State of Oregon Department of Environmental Quality

Notice of Proposed Rulemaking

April 30, 2025

Onsite Wastewater Management Program 2025

This package contains the following documents:

- Notice of Rulemaking
  - (a) Draft rules – edits highlighted
  - (b) Draft rules – edits included (final clean version)

Note for readers:

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Introduction

The Oregon Department of Environmental Quality invites public input on proposed permanent rule amendments to chapter 340 of the Oregon Administrative Rules.

Request for other options

During the public comment period, DEQ asks for public comment on whether there are other options for achieving the rules' substantive goals while reducing the rules' negative economic impact on business.

Overview

The 2023 legislature passed two bills that are implemented in this rulemaking related to accessory dwelling units, also commonly known as ADUs, and sewer availability. SB 835 focused on ADUs while SB 931 focused on sewer availability. Other rulemaking topics included are variances and the variance denial appeal process, nutrient and nitrate loading considerations, and operation and maintenance requirements. The scope of this rulemaking also includes housekeeping edits to clarify rules, updating verbiage to incorporate plain language, removing outdated terms and rules, and modernizing, clarifying, and enhancing existing rule language aimed at alignment with industry standards and public and environmental health protection. This rulemaking does not include any fee increases.

Procedural summary

More information

Information about this rulemaking is on the Rulemaking web page.

Public hearings

DEQ plans to hold one public hearing. Anyone can attend the hearing by webinar or teleconference.

Date: May 19, 2025
Start time: 2 p.m.

Join via Zoom

Instructions on how to join webinar or teleconference: Instructions

How to comment on this rulemaking proposal

DEQ is asking for public comment on the proposed rules. Anyone can submit comments and questions about this rulemaking. A person can submit comments by email, mail or at the public hearing.

- **Email:** Send comments by email to Onsite 2025 email box
- **Postal mail:** Oregon DEQ, Attn: Kyle Nelson, 475 NE Bellevue Dr Ste 110, Bend Or 97701
- **At the virtual public hearing:** 2 p.m., May 19, 2025 (see above)

Comment deadline

DEQ will only consider comments on the proposed rules that DEQ receives by **4 p.m. on May 23, 2025**.

Note for public university students:

ORS 192.345(29) allows Oregon public university and Oregon Health & Science University students to protect their university email addresses from disclosure under Oregon's public records law. If you are an Oregon public university or OHSU student, notify DEQ that you wish to keep your email address confidential.

Sign up for rulemaking notices

Get email or text updates about this rulemaking by either:

- Signing up through GovDelivery
- Signing up on the rulemaking website

What will happen next?

DEQ will include a written response to comments in a staff report DEQ will submit to the Environmental Quality Commission. DEQ may modify the rule proposal based on the comments received.

Proposed rules only become effective if the Environmental Quality Commission adopts them. DEQ's intended action is to present the proposed rule changes to the commission as soon as possible. DEQ intends to submit the proposed rule changes to the commission on or after June 20, 2025.

Statement of need

Proposed Rule or Topic	Discussion
Sewer Availability	
What need would the proposed rule address?	The proposed rule addresses the need to establish clearer, more practical criteria for determining the availability of sewerage systems when considering onsite wastewater (septic) permit applications and when they must be denied due to the location of a sewer connection. Previously, rules were based on physical availability without regard to existing development or proximity to urbanization, and legal availability without identifying clear authority or process.
How would the proposed rule address the need?	The proposed rule addresses the need by refining the definition of sewer availability. Under physical availability, it establishes new distance criteria based on the type of permit being requested. For single family dwelling construction and installation permits, typically associated with new development, the sewer connection must be within 300 feet of the property, while for repair or alteration permits, the connection must be within 200 feet. This updated threshold helps balance environmental and public health priorities while considering prohibitive costs to property owners. The rule also clarifies the role of local municipalities in determining legal availability and provides broad guidance on factors to consider when drafting local ordinances.
How will DEQ know the rule addressed the need?	DEQ will continue to solicit feedback from applicants, local municipalities, installers, county agents, and others to determine if the updated rule makes it easier for property owners to understand

Proposed Rule or Topic	Discussion
	and comply with requirements without unnecessary cost or delay.
Accessory Dwelling Units	
What need would the proposed rule address?	The proposed rule addresses the need for clear, consistent, and protective regulations for connecting accessory dwelling units to existing onsite septic systems. Until now, Oregon Administrative Rules have not defined ADUs or provided specific onsite wastewater system requirements for them, leading to inconsistent implementation by regulators and uncertainty for property owners. With the legalization of rural ADUs through Senate Bill 391 and the directive from Senate Bill 835 requiring EQC to adopt rules related to septic systems serving ADUs, there is a critical need to ensure these additional residential units are safely and properly served by onsite wastewater systems.
How would the proposed rule address the need?	The rule changes establish a clear definition of ADUs within DEQ's onsite wastewater regulations and provide statewide consistency in determining septic system requirements when an ADU is added to a property. The proposed rules revise key sections to define ADUs, standardize sizing criteria, and clarify when a site evaluation or system upgrade is required. These revisions enable regulators to evaluate ADU projects using transparent standards, while ensuring that septic systems are appropriately sized to handle increased wastewater volumes.
How will DEQ know the rule addressed the need?	DEQ will know the rule changes are effective if they result in more consistent decision-making and implementation across jurisdictions regarding ADU

Proposed Rule or Topic	Discussion
	septic system approvals. Success can also be measured by the reduction in regulatory confusion, technical assistance, and appeals or disputes over ADU sizing requirements, as well as feedback from regulators, installers, and property owners indicating clearer expectations and improved understanding.
Variances	
What need would the proposed rule address?	The proposed rule addresses the need for clearer guidance in the variance process, specifically to ensure that all variance proposals demonstrate protection of public health and the environment. The rule also seeks to provide a more accessible and efficient appeal process for applicants whose for cause variance requests are denied. The current rules lack clarity on the requirement that a variance must still meet the underlying protective intent of the rules, and the existing appeal option for variance denials through judicial review in circuit court is costly and burdensome for both applicants and DEQ.
How would the proposed rule address the need?	The rule revisions explicitly state that a variance proposal must be at least as protective to public health and the environment as if strict compliance with the rule were adhered to, thus helping applicants understand this key requirement upfront. Additionally, denial appeals will shift from circuit court to the Office of Administrative Hearings. This shift aligns the variance appeal process with other DEQ Water Quality permitting programs, streamlines administrative proceedings, reduces costs, and enables decisions to be made by judges experienced in administrative law.

Proposed Rule or Topic	Discussion
How will DEQ know the rule addressed the need?	DEQ will know the rule is effective if there is an improvement in the quality and completeness of variance applications, particularly if submitted proposals make explicit design considerations to be protective of public health and the environment when prescriptive standards cannot be met. For variance denial appeals, the successful transition of appeal cases to the Office of Administrative Hearings, with reduced legal costs and quicker resolutions, will indicate that the revised appeal process is functioning as intended.
Operation and Maintenance (O and M)	
What need would the proposed rule address?	The proposed rule addresses the need to modernize and clarify the operation and maintenance (O and M) requirements for higher treatment onsite wastewater systems in Oregon. As the number of these systems increases, clear, enforceable rules are essential to ensure these complex systems are maintained properly to protect public health and the environment. Existing rules are outdated, fragmented, and unclear in key areas such as maintenance responsibilities, required inspections, and compliance mechanisms, thus resulting in inconsistent implementation and oversight of the O and M program.
How would the proposed rule address the need?	The proposed rule creates a new consolidated section (OAR 340-071-0132) for O&M requirements, simplifying access to critical information and

Proposed Rule or Topic	Discussion
	reducing confusion among property owners, maintenance providers, and regulators. It clarifies roles and responsibilities for submitting reports and fees, specifies minimum maintenance requirements, and establishes penalties for non-compliance. The rule also standardizes contract requirements, requires ongoing service contracts, and mandates critical inspections like system start-ups. These updates close regulatory gaps, reduce administrative burden, and provide regulators with clear authority to ensure systems are being maintained and functioning as intended.
How will DEQ know the rule addressed the need?	DEQ will measure the effectiveness of the rule through improved compliance rates, reduced confusion among interested parties, and fewer complaints regarding unclear responsibilities or enforcement inconsistencies. Indicators of success will include timely submittal of annual inspection reports and fees, fewer reports of prematurely failed systems, and fewer complaints about insufficient service and improper maintenance. Additionally, regulators will track enforcement actions, system performance issues, and feedback from maintenance providers and property owners. This information will help evaluate whether the rule revisions have streamlined program administration and improved protection of public and environmental health.

Proposed Rule or Topic	Discussion
Nutrient and Nitrate Loading and Treatment	
What need would the proposed rule address?	The proposed rule addresses the need to explicitly consider and mitigate nutrient loads from onsite septic systems to be protective of public health and the environment. Currently, Oregon Administrative Rules do not directly address nutrient or nitrate loading, despite the known public health and ecological risks that nutrient and nitrate pollution can cause. Areas with sensitive groundwater and surface water resources, such as coastal lakes, Southern Deschutes County, and groundwater management areas (GWMAs), are especially vulnerable to impacts from nutrient and nitrate loading. Clear and direct rule language on this topic will provide onsite program agents with the specific tools needed to adequately evaluate and manage nutrient and nitrate pollution risks during the site evaluation and permitting processes.
How would the proposed rule address the need?	The proposed rule amends sections OAR 340-071-0220 and OAR 340-071-0345 to include provisions that explicitly authorize DEQ and local agents to consider nitrate and nutrient loading in the review of onsite septic system applications. These changes provide clear authority to require additional system design considerations or alternative treatment technologies (ATTs) that offer enhanced nitrogen reduction, especially in environmentally

Proposed Rule or Topic	Discussion
	sensitive areas. By moving beyond the general language of existing rules, the proposed revisions empower agents to take site-specific actions that reduce the risk of pollution and public health hazards posed by nutrient loading.
How will DEQ know the rule addressed the need?	DEQ will evaluate the effectiveness of the rule by soliciting feedback from regulators, installers, property owners, other interested parties, and DEQ's groundwater protection program about its implementation in areas identified as sensitive to nutrient or nitrate pollution, such as GWMAs and coastal lake regions. The feedback from these parties will aid in assessing whether the rule has provided the clarity and authority needed to better manage nitrate-related risks through the onsite program. Success indicators will include the increased use of nitrogen-reducing treatment systems in these sensitive areas, improved groundwater and surface water quality data where available, and more consistent application of nutrient and nitrate-related criteria in permitting decisions.

Federal relationship

ORS 183.332, 468A.327 and OAR 340-011-0029 require DEQ to attempt to adopt rules that correspond with existing equivalent federal laws and rules unless there are reasons not to do so.

The federal government does not have laws that directly apply to onsite septic systems. There is no corresponding federal regulation. Onsite septic systems are regulated by states, tribes, and local governments and not the federal government. DEQ's Onsite Wastewater Management Program is authorized by state statutes, ORS 454, 468, and 468B. However, EPA has published several technical guidance documents related to

the operation of onsite septic systems and DEQ's existing onsite septic system evaluation rules were developed to help satisfy Oregon's coastal non-point pollution requirements.

Rules affected, authorities, supporting documents

Lead division

Water Quality

Program or activity

Onsite Wastewater Management

Chapter 340 action

Adopt				
340-071-0132				
Amend				
340-071-0100	340-071-0130	340-071-0135	340-071-0140	340-071-0150
340-071-0155	340-071-0160	340-071-0162	340-071-0170	340-071-0175
340-071-0185	340-071-0205	340-071-0210	340-071-0215	340-071-0220
340-071-0260	340-071-0265	340-071-0275	340-071-0280	340-071-0290
340-071-0295	340-071-0302	340-071-0310	340-071-0340	340-071-0345
340-071-0360	340-071-0400	340-071-0415	340-071-0430	340-071-0440
340-071-0520	340-071-0600	340-071-0650	340-071-0800	340-073-0025
340-073-0026	340-073-0030	340-073-0035	340-073-0040	340-073-0050
340-073-0055	340-073-0056	340-073-0060	340-073-0075	340-073-0085
340-071-0110	340-071-0115	340-071-032	340-071-0315	
Repeal				
340-071-0115	340-071-0041			

Statutory Authority - ORS				
468.020	468.065	454.625	183.335	468B.010
468B.020	454.615			

Statutes Implemented - ORS				
454.605	454.615	454.779	454.655	454.695
468B.050	468B.055	468B.080	454.607	454.784
468.035	468.045	468.065	454.745	454.755

468B.015	468.070	454.675	454.665	454.775
454.610	454.657	454.660	454.662	454.625
468.020	454.725			

Legislation

Senate Bill 931 (2023)
Senate Bill 835 (2023)

Documents relied on for rulemaking

Document title	Document location
La Pine National Demonstration Pt	https://www.deschutes.org/cd/page/la-pine-national-demonstration-project
Evaluation of Approaches for Managing Nitrate Loading from On-Site Wastewater Systems near La Pine, Oregon	https://pubs.usgs.gov/sir/2007/5237/

Rules summary

As OAR 166-500-0030(1)(e) requires, the following are included to provide a brief summary of the proposed new rules and existing rules affected by this rulemaking.

OAR chapter 340, division 071

Rule Number	Rule Title	Explanation
0100	Definitions	Adding definitions for “Municipality,” “Accessory Dwelling Unit”, and “Time Dosing”. Clarifying ADU and single family dwelling are not a commercial facility. Expanding major maintenance definition to include replacing distribution & drop boxes. Removing automatic siphons as an approved dosing assembly. Separating definition of “design flow” from “projected daily sewage flow” and clarifying type of flow. Updating "cobbles" on table 7 to 10-inch/250-millimeter sieve size.
0110	Purpose	Updating statutes implemented end range to 454.779.

Rule Number	Rule Title	Explanation
0115	Technical Review Committee	Removing standing Technical Review Committee (TRC). Rules allow for case-by-case committee formation.
0130	General Standards, Prohibitions and Requirements	Relocating annual permit fees and reports, service contracts, and maintenance provider responsibilities to new section 0132. Clarifying design vs projected flow. Removing the specific edition of the Oregon State Plumbing Specialty Code.
0132	Operation and Maintenance	Clarifying and organizing existing O&M language into new section. Adding requirements for property owners, maintenance providers, and service contracts, as well as a Compliance subsection.
0135	Approval of New or Innovative Technologies, Materials, or Designs for Onsite Systems	Changing references to "paragraph" to be "subsection".
0140	Onsite System Fees	Adding annual report evaluation and alternative system periodic inspection to compliance recovery fee.
0150	Site Evaluation Procedures; Authorization to Use Existing Systems	Clarifying replacement area is needed for each system. Removing "qualified private contractor" from WPCF evaluations because it was intended to be removed in 2013 rulemaking. Adding agent can require a new site evaluation if the existing record does not have sufficient information to identify the approval area.
0155	Existing System Evaluation Report	Adding sewage disposal service (SDS) license requirement for people doing existing system evaluation reports (ESERs) with a National Association of Wastewater Technicians (NAWT) certification.
0160	Permit Application Procedures – Construction, Installation,	Adding sewer availability statement from sewer authority to application requirements and statement that sewer is only available within a city limit, UGB, or district. Changing the physical availability distance to 200 feet for existing single

Rule Number	Rule Title	Explanation
	Alteration, and Repair Permits	family dwelling development. Listing considerations for determining legal availability and clarifying that local municipalities determine legal availability through ordinance.
0162	Permit Application Procedures — WPCF Permits	Adding additional rules that don't apply to 14(a).
0170	Pre-Cover Inspections	Changing reference to OAR 340-071-0400(6) to be OAR 340-071-0400(5).
0175	Certificate of Satisfactory Completion	Changing reference to 340-071-0400(6)(d) to be 340-071-0400(5)(d).
0185	Decommissioning of Systems	Changing reference to OAR 340-071-0130(13) to be OAR 340-071-0132(1).
0205	Authorization to Use Existing Systems	Adding ADUs to Authorization Notice required and fees may be applied to construction-installation permit or site evaluation if Authorization is denied. Clarifying language about design flow vs projected flow, replacement area, adversely impacting the septic system, and when a site evaluation is needed.
0210	Alteration of Existing Onsite Wastewater Treatment Systems	Removing "above the original design flow" from 2(a).
0215	Repair of Existing Systems	Adding that a sewer availability statement is required prior to starting a repair if the property is within a city, UGB, or sanitary district.
0220	Standard Subsurface Systems	Adding nutrient loading to siting criteria. Updating pipe specification rules. Clarifying design flow vs. projected flow. Removing the specific edition of the Oregon State Plumbing Specialty Code.
0220 Table 2	Quantities of Sewage Flows	Adding ADUs to quantities of sewage flows.
0260	Alternative Systems, General	Changing the title of periodic inspections to alternative system inspections and adding

Rule Number	Rule Title	Explanation
		inspection may be conducted by a certified maintenance provider.
0265	Capping Fills	Changing rule reference and "projected daily sewage" to be "design" in 1(e)(C).
0275	Pressurized Distribution Systems	Relocating service contracts to 0132. Adding inspection requirements, including start-up inspections.
0280	Seepage Trench System	Changing "projected daily sewage" to be "design".
0290	Conventional Sand Filter Systems	Removing operation and maintenance and relocating owner responsibilities and service contracts to 0132. Adding seepage bed construction specifications following a sand filter or ATT. Updating pipe specification rules. Clarifying design flow vs projected flow.
0295	Conventional Sand Filter Design and Construction	Adding inspection requirements, including start-up inspections. Removing drain media and filter fabric requirements at the base of the filter for conventional sand systems. Clarifying design flow vs projected flow.
0302	Recirculating Gravel Filter (RGF)	Removing operation and maintenance standards and relocate service contracts to 0132.
0310	Steep Slope Systems	Clarifying design flow vs projected flow.
0315	Tile Dewatering System	Removing ASTM Standard D-3034 in 2(d).
0340	Holding Tanks	Relocating operation and maintenance to 0132.
0345	Alternative Treatment Technologies (ATTs)	Adding nutrient loading to citing criteria, NSF/ANSI 385 to ATT disinfection standards, inspection requirements, including start-up inspections, and that ATT models that treat nitrate-nitrogen pollution may be required by the agent in sensitive environments. Removing operation and maintenance standards and relocate service contracts to 0132.

Rule Number	Rule Title	Explanation
0360	Absorption Trenches in Saprolite	Removing "projected daily" from "projected daily sewage flow".
0400	Geographic Area Special Considerations	Removing River Road - Santa Clara area in Lane County geographic area special considerations because area has been sewered since late 1980s.
0415	For Cause Variances	Clarifying that variance proposals must be at least as protective as the rules require.
0430	Variance Hearings and Decisions	Adding ongoing sampling as a possible condition for a variance approval.
0440	Variance Appeals	Changing the for cause variance denial appeal process from a circuit court to a contested case hearing procedure.
0520	Large Systems	Removing" or siphons "from (1) and (5).
0600	Sewage Disposal Service Licenses	Changing references to "subparagraph" to "paragraph".
0650	Training and Certification Requirements for System Installers and Maintenance Providers	Removing exception to take certification exam for installers originally certified before Dec. 31, 2003.
0800	Tables	Adding ADUs to quantities of sewage flows in Table 2.

OAR chapter 340, division 073

Rule Number	Rule Title	Explanation
340-073	Construction Standards	Changing “the department” to “DEQ”.
0025	Tank Construction	Removing automatic siphons as an approved dosing assembly.
0026	Septic Tanks	Removing steel septic tanks.
0030	Dosing Septic Tank	Removing references to "siphon" from the rules.

0035	Distribution Boxes	Changing "the department" to "DEQ".
0040	Distribution Boxes, Drop Boxes, and Diversion Valves: Drop Boxes	Changing "the Department" to "DEQ".
0041	Filter Fabric	Removing filter fabric specification rules, which pertains to sand filters only.
0050 and 0055	Dosing Tanks; Dosing Assemblies: Effluent Pumps, Controls and Alarms	Removing automatic siphons as an approved dosing assembly. Clarifying design flow vs projected flow.
0056	Distribution Boxes, Drop Boxes, and Diversion Valves: Effluent Filters	Changing "the Department" to "DEQ".
0060	Pipe Materials and Construction	Moving header pipe specifications to Effluent Sewer Pipe subsection. Updating pipe specification rules.
0075	Non-water-Carried Waste Disposal Facilities, Materials, and Construction: Self-Contained Nonwater-Carried Toilet Facilities	Changing "the Department" to "DEQ".
0085	Non-water-Carried Waste Disposal Facilities, Materials, and Construction: Flexible Membrane Liners for Sand Filters Treating Septic Tank Effluent	Changing the statute implemented from "454.780" to "454.607".

Fee analysis

This rulemaking does not involve fees.

Statement of fiscal and economic impact

Below are the expected fiscal impacts for the Onsite Wastewater Management Program 2025 rulemaking for state agencies, local governments, the public, small businesses, and large companies.

Fiscal and economic impact

The proposed rules are intended to improve clarity, transparency, and efficiency, with most sectors experiencing little to no fiscal impact. While some local governments and businesses may experience slight fiscal benefits from streamlined processes due to updated O&M rules and minor housekeeping changes, other changes may result in additional costs for noncompliant property owners or for small businesses conducting existing system evaluations under a National Association of Wastewater Technicians (NAWT) accreditation that will require an additional sewage disposal license now. DEQ expects minimal fiscal impacts except from shifting variance appeals to a contested case hearing; however, due to variance appeals being rare occurrences, DEQ does not expect a significant fiscal impact over time. The rules provide transparency in areas, such as ADUs and nutrient loading, with little to no impacts on costs for property owners. Overall, the changes aim to balance the needs of the public, local governments, businesses, and DEQ while promoting more effective rules.

Statement of cost of compliance

State agencies

Other than DEQ, state agencies will be impacted similarly to the public, as they will interact with the rules as a customer. For example, the Oregon Parks and Recreation Department would apply for onsite septic permits just the same as a member of the public.

Many of the proposed rule changes have no fiscal impact on DEQ, such as removing or updating technology standards and changes that add transparency to current practices. Some rule changes may have a minimal fiscal impact. For example, in cases of ongoing noncompliance, the proposed changes include accessing the existing ‘compliance recovery fee’ to recoup some of the costs associated with the additional time spent on O&M enforcement. Eliminating the Technical Review Committee will save DEQ time spent maintaining a standing committee and will allow DEQ to devote limited resources to forming tailored committees to address relevant topics as needed. While rare, variance appeals associated with circuit court challenges are extremely expensive. The proposed rules to change the variance appeal process to contested case hearings are

expected to have a positive fiscal impact on DEQ with lower expected costs to defend decisions of the program that may be challenged. However, the change in process may result in more frequent variance denial appeals that could lead to fiscal impacts associated with increased expenditures, primarily in the form of staff time. These potential impacts are not expected to outweigh the ones that are currently associated with the costs of the circuit court process.

Local governments

Impacts to local governments will be similar to those of the public.

Local governments implementing the onsite program, known as Contract Counties, may experience a minimal fiscal impact in the form of fewer fees collected. This is due to the expansion of the definition of “major maintenance” to include replacing a distribution or drop box, so these situations will no longer require a permit if performed by a licensed installer or certified maintenance provider. Changes to the O&M rules may increase annual reporting compliance, resulting in increased fee revenue. However, increased compliance will require increased administrative work to process reports received, which may cancel out any fiscal gains. The fiscal impacts of changes to sewer availability rules are unknown due to legal availability being determined by municipalities.

Public

Sewer availability: The onsite program rules outline when a septic permit may be denied if sewer is available. Proposed changes to physical availability could help some existing homeowners whose properties are within 200-299 feet of a sewer connection save money in the short term by opting for septic repairs or alterations instead of connecting to sewer. Fiscal impacts are uncertain because legal availability depends on determinations by municipalities. Additionally, costs vary based on sewer connections and septic system types.

Accessory dwelling units: DEQ expects little to no fiscal impacts because the proposed rules mostly add transparency to how ADUs are currently addressed. One change that may benefit septic system owners is that the rules will allow agents to apply fees paid for Authorization Notices to site evaluation or construction-installation applications if the Authorization Notice application is denied, which will save applicants money in permitting fees.

Variances: The change for appealing a variance denial will have a fiscal impact with an expected reduction in the costs associated with challenging a denial decision. The current rules require appealing in circuit court and the proposed rules include appealing to an administrative law judge through a contested case hearing, which is generally a less costly process. Additionally, DEQ is proposing to clarify in rule that a variance must be at least as protective as if strictly adhering to all the rules and standards that are designed to be protective of public health and the environment, which is common practice already. This change is expected to have little to no fiscal impact and may save applicants the cost of applying if they know upfront that their proposal is not going to be protective enough. Owners of septic systems approved through the variance process

may experience increased expenses associated with changes made to the conditions of approval, such as ongoing sampling or reporting; however, the number of variance approvals has historically been a very small fraction of the total number of annual onsite septic system approvals, so the number of people this may impact is relatively small.

Nutrient and Nitrate Loading and Treatment: The proposed rule change may result in higher material costs in areas where nutrients and nitrates are a concern because technologies capable of higher nutrient removal may be associated with increased cost. Agents are already allowed under OAR 340-071-0130(1) to require more than the minimum standards in rule in order to protect public health and the environment, but the proposed rule change explicitly calls out nutrient and nitrate loading as a consideration. Therefore, fiscal impacts are expected to vary based on site specific situations.

Operation and maintenance changes: Property owners not complying with the rules may face additional fiscal impacts through an additional 'compliance recovery fee,' up to the amount of the periodic inspection fee, currently set by DEQ at $636.

Housekeeping: The proposed rule changes will have no fiscal impact on most, with some experiencing a positive impact by not having to pay for a permit in certain situations, such as replacing a distribution or drop box. This work will be defined as 'major maintenance' rather than requiring a permit, as long as the work is performed by a licensed installer or certified maintenance provider.

Large businesses - businesses with more than 50 employees

Impacts to large businesses will be minimal. High-Density Polyethylene, HDPE, manufacturers may experience a fiscal impact with the removal of plastic pipe limits that would have otherwise prohibited the use of HDPE pipe. HDPE is usually considered for larger projects where boring the pipe is cheaper than trenching.

Small businesses – businesses with 50 or fewer employees

Impacts to small businesses are expected to be minimal. There may be fiscal impacts in the form of additional costs to obtain a DEQ license for businesses that conduct existing system evaluations with a NAWT certification only. DEQ is proposing to add a license requirement with that credential because there is currently no way for DEQ to enforce violations for those qualified solely through a NAWT certification to do septic evaluations that are usually conducted for real estate transactions. A new Sewage Disposal Service license currently costs $512 and is good for three years. Changes to O&M rules, like removing term limits to contracts, are intended to reduce maintenance provider business' staff time. However, the new requirement for maintenance providers to conduct start-up inspections prior to agents issuing Certificates of Satisfactory Completion may be an increase in workload and site visits for maintenance providers that don't already provide that service. DEQ does not know how many businesses don't already provide this service, so it is not possible to provide an accurate estimate of how businesses will be impacted. Likewise, the addition of annual reporting to the compliance recovery fee could impact maintenance providers that do not submit annual reports and fees on-time, currently set by DEQ at $60, but it is not possible to know how many businesses will be noncompliant.

ORS 183.336 Cost of Compliance Effect on Small Businesses

a. Estimated number of small businesses and types of businesses and industries with small businesses subject to proposed rule.
There are about 340 active certified maintenance providers in Oregon, and some small business may employ multiple maintenance providers, so DEQ estimates that about 275 small businesses may be impacted by changes to the O&M rules.

The number of small businesses applying for permits or otherwise subject to onsite rules vary by year and are not tracked separately from residential applications, so DEQ cannot quantify.

b. Projected reporting, recordkeeping and other administrative activities, including costs of professional services, required for small businesses to comply with the proposed rule.
The changes to remove contract term limits and setting a limit of three years for how long records must be maintained will save maintenance providers time in renewing contracts and tracking records. Otherwise, the proposed changes will have a neutral impact on reporting, recordkeeping and other administrative activities to comply with the proposed rules.

c. Projected equipment, supplies, labor and increased administration required for small businesses to comply with the proposed rule.
DEQ does not expect an impact.

d. Describe how DEQ involved small businesses in developing this proposed rule.
Small businesses have been involved at various phases in developing the proposed rules. Several housekeeping changes were carried over from a rulemaking that was paused in 2019 and never carried through that involved several small business representatives on the rulemaking committee. For this rulemaking, DEQ engaged a small group of maintenance providers to consider how rule changes may improve challenges with the O&M program. The changes proposed do not include the more significant changes suggested by the group of maintenance providers, as program staffing is limited and unable to implement larger changes. Lastly, the advisory committee for this rulemaking has representatives of small businesses and they have provided input.

Documents relied on for fiscal and economic impact

Document title	Document location
Oregon Revised Statute 454	oregonlegislature.gov/bills_laws/ors/ors454.html
Oregon Administrative Rules 340-071	https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=1479

Oregon Administrative Rules 340-073	https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=1481

Advisory committee fiscal review

DEQ appointed an advisory committee.

As ORS 183.33 requires, DEQ asked for the committee's recommendations on:

- Whether the proposed rules would have a fiscal impact,
- The extent of the impact, and
- Whether the proposed rules would have a significant adverse impact on small businesses; if so, then how DEQ can comply with ORS 183.540 to reduce that impact.

The committee reviewed the draft fiscal and economic impact statement, and its findings are stated in the approved minutes dated Feb. 26, 2025.

The committee came to a consensus that the fiscal impact statement accurately reflects the expected costs and benefits at the Feb. 26, 2025, Rulemaking Advisory Committee meeting. The committee determined the proposed rules would not have a significant adverse impact on small businesses in Oregon.

Housing cost

As ORS 183.534 requires, DEQ evaluated whether the proposed rules would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel. Onsite systems are not typically used on lots of this size because it would be challenging to fit the onsite system and a 1,200-square-foot-house on a 6,000-square-foot parcel, so the proposed rules are unlikely to broadly increase housing costs. It is possible that the cost of development could increase on lots that are sensitive to nutrient or nitrate loading, where a more protective nutrient removal technology may be required, however, the rules already allow for that under OAR 340-071-0130(1).

Racial equity

The adoption of the proposed rules would address sewer availability, ADUs, nutrient loading, variances, and O and M statewide, affecting various sectors, both public and private. These changes are designed to improve water quality and ensure equitable environmental outcomes.

The proposed rule does not impose differing requirements based on demographics and is expected to be implemented uniformly across communities. However, improving sewer availability and supporting ADU development could disproportionately benefit Black, Indigenous and People of Color or historically underserved communities, where infrastructure gaps and housing shortages are often more severe. Addressing nutrient loading and expanding onsite variance requirements will help mitigate environmental burdens in areas where water quality issues disproportionately affect marginalized populations. Enhanced O and M protocols aim to safeguard long-term system reliability and public health, particularly in communities that have historically faced underinvestment in infrastructure.

While the rule's implementation will be uniform, its potential benefits may indirectly support racial equity by addressing long-standing disparities in access to safe and reliable wastewater infrastructure, ultimately contributing to healthier and more resilient communities across the state.

Environmental justice considerations

ORS 182.545 requires natural resource agencies to consider the effects of their actions on environmental justice issues. DEQ considered these effects by acknowledging that changes to rules concerning sewer availability, ADUs, nutrient loading, variances, and O and M could have potential EJ impacts on various communities. These communities often include populations that are disproportionately affected by environmental hazards and may have limited access to resources and political representation, such as low-income and rural groups.

Low-income rural communities often depend on onsite wastewater systems due to the unavailability of community-wide sanitary sewerage systems. Changes in these rules, such as updating standards for sewer availability, nutrient loading, or requiring Alternative Treatment Technology systems, could impose financial burdens on these at-risk communities. To address these concerns, DEQ has included representatives from EJ-affected communities in the Rulemaking Advisory Committee to ensure that the financial and practical implications of rulemaking are fully considered and to minimize potential negative or disproportionate impacts on these populations.

Adopting the proposed rule changes is intended to improve water quality and public health outcomes statewide. Measures to reduce nutrient loading and enhance O and M practices are critical to protecting environmental and community health, particularly in underserved areas that often experience greater environmental risks. Supporting ADU development and improving sewer availability standards can also promote equitable access to safer and more sustainable housing options.

DEQ has shared information about these potential impacts through RAC meetings, the Fiscal Impact Statement, public notices, and the staff report. These efforts aim to ensure transparency and inclusivity in decision-making and to align rule changes with environmental justice principles, contributing to healthier and more resilient communities across Oregon.

Land use

ORS 197.180 requires that agency actions, including rulemakings be consistent with the statewide planning goals and acknowledged comprehensive plans. DEQ's State Agency Coordination plan provides that issuance of on-site sewage disposal permits are actions affecting land use. For this reason, division 71 requires that a permit application include a land use compatibility statement which includes a local government determination of compatibility with the local plan.

Land-use considerations

DEQ determined whether the proposed rules involve programs or actions that affect land use by reviewing its Statewide Agency Coordination Plan. The plan describes the programs that DEQ determined significantly affect land use. DEQ considers that its programs specifically relate to the following statewide goals:

Goal	Title
5	Natural Resources, Scenic and Historic Areas, and Open Spaces
6	Air, Water and Land Resources Quality
11	Public Facilities and Services
16	Estuarine Resources
19	Ocean Resources

Statewide goals also specifically reference the following DEQ programs:

- Nonpoint source discharge water quality program – Goal 16
- Water quality and sewage disposal systems – Goal 16
- Water quality permits and oil spill regulations – Goal 19

Determination

DEQ determined that the following proposed rules affect programs or activities that the DEQ State Agency Coordination Program considers a land-use program.

OAR 340-071-0160
OAR 340-071-0205

DEQ’s statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules. Construction-installation permits and authorization notices are activities identified as affecting land use in OAR 340-018-0030(4)(c) and a Land Use Compatibility Statement is a required exhibit for both activities.

EQC prior involvement

DEQ did not present additional information specific to this proposed rule revision.

Advisory committee

Background

DEQ convened the Onsite Wastewater Management Program 2025 advisory committee. The committee included representatives from a variety of interested parties related to onsite systems and met four times. The committee's web page is located at: Onsite 2025

The committee members were:

Onsite Wastewater Management Program 2025 Advisory Committee	
Name	**Representing**
Brian Rabe	Elkhorn Consulting
Todd Cleveland	Deschutes County
Kevin Riddle	Sweet Water Sanitation /Oregon Onsite Wastewater Association
Sheryl Ervin	Infiltrator Water Technologies
Peggy Lynch	League of Women Voters of Oregon
Lucas Marshall	Clatsop County
Nicholas Peasley	Oregon Association of Realtors
Michelle Miranda	City of Eugene representing League of Oregon Cities
Amy Pepper	City of Wilsonville/Oregon Association of Clean Water Agencies
Lisa Rogers	Casa of Oregon

Meeting notifications

To notify people about the advisory committee's activities, DEQ:

- Sent GovDelivery bulletins, a free email subscription service, to the following lists:
    - Rulemaking
    - Subscribers of DEQ public notices
    - Onsite (Septic) Sewage Systems
- Added advisory committee announcements to DEQ's calendar of public meetings at DEQ Calendar.

Committee discussions

In addition to the recommendations described under the Statement of Fiscal and Economic Impact section above, the committee discussed potential implementation challenges and strategies to ensure compliance with the proposed rule changes. They

provided feedback on the clarity of regulatory language, suggesting refinements to improve understanding and minimize unintended burdens. The committee also explored opportunities for outreach and education to support affected interested parties in adapting to the new requirements. Their input was instrumental in refining the final rule language and ensuring that the regulatory changes align with industry practices while achieving the intended environmental and public health benefits.

Public engagement

Public notice

DEQ provided notice of the proposed rulemaking and rulemaking hearing by:

- On April 30, 2025, filing notice with the Oregon Secretary of State for publication in the May 2025 Oregon Bulletin;
- Posting the notice, invitation to comment and draft rules on the rulemaking web page.
    - Emailing approximately 22,092 interested parties on the following DEQ lists through GovDelivery:
        - Rulemaking
        - DEQ public notices
        - Onsite (Septic) Sewage Systems
    - Emailing the following key legislators required under ORS 183.335:
        - Sen Mark Meek (Chair, Senate Committee on Finance and Revenue)
        - Sen David Brock Smith (Vice Chair, Senate Committee on Energy and Environment)
        - Sen Todd Nash (Vice-Chair, Senate Committee on Natural Resources & Wildfire)
        - Sen Jeff Golden (Chair, Senate Committee on Natural Resources & Wildfire)
        - Rep Mark Owens (Co-Chair, House Committee on Ag, Natural Resources, Land Use & Water)
        - Rep Ken Helm (Co-Chair, House Committee on Ag, Natural Resources, Land Use & Water)
    - Emailing advisory committee members,
    - Posting on the DEQ event calendar

How to comment on this rulemaking proposal

DEQ is asking for public comment on the proposed rules. Anyone can submit comments and questions about this rulemaking. A person can submit comments by email, mail or at the public hearing.

- **Email:** Send comments by email to Onsite 2025 email box
- **Postal mail:** Oregon DEQ, Attn: Kyle Nelson, 475 NE Bellevue Dr Ste 110, Bend Or 97701
- **At the virtual public hearing:** 2 p.m., May 19, 2025 (see below)

Comment deadline

DEQ will only consider comments on the proposed rules that DEQ receives by **4 p.m., on May 23, 2025.**

Note for public university students:
ORS 192.345(29) allows Oregon public university and Oregon Health & Science University students to protect their university email addresses from disclosure under

Oregon's public records law. If you are an Oregon public university or OHSU student, notify DEQ that you wish to keep your email address confidential.

Public hearing

DEQ plans to hold one public hearing.

The public hearing is online and by teleconference only.

Anyone can attend a hearing by webinar or teleconference.

Date: May 19, 2025

Start time: 2 p.m.

Join via Zoom

Instructions on how to join webinar or teleconference: Instructions

DEQ will consider all comments and testimony received before the closing date. DEQ will summarize all comments and respond to comments in the Environmental Quality Commission staff report.

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.

Draft Rules – Edits Highlighted

Key to Identifying Changed Text:

~~Deleted Text~~
New/inserted text

DIVISION 71
ONSITE WASTEWATER TREATMENT SYSTEMS

340-071-0100
Definitions

As used in OAR 340, divisions 71 and 73, unless otherwise specified:

(1) "Absorption Area" means the entire area used for underground dispersion of the liquid portion of sewage including the area designated for a future replacement system. It may consist of a seepage pit, absorption field, or combination of the two. It may also consist of a cesspool, seepage bed, bottomless sand filter, or evapotranspiration-absorption system.

(2) "Absorption Facility" means a system of open-jointed or perforated piping, alternative distribution units, or other seepage systems for receiving the flow from septic tanks or other treatment facilities that are designed to distribute effluent for oxidation and absorption by the soil within the zone of aeration.

(3) "Absorption Field" means a system of absorption trenches, a seepage trench, or a system of seepage trenches.

(4) "Absorption Trench" means a ditch or a trench installed into soil, permeable saprolite, or diggable bedrock, with vertical sides and a substantially flat bottom.

(5) “Accessory dwelling unit”, ADU, means an interior, attached or detached residential structure that is used in connection with or that is accessory to a single-family dwelling, and is located on the same lot or parcel as the single-family dwelling. It contains provisions for cooking, eating, sleeping and sanitation, as defined by state or local building code, and does not exceed two bedrooms and size limitations established by state or local land use regulations.

(6)~~(5)~~ "Active Sand Dune" means wind-drifted ridges and intervening valleys, pockets, and swales of sand adjacent to the beach. The sand is grayish-brown with little or no horizon, color, or textural difference. Active dunes are either bare of vegetation or lack sufficient vegetation to prevent blowing of sand.

(7)~~(6)~~ "Aerobic Sewage Treatment Facility" means a sewage treatment plant that incorporates a means of introducing air and oxygen into the sewage to provide aerobic

biochemical stabilization during a detention period. Aerobic sewage treatment facilities may include anaerobic processes as part of the treatment system.

(8)~~(7)~~ "Aerobic System" means an alternative system that incorporates a septic tank or other treatment facility, an aerobic sewage treatment facility, and an absorption facility to provide treatment before dispersal.

(9)~~(8)~~ "Agent" means the director or person authorized to act on the Director's behalf, frequently referring to DEQ or contract county staff performing onsite permitting activities.

(10)~~(9)~~ "Alteration" means expansion or change in location of an existing system or any part of it. Major alteration is the expansion or change in location of the soil absorption facility, treatment unit, or any part of it. Minor alteration is the replacement or relocation of a septic tank or other components of the system other than the soil absorption facility, or a change in distribution technique or method.

(11)~~(10)~~ "Alternative System" means any onsite wastewater treatment system DEQ or the Commission approves for use in lieu of the standard subsurface system.

(12)~~(11)~~ "Alternative Treatment Technologies" means an alternative system that incorporates aerobic and other treatment technologies or units not specifically described elsewhere in this division.

(13)~~(12)~~ "Approved Material" means construction items that DEQ approved for use.

(14)~~(13)~~ "Approved Criteria" means methods of design or construction that DEQ approved for use.

(15)~~(14)~~ "ASTM" means American Society of Testing Materials.

(16)~~(15)~~ "Authorization Notice" means a written document issued by an agent establishing that an existing onsite wastewater treatment system appears adequate for its intended use.

(17)~~(16)~~ "Authorized Representative" means a person with written authorization to act as another person's delegate.

~~(17) "Automatic Siphon" means a hydraulic device designed to rapidly discharge the contents of a dosing tank between predetermined liquid levels.~~

(18) "Bedroom" means any room within a dwelling accepted as a bedroom by state or local building departments.

(19) "Biochemical Oxygen Demand" (BOD5) means the quantity of oxygen used in the biochemical oxidation of organic matter in five days at 20 degrees centigrade under specified conditions and reported as milligrams per liter (mg/L).

(20) "Black Waste" means human body wastes including feces, urine, other substances of body origin, and toilet paper.

(21) "Capping Fill System" means an alternative system that incorporates an absorption trench with an effective sidewall installed a minimum of 12 inches into the natural soil below a soil cap of specified depth and texture.

(22) "Carbonaceous Biochemical Oxygen Demand" (CBOD5) means BOD minus the nitrogenous oxygen demand, typically measured in mg/L.

(23) "Cesspool" means a lined pit that receives raw sewage, allows separation of solids and liquids, retains the solids, and allows liquids to seep into the surrounding soil through perforations in the lining.

(24) "Chemical Recirculating Toilet Facility" means a toilet facility in which black wastes are deposited and carried from a bowl by a combination of chemically treated and filtered liquid waste and water.

(25) "Chemical Toilet Facility" means a nonflushing, nonrecirculating toilet facility in which black wastes are deposited directly into a chamber containing a solution of water and chemical.

(26) "Clayey Soil" means mineral soil with over 40 percent clay that shrinks and develops wide cracks when dry and swells and shears when wet, forming slickensides and wedge-shaped structure. Clayey soil is very hard or extremely hard when dry, very firm when moist, and very sticky and very plastic when wet.

(27) "Claypan" means a dense, compact clay layer in the subsoil. It has a much lower permeability than the overlying soil horizon from which it is separated by an abrupt boundary. Claypans are hard when dry and very sticky and very plastic when wet and impede movement of water, air, and growth of plant roots.

(28) "Combustion Toilet Facility" means a toilet facility wherein black wastes are deposited directly into a combination chamber for incineration.

(29) "Commercial Facility" means any structure or building or portion of one other than a single-family dwelling or single-family dwelling with an accessory dwelling unit.

(30) "Commission" means the Environmental Quality Commission.

(31) "Community System" means an onsite system that serves more than one lot or parcel, more than one condominium unit, or more than one unit of a planned unit development.

(32) "Completed Application" means an application form that is completed in full, is signed by the owner or owner's authorized representative or, for WPCF permits, by the applicant or applicant's authorized representative, and is accompanied by all required exhibits and fees.

(33) "Conditions Associated with Saturation" means soil morphological properties that may indicate the presence of a water table that persists long enough to impair system function and create a potential health hazard. These conditions include depleted matrix chromas caused by saturation and not a relict or parent material feature, and the following:

(a) High chroma matrix with iron depletions. Soil horizons whose matrix chroma is 3 or more in which there are some visible iron depletions having a value 4 or more and a chroma of 2 or less. Iron-manganese concentrations as soft masses or pore linings may be present but are not diagnostic of conditions associated with saturation.

(b) Depleted matrix with iron concentrations. Soil horizons whose matrix color has a value of 4 or more and a chroma of 2 or less as a result of removal of iron and manganese oxides. Some visible zones of iron concentration are present as soft masses or pore linings.

(c) Depleted matrix without iron concentrations. Soil horizons whose color is more or less uniform with a value of 4 or more and a chroma of 2 or less as a result of removing iron and manganese oxides. These horizons lack visible iron concentrations as soft masses or pore linings.

(d) Reduced matrix. Soil horizons whose color has a value of 4 or more and a chroma of 2 or less with hues that are often, but not exclusively, on the grey pages of the Munsell Color Book. On exposure to air, yellow colors form within 24 hours as some of the ferrous iron oxidizes.

(e) Dark colored soils with organic matter accumulation. Mineral soils with a high amount of decomposed organic matter in the saturated zone, a value of 3 or less, and a chroma of 1 or less. Included in this category are organic soils with a minor amount of mineral matter.

(f) Soils with a dark surface. The upper surface layer has a dark color with a value of 3 or less and a chroma of 1 or less immediately underlain by a layer with a chroma of 2 or less.

(g) Iron stripping and staining in sandy soils. Soil horizons in which iron/manganese oxides or organic matter or both have been stripped from the matrix, exposing the primary base color of soil materials. The stripped areas and trans-located oxides or organic matter form a diffuse splotchy pattern of two or more colors.

(h) Salt-affected soils. Soils in arid and semi-arid areas that have visible accumulations of soluble salts at or near the ground surface.

(i) Dark colored shrink-swell soils. Vertisols whose colors have values of 3 or less and chromas of 1 or less. Iron concentrations may be present but are not diagnostic of conditions associated with saturation.

(j) Other soils that lack the diagnostic value and chroma as described in this section but remain saturated long enough to impair system function and have a high water table under OAR 340-071-0130(223).

(34) "Confining Layer" means a layer associated with an aquifer that, because of low permeability, does not allow water to move through it perceptibly under head differences occurring in the groundwater system.

(35) "Construction" includes installing a new system, or a part of one, or altering, repairing, or extending an existing system. The grading, excavating, and earth-moving work connected with installing, altering, or repairing a system or a part of one is considered system construction.

(36) "Contract County" means a local unit of government that has entered into an agreement with DEQ under OAR 340-071-0120 to perform duties of DEQ under this division.

