are an adequate number of qualified persons available to provide these services throughout the state. Some of the emerging challenges wastewater certification helps to meet through rulemaking and program improvements are those of an aging operator workforce, where the recruitment of new operators is critical to sustaining the continued level of service for Oregon communities.

The Wastewater System Operator Certification Program is working well in Oregon. Accomplishments since the last report include the transition to YDO, an extensive rulemaking effort, numerous in-person and virtual YDO and certification presentations around the state, webpage feature improvements, identification of additional facilities, and the addition of another computer exam site. For the coming biennium, DEQ will continue to seek a variety of outreach opportunities throughout the state. The program will continue to engage regularly with the Wastewater Operator Certification Advisory Committee, and the population it serves, in order to ensure needs are being met. Finally, the Operator Certification Program regularly looks to enhance program components by maintaining the most current information and resources on the web page for operators, system owners, DEQ employees, and others interested parties.