

**Date:** Sept. 9, 2024

**To:** Environmental Quality Commission

**From:** Leah Feldon, Director

**Subject:** Agenda item H, Informational item: Wastewater Operator Certification 2024 Rulemaking Sept. 26-27, 2024, EQC meeting

**Why this is important** DEQ will provide background information and inform the commission about the proposed rules for the Wastewater Operator Certification Program in preparation for a request for EQC action this November.

**Prior EQC involvement** Other than fee increases, the addition of the Small Wastewater System classification and certification in 2013, and minor rule edits, the Wastewater Operator Certification Program rules have not been significantly updated in many years. DEQ will familiarize EQC with emerging wastewater industry challenges and DEQ program needs reflected in the proposed rules.

**Background** This informational item is being presented as a precursor to a proposed action item. In November, DEQ's Wastewater Operator Certification program will be proposing permanent rule amendments to chapter 340, division 49 of the Oregon Administrative Rules under the authority of Oregon Revised Statutes 448.405 through 448.430 and 448.992.

DEQ's Wastewater Operator Certification Program grew out of a previous voluntary certification program run independently from the agency. Legislative action authorized DEQ to implement a certification program and gave similar authority to Oregon Health Authority to certify operators of drinking water systems. Many states have certification programs for wastewater operators, but certification is not required under federal law.

DEQ classifies each wastewater treatment system and collection system that manages sewage on a scale from Small Wastewater System to class I, II, III or IV, with four being the most complex. Certifications are offered at grades that match the system class (SWS, Grades I-IV). Per Oregon Administrative Rules, there must be at least one operator per work shift certified at or above the level of the treatment plant or collection system. This person is the Designated Supervisory Operator, and the owner of the wastewater treatment or collection system must inform DEQ of who that person is and update DEQ if the person in that position changes.

Trained and certified operators ensure that the systems function in a manner that protects public health and the environment, and the associated equipment is properly operated and maintained. 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. Oregon operators must meet minimum standards for education and operator work experience, as well as pass an examination, to obtain a renewable DEQ certification.

According to the U.S. Environmental Protection Agency's webpage on the water sector workforce, wastewater utilities face challenges in recruiting, training, and retaining employees. These challenges are expected to grow with roughly one-third of the wastewater sector workforce eligible to retire in the next ten years. Moreover, as the technologies used in the wastewater sector become more advanced, there is a growing need to employ talented resource protection professionals with specialized technical skills from a variety of backgrounds. Additionally, unpredictable weather patterns and natural disasters that affect wastewater system infrastructure and functionality, plus subsequent potential need for emergency response assistance, necessitate improved portability of operators across state borders.

DEQ is proposing changes to the operator certification rules in order to:

- Define full-time and part-time supervision
- Facilitate certification reciprocity among states
- Update pathways to certification
- Include an Operator-In-Training option for Small Wastewater System operators
- Simplify the way Wastewater Treatment systems are classified, and
- Add a compliance extension request option for systems whose classification increases

Given the current challenges facing wastewater treatment systems and the communities that operate them, 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. In addition, 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.

The statewide, two full time employee Wastewater Operator Certification Program certifies approximately 1,400 operators, classifies approximately 400 systems that handle domestic sewage, and is 100% fee-funded. In March 2023, the program transitioned from a paper-based application process to a fully online electronic data management system called Your DEQ Online, or YDO, which is an agency-wide platform used for most business and financial processes. The scope and approach to the rules considered the current capabilities of YDO and 2.0 FTE.

**Proposed rules and rationale** DEQ developed the rules in conjunction with the program’s standing advisory committee, which must meet twice per year as required by statute and consists of large and small wastewater system owners and operators, industry associates, and the educational community. Based on this input, DEQ has focused on the following key topics in developing its proposed revisions:

**Definition of full time and part time:**

Due to improved technologies such as Supervisory Control and Data Acquisition (SCADA) and other innovations such as remote sensors and increased automation, a larger percentage of wastewater operators work remotely, and this trend is expected to continue. As a result, the generally accepted definitions of full-time and part-time work have evolved and should be clarified to outline expectations regarding designated supervisory operator roles and responsibilities.

**Facilitate Reciprocity:**

Improved operator reciprocity among states is important if emergency response to natural disasters from neighboring states is required. “Professional Operators” certified by Water Professionals International, which is the company that creates and validates the nationally standardized wastewater exams used by over 40 states, take the same nationally standardized exam required by DEQ. Presently, the OARs require a reciprocity applicant to be certified by another state or province, so we are proposing to add “DEQ-approved certifying entity” so that the nationally standardized exam score could be accepted. In addition to meeting this exam requirement, the applicant needs to meet DEQ’s education and experience requirements.