(37) "Conventional Sand Filter" means a filter with 2 feet or more of sand filter media designed to chemically and biologically process septic tank or other treatment unit effluent from a pressure distribution system operated on an intermittent basis.

(38) "Curtain Drain" means a groundwater interceptor that is designed to divert groundwater from an absorption facility. The drain creates a "curtain" to block water from reaching the absorption facility.

(39) "Cut-manmade" means a land surface resulting from mechanical land shaping operations where the modified slope is greater than 50 percent and the depth of cut exceeds 30 inches.

(40) "DEQ" means the Department of Environmental Quality.

(41) "Design Capacity" means the ~~maximum daily~~ design flow a system is designed to treat and disperse.

(42) "Design Criteria" means the criteria used in designing onsite wastewater treatment systems including but not limited to dimensions, geometry, type of materials, size of drain media or filter media, absorption field sizing, depth, grade or slope, hydraulic loading rate, or any other factor relevant to the successful operation of the system. It does not include absorption area siting criteria.

(43) “Design flow” means the maximum daily quantity of sewage for which a system is sized and designed. The design flow allows for a safety margin and reserve capacity for the system during heavy use.

(44)~~(43)~~ "Designer" means a person who plans onsite wastewater treatment and dispersal technology for an onsite system.

(45)~~(44)~~ "Director" means the Director of the Department of Environmental Quality.

(46)~~(45)~~ "Disposal Trench" means "absorption trench."

(47)~~(46)~~ "Distribution Box" means a watertight structure that receives septic tank or other treatment facility effluent and distributes it concurrently into 2 or more header pipes leading to the absorption area.

(48)~~(47)~~ "Distribution Pipe" means an open-jointed or perforated pipe used in the dispersion of septic tank or other treatment facility effluent into absorption trenches, seepage trenches, or seepage beds.

(49)~~(48)~~ "Distribution Unit" means a distribution box, dosing tank, diversion valve or box, header pipe, or other means of transmitting septic tank or other treatment unit effluent from the effluent sewer to the distribution pipes.

(50)~~(49)~~ "Diversion Valve" means a watertight structure that receives septic tank or other treatment facility effluent through one inlet and distributes it to 2 outlets, only one of which is used at a time.

(51)~~(50)~~ "Dosing Tank" means a watertight receptacle placed after a septic tank or other treatment facility equipped with a~~n automatic siphon or~~ pump.

(52)~~(51)~~ "Dosing Septic Tank" means a unitized device performing functions of both a septic tank and a dosing tank.

(53)~~(52)~~ "Drainfield" means an "absorption field."

(54)~~(53)~~ "Drain Media" means clean washed gravel or clean, crushed rock with a minimum size of 3/4 inch and a maximum size of 2-1/2 inches used in the distribution of effluent. The material must be durable and inert so that it will maintain its integrity, will not collapse or disintegrate with time, and will not be detrimental to the performance of the system. Drain media also includes any product or material approved by DEQ for distribution of effluent in an absorption field.

(55)~~(54)~~ "Dwelling" means any structure or building or portion thereof that is used, intended, or designed to be occupied for human living purposes including but not limited to houses, houseboats, boathouses, mobile homes, recreational cabins, travel trailers, hotels, motels, and apartments.

(56)~~(55)~~ "Effective Seepage Area" means the sidewall area within an absorption trench or a seepage trench from the bottom of the trench to a level 2 inches above the distribution pipes, the sidewall area of any cesspool, seepage pit, unsealed earth pit privy, graywater waste absorption sump seepage chamber, or trench with drain media substitute, or the bottom area of a pressurized soil absorption facility installed in soil.

(57)~~(56)~~ "Effective Soil Depth" means the depth of soil material above a layer that impedes movement of water and air and growth of plant roots. Layers that differ from overlying soil material enough to limit effective soil depth are hardpans, claypans, fragipans, compacted soil, bedrock, saprolite, and clayey soil.

(58)~~(57)~~ "Effluent Filter" means an effluent treatment device installed on the outlet of a septic tank or outside the septic tank in a separate enclosure and designed to prevent the passage of suspended matter larger than 1/8 inch in size.

(59)~~(58)~~ "Effluent Lift Pump" means a pump used to lift septic tank or other treatment facility effluent to a higher elevation.

(60)~~(59)~~ "Effluent Sewer" means that part of the system of drainage piping that conveys partially treated sewage from a septic tank or other treatment facility into a distribution unit or an absorption facility.

(61)~~(60)~~ "Emergency Repair" means immediate action to repair a failing system when sewage is backing up into a dwelling or building or to repair a broken pressure sewer pipe. It does not include the construction of new or additional absorption facilities but does include using the septic tank as a temporary holding tank until new or additional absorption facilities can be permitted and constructed.

(62)~~(61)~~ "Equal Distribution" means the distribution of effluent to a set of absorption trenches in which each trench receives effluent in equivalent or proportional volumes.

(63)~~(62)~~ "Escarpment" means any naturally occurring slope greater than 50 percent that extends vertically 6 feet or more from toe to top, is characterized by a long cliff or steep slope that separates two or more comparatively level or gently sloping surfaces, and may intercept one or more layers that limit effective soil depth.

(64)~~(63)~~ "Existing Onsite Wastewater Treatment System" means any installed onsite wastewater treatment system constructed in conformance with the rules, laws, and local ordinances in effect at the time of construction.

(65)~~(64)~~ "Existing System" means "existing onsite wastewater treatment system."

(66)~~(65)~~ "Failing System" means any system that discharges untreated or incompletely treated sewage or septic tank effluent directly or indirectly onto the ground surface or into public waters or that creates a public health hazard.

(67)~~(66)~~ "Family Member" means any one of two or more persons related by blood or by law.

(68)~~(67)~~ "Fecal Coliform" means bacteria common to the digestive systems of warm-blooded animals and cultured in standard tests. The term is typically used to indicate fecal pollution and the possible presence of enteric pathogens and is measured as colonies/100ml.

(69)~~(68)~~ "Filter Fabric" means a woven or spun-bonded sheet material used to impede or prevent the movement of sand, silt, and clay into drain media.

(70)~~(69)~~ "Fragipan" means a loamy subsurface horizon with high bulk density relative to the horizon above, seemingly cemented when dry, and weakly to moderately brittle

when moist. Fragipans are mottled and low in organic matter, and they impede movement of water and air and growth of plant roots.

(71)~~(70)~~ "Governmental Unit" means the state or any county, municipality, or political subdivision or any agency thereof.

(72)~~(71)~~ "Grade" means the rate of fall or drop in inches per foot or the percentage of fall of a pipe.

(73)~~(72)~~ "Graywater" means household sewage other than "black wastes," such as bath water, kitchen waste water, and laundry wastes.

(74)~~(73)~~ "Graywater Waste Sump" means a receptacle or series of receptacles designed to receive hand-carried graywater for dispersal into the soil.

(75)~~(74)~~ "Grease and Oils" means a component of sewage typically originating from food stuffs, consisting of compounds of alcohol or glycerol with fatty acids.

(76)~~(75)~~ "Groundwater Interceptor" means any natural or artificial groundwater or surface water drainage system, including drain tile, curtain drain, foundation drain, cut banks, and ditches, that intercept and divert groundwater or surface water from the area of the absorption facility.

(77)~~(76)~~ "Hardpan" means a hardened layer in soil caused by cementation of soil particles with silica, calcium carbonate, magnesium carbonate, iron, or organic matter. The hardness does not change appreciably with changes in moisture content. Hardpans impede movement of water and air and growth of plant roots.

(78)~~(77)~~ "Header Pipe" means a tight-jointed part of the sewage drainage conduit that receives septic tank effluent from the distribution box, drop box, or effluent sewer and conveys it to the absorption area.

(79)~~(78)~~ "Headwall" means a steep slope at the head or upper end of a land slump block or unstable landform.

(80)~~(79)~~ "Holding Tank" means a watertight receptacle designed to receive and store sewage to facilitate treatment at another location.

(81)~~(80)~~ "Holding Tank System" means an alternative system consisting of the combination of a holding tank, service riser, and level indicator (alarm), designed to receive and store sewage for intermittent removal for treatment at another location.

(82)~~(81)~~ "Hydrosplitter" or "hydrasplitter" means a hydraulic device to proportion flow under pressure by the use of one or more orifices.

(83)~~(82)~~ "Incinerator Toilet Facility" means "combustion toilet facility."

(84)~~(83)~~ "Individual System" means a system that is not a community system.

(85)~~(84)~~ "Individual Water Supply" means a source of water and a distribution system that provides water for drinking, culinary, or household uses and is not a public water supply system.

(86)~~(85)~~ "Industrial Waste" means any liquid, gaseous, radioactive, or solid waste or a combination thereof resulting from any process of industry, manufacturing, trade, or business or from developing or recovering any natural resources.

(87)~~(86)~~ "Intermittent Sand Filter" means a conventional sand filter.

(88)~~(87)~~ "Intermittent Stream" means any public surface water or groundwater interceptor that continuously flows water for a period greater than two months in any one year but not continuously for that year.

(89)~~(88)~~ "Invert" is the lowest portion of the internal cross section of a pipe or fitting.

(90)~~(89)~~ "Large System" means any onsite system with a ~~projected daily sewage~~ design flow greater than 2,500 gallons.

(91)~~(90)~~ "Lateral Pipe" means "distribution pipe."

(92)~~(91)~~ "Maintenance" means taking the actions necessary to keep onsite system components properly functioning as designed. Maintenance is further defined as:

(a) Major Maintenance means ~~is cleaning~~, repairing or replacing a broken distribution or drop box or a broken or plugged effluent sewer pipe where:

(A) ~~The pipe is the same make and model~~ The box or pipe meets the requirements in this division and construction standards in division 073; ~~or~~ and

(B) ~~The pipe meets the requirements in this division; and~~ A certified maintenance provider with a sewage disposal service bond or certified licensed installer performs the work.

~~(C) A certified maintenance provider or certified licensed installer performs the work.~~

(b) Minor Maintenance includes, but is not limited to, repairing or replacing of a tank riser or lid, or pump, screen, filter, or other component internal to the tank that:

(A) Is the same make and model; or

(B) Meets the requirements in this division.

(93)~~(92)~~ "Maintenance provider" means a person who performs maintenance of onsite systems and:

(a) Possesses adequate skills and knowledge regarding onsite wastewater treatment, absorption facilities, and system functions to competently inspect and maintain onsite systems, and

(b) Is certified under OAR 340-071-0650.

(94) “Municipality” means a city, county, county service district, special service district, sanitary authority or sanitary district.

(95)~~(93)~~ "Mechanical Sewage Treatment Facility" or "Mechanical Oxidation Sewage Treatment Facility" means an aerobic sewage treatment facility.

(96)~~(94)~~ "Nonwater-Carried Waste Facility" means any toilet facility that has no direct water connection, including but not limited to pit privies, vault privies, and portable toilets.

(97)~~(95)~~ "Occupant" means any person living or sleeping in a dwelling.

(98)~~(96)~~ "Onsite Sewage Disposal System" means "onsite wastewater treatment system."

(99)~~(97)~~ "Onsite Wastewater Treatment System" means any existing or proposed subsurface onsite wastewater treatment and dispersal system including but not limited to a standard subsurface, alternative, experimental, or nonwater-carried sewage system. It does not include systems that are designed to treat and dispose of industrial waste as defined in OAR chapter 340, division 045.

(100)~~(98)~~ "Operating Permit" means a WPCF permit issued under these rules.

(101)~~(99)~~ "Owner" means any person who alone, jointly, or severally:

(k) Has legal title to any single lot, dwelling, dwelling unit, or commercial facility;

(l) Has care, charge, or control of any real property as agent, executor, administrator, trustee, commercial lessee, or guardian of the estate of the holder of legal title; or

(m) Is the contract purchaser of real property.

(102)~~(100)~~ "Peer Review" means a review by at least three members of a scientific community recognized as experts in the field of study and well-rehearsed with scientific principles and experimentation.

(103)~~(101)~~ "Permanent Groundwater Table" means the upper surface of a saturated zone that exists year-round. The thickness of the saturated zone and resulting elevation of the permanent groundwater table may fluctuate as much as 20 feet or more annually, but the saturated zone and associated permanent groundwater table is present at some depth beneath land surface throughout the year.

(104)~~(102)~~ "Permit" means the written document, issued and signed by an agent, that authorizes a permittee to install a system or any part of one and, in some cases, to operate and maintain the system under the permit.

(105)~~(103)~~ "Permit Action" means an agent's issuing, modifying, renewing, reinstating, or revoking a permit.

(106)~~(104)~~ "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any of its agencies, and the federal government and any of its agencies.

(107)~~(105)~~ "Pollution" or "Water Pollution" means any alteration of the physical, chemical, or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt, or odor of the waters, or any discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state that, alone, or in connection with any other substance, threatens to create a public nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses or to livestock, wildlife, fish, or other aquatic life or their habitat.

(108)~~(106)~~ "Portable Toilet" means any self-contained chemical toilet facility that is housed within a portable toilet shelter and includes but is not limited to construction-type chemical toilets.

(109)~~(107)~~ "Portable Toilet Shelter" means any readily relocatable structure built to house a toilet facility.

(110)~~(108)~~ "Pressure Distribution Lateral" means piping and fittings in pressure distribution systems that distribute septic tank or other treatment unit effluent to drain media through small diameter orifices.

(111)~~(109)~~ "Pressure Distribution Manifold" means piping and fittings in a pressure distribution system that supply effluent from pressure transport piping to pressure distribution laterals.

(112)~~(110)~~ "Pressure Distribution System" means any system designed to uniformly distribute septic tank or other treatment unit effluent under pressure in an absorption facility or treatment unit.

(113)~~(111)~~ "Pressure Transport Piping" means piping that conveys sewage effluent from a septic tank or other treatment or distribution unit typically by means of a pump ~~or siphon~~.

(114)~~(112)~~ "Pretreatment" means the wastewater treatment that takes place prior to discharging to any component of an onsite wastewater treatment system, including but not limited to pH adjustment, oil and grease removal, BOD5 and TSS reduction, screening, and detoxification.

(115)~~(113)~~ "Prior Approval" means a written approval for an onsite wastewater treatment system for a specific lot issued before January 1, 1974.

(116)~~(114)~~ "Prior Construction Permit" means a subsurface wastewater treatment system construction- installation permit issued before January 1, 1974, by a county that had an ordinance requiring construction-installation permits for subsurface wastewater treatment systems.

(117)~~(115)~~ "Privy" means a structure used for disposal of human waste without the aid of water. It consists of a shelter built above a pit or vault in the ground into which human waste falls.

(118)~~(116)~~ "Projected Daily Sewage Flow"~~ or "design flow"~~ means the anticipated peak daily quantity of sewage ~~production from a facility~~ an establishment produces. ~~for which a system is sized and designed. The projected daily sewage flow allows for a safety margin and reserve capacity for the system during periods of heavy use.~~

(119)~~(117)~~ "Public Health Hazard" means the presence of sufficient types or amounts of biological, chemical, physical, or radiological agents relating to water or sewage that cause, or threaten to cause, human illness, disorders, or disability. These include but are not limited to pathogenic viruses, bacteria, parasites, toxic chemicals, and radioactive isotopes.

(120)~~(118)~~ "Public Waters" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private, except private waters that do not combine or effect a junction with natural surface or underground waters, that are wholly or partially within or bordering the state or within its jurisdiction.

(121)~~(119)~~ "Recirculating Gravel Filter (RGF)" means a gravel filter wastewater treatment system in which a portion of the filtered effluent is mixed with septic tank effluent in a recirculation/dilution tank and redistributed to the filter.

(122)~~(120)~~ "Recirculating Gravel Filter System" means a recirculating gravel filter and an absorption facility used to treat wastewater.

(123)~~(121)~~ "Redundant Absorption Field System" means a system in which two complete absorption fields are installed, the absorption trenches of each system alternate with each other, and only one system operates at a given time.

(124)~~(122)~~ "Repair" means installing all portions of a system necessary to eliminate a public health hazard or pollution of public waters a failing system creates.

(a) Major repair is replacing the soil absorption facility, treatment unit, or any part of it.

(b) Minor repair is replacing a septic tank, broken pipe, distribution unit, or any part of the onsite system external to the septic tank or treatment facility except the soil absorption system. Unless classified as a major repair or major maintenance, any replacement of a part of a system with a part that does not meet the original design specifications is a minor repair.

(125)~~(123)~~ "Residential Strength Wastewater" means septic tank effluent that does not typically exceed five-day biochemical oxygen demand (BOD5) of 300 mg/L; total suspended solids (TSS) of 150 mg/L; total Kjeldahl nitrogen (TKN) of 150 mg/L; oil & grease of 25 mg/L; or concentrations or quantities of other contaminants normally found in residential sewage.

(126)~~(124)~~ "Sand Filter Media" means a medium sand or other approved material used in a conventional sand filter. The media must be durable and inert so that it will maintain its integrity, will not collapse or disintegrate with time, and will not be detrimental to the system's performance. The particle size distribution of the media must be determined through a sieve analysis conducted under ASTM C-117 and ASTM C-136. The media must comply with the following particle size distribution: 100 percent passing the 3/8 inch sieve, 95 percent to 100 percent passing the No. 4 sieve, 80 percent to 100 percent passing the No. 8 sieve, 45 percent to 85 percent passing the No. 16 sieve, 15 percent to 60 percent passing the No. 30 sieve, 3 percent to 15 percent passing the No. 50 sieve, and 4 percent or less passing the No. 100 sieve.

(127)~~(125)~~ "Sand Filter Surface Area" means the area of the level plane section in the medium sand horizon of a conventional sand filter located 2 feet below the bottom of the drain media containing the pressurized distribution piping.

(128)~~(126)~~ "Sand Filter System" means an alternative system that combines a septic tank or other treatment unit; a dosing system with effluent pump and controls ~~or dosing siphon~~, piping and fittings; a sand filter; and an absorption facility to treat wastewater.

(129)~~(127)~~ "Sanitary Drainage System" means that part of a system's drainage piping that conveys untreated sewage from a building or structure to a septic tank or other treatment facility, to a service lateral at a curb or in a street or alley, or to another disposal terminal holding human or domestic sewage. The sanitary drainage system consists of a building drain or building drain and building sewer.

(130)~~(128)~~ "Saprolite" means weathered material underlying the soil that grades from soft thoroughly decomposed rock to rock that has been weathered sufficiently so that it can be broken in the hands or cut with a knife. It has rock structure instead of soil structure and does not include hard bedrock or hard fractured bedrock.

(131)~~(129)~~ "Saturated Zone" means a three-dimensional layer, lens, or other section of the subsurface in which all open spaces including joints, fractures, interstitial voids, and pores are filled with groundwater. The thickness and extent of a saturated zone may vary seasonally or periodically in response to changes in the rate or amount of groundwater recharge or discharge.

(132)~~(130)~~ "Scum" means a mass of sewage solids floating at the surface of sewage that is buoyed up by entrained gas, grease, or other substances.

(133)~~(131)~~ "Seepage Area" means "effective seepage area."

(134)~~(132)~~ "Seepage Bed" means an absorption system having absorption trenches wider than 3 feet.

(135)~~(133)~~ "Seepage Pit" means a cesspool that has a treatment facility such as a septic tank ahead of it.

(136)~~(134)~~ "Seepage Trench System" means a system with absorption trenches with more than 6 inches of drain media below the distribution pipe.

(137)~~(135)~~ "Self-Contained Nonwater-Carried Waste Containment Facility" means a system in which all waste is contained in a watertight receptacle, including but not limited to vault privies, chemical toilets, combustion toilets, recirculating toilets, and portable toilets.

(138)~~(136)~~ "Septage" means the domestic liquid and solid sewage pumped from septic tanks, cesspools, holding tanks, vault toilets, chemical toilets or other similar domestic sewage treatment components or systems and other sewage sludge not derived at sewage treatment plants.

(139)~~(137)~~ "Septic Tank" means a watertight receptacle that receives sewage from a sanitary drainage system and is designed to separate solids from liquids, digest organic matter during a period of detention, and allow the liquids to discharge to a second treatment unit or to a soil absorption facility.

(140)~~(138)~~ "Septic Tank Effluent" means partially treated sewage that is discharged from a septic tank.

(141)~~(139)~~ "Serial Distribution" means the distribution of effluent to a set of absorption trenches constructed at different elevations in which one trench at a time receives effluent in consecutive order beginning with the uppermost trench by means of a drop box, a serial overflow, or another approved distribution unit. The effluent in an individual trench must reach a level of 2 inches above the distribution pipe before effluent is distributed to the next lower trench.

(142)~~(140)~~ "Sewage" means water-carried human and animal wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with any groundwater infiltration, surface waters, or industrial waste that may be present.

(143)~~(141)~~ "Sewage Disposal Service" means:

(a) Constructing onsite wastewater treatment systems, including placing portable toilets, or any part of one;

(b) Pumping out or cleaning onsite wastewater treatment systems, including portable toilets, or any part of one;

(c) Disposing of material derived from pumping out or cleaning onsite wastewater treatment systems. including portable toilets; or

(d) Grading, excavating, and earth-moving work connected with the operations described in ~~subsection~~ paragraph (a) of this section.

(144)~~(142)~~ "Sewage Stabilization Pond" means a pond designed to receive the raw sewage flow from a dwelling or other building and retain that flow for treatment without discharge.

(145)~~(143)~~ "Site Evaluation Report" means a report on the evaluation of a site to determine its suitability for an onsite system prepared under OAR 340-071-0150.

(146)~~(144)~~ "Slope" means the rate of fall or drop in feet per 100 feet of the ground surface. It is expressed as percent of grade.

(147)~~(145)~~ "Soil Permeability" refers to the ability of a soil to transmit water or air.

(148)~~(146)~~ "Soil Separate" means the size of soil particles described in Table 7.

(149)~~(147)~~ "Soil Texture" means the amount of each soil separate in a soil mixture. Field methods for judging the texture of a soil consist of forming a cast of soil, both dry and moist, in the hand and pressing a ball of moist soil between thumb and finger.

(a) The major textural classifications are defined as follows and shown in Table 6:

(A) Sand: Individual grains can be seen and felt readily. Squeezed in the hand when dry, this soil will fall apart when the pressure is released. Squeezed when moist, it will form a cast that will hold its shape when the pressure is released but will crumble when touched.

(B) Loamy Sand: Consists primarily of sand, but has enough silt and clay to make it somewhat cohesive. The individual sand grains can readily be seen and felt. Squeezed when dry, the soil will form a cast that will readily fall apart, but if squeezed when moist, a cast can be formed that will withstand careful handling without breaking.

(C) Sandy Loam: Consists largely of sand, but has enough silt and clay present to give it a small amount of stability. Individual sand grains can be readily seen and felt. Squeezed in the hand when dry, this soil will readily fall apart when the pressure is released. Squeezed when moist, it forms a cast that will not only hold its shape when the pressure is released but will withstand careful handling without breaking. The stability of the moist cast differentiates this soil from sand.

(D) Loam: Consists of an even mixture of the different sizes of sand and of silt and clay. It is easily crumbled when dry and has a slightly gritty, yet fairly smooth feel. It is slightly plastic. Squeezed in the hand when dry, it will form a cast that will withstand careful handling. The cast formed of moist soil can be handled freely without breaking.

(E) Silt Loam: Consists of a moderate amount of fine grades of sand, a small amount of clay, and a large quantity of silt particles. Lumps in a dry, undisturbed state appear quite cloddy, but they can be pulverized readily; the soil then feels soft and floury. When wet, silt loam runs together in puddles. Either dry or moist, casts can be handled freely without breaking. When a ball of moist soil is passing between thumb and finger, it will not press out into a smooth, unbroken ribbon but will have a broken appearance.

(F) Clay Loam: Consists of an even mixture of sand, silt, and clay that breaks into clods or lumps when dry. When a ball of moist soil is pressed between the thumb and finger, it will form a thin ribbon that will readily break, barely sustaining its own weight. The moist soil is plastic and will form a cast that will withstand considerable handling.

(G) Silty Clay Loam: Consists of a moderate amount of clay, a large amount of silt, and a small amount of sand. It breaks into moderately hard clods or lumps when dry. When moist, a thin ribbon or 1/8-inch wire can be formed between thumb and finger that will sustain its weight and will withstand gentle movement.

(H) Silty Clay: Consists of even amounts of silt and clay and very small amounts of sand. It breaks into hard clods or lumps when dry. When moist, a thin ribbon or 1/8 inch or smaller wire formed between thumb and finger will withstand considerable movement and deformation.

(I) Clay: Consists of large amounts of clay and moderate to small amounts of sand and silt. It breaks into very hard clods or lumps when dry. When moist, a thin, long ribbon or 1/16-inch wire can be molded with ease. Fingerprints will show on the soil, and a dull to bright polish is made on the soil by a shovel.

(b) Soil textural characteristics described in the United States Department of Agriculture Textural Classification Chart are incorporated here by reference. This textural classification chart is based on the Standard Pipette Analysis as defined in the United States Department of Agriculture, Soil Conservation Service Soil Survey Investigations Report No. 1 (See Table 6). [Table not included. See ED. NOTE.]

(150)~~(148)~~ "Soil with Rapid or Very Rapid Permeability" means:

(a) Soil that contains 35 percent or more of coarse fragments 2 millimeters in diameter or larger by volume with interstitial soil of sandy loam texture or coarser;

(b) Coarse textured soil defined as loamy sand or sand in this rule; or

(c) Stones, cobbles, gravel, and rock fragments with too little soil material to fill interstices larger than 1 millimeter in diameter.

(151)~~(149)~~ "Split Waste Method" means a process where black waste sewage and graywater from the same dwelling or building are managed by separate systems.

(152)~~(150)~~ "Stabilized Dune" means a sand dune that is similar to an active dune except that vegetative growth is dense enough to prevent blowing of sand. The surface horizon is either covered by a mat of decomposed and partially decomposed leaves, needles, roots, twigs, moss, or other vegetative material or contains roots to a depth of at least 6 inches and has a color value of 3 or less.

(153)~~(151)~~ "Standard Subsurface System" means an onsite wastewater treatment system consisting of a septic tank, distribution unit, and absorption facility constructed under OAR 340-071-0220.

(154)~~(152)~~ "Steep Slope System" means a seepage trench system installed on slopes greater than 30 percent and less than or equal to 45 percent.

(155)~~(153)~~ "Subsurface Absorption System" means the combination of a septic tank or other treatment unit and an effluent sewer and absorption facility.

(156)~~(154)~~ "Subsurface Sewage Disposal" means "subsurface wastewater treatment."

(157)~~(155)~~ "Subsurface Disposal System" means "subsurface absorption system."

(158)~~(156)~~ "Subsurface Wastewater Treatment" means dispersing wastewater from a septic tank or other treatment unit into the zone of aeration to be further treated through physical, chemical, or biological processes.

(159)~~(157)~~ "System" or "onsite system" means "onsite wastewater treatment system."

(160)~~(158)~~ "Temporary Groundwater Table" means the upper surface of a saturated zone that exists only on a seasonal or periodic basis. Like a permanent groundwater table, the elevation of a temporary groundwater table may fluctuate, but a temporary groundwater table and associated saturated zone will dry up for a period of time each year.

(161)~~(159)~~ "Test Pit" means an open pit dug to sufficient size and depth to permit thoroughly examining the soil to evaluate its suitability for subsurface wastewater treatment.

(162)~~(160)~~ "Third-Party" means a consulting firm, research institute, academic institute, or other similar entity with no vested interest in the outcome of test results of a material, design, or technology under evaluation.

(163)~~(161)~~ "Tile Dewatering System" means an alternative system in which the absorption facility is encompassed with field collection drainage tile to reduce and control a groundwater table and create a zone of aeration below the bottom of the absorption facility.

(164) "Time Dosing" means a method of pumping effluent where there is adequate effluent storage to manage surge flows within a time period, either daily or weekly, and meter the flow over the course of more than one day. This method requires adequate storage in a dosing tank or similar container, a control panel with a timer, and floats to activate timer and disable pump in periods of low flows.

(165)~~(162)~~ "Toilet Facility" means a fixture housed within a toilet room or shelter to receive black waste.

(166)~~(163)~~ "Total Kjeldahl Nitrogen" (TKN) means the combination of ammonia and organic nitrogen, excluding nitrate and nitrite nitrogen.

(167)~~(164)~~ "Total Nitrogen" (TN) means the sum of all nitrogen forms.

(168)~~(165)~~ "Total Suspended Solids" (TSS) means solids in wastewater that can be removed readily by standard filtering procedures in a laboratory and reported as milligrams per liter (mg/L).

(169)~~(166)~~ "Treatment" means the alteration of the quality of wastewaters by physical, chemical, or biological means or combination thereof to reduce potential degradation of water quality or the environment and risk to public health.

(170)~~(167)~~ "Treatment Standard 1" means a 30-day average of less than 20 mg/L of BOD5 and 20 mg/L of TSS. A 30-day average of less than 17 mg/L of CBOD5 is acceptable in lieu of the BOD5 value.

(171)~~(168)~~ "Treatment Standard 2" means a 30-day average of less than 20 mg/L of BOD5 and 20 mg/L of TSS, a 30-day geometric mean of less than 400 fecal coliform per 100 milliliters, and a 30-day average of 30 mg/L of TN. A 30-day average of less than 17 mg/L of CBOD5 is acceptable in lieu of the BOD5 value.

(172)~~(169)~~ "Turbidity" means the optical condition of waters caused by suspended or dissolved particles or colloids that scatter and absorb light rays instead of transmitting light in straight lines through the water column. Turbidity may be expressed as nephelometric turbidity units (NTU) measured with a calibrated turbidimeter.

(173)~~(170)~~ "Underdrain Media" means the material placed under the sand filter media in a sand filter and consists of clean, washed pea gravel with 100 percent passing the 1/2 inch sieve, 18 to 100 percent passing the 1/4 inch sieve, 5 to 75 percent passing the No. 4 sieve, 24 percent or less passing the No. 10 sieve, 2 percent or less passing the No. 16 sieve, and 1 percent or less passing the No. 100 sieve.

(174)~~(171)~~ "Unstable Landforms" means areas showing evidence of mass downslope movement such as debris flow, landslides, rockfall, and hummock hill slopes with undrained depressions upslope. Examples are landforms exhibiting slip surfaces roughly parallel to the hillside; landslide scars and curving debris ridges; fences, trees, and telephone poles that appear tilted; and tree trunks that bend uniformly as they enter the ground. Active sand dunes are unstable landforms.

(175)~~(172)~~ "Vertisols" means a mineral soil characterized by a high content of swelling-type clays that in dry seasons cause the soils to develop deep, wide cracks.

(176)~~(173)~~ "WPCF Permit" means a Water Pollution Control Facilities permit that has been issued under OAR chapter 340, divisions 045 or 071.

(177)~~(174)~~ "Wastewater" means "sewage."

(178)~~(175)~~ "Zone of Aeration" means the unsaturated zone that occurs below the ground surface and above the point at which the upper limit of the water table exists.

[ED. NOTE: Tables referenced are not included in rule text. All tables are found in OAR 340- 071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.605 & 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 15-1986, f. & ef. 8-6-86; DEQ 6-1988, f. & cert. ef. 3-17-88; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 15-2000, f. & cert. ef. 10-11-00; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14; DEQ 11-2014, f. & cert. ef. 10-15-14

340-071-0110
Purpose

These rules establish requirements for constructing, altering, repairing, operating, and maintaining onsite wastewater treatment systems. Their purpose is to restore and maintain the quality of public waters and to protect the public health and general welfare of the people of the State of Oregon.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.605 - 454.~~780~~779
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-050

340-071-0130
General Standards, Prohibitions and Requirements

(1) Protection of public waters from public health hazards. An agent may not authorize installing or using a system that is likely to pollute public waters or create a public health hazard. If, in the judgment of the agent, the minimum standards in this division will not adequately protect public waters or public health on a particular site, the agent must require a system to meet requirements that are protective. This may include but is not limited to increasing setbacks, increasing drainfield sizing, or using an alternative system. The agent must provide the applicant with a written statement of the specific reasons why more stringent requirements are necessary.

(2) Approved treatment and dispersal required. All wastewater must be treated and dispersed in a manner approved under these rules.

(3) Prohibited discharges of wastewater. A person may not discharge untreated or partially treated wastewater or septic tank effluent directly or indirectly onto the ground surface or into public waters. Such discharge constitutes a public health hazard and is prohibited.

(4) Prohibited discharges to systems. A person may not discharge into any system cooling water, air conditioning water, water softener brine, groundwater, oil, hazardous materials, roof drainage, or other aqueous or nonaqueous substances that are detrimental to the system's performance or to groundwater.

(5) Increased flows prohibited. Except where specifically allowed by this division, a person may not connect a dwelling or commercial facility to a system if the total

projected daily sewage flow would be greater than that allowed under the original system construction-installation permit.

(6) System capacity. Each system must have adequate capacity to properly treat and disperse the maximum projected daily sewage flow. The projected ~~quantity of~~ daily sewage flow must be determined from OAR 340-071-0220 Table 2 or other information the agent determines to be valid.

(7) Material standards. All materials used in onsite systems must comply with standards in this division and OAR chapter 340, division 073.

(8) Encumbrances. Before a permit to install a new system may be issued, the site for the new system must be approved under OAR 340-071-0150 and be free of encumbrances, such as easements or deed restrictions, that could prevent the installation or operation of the system from conforming with the rules of this division.

(9) Plumbing fixtures connected. All plumbing fixtures in dwellings, commercial facilities, and other structures from which sewage is or may be discharged must be connected to and discharge into an approved area-wide sewerage system or an approved onsite system that is not failing.

(10) Future connection to sewerage system. DEQ encourages placing plumbing in buildings to facilitate connection to a sewerage system in areas where a district has been formed to provide sewerage facilities.

(11) Property lines crossed: All or part of an onsite system, including areas for future repair or replacement, may be located on one or more lots or parcels different from the lot or parcel on which the facility the system serves is located. The lots and parcels may be under the same or different ownership:

(a) For each lot or parcel different from and under different ownership than the lot or parcel served, the owner of the lot or parcel served must ensure that a utility easement and covenant against conflicting uses is executed and recorded in such owner's favor, on a form the agent approves, in the county land title records. The easements and covenants must accommodate the parts of the system, including a 10-foot setback surrounding the areas for future repair or replacement, that lie beyond the property line of the facility

served and must allow entry by the grantee, successor, or assigns to install, maintain, and repair the system;

(b) For each lot or parcel different from, but under the same ownership as, the lot or parcel served, the owner of the property must execute and record in the county land title records, on a DEQ-approved form , an easement and a covenant in favor of the State of Oregon:

(A) Allowing the state's officers, agents, employees, and representatives to enter and inspect, including by excavation, that portion of the system, including setbacks, on the servient lot or parcel;

(B) Agreeing not to put that portion of the servient lot or parcel to a conflicting use; and

(C) Agreeing, upon severance of the lots or parcels, to grant or reserve and record a utility easement and covenant against conflicting uses, in a form DEQ approves, in favor of the owner of the lot or parcel served by the system under ~~subsection~~ paragraph (a) of this section.

(12) Initial and replacement absorption area. Except as provided in specific rules, the absorption area, including installed system and replacement area, must not be subject to activity that is likely, in the opinion of the agent, to adversely affect the soil or the functioning of the system. This may include but is not limited to vehicular traffic, covering the area with asphalt or concrete, filling, cutting, or other soil modification.

~~(13) Operation and maintenance. Owners of onsite systems must operate and maintain their systems in compliance with all permit conditions and applicable requirements in this division and must not create a public health hazard or pollute public waters. Operation and maintenance requirements for systems under WPCF permits are established by the WPCF permits required in this division.~~

(13)~~(14)~~ Construction. An agent may limit the time period during which a system can be constructed to ensure that soil conditions, weather, groundwater, or other conditions do not adversely affect the reliability of the system.

(14)~~(15)~~ Permit requirements:

(a) A person may not cause or allow constructing, altering, or repairing a system or any part of one without a WPCF permit issued under OAR 340-071-0162 or a construction-installation, alteration, or repair permit under OAR 340-071-0160, 340-071-0210, and 340-071-0215 except for emergency repairs authorized under OAR 340-071-0215(2~~1~~) and (3~~2~~);

(b) The following systems must be constructed and operated under a renewable WPCF permit issued pursuant to OAR 340-071-0162:

(A) Any system or combination of systems located on the same property or serving the same facility and having a total ~~sewage flow~~ design capacity greater than 2,500 gpd. Flows from single-family residences or equivalent flows on separate systems incidental to the purpose of the large system or combination of systems (e.g., caretaker residence for a mobile home park) need not be included;

(B) A system of any size, if the septic tank effluent produced is greater than residential strength wastewater as defined in OAR 340-071-0100 or systems using pretreatment methods other than grease traps and grease interceptor tanks to achieve residential strength wastewater;

(C) Except as provided for in section (~~16~~15)(d) of this rule, other systems that are not described in this division and do not discharge to surface public waters or the ground surface.

(15)~~(16)~~ WPCF permits for existing facilities:

(a) The owner of an existing system required to have a WPCF permit under subsection (~~15~~14)(b) of this rule is not required to obtain a WPCF permit until a system major repair or major alteration of a system, or facility expansion, is necessary;

(b) The permittee of an existing aerobic treatment unit, recirculating gravel filter, commercial sand filter, or alternative treatment technology system constructed or operating under a WPCF permit that is no longer required under section (~~15~~14) of this rule may request DEQ to terminate the permit:

(A) The permittee must submit, on a DEQ-approved form:

(i) A copy of the service contract required in OAR 340-071-0132 ~~340-071-0290, 340-071-0302, or 340-071-0345~~; and

(ii) A written statement from a maintenance provider certifying that the system is not failing.

(B) DEQ will send a letter to the permittee to terminate a WPCF permit. The letter will be deemed a Certificate of Satisfactory Completion for the permitted system.

(c) DEQ may terminate WPCF permits for existing holding tanks for which permits are no longer required under section (~~15~~14) of this rule. DEQ will send a letter to the permittee to terminate the permit. The letter will be deemed a Certificate of Satisfactory Completion for the permitted system;

(d) Permittees of other existing systems or combination of systems constructed or operating under a WPCF permit may request DEQ terminate the permit if all of the following conditions are met:

(A) The system or combination of systems located on the same property or serving the same facility must have a total ~~sewage flow~~ design capacity of 2,500 gpd or less; and

(B) The system or combination of systems must not produce septic tank effluent greater than residential strength wastewater as defined in OAR 340-071-100; and

(C) The system or combination of systems must have been operating under a WPCF permit before July 1, 2007; and

(D) The absorption facility is described in this division and does not discharge to surface public waters or the ground surface; and

(E) DEQ determines that the system or combination of systems is in compliance with the waste disposal limitations specified in the WPCF permit; and

(F) The permittee submits a copy of a service contract that meets the requirements of OAR 340-071-0132 ~~340-071-0302(6);~~ and

(G) The permittee submits a written statement from a maintenance provider certifying that the system is not failing;

(H) Owners of and maintenance providers for these systems must operate and maintain the system under the requirements described for recirculating gravel filter systems in OAR 340-071-0132 and 0302~~(4), (5), and (6)~~. DEQ will send a letter to the permittee to terminate the WPCF permit. The letter will be deemed a Certificate of Satisfactory Completion for the permitted system. Conditions specified in the Certificate of Satisfactory Completion continue in force as long as the system is in use.

(16)~~(17) Annual permit fees and reports:~~

~~(a) Owners of pressurized distribution, sand filter, recirculating gravel filter, and alternative treatment technology systems and those systems described in section (16)(d) of this rule not under WPCF permits must submit annual fees and reports as follows:~~

~~(A) Owners must pay the annual report evaluation fee in OAR 340-071-0140(3) by the date DEQ specifies for each year the system is in operation. A system is placed in operation when it first receives wastewater and remains in operation until DEQ receives notice the system has been decommissioned;~~

~~(B) Owners must submit written certification prepared by a maintenance provider on a DEQ-approved form that:~~

~~(i) The system has been maintained under the requirements of the rules in this division during the reporting year and is operating under the agent- approved design specifications; or~~

~~(ii) The owner has applied for a repair permit under OAR 340-071-0215.~~

~~(C) Owners are not required to submit fees or reports under this subsection that a maintenance provider has submitted on behalf of the owner under this section.~~

~~(e) Owners of holding tanks not under WPCF permits. Owners of holding tanks not under WPCF permits must pay annual fees and reports as follows:~~

~~(A) Owners must pay the annual report evaluation fee in 340-071-0140(3) by the date specified by DEQ for each calendar year the tank is in operation;~~

~~(B) Owners must submit written certification on a DEQ-approved form that the holding tank has been regularly inspected and pumped during the reporting year and that the year's service log for the holding tank is available for inspection by the agent.~~

~~(c)~~ Fees for systems under WPCF permits. Permittees of onsite systems under WPCF permits must pay the annual compliance determination fee in OAR 340-071-0140(4) by the date DEQ specifies for each year the system is in operation.

(17)~~(18)~~ Engineering plan review. Unless specifically exempted in this division, all plans and specifications for constructing, installing, or modifying onsite systems must be submitted to the agent for approval or denial. The design criteria and rules governing the plan review are as follows:

(a) The agent must review all plans and specifications for WPCF permits under OAR chapter 340, division 052;

(b) Plans and specifications for construction-installation permits for commercial sand filter, recirculating gravel filter, and advanced treatment technology systems with design capacities greater than 600 gpd must be signed by a person registered under ORS 672 or 700.

(18)~~(19)~~ Criteria and standards for design and construction. The criteria and standards for design and construction in this division and OAR chapter 340, division 073 apply to all onsite systems:

(a) For onsite systems subject to WPCF onsite permits, DEQ may allow variations of the criteria, standards, and technologies in this division and OAR chapter 340, division 073 based on adequate documentation of successful operation of the proposed technology or design. The system designer must demonstrate the performance of new processes, treatment systems, and technologies under OAR chapter 340, division 052;

(b) For systems not requiring WPCF permits, DEQ may authorize variances from the criteria, standards, and technologies in this division through the variance processes in OAR 340-071-0415 through 340-071-0445.

(19)~~(20)~~ Manufacturer's specifications. All materials and equipment, including but not limited to tanks, pipe, fittings, solvents, pumps, controls, and valves, must be installed, constructed, operated, and maintained under manufacturer's specifications.

(20)~~(21)~~ Sewer and water lines. Effluent sewer and water line piping constructed of materials that are approved for use within a building, as defined by ~~the 2000 Edition of~~ the Oregon State Plumbing Specialty Code, may be run in the same trench. Effluent sewer pipe of material not approved for use in a building must not be run or laid in the same trench as water pipe unless both of the following conditions are met:

(a) The bottom of the water pipe at all points is at least 12 inches above the top of the sewer pipe;

(b) The water pipe is placed on a solid shelf excavated at one side of the common trench with a minimum clear horizontal distance of at least 12 inches from the sewer pipe.

(21)~~(22)~~ Septage management. A person may not dispose of wastewater, septage, or sewage- contaminated materials in any location or manner not authorized by DEQ.

~~(23) Service Contracts. Service contracts for servicing and maintaining onsite systems must include:~~

(a) A schedule for the first two years of operation that directs the maintenance provider to inspect, adjust and service the system a minimum of once every six months,

(b) A schedule for subsequent years of operation that directs the maintenance provider to inspect, adjust and service the system:

(C) According to the manufacturer's specifications in the approved owner's manual; and

(D) At least once every 12 months.

(c) A clause stating that the maintenance provider must provide an effluent quality inspection that includes but is not limited to:

(A) A visual assessment for color, turbidity, and scum overflow,

(B) An olfactory assessment for odor, and

(C) Any other performance assessment or operational diagnosis, which may include sampling of treated effluent (post-disinfection if disinfection is used) necessary to determine or ensure proper operation of the facility.

(d) A clause stating that the maintenance provider must notify the system owner in writing about any improper system function that cannot be remedied during the time of inspection and include an estimated date of correction.

(e) Other information and conditions of the agreement such as:

(A) Owner's name and address;

(B) Property address and legal description;

(C) Permit requirements;

(D) Contact information for the owner, maintenance provider, and agent;

(E) Details of service to be provided, including the service required in this section;

(F) Schedule of maintenance provider duties;

(G) Cost and length of service contract and time period covered;

(H) Details of any warranty; and

(I) Owner's responsibilities under the contract for routine operation of the onsite system.

(24) A maintenance provider under a contract required in OAR 340-071-0275, 0290, 0302 & 0345 must:

(a) Observe and record conditions in the drainfield during all operation and maintenance activities for the system and report those observations to the system owner;

(b) Make repairs or alteration to comply with OAR 340-071-0215, 340-071-0210 and other applicable requirements in this division;

(c) Maintain accurate records of their service contracts, customers, performance data, and time lines for renewing the contracts. These records must be available for inspection upon the agent's request;

(d) Notify the agent of service contracts that are terminated or not renewed within 30 days of their termination or expiration;

(e) Make emergency service available within 48 hours of a service request;

(f) Submit the annual report required in section (17) and the annual evaluation fee in OAR 340-071-0140(3) for each system under contract to be serviced by the maintenance provider;

(g) System owners must report evidence of any system failures to the agent and take appropriate action the agent approves to correct the problem.

(22)(25) Groundwater levels. All groundwater levels must be predicted using conditions associated with saturation. In areas where conditions associated with saturation do not occur or are inconclusive, such as in soil with rapid or very rapid permeability, predictions of the high level of the water table must be based on an agent's past recorded observations. If such observations have not been made or are inconclusive, the application must be denied until observations can be made. Groundwater level observations must be made during the period of the year in which high groundwater normally occurs in an area. A properly installed nest of piezometers or other methods DEQ accepts must be used for making water table observations.

(23) A person may not submit information required by statute, rule, permit, or order that is false, inaccurate, or incomplete.

[ED. NOTE: All tables are found in OAR 340-071-0800.Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.655, 454.695, 468B.050, 468B.055, 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 27-1994, f. & cert. ef. 11-15-94; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 8-1998, f. & cert. ef. 6-5-98; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 5-2000(Temp), f. 2-24-00, cert. ef. 3-1-00 thru 8-27-00; DEQ 14-2000, f. & cert. ef. 8-24-00; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 5-2007, f. & cert. ef. 7-3-07; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0132
Operation and Maintenance

(1) Owners. Owners of onsite wastewater treatment systems must operate and maintain their systems in compliance with all permit conditions and applicable requirements in

this division and must not create a public health hazard or pollute public waters. Operation and maintenance requirements for systems under WPCF permits are established by the WPCF permits required in OAR 340-071-0130. Owners of the following alternative systems must also comply with the operation and maintenance standards:

(a) The owner of pressurized distribution and residential sand filter systems permitted after January 1, 2014, commercial sand filters on or after March 1, 2005, and all recirculating gravel filters, alternative treatment technology systems, and those systems described in subsection (15)(d) of OAR 340-071-0130 not under WPCF permits must:

(A) Maintain a contract under this rule with a maintenance provider certified as required in OAR 340-071-0650 to service and maintain the onsite system. A service contract must be executed before the system is installed and must be maintained with a certified maintenance provider until the system is decommissioned.

(B) Report evidence of any system failures to the certified maintenance provider and agent and take appropriate action the agent approves to correct the problem, including but not limited to applying for a repair permit under OAR 340-071-0215.

(C) Ensure the system is inspected at least annually by a certified maintenance provider or the agent under OAR 340-071-0260.

(b) Owners of residential sand filter systems permitted prior to January 2, 2014, or commercial sand filter systems permitted prior to April 1, 1995, must follow the operation and maintenance requirements under section (5).

(c) Owners of holding tanks must maintain a pumping agreement with a sewage disposal service licensed under OAR 340-071-0600 to provide for regularly inspecting and pumping at all times the holding tank is being used and pay the annual fees and report as required in section (4).

(2) Service Contracts. Service contracts for inspecting, operating, and maintaining onsite systems, must be perpetual and continuous. Except transition periods described in subsection (6)(b) of this section, the service contract must remain in effect until the onsite system is decommissioned or terminated in accordance with this rule. The service contract must include:

(a) For initially permitted systems only, a schedule for the first two years of operation that directs the maintenance provider to inspect, adjust and service the system a minimum of once every six months~~,~~.

(b) A schedule for subsequent years of operation that directs the maintenance provider to inspect, adjust and service the system:

(A) According to the manufacturer’s specifications in the approved owner’s manual or in cases where there is not an approved owner’s manual, by the specifications required by DEQ; and

(B) At least once every 12 months.

(c) For ATT systems only, a clause stating that the maintenance provider must provide an effluent quality inspection that includes but is not limited to:

(A) A visual assessment for color, turbidity, and scum overflow,

(B) An olfactory assessment for odor, and

(C) Any other performance assessment or operational diagnosis, which may include sampling of treated effluent (post-disinfection if disinfection is used) necessary to determine or ensure proper performance of the facility.

(d) A clause stating that the maintenance provider must notify the system owner and agent in writing within 30 days about any improper system function that cannot be remedied during the time of inspection, including any necessary repairs to comply with OAR 340-071-0215, and include an estimated date of correction.

(e) A clause stating the causes for termination, including but not limited to non-payment, breach of contract, or termination at-will by written notice from either party.

(f) Other information and conditions of the agreement such as:

(A) Effective date, which is equal to the date the system is placed in operation or when a new agreement for an existing system in operation is executed;

(B) Owner's name and address;

(C) Property address and legal description;

(D) Permit requirements and conditions;

(E) Contact information for the owner, maintenance provider, and agent;

(F) Details of service to be provided, including but not limited to the service recommended by the manufacturer in the approved operation manual for ATTs, as required by the designer in the prepared operation and maintenance manual for RGFs under 340-071-0302, or listed by the National Association of Wastewater Technicians (NAWT) on the Operational Checklist, or other checklist approved by DEQ, for pressure distribution or sand filter systems;

(G) Schedule of maintenance provider duties;

(H) Details of any warranty;

(I) Owner's responsibilities under the contract for routine inspection, operation, and maintenance of the onsite system;

(3) Maintenance Providers. A maintenance provider under a contract required in this rule must:

(a) Observe and record conditions in the treatment unit, if applicable, and the absorption area during all operation and maintenance activities for the system and report those observations to the system owner in writing;

(b) Conduct minor or major maintenance as defined under 340-071-0100(92);

(c) Maintain accurate records of their current and previous 3 years of service contracts, customers, inspection checklists, and performance data. These records must be available for inspection upon the agent's request;

(d) Notify the owner and agent in writing of service contracts that are terminated ~~not renewed~~ within 30 days of their termination;

(e) Make emergency service available within 48 hours of a service request or system alarm;

(f) Submit the annual report required in section (4) and the annual evaluation fee in OAR 340-071-0140(3) for each system under contract to be serviced by the maintenance provider;

(g) Follow the terms outlined in the service contract;

(h) For ATT systems, be certified by the manufacturer to provide service on the ATT and ensure the ATT and all components of the onsite system are properly operated and timely maintained per the manufacturers specifications until the system is decommissioned so that the effluent standards in OAR 340-071-0345 are met.

(i) For conventional and other sand filter systems, ensure the sand filter and all components of the onsite system are properly operated and timely maintained in accordance with section (5) and these rules until the system is decommissioned.

(4) Annual permit fees and reports:

(a) Except in paragraph (c) of this section, the maintenance provider under contract must pay the annual report evaluation fee in OAR 340-071-0140(3) by the date DEQ specifies for each year the system is in operation, as required in this section. A system is placed into operation the date a Certificate of Satisfactory Completion is issued or when the system is connected to plumbing, whichever occurs last, and remains in operation until the agent receives notice the system has been decommissioned.

(b) A maintenance provider must submit written certification prepared on a DEQ-approved form by the date specified by DEQ for each year the system is in operation that:

(A) The system has been maintained under the requirements of the rules in this division during the reporting year and is operating under the agent-approved design specifications; or

(B) Minor or major maintenance is pending, an estimated date of correction and estimated cost has been provided to the property owner in writing; or

(C) The owner and the agent have been notified in writing that the system requires a repair permit under OAR 340-071-0215.

(c) A maintenance provider is not required to submit fees or reports under paragraphs (a) and (b) of this section if:

(A) The effective date of the initial contract under section (2) for a new system was in the last 6 months of the reporting period; or

(B) The maintenance provider notified the property owner and agent of contract termination under section (3) and did not already conduct an inspection during the reporting period; or

(C) The maintenance provider has not had a reasonable opportunity to conduct a maintenance inspection during the reporting period because the effective date of a new contract was in the last 60 days of the reporting period and the system was inaccessible to the maintenance provider for maintenance due to inclement weather or the owner denying access.

(d) Owners of holding tanks not under WPCF permits must pay annual fees and reports as follows:

(A) Owners must pay the annual report evaluation fee in 340-071-0140(3) by the date specified by DEQ for each calendar year the tank is in operation;

(B) Owners must submit written certification on a DEQ-approved form that the holding tank has been regularly inspected and pumped during the reporting year and that the year's service log for the holding tank is available for inspection by the agent.

(5) Sand filter operation and maintenance. The operation and maintenance of conventional and other sand filter systems must include but is not limited to the inspection of the septic tank and other components of the system at least annually for sludge accumulation, pump calibration, and cleaning the laterals. Tanks must be pumped when there is an accumulation of floating scum less than 3 inches above the bottom of the outlet tee fitting, holes or ports, or an accumulation of sludge less than 6 inches below the bottom of the outlet tee fitting, holes or ports. Pump calibration, cleaning of the laterals, and other maintenance must be completed as necessary.

(6) Compliance.

(a) Compliance Recovery Fee. If the maintenance provider does not submit the annual report or fee under this rule by the date DEQ specifies each year, the agent may require the maintenance provider pay the compliance recovery fee under OAR 340-071-0140(7).

(b) Compliance inspection. If the owner does not maintain a contract for the entirety of the reporting period, except for a contract transition period of not more than 30 days, the agent may require an alternative inspection under OAR 340-071-0260 and a compliance recovery fee under OAR 340-071-0140(7).

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.625 & 468.020

340-071-0135
Approval of New or Innovative Technologies, Materials, or Designs for Onsite Systems

(1) DEQ approval.

(a) Coordination with listing of alternative treatment technologies, OAR 340-071-0345. Under OAR 340-071-0345, DEQ maintains a list of alternative treatment technologies (ATTs) that have been tested by an NSF/ANSI organization that meets the requirements of ISO/IEC 17025 – 2005. The ATT must meet the performance standards and other requirements in OAR 340-071-0345. ATTs are usually separate treatment units that are installed in onsite systems. Only listed ATTs may be installed under the siting criteria in OAR 340-071-0345. This rule provides a process for approving new or innovative technologies, materials, or designs for various components of onsite systems, such as drainfield products or appurtenances. Add-on treatment units, such as units to remove nitrogen following an ATT or sand filter, may also be approved under this rule. However, DEQ does not intend to approve alternatives to standard systems under this rule. Alternative systems will need to be listed as ATTs under OAR 340-071-0345 or approved under new rules in this division.

(b) DEQ may approve new or innovative technologies, materials, or designs for onsite systems pursuant to this rule if it determines they will protect public health, safety, and waters of the state as effectively as systems authorized in this division. DEQ must base approval on one or more of the following:

(A) A performance evaluation conducted under section (3) of this rule that demonstrates the technology, material, or design will achieve applicable performance standards in OAR chapter 340, divisions 071 and 073 and any additional standards DEQ determines are necessary to satisfy the requirements of subsection (1)(b) of this rule.

(B) Documentation that the alternative drainfield products are functionally equivalent to drainfield products DEQ approves.

(C) Documentation that the material used as a substitute for drain media in absorption trenches will achieve the performance standards and design criteria in section (5) of this rule.

(D) Certification of the new material, technology, or design for proposed uses by NSF/ANSI, or another program providing equivalent performance demonstration required by this rule and approved by DEQ.

(c) DEQ may approve or deny a request for approval of a new or innovative technology, material, or design or may limit approval to those locations or conditions for which achievement of standards has been demonstrated.

(d) DEQ may amend or revoke approval of a new or innovative material, technology, or design if it determines:

(A) Approval was based on false or misleading information;

(B) The material, technology, or design no longer achieves performance standards for which it was approved; or

(C) The manufacturer is not meeting the requirements in this rule or conditions of the approval.

(2) Requests for approval.

(a) Any person may submit a completed application for approval of a new or innovative technology, material, or design for onsite systems to DEQ.

(b) The application must include the following:

(A) For approval based on a performance evaluation under ~~paragraph~~ subsection (1)(b)(A) of this rule:

(i) A proposed evaluation protocol under section (3) of this rule and a proposed schedule for completing the proposed evaluation; and

(ii) At the conclusion of the performance evaluation, documentation demonstrating the technology, material, or design achieves applicable standards.

(B) For approval under ~~paragraph~~ subsection (1)(b)(B) of this rule, documentation supporting a determination of functional equivalency.

(C) For approval under ~~paragraph~~ subsection (1)(b)(C) of this rule, documentation supporting a determination that the applicable standards will be achieved.

(D) For approval under ~~paragraph~~ subsection (1)(b)(D) of this rule, documentation of certification by an approved program.

(E) The Innovative or Alternative Technology, Material, or Design Review fee established in OAR 340-071-0140(5).

(3) Requirements for studies. Field or other studies used to demonstrate performance of technologies, materials, or designs under ~~paragraph~~ subsection (1)(b)(A) of this rule must satisfy the following requirements:

(a) Be based on theory or applied research that supports the intended use of the technology, material, or design.

(b) Follow an evaluation protocol that has been peer reviewed and approved by DEQ and that clearly defines the number of systems for installation reasonably necessary for the study and performance objectives, including standards to be achieved; performance measurements to validate attainment of the objectives; and the variables to be considered, including climate, soil, waste characteristics such as flow and strength, and topography.

(c) Include controls that represent the standards to be achieved.

(d) Include sufficient monitoring and reporting of performance data on both the test product and control product to support direct comparisons to the standards to be achieved.

(e) Address system operations at maturity and relevant temporal variations to support comparison to the standards to be achieved.

(f) Be designed and conducted by a qualified third party DEQ approves who certifies whether the installation, monitoring, and evaluation of the systems studied and reports submitted to DEQ satisfy this rule's requirements.

(g) At the conclusion of the study, provide sufficient performance data to demonstrate standards are met. Data must be peer-reviewed, be scientifically defensible, and have sufficient replication to be representative and to address variations in climate, soil, topography, waste loading, and strength relevant to the proposed use.

(4) Installation of onsite systems for study. The following requirements must be met for each system incorporating unapproved new or innovative technologies, materials, or designs installed for study under this rule or OAR 340-071-0130, or former OAR 340-071-0116 or 340-071-0117 (replaced by this rule):

(a) Prior to installation, the system owner must obtain a WPCF permit under OAR 340-071-0162 or, for a system incorporating only unapproved drainfield materials and not otherwise requiring a WPCF permit, or a construction-installation permit under OAR 340- 071-0160.

(b) Before installation, the system owner must provide legal and physical access for construction inspections and monitoring.

(c) The system owner must acknowledge that the system being installed is an unapproved technology and must agree in writing to hold the State of Oregon and its officers, employees, and agents harmless of any and all loss or damage caused by system failure or defective installation or operation of the proposed systems.

(d) Before transferring ownership of a system using an unapproved technology, the system owner must notify all transferees that the technology has not been approved, and the transferee must agree in writing to hold the state of Oregon and its officers, employees, and agents harmless of any and all loss or damage caused by system failure or defective installation or operation of the proposed systems.

(e) A site evaluation must be conducted under this division. Suitable area must be available for installation of both an initial onsite system and a full replacement system.

(5) Standards and design criteria for drain media substitutes. To be approved under (1)(b)(C) of this rule, substitutes for drain media used in absorption trenches, including seepage trenches, seepage beds, or other similar absorption facilities, must meet the following performance standards and design criteria:

(a) Performance standards. New or innovative materials to be used as a substitute for drain media must be structurally sound, durable, and inert in the environment they are placed.

The substitute material must be capable of passing wastewater toward the infiltrative surfaces at a rate equal to or greater than gravel drain media.

(b) Design criteria for absorption trenches.

(A) The trench must be excavated under the trench standards described in this division. If warranted by the design configuration of the substitute material, the trench width may be less than 24 inches, provided the trench length is increased to compensate for the loss of the bottom surface area using the following formula: Adjusted Trench Length = (24 inches ÷ W) x L, where W = the reduced trench width in inches, and L = the original trench length as specified in ~~paragraph~~ subsection (5)(b)(F) of this rule.

(B) The substitute material for the drain media must be placed in the trench and be in uniform contact with the trench bottom and both sidewalls. If voids larger than typically found with the use of drain media are present along the trench bottom after placement of the substitute material, steps must be taken to prevent the entry of burrowing rodents. If the substitute material for drain media is not in uniform contact with both sidewalls, drain media must be placed in the trench to provide that contact.

(C) The substitute material for drain media must be placed to provide a uniform sidewall infiltrative surface depth as measured along the trench sidewall from the bottom to the top of the drain media substitute in contact with the sidewall. In seepage trenches, the depth of the substitute material must be greater than 12 inches. If the substitute material provides less than 12 inches of sidewall contact depth, either drain media must be placed to accomplish the minimum sidewall contact depth, or the length of the absorption trench must be increased to compensate for the reduced sidewall seepage area depth using the following formula: Adjusted Trench Length = (12 inches ÷ D) x L, where D = the reduced sidewall seepage area depth in inches, and L = the original trench length as specified in ~~paragraph~~ subsection (5)(b)(F) of this rule.

(D) If a substitute material is used in a trench that is both narrower than 24 inches and has a sidewall contact depth that is less than 12 inches, the adjusted trench length must be the longer of the adjusted trench lengths calculated using the formulae in paragraphs (A) and (C) of this subsection.

(E) The top surface of the substitute material for the drain media must be level across the trench and in contact with each side of the trench. The substitute material for drain

media must have porosity at the top surface that is not appreciably different from the porosity of drain media. Drain media may be placed across the top of the substitute material to provide the level surface extending from sidewall to sidewall.

(F) The sizing for standard absorption trenches using a substitute material for drain media must conform to applicable criteria in OAR 340-071-0220(2), 340- 071-0290(3), or 340-071-0360(2)(a). Seepage trenches using a substitute material for drain media must conform with applicable size criteria in OAR 340-071- 0280(2), 340-071-0290(3), 340-071-0310(2), or 340-071-0360(2)(b).

(c) Design criteria for seepage beds.

(A) Bed excavation must conform with the standards described in OAR 340-071-0275(4)(d).

(B) The substitute material for drain media must be placed in the excavation and in contact with the bottom and sidewalls of the bed. If voids larger than typically found with the use of drain media are present along the bottom or sidewalls after placement of the substitute material, steps must be taken to prevent entry of burrowing rodents.

(C) The substitute material for drain media must be placed to provide a substitute material depth of at least 12 inches, as measured from the bottom of the excavation to the top of the drain media substitute. If the depth of the media substitute is less than 12 inches, drain media must be placed within the excavation to provide this depth.

(D) The upper surface of the substitute material for drain media must be level from sidewall to sidewall. The porosity of the top surface of the substitute material must not appreciably differ from the porosity of drain media. Drain media may be placed across the top of the substitute material to provide the level surface extending from sidewall to sidewall.

(E) Seepage beds using a substitute material for drain media must conform with size requirements in OAR 340-071-0275(4)(d)(B).

(d) Distribution piping in absorption facilities using a substitute material for drain media must comply with the appropriate pipe standards in this division and OAR chapter 340, division 073.

(6) Study protocols for substitutes for drain media — example. This section provides an example study protocol to demonstrate substitute drain media under ~~paragraph~~ subsection (1)(b)(C) of this rule. Proposed protocols must be approved for study under section (3) of this rule.

(a) A standard onsite system must be installed and sized for a given soil group according to Tables 4 and 5 of this division. The system must be designed to allow a side-by-side performance comparison of the substitute material with a standard absorption trench (the control). For this purpose, the drainfield must contain four small test cells, two of them containing the substitute material and two the standard drain

media, which receive septic tank effluent before the remaining portion of the drainfield. The test cells must represent

approximately one-third of the total drainfield. The cells containing the substitute material must be sized according to the manufacturer's claim for equivalence to the standard trench length.

(b) A drop box or similar monitoring box containing a sump must be placed at the end of each test cell. All drop boxes must be connected to the remaining portion of the drainfield.

(c) The test cells must be fed by a pump and a hydrosplitter to distribute the effluent equally to each test cell. Installation of a water meter or pump cycle-counter may be required.

(d) Observation ports must be installed in each test cell to allow measuring and recording the effluent ponding depth.

(e) Domestic wastewater coming directly from a septic tank connected to a residence or facility must be used in the field study.

(f) The performance standard to be achieved is the acceptance rate of the effluent by the substitute material, measured by observing the time required for each test cell to overflow to the drop box.

(g) The test must conclude at the end of three years or when overflow is observed in one of each paired test cells, whichever occurs first. Observation of overflow or no overflow and of ponding must be recorded at least monthly.

(h) For approval for statewide use, the testing described in this section must be duplicated at sites within the two major climatic regimes of Oregon, west of the Cascade Mountain Range and east of the Cascade Mountain Range, and in each of the soil groups described in Tables 4 and 5 of this division. At least 18 duplicate sites are required, with 3 sites in each of 3 soil groups in the 2 major climatic regimes of Oregon. Studies may include additional sites.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.607, 454.615, 454.784, 468.035, 468.045, 468.065 & 468B.050
Hist.: DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 14-2000, f. & cert. ef. 8-24-00; Renumbered from 340-071-0116 & 340-071-0117, DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0140
Onsite System Fees

(1) This rule establishes the fees for site evaluations, permits, reports, variances, licenses, and other services DEQ provides under this division.

(2) Table 9A lists the site evaluation and existing system evaluation fees. [Table not included. See ED. NOTE.]

(3) Tables 9B and 9C list the permitting fees for systems not subject to WPCF permits. Online submittals for annual report evaluation fees may apply when DEQ implements online reporting. [Table not included. See ED. NOTE.]

(4) WPCF permit fees. Fees in this section apply to WPCF permits issued under OAR 340-071- 0162. Table 9D lists the WPCF permit fees. [Table not included. See ED. NOTE.]

(5) Table 9F lists the innovative, Alternative Technology and Material Plan Review fees. [Table not included. See ED. NOTE.]

(6) Table 9E lists the Sewage Disposal Service License and Truck Inspection fees. [Table not included. See ED. NOTE.]

(7) Compliance Recovery Fee. When a violation involves an annual report evaluation, alternative system inspections, or results in an application in order to comply with the requirements in this division, the agent may require the applicant to pay a compliance recovery fee. The fee may be billed in addition to any annual report evaluation fee, alternative system inspection fee, or the application fee. ~~The amount of the compliance recovery fee shall not exceed the application fee~~. Such violations include but are not limited to installing a system without a permit, performing sewage disposal services without a license, failing to submit an annual report by the date specified by DEQ for each year the system is in operation, failing to maintain a service contract, or failure to obtain an authorization notice when it is required. The amount of the compliance recovery fee must be assessed as follows:

(a) For violations involving annual report evaluation fees, the amount shall not exceed the annual report evaluation fee;

(b) For violations involving alternative system inspections, the amount shall not exceed the alternative system inspection fee, regardless of whether the agent or maintenance provider conducts the inspection; or

(c) For violations that result in an application in order to comply with the requirements in this division, the amount shall not exceed the application fee.

(8) Land Use Review Fee. Land use review fees are listed in Table 9C and are assessed when an agent review is required in association with a land use action or building permit application and no approval is otherwise required in the division.

(9) Contract county fee schedules.

(a) Each county having an agreement with DEQ under ORS 454.725 must adopt a fee schedule for services rendered and permits issued. The county fee schedule may not include DEQ's surcharge established in section (10) of this rule unless identified as a DEQ surcharge.

(b) The county must submit a copy of the fee schedule and any subsequent amendments to the schedule to DEQ.

(c) Fees may not exceed actual costs for efficiently conducted services.

(10) DEQ surcharge.

(a) To offset a portion of the administrative and program oversight costs of the statewide onsite wastewater management program, DEQ and contract counties must levy a surcharge for each site evaluation, report permit, and other activity for which an application is required in this division. The surcharge fee is listed in Table 9F. This surcharge does not apply to pumper truck inspections, annual report evaluation fees, or certification of installers or maintenance providers. [Table not included. See ED. NOTE.]

(b) Proceeds from surcharges DEQ and contract counties collect must be accounted for separately. Each contract county must forward the proceeds to DEQ under its agreement with the DEQ.

(11) Refunds. DEQ may refund all or a portion of a fee accompanying an application if the applicant withdraws the application before any field work or other substantial review of the application has been done.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625, 468.020 & 468.065(2)
Stats. Implemented: ORS 454.745, 468.065 & 468B.050
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 13-1986, f. & ef. 6-18-86; DEQ 15-1986, f. & ef. 8-6-86; DEQ 6-1988, f. & cert. ef. 3-17-88; DEQ 11-1991, f. & cert. ef. 7-3-91; DEQ 18-1994, f. 7-28-94, cert. ef. 8-1-94; DEQ 27-1994, f. & cert. ef. 11-15-94; DEQ 12-1997, f. & cert. ef. 6-19-97; Administrative correction 1-28-98; DEQ 8-1998, f. & cert. ef. 6-5-98; DEQ 16-1999, f. & cert. ef. 12-29-99; Administrative correction 2-16-00; DEQ 9- 2001(Temp), f. & cert. ef. 7-16-01 thru 12-28-01; DEQ 14-2001, f. & cert. ef. 12-26-01; DEQ 2-2002, f. & cert. ef. 2-12-02; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 7-2008, f. 6-27-08, cert. ef. 7-1-08; DEQ 10-2009, f. 12-28-09, cert. ef. 1-4-10; DEQ 7-2010, f. 8-27-10, cert. ef. 9-1-10; DEQ 9-2011, f. & cert. ef. 6-30-11; DEQ 6-2012, f. 10-31-12, cert. ef. 11-1-12; DEQ 8-2013, f. 10-23-13, cert. ef. 11-1-13; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14; DEQ 11-2014, f. & cert. ef. 10-15-14; DEQ 13-2014, f. 11-14-14, cert. ef. 12-1-14; DEQ 4-2015, f. & cert. ef. 2-3-15; DEQ 16-2015, f. 12-10-15, cert. ef. 1-1-16; DEQ 1-2016, f. & cert. ef. 1-27-16

340-071-0150
Site Evaluation Procedures

(1) A site evaluation is the first step in the process of obtaining a construction-installation permit for an onsite system. Except as otherwise provided in these rules, before obtaining a permit to construct an onsite system, a person must obtain a site evaluation report finding the site suitable for an onsite system under this division.

(2) Completed applications for site evaluations must be submitted to the agent with all required exhibits and the applicable site evaluation fee in OAR 340-071-0140(2).

(a) Unless DEQ approves other procedures for a contract county, applicants must provide at least two test pits, with dimensions and configuration as the agent directs, located approximately 75 feet apart and within the area of the proposed system, including the repair/replacement area.

(b) The fee paid for a site evaluation report covers as many site inspections within ninety days of the initial inspection as necessary to determine the suitability of a single lot or parcel for a single system. A site is considered to be suitable as soon as it is found to meet the criteria for any type of onsite system.

(3) Site evaluation report.

(a) The agent ~~or, for WPCF permits, an agent or a qualified private contractor,~~ must evaluate the site of the proposed system, consider all system options, and provide a report of such evaluation.

(b) The site evaluation report must be on a DEQ-approved form.

(c) The report must contain, at a minimum, a site diagram and observations of the following site characteristics:

(A) Parcel size;

(B) Slope in absorption field and replacement areas (percent and direction);

(C) Surface streams, springs, other bodies of water;

(D) Existing and proposed wells;

(E) Escarpments;

(F) Cuts and fills;

(G) Unstable landforms;

(H) Soil profiles determined from test pits provided by applicant;

(I) Water table levels as indicated by conditions associated with saturation or water table observations;

(J) Useable area for initial and replacement absorption areas;

(K) Encumbrances observed or listed on the application;

(L) Sewerage availability;

(M) Other observations including off-site features as appropriate.

(d) Site evaluation reports for subdivisions or other land divisions must be based on an evaluation of each lot.

(e) Specific conditions or limitations imposed on an approved site must be listed on the evaluation report.

(f) A site evaluation report approving a site for a system qualifies the property owner for a permit to construct a system on that property if other requirements for a permit are met.

(4) Approval or denial:

(a) A site must be approved for a system if the site evaluation report documents the following:

(A) The site evaluation report identifies the types of the initial and replacement systems for which the site is approved.

(B) All criteria for approving a specific type or types of systems, as described in this division are satisfied.

(C) Each lot or parcel has sufficient usable area available to accommodate an initial and replacement system for all existing and proposed uses. The usable area may be located within the lot or parcel or within the bounds of another lot or parcel that is secured under OAR 340-071-0130(11). The initial and replacement systems may be of different types, e.g., a standard subsurface system as the initial system and an alternative system as the replacement system. The site evaluation report must indicate the types of the initial and replacement systems for which the site is approved.

(D) A replacement area is not required in areas under control of a legal entity such as a city, county, or sanitary district if the legal entity gives a written commitment that sewerage service will be provided within five years.

(b) A site must be denied if the conditions identified in subsection (4)(a) of this rule are not met.

(c) Changes in technical requirements in this division may not invalidate a site approval but may require design changes or use of a different type of system.

(d) An agent may require a new site evaluation application if an existing site evaluation record does not include sufficient information for an agent to determine the approval area for a proposed system.

(5) Site evaluation report review. An applicant may request DEQ to review an agent's site evaluation report. The application for review must be submitted to DEQ in writing within 60 days after the site evaluation report issue date and must include the site evaluation review fee in OAR 340-071-0140(2). DEQ will review and approve or disapprove the site evaluation report.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.655 & 454.755
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0155
Existing System Evaluation Report

(1) An evaluation of an existing onsite wastewater treatment system must meet the following requirements:

(a) An evaluation must be performed by a person with one or more of the qualifications listed below:

(A) Professional Engineer under ORS chapter 672 with knowledge and experience inspecting onsite systems;

(B) Registered Environmental Health Specialist or Wastewater Specialist under ORS chapter 700 with knowledge and experience inspecting onsite systems;

(C) A certified installer with knowledge and experience inspecting onsite systems;

(D) A certified maintenance provider with knowledge and experience inspecting onsite systems;

(E) A current NAWT inspector training and certification accreditation with a sewage disposal service license;

(F) Other similar license or certification DEQ approves.

(b) An evaluation must include the following:

(A) An examination of the records available on the existing system, including all permit records and pumping and other maintenance records.

(B) For existing systems without a permit record, the inspector must create a record to document system materials, components, and location. Methods used to create the record may include the use of soil probes, metal detectors, electronic pipe tracers, radio and video technology, and uncovering system components.

(C) A field inspection of the existing system.

(D) A report of findings on a DEQ-approved form including the information obtained relevant to system performance, such as age; usage; records of installation, maintenance, and repairs; type, size, capacity, and condition of components; evidence of any failures; other relevant information, such as condition of repair area if known; and a complete sketch of the system showing location and distances of major components.

(E) The evaluation must include all portions of the system that serve the facility, including any portion located on a lot or parcel different from the lot or parcel on which the facility the system serves is located.

(2) A person may not conduct an existing system evaluation required by this rule unless the person meets the qualifications in subsection (1)(a) of this rule prior to conducting the evaluation.

(3) Any person may request an agent to provide an evaluation report on an existing onsite wastewater treatment system.

(4) A completed application form must be submitted to the agent with all necessary exhibits and the existing system evaluation fee in OAR 340-071-0140(2).

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.755, 468B.015 & 468B.080
Hist.: DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0160
Permit Application Procedures — Construction~~,~~ - Installation, Alteration, and Repair Permits

(1) Permittees. A permit to construct a system may be issued under this rule only to the owner of the real property that the system will serve.

(2) Application. A completed application for a construction, installation, alteration, or repair permit must be submitted to the appropriate agent on approved forms with all required exhibits and the applicable permit application fee in OAR 340-071-0140(3). Applications that do not comply with this section will not be accepted for filing. Except as otherwise allowed in this division, the exhibits must include:

(a) A site evaluation report approving the site for the type and quantity of waste to be disposed. Agents may waive the requirement for the report and fee for applications for repair or alteration permits.

(b) A land use compatibility statement from the appropriate land use authority as required in OAR chapter 340, division 018.

(c) Plans and specifications for the onsite system proposed for installation within the area the agent identified and approved in a site evaluation report. The agent must determine and request the minimum level of detail necessary to e~~i~~nsure proper system construction.

(d) A written statement from the municipality with sewer authority confirming a community or area-wide sewerage is not available if the property is located within a city limit, urban growth boundary, or sanitary district or equivalent.

(e) Any other information the agent determines is necessary to complete the permit application.

(3) Deadlines for action. The agent must either issue or deny the permit within 20 days after receiving the completed application unless weather conditions or distance and unavailability of transportation prevent the agent from timely action. The agent must notify the applicant in writing of any delay and the reason for delay and must either issue or deny the permit within 60 days after the mailing date of notification.

(4) Permit denial. The agent must deny a permit if any of the following occurs:

(a) The application contains false information.

(b) The agent wrongfully received the application.

(c) The proposed system would not comply with applicable requirements in this division or in OAR chapter 340, division 073.

(d) The proposed system, if constructed, would violate a commission moratorium under OAR 340-071-0460.

(e) The proposed system location is encumbered as described in OAR 340-071-0130(8).

(f) A community or area-wide sewerage system is available that can satisfactorily accommodate ~~serve~~ the proposed sewage discharge ~~flow~~. A sewerage system is considered available if the property to be served is located within a city limit, urban growth boundary, or sanitary district or equivalent, and the system is both physically ~~legally~~ and legally ~~physically~~ available, as described in paragraphs (A) and (B) of this subsection.

(A) Physical availability. A sewerage system is considered physically available if topographic or man-made features do not make connection physically impractical, as determined by the municipality, and one of the following applies:

(i) For a construction-installation permit a single-family dwelling or other establishment with a maximum projected daily sewage flow not exceeding 899 gallons, the nearest sewerage connection point from the property to be served is within 300 feet.

(ii) For a repair or alteration permit to serve a single-family dwelling or other establishment with a maximum projected daily sewage flow not exceeding 899 gallons, the nearest sewerage connection point from the property to be served is within 200 feet.

(iii) For any permit, a proposed subdivision or group of two to five single-family dwellings or other establishment with the equivalent projected daily sewage flow, the nearest

sewerage connection point from the property to be served is not further than 200 feet multiplied by the number of dwellings or dwelling equivalents.

(iv) For proposed subdivisions or other developments with more than five single-family dwellings or equivalent flows, the agent will determine sewerage availability.

(B) Legal availability. A sewerage system is ~~deemed~~ legally available if the system is not under a DEQ connection permit moratorium, is accessible by a right-of-way or existing easement, and the ~~sewerage system owner is willing or obligated to provide sewer service~~ governing municipality determines if a community or area-wide sewerage system is available by local ordinance. Legal availability as determined by local ordinance includes but is not limited to the following considerations:

(i) Distance to a sewerage connection point as a proxy of cost to extend sewer;

(ii) Residential compared to commercial wastewater flow and strength;

(iii) Single-family dwellings and duplexes compared to multi-family dwellings;

(iv) Partitioned and vacant lots compared to existing development;

(v) Statewide planning goals;

(vi) Social and Environmental Justice goals;

(vii) Scope of septic system repairs;

(viii) Age of existing septic systems and evidence of failing septic systems;

(ix) Other environmental and public health concerns;

(x) Extenuating circumstances where the municipality grants a waiver.

(5) Permit effective dates. A permit issued for construction of a system under this rule is effective for one year from the date of issuance. After a system has been installed under the permit and a Certificate of Satisfactory Completion has been issued for the installation, conditions specified in the Certificate of Satisfactory Completion continue in force as long as the system is in use.

(6) Permit renewal, reinstatement, or transfer. An agent may renew, reinstate, or transfer a permit if the following conditions are met:

(a) The applicant submits a completed application for permit renewal before the permit expiration date or for reinstatement within one year after the permit expiration date.

(b) Applications for transfer of a permit from a permittee to another person must be filed before the permit expiration date. Only the permittee's name may be changed in a transfer.

(c) Applications for permit renewal, reinstatement, or transfer must conform to the requirements of this rule and the permit will be issued or denied under this rule.

(7) Temporary holding tank. If a permit has been issued under these rules but existing soil moisture conditions preclude the construction of the soil absorption system, an agent may approve installing a septic tank for use as a temporary holding tank for up to 12 months. Before approval, the permittee must demonstrate that the outlet of the tank has been sealed with a water tight seal and that the permittee has entered into a pumping contract for the tank. Unless otherwise authorized by the agent, the septic tank must be designed and constructed under OAR 340-071-0340.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.655
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0162
Permit Application Procedures — WPCF Permits

(1) Procedures in this rule are for applications for WPCF permits for onsite systems.

(2) Any person may request a new, modified, or renewal WPCF permit by submitting an application on forms DEQ provides with the specified number of copies of all required exhibits. The name of the applicant and permittee must be the legal name of the owner of the facilities the system serves or the lessee responsible for the operation and maintenance. Applications must be submitted at least 60 days before a permit is needed. Required exhibits include but are not limited to the following:

(a) A land use compatibility statement from the local land use planning agency indicating that the site is approved for the activity for which the applicant is applying. If the activity is approved only upon conditions in a conditional use permit, a copy of the conditional use permit must be provided;

(b) A copy of a site evaluation report approving the site for the type and quantity of wastes to be disposed;

(c) Evidence that the permit processing fees and the first year's annual compliance determination fee in OAR 340-071-0140(4) have been paid to DEQ or agent, as directed; and

(d) A site diagram meeting the requirements of OAR 340-071-0160(2)(c).

(3) DEQ will not accept applications for filing that are obviously incomplete, improperly signed, or lacking required exhibits clearly identified. DEQ will return these applications for completion. DEQ will consider applications that are correctly signed and appear administratively complete timely upon receipt. A request for further information under section (4) of this rule will not affect the timeliness of an application.

(4) Within 45 days after receiving an application, DEQ will preliminarily review the application to determine the adequacy of the information submitted. Failure to complete this review within 45 days does not preclude DEQ from later requesting additional information from the applicant as provided in this section.

(a) DEQ will request in writing from the applicant any additional information needed to review the application. DEQ will consider the application withdrawn if the applicant fails to submit the requested information within 90 days of the request.

(b) If DEQ determines that additional measures are necessary to gather facts regarding the application, DEQ will notify the applicant of measures to be instituted and the timetable and procedures to be followed. DEQ will consider the application withdrawn if the applicant fails to comply with the additional measures.

(5) Draft permit review. Before issuing a permit, DEQ will send a draft permit to the applicant for review. The applicant will have up to 14 calendar days to comment on the draft permit.

(6) Public participation. DEQ will provide for public participation under the requirements for WPCF permits in OAR chapter 340, division 045.

(7) Final DEQ action. DEQ must take final action on the permit application within 45 days of the close of the public comment period if a comment period is required. DEQ will consider all timely comments and other information obtained pertinent to the permit action. DEQ will notify the applicant of the action taken.

(8) Applicant's appeal rights. DEQ's final action is effective 20 days from the date DEQ serves notice to the applicant of DEQ's final action unless the applicant requests a hearing before the effective date. The request for a hearing must be in writing and state the grounds for the request. DEQ will conduct any hearing as a contested case hearing under ORS 183.413 through 183.470 and OAR chapter 340, division 011.

(9) Permit term. The term of a permit issued under this rule may not exceed ten years. The expiration date will be recorded on each permit issued.

(10) For systems that are proposed to be or are operating under a WPCF permit, a person may not construct, alter, or repair the system, or any part thereof, unless that person is licensed under ORS 454.695 or is the permittee.

(11) A person may not connect to or use any system authorized by a WPCF permit unless the system has been inspected and certified under OAR chapter 340, division 052 and DEQ has accepted that certification.

(12) Renewal of a permit. The procedures for issuing a new WPCF permit apply to renewing a permit. A permit may be renewed if the applicant files a completed permit renewal application, on forms DEQ provides, with DEQ at least sixty days before the permit expires. The permit will not expire until DEQ takes final action on a timely renewal application.

(13) DEQ may terminate, revoke, modify, or transfer a permit under the rules in OAR chapter 340, division 045 applicable to WPCF permits.

(14) Rules that do not apply to WPCF applicants or permittees:

(a) Because the permit review, issuance, and appeal procedures for WPCF permits are different from those of other onsite permits in these rules, the following rules do not apply to WPCF applicants or permittees: OAR 340-071-0132(1)(a) and (b), (2)-(4) and (6); 340-071-0135; 340-071-0155; 340-071-0160(1), (2)(a), (b), ~~and~~ (d), and (e), (3), (5) and (6); 340-071-0165(1); 340-071-0170; 340-071-0175; 340-071-0185; 340-071-0200; 340-071-0205; 340-071-0210; 340-071-0215(1), (2), ~~(3),~~ (4) and (6) ~~(5)~~; 340-071-0275(4)(c)(A); 340-071-0290(7); 340-071-0295(1); 340-071-0302 (4) and (5) ~~(6)~~; 340-071-0330; 340-071-0345(1)-(7) and (9)-(14); 340-071-0360(2)(b)(B); 340-071-0410; 340-071-0415; 340-071-0420; 340-071-0425; 340-071-0430; 340-071- 0435; 340-071-0440; 340-071-0445; and 340-071-0500.

(b) WPCF permit applicants and permittees are not subject to any WPCF permit-related fees other than those specified in OAR 340-071-0140.

(c) The following rules in OAR chapter 340, division 073 do not apply to WPCF applicants or permittees: OAR 340-073-0030(1); 340-073-0065; 340-073-0070; and 340-073-0075.

Stat. Auth.: ORS 454.625, 468.020 & 468.065(2)
Stats. Implemented: ORS 468.065, 468.070, 468B.050 & 468B.055
Hist.: DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 15-2000, f. & cert. ef. 10-11-00; DEQ 2-2002, f. & cert. ef. 2-12-02; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0170
Pre-Cover Inspections

(1) System installers must request a pre-cover inspection when system construction, alteration, or repair is complete except for backfill (cover) and as a permit otherwise requires. The agent must inspect the installation to determine whether it complies with this division, unless the agent waives the inspection under section (2) of this rule or OAR 340-071-0400(~~6~~5).

(2) The agent may waive inspections for a system proposed to serve a single-family dwelling or for a system of similar flow and waste strength if:

(a) The system was installed by a sewage disposal service business licensed under ORS 454.695;

(b) The installer complies with all requirements of this rule; and

(c) Upon the agent's request, the installer submits to the agent photographs of those portions of the construction for which the inspection is waived.

(3) To request a pre-cover inspection, the installer must submit the following information to the agent at the time system construction is complete.

(a) A detailed and accurate as-built plan of the constructed system.

(b) A list of all materials used in the construction of the system.

(c) Certification on a DEQ-approved form signed by the permittee who installed the system or an installer certified under OAR 340-071-0650 on a DEQ-approved form that the system was constructed as the permit, this division, and OAR chapter 340, division 073 require.

(4) An agent may require an owner to pay the inspection fee in OAR 340-071-0140(3) when a pre-cover inspection correction notice requires correction of improper construction and, at a subsequent inspection, the agent finds system construction deficiencies have not been corrected.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.665
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0175
Certificate of Satisfactory Completion

(1) The agent may issue a Certificate of Satisfactory Completion for a system installation if, the agent inspects and system and determines the system complies with applicable requirements in this division and OAR chapter 340, division 073 and the permit's conditions.

(2) If an agent determines an installation does not comply with the requirements in section (1) of this rule, the agent must notify the permittee in writing or post a Correction Notice on the site. The notice must explain the system deficiencies and corrective action required.

(3) If an agent does not inspect a system within 7 days after notification of completion or waives the inspection under OAR 340-071-0170(2) or 340-071-0400(~~6~~5)(d), a Certificate of Satisfactory Completion will be deemed to have been issued by operation of law. In such cases, a modified Certificate will be issued to the owner.

(4) A system may be backfilled (covered) after installation only after:

(a) The agent has notified the permittee that the inspection will not be conducted;

(b) The agent has inspected the system and issued a Certificate of Satisfactory Completion; or

(c) A Certificate of Satisfactory Completion has been issued by operation of law under section (3) of this rule.

(5) The permittee must ensure satisfactory completion of a system installation within 30 days after written notification or posting of a Correction Notice under section (2) of this rule unless the agent agrees to a later time.

(6) A person may not connect to or use any system completed after January 1, 1974, unless a Certificate of Satisfactory Completion has been issued for the installation or deemed issued by operation of law under this rule.

(7) Unless the agent requires otherwise, the system installer must backfill (cover) a system within 10 days after issuance of a Certificate of Satisfactory Completion for that system.

(8) A Certificate of Satisfactory Completion is valid for a period of five years for connection of the system to the facility for which it was constructed. After the five-year period, an Authorization Notice, alteration permit, or construction-installation permit may be required under OAR 340-071-0160, 340-071-0205, or 340-071-0210.

(9) A permittee may appeal the denial or revocation of a Certificate of Satisfactory Completion under ORS 183.310 through 183.550 and OAR chapter 340, division 11.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.655
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0185
Decommissioning of Systems

(1) The owner must decommission a system when:

(a) A sewerage system becomes available and the facility the system serves has been connected to that sewerage system;

(b) The source of sewage has been permanently eliminated;

(c) The system has been operated in violation of OAR 340-071-013~~0~~2(~~13~~1) and a repair permit and Certificate of Satisfactory Completion have not subsequently been issued for the system;

(d) The system has been constructed, installed, altered, or repaired without a permit required in this division, and a permit has not subsequently been issued for the system; or

(e) The system has been operated or used without a required Certificate of Satisfactory Completion or Authorization Notice and a Certificate of Satisfactory Completion or Authorization Notice has not subsequently been issued for the system.

(2) Procedures for decommissioning.

(a) Tanks, cesspools, and seepage pits must be pumped by a licensed sewage disposal service to remove all septage.

(b) Tanks, cesspools, and seepage pits must be filled with reject sand, bar run gravel, or other material approved by the agent, or the container must be removed and properly disposed.

(3) If, in the judgment of the agent, compliance with section (2) of this rule is not reasonably possible or necessary to protect public health, welfare, safety, or public waters, the agent may waive one or both of those requirements.

Statutory/Other Authority: ORS 454.625 & 468.020
Statutes/Other Implemented: ORS 454.615 & 454.655
History: DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 15-1986, f. & ef. 8-6-86; DEQ 5-1982, f. & ef. 3-9-82; DEQ 10-1981, f. & ef. 3-20-81

340-071-0205
Authorization to Use Existing Systems

(1) Authorization Notice required. Except as this rule specifically allows, a person may not place into service, reconnect to, connect an accessory dwelling unit to, change the use of, or increase the projected daily sewage flow into, an existing onsite system without first obtaining an Authorization Notice, construction-installation permit, or alteration permit as appropriate.

(2) Exceptions.

(a) An Authorization Notice is not required to replace a mobile home with a similar mobile home in a mobile home park or a recreation vehicle with another recreation vehicle in a lawful recreation vehicle park if the onsite wastewater system has adequate capacity for safely treating wastewater generated within the park.

(b) An Authorization Notice is not required to place into service a previously unused system for which a Certificate of Satisfactory Completion has been issued within five years of the date such system is placed into service if the projected daily sewage flow does not exceed the design flow and the system is in compliance with the requirements of the Certificate of Satisfactory Completion and applicable requirements in this division.

(3) A completed application for the Authorization Notice must be submitted to an agent with all required exhibits and the authorization notice fee in OAR 340-071-0140(3). The exhibits must include:

(a) A land use compatibility statement from the appropriate land use authority as required in OAR chapter 340, division 018;

(b) An accurate property development plan;

(c) An onsite system description;

(d) A lot map or equivalent plat map for the property;

(e) Documentation of any hardship claimed;

(f) All other information the agent finds necessary to complete the application.

(4) An agent may issue an Authorization Notice valid for up to one year to place into service or change the use of an existing onsite system when there is no increase in projected daily sewage flow ~~is projected~~ and the design flow is not exceeded, if:

(a) The existing system is not failing;

(b) All set-backs between the existing system and the structure can be maintained; and

(c) In the agent's opinion, the proposed use would not create a public health hazard on the ground surface or in public surface waters.

(5) An agent may issue an Authorization Notice valid for up to one year to place into service or change the use of an existing system when projected daily sewage flow would increase by not more than 300 gallons above the design capacity and not more than 50 percent of the design capacity for the system if:

(a) The existing system is not failing;

(b) All set-backs between the existing system and the structure can be maintained;

(c) A full system replacement area is available for each system on the property and meets all siting requirements in this division except those relating to soil conditions and groundwater; and

(d) In the agent's opinion, the proposed increase in sewage flow would not create a public health hazard or pollute waters, as a result of adversely impacting the functioning of the system.