**Update Pathways to Certification:**

Wastewater management increasingly requires computer and other technical skills that a college degree or other post-high school education can provide. At present, the Operator Certification program accepts some post-high school education in lieu of the required work experience for certification. DEQ has received feedback that this option should be expanded, particularly to attract technology-savvy candidates to vacant wastewater system operation positions where their skills are needed, and where their education can accelerate their promotion to higher grade certifications. Additionally, for operators with only high school/GED education, the experience required for higher grade certification should be reduced to mirror the requirements of surrounding states with similar certification grades and system classifications. As shown in Attachment 1, we are proposing to accept a relevant four-year degree to reduce the experience requirement at all grades, as well as accept a graduate degree for Treatment Grade IV certification. For grades III and IV for both collection and treatment, the proposed rules also include reduction of required experience for those with GED or high school only education as well, which is comparable to the experience requirements of Washington and Idaho.

**Include an Operator-In-Training option for Small Wastewater Systems:**

In order to provide an entry-level pathway to certification for new operators at the smallest systems, DEQ is including an operator-in-training (OIT) pathway for small wastewater system certification. Currently the rules only allow this pathway for Collection and treatment grade I, and it is a way for operators to sit for the exam before they have the required experience.

**Simplify the way Wastewater Treatment Systems are Classified:**

Currently, DEQ uses a multi-page classification worksheet to tally points for each feature of a treatment system to determine the treatment system classification. Our DEQ engineers used models from neighboring states, along with feedback from our standing advisory committee, to create a simpler classification system that focusses on the main type of technology used to treat the wastewater. The proposed rules keep the option to change the classification of the system up or down if other factors exist, such as additional treatment processes for solids.

**Add a compliance extension request option for systems whose classification increases (but the operators aren't certified at the increased level):**

Currently, DEQ may grant a time extension up to 120 days to find a suitable operator for a facility when their previous operator leaves the job. However, an operator who is certified at one grade lower may already be employed at that system, and the lower grade certified operator is typically familiar with and capable of successfully running the system. Therefore, DEQ has drafted rules that would allow for the extension to be increased to 365 days for systems whose classification increases for any reason, as long as the lower grade operator has been employed at that system for at least one year and the facility has not committed any recent Class I violations. This will allow that operator additional time to attain a higher certification, in order to become the primary supervisory operator.

**Key issues**

Proposed rules were developed in conjunction with program staff, DEQ engineers, and the Operator Certification programs' standing advisory committee, which consists of owners and operators of small and large wastewater systems, educators, and industry associations, including Oregon Association of Water Utilities (OAWU) and a regional representative of the Water Environment Federation (WEF). A Rulemaking Advisory Committee meeting was held on April 19, 2024, to present and receive feedback on the proposed rules, draft fiscal and economic impact statement, and environmental justice statement. All meeting materials, including the presentation and draft rules, were posted prior to the meeting on the external rulemaking webpage ([Department of Environmental Quality : Wastewater Operator Certification 2024 : Rulemaking at DEQ : State of Oregon](#)), and the public was invited to attend this meeting. Initial Rules Advisory Committee comments were addressed in the Public Notice document. There was also a public hearing and public comment period in July/August 2024, which was announced through the public notice, and all comments are being considered and responded to.

**EQC involvement** DEQ intends to bring a rule proposal for commission action at the November 2024 EQC meeting.

**Supporting materials** Attachment 1: Pathway Qualifications Tables for Collection and Treatment  
Attachment 2: Table A - Criteria for Classifying Wastewater Treatment Systems  
[EPA America's Water Sector Workforce Initiative: A Call to Action](#)  
[State of Washington Operator Certification Education and Experience Requirements and Classification of Wastewater Treatment Plants: Chapter 173-230 WAC](#)  
[Idaho Board of Wastewater Professionals License Requirements](#)

*Report prepared by Kimi Grzyb  
Wastewater System Operator Certification Program Coordinator*

**Translation or other formats**

[Español](#) | [한국어](#) | [繁體中文](#) | [Русский](#) | [Tiếng Việt](#) | [العربية](#)  
800-452-4011 | TTY: 711 | [deqinfo@deq.oregon.gov](mailto:deqinfo@deq.oregon.gov)

**Non-discrimination statement**

DEQ does not discriminate on the basis of race, color, national origin, disability, age or sex in administration of its programs or activities. Visit DEQ's [Civil Rights and Environmental Justice page](#).