(6) ~~A construction-installation permit is required to place into service or change the use of a system~~ ~~w~~When the projected daily sewage flow~~s~~ would increase by more than 300 gallons above the design capacity or by more than 50 percent of the design capacity of the system, a site evaluation approval under OAR 340-071-0150 and a construction-installation permit ~~is~~ are required to place into service or change the use of a system.

(7) Personal hardship.

(a) The agent may issue an Authorization Notice allowing a temporary dwelling to use an existing system serving another single-family dwelling to provide housing for a person suffering hardship or for an individual providing care for such a person if:

(A) The agent receives a hardship approval issued under local planning ordinances;

(B) The system is not failing; and

(C) The agent receives evidence that local zoning and land use planning regulations allow placing a hardship temporary dwelling on the subject property.

(b) The Authorization Notice remains in effect for a specified period not to exceed 5 years, but may not exceed cessation of the hardship. The Authorization Notice may be extended for additional periods upon application under the requirements in section (3) of this rule.

(c) The agent must impose conditions in the Authorization Notice that are necessary to protect public health.

(8) Temporary placement.

(a) The agent may issue an Authorization Notice allowing a temporary dwelling to use an existing system serving another single-family dwelling to provide temporary housing for a family member in need if:

(A) The agent receives evidence that the family member is in need of temporary housing;

(B) The system is not failing;

(C) A full system replacement area is available; and

(D) The agent receives evidence that local zoning and land use planning regulations allow placement of a temporary dwelling on the subject property.

(b) The Authorization Notice may authorize use for no more than two years and is not renewable. The agent must impose conditions in the Authorization Notice necessary to protect public health. If the system fails during the temporary placement and additional replacement area is no longer available, the owner must disconnect the temporary dwelling from the system.

(9) If the conditions of sections (4), (5), ~~(6),~~ (7), and (8) of this rule are not satisfied, the agent must either deny the Authorization Notice or withhold issuance until necessary alterations or repairs are made to the system.

(a) Alteration or repair requires a permit under OAR 340-071-0160, 340-071-0210, or 340-071-0215. The agent must credit the Authorization Notice fee submitted with the Authorization Notice application toward the permit fee.

(b) The agent may require submitting the exhibits described in OAR 340-071-0160(2) to complete the permit application and must issue or deny the permit under OAR 340-071-0160.

(10) If the Authorization Notice is denied due to the requirements in section 6, the fees may be applied toward the construction-installation permit fee or site evaluation required under OAR 340-071-0150.

(11)~~(10)~~ Upon the applicant's request, DEQ will review an Authorization Notice an agent denied. The application for review must be submitted to DEQ in writing within 45 days of the Authorization Notice denial along with the denial review fee in OAR 340-071-0140(3) and other information DEQ finds necessary to complete the review. DEQ will prepare a report of the review.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 11-1991, f. & cert. ef. 7-3-91; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0210
Alteration of Existing Onsite Wastewater Treatment Systems

(1) Permit required. A person may not alter or increase the design capacity of an existing onsite wastewater treatment system not under a WPCF permit without first obtaining an alteration permit under this rule or a construction-installation permit under OAR 340-071-0160, as applicable. The permit application procedure is described in OAR 340-071-0160.

(2) An agent may issue an alteration permit if the requirements of either paragraph ~~subsections~~ (a) or (b) of this section are met.

(a) Alterations do not increase the system's design capacity ~~above the original design flow~~ and:

(A) The existing system is not failing;

(B) The site setbacks in Table 1 can be met except that if the setbacks in Table 1 for septic tanks, treatment units, effluent sewers, and distribution units cannot be met, the agent may allow a reasonable installation; and

(C) In the agent's opinion, use of the onsite system would not create a public health hazard or result in water pollution.

(b) Alterations do not exceed the existing system design capacity by more than 300 gpd or 50 percent, and:

(A) The existing system is not failing;

(B) The setbacks in Table 1 can be met; and

(C) In the agent's opinion, using the onsite system would not create a public health hazard or result in water pollution.

(3) An application for a construction-installation permit under OAR 340-071-0160 is required when the existing system design capacity is proposed to be exceeded by more than 300 gpd or more than 50 percent.

(4) Certificate of Satisfactory Completion required. Upon completing installation of that part of a system for which a permit was issued, the system installer must comply with the requirements for pre-cover inspections in OAR 340-071-0170. The agent must issue or deny the Certificate of Satisfactory Completion for the completed construction under OAR 340-071-0175. The projected daily sewage flow into the system may not be increased until the Certificate is issued.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.655, 454.665 & 454.675
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-15-94,
cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0215
Repair of Existing Systems

(1) The system owner must ensure a failing system is immediately repaired unless, in the opinion of the agent, adverse soil conditions resulting from climatic conditions would likely preclude a successful repair. In that circumstance, the agent may allow a delay in commencing or completing repairs until the soil conditions improve. If the agent authorizes a delay, the agent must issue a notice of noncompliance to the system owner specifying a compliance date and any interim provisions required to prevent a public health hazard and protect public waters.

(2) Except for emergency repairs, a person may not repair a failing system without first obtaining a repair permit under this rule. A person may make emergency repairs without first obtaining a permit if a repair permit application is submitted to the agent within three working days after the emergency repairs are begun. The permit application procedure is described in OAR 340-071-0160.

(3) Repairs for properties located within a city limit, urban growth boundary, or sanitary district or equivalent, including emergency repairs, must obtain a written statement from the sewer authority confirming a community or area-wide sewerage is not available prior to repairing a failing system.

(4)~~(3)~~ Certificate of Satisfactory Completion. Upon completion of installation of that part of a system for which a repair permit was issued, the system installer must comply with the requirements for pre-cover inspections in OAR 340-071-0170. The agent must issue or deny the Certificate of Satisfactory Completion under OAR 340-071-0175.

(5)~~(4)~~ Criteria for permit issuance.

(a) If the site characteristics and standards in OAR 340-071-0220 can be met, the repair installation must conform to the requirements.

(b) If the site characteristics or standards in OAR 340-071-0220 cannot be met, the agent may allow a reasonable repair installation to eliminate a public health hazard, including installing an alternative system as necessary.

(6)~~(5)~~ Notwithstanding the permit duration specified in OAR 340-071-0160(5), a permit issued under this rule may be effective for a period of less than one year from the date of issue if specified by the agent.

(7)~~(6)~~ System owners must decommission failing systems under OAR 340-071-0185 if the systems cannot be repaired.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.655, 454.665, 454.675 & 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0220
Standard Subsurface Systems

(1) Criteria For standard subsurface systems. Each site must meet all of the conditions in this section to be approved for a standard subsurface system.

(a) Effective soil depth must extend 30 inches or more below the ground surface as shown in Table 3. A minimum 6-inch separation must be maintained between the layer that limits effective soil depth and the bottom of the absorption facility.

(b) Water table levels must be predicted using standards in OAR 340-071-0130(~~25~~22).

(A) The permanent water table must be at least 4 feet below the bottom of the absorption facility, except in defined geographic areas where DEQ has determined through a groundwater study that less separation will not degrade groundwater or threaten public health. In these exception areas, the permanent water table must be at least 24 inches below the ground surface.

(B) A temporary water table must be 24 inches or more below the ground surface. An absorption facility may not be installed deeper than the top of the temporary water table.

(C) A groundwater interceptor may be used to intercept or drain water from an absorption area on sites with adequate slope to permit proper drainage. An agent may require a demonstration that the site can be de-watered before issuing a site evaluation report approving the site. Where required, groundwater interceptors are an integral part of the system but do not need to meet setback requirements to

property lines, wells, streams, lakes, ponds, or other surface water bodies that are required for the wastewater absorption area.

(c) Except as ~~subsection~~ paragraph (d) of this section provides, soil with rapid or very rapid permeability must be 36 inches or more below the ground surface. A minimum 18-inch separation must be maintained between soil with rapid or very rapid permeability and the bottom of absorption trenches.

(d) Sites may be approved with no separation between the bottom of absorption trenches and soil with rapid or very rapid permeability as defined in OAR 340-071-0100(~~148~~150)(a) and (b) and absorption trenches may be placed into such soil if any of the following conditions occur.

(A) A confining layer occurs between the bottom of absorption trenches and the groundwater table and a minimum 6-inch separation is maintained between the bottom of absorption trenches and the top of the confining layer.

(B) A layer of nongravelly (less than 15 percent gravel) soil with sandy loam or finer texture at least 18 inches thick occurs between the bottom of the absorption trenches and the groundwater table.

(C) The ~~projected daily sewage flow~~ design flow does not exceed a loading rate of 450 gallons per acre per day.

(e) Slopes do not exceed 30 percent or the slope/effective soil depth relationship described in Table 3.

(f) The site has not been filled or the soil has not been modified in a way that would, in the agent's opinion, adversely affect the system's functioning.

(g) The site is not on an unstable land form that might adversely affect operation of the system.

(h) The site of the initial and replacement absorption facility is not covered by asphalt or concrete or subject to vehicular traffic, livestock, or other activity that would adversely affect the soil.

(i) The site of the initial and replacement absorption facility will not be subjected to excessive saturation from artificial drainage of ground surfaces, driveways, roads, roof drains, or other circumstances.

(j) Setbacks in Table 1 except as modified by this subsection can be met.

(A) Surface waters setbacks. Setback from streams or other surface waters must be measured from bank drop-off or mean yearly high water mark, whichever provides the greatest separation distance.

(B) Lots created before May 1, 1973. For lots or parcels legally created before May 1, 1973, the agent may approve installing a standard or alternative system with a setback

from surface waters of less than 100 feet but not less than 50 feet if all other applicable provisions of this rule can be met.

(C) Water lines and sewer lines. Effluent sewer and water line piping constructed of materials that are approved for use within a building in the ~~2000 Edition of the~~ Oregon State Plumbing Specialty Code may be run in the same trench or may cross. Where the effluent sewer pipe material is not approved for use in a building, it may not be run or laid in the same trench as water pipe unless:

(i) The bottom of the water pipe at all points is set at least 12 inches above the top of the sewer pipe; and

(ii) The water pipe is placed on a solid shelf excavated at one side of the common trench with a minimum, clear, horizontal distance of at least 12 inches from the sewer pipe.

(D) Septic tank setbacks. The agent must encourage placing septic tanks and other treatment units as close as feasible to the minimum separation from the building foundation to minimize clogging the building sewer.

(E) Pressure transport pipe setback to well. Notwithstanding the setback distance in Table 1, the agent may allow the separation distance between a pressure transport pipe and a well to be less than 50 feet but no less than 25 feet when: [Table not included. See ED. NOTE.]

(i) The pressure transport pipe is ~~PVC~~ Schedule 40 or heavier pressure-rated piping ~~meeting ASTM Specification D-2241~~;

(ii) The pressure transport pipe is placed within a larger diameter ~~PVC or ABS~~ Schedule 40 or heavier encasement pipe, with the pipe ends located at least 50 feet away from the well; and

(iii) All pipe joints in the pressure transport pipe and encasement pipe are solvent-welded or heat welded in accordance with the manufacturer's specifications.

(k) The agent makes a determination based on the best available science that the nutrient load from the system would not significantly degrade or pollute public waters, or create a public health hazard.

(2) Criteria for sizing absorption fields. Absorption fields must be designed and sized based on the criteria in this section.

(a) Table 2, specifying quantities of sewage flows, or other information the agent determines is reliable with the following exception. [Table not included. See ED. NOTE.] A system must be sized on the basis of 300 gallons sewage flow per day plus 75 gallons per day for the third bedroom when the system:

(A) Is proposed to serve a single-family dwelling on a lot of record created before March 1, 1978, that is too small to accommodate a system sized for a daily sewage flow of 450 gallons; or

(B) Serves specifically planned developments with living units of three or fewer bedrooms and deed restrictions prohibit an increase in the number of bedrooms.

(b) Table 4, specifying the minimum length of absorption trenches based on soil texture and effective soil depth. [Table not included. See ED. NOTE.]

(c) Table 5, specifying the minimum length of absorption trenches based on soil texture and depth to temporary water. [Table not included. See ED. NOTE.]

(d) Strength of the wastewater. If the strength of the wastewater exceeds the maximum limits for residential strength wastewater or the contents of the wastewater are atypical of residential strength wastewater or pose a threat to groundwater, public health, or the environment, the wastewater must be pretreated to acceptable levels before being discharged into a standard or alternative system.

(3) Septic tank.

(a) Liquid capacity.

(A) The quantity of projected daily sewage flow and design flow ~~projected~~ for a facility must be estimated from Table 2. For establishments not listed in Table 2, the agent must determine the projected daily sewage flow and design flow ~~for establishments not listed in Table 2~~. [Table not included. See ED. NOTE.]

(B) A septic tank that serves a commercial facility must have a liquid capacity of at least two times the design flow or projected daily sewage flow, whichever is greater, unless the agent authorizes otherwise. In all cases the capacity must be at least 1,000 gallons.

(C) The capacity of a septic tank that serves a single-family dwelling must be based on the number of bedrooms in the dwelling. For a dwelling with 4 or fewer bedrooms, the tank capacity must be at least 1,000 gallons. Septic tank capacity must be at least 1,500 gallons for dwellings with more than 4 bedrooms.

(D) The agent may require a larger capacity than this subsection specifies as needed for special or unique waste characteristics, such as flow patterns, volumes, waste strength, or facility operation.

(b) Installation requirements.

(A) Septic tanks must be installed on a level, stable base that will not settle.

(B) Septic tanks located in high groundwater area must be weighted or provided with an antibuoyancy device to prevent flotation under the manufacturer's instructions.

(C) Tanks must be installed with at least one watertight riser extending to the ground surface or above. The riser must have a minimum diameter of 20 inches when the soil cover above the tank does not exceed 36 inches. The riser must have a minimum diameter of 30 inches when the soil cover above the tank exceeds 36 inches or when

the tank capacity exceeds 3,000 gallons. A gasketed cover must be provided and securely fastened or weighted to prevent unauthorized access.

(D) Tanks must be installed in a location that provides access for maintenance.

(E) Where practicable, the sewage flow from an establishment must be consolidated into one septic tank.

(F) The agent may allow a removable plug to be placed in the top of a septic tank inlet sanitary tee if the septic tank discharges directly into a gravity-fed absorption facility.

(G) After installation all tanks must prove watertightness under OAR 340-073- 0025.

(H) Unless the agent allows otherwise, an effluent filter meeting the requirements of OAR 340-073-0056 must be installed at the septic tank outlet if a tank serves a commercial facility. A service access riser and cover meeting the requirements of 340-071-0220(3)(b)(C) must be placed above the effluent filter.

(c) Construction. Tank construction must comply with minimum standards in OAR chapter 340, division 073, unless otherwise DEQ authorizes otherwise in writing.

(d) Multi-compartment tank requirement.

(A) With the exception in paragraph (B) of this subsection, if a sewage ejector pump precedes a septic tank, the tank must have been manufactured as a multi- compartment tank under requirements in this division and OAR chapter 340, division 073. An effluent filter must be installed unless the agent allows other methods with equal or better performance in preventing suspended solids from passing to the drainfield.

(B) If the sewage ejector pump preceding the septic tank at a single-family residence receives wastewater from only a clothes washing machine and a sink, a single-compartment septic tank may be used in lieu of a multi-compartment septic tank. The tank must meet the minimum capacity requirement in ~~subsection~~ paragraph (a) of this section, and an effluent filter must be installed in the tank's outlet tee fitting. Alternatively, the agent may allow the filter to be placed in a separate vault and riser located just outside the septic tank or may authorize other alternatives as appropriate.

(4) Distribution techniques. Absorption trenches must be constructed according to one of the methods in this section.

(a) Gravity-fed equal distribution (including loop).

(A) Equal distribution must be used on generally level ground. All trenches and piping must be level within a tolerance of plus or minus 1 inch. All lateral piping must be at the same elevation.

(B) A pressure-operated hydrosplitter may be used to achieve equal distribution.

(C) To determine the total useable area of a looped soil absorption facility, the agent must add the sum of the lengths of the parallel absorption trenches and the lengths of up to two absorption trenches intersecting the parallel trenches.

(b) Serial distribution. Serial distribution is generally used on sloping ground. Each trench must be level within a tolerance of plus or minus 1 inch. Serial distribution may be a combination of equal distribution and serial distribution.

(c) Pressurized distribution systems. Pressurized distribution must satisfy the requirements in OAR 340-071-0275.

(5) Distribution boxes and drop boxes.

(a) Construction. Distribution box and drop box construction must comply with standards in OAR 340-073-0035 and 340-073-0040.

(b) Foundation. All distribution boxes and drop boxes must be bedded on a stable, level base.

(c) In all gravity distribution techniques, the connection of the effluent piping to the distribution piping must include at least one distribution or drop box or other device acceptable to the agent as a means for locating and monitoring the absorption field.

(6) Dosing tanks and dosing septic tanks.

(a) Tank construction must comply with the standards in OAR chapter 340, division 73 unless DEQ authorizes otherwise in writing.

(b) The tank must be installed on a stable, level base at a location that provides access for maintenance.

(c) The tank must be provided with at least one watertight service access riser extending to the ground surface or above. The riser must have a minimum diameter of 20 inches when the soil cover above the tank does not exceed 36 inches. The riser must have a minimum diameter of 30 inches when the soil cover above the tank exceeds 36 inches. A gasketed cover must be securely fastened or weighted to prevent unauthorized access.

(d) A tank located in a high groundwater area must be weighted or provided with an antibuoyancy device to prevent flotation under the tank manufacturer's instructions.

(7) Absorption trenches.

(a) Absorption trenches must be constructed under the standards in this section unless otherwise authorized in this division.

(A) Minimum bottom width of trench — 24 inches.

(B) Minimum depth of trench:

(i) Equal or looped distribution —18 inches.

(ii) Serial distribution — 24 inches.

(iii) Pressure distribution — 18 inches.

(C) Maximum depth of trench — 36 inches.

(D) Maximum length of an individual trench — 150 linear feet, unless the agent authorizes otherwise in writing.

(E) Minimum distance of undisturbed earth between trenches — 8 feet.

(b) The bottom of the trench must be level within a tolerance of plus or minus 1 inch end to end and level from side to side.

(c) When the sidewall within a trench has been smeared or compacted, sidewalls must be raked to ensure permeability.

(d) Trenches must be constructed to prevent septic tank effluent from flowing backwards from the distribution pipe to undermine the distribution box, the septic tank, or any portion of the distribution unit.

(e) Drain media must extend the full width and length of the trench to a depth of at least 12 inches with at least 6 inches of drain media under the distribution pipe and at least 2 inches over the distribution pipe.

(f) Before backfilling the trench, the drain media must be covered with filter fabric, untreated building paper, or other material the agent approves.

(g) If trenches are installed in sandy loam or coarser soils, filter fabric or other nondegradable material the agent approves must be used to cover the drain media.

(8) Trench backfill.

(a) The installer must backfill the system. Backfill must be carefully placed to prevent damage to the system.

(b) A minimum of 6 inches of backfill is required. 12 inches is required in serial systems.

(c) Backfill must be free of large stones, frozen clumps of earth, masonry, stumps, waste construction materials, or other materials that could damage the system.

(9) Header pipe. Header pipe must be watertight, have a minimum diameter of 3 inches, and be bedded on undisturbed earth. Where distribution boxes or drop boxes are used, the header pipe between the box and the distribution pipe must be at least 4 feet in length and be installed level.

(10) Distribution pipe.

(a) Distribution pipes must have a minimum diameter of 3 inches.

(b) Each disposal trench must have distribution piping that is centered in the trench and laid level within a tolerance of plus or minus 1 inch.

(c) Distribution pipe must comply with standards in OAR 340-073-0060(4).

(d) All perforated pipe must be installed with centerline markings up.

(11) Effluent sewer. The effluent sewer must extend at least 5 feet beyond the septic tank before connecting to the distribution unit. It must be installed with a minimum fall of 4 inches per 100 feet and at least 2 inches of fall from one end of the pipe to the other. In addition, there must be a minimum difference of 8 inches between the invert of the septic tank outlet and either the invert of the header to the distribution pipe of the highest lateral in a serial distribution field or the invert of the header pipe to the distribution pipes of an equal distribution absorption field. A minimum 18-gauge, green-jacketed tracer wire or green color-coded metallic tape must be placed above the effluent sewer pipe.

(12) Curtain drain construction. Unless the agent authorizes otherwise, curtain drains must comply with the following requirements.

(a) Ground slope must be at least 3 percent, or other landform features such as an escarpment must allow for effective drainage.

(b) The curtain drain must extend at least 6 inches into the layer that limits effective soil depth or to a depth adequate to effectively dewater the site.

(c) Trench width must be a minimum of 12 inches.

(d) Perforated pipe must have a minimum diameter of 4 inches and must meet the requirements in OAR 340-073-0060(4).

(e) Perforated pipe must be installed at least 2 inches above the bottom and along the full length of the trench and must be covered by a minimum of 10 inches of drain media.

(f) The curtain drain must be filled with drain media to within 12 inches of the ground surface.

(g) Outlet pipe must be rigid, smooth-wall, solid ~~PVC~~ Schedule 40 pipe ~~meeting or exceeding ASTM Standard D-3034~~ with a ~~minimum~~ diameter of at least 4 inches. A flap gate or rodent guard must be installed.

(h) Filter fabric must be placed over the drain media.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 468B.080

Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 7-2008, f. 6-27-08, cert. ef. 7-1-08; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14; DEQ 11-2014, f. & cert. ef. 10-15-14

340-071-0260
Alternative Systems, General

(1) Application requirements. The requirements in this division and OAR chapter 340, division 073 for siting, constructing, and maintaining standard subsurface systems apply to alternative systems unless the standards for alternative systems in this division provide otherwise.

(2) ~~Periodic inspections~~ Alternative system inspections.

(a) Agents may perform periodic inspections of installed alternative systems. System owners must pay the alternative system inspection fee in OAR 340-071-0140(3) for the inspection upon billing by the agent.

(b) The agent must prepare a report of each inspection listing system deficiencies, corrections required, and timetables for correction, and will provide a copy to the system owner. The agent may follow up as necessary to ensure proper corrections.

(c) The agent may require a certified maintenance provider conduct the alternative system inspection and prepare a report in lieu of an inspection by the agent as follows:

(A) The report must list system deficiencies, corrections required, and an estimated date of correction;

(B) For ATT systems, the maintenance provider must be certified by the manufacturer to do service on the ATT.

(C) The system owner is responsible for any costs associated with alternative system inspections made by maintenance providers, including but not limited to labor, parts, and services.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 9-1984, f. & ef. 5-29-84; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0265
Capping Fills

(1) Criteria for approval. Each site approved for a capping fill system must meet all the following conditions:

(a) Slope does not exceed 12 percent.

(b) Temporary water table is not closer than 18 inches to the ground surface at any time during the year. A 6-inch minimum separation must be maintained between the bottom of the absorption trench and the temporary water table.

(c) Where a permanent water table is present, a minimum 4-foot separation must be maintained between the bottom of the absorption trench and the water table.

(d) Except as provided in ~~subsection~~ paragraph (e) of this section, where material with rapid or very rapid permeability is present, a minimum 18-inch separation must be maintained between the bottom of the absorption trench and soil with rapid or very rapid permeability.

(e) Sites may be approved with no separation between the bottom of the absorption trenches and soil with rapid or very rapid permeability (as defined in OAR 340-071-0100(~~148~~150)(a) or (b)), and absorption trenches may be placed into such soil if any of the following conditions occur.

(A) A confining layer occurs between the bottom of absorption trenches and the temporary groundwater table and a minimum 6-inch separation is maintained between the bottom of absorption trenches and the top of the confining layer.

(B) A layer of non-gravelly (less than 15 percent gravel) soil with sandy loam or finer texture at least 18 inches thick occurs between the bottom of the absorption trenches and the groundwater table.

(C) The ~~projected daily sewage~~ design flow does not exceed a loading rate of 450 gallons per acre per day.

(f) Effective soil depth is 18 inches or more below the natural soil surface.

(g) Soil texture from the ground surface to the layer that limits effective soil depth is no finer than silty clay loam.

(h) A minimum 6-inch separation is maintained between the bottom of the absorption trench and the layer that limits effective soil depth.

(i) The system can be sized according to effective soil depth in Table 4.

(2) Installation requirements. The cap must be constructed as the permit requires. Unless the agent requires otherwise, construction must follow this sequence:

(a) The agent must examine and approve the soil before placing the cap. The texture of the soil used for the cap must be the same textural class as or one textural class finer than the natural topsoil unless otherwise allowed in this division.

(b) Capping fills must be constructed between June 1 and October 1 unless the agent allows otherwise. The upper 18 inches of natural soil must not be saturated or have a moisture content that causes loss of soil structure and porosity when worked.

(c) The absorption area and the borrow site must be scarified to destroy the vegetative mat.

(d) The system must be installed as specified in the construction-installation permit with a minimum 10-foot separation between the edge of the fill and the absorption facility.

(e) Filter fabric must be used between the drain media and the soil cap, unless the agent authorizes otherwise.

(f) Fill must be applied to the fill site and worked in so that the two contact layers, native soil and fill, are mixed. Fill material must be evenly graded to a final depth of 10 inches over the drain media for an equal system or 16 inches over the drain media for a serial system to allow for appropriate settled depths. Both initial cap and repair cap may be constructed at the same time.

(g) The site must be landscaped according to permit conditions and be protected from livestock, automotive traffic, and other activity that could damage the system.

(3) Required inspections. Unless the agent waives it, the following inspections must be performed for each capping fill installed.

(a) Inspecting both the absorption area and borrow material before cap construction for scarification, soil texture, and moisture content.

(b) Inspecting the installed absorption facility before covering.

(c) Inspection after the cap is placed to determine adequate contact between fill material and native soil (no obvious contact zone visible), adequate depth of material, and uniform distribution of fill material.

(d) Final inspection after landscaping or other erosion control measures are established. [ED. NOTE: All table s are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0275
Pressurized Distribution Systems

(1) Pressurized distribution systems receiving residential strength wastewater may be permitted on any site meeting the requirements for installation of a standard onsite

system and on other sites where this method of effluent distribution is preferable and the site conditions in this rule can be met.

(2) Except as allowed in OAR 340-071-0220(1)(d), pressurized distribution systems must be used where depth to soil with rapid or very rapid permeability as defined in OAR 340-071- 0100(~~148~~150)(a) and (b) is less than 36 inches and the minimum separation distance between the bottom of the absorption trench and such soil is less than 18 inches.

(3) Pressurized distribution systems installed in soil with rapid or very rapid permeability as defined in OAR 340-071-0100(~~148~~150)(a) and (b) in areas with permanent water tables may not discharge more than 450 gallons of effluent per 1/2 acre per day except where:

(a) Groundwater is degraded and designated as a non-developable resource by the Oregon Water Resources Department; or

(b) A detailed hydrogeological study discloses loading rates exceeding 450 gallons per 1/2 acre per day would not increase the nitrate-nitrogen concentration in the groundwater beneath the site or at any down gradient location to above 5 mg/L.

(4) Materials and construction.

(a) General.

(A) All materials used in pressurized systems must be structurally sound, durable, and capable of withstanding normal stresses incidental to installation and operation.

(B) Pump wiring must comply with applicable building, electrical, or other codes. An electrical permit and inspection from the Department of Consumer and Business Services, Building Codes Division, or the municipality with jurisdiction, is required for pump wiring installation.

(C) A single-compartment dosing septic tank may not be used in a system with pressurized distribution laterals unless the tank is partitioned with a flow-through below the tank's lowest liquid level. The flow through port must be at 65 to 75 percent of the minimum liquid level and be at least 4" in diameter.

(b) Pressurized distribution piping. Piping, valves, and fittings for pressurized systems must meet the following minimum requirements.

(A) All pressure transport, manifold, lateral piping, and fittings must meet the requirements in OAR 340-073-0060(3).

(B) Pressure transport piping must be uniformly supported along the trench bottom. The agent may require the piping to be bedded in sand or other material approved by the agent. A minimum 18 gauge, green-jacketed tracer wire or green color-coded metallic locate tape must be placed above piping.

(C) Orifices must be located on top of the pipe, except as noted in ~~paragraph~~ subsection 4(b)(I) of this rule~~section~~.

(D) The ends of lateral piping must be constructed with long sweep elbows or an equivalent method to bring the end of the pipe to finished grade. The ends of the pipe must be provided with threaded plugs, caps, or other devices acceptable to the agent to allow for access to and flushing the lateral.

(E) All joints in the manifold, lateral piping, and fittings must be solvent-welded using the appropriate joint compound for the pipe material. Pressure transport piping may be solvent-welded or rubber-ring jointed.

(F) A shut off valve must be placed on the pressure transport pipe in or near the dosing tank when appropriate.

(G) A check valve must be placed between the pump and the shut off valve when appropriate.

(H) All orifices must be covered by a protective, durable, noncorrosive orifice shield designed to keep orifices from being blocked by drain media or other system components. The shields or piping must be removable for access to the orifices.

(I) The agent may specify alternate orifice orientation and valve arrangements for conditions such as extended freezing temperatures, temporary or seasonal use, or effluent characteristics.

(J) Where operating a pump could result in siphonage of effluent to below the normal off level of the pump, an anti-siphon measure in the form of a non- discharging valve designed for the specific purpose must be used. The anti-siphon valve must be installed and operated under manufacturer's specifications.

(c) Absorption trench sizing and construction.

(A) A system using absorption trenches must be designed and sized as OAR 340- 071-0220(2) requires.

(B) Absorption trenches must be constructed using the specifications for the standard disposal trench unless otherwise authorized by the agent.

(C) The trench must contain drain media at least 12 inches deep, with at least 6 inches of media under the pressure distribution laterals and sufficient media above the laterals to meet or cover the orifice shields to provide a smooth, even cover.

(D) The top of the drain media must be covered with filter fabric or other nondegradable material permeable to fluids that will not allow passage of soil particles coarser than very fine sand. In unstable soils, sidewall lining may be required.

(d) Seepage bed construction.

(A) Seepage beds may be used instead of absorption trenches in soil as defined in OAR 340-071-0100(~~148~~150)(b) if flows do not exceed 600 gpd.

(B) The effective seepage area must be based on the bottom area of the seepage bed. The area must be at least 200 square feet per 150 gallons per day waste flow.

(C) Beds must be installed at least 18 inches deep (12 inches with a capping fill) but not deeper than 36 inches into the natural soil. The seepage bed bottom must be level.

(D) The top of the drain media must be covered with filter fabric or other nondegradable material that is permeable to fluids but will not allow passage of soil particles coarser than very fine sand.

(E) The bed must contain drain media at least 12 inches deep with at least 6 inches of media under the pressure distribution laterals and sufficient media

above the laterals to meet or cover the orifice shields to provide a smooth, even cover.

(F) Pressurized distribution piping must be horizontally spaced not more than 4 feet apart and not more than 2 feet away from the seepage bed sidewall. At least 2 parallel pressurized distribution pipes must be placed in the seepage bed.

(G) A minimum of 10 feet of undisturbed earth must be maintained between seepage beds.

(5) Hydraulic design criteria. Pressurized distribution systems must be designed for appropriate head and capacity.

(a) Head calculations must include maximum static lift, pipe friction, and orifice head requirements.

(A) Static lift where pumps are used must be measured from the minimum dosing tank level to the level of the perforated distribution piping.

(B) Pipe friction must be based upon a Hazen Williams coefficient of smoothness of 150. All pressure piping and fittings on laterals must have a minimum diameter of 2 inches unless submitted plans and specifications show a smaller diameter pipe is adequate.

(C) A minimum head of 5 feet at the remotest orifice and no more than a 10 percent flow variation between the nearest and remotest orifice in an individual unit are required.

(b) The capacity of a pressurized distribution system refers to the rate of flow given in gallons per minute (gpm).

(A) Lateral piping must have discharge orifices drilled a minimum diameter of 1/8 inch and evenly spaced no more than 24 inches apart in coarse textured soils or no more than 4 feet apart in finer textured soils.

(B) The system must be dosed at a rate not to exceed 20 percent of the projected daily sewage flow.

(C) The effect of back drainage of the total volume of effluent within the pressure distribution system must be evaluated for its impact on the dosing tank and system operation.

~~(6) Service contracts. The owner of a pressurized distribution system must maintain a contract, under OAR 340-071-0130(23), with a maintenance provider to service, maintain and adjust the onsite system. A service contract must be entered before the system is installed and must be maintained until the system is decommissioned~~.

(6) Operation and maintenance. The operation and maintenance of a pressurized distribution system, including service contracts, must meet the requirements under OAR 340-071-0132.

(7) Required inspections. The agent must perform the following inspections for each installed pressure distribution system, unless waived by the agent:

(a) Inspect the installed absorption facility and distribution network before covering.

(b) Inspect to confirm the pump, floats, and controls are powered on, set according to the approved plans, and functioning properly. The agent may require the certified maintenance provider under contract for inspecting, operating, and maintaining the system to conduct this inspection and submit a completed start-up report on a DEQ-approved form to the agent.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.775 & 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0280
Seepage Trench System

(1) Criteria for approval. Construction permits may be issued for seepage trench systems on lots created before January 1, 1974, for sites that meet all the following conditions.

(a) Groundwater will not be degraded.

(b) Lot or parcel size will not accommodate standard subsurface system disposal trenches with a ~~projected~~ design flow of 450 gpd.

(c) All other requirements for standard subsurface systems can be met.

(2) Design criteria.

(a) The maximum depth allowed for a seepage trench is 42 inches.

(b) The seepage trench system must be sized according to the following formula: length of seepage trench = 4 x (length of standard disposal trench) divided by (3 + 2D), where D = depth of drain media below distribution pipe in feet. Maximum depth of drain media

(D) is 2 feet.

(c) The ~~projected daily sewage~~ design flow is limited to a maximum of 450 gallons.

Statutory/Other Authority: ORS 454.625 & 468.020
Statutes/Other Implemented: ORS 454.615 & 454.775
History: DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 15-1986, f. & ef. 8-6-86; DEQ 8-1983, f. & ef. 5-25-83; DEQ 10-1981, f. & ef. 3-20-81

340-071-0290
Conventional Sand Filter Systems

(1) Criteria for approval. Construction of conventional sand filter systems may be approved for single-family dwellings or commercial facilities.

(2) Sites approved for sand filter systems. Sand filters may be permitted on any site meeting requirements for standard onsite systems in OAR 340-071-0220 or for pressurized distribution systems in OAR 340-071-0275 if site conditions in this section can be met.

(a) Separation from the temporary groundwater table must satisfy the requirements in this subsection.

(A) The high level attained by a temporary groundwater table is:

(i) Twelve inches or more below ground surface where:

(I) The ground slope does not exceed 12 percent;

(II) Equal distribution methods are achieved by gravity or using either a hydrosplitter or pressurized distribution method; and

(III) A capping fill is placed under OAR 340-071-0265(2) and 340-071-0265(3)(a) through (c).

(ii) Eighteen inches or more below ground surface where equal distribution methods are achieved by gravity or through the use of a hydrosplitter or pressurized distribution.

(iii) Twenty-four inches or more below ground surface where serial distribution methods are used.

(B) Methods used in OAR 340-071-0315 for tile dewatering systems may be used to achieve separation distances from temporary groundwater.

(C) Absorption trenches may not be installed deeper than the highest level of the temporary water table. The minimum backfill depth within the absorption trenches is 6 inches for trenches using equal distribution methods and 12 inches for trenches using serial distribution.

(b) Separation from the permanent groundwater table must satisfy the requirements in this subsection.

(A) The highest level attained by a permanent water table does not exceed the minimum separation distance from the bottom of the absorption area as follows:

(i) For gravel and Soil Group A: sand, loamy sand, sandy loam — 24 inches;

(ii) For Soil Group B: loam, silt loam, sandy clay loam, clay loam — 18 inches;

(iii) For Soil Group C: silty clay loam, silty clay, clay, sandy clay — 12 inches.

(B) Shallow absorption trenches placed not less than 12 inches into the original soil profile may be used with a capping fill to achieve separation distances from permanent groundwater. The fill must be placed under OAR 340-071-0265(2) and 340-071-0265(3)(a) through (c).

(C) Methods used in OAR 340-071-0315 for tile dewatering systems may be used to achieve separation distances from permanent groundwater.

(c) Sand filter systems installed in soils with rapid or very rapid permeability as defined in OAR 340-071-0100(~~148~~150)(a) and (b) in areas with permanent water tables may not discharge more than 450 gallons of effluent per 1/2 acre per day except where:

(A) Groundwater is degraded and designated as a nondevelopable resource by the Oregon Water Resources Department; or

(B) A detailed hydrogeological study determines loading rates exceeding 450 gallons per 1/2 acre per day would not increase nitrate-nitrogen concentration in the groundwater beneath the site or any downgradient location to above 5 mg/L.

(d) Sand filter systems may be installed in soils, fractured bedrock, or saprolite diggable with a backhoe if, in the judgment of the agent, the soils, fractured bedrock, or saprolite is permeable to the extent that effluent will absorb adequately and not hinder the performance of the filter or absorption field. The agent may require that an absorption test be conducted to determine the permeability of the bedrock or saprolite. Test methods must be acceptable to DEQ.

(A) Where ground slope does not exceed 12 percent, a capping fill, 12-inch deep trench may be installed under OAR 340-071-0265, except that when installed in fractured bedrock or saprolite, the cap material must be Soil Group B.

(B) Where ground slope exceeds 12 percent but is not greater than 30 percent, a standard 24-inch deep trench may be installed.

(e) A sand filter absorption facility may be installed on slopes of 30 percent or less if other conditions in this section are satisfied.

(f) An absorption facility following a sand filter may be installed on slopes above 30 percent and up to 45 percent where:

(A) ~~Projected daily~~ Design flow does not exceed 450 gallons and the installation is sized under sand filter absorption area criteria;

(B) The soil is diggable with a backhoe to a depth of at least 36 inches and 12 inches below the bottom of the trench; and

(C) The temporary water table is at least 30 inches below the ground surface and 6 inches below the bottom of the trench.

(g) Setbacks in Table 1 can be met, except the minimum separation distance between the sewage absorption area and surface waters must be at least 50 feet.

(3) Absorption trenches. Absorption trenches for sand filter absorption facilities must satisfy the requirements in this section.

(a) The minimum length of a standard absorption trench per 150 gallons of ~~projected daily~~ sewage flow is:

(A) For gravel and Soil Group A: sand, loamy sand, sandy loam -- 35 linear feet;

(B) For Soil Group B: loam, silt loam, sandy clay loam, clay loam -- 45 linear feet;

(C) For Soil Group C: silty clay loam, silty clay, sandy clay, clay -- 50 linear feet;

(D) For permeable saprolite or fractured bedrock -- 50 linear feet;

(E) For high shrink-swell clays (Vertisols) -- 75 linear feet.

(b) On lots created before January 1, 1974, which do not have sufficient, suitable area for an absorption facility sized under this section, the agent may allow seepage trenches if:

(A) The design criteria and limitations in OAR 340-071-0280(2) are met;

(B) The soil is not a high shrink-swell clay;

(C) The temporary water table is at least 30 inches below the ground surface; and

(D) All other requirements of this rule are met.

(c) Trench designs in Vertisols.

(A) Absorption trenches in Vertisols must contain 24 inches of drain media and 24 inches of soil backfill in areas with an annual rainfall of 25 inches or less, minimum slopes of 5 percent, and a temporary water table at least 48 inches below the ground surface.

(B) Seepage trenches in Vertisols containing less than 24 inches of drain media may be used if designed under the criteria and limitations in OAR 340-071-0280 in areas with an annual rainfall of 25 inches or less, minimum slopes of 5 percent, and a temporary water table at least 48 inches below the ground surface.

(d) Seepage bed construction.

(A) Seepage beds may be used instead of absorption trenches in soil as defined in OAR 340-071-0100(150)(b).

(B) The effective seepage area must be based on the bottom area of the seepage bed. The area must be at least 70 square feet per 150 gallons per day waste flow.

(C) Materials and construction requirements from 340-071-0275(4)(c) apply, except as otherwise provided for in this section.

(4) Bottomless sand filter. Sites may use a bottomless sand filter if the site meets the criteria in this section and section (3) of this rule.

(a) Saprolite; fractured bedrock; gravel; or soil textures of sand, loamy sand, or sandy loam occur in a continuous section at least 2 feet thick in contact with and below the bottom of the sand filter.

(b) The agent determines the saprolite, fractured bedrock, gravel, or soil is permeable over the basal area to the extent that effluent will absorb adequately and not hinder the performance of the filter. The agent may require that an absorption test be conducted to determine the permeability of the basal area. Test methods must be acceptable to DEQ.

(c) The application rate is based on the design ~~sewage~~ flow in OAR 340-071-0220(2)(a) and the basal area of the sand.

(d) The water table is at least 24 inches below the ground surface throughout the year, and a minimum 24-inch separation is maintained between a water table and the bottom of the sand filter.

(5) Materials and construction.

(a) All materials used in sand filter system construction must be structurally sound, durable, and capable of withstanding normal installation and operation stresses.

Component parts subject to malfunction or excessive wear must be readily accessible for repair and replacement.

(b) All filter containers must be placed over a stable, level base.

(c) In a gravity-operated distribution system, the invert elevation of the outlet end of the underdrain pipe must be at or above the final settled ground elevation of the highest absorption trench.

(d) Piping and fittings for the sand filter distribution system must comply with the requirements for pressure distribution systems in OAR 340-071-0275.

(e) Septic tanks, dosing tanks, and other components must comply with the requirements in OAR 340-071-0220 unless this rule specifies different requirements.

(f) The design and construction requirements in OAR 340-071-0295 must be met. A bottomless sand filter unit does not require a watertight floor, but does require watertight walls unless otherwise authorized by the agent.

(g) A bottomless sand filter unit does not require a minimum 10-foot separation between the original and replacement unit.

(6) Gravelless absorption method.

(a) Absorption trenches following a sand filter may be constructed without using drain media if they meet the criteria in this section.

(A) Absorption trenches must be 12 inches wide by 10 inches deep and incorporate pressurized distribution and a chamber constructed of half sections of 12-inch diameter plastic irrigation pipes ~~(PIP)~~ or an equivalent pipe material as determined by the agent. DEQ may consider deviations to the depth requirement in this rule for alternative drainfield products.

(B) Trenches must be level end to end and across their width.

(C) The agent may allow trenches on minimum 3-foot centers maintaining at least 2 feet of undisturbed earth between parallel trench sidewalls.

(D) Pressurized distribution piping must meet the requirements of OAR 340-071-0275(4)(b), except that orifice shields are not required.

(E) Distribution piping must be perforated with 1/8 inch diameter orifices on maximum 2-foot centers at the 12 o'clock position. The hydraulic design must provide at least a 2-foot residual head at the distal orifice.

(F) The chambers must have an adequate footing to support the soil cover and all normal activity and at a minimum must be constructed of 12-inch plastic irrigation pipe ~~PIP~~ rated at 43 pounds per square inch and meeting the appendix standards of ASTM D-2241.The agent may allow other pipe materials that demonstrate equivalent durability

and strength to 12-inch plastic irrigation pipe. Each line must be equipped with a minimum 6-inch diameter inspection port.

(b) Except as noted in ~~subsection~~ paragraph (a) of this section, all construction and siting criteria for conventional sand filter systems in this division must be met. This includes but is not limited to the absorption field sizing for sand filter systems in OAR 340-071-0290(3) and area sizing for an initial and replacement absorption facility meeting standard trench separations in OAR 340-071-0220(7)(a)(E). Plans must verify that a system can be installed on the parcel that will meet the requirements in OAR 340-071-0290(3) and 340- 071-0220(7)(a)(E) and all other applicable rules before a gravelless absorption method is approved.

(c) A gravelless absorption method may be used wherever this division allows a standard or alternative-type absorption trench for sand filter systems, except in Vertisols.

(d) A method to prevent burrowing animals from entering the chamber must be provided in areas where this is likely to occur.

(7) Operation and maintenance. The operation and maintenance of conventional and other sand filter systems, including service contracts for commercial sand filters permitted on or after March 1, 2005, and residential sand filters permitted after January 1, 2014, must meet the requirements under OAR 340-071-0132. ~~Owners of conventional and other sand filter systems must ensure the sand filter and all other components of the system are continuously operated and timely maintained as the Certificate of Satisfactory Completion and this rule require.~~

~~(a) Owners of conventional and other sand filter systems must comply with the operation and maintenance requirements in this section. The owner of a sand filter system must inspect the septic tank and other components of the system at least annually for sludge accumulation, pump calibration, and cleaning the laterals. Tanks must be pumped when there is an accumulation of floating scum less than 3 inches above the bottom of the outlet tee fitting, holes or ports, or an accumulation of sludge less than 6 inches below the bottom of the outlet tee fitting, holes or ports. Pump calibration, cleaning of the laterals, and other maintenance must be completed as necessary.~~

~~(b) Service Contracts. The owner of a residential sand filter system and all sand filter systems serving commercial facilities must maintain a contract, under OAR 340-071-0130(23), with a maintenance provider to service and maintain the onsite system. A service contract must be entered before the system is installed and must be maintained until the system is decommissioned.~~

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.775 & ~~454.780~~ 454.607
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83;

DEQ 9-1984, f. & ef. 5-29-84; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; Administrative correction 2-16-00; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05, Renumbered from 340-071-0305; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0295
Conventional Sand Filter Design and Construction

(1) Criteria for sizing. Systems must be sized based on quantities of sewage flow under OAR 340-071-0220(2)(a).

(2) Minimum filter area:

(a) A sand filter proposed to serve a single-family dwelling must have an effective medium sand surface area of at least 360 square feet. If the design ~~sewage~~ flow exceeds 450 gallons per day, the medium sand surface area must be determined with the following equation: Area = ~~projected daily sewage~~ design flow divided by 1.25 gallons per square foot.

(b) A bottomless sand filter following an ATT system must have an effective medium sand surface area of at least 250 square feet. If the design ~~sewage~~ flow exceeds 450 gallons per day, the medium sand surface area must be determined with the following equation: Area = ~~projected daily sewage~~ design flow divided by 1.80 gallons per square foot.

(c) Sand filter influent may not exceed concentrations of 300 mg/L BOD5, 150 mg/L TSS, or 25 mg/L oil and grease.

(3) Design criteria.

(a) The interior base of the filter container must be level or constructed at a grade of 1 percent or less to the underdrain piping elevation.

(b) Except for sand filters without a bottom, underdrain piping must meet the requirements in OAR 340-073-0060(2) and must be installed in the interior of the filter container at the lowest elevation. The piping must be level or on a grade of 1 percent or less to the point of passage through the filter container. The pipe perforations or slots must be oriented in the upright or sideways position.

(c) The base of the filter container with the underdrain piping in place must be covered with a minimum of 6 inches of ~~drain media or~~ underdrain media. Unless the agent waives it, the underdrain media proposed for a sand filter must be sieved to determine conformance with the criteria in OAR 340-071-0100(~~170~~173) and a report of the analysis must be provided to the agent. ~~Where underdrain media is used,~~ The underdrain piping must be enveloped in an amount and depth of drain media to prevent migration of the underdrain media to the pipe perforations.

~~(d) Where drain media is used at the base of the filter, it must be covered by a layer of filter fabric meeting the specifications in OAR 340-073-0041. Where underdrain media is used, filter fabric is not required.~~

(d)~~(e)~~ A minimum of 24 inches of approved sand filter media must be installed over the filter fabric or underdrain media. The sand filter media must be damp at the time of installation. The top surface of the media must be level. Unless waived by the agent, the sand filter media proposed for each sand filter must be sieve-tested to determine conformance with the criteria in OAR 340-071-0100(~~124~~126), and a report of the analysis must be provided to the agent.

(e)~~(f)~~ A minimum of 3 inches of clean drain or underdrain media is required below the distribution laterals, and sufficient media is required above the laterals to meet or cover the orifice shields to provide a smooth, even cover.

(f)~~(g)~~ A pressurized distribution system meeting the requirements of OAR 340-071-0275(4) and (5) must be constructed as described in ~~subsection~~ paragraph (~~f~~e) of this section.

(A) Distribution laterals must be spaced a maximum of 30 inches center to center. Orifices must be spaced no more than 30 inches apart.

(B) The ends of the distribution laterals must be designed and constructed to allow flushing of the piping, collectively or individually, using a corrosion- resistant and accessible valve or threaded endcap. The flushed effluent may be discharged to the septic tank or into the sand filter.

(C) The diameters of the distribution manifold and laterals must be at least 1/2 inch in diameter.

(D) A sand filter must be dosed at a rate not to exceed 10 percent of the projected daily sewage flow.

(g)~~(h)~~ The top of the media in which the pressure distribution system is installed must be covered with filter fabric ~~meeting the specifications in OAR 340-073-0041~~.

(h)~~(i)~~ The top of the sand filter area must be backfilled with a soil cover free of rock, vegetation, wood waste, and other materials that may harm the filter. The soil cover must have a textural class no finer than loam unless otherwise authorized by the agent. The soil cover must be at least 6 inches and no more than 12 inches deep.

(i)~~(j)~~ All piping passing through the sand filter container must be watertight.

(4) Container design and construction.

(a) A reinforced concrete container with watertight walls and floors must be used where watertightness is necessary to prevent groundwater from infiltrating into the filter or to prevent the effluent from exfiltrating from the filter except as otherwise allowed in this

division or OAR chapter 340, division 073. The container structure may require a building permit for construction.

(b) The container may be constructed of materials other than concrete where equivalent function, workmanship, watertightness, and at least a 20-year service life can be documented.

(A) Flexible membrane liner (FML) materials must have properties at least equivalent to 30 mil unreinforced polyvinyl chloride (PVC) described in OAR 340-073-0085. For FML materials to be approved for installation:

(i) Field repair instructions and materials must be provided to the purchaser with the liner; and

(ii) The final materials must have factory-fabricated boots suitable for field bonding onto the liner to facilitate the passage of piping through the liner in a waterproof manner.

(B) Where accepted for use, flexible sheet membrane liners must be installed as OAR 340-073-0085 requires.

(C) The backfill around the container must be no steeper than a 3:1 slope (3 feet for every vertical foot) unless otherwise authorized by the agent.

(5) Internal pump option. Where a pump is used to discharge effluent from a sand filter to another treatment unit, a distribution unit, or an absorption facility, the design and construction of the filter may include an internal pump station if the following conditions are met.

(a) The location, design, and construction of the pump station must not conflict with design, construction, and operation of the sand filter system.

(b) The design and construction of the pump, discharge plumbing, controls, and alarm must meet the requirements in OAR 340-073-0055 except subsections (4)(d) and (4)(h).

(c) The pump and related apparatus must be housed in a corrosion-resistant vault designed to withstand stresses and prevent the migration of drain media, sand, or underdrain media to its interior. The vault must have a durable, affixed floor. The vault and lid must provide watertight access to finished grade with a diameter equal to that of the vault and designed to receive treated effluent from the bottom of the sand filter.

(d) The depth of underdrain media and the operating level of the pump cycle and alarm may not allow effluent to come within 2 inches of the bottom of the sand filter media. The pump off-level may be no lower than the invert of the perforations of the underdrain piping.

(e) The internal sand filter pump must be electrically linked to the sand filter dosing apparatus to prevent effluent from entering the sand filter if the internal sand filter pump fails.

(6) Required inspections. The agent must perform the following inspections for each installed sand filter system, unless waived by the agent:

(a) For bottomless sand filter only, inspect the absorption area for scarification, soil texture, and moisture content

(b) Inspect the box or container construction.

(c) Inspect the media size, cleanliness, and installation.

(d) Inspect the construction of the pressure distribution system.

(e) Inspect the installation of filter fabric over the top of the media the distribution system is installed in.

(f) Inspect the sand filter soil cover.

(g) For conventional sand filter only, inspect the absorption facility before covering.

(h) Inspect to confirm the pump, floats, and controls are powered on, set according to the approved plans, and functioning properly. The agent may require the certified maintenance provider under contract for inspecting, operating, and maintaining the system to conduct this inspection and submit a completed start-up report on a DEQ-approved form to the agent.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.775 & ~~454.780~~ 454.607
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0302
Recirculating Gravel Filter (RGF)

(1) Siting and absorption area construction criteria.

(a) RGFs approved for treatment standard 1 may be sited and sized as follows.

(A) In areas with a temporary water table, as specifications for sand filters in areas with temporary groundwater in OAR 340-071-0290 require.

(B) In areas with permanent groundwater, where 4 feet of separation can be maintained between the bottom of the trench and groundwater and the other criteria in OAR 340-071-0290 can be met.

(C) On sites meeting criteria for standard onsite systems in OAR 340-071-0220 or for pressurized systems in OAR 340-071-0275.

(b) RGFs used in conjunction with approved disinfection and approved nitrogen reduction processes and expected to meet treatment standard 2 may be sited and sized as follows.

(A) On sites meeting the criteria for treatment standard 1 in ~~subsection~~ paragraph (a) of this section.

(B) In areas with a permanent water table, as specifications for sand filters in areas with a permanent water table in OAR 340-071-0290 require.

(c) Any type of absorption area permitted for a sand filter system, including the gravel-less absorption method, may be permitted for an RGF system.

(2) Design criteria.

(a) Filter design and dosing.

(A) The filter's basal or bottom area must be sized based on a maximum organic load. For residential strength wastewater that has been pretreated through a septic tank, the maximum hydraulic load allowable is 5 gal/ft2/day.

(B) For BOD5 waste strengths stronger than residential strength wastewater but not exceeding 400 mg/L, the filter size must be increased proportionately.

(C) Higher strength wastewaters must be pretreated or will require special consideration. In no case may the concentration of greases and oil applied exceed 30 mg/L.

(b) Filter media.

(A) Where CBOD5 removal must be at least 85 percent based upon the raw sewage concentration applied to the septic tank and nitrification of wastewater is necessary, a filter media must consist of 3 feet of very fine washed gravel, 100 percent passing a 3/8-inch sieve with an effective size between 3 and 5 millimeters and a uniformity coefficient of 2 or less. Washed means that negligible fines (less than 1.0 percent) pass a No. 10 sieve.

(B) Where additional removal of BOD5 and denitrification is intended or required, a treatment media may consist of 2 feet of very coarse washed sand, 100 percent passing a 3/8-inch sieve with an effective size between 1.5 and 2.5 millimeters and a uniformity coefficient of 2 or less. Washed means that negligible fines (less than 4.0 percent) pass the No. 100 sieve.

(C) Sieves of 3/8 inch, 1/4 inch, and Nos. 4, 6, 8, 10, 50, and 100 must be used in gradation analysis.

(D) The permittee must provide fresh samples of the intended media for each project before shipment to the project site. A laboratory gradation analysis must be performed and the gradation data plotted on semi-log paper as a gradation curve. The permittee

must submit lab data, gradation curve, and a 5-pound sample of the media to the agent for approval. Only approved media may be used.

(c) Filter media must be overlain by a 3-inch bed of 1/2-inch to 3/4-inch washed gravel. The media and gravel may only lightly cover the distribution piping. Unless otherwise authorized, each orifice must be covered by an orifice shield to prevent aerial spray drift.

(d) Filter dosing must use a low pressure distribution piping system operating under adequate head to pressurize the system. The operating head must be a minimum of 5 feet at the remotest orifice and have no more than 10 percent flow variation between the nearest and remotest orifice in an individual unit. Each lateral pipe end must terminate with a screwed plug or cap accessible for removal and flushing. Wherever practical, a valved backflush system must be installed to flush groups of laterals back to a septic tank or elsewhere.

(e) Pressure-distribution piping must be spaced 2 feet center to center in a parallel grid. Orifice spacing must be every 2 feet on laterals. Piping grid edges should be within 1 foot of the filter basal edge.

(f) Filter media must be underlain by a 6-inch bed of a 1/2 to 3/4-inch washed gravel underdrain media. No filter fabric may cover the underdrain media.

(g) Perforated collection pipes must meet requirements in OAR 340-073-0060(2) and be bedded in the underdrain media. Pipes must be at least 4 inches in diameter with no filter fabric wrap. At least 15 lineal feet of collection pipe is required for each 225 square feet of filter basal area.

(h) The filter container must be watertight to suit the design conditions. Underflow must be contained. Groundwater must be excluded. A concrete container may be used. Other materials may be used if equivalent function, workmanship, watertightness, and at least a 20-year service life can be expected.

(3) Recirculation/dilution tank.

(a) A recirculation tank receives septic tank effluent and underflow from the filter. A pumping system at this tank delivers flow to the filter dose piping network according to a project design. The recirculation tank volume measured from tank floor to tank soffit must be at least equal to the projected daily sewage flow volume.

(b) The recirculation ratio at design flow must be at least 4. Recirculation ratio is the daily volume of recycle divided by design daily volume of the wastewater. A fabricated "T" or "Splitter T" float valve located in the recirculation tank must be used whenever possible. Minimum recirculation tank liquid volume must be at least 80 percent of the gross tank volume when a float valve is used. Alternatively, where required and reasonable, a splitter basin using orifice or weir control may be used to divide underflow 20 percent to the absorption field and 80 percent to recycle on a daily basis. This alternative must use orifice control wherever possible. Minimum recirculation tank liquid volume must be at least 50 percent of the required tank volume when a splitter basin is used.

(c) Evaluation of and design for overflow and surge control at the recirculation tank must be included in the design plans.

(d) An audible or visual high water alarm must be included in the recirculation tank immediately below the overflow level. A latching electrical relay must retain the audible or visual alarm until a site attendant acknowledges it.

(e) Parallel pump start/stop electric controls (usually floats) must be installed to correct any unforeseen high liquid level event and keep sewage contained. This pump start function precludes overflow and must operate in parallel with the start/stop function of a timer and must not interfere with or depend upon a timer position.

(f) All areas of the filter must be wetted 48 times a day or every 30 minutes to achieve the recirculation ratio of at least 4 unless the agent authorizes otherwise.

(g) Testing must demonstrate the recirculation tank is watertight. The designer must witness the testing. Test protocol must be included in the design plans.

(h) A fence or other effective means must restrict access onto the filter. Design and construction must prevent surface water entry onto the filter.

(i) Access openings to the recirculation tank must be provided at each end. Larger tanks must have additional openings. The smallest dimension of any access must be 18 inches. Larger openings must be provided if partially obstructed with piping or other objects. Provisions must be made to remove dregs (settleable solids). Pumps must be readily removable and replaceable without demolition of piping or other components.

(4) Operation and Maintenance standards. The operation and maintenance of a RGF system must meet the requirements under OAR 340-071-0132 and this rule. ~~The owner of an onsite system using an RGF must ensure the RGF and all other components of the onsite system are properly operated and timely maintained or decommissioned.~~

(5) Operation and maintenance manual. The designer of an RGF system must ensure that comprehensive and detailed operation and maintenance instructions are provided to the onsite system owner and agent at the time of installation. The instructions must emphasize operating and maintaining the entire system within the parameter ranges for which it is designed. The information must be presented in a manner that can be easily understood by the owner and include at a minimum:

(a) As-built plans with the name and contact number of the installer;

(b) A description of how the process functions, including diagrams illustrating basic system design and flow path;

(c) A maintenance schedule for all critical components;

(d) Requirements and recommended procedures for periodic removal of residuals from the system;

(e) A detailed procedure for visually evaluating the function of system components;

(f) A description of olfactory and visual techniques for confirming correct process parameters and system performance;

(g) A recommended method for collecting and transporting effluent samples;

(h) Safety concerns that may need to be addressed; and

(i) Emergency contact numbers for maintenance providers and pumpers.

~~(6) Service contracts. The owner of an RGF system must maintain a contract, under OAR 340- 071-0130(23), with a maintenance provider to service and maintain the onsite system. A service contract must be entered before the system is installed and must be maintained until the system is decommissioned.~~

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, ~~454.780~~454.607, 468B.050 & 468B.055
Hist.: DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0310
Steep Slope Systems

(1) General conditions for approval. Construction-installation permits may be issued for steep slope systems serving single-family dwellings on slopes in excess of 30 percent if all the following requirements can be met.

(a) Slope does not exceed 45 percent.

(b) The soil is well-drained with no evidence of saturation to a depth of 60 inches.

(c) The soil has a minimum effective soil depth of 60 inches.

(2) Construction requirements.

(a) Seepage trenches must be installed at a minimum depth of 30 inches and a maximum depth of 36 inches below the natural soil surface on the downhill side of the trench and must contain a minimum of 18 inches of drain media and 12 inches of native soil backfill.

(b) The system must be sized at a minimum of 75 linear feet per 150 gallons ~~projected daily~~ sewage flow.

Statutory/Other Authority: ORS 454.625 & 468.020
Statutes/Other Implemented: ORS 454.615 & 454.775
History: DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 9-1984, f. & ef. 5-29-84; DEQ 8-1983, f. & ef. 5-25-83; DEQ 10-1981, f. & ef. 3-20-81

340-071-0315
Tile Dewatering System

(1) General conditions for approval. Construction permits may be issued for tile dewatering systems if the following requirements can be met:

(a) The site has a natural outlet that will allow a field tile installed on a proper grade around the proposed absorption facility to daylight above annual high water.

(b) Soils are silty clay loam or coarser textured and drainable.

(c) Soils must have a minimum effective soil depth of at least 30 inches in soils with temporary groundwater and at least 72 inches in soils with permanent groundwater unless otherwise authorized by the agent.

(d) Slope does not exceed 3 percent.

(e) All other requirements for the system, except depth to groundwater, can be met. After the field collection drainage tile is installed, the groundwater levels must conform to the requirements of OAR 340-071-0220(1), 340-071-0265(1), 340-071-0290(2), 340-071-0302(1), or 340-071-0345(8).

(2) Construction requirements.

(a) Field collection drainage tile must be installed on a uniform grade of 0.2 to 0.4 feet of fall per 100 feet. The tile drainage trench must be constructed to the minimum depth required in the approved site evaluation report.

(b) A field collection drainage tile trench must be constructed at least 12 inches wide.

(c) Maximum drainage tile spacing must be 70 feet center to center.

(d) The minimum horizontal separation distance between the drainage tile and absorption facility must be 20 feet.

(e) Field collection drainage tile must be rigid, smooth-wall, perforated pipe or other pipe material the agent approves with a minimum diameter of 4 inches.

(f) Field collection drainage tile must be enveloped in clean drain media or underdrain media to within 30 inches of the soil surface in soils with permanent groundwater or to within 12 inches of the soil surface in soils with temporary groundwater. Drain media must be covered with filter fabric, treated building paper, or other nondegradable material approved by the agent.

(g) Outlet tile must be rigid, smooth-wall, solid ~~PVC~~ pipe ~~meeting or exceeding ASTM Standard D-3034~~ with an interior ~~minimum~~ diameter of at least 4 inches. The agent may require a flap gate or rodent guard.

(h) A silt trap with a 12-inch minimum diameter must be installed between the field collection drainage tile and the outlet pipe unless otherwise authorized by the agent. The bottom of the silt trap must be at least 12 inches below the invert of the drainage pipe outlet.

(i) The discharge pipe and tile drainage system are integral parts of the system but do not need to meet setback requirements to property lines, wells, streams, lakes, ponds, or other surface waterbodies.

(j) Before issuing a final site evaluation report approving the site, the agent may require demonstration that a proposed tile dewatering site can be effectively drained.

(k) The absorption facility must use equal or pressurized distribution.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0340
Holding Tanks

(1) Criteria for approval. Except as section (5) of this rule provides, installing a holding tank system requires a construction-installation or WPCF permit. A construction-installation permit may be issued for sites that meet all the following conditions.

(a) Permanent use.

(A) The site cannot be approved for installation of a standard subsurface system.

(B) No community or area-wide sewerage system is available or expected to be available within five years.

(C) The tank is intended to serve a small industrial or commercial building or an occasional use facility such as a county fair or a rodeo.

(D) Unless DEQ allows otherwise, the projected daily sewage flow is not more than 200 gallons.

(E) Setbacks required for septic tanks can be met.

(b) Temporary use: A holding tank may be installed in an area under the control of a city or other legal entity authorized to construct, operate, and maintain a community or area-wide sewerage system if:

(A) The application for permit includes a copy of a legal commitment from the legal entity to extend a community or area-wide sewerage system meeting the requirements of this

division to the property covered by the application within five years from the date of the application; and

(B) The proposed holding tank complies with other applicable requirements in OAR chapter 340, divisions 071 and 073.

(2) Operation~~s~~ and maintenance. The operation and maintenance of a holding tank must meet the requirements under OAR 340-071-0132 and this rule. ~~At all times the holding tank is being used, the tank's owner must maintain a service contract with a sewage disposal service licensed under OAR 340-071- 0600 to provide for regularly inspecting and pumping the holding tank.~~

(3) Design and construction requirements. Except as provided in section (5) of this rule, holding tanks must comply with the following requirements:

(a) Plans and specifications for each holding tank proposed to be installed must be submitted to the agent for review and approval.

(b) Each tank must:

(A) Have a minimum liquid capacity of 1,500 gallons;

(B) Comply with tank standards in OAR 340-073-0025;

(C) Be located and designed to facilitate removal of contents by pumping

(D) Be equipped with both an audible and a visual alarm placed in locations acceptable to the agent to indicate when the tank is 75 percent full. Only the audible alarm may be user cancelable;

(E) Have no overflow vent at an elevation lower than the overflow level of the lowest fixture served; and

(F) Be designed for antibuoyancy if test hole examination or other observations indicate seasonally high groundwater may float the tank when empty.

(4) Special requirements. The application for a holding tank permit must include:

(a) A copy of a contract with a licensed sewage disposal service that requires the tank to be pumped periodically at regular intervals or as needed and the contents treated in a manner and at a facility the agent approves; and

(b) Evidence that the owner or operator of the proposed treatment facility will accept the pumpings for treatment.

(5) Portable holding tanks may be temporarily placed at sites having limited duration events such as county fairs or construction projects or at temporary restaurants if the following requirements are met:

(a) The tanks must be owned and serviced by a licensed sewage disposal service with sewage pumping equipment having a 550-gallon or larger tank and meeting all other requirements in OAR 340-071-0600(11).

(b) Tank placement and use must comply with all local planning, building, and health requirements.

(c) Only domestic sewage may be discharged into the tank.

(d) The tank must be maintained in a sanitary manner to prevent a health hazard or nuisance.

(e) The tank must not be buried.

(f) A person may not use the tank to serve a dwelling, recreation vehicle, or any other structure having sleeping accommodations, except that a portable holding tank may be used temporarily to serve a contractor's job shack or night watchman's trailer.

(g) The tank must meet the following standards:

(A) The tank must be watertight with no overflow vent lower than the overflow level of the lowest fixture served.

(B) Tank capacity may not exceed 1,000 gallons unless otherwise authorized by the agent.

(C) The tank must be structurally sound and made of durable, noncorrosive materials.

(D) The tank must be designed and constructed to provide a secure, watertight connection of the building sewer pipe.

(E) The tank must be marked with the name and phone number of the licensed sewage disposal service responsible for maintaining the tank.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 13-1997(Temp), f. & cert. ef. 6-23- 97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0345
Alternative Treatment Technologies (ATTs)

(1) Criteria for approval. Construction-installation permits may be issued for onsite systems incorporating alternative treatment technologies (ATTs) for single-family dwellings and commercial facilities if the following criteria are met:

(a) DEQ has listed the ATT, including brand and model or type where applicable, for use in onsite systems pursuant to section (2) of this rule.

(b) The ATT meets the performance and model selection criteria specified for the proposed use in section (4) of this rule.

(c) The site meets the appropriate siting criteria in section (8) of this rule, and the agent has approved the site.

(d) The owner of the property served by the onsite system incorporating the ATT has a written service contract as required in section (~~14~~12) of this rule.

(2) ATT listing and delisting.

(a) DEQ will maintain a list of ATTs that meet the performance requirements in section

(3) of this rule.

(b) Any person may submit an application for listing an ATT. The application must include:

(A) Documentation that the ATT meets the performance requirements in section

(3) of this rule;

(B) Documentation that the ATT has been tested to NSF/ANSI as a class 1 or equivalent residential wastewater treatment system;

(C) A guide for inspecting the ATT installation;

(D) A plan for training agents on inspecting the ATT and training and certifying system installers on installing the ATT;

(E) A plan for training and certifying maintenance providers on system maintenance for the ATT;

(F) Documentation that the ATT complies with sections (5)-(7) and (9) of this rule; and

(G) The alternative technology review fee in OAR 340-071-0140(5).

(c) DEQ will approve applications to list ATTs that DEQ determines meet the performance requirements in section (3) of this rule under normal operating conditions. ATTs will be listed by brand and model or type for the treatment standards they achieve.

(d) DEQ may approve ATTs that vary from standards in OAR chapter 340, division 073.

(e) Beginning July 1, 2015, DEQ may remove ATTs from the list if it determines the requirements for approval in ~~subsection~~ paragraph (c) of this section are no longer satisfied or if:

(A) Ten percent or more of systems under 10 years of age fail;

(B) The manufacturer fails to submit the annual report in ~~section~~ paragraph (g) of this rule by the date specified by DEQ; or

(C) The manufacturer fails to submit the annual compliance determination fee in OAR 340-071-0140(5) by the date specified by DEQ; or

(D) The manufacturer goes out of business.

(f) All ATT listings will expire on June 30, 2016 and will be removed from the list. To renew the ATT listing and remain on the list, the manufacturer of the ATT must submit an application for each ATT model by July 1, 2015. The application must include, but is not limited to:

(A) A current list of each ATT sold in the State of Oregon including the model number, serial number, and the property address the ATT is located;

(B) A current list of all maintenance providers the manufacturer certifies;

(C) The material plan review fee in OAR 340-071-0140(5).

(g) Annual manufacturer report. Unless DEQ authorizes otherwise in writing, the manufacturer must submit an annual report for each ATT model. The report must include, but is not limited to:

(A) A list of each ATT sold in Oregon for the reporting period including the model number, serial number, certified maintenance provider name, status of service contract, and the property address the ATT is located;

(B) A current list of all installers and maintenance providers that are certified by the manufacturer;

(C) The annual compliance determination fee in OAR 340-071-0140(5).

(h) Any person adversely affected by DEQ's listing or delisting decision may appeal that decision through the contested case hearing procedures in ORS Chapter 183 and OAR chapter 340, division 011.

(3) Performance testing and standards for listing ATTs.

(a) Product testing.

(A) ATTs must be tested according to the product standards and testing protocols of NSF/ANSI Standard No. 40 for residential wastewater treatment systems – 2013, NSF/ANSI Standard No. 245 for nitrogen reduction — 2012, or another NSF/ANSI protocol DEQ approves.

(B) For purposes of demonstrating performance to the fecal coliform concentration in treatment standard 2, the ATT shall be followed by a nonchlorinating disinfection device

that has been tested according to NSF/ANSI Standard No. 46 – 2012, or the ATT must be tested by collecting and analyzing influent and effluent grab samples at a minimum frequency of 3 days per week and the same duration (26 consecutive weeks) and hydraulic loadings (design and stress loadings) as the NSF/ANSI sample collection requirements for the BOD5, CBOD5, and TSS parameters. The testing must be performed by an ANSI accredited, third-party testing and certification organization whose accreditation is specific to onsite wastewater treatment products, or have been studied under the La Pine National Demonstration Project.

(b) Product performance. An ATT must produce effluent quality equal to or better than treatment standard 1 or 2 defined in ~~section~~ OAR 340-071-0100.

(4) ATT model type and size selection. The model, type, and size of the ATT proposed for a system must be consistent with manufacturer recommendations and match the design capacity ~~daily design wastewater flow anticipated from the dwelling or facility~~.

(5) Access ports.

(a) At a minimum, the ATT must have ground-level access ports sized and located to facilitate installing, removing, sampling, examining, maintaining, and servicing components or compartments that require routine maintenance or inspection. Access ports must facilitate:

(A) Visually inspecting and removing mechanical or electrical components;

(B) Removing components that require periodic cleaning or replacement;

(C) Visually inspecting and collecting samples; and

(D) Removing (manual or pumping) accumulated residuals.

(b) Access ports must be protected against unauthorized intrusion. Acceptable protective measures include but are not limited to padlocks or covers that can be removed only with tools.

(6) Malfunction, failure sensing, and signaling equipment.

(a) The system must be designed to prevent untreated waste passing into the absorption field if the plant malfunctions.

(b) The ATT must possess a mechanism or process capable of detecting:

(A) Failure of electrical and mechanical components that are critical to the treatment process; and

(B) High liquid level conditions above the normal operating specifications.

(c) The ATT must possess a mechanism or process capable of notifying the system owner of failures. The mechanism must have circuits separate from pump circuits and deliver a visible and audible signal.

(A) The visual alarm signal must be conspicuous at a distance of 50 feet from the system and its appurtenances.

(B) The audible alarm signal strength must be between 70 and 90 dbA at 5 feet and discernible at a distance of 50 feet from the system and its appurtenances.

(C) The visual and auditory signals must continue to function in the event of electrical, mechanical equipment, or hydraulic malfunction of the system. The audible signal may be disabled for service as long as the visual signal remains active while cause for the alarm is identified and alleviated.

(d) A clearly visible label or plate with instructions for obtaining service must be permanently located near the failure signal.

(7) Data plate.

(a) The ATT must have permanent and legible data plates located on:

(A) The front of the electrical control box if the ATT has an electrical control box or panel; and

(B) The tank, aeration equipment assembly, or riser at a location accessed during maintenance cycles and inspections.

(b) Each data plate must include:

(A) Manufacturer's name and address;

(B) Model number;

(C) Serial number (required on one data plate only);

(D) Rated daily hydraulic capacity of the system; and

(E) The performance expectations as determined by performance testing and evaluation.

(8) Siting and absorption area construction criteria.

(a) ATTs approved for treatment standard 1 may be sited and sized as follows:

(A) In areas with a temporary water table, as specifications for sand filters in areas with temporary groundwater in OAR 340-071-0290 require.

(B) In areas with permanent groundwater, where 4 feet of separation can be maintained between the bottom of the trench and groundwater and the other criteria in OAR 340-071-0290 can be met.

(C) On sites meeting criteria for standard onsite systems in OAR 340-071-0220 or for pressurized systems in OAR 340-071-0275.

(b) ATTs used in conjunction with approved disinfection and approved nitrogen reduction processes and approved for treatment standard 2 may be sited and sized as follows.

(A) On sites meeting the criteria for treatment standard 1 in ~~subsection~~ paragraph (a) of this section.

(B) In areas with a permanent water table, as specifications for sand filters in areas with a permanent water table in OAR 340-071-0290 require.

(c) Any type of absorption area permitted for a sand filter system, including the gravel-less absorption method, may be permitted for an ATT system.

(d) In known areas of sensitivity to nitrate-nitrogen pollution, including but not limited to coastal lakes, areas of groundwater concern, and Groundwater Management Areas, the agent may limit the use of DEQ-approved ATT models and require models that have proven to provide additional nitrogen reduction beyond the minimum standards provided under treatment standards 1 and 2, and NSF/ANSI 245 standards.

(e) The agent makes a determination based on the best available science that the nutrient load from the system would not significantly degrade or pollute public waters, or create a public health hazard.

(9) Limited warranty. The ATT manufacturer must:

(a) Warrant all components of the ATT to be free from defects in material and workmanship for a minimum of two years from the date of installation; and

(b) Fulfill the terms of the warranty by repairing or exchanging any components that the manufacturer determines may be defective.

(10) Installation. ATTs must be installed under the manufacturer's instructions and this division. The installer must be certified by the ATT manufacturer to install the system and provide written certification to the agent that the ATT component was installed under the manufacturer's instructions and this rule.

(11) Sampling ports. A sampling port must be designed, constructed, and installed to provide easy access for collecting a free falling or undisturbed sample from the effluent stream. The sampling port may be located within the ATT or other system component (such as a pump chamber) if the wastewater stream being sampled is representative of the effluent stream from the ATT.

(12) Operation and maintenance ~~standards~~. The operation and maintenance of an ATT system, including service contracts, must meet the requirements under OAR 340-071-0132. ~~The owner of an ATT system must ensure the ATT and all components of the onsite system are properly operated and timely maintained or decommissioned and the effluent standards in section (3) of this rule are met.~~

(13) Owner's manual. The designer of each onsite system using an ATT must provide a comprehensive owner's manual prepared by the manufacturer or designer to the system owner, manufacturer's representative, installer, and if requested, the agent before or at the time of installation. The manual may be a collection of individual system component manuals and must include information on system specifications, system installation, operation and maintenance, and troubleshooting and repair. The information must be presented in a manner the owner can easily understand.
~~(14) Service contracts.~~

~~(a) The owner of an ATT system must maintain a contract, under OAR 340-071-0130(23), with a maintenance provider to service and maintain the onsite system. A service contract must be entered before the system is installed and must be maintained until the system is decommissioned.~~

~~(b) A maintenance provider must~~ ~~be certified by the manufacturer to provide service~~ ~~on an~~ ~~ATT.~~

(14) Required inspections. The following inspections must be performed for each installed sand filter, unless waived by the agent:

(a) Inspect the absorption facility before covering.

(b) Inspect the installation of the ATT per the manufacturer's instructions and this division.

(c) Inspect to confirm the pump, floats, and controls are powered on, set according to the approved plans, and functioning properly. The agent may require the certified maintenance provider under contract for inspecting, operating, and maintaining the system to conduct this inspection and submit a completed start-up report to the agent. The form must be provided by the manufacturer or approved by DEQ.

[ED. NOTE: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0360

Absorption Trenches in Saprolite

(1) General conditions for approval. An onsite system construction-installation permit may be issued for a single-family dwelling on a site with soil shallow to saprolite if requirements in either ~~subsection~~ paragraph (a) or (b) of this section can be met.

(a) If slope does not exceed 30 percent:

(A) The saprolite is sufficiently weathered so that it can be textured, crushed, or broken with hand pressure to a depth of 24 inches and can be dug from a test pit wall with a spade or other hand tool to a depth of 48 inches; and

(B) Clay films or iron coatings with moist values of 5 or less and moist chromas of 4 or more, organic coatings with moist values of 3 or less and moist chromas of 2 or more, or both occur on fracture surfaces of the saprolite to a depth of 48 inches.

(b) If slope exceeds 30 percent but not 45 percent:

(A) The saprolite is sufficiently weathered so that it can be textured, crushed, or broken with hand pressure to a depth of 24 inches and can be dug from a test pit wall with a spade or other hand tool to a depth of 60 inches; and

(B) Clay films or iron coatings with moist values of 5 or less and moist chromas of 4 or more, organic coatings with moist values of 3 or less and moist chromas of 2 or more, or both occur on fracture surfaces of the saprolite to a depth of 60 inches.

(c) For saprolite derived from granite or other deposits where clay films or iron coatings are not present, a soil absorption test and the degree of consolidation may be used to predict hydraulic conductivity of the saprolite. Agents may approve sites where conductivity is sufficiently high to ensure adequate drainage. Test methods must be acceptable to DEQ.

(2) Construction Requirements.

(a) Standard absorption trenches must be installed where slope does not exceed 30 percent.

(A) The trenches must be installed at a minimum depth of 24 inches and a maximum depth of 30 inches below the natural soil surface and contain 12 inches of filter material and a minimum of 12 inches of native soil backfill.

(B) The trenches must be sized at a minimum of 100 linear feet per 150 gallons ~~projected daily~~ sewage flow.

(b) Seepage trenches must be installed where slope exceeds 30 percent but not 45 percent.

(A) Seepage trenches must be installed at a minimum depth of 30 inches and at a maximum depth of 36 inches below the natural soil surface and contain a minimum of 18 inches of filter material and 12 inches of native soil backfill.

(B) Seepage trenches must be sized at a minimum of 75 linear feet per 150 gallons ~~projected daily~~ sewage flow.

Statutory/Other Authority: ORS 454.625 & 468.020
Statutes/Other Implemented: ORS 454.615 & 454.775

History: DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 15-1986, f. & ef. 8-6-86; DEQ 9-1984, f. & ef. 5-29-84

340-071-0400

Geographic Area Special Considerations.

~~(1) River Road — Santa Clara Area, Lane County.~~

~~(a) Within the areas described in subsection (b) of this section, an agent may approve sites or issue construction-installation permits for new onsite wastewater treatment systems if both of the following conditions are met:~~

~~(A) The lot and proposed system comply with all rules in effect at the time the site is approved or the permit is issued.~~

~~(B) The system alone or in combination with other new sources will not contribute more than 16.7 pounds of nitrate-nitrogen per acre per year to the local groundwater. To ensure compliance, the applicant must own or control adequate land through easements or equivalent.~~

~~(b) Subsection (a) of this section applies to all of the following area generally known as River Road — Santa Clara and defined by the boundary submitted by the Board of County Commissioners for Lane County. The area is bounded on the south by the City of Eugene, on the west by the Southern Pacific Railroad, on the north by Beacon Drive, and on the east by the Willamette River and includes all or portions of T16S, R4W, Sections 33, 34, 35, 36; T17S, R4W, Sections 1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25; and T17S, R1E, Sections 6, 7, 18, Willamette Meridian.~~

~~(c) Appropriate local agencies within this area may petition the commission to repeal or modify this rule. Such petition must provide reasonable evidence either that development using onsite wastewater treatment systems will not cause unacceptable degradation of groundwater quality or surface water quality or that degradation of groundwater or surface water quality will not occur as a result of the modification or repeal requested.~~

~~(d) This section does not apply to any construction-installation permit application based on a site approval issued by the agent pursuant to ORS 454.755(1) (b) before March 20, 1981.~~

(1)~~(2)~~ General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County.

(a) Within the area described in ~~subsection~~ paragraph (b) of this section, an agent may approve sites or issue construction-installation permits for new onsite systems under either of the following circumstances:

(A) The lot and proposed system comply with all rules in effect at the time the site is approved or the permit is issued.

(B) The lot and proposed system comply with paragraph (A) of this subsection except for the projected daily sewage loading rates, and the agent determines the system in combination with all other previously approved systems owned or legally controlled by the applicant will not contribute to the local groundwater more than 58 pounds of nitrate-nitrogen per year per acre owned or controlled by the applicant.

(b) ~~Subsection~~ Paragraph (a) of this section applies to the following area designated the General North Florence Aquifer of the North Florence Dunal Area and defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study. The area is bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake, and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake, and Sutton Creek and includes all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed, which is the area beginning at a point known as Tank One, located in Section One, Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon: run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; run thence S. 04° 58' 45.4" E. 1301.91 ft. to a point; run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; run thence S. 15° 20' 45.4" E. 774.62 ft. to a point; run thence S. 31°44' 14.0" W. 520.89.ft. to a point; run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; run thence 36° 37' 58.2" W. 918.41 ft. to a point; run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; run thence N. 59° 33'18.9" E. 1117.02 ft. to a point; run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; run thence N. 19° 46' 39.6" E. 1524.95 to a point; run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; run thence N. 89° 04' 46.8" E, 249.03 ft. to a point; run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(2)~~(3)~~ Lands overlaying the Alsea Dunal Aquifer.

(a) Within the area set forth in ~~subsection~~ paragraph (c) of this section, the agent may approve a site or issue a permit to construct a single onsite system on lots that were lots

of record before January 1, 1981, or on lots in partitions or subdivisions that have received preliminary planning, zoning, and onsite wastewater treatment system approval before January 1, 1981, if one of the following can be met:

(A) At the time the site is approved or the permit is issued, the lot complies with OAR 340-071-0100 through 340-071-0360 and 340-071-0410 through 340-071-

0520.

(B) The site meets all of the following conditions when a pressurized seepage bed is used:

(i) Groundwater levels are not closer than 4 feet from the ground surface or closer than 3 feet from the bottom of the seepage bed.

(ii) The seepage bed is constructed under OAR 340-071-0275(4) and (5).

(iii) The seepage bed is sized on the basis of 200 square feet of bottom area per 150 gallons ~~projected daily~~ sewage flow.

(iv) ~~Projected daily sewage~~ Design flows are limited to 375 gallons per lot, except for lots approved in a site evaluation for a larger flow.

(v) All setbacks identified in Table 1 can be met, except that lots of record before May 1, 1973, must maintain a minimum 50-feet separation to public surface waters.

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed, or the area reserved for replacement is waived pursuant to the exception in OAR 340-071-0150(4)(a)(C).

(C) The site meets all of the following conditions when a bottomless sand filter is used.

(i) Groundwater levels are not closer than 1 foot from the ground surface and not closer than 1 foot from the bottom of the sand filter.

(ii) ~~Sewage~~ Design flows are limited to 375 gallons per day per lot, except for lots approved in a site evaluation for larger flows.

(iii) The sand filter is sized at 1 square foot of bottom area for each gallon of ~~projected daily~~ sewage flow.

(iv) The design and construction requirements in OAR 340-071-0295(3) and (4) must be met. A bottomless sand filter unit does not require a watertight floor, but does require watertight walls unless otherwise authorized by the agent.

(v) All setbacks identified in Table 1 can be met, except that lots of record before May 1, 1973, must maintain a minimum 50 feet separation to public surface waters.

(vi) Sufficient area exists on the lot to install an initial and replacement bottomless conventional sand filter, or the area for replacement is not required under OAR 340-071-0150(4)(a)(C).

(b) An agent may approve a site or issue a construction-installation permit for a new onsite system within the area set forth in ~~subsection~~ paragraph (c) of this section on lots created on or after January 1, 1981, if all rules in this division can be met.

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, on the west by the Pacific Ocean, and from Driftwood Beach Wayside South to the southern tip of the Alsea Bay Spit.

(d) If groundwater monitoring in the Alsea Dunal Aquifer indicates unacceptable levels of degradation or if development of the aquifer as a source of drinking water is necessary or desirable, sewage collection and off-site treatment facilities must be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(3)~~(4)~~ Christmas Valley Townsite, Lake County.

(a) Within the area set forth in ~~subsection~~ paragraph (b) of this section, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when issuing site evaluation reports and construction-installation permits.

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(4)~~(5)~~ Clatsop Plains Aquifer, Clatsop County. The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of onsite wastewater treatment systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished.

(a) By January 1, 1983, Clatsop County must identify and set aside aquifer reserve areas for future water supply development containing a minimum of 2-1/2 square miles. The reserve areas must be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The agent may approve sites and issue construction permits for new onsite systems within the area generally known as the Clatsop Plains as described in ~~subsection~~ paragraph (c) of this section if the conditions in paragraph (A) and paragraph (B), (C), or (D) of this subsection are met.

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15), or Clatsop County (adopted through Ordinance No. 79-10).

(B) The lot or parcel does not violate any rule of this division.

(C) The lot or parcel does not violate DEQ's Water Quality Management Plan or any rule in this division, except that the projected maximum sewage loading rate may exceed the ratio of 450 gallons per 1/2 acre per day. In this case, the onsite system must be either a sand filter system or a pressurized distribution system with a design ~~sewage~~ flow not to exceed 450 gallons per day.

(D) Use of standard onsite systems to serve single-family dwellings within planned developments or clustered-lot subdivisions complies with the following requirements:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries.

(ii) The lots do not violate any rule of this division, except the projected maximum sewage loading rate may exceed the ratio of 450 gallons per acre per day.

(iii) DEQ is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(c) The area generally known as Clatsop Plains is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east.

(5)~~(6)~~ Within areas east of the Cascade Range where the annual precipitation does not exceed 20 inches, the agent may issue a construction-installation permit authorizing installation of a standard system to serve a single-family dwelling if the requirements in ~~subsections~~ paragraphs (a) and (b) of this section are met.

(a) Minimum site criteria.

(A) The parcel or lot is 10 acres or larger.

(B) The slope gradient does not exceed 30 percent.

(C) The soils are diggable with a backhoe to a depth of at least 24 inches.

(D) The site complies with the provisions of OAR 340-071-0220(1)(b), (f), (g), (h), (i), ~~and~~ (j), and (k).

(b) Minimum construction requirements.

(A) The system must contain at least 225 linear feet of absorption trench for ~~projected sewage~~ design flows not exceeding 450 gallons per day. Larger ~~sewage~~ design flows must be sized on the basis of 75 linear feet per each 150 gallons of sewage ~~projected~~ flow.

(B) The system must be constructed and backfilled as OAR 340-071-0220(3), (4), (5), (7), (8), (9), (10), (11), and (12) require.

(c) The owner or owner's authorized representative may submit a single application to the agent for both a site evaluation report and a construction-installation permit. Such application must be submitted under OAR 340-071-0160 or 340-071-0162 and include the applicable evaluation and permit fees in OAR 340-071-0140.

(d) The agent may waive the pre-cover inspection for a system installed pursuant to this section if the system installer submits the following information to the agent at the time construction of the system is complete:

(A) A detailed, accurate as-built plan of the constructed system;

(B) A list of all material used in the construction of the system; and

(C) A written certification on a DEQ-approved form that the construction complies with the permit and rules in this division and OAR chapter 340, division 73.

(e) The Agent may waive the site evaluation for a single-family dwelling if the requirements in this subsection are met. These conditions are set forth in an addendum to the memorandum of agreement (contract) between the County and DEQ.

(A) Minimum site criteria.

(i) The lot or parcel is 80 acres or larger.

(ii) The separation distance between the proposed onsite system and the nearest dwelling not served by the proposed system is at least 1/4 mile.

(iii) The nearest property line to the proposed system is at least 100 feet; the nearest domestic water source is at least 200 feet; and the nearest public surface water is at least 200 feet.

(iv) In the agent's opinion, topographical and soils information submitted with the application, including but not limited to slope, terrain, landform, and rock outcrops, demonstrates that the property can be approved for an onsite system under this division.

(B) Minimum construction requirements.

(i) Sizing requirements of Tables 4 and 5 must be followed as closely as possible. In all cases the system must contain at least 225 linear feet of absorption trench for ~~projected sewage~~ design flows not exceeding 450 gallons per day. Larger sewage flows must be sized on the basis of 75 linear feet per each 150 gallons of ~~projected~~ sewage flow.

(ii) The system must be constructed and backfilled as closely as possible to the requirements in OAR 340-071-0220. The agent may waive watertight testing of tanks in the system.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 183.335, 454.625, 468.020, 468B.010 & 468B.020
Stats. Implemented: ORS 454.610 & 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 17-1981, f. & ef. 7-10-81; DEQ 2-1982, f. & ef. 1-28-82; DEQ 16-1982, f. & ef. 8-31-82; DEQ 20-1982, f. & ef. 10-19-82; DEQ 3-1983, f. & ef. 4-18-83; DEQ 8-1983, f. & ef. 5-25-83; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 20-1996(Temp), f. & cert. ef. 10-14-96; DEQ 4-1997, f. & cert. ef. 3-7-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0415
For Cause Variances

(1) An applicant may request variances from any rule or standard in this division.

(2) Variances. Variance officers the director appoints may, after a public hearing, grant variances from any rule in this division to permit applicants.

(3) To grant a variance, the variance officer must find that~~:~~ the proposal demonstrates that the system design is equally or more protective to public health and the environment as the rules or standards in this division, and one of the following:

(a) Strict compliance with the rule or standard is inappropriate; or

(b) Special physical conditions render strict compliance unreasonable, burdensome, or impractical.

(4) Applications.

(a) A separate application for each site considered for a variance must be submitted to DEQ or the contract county as appropriate.

(b) Each application must be signed by the owner of the property served by the system and include:

(A) A site evaluation report, unless the variance officer waives it;

(B) Plans and specifications for the proposed system;

(C) The variance from onsite system rule fee in OAR 340-071-0140; and

(D) Other information the variance officer determines is necessary for a decision.

(5) An applicant for a variance is not required to pay the application fee if at the time of filing the applicant:

(a) Is 65 years of age or older;

(b) Is a resident of Oregon;

(c) Has an annual household income, as defined in ORS 310.630, of $15,000 or less; and

(d) Has not previously applied for a variance under this section.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.657, 454.660 & 454.662
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 9-1984, f. & ef. 5-29-84; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0430
Variance Hearings and Decisions

(1) A variance officer must hold a public information hearing on each variance application for a for cause or hardship variance within 30 days after receiving a completed application.

(2) The hearing must be held in the county where the property described in the application is located.

(3) The applicant must demonstrate the variance is warranted.

(4) The variance officer must visit the site of the proposed system before conducting the hearing.

(5) The variance officer or, for hardship variances, the commission, must grant or deny the variance within 45 days after the hearing is completed. A decision to grant a variance must include the location of the onsite system and the specifications and conditions of the variance ~~and the location of the onsite system~~. The system owner must comply with the conditions of the variance approval, including but not limited to ongoing sampling or reporting requirements, as deemed necessary by the variance officer or, for hardship variances, the commission, to ensure the intended performance of the system, until the system is decommissioned. Any costs associated with the conditions of approval is the sole responsibility of the system owner.

(6) Except for hardship variances under OAR 340-071-0420, variances run with the land.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.660
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0440
Variance Appeals

(1) For cause variance approvals. Any person adversely affected by a variance officer's approval of a variance under OAR 340-071-0415 ~~or 340-071-0420~~ may appeal that decision to the commission under ORS 454.660(1). The appeal must be in writing and

submitted to the commission within 20 days of the variance officer's approval of the variance. The written appeal must specify the grounds for the appeal. Any person adversely affected by the commission's final order may appeal that decision to a circuit court under ORS 183.484.