Attachment 1 - Pathway Qualifications Tables for Collection and Treatment

Table 1: Collection System Operation															
Certificate Level and Qualifications	Path A			Path B			Path C			Path D			Path E		
	Ed	Exp*	System Class	Ed	Exp*	System Class	Ed	Exp*	System Class	Ed	Exp*	System Class	Ed	Exp*	System Class
SWWS	HS	1	any										<u>4</u>	<u>6mos.</u>	
Grade I	HS	1	any	WET	6mos.								<u>4</u>	<u>6mos.</u>	
Provisional I	HS	any	any												
Grade II	HS	3	any	1	2	any							<u>4</u>	<u>1</u>	
Grade III	HS	<del>6</del> <u>8</u>	<del>4</del> <u>3</u> ≥ II	1	5	2.5 ≥ II	2	4	2 ≥ II	3	3	1.5 ≥ II	<u>4</u>	<u>2</u>	<u>1</u> ≥ II
Grade IV	HS	<del>10</del> <u>8</u>	<del>5</del> <u>4</u> ≥ III	1	<del>8</del> <u>7</u>	<del>4</del> <u>3.5</u> ≥ III	2	6	3 ≥ III	3	5	2.5 ≥ III	4	4	2 ≥ III

Table 2: Treatment System Operation															
Certificate Level and Qualifications	Path A			Path B			Path C			Path D			Path E		
	Ed	Exp*	System Class	Ed	Exp*	System Class	Ed	Exp*	System Class	Ed	Exp*	System Class	<u>Ed</u>	<u>Exp*</u>	<u>System Class</u>
SWWS	HS	1	SWWS										<u>4</u>	<u>6mos.</u>	
Grade I	HS	1	I-IV										<u>4</u>	<u>6mos.</u>	
Provisional	HS	any	SWWS-IV												
Grade II	HS	3	I-IV	1	2	I-IV							<u>4</u>	<u>1</u>	
Grade III	HS	<del>6</del> <u>8</u>	<del>3</del> <u>4</u> ≥ II	1	5	2.5 ≥ II	2	4	2 ≥ II	3	3	1.5 ≥ II	<u>4</u>	<u>2</u>	<u>1</u> ≥ II
Grade IV	HS+1	<del>8</del> <u>4</u>	<del>4</del> <u>5</u> ≥ III	2	6	3 ≥ III	3	5	2.5 ≥ III	4	4	2 ≥ III	<u>MS/PHD</u>	<u>3</u>	<u>1.5</u> ≥ III

\*Black text indicates existing requirements, blue text indicates proposed requirements; time requirements are in years, unless otherwise indicated.

Attachment 2 - Table A - Criteria for Classifying Wastewater Treatment Systems

<b>Table A</b>				
<b>Criteria for Classifying Wastewater Treatment Systems</b>				
<b>Treatment Type</b>	<b>Classification</b>			
	<b>Design Average Dry Weather Flow (MGD)</b>			
	<b>≤ 1</b>	<b>&gt; 1 ≤ 5</b>	<b>&gt; 5 ≤ 10</b>	<b>&gt; 10</b>
Lagoon (Non-aerated)	I	I	I	I
Lagoon (Aerated)	I	II	II	II
Biofiltration	II	II	III	III
Extended Aeration	II	II	III	III
Conventional Activated Sludge	II	II	III	IV
Membrane Bioreactor	II	II	III	IV
Activated Sludge with Separate Fixed Film	III	III	IV	IV
Sequencing Batch Reactor, Moving Bed Biofilm Reactor, Integrated Fixed Film Activated Sludge, Oxidation Ditch, Other Suspended Growth Media	III	III	IV	IV
Activated Sludge with Tertiary Filtration (includes chemical phosphorus removal)	III	III	IV	IV
Activated Sludge with Biological Nutrient Removal	III	IV	IV	IV

If more than one treatment type is used, the highest rated treatment type will determine the classification.

Plants may be classified differently than indicated in Table A if:

- (a) They have characteristics that make operation more or less complex or difficult than other similar plants with the same flow range.
- (b) The conditions of flow or the use of the receiving waters require an unusually high degree of plant operational control.
- (c) They use an approved method of wastewater treatment that is not included in Table A.