(2) For cause variance denials: Any person adversely affected by ~~the~~ a variance officer's denial of a variance under OAR 340-071-0415 ~~or 340-071-0420 or by the commission's approval of a hardship variance under OAR 340-071-0420 may appeal that decision to a circuit court under ORS 183.484~~ may request a hearing on the variance officer's decision. The request for hearing must be made in writing within 20 days of the date of the variance denial and must state the grounds for the request. The hearing will be conducted as a contested case hearing under ORS 183.413 through 183.470 and OAR chapter 340, division 011.

(3) Hardship variances. Any person adversely affected by the commission's approval or denial of a hardship variance under OAR 340-071-0420 may appeal that decision to a circuit court in accordance with ORS 183.484.

Stat. Auth.: ORS 454.625
Stats. Implemented: ORS 454.660
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0520
Large Systems

Unless DEQ authorizes otherwise, large systems must comply with the following requirements.

(1) Large system absorption facilities must be designed with distribution to the cells by means of pumps ~~or siphons~~.

(2) The absorption area must be divided into relatively equal units. Each unit may receive no more than 1300 gallons of effluent per day.

(3) The replacement (repair) absorption area must be divided into relatively equal units, with a replacement absorption area unit located adjacent to an initial absorption area unit.

(4) Effluent distribution must alternate between the absorption area units.

(5) Each system must have at least two pumps ~~or siphons~~.

(6) The applicant must provide a written assessment of the impact of the proposed system on the quality of public waters and public health, prepared by a registered geologist, a certified engineering geologist qualified as a hydrogeologist, or a subordinate under the direction of either, except as specifically exempted in ORS 672.535.

(7) The owners of all new and existing large systems must register those systems with DEQ as Underground Injection Control (UIC) systems under OAR chapter 340, division 044. Large systems receiving domestic waste are regulated under this division. Drainfields receiving nondomestic waste are also regulated under the UIC rules.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0600
Sewage Disposal Service Licenses

(1) License required. A person may not perform sewage disposal services or advertise or represent himself as being in the business of performing such services without a valid license issued by DEQ to perform those services. A separate license is required for each business, organization, or other person conducting sewage disposal services.

(2) Types of licenses. DEQ may issue three types of sewage disposal service licenses.

(a) Installer license. An installer license is required for any person to construct or install onsite systems or parts of onsite systems or to perform the grading, excavating, or earth-moving work associated with constructing or installing onsite systems.

(b) Pumper license. A pumper license is required for any person to pump out or clean onsite systems, including portable toilets or any part of them, and to dispose of the material derived from pumping out or cleaning onsite systems or portable toilets.

(c) Installer/pumper license. The combined installer/pumper license authorizes a person to perform the work authorized by the installer and the pumper licenses.

(3) Duration of license. The duration of a sewage disposal service license may not exceed three years following the issue date. DEQ may issue licenses for periods of less than three years to stagger expiration dates. DEQ will provide licensees written notice of the expiration date assigned and date application for renewal is due.

(4) Certification requirement.

(a) Each business with an installer or installer/pumper license must identify at least one person certified under OAR 340-071-0650 who will supervise installation of onsite systems for the licensee.

(b) Applicants must submit evidence of the certification required by this section to DEQ with their application.

(5) New, renewal, and reinstatement licenses. Persons applying for new, renewal, or reinstatement of existing licenses must submit the following to DEQ for each license:

(a) A complete license application form.

(b) Evidence of a surety bond or equivalent security DEQ-approved in the penal sum of $15,000 for each installer or installer/pumper license or $5,000 for each pumper license and evidence that the security or bond will be continued through the license cycle and satisfies all other requirements of section (7) of this rule.

(c) The applicable license fee in OAR 340-071-0140(6).

(d) Evidence of certification as required in section (4) of this rule.

(e) For pumper licenses:

(A) A completed Sewage Pumping Equipment Description/Inspection form documenting inspection by an agent of all pumping equipment to be used for work under the license; and

(B) On DEQ's request, summary origin-destination pumping information for pumping services.

(6) Transfer or amendment of license. DEQ may amend or transfer a valid sewage disposal service license to reflect changes in business name, ownership, or entity (e.g., from individual to partnership or corporation). Persons applying for a license transfer or amendment must submit the following to DEQ:

(a) A complete application to transfer or amend the license with the applicable license fee in OAR 340-071-0140(6);

(b) A rider to an existing bond or a new form of security as required in subsection (5)(b) of this rule;

(c) The valid sewage disposal service license (not suspended, revoked, or expired) being transferred or amended;

(d) For business name changes, a new Sewage Pumping Equipment Description/Inspection form for each vehicle to be used for work under the license; and

(e) For installer licenses, evidence of certification as required in section (4) of this rule.

(7) Security requirements.

(a) Security this rule requires may be any of the following.

(A) A surety bond executed in favor of the State of Oregon on a form the Attorney General approved and DEQ provides. The bond must be issued by a surety company licensed by the Insurance Commissioner of Oregon. A surety bond must require at least 45 days' notice to DEQ before cancellation is effective and must otherwise remain in effect for at least two years after the sewage disposal service license terminates, except as provided in ~~subsection~~ paragraph (c) of this section.

(B) An insured savings account irrevocably assigned to DEQ with interest earned by such account made payable to the depositor.

(C) Negotiable securities of a character approved by the State Treasurer irrevocably assigned to DEQ with interest earned on deposited securities made payable to the depositor.

(b) Any deposit of cash or negotiable securities under ORS 454.705 must remain in effect for at least two years following termination of the sewage disposal service license except as provided in ~~subsection~~ paragraph (c) of this section. A claim against such security deposits must be submitted in writing to DEQ with an authenticated copy of:

(A) The court judgment or order requiring payment of the claim; or

(B) Written authority by the depositor for DEQ to pay the claim.

(c) When proceedings under ORS 454.705 have been commenced while the security required is in effect, such security must be held until final disposition of the proceedings is made. At that time claims will be referred for consideration of payment from the security so held.

(8) Licensee responsibilities. Each licensee:

(a) Is responsible for violations of any statute, rule, or order of the commission or DEQ pertaining to the licensed business.

(b) Is responsible for any act or omission of any servant, agent, employee, or representative of such licensee that violates any statute, rule, or order concerning the license privileges.

(c) Must deliver written notice, before completing licensed services, to each person:

(A) The rights of the recipient included in ORS 454.705(2); and

(B) The name and address of the surety company that has executed the bond required by ORS 454.705(1); or

(C) A statement that the licensee has deposited cash or negotiable securities for the benefit of DEQ to compensate any person injured by the licensee's failure to comply with ORS 454.605 to 454.745 and rules of this division.

(d) Inform DEQ of changes that affect the license, such as changes in the business, ownership, or entity (e.g., changes from individual to partnership or corporation).

(9) Misuse of license.

(a) A sewage disposal service licensee may not allow anyone to perform sewage disposal services under its license except the licensee's employees.

(b) A licensee may not:

(A) Display or cause or permit to be displayed any license that is fictitious, revoked, suspended, or fraudulently altered;

(B) Fail or refuse to surrender to DEQ any license that has been suspended or revoked.

(C) Give false or fictitious information or knowingly conceal a material fact or otherwise commit a fraud in any license application or any other activities associated with the license.

(10) Denial, suspension, or revocation of licenses.

(a) DEQ may refuse to grant, renew, or reinstate or may suspend or revoke any sewage disposal service license under procedures in ORS 183.310 to 183.540 if it finds:

(A) A material misrepresentation or false statement in connection with a license application;

(B) Failure to comply with any provisions of ORS 454.605 through 454.785, the rules of the commission, or an order of the commission or DEQ;

(C) Failure to maintain in effect at all times the required bond or other approved equivalent security in the full amount specified in these rules; or

(D) Nonpayment by drawee of any instrument the applicant tendered as payment of a license fee.

(b) Whenever a license is suspended or revoked or expires, the licensee must remove the license from display and remove all DEQ-issued labels from equipment used for work under the license. Within 14 days after suspension or revocation, the licensee must surrender the suspended or revoked license and certify in writing to DEQ that all DEQ- issued labels have been removed from all equipment.

(c) A sewage disposal service business may not be considered for re-licensure for a period of at least one year after DEQ revokes its license.

(d) A suspended license may be reinstated if:

(A) The licensee submits to DEQ a complete application for reinstatement of license accompanied by the applicable license fee in OAR 340-071-0140(6);

(B) The grounds for suspension have been corrected; and

(C) The original license would not have otherwise expired.

(11) Requirements for pumping vehicles and equipment. A licensee who pumps onsite systems must ensure that all pumping vehicles and equipment comply with the following requirements.

(a) Tanks used for pumping or transporting septage must:

(A) Have a liquid capacity of at least 550 gallons, except that tanks for equipment used exclusively for pumping chemical toilets not exceeding 80 gallons capacity must have a liquid capacity of at least 150 gallons;

(B) Be of watertight metal construction;

(C) Be fully enclosed; and

(D) Have suitable covers to prevent spillage.

(b) Vehicles used for pumping or transporting septage must be equipped with either a vacuum or other type of pump that is self-priming and will not allow seepage from the diaphragm or other packing glands.

(c) The sewage hose on vehicles must be drained, capped, and stored in a manner that will not create a public health hazard or nuisance.

(d) The discharge nozzle must be:

(A) Provided with either a camlock quick coupling or threaded screw cap;

(B) Sealed by threaded cap or quick coupling when not in use;

(C) Located to minimize flow or drip onto any portion of the vehicle;

(D) Protected from accidental damage or breakage.

(e) Pumping equipment must not have spreader gates unless permitted to land apply alkaline-stabilized septage under chapter 340, division 050.

(f) Each vehicle must at all times be supplied with a pressurized wash-water tank, disinfectant, and implements for cleanup.

(g) Except as specified in ~~subsection~~ paragraph (h) of this section or otherwise authorized in writing by the agent, pumping equipment must be used exclusively for pumping sewage disposal facilities.

(h) The following may be pumped or serviced using pumping equipment without written authorization, whether or not they are connected to an onsite system or a centralized community sewer system: pump stations, lift stations, food grease tanks, vaults or tanks used for domestic sewage not contaminated with industrial or hazardous waste, and spills and backups of uncontaminated domestic sewage.

(i) Chemical toilet pumping equipment may not be used for any other purpose if the pump tank has a liquid capacity of less than 550 gallons.

(j) Equipment must be maintained in a reasonably clean condition at all times and must be operated in a manner that does not create a public health hazard or nuisance.

(12) Vehicle identification. The onsite sewage disposal services licensee must identify vehicles as follows.

(a) The licensee's name or assumed business name must be displayed on both sides of the vehicle or the attached tank and on both sides of a tank trailer.

(A) Letters and numbers must be at least 3 inches high unless DEQ authorizes otherwise.

(B) Letters and numbers must be in a color contrasting with the background.

(b) Tank capacity must be printed on both sides of the tank.

(A) Letters and numbers must be at least 3 inches high unless DEQ authorizes otherwise.

(B) Letters and numbers must be in a color contrasting with the background.

(c) DEQ-issued labels for each current license period must be displayed at all times at the front and rear and on each side of the vehicle. Labels must be returned to DEQ when a vehicle is no longer being used in conjunction with pumping under a sewage disposal service license.

(13) Septage management requirements. The licensee and all persons managing septage:

(a) Must avoid spilling sewage or septage during pumping, cleaning, or transport and must immediately clean up any spill and disinfect the spill area.

(b) Must dispose of septage and sewage only in DEQ-approved disposal facilities.

(c) At all times during pumping, transport, or disposal of septage, must possess origin-destination records for sewage disposal services rendered.

(d) Must maintain on file for at least three years complete origin-destination records for sewage disposal services rendered. The records must be made available for review upon the request of DEQ. Origin-destination records must include the following information for each pumping, transport, and disposal occurrence:

(A) Source of septage, including name and address;

(B) Specific type of material pumped;

(C) Quantity of material pumped;

(D) Name and location of disposal site where septage was deposited;

(E) Quantity of material deposited; and

(F) The license numbers or vehicle numbers assigned by the licensee for all vehicles or trailers used for pumping, transport, and disposal.

(e) Must transport septage in a manner that will not create a public health hazard or nuisance.

(f) Must possess a current DEQ-approved septage management plan. The plan must be kept current, with any revisions approved by DEQ before implementation.

(g) Must comply with the approved septage management plan and the DEQ-issued septage management plan approval letter.

Stat. Auth.: ORS 454.615, 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.625 & 468.020
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 32-1981(Temp), f. & ef. 12-8-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 10-1996(Temp), f. & cert. ef. 7-16-96; DEQ 12-1997, f. & cert. ef. 6-19-97; Administrative correction 1-28-98; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0650
Training and Certification Requirements for System Installers and Maintenance Providers

(1) Certification required.

(a) A person who supervises or is responsible for constructing or installing onsite systems must be a certified installer unless the person is the permittee for constructing or installing the system or the permittee's regular employee.

(b) A maintenance provider who inspects, maintains, or certifies or supervises maintenance on onsite systems using alternative treatment technologies, recirculating gravel filters, sand filters, or pressurized distribution systems must be certified as a maintenance provider.

(2) Training and certification programs. DEQ may enter interagency agreements to provide a program to train and certify onsite system installers, maintenance providers, and other onsite maintenance providers as described in this rule.

(3) Initial training and certification.

(a) Each initial training course for certification must provide the minimum training described in this section. One day of training equals 8 hours including a total of 30 minutes of break time and a one-hour lunch.

(b) Course instructors must have academic credentials or field experience in the course discipline and experience as instructors.

(c) Installer training.

(A) The training course for installers must include at least 8 hours of lectures, demonstrations, hands-on training, course review, and exam. DEQ encourages using audiovisual materials to complement lectures where appropriate.

(B) Installer training must at a minimum adequately address the following topics:

(i) Working knowledge of onsite rules.

(ii) Working understanding of permits.

(iii) Basic math skills.

(iv) Technical drawing.

(v) Field layout of onsite system.

(vi) Installation requirements.

(vii) Job safety practices.

(d) Maintenance provider training.

(A) The training course for maintenance providers must include at least 8 hours of lectures, demonstrations, hands-on training, course review, and exam. DEQ encourages using audiovisual materials to complement lectures where appropriate.

(B) Maintenance provider training must adequately address the following topics:

(i) Working knowledge of onsite rules.

(ii) Working understanding of permits.

(iii) Basic math skills.

(iv) Technical drawing.

(v) Onsite system processes.

(vi) System operation and maintenance.

(vii) Job safety practices.

(4) Examinations and certification.

(a) The training provider must administer an open book examination to persons seeking certification. A person seeking initial certification in a discipline must complete the initial training and pass the examination for that discipline. ~~except that installers DEQ certified before December 31, 2003, are not required to take the examination.~~

(b) Each examination must be approved by DEQ and include questions that adequately cover the topics in the training course for that discipline. Applicants must answer 70 percent correctly to pass.

(c) The training provider must issue a certification to each person who completes the training course and passes the required examination.

(d) Each certification must include the following:

(A) A unique certificate number.

(B) Full name of the person certified.

(C) Dates of the training course.

(D) Date of the examination.

(E) An expiration date three years after the certification issuance date.

(F) The name, address, and telephone number of the training provider that issued the certificate.

(G) A statement that the person receiving the certification has completed the requisite training and examination for the discipline certified.

(e) Certified persons must have proof of certification at the location where they are conducting work requiring certification.

(5) Recertification.

(a) For each discipline, the training provider or DEQ must review and approve continuing education courses and other training for recertification. Training approved for each discipline must cover topics related to that discipline, including the topics addressed in section (1) of this rule.

(b) For each discipline, the training provider must extend recertification to each certified person who completes 18 hours of approved continuing education following his most recent certification and to each formerly certified person who completes these requirements within six months after his certification expires.

(6) Suspension or revocation of certification.

(a) DEQ may suspend or revoke the certification of any person for the following reasons:

(A) Performing work requiring certification at a job site without physically possessing a current certification.

(B) Permitting another person to duplicate or use one's own certification.

(C) Obtaining certification from a person not accredited to provide the certification.

(D) Violating requirements in this division.

(E) Failing to pay civil penalties assessed for violations of this division.

(b) DEQ must notify the person whose certification is being revoked or suspended of the reasons for the action and any conditions that must be met before DEQ will reinstate the certification.

(c) A person may appeal a suspension or revocation by requesting a contested case hearing under OAR chapter 340, division 011.

(d) A person whose certification has been revoked may not be recertified and may not apply for a new certification for 12 months after the revocation date or under exceptional circumstances as approved by DEQ.

Stat. Auth.: ORS 454.615, 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.625 & 468.020
Hist.: DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0800
Tables

Tables for Division 071.

[ED. NOTE: To view attachments referenced in rule text, click here for PDF copy.]

Statutory/Other Authority: ORS 454.615, 454.625 & 468.020
Statutes/Other Implemented: ORS 454.775, 454.780, 454.784, 468.020, 454.605, 454.607, 454.610, 454.615, 454.625, 454.655, 454.665, 454.675, 454.695, 454.725, 454.745, 454.755, 468.035, 468.045, 468.065, 468B.050, 468B.055 & 468B.080
History:
DEQ 11-2024, amend filed 07/15/2024, effective 08/01/2024
DEQ 12-2023, amend filed 09/13/2023, effective 11/01/2023
DEQ 15-2022, amend filed 09/06/2022, effective 11/01/2022
DEQ 15-2021, amend filed 09/30/2021, effective 11/01/2021
DEQ 16-2020, amend filed 07/29/2020, effective 08/01/2020
DEQ 22-2019, amend filed 09/27/2019, effective 09/27/2019
DEQ 193-2018, amend filed 09/17/2018, effective 09/17/2018
DEQ 31-2017, minor correction filed 11/29/2017, effective 11/29/2017
DEQ 16-2017, minor correction filed 11/01/2017, effective 11/01/2017
DEQ 15-2017, adopt filed 10/31/2017, effective 11/01/2017

340-071-0800
Tables

TABLE 1
MINIMUM SEPARATION DISTANCES
(OAR 340-071-0220)

Items Requiring Setback	From Subsurface Absorption Area Including Replacement Area	From Septic Tank and Other Treatment Units, Effluent Sewer and Distribution Units
1. Groundwater Supplies and Wells.	*100'	50'
2. Springs:		
- Upgradient.	50'	50'
- Downgradient.	100'	50'
**3. Surface Public Waters:		
- Year round.	100'	50'
- Seasonal.	50'	50'
4. Intermittent Streams:		
- Piped (watertight not less than 20' from any part of the onsite system).	20'	20'
- Unpiped.	50'	50'
5. Groundwater Interceptors:		
- On a slope of 3% or less.	20'	10'
- On a slope greater than 3%:		
- Upgradient.	10'	5'
- Downgradient.	50'	10'
6. Irrigation Canals:		
- Lined (watertight canal).	25'	25'
- Unlined:		
- Upgradient.	25'	25'
- Downgradient.	50'	50'
7. Manmade cuts downgradient in excess of 30 inches (top of downslope cut):	50'	25'
- Which intersect layers that limit effective soil depth within 48 inches of surface.	25'	10'
- Which do not intersect layers that limit effective soil depth		

TABLE 1
MINIMUM SEPARATION DISTANCES
(OAR 340-071-0220)

Items Requiring Setback	From Subsurface Absorption Area Including Replacement Area	From Septic Tank and Other Treatment Units, Effluent Sewer and Distribution Units
8. Downgradient Escarpments: • Which intersect layers that limit effective soil depth. • Which do not intersect layers that intersect effective soil depth.	50' 25'	10' 10'
9. Property Lines.	10'	5'
10. Water Lines.	10'	10'
11. Foundation lines of any building, including garages and out buildings.	10'	5'
12. Underground Utilities.	10'	—

* 50-foot setback for wells constructed with special standards granted by WRD.
**This does not prevent stream crossings of pressure effluent sewers.

TABLE 2 QUANTITIES OF SEWAGE FLOWS
(OAR 340-071-0220)

Type of Establishment		Column 1	Column 2
		Gallons Per Day	Minimum Gallons Per Establishment Per Day
Airports		5 (per passenger)	150
Bathhouses and swimming pools		10 (per person)	300
Camps: (4 Persons per Campsite, where Applicable)	Campground with central comfort stations	35 (per person)	700
	With flush toilets, no showers	25 (per person)	500
	Construction camps — semi-permanent	50 (per person)	1000
	Day camps — no meals served	15 (per person)	300
	Resort camps (night and day) with limited plumbing	50 (per person)	1000
	Luxury camps	100 (per person)	2000
Churches		5 (per seat)	150
Country clubs		100 (per resident member)	2000
Country clubs		25 (per non-resident member present)	—
Dwellings:	Boarding houses	150 (per bedroom)	600
	Boarding houses – additional for non-residential boarders	10 (per person)	—
	Rooming houses	80 (per person)	500
	Condominiums, Multiple family dwellings — including apartments	300 (per unit)	900
	Single-family dwellings	300 (not exceeding 2 bedrooms)	450*
	Single-family dwellings — with more than 2 bedrooms	75 (for third & each succeeding bedroom)	450
	Single-family dwellings – with accessory dwelling unit (ADU)	600 (not exceeding 2 bedrooms in either dwelling)	750

	Accessory dwelling units (ADU)	300 (per unit)	-

TABLE 2 QUANTITIES OF SEWAGE FLOWS (OAR 340-071-0220)

Type of Establishment		Column 1	Column 2
		Gallons Per Day	Minimum Gallons Per Establishment Per Day
Factories (exclusive of industrial wastes — with shower facilities)		35 (per person per shift)	300
Factories (exclusive of industrial wastes — without shower facilities)		15 (per person per shift)	150
Hospitals		250 (per bed space)	2500
Hotels with private baths		120 (per room)	600
Hotels without private baths		100 (per room)	500
Institutions other than hospitals		125 (per bed space)	1250
Laundries — self-service		500 (per machine)	2500
Mobile home parks		250 (per space)	750
Motels — with bath, toilet, and kitchen wastes		100 (per bedroom)	500
Motels — without kitchens		80 (per bedroom)	400
Picnic Parks — toilet wastes only		5 (per picnicker)	150
Picnic Parks — with bathhouses, showers, and flush toilets		10 (per picnicker)	300
Restaurants		40 (per seat)	800
Restaurants — single-service		2 (per customer)	300
Restaurants — with bars and/or lounges		50 (per seat)	1000
Schools:	Boarding	100 (per person)	3000
	Day — without gyms, cafeterias, or showers	15 (per person)	450
	Day — with gyms, cafeterias and showers	25 (per person)	750
	Day — with cafeteria, but without gyms or showers	20 (per person)	600
Service Stations		10 (per vehicle served)	500
Swimming pools and bathhouses		10 (per person)	300
Theaters:	Movie	5 (per seat)	300
	Drive-In	20 (per car space)	1000
Travel trailer parks — without individual water and sewer hookups		50 (per space)	300
Travel trailer parks — with individual water and sewer hookups		100 (per space)	500
Workers:	Construction — as semi-permanent	50 (per person)	1000

	camps		
	Day — at schools and offices	15 (per shift)	150
* Except as otherwise provided in these rules.			

TABLE 3
SLOPE, EFFECTIVE SOIL DEPTH RELATIONSHIP
(OAR 340-071-0220)

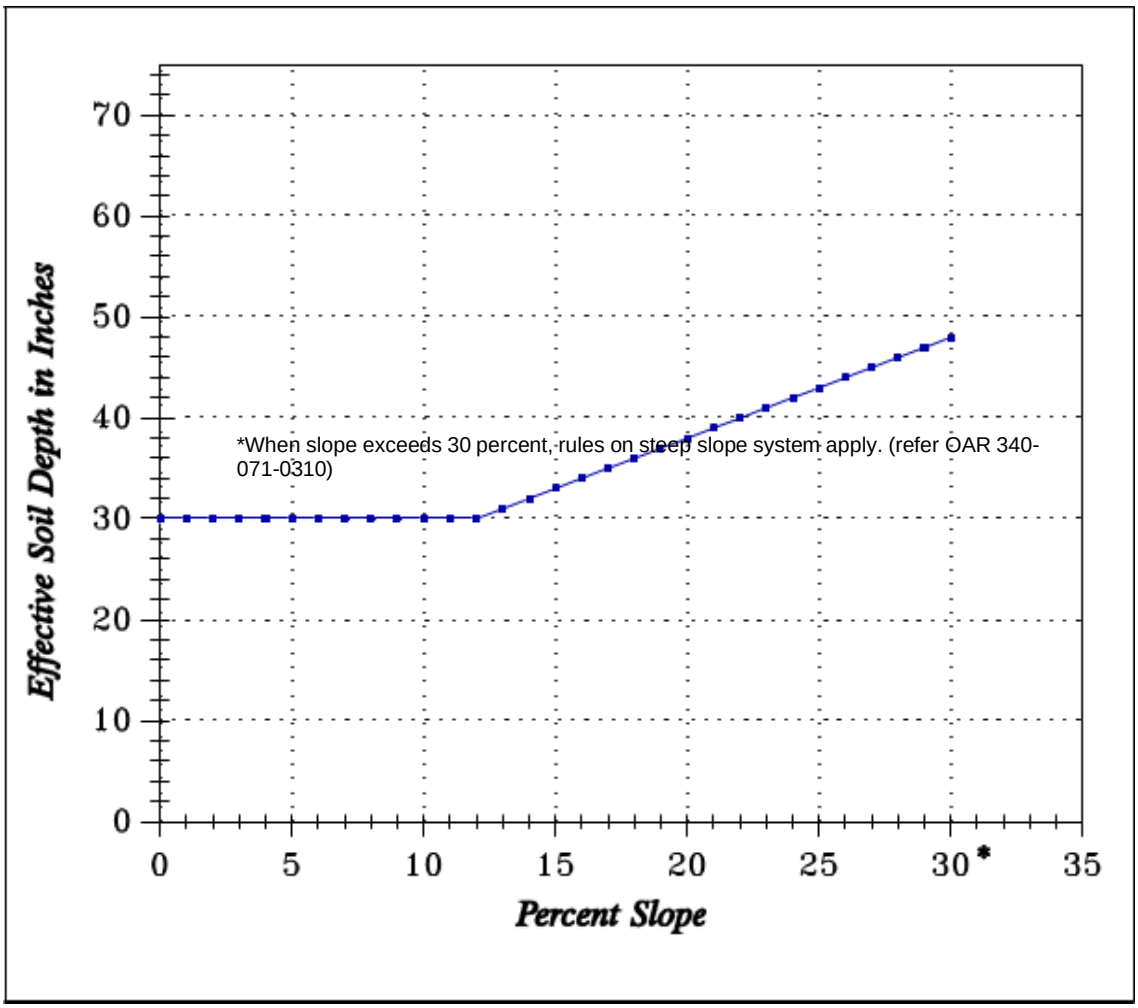


TABLE 4
(OAR 340-071-0220)

Minimum length of absorption trench (linear feet) required per 150 gallons ~~projected daily~~ sewage flow determined from soil texture versus effective soil depth.

Effective Soil Depth	Soil Group		
	A	B	C
18" to Less than 24"	125	150	175
24" to Less than 36"	100	125	150
36" to Less than 48	75	100	125
48" or more	50	75	125

* Soil Group A — Sand, Loamy Sand, Sandy Loam.
Soil Group B — Sandy Clay Loam, Loam, Silt Loam, Silt, Clay Loam. Soil Group C — Silty Clay Loam, Sandy Clay, Silty Clay, Clay.
* If sand grains are fine or very fine, site according to Group B soils.

TABLE 5
(OAR 340-071-0220)

Minimum length of absorption trench (linear feet) required per 150 gallons ~~projected daily sewage flow~~ design flow determined from soil texture versus depth to temporary groundwater.

Depth to Temporary Groundwater	Soil Group		
	A	B	C
24" to Less than 48"	100	125	150
48" or More	50	75	125

* Soil Group A — Sand, Loamy Sand, Sandy Loam.

Soil Group B — Sandy Clay Loam, Loam, Silt Loam, Silt, Clay Loam. Soil Group C — Silty Clay Loam, Sandy Clay, Silty Clay, Clay.

* If sand grains are fine or very fine, site according to Group B soils.

TABLE 6
SOIL TEXTURAL CLASSIFICATION CHART (OAR 340-071-0100)

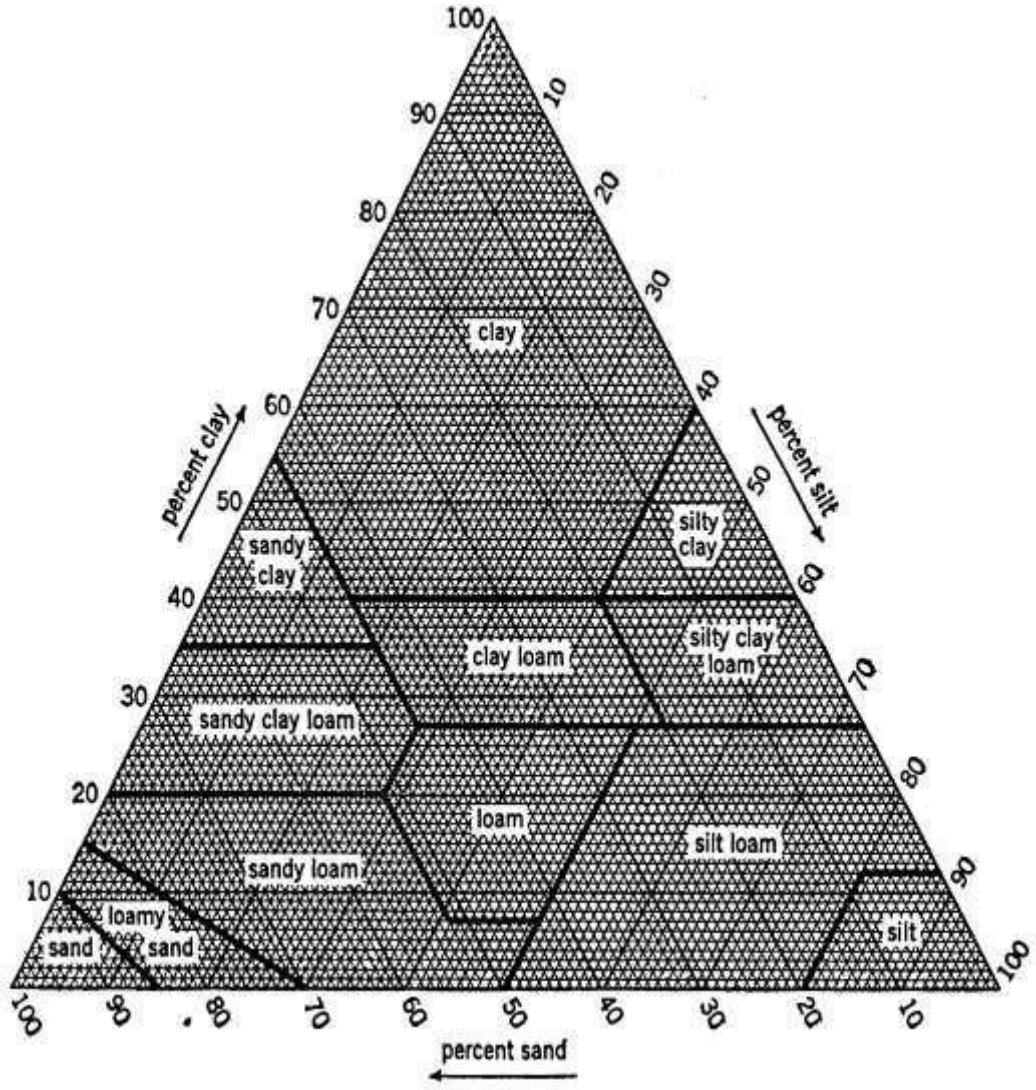


TABLE 7

USDA SOIL CLASSIFICATION SIZES OF SOIL SEPARATES

(OAR 340-071-0100)

	Sieve Sizes	Millimeters
Clay		.002
Silt	270	.050
Very Fine Sand	200 140	.075 .1
Fine Sand	60	.25
Medium Sand	35	.5
Coarse Sand	18	1.0
Very Coarse Sand	10	2.0
Fine Gravel	4 3/8” 1/2	4.75 9.5 12.5
Course Gravel	3”	76.2
Cobbles	10”	250

TABLE 8
MINIMUM SEPARATION DISTANCES FOR NONWATER-CARRIED WASTE DISPOSAL FACILITIES
(OAR 340-071-0330)

	Self-Contained Nonwater- Carried Waste Disposal	Unsealed Earth Type Privies, Graywater Waste Disposal Sump and Seepage Chambers
Groundwater supplies including springs and cisterns	50'	100'
Surface public waters, excluding intermittent streams	50'	100'
Intermittent streams	50'	50'
Property line	25'	25'

TABLE 9A: SITE EVALUATION AND EXISTING SYSTEM EVALUATION FEES
(OAR 340-071-0140)

New Site Evaluation fees. Fees in this section apply to each system for which site suitability is evaluated.

Single-family dwelling - First lot	$700
Single-family dwelling - Each additional lot evaluated during initial visit	$700
Commercial facility with a design capacity of 1,000 gpd or less	$700
Commercial facility with a design capacity of 1,001-1,500 gpd	$882
Commercial facility with a design capacity of 1,501-2,000 gpd	$1,063
Commercial facility with a design capacity of 2,001-2,500 gpd	$1,244
Commercial facility with a design capacity of 2,501-3,000 gpd	$1,426
Commercial facility with a design capacity of 3,001-3,500 gpd	$1,607
Commercial facility with a design capacity of 3,501-4,000 gpd	$1,788
Commercial facility with a design capacity of 4,001-4,500 gpd	$1,969
Commercial facility with a design capacity of 4,501-5,000 gpd	$2,151
Commercial facility with a design flow greater than 5,000 gpd	$2,373
Site Evaluation Report Review fee	$659
Existing System Evaluation Report fee	$659

TABLE 9B: PERMITTING FEES FOR SYSTEMS NOT SUBJECT TO WPCF PERMITS (OAR 340-071-0140)							
		System Type A	System Type B	System Type C	System Type D	System Type E	Plan Review fees for Commercial Facility Systems
Construction-Installation							
For systems with a design capacity of less than 600 gpd		$461	$890	$1,038	$1,272	$1,566	$0
For systems with a design capacity of 601-1,000 gpd		$461	$890	$1,038	$1,272	$1,566	$379
For systems with a design capacity of 1,001-1,500 gpd		$560	$989	$1,137	$1,352	$1,710	$445
For systems with a design capacity of 1,501-2,000 gpd		$659	$1,088	$1,236	$1,433	$1,776	$511
For systems with a design capacity of 2,001-2,500 gpd		$758	$1,187	$1,335	$1,513	$1,862	$577
Reinspection fee	$103						
Pump Evaluation fee. For all permits that specify the use of a pump ~~or dosing siphon~~ except for sand filter, Alternative treatment technologies, Recirculating gravel filter, and pressurized distribution systems	$66						

TABLE 9B: PERMITTING FEES FOR SYSTEMS NOT SUBJECT TO WPCF PERMITS (OAR 340-071-0140)

System Type Key:

Type A = Gray Water waste disposal sumps Type B = Holding tanks

Type C = Standard subsurface, Absorption trenches in saprolite, Redundant, Seepage trench, Steep slope Type D = Alternative treatment technologies, Capping fill, Pressurized distribution, Tile dewatering Type E = Recirculating gravel filter, Sand filter (commercial or residential)

TABLE 9C: OTHER PERMITTING FEES FOR SYSTEMS NOT SUBJECT TO WPCF PERMITS (OAR 340-071-0140)

		Field Visit required	No Field Visit
Minor Alteration Permit	$272		
Major Alteration Permit	$569		
Minor Repair Permit – Single-Family Dwelling	$264		
Major Repair Permit – Single-Family Dwelling	$551		
Minor Repair Permit - Commercial Facility	$478		
Major Repair Permit - Commercial Facility	$1,038		
Permit Denial Review	$363		
Permit Transfer, Reinstatement, or Renewal		$536	$157
Authorization Notice		$643	$165
Authorization Notice Denial Review	$659		
Renewal of hardship authorization for temporary		$340	$103
Alternative system inspection - Holding tanks	$396		
Variance from onsite system rules	$2,142		
Land use clearance	$52		
Annual report evaluation - Holding tanks – hard	$31		
Annual report evaluation - Holding tanks – online	$26		
Alternative system inspection - Other alternative systems listed in Table 9B	$544		
Annual report evaluation - Sand filters, pressurized distribution systems, recirculating gravel filters, and alternative treatment technology – hard copy	$62		
Annual report evaluation - Sand filters, pressurized distribution systems, recirculating gravel filters, and alternative treatment technology – online submittal	$52		

TABLE 9D: WPCF PERMIT FEES (OAR 340-071-0140)			
	Application filing fee (all systems)	Permit processing fees for onsite systems with a design capacity of 1,200 gpd or less	Permit processing fees for onsite systems with a design capacity over 1,200 gpd
New application	$85	$684	$3,416
Permit renewal (involving request for effluent limit modifications)	$85	$340	$1,710
Permit renewal (without request for effluent limit modifications)	$85	$172	$853
Permit modification (involving increase in effluent limitations)	$85	$340	$1,710
Permit modification (not involving an increase in effluent limits)	$85	$256	$853
		Plan Review fee	
For commercial facilities with a design capacity less than 600 gpd		$0	
		Plan Review fee	
For commercial facilities with a design capacity less than 600 gpd		$0	
For commercial facilities with a design capacity of 601 - 1,000 gpd		$326	
For commercial facilities with a design capacity of 1,001 - 1,500 gpd		$384	
For commercial facilities with a design capacity of 1,501 - 2,000 gpd		$442	
For commercial facilities with a design capacity of 2,001 - 2,500 gpd		$498	
For commercial facilities with a design capacity of 2,501 - 3,000 gpd		$584	
For commercial facilities with a design capacity of 3,001 - 3,500 gpd		$641	
For commercial facilities with a design capacity of 3,501 - 4,000 gpd		$698	
For commercial facilities with a design capacity of 4,001 - 4,500 gpd		$753	
For commercial facilities with a design capacity of 4,501 - 5,000 gpd		$811	
Commercial facilities with a design capacity greater than 5,000 gpd		$853	
Single-family dwelling		$172	
		Annual Compliance Determination fee	
Onsite sewage lagoon with no discharge		$1,024	
Treatment Standard 1 or better systems with design capacities less than 2,500 gpd		$427	
Treatment Standard 1 or better systems with design capacities of 2,501 - 20,000 gpd		$853	
Holding tanks, if by the date specified by DEQ, the owner does not submit written certification to DEQ that the holding tank has been operated the previous calendar year in full compliance with the permit or that the previous year's service logs for the holding tanks are not available for inspection by the DEQ		$340	
Holding tanks, if by the date specified by DEQ, the owner submits written certification to DEQ that the holding tank has been operated the previous calendar year in full compliance with		$37	

the permit and that the previous year's service	
Other systems with design capacities less than 20,000 gpd	$427
Other systems with design capacities greater than 20,000 gpd	$853

OAR 340-071-0140 TABLE 9E: SEWAGE DISPOSAL SERVICE LICENSE AND TRUCK INSPECTION FEES	
New 3-year business license	$438 per year
Renewal of business license	$330 per year
Additional license fee for additional pumper vehicles	$16/vehicle
Transfer of or amendments to license	$206
Reinstatement of suspended license	$258
Pumper truck inspections - First vehicle, each inspection	$103
Pumper truck inspections - Each additional vehicle, each inspection	$52

TABLE 9F: OTHER FEES OAR 340-071-0140	
Innovative or Alternative Technology Review	$1,648
Alternative Technology Review (greater than 1,500 gpd)	$3,296
Alternative Treatment Technology Annual Compliance Determination Fee (per listed model)	$515
Material Plan Review	$494
Department Surcharge	$100

Stat. Auth.: ORS 454.615, 454.625 & 468.020
Stats. Implemented: ORS 454.605, 454.607, 454.610, 454.615, 454.625, 454,655, 454.665, 454.675, 454.695, 454.725, 454.745, 454.755, 454.775, ~~454.780~~, 454.784, 468.020, 468.035, 468.045, 468.065, 468B.050, 468B.055, 468B.080.

340-073-0025
Tank Construction

The following construction and manufacturing requirements apply to all septic tanks, holding tanks, dosing tanks, multiple-compartment combination septic and dosing tanks, and dosing septic tanks manufactured for use in Oregon unless specifically exempted by OAR chapter 340, divisions 071 or 073.

(1) Compartments. Tanks may have single or multiple compartments.

(a) Single-compartment tanks and multiple-compartment tanks must meet or exceed the minimum volume requirements described in OAR chapter 340, divisions 071 and 073.

(b) Multiple-compartment tanks must comply with the following requirements:

(A) The liquid capacity of the first compartment must be at least 2/3 of the total required liquid capacity, as measured from the invert elevation of the first compartment's outlet Tee fitting;

(B) A compartment may not have an inside horizontal dimension of less than 24 inches.

(c) The liquid depth of any compartment must be at least 30 inches. Liquid depths greater than 72 inches may not be considered in determining the working liquid capacity unless the tank has a capacity greater than 3,000 gallons.

(2) Service access manhole. All tanks must have at least one service access manhole measuring at least 18 inches across its shortest dimension in each compartment.

(3) Watertightness. After installation, all tanks must be watertight. The installer must test each tank for watertightness by filling the tank to a point at least 2 inches above the point of riser connection to the top of the tank. During the test there may be no more than a one gallon leakage over a 24 hour period. The tank manufacturer must deliver watertight tanks and should test each tank for watertightness before the tank is shipped from the manufacturing plant.

(4) If the tank manufacturer does not fully assemble the tank, as with a two-piece concrete tank, the manufacturer must provide the bonding and sealing agents and an instruction manual for assembling the tank.

(5) Structure: All tanks must be able to support an earth load of at least 300 pounds per square foot when the maximum coverage does not exceed 3 feet. Tanks installed with more than 3 feet of cover must be reinforced to support the additional load. Lateral load must be 62.4 pcf of equivalent fluid pressure (EFP). Tanks must be able to withstand long-term external hydrostatic loads in addition to soil loads. Internal hydrostatic pressures must be omitted to allow for septage pumping during critical groundwater conditions. A 2,500 pound wheel load concentrated over the critical elements of the tank shall also be considered.

(6) Service access riser and cover. All tanks must be manufactured to accommodate installation of a watertight service access riser above one service access manhole. The riser must have a minimum nominal diameter of 20 inches when tank burial depths do not exceed 36 inches. Tanks designed for burial depths deeper than 36 inches must also be designed to accommodate installation of a 30-inch minimum diameter service access riser above each service access manhole. A gasketed riser cover must be provided and securely fastened or weighted to prevent unauthorized access.

(7) Inlet and outlet Tee fittings.

(a) The inlet and outlet Tee fittings must be of Schedule 40 P~~.~~V~~.~~C~~.~~ plastic, Schedule 40 ABS plastic, or other equally durable materials approved by ~~the department~~ DEQ with a minimum diameter of 4 inches.

(b) The distance between the inlet and outlet Tee fittings in a single-compartment tank must at least equal the liquid depth of the tank.

(c) The inlet and outlet Tee fittings in a single~~-~~compartment tank, where applicable, must be located at opposite ends of the tank. The inlet Tee fitting must be readily accessible by way of a watertight, 8-inch minimum diameter riser (with cover) and access hole positioned directly above the inlet Tee. The fittings must be attached in a watertight manner acceptable to DEQ ~~the department~~.

(d) The inlet fitting in all single-compartment tanks, except dosing tanks, and in each compartment of multiple-compartment tanks, must be a "sanitary tee" extending at least 6 inches above and at least 12 inches below the normal high and low liquid levels, respectively.

(e) The outlet Tee fitting, holes, or ports provided in a vault or outlet effluent filter must be positioned to withdraw effluent horizontally from the clear zone at an elevation measured from the inside bottom of the tank to 65 to 75 percent of the lowest operating liquid depth. The net area of the ports must be at least 6 square inches. The outlet fitting in single-compartment tanks and in each compartment of multiple-compartment tanks must extend at least 6 inches above the highest normal liquid depth to provide scum storage. When the single-compartment tank is used as a holding tank, dosing septic tank, or dosing tank, the outlet Tee fitting must be provided with a watertight plug or omitted. The outlet Tee fitting may also be plugged or omitted in the last compartment of a multiple-compartment tank when a pump ~~or siphon~~ is placed in that last compartment.

(f) Ventilation must be provided through the fittings by means of a 2-inch minimum space between the top of the inlet Tee fittings and the adjacent tank surfaces.

(g) The invert of the inlet fitting must be at least 1 inch and preferably 3 inches above the invert of the outlet fitting or the highest normal liquid level.

(h) A convenient means of monitoring sludge and scum accumulation must be provided, with access extending to ground level.

(i) The tank manufacturer must provide with each Tee fitting an appropriate coupler that will provide a watertight connection between the fittings and the building and effluent sewer pipes.

(8) At least 10% of the inside volume of a tank must be above the highest normal liquid level to provide scum storage and reserve.

(9) Except as provided in OAR 340-073-0026, tanks shall be constructed of concrete, fiberglass, or other noncorrosive materials approved by DEQ ~~the department~~:

(a) Precast concrete tanks must have a minimum wall, compartment, and bottom thickness of 2-1/2 inches and must be adequately reinforced. The top must be at least 4 inches thick.

(b) Cast-in-place tanks must be designed by a civil or structural engineer to the requirements of these rules, and the tank construction must be certified by the designer or qualified representative. A structural permit from the Building Codes Division or the municipality with jurisdiction (as defined in 455.010(4)) may be required when cast-in-place concrete tanks are used.

(c) Tanks made of other corrosion resistant materials must be constructed to provide structural integrity to meet the requirements of sections (3), (4), and (5) of this rule.

(10) All prefabricated tanks must be marked on the uppermost tank surface over the outlet with the liquid capacity of the tank, the burial depth limit, date of manufacture, and either the manufacturer's full business name or the number assigned by DEQ ~~the department~~.

(11) Each commercial manufacturer of prefabricated tanks must provide two complete sets of plans and specifications, prepared by a registered professional engineer licensed to practice in Oregon, to DEQ ~~the department~~ for review and approval. Plans submittal must include the structural analysis, calculation of total gallons, operating gallons, gallons per inch, and buoyancy, including predetermined countermeasures.

(12) Each commercial manufacturer of pre-fabricated tanks must provide DEQ ~~the department~~ with written certification that tanks for use in onsite systems in the State of Oregon will comply with all requirements of this rule.

(13) An installation manual, on waterproof paper or placed within a weather-resistant container, must be provided by the manufacturer with each tank distributed. The manual must describe proper installation of the tank, riser(s) and lid, pipe connections, watertight testing procedures, backfill, and any special precautions or limitations.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef.

8-6-86; DEQ 27-1994, f.11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0026
Septic Tanks

~~(1)~~ Septic tanks must be constructed of concrete, fiberglass, ~~steel,~~ or other non-corrosive materials approved by DEQ ~~the department~~.

~~(2) Steel septic tanks must be manufactured with 12-gauge or thicker steel. They must be coated inside and out with asphalt or other protective coatings that meet the American National Standards Institute UL 70 standard, Sections 25 through 43, or other coatings of equal or better performance approved by the department.~~

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0030
Dosing Septic Tank

(1) A dosing septic tank may discharge effluent with a pump ~~or dosing siphon~~ from the clear zone at the outlet end of the tank. These may be considered for installations where the design flow does not exceed 600 gallons per day.

(2) Special Configuration:

(a) The minimum total primary volume of the tank must be 1,100 gallons for flows less than or equal to 450 gallons per day and 1,500 gallons for flows greater than 450 and up to 600 gallons per day.

(b) The submerged volume at the lowest operating liquid level must be at least 900 gallons. The remaining capacity must be used to ensure optimum surge capacity and reserve storage capacity.

(c) Liquid levels must be controlled in a manner that is consistent with pump dosing requirements described in OAR chapter 340, divisions 071 and 073.;

(d) All apparatus must be constructed and installed to facilitate ease of service without having to alter any other component.

(e) The installation manual described in OAR 340-073-0025(13) must include additional information about ~~siphon selection,~~ installation of the pump ~~or siphon~~ vault and screen, pump control and alarm levels, and the watertight pass-through methods for electrical wiring and pipe.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615

Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0035
Distribution Boxes

(1) Distribution boxes must be constructed of concrete, fiberglass, or other materials acceptable to DEQ ~~the department~~.

(2) Distribution boxes must be constructed of durable, watertight materials resistant to deterioration and be designed to accommodate watertight connections for the effluent sewer and header pipes. The top, walls, and bottom of concrete distribution boxes must be at least 1-1/2 inches thick. All distribution boxes must be able to support an earth load of at least 200 pounds per square foot.

(3) The invert elevation of all outlets must be the same and must be at least 2 inches below the inlet invert.

(4) Each distribution box must be provided with a sump extending at least 2 inches below the invert of the outlets unless otherwise authorized by DEQ ~~the department~~.

(5) Distribution box covers must be marked with the manufacturer's full business name or number assigned by DEQ ~~the department~~.

(6) Each manufacturer must provide DEQ ~~the department~~ with complete, detailed plans and specifications of the distribution box and must certify, in writing, that distribution boxes manufactured for use in onsite sewage systems in Oregon will comply with all requirements of this rule. Plans and specifications must be prepared under the supervision of and designed by a professional engineer licensed in accordance with ORS chapter 672.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0040

Drop Boxes

(1) Drop boxes must be constructed of concrete, fiberglass, or other materials acceptable to DEQ ~~the department~~.

(2) Drop boxes must be constructed of durable, watertight materials resistant to deterioration and be designed to accommodate watertight connections for the effluent sewer and header pipes. The top, walls, and bottom of concrete drop boxes must be at least 1-1/2 inches thick. All drop boxes must be able to support an earth load of at least 200 pounds per square foot.

(3) The inverts of the inlet and overflow port must be at the same elevation. The invert of the header pipe port(s) leading to the absorption trench(es) must be 6 inches below the inlet invert.

(4) Drop box covers must be marked with the manufacturer's full business name or number assigned by DEQ ~~the department~~.

(5) Each manufacturer must provide DEQ ~~the department~~ with complete, detailed plans and specifications of the drop box and must certify, in writing, that drop boxes manufactured for use in onsite systems in Oregon will comply with all requirements of this rule. Plans and specifications must be prepared under the supervision of and designed by a professional engineer licensed in accordance with ORS Chapter 672.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

~~340-073-0041~~
~~Filter Fabric~~

Except as otherwise allowed by the department, filter fabric used as a barrier between the lower lens of drain media and the medium sand in a conventional sand filter system must meet the following specifications:

(1) Material synthetic fabric, either spunbonded or woven.

(2) Burst strength not less than 25 psi.

(3) Air permeability not less than 500 cfm per sq. ft.

(4) Water flow rate not less than 500 gpm per sq. ft. at 3 inches of head.

(5) Hydrophilic surface reaction to water.

(6) Equivalent opening size of 70 to 100 sieve.

(7) Chemical properties:

(a) Nonbiodegradable.

(b) Resistant to acids and alkalies within a pH range of 4 to 10.

(c) Resistant to common solvents.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 15-1986, f. & ef. 8-6-86; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0050
Distribution Boxes, Drop Boxes, and Diversion Valves: Dosing Tanks

(1) Dosing tanks must meet the standards described in OAR 340-073-0025, except as otherwise allowed in this rule.

(2) Each dosing tank employing one or more pumps must have a minimum liquid capacity equal to the design flow ~~projected daily sewage flow~~ for flows up to 1,200 gallons per day. ~~The department~~ DEQ will determine tank sizing for dosing tanks with ~~projected daily sewage flows~~ design flows greater than 1,200 gallons per day. The liquid capacity of dosing tanks must be as measured from the invert elevation of the inlet fitting.

(3) Each dosing tank must be provided with a service access manhole having a minimum horizontal measurement of 18 inches.

(4) Each dosing tank proposed to serve a commercial facility containing more than one pump ~~or siphon~~ must be provided with at least one service access manhole that provides adequate space to construct, install, service, and operate the equipment in accordance with the requirements of OAR chapter 340, divisions 071 and 073.

(5) The installation manual described in OAR 340-073-0025(13) must include additional information about ~~siphon selection,~~ installation of the pump ~~or siphon~~ screen, pump control and alarm levels, and the watertight pass-through methods for electric wiring and pipe.

~~(6) Dosing tanks with siphons must be designed and sized for each specific project. The tank manufacturer must specify the type or model of siphon, screen, and related apparatus that are compatible with each dosing tank.~~

(6) The inlet fitting must extend below the lowest operating level of the pump ~~or siphon~~.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0055
Dosing Assemblies: Effluent Pumps, Controls and Alarms~~, and Dosing Siphons~~

(1) Design and equipment must emphasize ease of maintenance, longevity, and reliability of components and must be proven suitable by operational experience, test, or analysis acceptable to DEQ ~~the department~~.

(2) Easy means of electrical and plumbing disconnect must be provided. All apparatus must be constructed and installed to facilitate ease of service without having to alter any other component.

(3) Component materials must be durable and corrosion-resistant such as Type 316 stainless steel, suitable plastics, or 85-5-5-5 bronze.

(4) Pumps, ~~Siphons,~~ Controls, and Alarms. All pumps, ~~siphons,~~ controls and related apparatus must be field tested under working conditions and found to operate and perform satisfactorily. Electrical components used in onsite systems must comply with applicable requirements of the State of Oregon Electrical Code and the standards in this rule ~~section~~.

(a) Motors must be continuous-duty with overload protection.

(b) Pumps must have durable impellers of bronze, cast iron, or other materials approved by DEQ ~~the department~~.

(c) Submersible pumps must be provided with an easy, readily accessible means of electrical and plumbing disconnect and a noncorrosive lifting device to remove the pump ~~as a means of removal~~ for servicing.

(d) Except where the agent specifically authorize~~d~~s it in writing by the agent, the pump ~~or siphon~~ must be placed within a corrosion-resistant screen or vault with a filtering device that extends into or above the tank's service access manhole. The screen or filtering device must have at least 12 square feet of surface area, with 1/8-inch openings. In lieu of the screen, the agent may allow other methods with equal or better performance ~~in~~ for preventing ~~the passage of~~ suspended solids from passing to the pump ~~or siphon~~.

(e) Pumps must be automatically controlled by float switches with a minimum rating of 12 amps at 115 volts A.C. or by a ~~department~~DEQ-approved, equally reliable switching mechanism. Except as otherwise required in this division, the switches must be installed so that no more than 20% of the design flow ~~projected daily sewage flow~~ is discharged each cycle. The pump "off" level must be set to maintain the liquid level above the top of the pump or to the designer and pump manufacturer's specifications.

(f) An audible and visual high water level alarm with manual silence switch must be located in or near the building served by the pump. Only the audible alarm may be user-cancelable. The switching mechanism within a dosing tank or chamber controlling the high water level alarm must be located so that at time of activation the tank has a remaining volume equal to 1/3 or more of the system's design flow, as measured below the invert of the inlet, for effluent storage. The alarm and pump must be on separate circuits. Commercial applications using duplex pumps are not subject to the 1/3 storage reserve requirement.

(g) When a system has more than one pump, ~~the department~~ DEQ may require the pumps to be wired into the electrical control panel to function alternately after each pumping cycle. If either pump should fail, the other pump will continue to function while

the high water level alarm activates. A cycle counter must be installed in the electrical control panel for each pump.

(h) All pump installations must be designed with adequate sludge storage volume below the effluent intake level of the pump.

(i) All commercial systems with a design flow greater than 600 gallons must be constructed ~~in duplex (~~with two or more alternating pumps~~)~~ unless otherwise authorized in writing by ~~the department~~DEQ. Controls must be provided such that an alarm will signal when one1 of the pumps malfunctions.

(j) All pumps serving commercial systems must be operated through a pre-manufactured electrical control panel. There must be a means of monitoring pump performance ~~through the use of~~ with elapsed-time meters and cycle counters ~~is required~~.

(k) Where multiple pumps are operated in series, an electrical control panel must be installed to prevent the operation of a pump or pumps preceding a station that experiences a high level alarm event.

~~(5) Dosing Siphons. Dosing siphons used in onsite systems must comply with the following minimum requirements.~~

~~(a) The siphon must be constructed of corrosion-resistant materials.~~

~~(b) The siphon must be installed within a compatible tank in accordance with the siphon manufacturer's recommendations.~~

~~(c) The siphon manufacturer must provide installation and maintenance instructions to the owner.~~

~~The installation must include a device that tracks the operation of the siphon by measuring cycle events and records them by means of an event counter mounted within the dwelling or structure served.~~

Stat. Auth.: ORS 454.625 & 468.020

Stats. Implemented: ORS 454.615

Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 23-1981(Temp), f. & ef. 9-2-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15- 1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0056

Distribution Boxes, Drop Boxes, and Diversion Valves: Effluent Filters

Effluent filters used in onsite systems must meet the following criteria.

(1) Filters must be of durable, resilient, corrosion resistant, non-degradable materials resistant to deformation under normal operating conditions.

(2) Filters must be designed to prevent the escape of sludge or scum during normal operation and in the event of a malfunction, including filter clogging.

(3) The filter must retain all particles greater than 1/8 inch.

(4) The filter assembly must baffle the sludge and scum layers to prevent the escape of gross solids during sludge bulking or gas ebullition.

(5) Filters must be designed and positioned to allow for easy, trouble-free removal from and reinstallation to the screen apparatus from the assembly.

(6) The assembly must be capable of withstanding stresses placed upon it by installation, operation, and service.

(7) The assembly in the septic tank must perform as a conventional tank outlet that meets the requirements of OAR 340-073-0025(6) when the filter is removed.

(8) The filter must be designed to handle the flow of the system it is to serve without excessive maintenance. For a single-family dwelling, maintenance is considered "excessive" when the filter requires service or cleaning more than one time per year. Service must be performed each time the tank is pumped and in accordance with the manufacturer's specifications.

(9) To obtain ~~department~~ DEQ approval, the manufacturer of an effluent filter must provide ~~the department~~ DEQ with the necessary technical data to show that the design and materials comply with this rule. The manufacturer must provide an operation and maintenance manual with each unit distributed.

(10) Effluent filter units external to the tank must be watertight.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0060
Distribution Boxes, Drop Boxes, and Diversion Valves: Pipe Materials and Construction

(1) Effluent Sewer Pipe: The effluent sewer and header must be constructed with materials ~~in conformance with~~ that conform to state building sewer standards. The effluent sewer and header pipe must have a ~~minimum~~ diameter of at least 3 inches. When the septic tank is fitted with an effluent filter, the ~~minimum~~ nominal diameter of effluent sewer piping may be reduced to at least 1-1/4 inches.

(2) Underdrain pipe. Underdrain pipe must meet or exceed Schedule 40 pipe ~~the requirements for Class 125 PVC pressure pipe as identified in **ASTM Specification D 2241**~~. The pipe and fittings must be marked as required by ASTM Specification D 2241. The underdrain pipe must be perforated in accordance with subsection (4)(d) of this rule or with 1/4-inch slots cut halfway through the pipe at 4 inches center to center.

(3) ~~Polyvinyl chloride (PVC)~~ Pressure transport pipe, pressure manifolds, and pressure lateral pipe and fittings must meet or exceed Schedule 40 and be pressure rated ~~the current requirements for Class 160 PVC 1120 pressure pipe as identified in ASTM Specification D 2241~~. High density polyethylene (HDPE) pipe must be pressure rated under the standards referenced in Chapter 17 of the Oregon Plumbing Specialty Code. Any transitional fittings between material must be manufacture for that purpose ~~The pipe and fittings must be marked as required by ASTM Specification D 2241~~. ~~For pipe diameters of 1 inch or less, the minimum pressure rating is 200 pounds per square inch (psi). For pipe diameters greater than 1 inch, the minimum pressure rating is 160 psi.~~

(4) Distribution ~~and Header~~ Pipe and Fittings.

(a) Polyethylene distribution pipe in 10 foot lengths ~~and header pipe in lengths of 10 feet~~ or greater must meet the current ASTM Specification F 667 ~~405~~. Pipe and fittings must also pass a deflection test withstanding 350 pounds per foot without cracking or collapsing using the method in ASTM 2412. Pipe used in absorption facilities must be heavy duty. Markings must meet requirements in ASTM F 667 ~~405~~.

(b) Polyvinyl chloride (PVC) distribution ~~and header pipe~~ and fittings must ~~meet the most~~ current **ASTM Specification D 2729**. Pipe and fittings must pass a deflection test withstanding 350 pounds per foot without cracking or collapsing using the method found in ASTM 2412. Markings must meet requirements in ASTM Specification D 2729.

(c) Polyethylene smooth wall distribution ~~and header~~ pipe in 10-foot length and fittings must meet ~~the most current~~ ASTM Specification F 810. Pipe and fittings must also pass a deflection test of 350 pounds per foot without cracking or collapsing by using the method found in ASTM 2412. Markings shall meet the requirements in **ASTM Specification F 810**, **Section 9**.

(d) The three types of plastic pipe described above must have two rows of holes spaced 120 degrees apart and 60 degrees on either side of a center line. For distribution pipe, a line of contrasting color must be provided on the outside of the pipe along the line furthest away and parallel to the two rows of perforations. Durable ink markings must cover at least 50% of the pipe. Markings may consist of a solid line, letters, or a combination of the two. Intervals between markings must not exceed 12 inches. The holes of each row may not be more than 5 inches on center and must have a minimum diameter of 1/2 inch.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 9-1982, f. & ef.

6-16-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0075
Non-water-Carried Waste Disposal Facilities, Materials, and Construction: Self-Contained Nonwater-Carried Toilet Facilities

(1) General Standards. All self-contained, nonwater-carried toilet facilities must comply with the following requirements.

(a) They must have water-tight chambers constructed of reinforced concrete, plastic, fiberglass, metal, or other material of acceptable durability and corrosion resistance, approved by DEQ ~~the department~~, and designed to facilitate the removal of the wastes.

(b) Black wastes must be stored in an appropriate chamber until removal for final treatment elsewhere. Wastes must be removed from the chamber whenever necessary to prevent overflow.

(c) Chemicals containing heavy metals such as copper, cadmium, and zinc, must not be used in self-contained toilet facilities.

(d) All surfaces subject to soiling must be impervious, easily cleanable, and readily accessible.

(2) Vault Toilet Facilities.

(a) The capacity of vaults must be at least 350 gallons or, in places of employment, 100 gallons per seat.

(b) Caustic must be added routinely to vault chambers to control odors.

(3) Chemical Toilet Facilities.

(a) Toilet bowls must be constructed of stainless steel, plastic, fiberglass, ceramic, or other material approved by DEQ ~~the department~~.

(b) Waste passages must have smooth surfaces and be free of obstructions, recesses, or cross braces that would restrict or interfere with flow of black wastes.

(c) Biocides and oxidants must be added to waste detention chambers at rates and - intervals recommended by the chemical manufacturer and approved by DEQ ~~the department~~.

(d) Chambers and receptacles must provide a minimum storage capacity of 50 gallons per seat.

(e) Portable shelters housing chemical toilets must display the business name of the licensed sewage disposal service that is responsible for servicing them.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 9-1984, f. & ef. 5-29-84; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0085
Non-water-Carried Waste Disposal Facilities, Materials, and Construction: Flexible Membrane Liners for Sand Filters Treating Septic Tank Effluent

(1) Unsupported polyvinyl chloride (PVC) must have the following properties (Property -- Test Method).

(a) Thickness -- ASTM D1593, Para 9.1.3, 30 mil, minimum

(b) Specific Gravity (minimum) -- ASTM D792, Method A

(c) Minimum Tensile Properties (each direction) -- ASTM D882

(A) Breaking Factor (pounds/inch width) -- Method A or B (1 inch wide), 69

(B) Elongation at Break (percent) -- Method A or B, 300

(C) Modulus (force) at 100% Elongation (pounds/inch width) -- Method A or B, 27

(d) Tear Resistance (pounds, minimum) -- ASTM D1004, Die C, 8

(e) Low Temperature -- ASTM D1790, -20° F

(f) Dimensional Stability (each direction, percent change maximum) -- ASTM D1204, 212° F;, 15 min., ±5

(g) Water Extraction -- ASTM D1239, 0.35% max

(h) Volatile Loss -- ASTM D1203,Method A, 0.7% max

(i) Resistance to Soil Burial (percent change maximum in original value) -- ASTM D3083:

(A) Breaking Factor, -5

(B) Elongation at Break, -20

(C) Modulus at 100% Elongation, ±10.

(j) Bonded Seam Strength (factory seam, breaking factor, ppi width) -- ASTM D3083, 55.2

(k) Hydrostatic Resistance -- ASTM D751, Method A, 82.

(2) Installation Standards.

(a) Patches, repairs, and seams must have the same physical properties as the parent material.

(b) Site considerations and preparation.

(A) The supporting surface slopes and foundation to accept the liner must be stable and structurally sound with appropriate compaction. Particular attention must be paid to the potential of sink hole development and differential settlement.

(B) Soil stabilizers such as cementations or chemical binding agents may not adversely affect the membrane; cementations and chemical binding agents may be potentially abrasive agents.

(c) Only fully buried membrane liner installation may be considered to avoid weathering.

(d) Unreinforced liners have high elongation and can conform to irregular surfaces and follow settlements within limits. Unreasonable strain reduces effective thickness and may reduce life expectancy by lessening the chemical resistance of the thinner (stretched) material. Every effort must be made to minimize the strain (or elongation) anywhere in the flexible membrane liner.

(e) Construction and installation.

(A) Surface condition.

(i) Preparation of earth subgrade. The prepared subgrade must be of soil types no larger than Unified Soil Classification System (USCS sand (SP) to a minimum of 4 inches below the surface and free from loose earth, rock, fractured stone, debris, cobbles, rubbish and roots. The surface of the completed subgrade must be properly compacted, smooth, uniform, and free from sudden changes in grade. Importing suitable soil may be required.

(ii) Maintenance of subgrade. The earth subgrade must be maintained in a smooth, uniform, and compacted condition during installation of the lining.

(B) Climatic conditions.

(i) Temperature. Placing liner outside the desirable temperature range must be avoided. The desirable temperature range for membrane installation is 42° F. to 78° F. Lower or higher temperatures may have an adverse effect on transportation, storage, field handling, and placement, seaming, and backfilling; and attaching boots and patches may be difficult.

(ii) Wind. Placing the liner in high wind must be avoided. Wind may have an adverse effect on liner installation such as interfering with liner placement. Mechanical damage may result. Cleanliness of areas for boot connection and patching may not be possible. Alignment of seams and cleanliness may not be possible.

(iii) Precipitation. Seaming, patching, and attaching "boots" must be done under dry conditions. When field seaming is adversely affected by moisture, portable protective structures and other methods must be used to maintain a dry sealing surface. Proper surface preparation for bonding boots and patches may not be possible.

(C) Structures. Where penetrations are necessary, liners must be attached to pipes with a mechanical type seal supplemented by a chemically compatible caulking or adhesives to effect a liquid-tight seal. Maximum compaction must be provided in the area adjacent to pipes to compensate for any settlement.

(D) Liner Placement.

(i) Size. The final cut size of the liner must be carefully determined and ordered to generously fit the container geometry without field seaming or excess straining of the liner material.

(ii) Transportation, handling, and storage. Transportation, handling, and storage procedures must be planned to prevent material damage. Material must be stored in a secured area and protected from adverse weather.

(iii) Site inspection. A site inspection must be carried out by the agent and the installer before liner installation to verify surface conditions and other conditions important to installation.

(iv) Deployment. Panels must be positioned to minimize handling. Seaming should not be necessary. Bridging or stressed conditions must be avoided with proper slack allowances for shrinkage. The liner must be secured to prevent movement and promptly backfilled.

(v) Anchoring trenches. The liner edges must be secured frequently in a backfilled trench.

(vi) Field seaming. Field seaming, if absolutely necessary, must be attempted only when weather conditions are favorable. The contact surfaces of the materials must be clean of dirt, dust, moisture, or other foreign materials. The contact surfaces must be aligned with sufficient overlap and bonded in accordance with the suppliers recommended procedures. Wrinkles must be smoothed out and seams must be inspected by nondestructive testing techniques to verify their integrity. As seaming occurs during installation, the field seams must be inspected continuously, and any faulty area repaired immediately.

(vii) Field repairs. Traffic on the lined area must be minimized. Any necessary repairs to the liner must be patched using the same lining material and following the recommended procedure of the supplier.

(viii) Final inspection and acceptance. Completed liner installations must be visually checked for punctures, rips, tears, and seam discontinuities before placement of any backfill. At this time the installer must also manually check all factory and field seams

with an appropriate tool. In lieu of or in addition to manual checking seams, either of the following tests may be performed:

(I) Wet Test. The lined basin must be flooded with water to the 1-foot level after inlets and outlets have been plugged. There may not be any loss of water in a 24 hour test period.

(II) Air Lance Test. All bonded seams must be checked using a minimum 50 PSI (gauge) air supply directed through a 3/16 inch (typical) nozzle held not more than 2 inches from the seam edge and directed at the seam edge. Riffles indicate unbonded areas within the seam or other undesirable seam construction.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & ~~454.780~~ 454.607
Hist.: DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

Draft Rules – Edits Included

DIVISION 71
ONSITE WASTEWATER TREATMENT SYSTEMS

340-071-0100
Definitions

As used in OAR 340, divisions 71 and 73, unless otherwise specified:

(1) "Absorption Area" means the entire area used for underground dispersion of the liquid portion of sewage including the area designated for a future replacement system. It may consist of a seepage pit, absorption field, or combination of the two. It may also consist of a cesspool, seepage bed, bottomless sand filter, or evapotranspiration-absorption system.

(2) "Absorption Facility" means a system of open-jointed or perforated piping, alternative distribution units, or other seepage systems for receiving the flow from septic tanks or other treatment facilities that are designed to distribute effluent for oxidation and absorption by the soil within the zone of aeration.

(3) "Absorption Field" means a system of absorption trenches, a seepage trench, or a system of seepage trenches.

(4) "Absorption Trench" means a ditch or a trench installed into soil, permeable saprolite, or diggable bedrock, with vertical sides and a substantially flat bottom.

(5) “Accessory dwelling unit”, ADU, means an interior, attached or detached residential structure that is used in connection with or that is accessory to a single-family dwelling, and is located on the same lot or parcel as the single-family dwelling. It contains provisions for cooking, eating, sleeping and sanitation, as defined by state or local building code, and does not exceed two bedrooms and size limitations established by state or local land use regulations.

(6) "Active Sand Dune" means wind-drifted ridges and intervening valleys, pockets, and swales of sand adjacent to the beach. The sand is grayish-brown with little or no horizon, color, or textural difference. Active dunes are either bare of vegetation or lack sufficient vegetation to prevent blowing of sand.

(7) "Aerobic Sewage Treatment Facility" means a sewage treatment plant that incorporates a means of introducing air and oxygen into the sewage to provide aerobic biochemical stabilization during a detention period. Aerobic sewage treatment facilities may include anaerobic processes as part of the treatment system.

(8) "Aerobic System" means an alternative system that incorporates a septic tank or other treatment facility, an aerobic sewage treatment facility, and an absorption facility to provide treatment before dispersal.

(9) "Agent" means the director or person authorized to act on the Director’s behalf, frequently referring to DEQ or contract county staff performing onsite permitting activities.

(10) "Alteration" means expansion or change in location of an existing system or any part of it. Major alteration is the expansion or change in location of the soil absorption facility, treatment unit, or any part of it. Minor alteration is the replacement or relocation of a septic tank or other components of the system other than the soil absorption facility, or a change in distribution technique or method.

(11) "Alternative System" means any onsite wastewater treatment system DEQ or the Commission approves for use in lieu of the standard subsurface system.

(12) "Alternative Treatment Technologies" means an alternative system that incorporates aerobic and other treatment technologies or units not specifically described elsewhere in this division.

(13) "Approved Material" means construction items that DEQ approved for use.

(14) "Approved Criteria" means methods of design or construction that DEQ approved for use.

(15) "ASTM" means American Society of Testing Materials.

(16) "Authorization Notice" means a written document issued by an agent establishing that an existing onsite wastewater treatment system appears adequate for its intended use.

(17) "Authorized Representative" means a person with written authorization to act as another person's delegate.

(18) "Bedroom" means any room within a dwelling accepted as a bedroom by state or local building departments.

(19) "Biochemical Oxygen Demand" (BOD5) means the quantity of oxygen used in the biochemical oxidation of organic matter in five days at 20 degrees centigrade under specified conditions and reported as milligrams per liter (mg/L).

(20) "Black Waste" means human body wastes including feces, urine, other substances of body origin, and toilet paper.

(21) "Capping Fill System" means an alternative system that incorporates an absorption trench with an effective sidewall installed a minimum of 12 inches into the natural soil below a soil cap of specified depth and texture.

(22) "Carbonaceous Biochemical Oxygen Demand" (CBOD5) means BOD minus the nitrogenous oxygen demand, typically measured in mg/L.

(23) "Cesspool" means a lined pit that receives raw sewage, allows separation of solids and liquids, retains the solids, and allows liquids to seep into the surrounding soil through perforations in the lining.

(24) "Chemical Recirculating Toilet Facility" means a toilet facility in which black wastes are deposited and carried from a bowl by a combination of chemically treated and filtered liquid waste and water.

(25) "Chemical Toilet Facility" means a nonflushing, nonrecirculating toilet facility in which black wastes are deposited directly into a chamber containing a solution of water and chemical.

(26) "Clayey Soil" means mineral soil with over 40 percent clay that shrinks and develops wide cracks when dry and swells and shears when wet, forming slickensides and wedge-shaped structure. Clayey soil is very hard or extremely hard when dry, very firm when moist, and very sticky and very plastic when wet.

(27) "Claypan" means a dense, compact clay layer in the subsoil. It has a much lower permeability than the overlying soil horizon from which it is separated by an abrupt boundary. Claypans are hard when dry and very sticky and very plastic when wet and impede movement of water, air, and growth of plant roots.

(28) "Combustion Toilet Facility" means a toilet facility wherein black wastes are deposited directly into a combination chamber for incineration.

(29) "Commercial Facility" means any structure or building or portion of one other than a single-family dwelling or single-family dwelling with an accessory dwelling unit.

(30) "Commission" means the Environmental Quality Commission.

(31) "Community System" means an onsite system that serves more than one lot or parcel, more than one condominium unit, or more than one unit of a planned unit development.

(32) "Completed Application" means an application form that is completed in full, is signed by the owner or owner's authorized representative or, for WPCF permits, by the applicant or applicant's authorized representative, and is accompanied by all required exhibits and fees.

(33) "Conditions Associated with Saturation" means soil morphological properties that may indicate the presence of a water table that persists long enough to impair system function and create a potential health hazard. These conditions include depleted matrix chromas caused by saturation and not a relict or parent material feature, and the following:

(a) High chroma matrix with iron depletions. Soil horizons whose matrix chroma is 3 or more in which there are some visible iron depletions having a value 4 or more and a chroma of 2 or less. Iron-manganese concentrations as soft masses or pore linings may be present but are not diagnostic of conditions associated with saturation.

(b) Depleted matrix with iron concentrations. Soil horizons whose matrix color has a value of 4 or more and a chroma of 2 or less as a result of removal of iron and manganese oxides. Some visible zones of iron concentration are present as soft masses or pore linings.

(c) Depleted matrix without iron concentrations. Soil horizons whose color is more or less uniform with a value of 4 or more and a chroma of 2 or less as a result of removing iron and manganese oxides. These horizons lack visible iron concentrations as soft masses or pore linings.

(d) Reduced matrix. Soil horizons whose color has a value of 4 or more and a chroma of 2 or less with hues that are often, but not exclusively, on the grey pages of the Munsell Color Book. On exposure to air, yellow colors form within 24 hours as some of the ferrous iron oxidizes.

(e) Dark colored soils with organic matter accumulation. Mineral soils with a high amount of decomposed organic matter in the saturated zone, a value of 3 or less, and a chroma of 1 or less. Included in this category are organic soils with a minor amount of mineral matter.

(f) Soils with a dark surface. The upper surface layer has a dark color with a value of 3 or less and a chroma of 1 or less immediately underlain by a layer with a chroma of 2 or less.

(g) Iron stripping and staining in sandy soils. Soil horizons in which iron/manganese oxides or organic matter or both have been stripped from the matrix, exposing the primary base color of soil materials. The stripped areas and trans-located oxides or organic matter form a diffuse splotchy pattern of two or more colors.

(h) Salt-affected soils. Soils in arid and semi-arid areas that have visible accumulations of soluble salts at or near the ground surface.

(i) Dark colored shrink-swell soils. Vertisols whose colors have values of 3 or less and chromas of 1 or less. Iron concentrations may be present but are not diagnostic of conditions associated with saturation.

(j) Other soils that lack the diagnostic value and chroma as described in this section but remain saturated long enough to impair system function and have a high water table under OAR 340-071-0130(22).

(34) "Confining Layer" means a layer associated with an aquifer that, because of low permeability, does not allow water to move through it perceptibly under head differences occurring in the groundwater system.

(35) "Construction" includes installing a new system, or a part of one, or altering, repairing, or extending an existing system. The grading, excavating, and earth-moving work connected with installing, altering, or repairing a system or a part of one is considered system construction.

(36) "Contract County" means a local unit of government that has entered into an agreement with DEQ under OAR 340-071-0120 to perform duties of DEQ under this division.

(37) "Conventional Sand Filter" means a filter with 2 feet or more of sand filter media designed to chemically and biologically process septic tank or other treatment unit effluent from a pressure distribution system operated on an intermittent basis.

(38) "Curtain Drain" means a groundwater interceptor that is designed to divert groundwater from an absorption facility. The drain creates a "curtain" to block water from reaching the absorption facility.

(39) "Cut-manmade" means a land surface resulting from mechanical land shaping operations where the modified slope is greater than 50 percent and the depth of cut exceeds 30 inches.

(40) "DEQ" means the Department of Environmental Quality.

(41) "Design Capacity" means the design flow a system is designed to treat and disperse.

(42) "Design Criteria" means the criteria used in designing onsite wastewater treatment systems including but not limited to dimensions, geometry, type of materials, size of drain media or filter media, absorption field sizing, depth, grade or slope, hydraulic loading rate, or any other factor relevant to the successful operation of the system. It does not include absorption area siting criteria.

(43) “Design flow” means the maximum daily quantity of sewage for which a system is sized and designed. The design flow allows for a safety margin and reserve capacity for the system during heavy use.

(44) "Designer" means a person who plans onsite wastewater treatment and dispersal technology for an onsite system.

(45) "Director" means the Director of the Department of Environmental Quality.

(46) "Disposal Trench" means "absorption trench."

(47) "Distribution Box" means a watertight structure that receives septic tank or other treatment facility effluent and distributes it concurrently into 2 or more header pipes leading to the absorption area.

(48) "Distribution Pipe" means an open-jointed or perforated pipe used in the dispersion of septic tank or other treatment facility effluent into absorption trenches, seepage trenches, or seepage beds.

(49) "Distribution Unit" means a distribution box, dosing tank, diversion valve or box, header pipe, or other means of transmitting septic tank or other treatment unit effluent from the effluent sewer to the distribution pipes.

(50) "Diversion Valve" means a watertight structure that receives septic tank or other treatment facility effluent through one inlet and distributes it to 2 outlets, only one of which is used at a time.

(51) "Dosing Tank" means a watertight receptacle placed after a septic tank or other treatment facility equipped with a pump.

(52) "Dosing Septic Tank" means a unitized device performing functions of both a septic tank and a dosing tank.

(53) "Drainfield" means an "absorption field."

(54) "Drain Media" means clean washed gravel or clean, crushed rock with a minimum size of 3/4 inch and a maximum size of 2-1/2 inches used in the distribution of effluent. The material must be durable and inert so that it will maintain its integrity, will not collapse or disintegrate with time, and will not be detrimental to the performance of the system. Drain media also includes any product or material approved by DEQ for distribution of effluent in an absorption field.

(55) "Dwelling" means any structure or building or portion thereof that is used, intended, or designed to be occupied for human living purposes including but not limited to houses, houseboats, boathouses, mobile homes, recreational cabins, travel trailers, hotels, motels, and apartments.

(56) "Effective Seepage Area" means the sidewall area within an absorption trench or a seepage trench from the bottom of the trench to a level 2 inches above the distribution pipes, the sidewall area of any cesspool, seepage pit, unsealed earth pit privy, graywater waste absorption sump seepage chamber, or trench with drain media substitute, or the bottom area of a pressurized soil absorption facility installed in soil.

(57) "Effective Soil Depth" means the depth of soil material above a layer that impedes movement of water and air and growth of plant roots. Layers that differ from overlying soil material enough to limit effective soil depth are hardpans, claypans, fragipans, compacted soil, bedrock, saprolite, and clayey soil.

(58) "Effluent Filter" means an effluent treatment device installed on the outlet of a septic tank or outside the septic tank in a separate enclosure and designed to prevent the passage of suspended matter larger than 1/8 inch in size.

(59) "Effluent Lift Pump" means a pump used to lift septic tank or other treatment facility effluent to a higher elevation.

(60) "Effluent Sewer" means that part of the system of drainage piping that conveys partially treated sewage from a septic tank or other treatment facility into a distribution unit or an absorption facility.

(61) "Emergency Repair" means immediate action to repair a failing system when sewage is backing up into a dwelling or building or to repair a broken pressure sewer pipe. It does not include the construction of new or additional absorption facilities but does include using the septic tank as a temporary holding tank until new or additional absorption facilities can be permitted and constructed.

(62) "Equal Distribution" means the distribution of effluent to a set of absorption trenches in which each trench receives effluent in equivalent or proportional volumes.

(63) "Escarpment" means any naturally occurring slope greater than 50 percent that extends vertically 6 feet or more from toe to top, is characterized by a long cliff or steep slope that separates two or more comparatively level or gently sloping surfaces, and may intercept one or more layers that limit effective soil depth.

(64) "Existing Onsite Wastewater Treatment System" means any installed onsite wastewater treatment system constructed in conformance with the rules, laws, and local ordinances in effect at the time of construction.

(65) "Existing System" means "existing onsite wastewater treatment system."

(66) "Failing System" means any system that discharges untreated or incompletely treated sewage or septic tank effluent directly or indirectly onto the ground surface or into public waters or that creates a public health hazard.

(67) "Family Member" means any one of two or more persons related by blood or by law.

(68) "Fecal Coliform" means bacteria common to the digestive systems of warm-blooded animals and cultured in standard tests. The term is typically used to indicate fecal pollution and the possible presence of enteric pathogens and is measured as colonies/100ml.

(69) "Filter Fabric" means a woven or spun-bonded sheet material used to impede or prevent the movement of sand, silt, and clay into drain media.

(70) "Fragipan" means a loamy subsurface horizon with high bulk density relative to the horizon above, seemingly cemented when dry, and weakly to moderately brittle when moist. Fragipans are mottled and low in organic matter, and they impede movement of water and air and growth of plant roots.

(71) "Governmental Unit" means the state or any county, municipality, or political subdivision or any agency thereof.

(72) "Grade" means the rate of fall or drop in inches per foot or the percentage of fall of a pipe.

(73) "Graywater" means household sewage other than "black wastes," such as bath water, kitchen waste water, and laundry wastes.

(74) "Graywater Waste Sump" means a receptacle or series of receptacles designed to receive hand-carried graywater for dispersal into the soil.

(75)"Grease and Oils" means a component of sewage typically originating from food stuffs, consisting of compounds of alcohol or glycerol with fatty acids.

(76) "Groundwater Interceptor" means any natural or artificial groundwater or surface water drainage system, including drain tile, curtain drain, foundation drain, cut banks, and ditches, that intercept and divert groundwater or surface water from the area of the absorption facility.

(77) "Hardpan" means a hardened layer in soil caused by cementation of soil particles with silica, calcium carbonate, magnesium carbonate, iron, or organic matter. The hardness does not change appreciably with changes in moisture content. Hardpans impede movement of water and air and growth of plant roots.

(78) "Header Pipe" means a tight-jointed part of the sewage drainage conduit that receives septic tank effluent from the distribution box, drop box, or effluent sewer and conveys it to the absorption area.

(79) "Headwall" means a steep slope at the head or upper end of a land slump block or unstable landform.

(80) "Holding Tank" means a watertight receptacle designed to receive and store sewage to facilitate treatment at another location.

(81) "Holding Tank System" means an alternative system consisting of the combination of a holding tank, service riser, and level indicator (alarm), designed to receive and store sewage for intermittent removal for treatment at another location.

(82) "Hydrosplitter" or "hydrasplitter" means a hydraulic device to proportion flow under pressure by the use of one or more orifices.

(83) "Incinerator Toilet Facility" means "combustion toilet facility."

(84) "Individual System" means a system that is not a community system.

(85) "Individual Water Supply" means a source of water and a distribution system that provides water for drinking, culinary, or household uses and is not a public water supply system.

(86) "Industrial Waste" means any liquid, gaseous, radioactive, or solid waste or a combination thereof resulting from any process of industry, manufacturing, trade, or business or from developing or recovering any natural resources.

(87) "Intermittent Sand Filter" means a conventional sand filter.

(88) "Intermittent Stream" means any public surface water or groundwater interceptor that continuously flows water for a period greater than two months in any one year but not continuously for that year.

(89) "Invert" is the lowest portion of the internal cross section of a pipe or fitting.

(90) "Large System" means any onsite system with a design flow greater than 2,500 gallons.

(91) "Lateral Pipe" means "distribution pipe."

(92) "Maintenance" means taking the actions necessary to keep onsite system components properly functioning as designed. Maintenance is further defined as:

(a) Major Maintenance means, repairing or replacing a broken distribution or drop box or a broken or plugged effluent sewer pipe where:

(A) The box or pipe meets the requirements in this division and construction standards in division 073; and

(B) A certified maintenance provider with a sewage disposal service bond or certified licensed installer performs the work.

(b) Minor Maintenance includes, but is not limited to, repairing or replacing of a tank riser or lid, or pump, screen, filter, or other component internal to the tank that:

(A) Is the same make and model; or

(B) Meets the requirements in this division.

(93) "Maintenance provider" means a person who performs maintenance of onsite systems and:

(a) Possesses adequate skills and knowledge regarding onsite wastewater treatment, absorption facilities, and system functions to competently inspect and maintain onsite systems, and

(b) Is certified under OAR 340-071-0650.

(94) “Municipality” means a city, county, county service district, special service district, sanitary authority or sanitary district.

(95) "Mechanical Sewage Treatment Facility" or "Mechanical Oxidation Sewage Treatment Facility" means an aerobic sewage treatment facility.

(96) "Nonwater-Carried Waste Facility" means any toilet facility that has no direct water connection, including but not limited to pit privies, vault privies, and portable toilets.

(97) "Occupant" means any person living or sleeping in a dwelling.

(98) "Onsite Sewage Disposal System" means "onsite wastewater treatment system."

(99) "Onsite Wastewater Treatment System" means any existing or proposed subsurface onsite wastewater treatment and dispersal system including but not limited to a standard subsurface, alternative, experimental, or nonwater-carried sewage system. It does not include systems that are designed to treat and dispose of industrial waste as defined in OAR chapter 340, division 045.

(100) "Operating Permit" means a WPCF permit issued under these rules.

(101) "Owner" means any person who alone, jointly, or severally:

(k) Has legal title to any single lot, dwelling, dwelling unit, or commercial facility;

(l) Has care, charge, or control of any real property as agent, executor, administrator, trustee, commercial lessee, or guardian of the estate of the holder of legal title; or

(m) Is the contract purchaser of real property.

(102) "Peer Review" means a review by at least three members of a scientific community recognized as experts in the field of study and well-rehearsed with scientific principles and experimentation.

(103) "Permanent Groundwater Table" means the upper surface of a saturated zone that exists year-round. The thickness of the saturated zone and resulting elevation of the permanent groundwater table may fluctuate as much as 20 feet or more annually, but the saturated zone and associated permanent groundwater table is present at some depth beneath land surface throughout the year.

(104) "Permit" means the written document, issued and signed by an agent, that authorizes a permittee to install a system or any part of one and, in some cases, to operate and maintain the system under the permit.

(105) "Permit Action" means an agent’s issuing, modifying, renewing, reinstating, or revoking a permit.

(106) "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any of its agencies, and the federal government and any of its agencies.

(107) "Pollution" or "Water Pollution" means any alteration of the physical, chemical, or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt, or odor of the waters, or any discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state that, alone, or in connection with any other substance, threatens to create a public nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses or to livestock, wildlife, fish, or other aquatic life or their habitat.

(108) "Portable Toilet" means any self-contained chemical toilet facility that is housed within a portable toilet shelter and includes but is not limited to construction-type chemical toilets.

(109) "Portable Toilet Shelter" means any readily relocatable structure built to house a toilet facility.

(110) "Pressure Distribution Lateral" means piping and fittings in pressure distribution systems that distribute septic tank or other treatment unit effluent to drain media through small diameter orifices.

(111) "Pressure Distribution Manifold" means piping and fittings in a pressure distribution system that supply effluent from pressure transport piping to pressure distribution laterals.

(112) "Pressure Distribution System" means any system designed to uniformly distribute septic tank or other treatment unit effluent under pressure in an absorption facility or treatment unit.

(113) "Pressure Transport Piping" means piping that conveys sewage effluent from a septic tank or other treatment or distribution unit typically by means of a pump ~~or siphon~~.

(114) "Pretreatment" means the wastewater treatment that takes place prior to discharging to any component of an onsite wastewater treatment system, including but not limited to pH adjustment, oil and grease removal, BOD5 and TSS reduction, screening, and detoxification.

(115) "Prior Approval" means a written approval for an onsite wastewater treatment system for a specific lot issued before January 1, 1974.

(116) "Prior Construction Permit" means a subsurface wastewater treatment system construction- installation permit issued before January 1, 1974, by a county that had an ordinance requiring construction-installation permits for subsurface wastewater treatment systems.

(117) "Privy" means a structure used for disposal of human waste without the aid of water. It consists of a shelter built above a pit or vault in the ground into which human waste falls.

(118) "Projected Daily Sewage Flow" means the anticipated peak daily quantity of sewage an establishment produces.

(119) "Public Health Hazard" means the presence of sufficient types or amounts of biological, chemical, physical, or radiological agents relating to water or sewage that cause, or threaten to cause, human illness, disorders, or disability. These include but are not limited to pathogenic viruses, bacteria, parasites, toxic chemicals, and radioactive isotopes.

(120) "Public Waters" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private, except private waters that do not combine or effect a junction with natural surface or underground waters, that are wholly or partially within or bordering the state or within its jurisdiction.

(121) "Recirculating Gravel Filter (RGF)" means a gravel filter wastewater treatment system in which a portion of the filtered effluent is mixed with septic tank effluent in a recirculation/dilution tank and redistributed to the filter.

(122) "Recirculating Gravel Filter System" means a recirculating gravel filter and an absorption facility used to treat wastewater.

(123) "Redundant Absorption Field System" means a system in which two complete absorption fields are installed, the absorption trenches of each system alternate with each other, and only one system operates at a given time.

(124) "Repair" means installing all portions of a system necessary to eliminate a public health hazard or pollution of public waters a failing system creates.

(a) Major repair is replacing the soil absorption facility, treatment unit, or any part of it.

(b) Minor repair is replacing a septic tank, broken pipe, distribution unit, or any part of the onsite system external to the septic tank or treatment facility except the soil absorption system. Unless classified as a major repair or major maintenance, any replacement of a part of a system with a part that does not meet the original design specifications is a minor repair.

(125) "Residential Strength Wastewater" means septic tank effluent that does not typically exceed five-day biochemical oxygen demand (BOD5) of 300 mg/L; total suspended solids (TSS) of 150 mg/L; total Kjeldahl nitrogen (TKN) of 150 mg/L; oil & grease of 25 mg/L; or concentrations or quantities of other contaminants normally found in residential sewage.

(126) "Sand Filter Media" means a medium sand or other approved material used in a conventional sand filter. The media must be durable and inert so that it will maintain its integrity, will not collapse or disintegrate with time, and will not be detrimental to the system’s performance. The particle size distribution of the media must be determined through a sieve analysis conducted under ASTM C-117 and ASTM C-136. The media must comply with the following particle size distribution: 100 percent passing the 3/8 inch sieve, 95 percent to 100 percent passing the No. 4 sieve, 80 percent to 100 percent passing the No. 8 sieve, 45 percent to 85 percent passing the No. 16 sieve, 15 percent to 60 percent passing the No. 30 sieve, 3 percent to 15 percent passing the No. 50 sieve, and 4 percent or less passing the No. 100 sieve.

(127) "Sand Filter Surface Area" means the area of the level plane section in the medium sand horizon of a conventional sand filter located 2 feet below the bottom of the drain media containing the pressurized distribution piping.

(128) "Sand Filter System" means an alternative system that combines a septic tank or other treatment unit; a dosing system with effluent pump and controls, piping and fittings; a sand filter; and an absorption facility to treat wastewater.

(129) "Sanitary Drainage System" means that part of a system's drainage piping that conveys untreated sewage from a building or structure to a septic tank or other treatment facility, to a service lateral at a curb or in a street or alley, or to another disposal terminal holding human or domestic sewage. The sanitary drainage system consists of a building drain or building drain and building sewer.

(130) "Saprolite" means weathered material underlying the soil that grades from soft thoroughly decomposed rock to rock that has been weathered sufficiently so that it can be broken in the hands or cut with a knife. It has rock structure instead of soil structure and does not include hard bedrock or hard fractured bedrock.

(131) "Saturated Zone" means a three-dimensional layer, lens, or other section of the subsurface in which all open spaces including joints, fractures, interstitial voids, and pores are filled with groundwater. The thickness and extent of a saturated zone may vary seasonally or periodically in response to changes in the rate or amount of groundwater recharge or discharge.

(132) "Scum" means a mass of sewage solids floating at the surface of sewage that is buoyed up by entrained gas, grease, or other substances.

(133) "Seepage Area" means "effective seepage area."

(134) "Seepage Bed" means an absorption system having absorption trenches wider than 3 feet.

(135) "Seepage Pit" means a cesspool that has a treatment facility such as a septic tank ahead of it.

(136) "Seepage Trench System" means a system with absorption trenches with more than 6 inches of drain media below the distribution pipe.

(137) "Self-Contained Nonwater-Carried Waste Containment Facility" means a system in which all waste is contained in a watertight receptacle, including but not limited to vault privies, chemical toilets, combustion toilets, recirculating toilets, and portable toilets.

(138)"Septage" means the domestic liquid and solid sewage pumped from septic tanks, cesspools, holding tanks, vault toilets, chemical toilets or other similar domestic sewage treatment components or systems and other sewage sludge not derived at sewage treatment plants.

(139) "Septic Tank" means a watertight receptacle that receives sewage from a sanitary drainage system and is designed to separate solids from liquids, digest organic matter during a period of detention, and allow the liquids to discharge to a second treatment unit or to a soil absorption facility.

(140) "Septic Tank Effluent" means partially treated sewage that is discharged from a septic tank.

(141) "Serial Distribution" means the distribution of effluent to a set of absorption trenches constructed at different elevations in which one trench at a time receives effluent in consecutive order beginning with the uppermost trench by means of a drop box, a serial overflow, or another approved distribution unit. The effluent in an individual trench must reach a level of 2 inches above the distribution pipe before effluent is distributed to the next lower trench.

(142) "Sewage" means water-carried human and animal wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with any groundwater infiltration, surface waters, or industrial waste that may be present.

(143) "Sewage Disposal Service" means:

(a) Constructing onsite wastewater treatment systems, including placing portable toilets, or any part of one;

(b) Pumping out or cleaning onsite wastewater treatment systems, including portable toilets, or any part of one;

(c) Disposing of material derived from pumping out or cleaning onsite wastewater treatment systems. including portable toilets; or

(d) Grading, excavating, and earth-moving work connected with the operations described in paragraph (a) of this section.

(144) "Sewage Stabilization Pond" means a pond designed to receive the raw sewage flow from a dwelling or other building and retain that flow for treatment without discharge.

(145) "Site Evaluation Report" means a report on the evaluation of a site to determine its suitability for an onsite system prepared under OAR 340-071-0150.

(146) "Slope" means the rate of fall or drop in feet per 100 feet of the ground surface. It is expressed as percent of grade.

(147) "Soil Permeability" refers to the ability of a soil to transmit water or air.

(148) "Soil Separate" means the size of soil particles described in Table 7.

(149) "Soil Texture" means the amount of each soil separate in a soil mixture. Field methods for judging the texture of a soil consist of forming a cast of soil, both dry and moist, in the hand and pressing a ball of moist soil between thumb and finger.

(a) The major textural classifications are defined as follows and shown in Table 6:

(A) Sand: Individual grains can be seen and felt readily. Squeezed in the hand when dry, this soil will fall apart when the pressure is released. Squeezed when moist, it will form a cast that will hold its shape when the pressure is released but will crumble when touched.

(B) Loamy Sand: Consists primarily of sand, but has enough silt and clay to make it somewhat cohesive. The individual sand grains can readily be seen and felt. Squeezed when dry, the soil will form a cast that will readily fall apart, but if squeezed when moist, a cast can be formed that will withstand careful handling without breaking.

(C) Sandy Loam: Consists largely of sand, but has enough silt and clay present to give it a small amount of stability. Individual sand grains can be readily seen and felt. Squeezed in the hand when dry, this soil will readily fall apart when the pressure is released. Squeezed when moist, it forms a cast that will not only hold its shape when the pressure is released but will withstand careful handling without breaking. The stability of the moist cast differentiates this soil from sand.

(D) Loam: Consists of an even mixture of the different sizes of sand and of silt and clay. It is easily crumbled when dry and has a slightly gritty, yet fairly smooth feel. It is slightly plastic. Squeezed in the hand when dry, it will form a cast that will withstand careful handling. The cast formed of moist soil can be handled freely without breaking.

(E) Silt Loam: Consists of a moderate amount of fine grades of sand, a small amount of clay, and a large quantity of silt particles. Lumps in a dry, undisturbed state appear quite cloddy, but they can be pulverized readily; the soil then feels soft and floury. When wet, silt loam runs together in puddles. Either dry or moist, casts can be handled freely without breaking. When a ball of moist soil is passing between thumb and finger, it will not press out into a smooth, unbroken ribbon but will have a broken appearance.

(F) Clay Loam: Consists of an even mixture of sand, silt, and clay that breaks into clods or lumps when dry. When a ball of moist soil is pressed between the thumb and finger, it will form a thin ribbon that will readily break, barely sustaining its own weight. The moist soil is plastic and will form a cast that will withstand considerable handling.

(G) Silty Clay Loam: Consists of a moderate amount of clay, a large amount of silt, and a small amount of sand. It breaks into moderately hard clods or lumpswhen dry. When moist, a thin ribbon or 1/8-inch wire can be formed between thumb and finger that will sustain its weight and will withstand gentle movement.

(H) Silty Clay: Consists of even amounts of silt and clay and very small amounts of sand. It breaks into hard clods or lumps when dry. When moist, a thin ribbon or 1/8 inch or smaller wire formed between thumb and finger will withstand considerable movement and deformation.

(I) Clay: Consists of large amounts of clay and moderate to small amounts of sand and silt. It breaks into very hard clods or lumps when dry. When moist, a thin, long ribbon or 1/16-inch wire can be molded with ease. Fingerprints will show on the soil, and a dull to bright polish is made on the soil by a shovel.

(b) Soil textural characteristics described in the United States Department of Agriculture Textural Classification Chart are incorporated here by reference. This textural classification chart is based on the Standard Pipette Analysis as defined in the United States Department of Agriculture, Soil Conservation Service Soil Survey Investigations Report No. 1 (See Table 6). [Table not included. See ED. NOTE.]

(150) "Soil with Rapid or Very Rapid Permeability" means:

(a) Soil that contains 35 percent or more of coarse fragments 2 millimeters in diameter or larger by volume with interstitial soil of sandy loam texture or coarser;

(b) Coarse textured soil defined as loamy sand or sand in this rule; or

(c) Stones, cobbles, gravel, and rock fragments with too little soil material to fill interstices larger than 1 millimeter in diameter.

(151) "Split Waste Method" means a process where black waste sewage and graywater from the same dwelling or building are managed by separate systems.

(152) "Stabilized Dune" means a sand dune that is similar to an active dune except that vegetative growth is dense enough to prevent blowing of sand. The surface horizon is either covered by a mat of decomposed and partially decomposed leaves, needles, roots, twigs, moss, or other vegetative material or contains roots to a depth of at least 6 inches and has a color value of 3 or less.

(153) "Standard Subsurface System" means an onsite wastewater treatment system consisting of a septic tank, distribution unit, and absorption facility constructed under OAR 340-071-0220.

(154) "Steep Slope System" means a seepage trench system installed on slopes greater than 30 percent and less than or equal to 45 percent.

(155) "Subsurface Absorption System" means the combination of a septic tank or other treatment unit and an effluent sewer and absorption facility.

(156) "Subsurface Sewage Disposal" means "subsurface wastewater treatment."

(157) "Subsurface Disposal System" means "subsurface absorption system."

(158) "Subsurface Wastewater Treatment" means dispersing wastewater from a septic tank or other treatment unit into the zone of aeration to be further treated through physical, chemical, or biological processes.

(159) "System" or "onsite system" means "onsite wastewater treatment system."

(160) "Temporary Groundwater Table" means the upper surface of a saturated zone that exists only on a seasonal or periodic basis. Like a permanent groundwater table, the elevation of a temporary groundwater table may fluctuate, but a temporary groundwater table and associated saturated zone will dry up for a period of time each year.

(161) "Test Pit" means an open pit dug to sufficient size and depth to permit thoroughly examining the soil to evaluate its suitability for subsurface wastewater treatment.

(162) "Third-Party" means a consulting firm, research institute, academic institute, or other similar entity with no vested interest in the outcome of test results of a material, design, or technology under evaluation.

(163) "Tile Dewatering System" means an alternative system in which the absorption facility is encompassed with field collection drainage tile to reduce and control a groundwater table and create a zone of aeration below the bottom of the absorption facility.

(164) "Time Dosing" means a method of pumping effluent where there is adequate effluent storage to manage surge flows within a time period, either daily or weekly, and meter the flow over the course of more than one day. This method requires adequate storage in a dosing tank or similar container, a control panel with a timer, and floats to activate timer and disable pump in periods of low flows.

(165) "Toilet Facility" means a fixture housed within a toilet room or shelter to receive black waste.

(166) "Total Kjeldahl Nitrogen" (TKN) means the combination of ammonia and organic nitrogen, excluding nitrate and nitrite nitrogen.

(167) "Total Nitrogen" (TN) means the sum of all nitrogen forms.

(168) "Total Suspended Solids" (TSS) means solids in wastewater that can be removed readily by standard filtering procedures in a laboratory and reported as milligrams per liter (mg/L).

(169) "Treatment" means the alteration of the quality of wastewaters by physical, chemical, or biological means or combination thereof to reduce potential degradation of water quality or the environment and risk to public health.

(170) "Treatment Standard 1" means a 30-day average of less than 20 mg/L of BOD5 and 20 mg/L of TSS. A 30-day average of less than 17 mg/L of CBOD5 is acceptable in lieu of the BOD5 value.

(171) "Treatment Standard 2" means a 30-day average of less than 20 mg/L of BOD5 and 20 mg/L of TSS, a 30-day geometric mean of less than 400 fecal coliform per 100 milliliters, and a 30-day average of 30 mg/L of TN. A 30-day average of less than 17 mg/L of CBOD5 is acceptable in lieu of the BOD5 value.

(172) "Turbidity" means the optical condition of waters caused by suspended or dissolved particles or colloids that scatter and absorb light rays instead of transmitting light in straight lines through the water column. Turbidity may be expressed as nephelometric turbidity units (NTU) measured with a calibrated turbidimeter.

(173) "Underdrain Media" means the material placed under the sand filter media in a sand filter and consists of clean, washed pea gravel with 100 percent passing the 1/2 inch sieve, 18 to 100 percent passing the 1/4 inch sieve, 5 to 75 percent passing the No. 4 sieve, 24 percent or less passing the No. 10 sieve, 2 percent or less passing the No. 16 sieve, and 1 percent or less passing the No. 100 sieve.

(174) "Unstable Landforms" means areas showing evidence of mass downslope movement such as debris flow, landslides, rockfall, and hummock hill slopes with undrained depressions upslope. Examples are landforms exhibiting slip surfaces roughly parallel to the hillside; landslide scars and curving debris ridges; fences, trees, and telephone poles that appear tilted; and tree trunks that bend uniformly as they enter the ground. Active sand dunes are unstable landforms.

(175) "Vertisols" means a mineral soil characterized by a high content of swelling-type clays that in dry seasons cause the soils to develop deep, wide cracks.

(176) "WPCF Permit" means a Water Pollution Control Facilities permit that has been issued under OAR chapter 340, divisions 045 or 071.

(177) "Wastewater" means "sewage."

(178) "Zone of Aeration" means the unsaturated zone that occurs below the ground surface and above the point at which the upper limit of the water table exists.

[ED. NOTE: Tables referenced are not included in rule text. All tables are found in OAR 340- 071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.605 & 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 15-1986, f. & ef. 8-6-86; DEQ 6-1988, f. & cert. ef. 3-17-88; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 15-2000, f. & cert. ef. 10-11-00; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14; DEQ 11-2014, f. & cert. ef. 10-15-14

340-071-0110
Purpose

These rules establish requirements for constructing, altering, repairing, operating, and maintaining onsite wastewater treatment systems. Their purpose is to restore and maintain the quality of public waters and to protect the public health and general welfare of the people of the State of Oregon.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.605 - 454.779
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-050

340-071-0130
General Standards, Prohibitions and Requirements

(1) Protection of public waters from public health hazards. An agent may not authorize installing or using a system that is likely to pollute public waters or create a public health hazard. If, in the judgment of the agent, the minimum standards in this division will not adequately protect public waters or public health on a particular site, the agent must require a system to meet requirements that are protective. This may include but is not limited to increasing setbacks, increasing drainfield sizing, or using an alternative system. The agent must provide the applicant with a written statement of the specific reasons why more stringent requirements are necessary.

(2) Approved treatment and dispersal required. All wastewater must be treated and dispersed in a manner approved under these rules.

(3) Prohibited discharges of wastewater. A person may not discharge untreated or partially treated wastewater or septic tank effluent directly or indirectly onto the ground surface or into public waters. Such discharge constitutes a public health hazard and is prohibited.

(4) Prohibited discharges to systems. A person may not discharge into any system cooling water, air conditioning water, water softener brine, groundwater, oil, hazardous materials, roof drainage, or other aqueous or nonaqueous substances that are detrimental to the system's performance or to groundwater.

(5) Increased flows prohibited. Except where specifically allowed by this division, a person may not connect a dwelling or commercial facility to a system if the total projected daily sewage flow would be greater than that allowed under the original system construction-installation permit.

(6) System capacity. Each system must have adequate capacity to properly treat and disperse the maximum projected daily sewage flow. The projected daily sewage flow must be determined from OAR 340-071-0220 Table 2 or other information the agent determines to be valid.

(7) Material standards. All materials used in onsite systems must comply with standards in this division and OAR chapter 340, division 073.

(8) Encumbrances. Before a permit to install a new system may be issued, the site for the new system must be approved under OAR 340-071-0150 and be free of encumbrances, such as easements or deed restrictions, that could prevent the installation or operation of the system from conforming with the rules of this division.

(9) Plumbing fixtures connected. All plumbing fixtures in dwellings, commercial facilities, and other structures from which sewage is or may be discharged must be connected to and discharge into an approved area-wide sewerage system or an approved onsite system that is not failing.

(10) Future connection to sewerage system. DEQ encourages placing plumbing in buildings to facilitate connection to a sewerage system in areas where a district has been formed to provide sewerage facilities.

(11) Property lines crossed: All or part of an onsite system, including areas for future repair or replacement, may be located on one or more lots or parcels different from the lot or parcel on which the facility the system serves is located. The lots and parcels may be under the same or different ownership:

(a) For each lot or parcel different from and under different ownership than the lot or parcel served, the owner of the lot or parcel served must ensure that a utility easement and covenant against conflicting uses is executed and recorded in such owner's favor, on a form the agent approves, in the county land title records. The easements and covenants must accommodate the parts of the system, including a 10-foot setback surrounding the areas for future repair or replacement, that lie beyond the property line of the facility

served and must allow entry by the grantee, successor, or assigns to install, maintain, and repair the system;

(b) For each lot or parcel different from, but under the same ownership as, the lot or parcel served, the owner of the property must execute and record in the county land title records, on a DEQ-approved form, an easement and a covenant in favor of the State of Oregon:

(A) Allowing the state's officers, agents, employees, and representatives to enter and inspect, including by excavation, that portion of the system, including setbacks, on the servient lot or parcel;

(B) Agreeing not to put that portion of the servient lot or parcel to a conflicting use; and

(C) Agreeing, upon severance of the lots or parcels, to grant or reserve and record a utility easement and covenant against conflicting uses, in a form DEQ approves, in favor of the owner of the lot or parcel served by the system under paragraph (a) of this section.

(12) Initial and replacement absorption area. Except as provided in specific rules, the absorption area, including installed system and replacement area, must not be subject to activity that is likely, in the opinion of the agent, to adversely affect the soil or the functioning of the system. This may include but is not limited to vehicular traffic, covering the area with asphalt or concrete, filling, cutting, or other soil modification.

(13) Construction. An agent may limit the time period during which a system can be constructed to ensure that soil conditions, weather, groundwater, or other conditions do not adversely affect the reliability of the system.

(14) Permit requirements:

(a) A person may not cause or allow constructing, altering, or repairing a system or any part of one without a WPCF permit issued under OAR 340-071-0162 or a construction-installation, alteration, or repair permit under OAR 340-071-0160, 340-071-0210, and 340-071-0215 except for emergency repairs authorized under OAR 340-071-0215(2) and (3);

(b) The following systems must be constructed and operated under a renewable WPCF permit issued pursuant to OAR 340-071-0162:

(A) Any system or combination of systems located on the same property or serving the same facility and having a total design capacity greater than 2,500 gpd. Flows from single-family residences or equivalent flows on separate systems incidental to the purpose of the large system or combination of systems (e.g., caretaker residence for a mobile home park) need not be included;

(B) A system of any size, if the septic tank effluent produced is greater than residential strength wastewater as defined in OAR 340-071-0100 or systems using pretreatment methods other than grease traps and grease interceptor tanks to achieve residential strength wastewater;

(C) Except as provided for in section (15)(d) of this rule, other systems that are not described in this division and do not discharge to surface public waters or the ground surface.

(15) WPCF permits for existing facilities:

(a) The owner of an existing system required to have a WPCF permit under subsection (14)(b) of this rule is not required to obtain a WPCF permit until a system major repair or major alteration of a system, or facility expansion, is necessary;

(b) The permittee of an existing aerobic treatment unit, recirculating gravel filter, commercial sand filter, or alternative treatment technology system constructed or operating under a WPCF permit that is no longer required under section (14) of this rule may request DEQ to terminate the permit:

(A) The permittee must submit, on a DEQ-approved form:

(i) A copy of the service contract required in OAR 340-071-0132; and

(ii) A written statement from a maintenance provider certifying that the system is not failing.

(B) DEQ will send a letter to the permittee to terminate a WPCF permit. The letter will be deemed a Certificate of Satisfactory Completion for the permitted system.

(c) DEQ may terminate WPCF permits for existing holding tanks for which permits are no longer required under section (14) of this rule. DEQ will send a letter to the permittee to terminate the permit. The letter will be deemed a Certificate of Satisfactory Completion for the permitted system;

(d) Permittees of other existing systems or combination of systems constructed or operating under a WPCF permit may request DEQ terminate the permit if all of the following conditions are met:

(A) The system or combination of systems located on the same property or serving the same facility must have a total design capacity of 2,500 gpd or less; and

(B) The system or combination of systems must not produce septic tank effluent greater than residential strength wastewater as defined in OAR 340-071-100; and

(C) The system or combination of systems must have been operating under a WPCF permit before July 1, 2007; and

(D) The absorption facility is described in this division and does not discharge to surface public waters or the ground surface; and

(E) DEQ determines that the system or combination of systems is in compliance with the waste disposal limitations specified in the WPCF permit; and

(F) The permittee submits a copy of a service contract that meets the requirements of OAR 340-071-0132 and

(G) The permittee submits a written statement from a maintenance provider certifying that the system is not failing;

(H) Owners of and maintenance providers for these systems must operate and maintain the system under the requirements described for recirculating gravel filter systems in OAR 340-071-0132 and 0302. DEQ will send a letter to the permittee to terminate the WPCF permit. The letter will be deemed a Certificate of Satisfactory Completion for the permitted system. Conditions specified in the Certificate of Satisfactory Completion continue in force as long as the system is in use.

(16) Fees for systems under WPCF permits. Permittees of onsite systems under WPCF permits must pay the annual compliance determination fee in OAR 340-071-0140(4) by the date DEQ specifies for each year the system is in operation.

(17) Engineering plan review. Unless specifically exempted in this division, all plans and specifications for constructing, installing, or modifying onsite systems must be submitted to the agent for approval or denial. The design criteria and rules governing the plan review are as follows:

(a) The agent must review all plans and specifications for WPCF permits under OAR chapter 340, division 052;

(b) Plans and specifications for construction-installation permits for commercial sand filter, recirculating gravel filter, and advanced treatment technology systems with design capacities greater than 600 gpd must be signed by a person registered under ORS 672 or 700.

(18) Criteria and standards for design and construction. The criteria and standards for design and construction in this division and OAR chapter 340, division 073 apply to all onsite systems:

(a) For onsite systems subject to WPCF onsite permits, DEQ may allow variations of the criteria, standards, and technologies in this division and OAR chapter 340, division 073 based on adequate documentation of successful operation of the proposed technology or design. The system designer must demonstrate the performance of new processes, treatment systems, and technologies under OAR chapter 340, division 052;

(b) For systems not requiring WPCF permits, DEQ may authorize variances from the criteria, standards, and technologies in this division through the variance processes in OAR 340-071-0415 through 340-071-0445.

(19) Manufacturer's specifications. All materials and equipment, including but not limited to tanks, pipe, fittings, solvents, pumps, controls, and valves, must be installed, constructed, operated, and maintained under manufacturer's specifications.

(20) Sewer and water lines. Effluent sewer and water line piping constructed of materials that are approved for use within a building, as defined by the Oregon State Plumbing Specialty Code, may be run in the same trench. Effluent sewer pipe of material not approved for use in a building must not be run or laid in the same trench as water pipe unless both of the following conditions are met:

(a) The bottom of the water pipe at all points is at least 12 inches above the top of the sewer pipe;

(b) The water pipe is placed on a solid shelf excavated at one side of the common trench with a minimum clear horizontal distance of at least 12 inches from the sewer pipe.

(21) Septage management. A person may not dispose of wastewater, septage, or sewage- contaminated materials in any location or manner not authorized by DEQ.

(22) Groundwater levels. All groundwater levels must be predicted using conditions associated with saturation. In areas where conditions associated with saturation do not occur or are inconclusive, such as in soil with rapid or very rapid permeability, predictions of the high level of the water table must be based on an agent’s past recorded observations. If such observations have not been made or are inconclusive, the application must be denied until observations can be made. Groundwater level observations must be made during the period of the year in which high groundwater

normally occurs in an area. A properly installed nest of piezometers or other methods DEQ accepts must be used for making water table observations.

(22) A person may not submit information required by statute, rule, permit, or order that is false, inaccurate, or incomplete.

[NOTE: All tables are found in OAR 340-071-0800.Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.655, 454.695, 468B.050, 468B.055, 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 27-1994, f. & cert. ef. 11-15-94; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 8-1998, f. & cert. ef. 6-5-98; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 5-2000(Temp), f. 2-24-00, cert. ef. 3-1-00 thru 8-27-00; DEQ 14-2000, f. & cert. ef. 8-24-00; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 5-2007, f. & cert. ef. 7-3-07; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0132
Operation and Maintenance
(1) Owners. Owners of onsite wastewater treatment systems must operate and maintain their systems in compliance with all permit conditions and applicable requirements in this division and must not create a public health hazard or pollute public waters. Operation and maintenance requirements for systems under WPCF permits are established by the WPCF permits required in OAR 340-071-0130. Owners of the following alternative systems must also comply with the operation and maintenance standards:

(a) The owner of pressurized distribution and residential sand filter systems permitted after January 1, 2014, commercial sand filters on or after March 1, 2005, and all recirculating gravel filters, alternative treatment technology systems, and those systems described in subsection (15)(d) of OAR 340-071-0130 not under WPCF permits must:

(A) Maintain a contract under this rule with a maintenance provider certified as required in OAR 340-071-0650 to service and maintain the onsite system. A service contract must be executed before the system is installed and must be maintained with a certified maintenance provider until the system is decommissioned.

(B) Report evidence of any system failures to the certified maintenance provider and agent and take appropriate action the agent approves to correct the problem, including but not limited to applying for a repair permit under OAR 340-071-0215.

(C) Ensure the system is inspected at least annually by a certified maintenance provider or the agent under OAR 340-071-0260.

(b) Owners of residential sand filter systems permitted prior to January 2, 2014, or commercial sand filter systems permitted prior to April 1, 1995, must follow the operation and maintenance requirements under section (5).

(c) Owners of holding tanks must maintain a pumping agreement with a sewage disposal service licensed under OAR 340-071-0600 to provide for regularly inspecting and pumping at all times the holding tank is being used and pay the annual fees and report as required in section (4).

(2) Service Contracts. Service contracts for inspecting, operating, and maintaining onsite systems, must be perpetual and continuous. Except transition periods described in subsection (6)(b) of this section, the service contract must remain in effect until the onsite system is decommissioned or terminated in accordance with this rule. The service contract must include:

(a) For initially permitted systems only, a schedule for the first two years of operation that directs the maintenance provider to inspect, adjust and service the system a minimum of once every six months~~,~~.

(b) A schedule for subsequent years of operation that directs the maintenance provider to inspect, adjust and service the system:

(A) According to the manufacturer's specifications in the approved owner's manual or in cases where there is not an approved owner's manual, by the specifications required by DEQ; and

(B) At least once every 12 months.

(c) For ATT systems only, a clause stating that the maintenance provider must provide an effluent quality inspection that includes but is not limited to:

(A) A visual assessment for color, turbidity, and scum overflow,

(B) An olfactory assessment for odor, and

(C) Any other performance assessment or operational diagnosis, which may include sampling of treated effluent (post-disinfection if disinfection is used) necessary to determine or ensure proper performance of the facility.

(d) A clause stating that the maintenance provider must notify the system owner and agent in writing within 30 days about any improper system function that cannot be remedied during the time of inspection, including any necessary repairs to comply with OAR 340-071-0215, and include an estimated date of correction.

(e) A clause stating the causes for termination, including but not limited to non-payment, breach of contract, or termination at-will by written notice from either party.

(f) Other information and conditions of the agreement such as:

(A) Effective date, which is equal to the date the system is placed in operation or when a new agreement for an existing system in operation is executed;

(B) Owner's name and address;

(C) Property address and legal description;

(D) Permit requirements and conditions;

(E) Contact information for the owner, maintenance provider, and agent;

(F) Details of service to be provided, including but not limited to the service recommended by the manufacturer in the approved operation manual for ATTs, as required by the designer in the prepared operation and maintenance manual for RGFs under 340-071-0302, or listed by the National Association of Wastewater Technicians (NAWT) on the Operational Checklist, or other checklist approved by DEQ, for pressure distribution or sand filter systems;

(G) Schedule of maintenance provider duties;

(H) Details of any warranty;

(I) Owner's responsibilities under the contract for routine inspection, operation, and maintenance of the onsite system;

(3) Maintenance Providers. A maintenance provider under a contract required in this rule must:

(a) Observe and record conditions in the treatment unit, if applicable, and the absorption area during all operation and maintenance activities for the system and report those observations to the system owner in writing;

(b) Conduct minor or major maintenance as defined under 340-071-0100(92);

(c) Maintain accurate records of their current and previous 3 years of service contracts, customers, inspection checklists, and performance data. These records must be available for inspection upon the agent’s request;

(d) Notify the owner and agent in writing of service contracts that are terminated ~~not renewed~~ within 30 days of their termination;

(e) Make emergency service available within 48 hours of a service request or system alarm;

(f) Submit the annual report required in section (4) and the annual evaluation fee in OAR 340-071-0140(3) for each system under contract to be serviced by the maintenance provider;

(g) Follow the terms outlined in the service contract;

(h) For ATT systems, be certified by the manufacturer to provide service on the ATT and ensure the ATT and all components of the onsite system are properly operated and timely maintained per the manufacturers specifications until the system is decommissioned so that the effluent standards in OAR 340-071-0345 are met.

(i) For conventional and other sand filter systems, ensure the sand filter and all components of the onsite system are properly operated and timely maintained in accordance with section (5) and these rules until the system is decommissioned.

(4) Annual permit fees and reports:

(a) Except in paragraph (c) of this section, the maintenance provider under contract must pay the annual report evaluation fee in OAR 340-071-0140(3) by the date DEQ specifies for each year the system is in operation, as required in this section. A system is placed into operation the date a Certificate of Satisfactory Completion is issued or when the system is connected to plumbing, whichever occurs last, and remains in operation until the agent receives notice the system has been decommissioned.

(b) A maintenance provider must submit written certification prepared on a DEQ-approved form by the date specified by DEQ for each year the system is in operation that:

(A) The system has been maintained under the requirements of the rules in this division during the reporting year and is operating under the agent-approved design specifications; or

(B) Minor or major maintenance is pending, an estimated date of correction and estimated cost has been provided to the property owner in writing; or

(C) The owner and the agent have been notified in writing that the system requires a repair permit under OAR 340-071-0215.

(c) A maintenance provider is not required to submit fees or reports under paragraphs (a) and (b) of this section if:

(A) The effective date of the initial contract under section (2) for a new system was in the last 6 months of the reporting period; or

(B) The maintenance provider notified the property owner and agent of contract termination under section (3) and did not already conduct an inspection during the reporting period; or

(C) The maintenance provider has not had a reasonable opportunity to conduct a maintenance inspection during the reporting period because the effective date of a new contract was in the last 60 days of the reporting period and the system was inaccessible to the maintenance provider for maintenance due to inclement weather or the owner denying access.

(d) Owners of holding tanks not under WPCF permits must pay annual fees and reports as follows:

(A) Owners must pay the annual report evaluation fee in 340-071-0140(3) by the date specified by DEQ for each calendar year the tank is in operation;

(B) Owners must submit written certification on a DEQ-approved form that the holding tank has been regularly inspected and pumped during the reporting year and that the year's service log for the holding tank is available for inspection by the agent.

(5) Sand filter operation and maintenance. The operation and maintenance of conventional and other sand filter systems must include but is not limited to the inspection of the septic tank and other components of the system at least annually for sludge accumulation, pump calibration, and cleaning the laterals. Tanks must be pumped when there is an accumulation of floating scum less than 3 inches above the bottom of the outlet tee fitting, holes or ports, or an accumulation of sludge less than 6 inches below the bottom of the outlet tee fitting, holes or ports. Pump calibration, cleaning of the laterals, and other maintenance must be completed as necessary.

(6) Compliance.

(a) Compliance Recovery Fee. If the maintenance provider does not submit the annual report or fee under this rule by the date DEQ specifies each year, the agent may require the maintenance provider pay the compliance recovery fee under OAR 340-071-0140(7).

(b) Compliance inspection. If the owner does not maintain a contract for the entirety of the reporting period, except for a contract transition period of not more than 30 days, the agent may require an alternative inspection under OAR 340-071-0260 and a compliance recovery fee under OAR 340-071-0140(7).

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.625 & 468.020

340-071-0135
Approval of New or Innovative Technologies, Materials, or Designs for Onsite Systems

(1) DEQ approval.

(a) Coordination with listing of alternative treatment technologies, OAR 340-071-0345. Under OAR 340-071-0345, DEQ maintains a list of alternative treatment technologies (ATTs) that have been tested by an NSF/ANSI organization that meets the requirements of ISO/IEC 17025 – 2005. The ATT must meet the performance standards and other requirements in OAR 340-071-0345. ATTs are usually separate treatment units that are installed in onsite systems. Only listed ATTs may be installed under the siting criteria in OAR 340-071-0345. This rule provides a process for approving new or innovative technologies, materials, or designs for various components of onsite systems, such as drainfield products or appurtenances. Add-on treatment units, such as units to remove nitrogen following an ATT or sand filter, may also be approved under this rule. However, DEQ does not intend to approve alternatives to standard systems under this rule. Alternative systems will need to be listed as ATTs under OAR 340-071-0345 or approved under new rules in this division.

(b) DEQ may approve new or innovative technologies, materials, or designs for onsite systems pursuant to this rule if it determines they will protect public health, safety, and waters of the state as effectively as systems authorized in this division. DEQ must base approval on one or more of the following:

(A) A performance evaluation conducted under section (3) of this rule that demonstrates the technology, material, or design will achieve applicable performance standards in OAR chapter 340, divisions 071 and 073 and any additional standards DEQ determines are necessary to satisfy the requirements of subsection (1)(b) of this rule.

(B) Documentation that the alternative drainfield products are functionally equivalent to drainfield products DEQ approves.

(C) Documentation that the material used as a substitute for drain media in absorption trenches will achieve the performance standards and design criteria in section (5) of this rule.

(D) Certification of the new material, technology, or design for proposed uses by NSF/ANSI, or another program providing equivalent performance demonstration required by this rule and approved by DEQ.

(c) DEQ may approve or deny a request for approval of a new or innovative technology, material, or design or may limit approval to those locations or conditions for which achievement of standards has been demonstrated.

(d) DEQ may amend or revoke approval of a new or innovative material, technology, or design if it determines:

(A) Approval was based on false or misleading information;

(B) The material, technology, or design no longer achieves performance standards for which it was approved; or

(C) The manufacturer is not meeting the requirements in this rule or conditions of the approval.

(2) Requests for approval.

(a) Any person may submit a completed application for approval of a new or innovative technology, material, or design for onsite systems to DEQ.

(b) The application must include the following:

(A) For approval based on a performance evaluation under subsection (1)(b)(A) of this rule:

(i) A proposed evaluation protocol under section (3) of this rule and a proposed schedule for completing the proposed evaluation; and

(ii) At the conclusion of the performance evaluation, documentation demonstrating the technology, material, or design achieves applicable standards.

(B) For approval under subsection (1)(b)(B) of this rule, documentation supporting a determination of functional equivalency.

(C) For approval under subsection (1)(b)(C) of this rule, documentation supporting a determination that the applicable standards will be achieved.

(D) For approval under subsection (1)(b)(D) of this rule, documentation of certification by an approved program.

(E) The Innovative or Alternative Technology, Material, or Design Review fee established in OAR 340-071-0140(5).

(3) Requirements for studies. Field or other studies used to demonstrate performance of technologies, materials, or designs under subsection (1)(b)(A) of this rule must satisfy the following requirements:

(a) Be based on theory or applied research that supports the intended use of the technology, material, or design.

(b) Follow an evaluation protocol that has been peer reviewed and approved by DEQ and that clearly defines the number of systems for installation reasonably necessary for the study and performance objectives, including standards to be achieved; performance measurements to validate attainment of the objectives; and the variables to be considered, including climate, soil, waste characteristics such as flow and strength, and topography.

(c) Include controls that represent the standards to be achieved.

(d) Include sufficient monitoring and reporting of performance data on both the test product and control product to support direct comparisons to the standards to be achieved.

(e) Address system operations at maturity and relevant temporal variations to support comparison to the standards to be achieved.

(f) Be designed and conducted by a qualified third party DEQ approves who certifies whether the installation, monitoring, and evaluation of the systems studied and reports submitted to DEQ satisfy this rule’s requirements.

(g) At the conclusion of the study, provide sufficient performance data to demonstrate standards are met. Data must be peer-reviewed, be scientifically defensible, and have sufficient replication to be representative and to address variations in climate, soil, topography, waste loading, and strength relevant to the proposed use.

(4) Installation of onsite systems for study. The following requirements must be met for each system incorporating unapproved new or innovative technologies, materials, or

designs installed for study under this rule or OAR 340-071-0130, or former OAR 340-071-0116 or 340-071-0117 (replaced by this rule):

(a) Prior to installation, the system owner must obtain a WPCF permit under OAR 340-071-0162 or, for a system incorporating only unapproved drainfield materials and not otherwise requiring a WPCF permit, or a construction-installation permit under OAR 340- 071-0160.

(b) Before installation, the system owner must provide legal and physical access for construction inspections and monitoring.

(c) The system owner must acknowledge that the system being installed is an unapproved technology and must agree in writing to hold the State of Oregon and its officers, employees, and agents harmless of any and all loss or damage caused by system failure or defective installation or operation of the proposed systems.

(d) Before transferring ownership of a system using an unapproved technology, the system owner must notify all transferees that the technology has not been approved, and the transferee must agree in writing to hold the state of Oregon and its officers, employees, and agents harmless of any and all loss or damage caused by system failure or defective installation or operation of the proposed systems.

(e) A site evaluation must be conducted under this division. Suitable area must be available for installation of both an initial onsite system and a full replacement system.

(5) Standards and design criteria for drain media substitutes. To be approved under (1)(b)(C) of this rule, substitutes for drain media used in absorption trenches, including seepage trenches, seepage beds, or other similar absorption facilities, must meet the following performance standards and design criteria:

(a) Performance standards. New or innovative materials to be used as a substitute for drain media must be structurally sound, durable, and inert in the environment they are placed. The substitute material must be capable of passing wastewater toward the infiltrative surfaces at a rate equal to or greater than gravel drain media.

(b) Design criteria for absorption trenches.

(A) The trench must be excavated under the trench standards described in this division. If warranted by the design configuration of the substitute material, the trench width may be less than 24 inches, provided the trench length is increased to compensate for the loss of the bottom surface area using the following formula: Adjusted Trench Length = (24 inches ÷ W) x L, where W = the reduced trench width in inches, and L = the original trench length as specified in subsection (5)(b)(F) of this rule.

(B) The substitute material for the drain media must be placed in the trench and be in uniform contact with the trench bottom and both sidewalls. If voids larger than typically found with the use of drain media are present along the trench bottom after placement of the substitute material, steps must be taken to prevent the entry of burrowing rodents.

If the substitute material for drain media is not in uniform contact with both sidewalls, drain media must be placed in the trench to provide that contact.

(C) The substitute material for drain media must be placed to provide a uniform sidewall infiltrative surface depth as measured along the trench sidewall from the bottom to the top of the drain media substitute in contact with the sidewall. In seepage trenches, the depth of the substitute material must be greater than 12 inches. If the substitute material provides less than 12 inches of sidewall contact depth, either drain media must be placed to accomplish the minimum sidewall contact depth, or the length of the absorption trench must be increased to compensate for the reduced sidewall seepage area depth using the following formula: Adjusted Trench Length = (12 inches ÷ D) x L, where D = the reduced sidewall seepage area depth in inches, and L = the original trench length as specified in subsection (5)(b)(F) of this rule.

(D) If a substitute material is used in a trench that is both narrower than 24 inches and has a sidewall contact depth that is less than 12 inches, the adjusted trench length must be the longer of the adjusted trench lengths calculated using the formulae in paragraphs (A) and (C) of this subsection.

(E) The top surface of the substitute material for the drain media must be level across the trench and in contact with each side of the trench. The substitute material for drain media must have porosity at the top surface that is not appreciably different from the porosity of drain media. Drain media may be placed across the top of the substitute material to provide the level surface extending from sidewall to sidewall.

(F) The sizing for standard absorption trenches using a substitute material for drain media must conform to applicable criteria in OAR 340-071-0220(2), 340- 071-0290(3), or 340-071-0360(2)(a). Seepage trenches using a substitute material for drain media must conform with applicable size criteria in OAR 340-071- 0280(2), 340-071-0290(3), 340-071-0310(2), or 340-071-0360(2)(b).

(c) Design criteria for seepage beds.

(A) Bed excavation must conform with the standards described in OAR 340-071-0275(4)(d).

(B) The substitute material for drain media must be placed in the excavation and in contact with the bottom and sidewalls of the bed. If voids larger than typically found with the use of drain media are present along the bottom or sidewalls after placement of the substitute material, steps must be taken to prevent entry of burrowing rodents.

(C) The substitute material for drain media must be placed to provide a substitute material depth of at least 12 inches, as measured from the bottom of the excavation to the top of the drain media substitute. If the depth of the media substitute is less than 12 inches, drain media must be placed within the excavation to provide this depth.

(D) The upper surface of the substitute material for drain media must be level from sidewall to sidewall. The porosity of the top surface of the substitute material must not appreciably differ from the porosity of drain media. Drain media may be placed across

the top of the substitute material to provide the level surface extending from sidewall to sidewall.

(E) Seepage beds using a substitute material for drain media must conform with size requirements in OAR 340-071-0275(4)(d)(B).

(d) Distribution piping in absorption facilities using a substitute material for drain media must comply with the appropriate pipe standards in this division and OAR chapter 340, division 073.

(6) Study protocols for substitutes for drain media — example. This section provides an example study protocol to demonstrate substitute drain media under subsection (1)(b)(C) of this rule. Proposed protocols must be approved for study under section (3) of this rule.

(a) A standard onsite system must be installed and sized for a given soil group according to Tables 4 and 5 of this division. The system must be designed to allow a side-by-side performance comparison of the substitute material with a standard absorption trench (the control). For this purpose, the drainfield must contain four small test cells, two of them containing the substitute material and two the standard drain media, which receive septic tank effluent before the remaining portion of the drainfield. The test cells must represent approximately one-third of the total drainfield. The cells containing the substitute material must be sized according to the manufacturer's claim for equivalence to the standard trench length.

(b) A drop box or similar monitoring box containing a sump must be placed at the end of each test cell. All drop boxes must be connected to the remaining portion of the drainfield.

(c) The test cells must be fed by a pump and a hydrosplitter to distribute the effluent equally to each test cell. Installation of a water meter or pump cycle-counter may be required.

(d) Observation ports must be installed in each test cell to allow measuring and recording the effluent ponding depth.

(e) Domestic wastewater coming directly from a septic tank connected to a residence or facility must be used in the field study.

(f) The performance standard to be achieved is the acceptance rate of the effluent by the substitute material, measured by observing the time required for each test cell to overflow to the drop box.

(g) The test must conclude at the end of three years or when overflow is observed in one of each paired test cells, whichever occurs first. Observation of overflow or no overflow and of ponding must be recorded at least monthly.

(h) For approval for statewide use, the testing described in this section must be duplicated at sites within the two major climatic regimes of Oregon, west of the Cascade

Mountain Range and east of the Cascade Mountain Range, and in each of the soil groups described in Tables 4 and 5 of this division. At least 18 duplicate sites are required, with 3 sites in each of 3 soil groups in the 2 major climatic regimes of Oregon. Studies may include additional sites.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.607, 454.615, 454.784, 468.035, 468.045, 468.065 & 468B.050
Hist.: DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 14-2000, f. & cert. ef. 8-24-00; Renumbered from 340-071-0116 & 340-071-0117, DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0140
Onsite System Fees

(1) This rule establishes the fees for site evaluations, permits, reports, variances, licenses, and other services DEQ provides under this division.

(2) Table 9A lists the site evaluation and existing system evaluation fees. [Table not included. See ED. NOTE.]

(3) Tables 9B and 9C list the permitting fees for systems not subject to WPCF permits. Online submittals for annual report evaluation fees may apply when DEQ implements online reporting. [Table not included. See ED. NOTE.]

(4) WPCF permit fees. Fees in this section apply to WPCF permits issued under OAR 340-071- 0162. Table 9D lists the WPCF permit fees. [Table not included. See ED. NOTE.]

(5) Table 9F lists the innovative, Alternative Technology and Material Plan Review fees. [Table not included. See ED. NOTE.]

(6) Table 9E lists the Sewage Disposal Service License and Truck Inspection fees. [Table not included. See ED. NOTE.]

(7) Compliance Recovery Fee. When a violation involves an annual report evaluation, alternative system inspections, or results in an application in order to comply with the requirements in this division, the agent may require the applicant to pay a compliance recovery fee. The fee may be billed in addition to any annual report evaluation fee, alternative system inspection fee, or the application fee. Such violations include but are not limited to installing a system without a permit, performing sewage disposal services without a license, failing to submit an annual report by the date specified by DEQ for each year the system is in operation, failing to maintain a service contract, or failure to obtain an authorization notice when it is required. The amount of the compliance recovery fee must be assessed as follows:

(a) For violations involving annual report evaluation fees, the amount shall not exceed the annual report evaluation fee;

(b) For violations involving alternative system inspections, the amount shall not exceed the alternative system inspection fee, regardless of whether the agent or maintenance provider conducts the inspection; or

(c) For violations that result in an application in order to comply with the requirements in this division, the amount shall not exceed the application fee.

(8) Land Use Review Fee. Land use review fees are listed in Table 9C and are assessed when an agent review is required in association with a land use action or building permit application and no approval is otherwise required in the division.

(9) Contract county fee schedules.

(a) Each county having an agreement with DEQ under ORS 454.725 must adopt a fee schedule for services rendered and permits issued. The county fee schedule may not include DEQ's surcharge established in section (10) of this rule unless identified as a DEQ surcharge.

(b) The county must submit a copy of the fee schedule and any subsequent amendments to the schedule to DEQ.

(c) Fees may not exceed actual costs for efficiently conducted services.

(10) DEQ surcharge.

(a) To offset a portion of the administrative and program oversight costs of the statewide onsite wastewater management program, DEQ and contract counties must levy a surcharge for each site evaluation, report permit, and other activity for which an application is required in this division. The surcharge fee is listed in Table 9F. This surcharge does not apply to pumper truck inspections, annual report evaluation fees, or certification of installers or maintenance providers. [Table not included. See ED. NOTE.]

(b) Proceeds from surcharges DEQ and contract counties collect must be accounted for separately. Each contract county must forward the proceeds to DEQ under its agreement with the DEQ.

(11) Refunds. DEQ may refund all or a portion of a fee accompanying an application if the applicant withdraws the application before any field work or other substantial review of the application has been done.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625, 468.020 & 468.065(2)
Stats. Implemented: ORS 454.745, 468.065 & 468B.050
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ

13-1986, f. & ef. 6-18-86; DEQ 15-1986, f. & ef. 8-6-86; DEQ 6-1988, f. & cert. ef. 3-17-88; DEQ 11-1991, f. & cert. ef. 7-3-91; DEQ 18-1994, f. 7-28-94, cert. ef. 8-1-94; DEQ 27-1994, f. & cert. ef. 11-15-94; DEQ 12-1997, f. & cert. ef. 6-19-97; Administrative correction 1-28-98; DEQ 8-1998, f. & cert. ef. 6-5-98; DEQ 16-1999, f. & cert. ef. 12-29-99; Administrative correction 2-16-00; DEQ 9- 2001(Temp), f. & cert. ef. 7-16-01 thru 12-28-01; DEQ 14-2001, f. & cert. ef. 12-26-01; DEQ 2-2002, f. & cert. ef. 2-12-02; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 7-2008, f. 6-27-08, cert. ef. 7-1-08; DEQ 10-2009, f. 12-28-09, cert. ef. 1-4-10; DEQ 7-2010, f. 8-27-10, cert. ef. 9-1-10; DEQ 9-2011, f. & cert. ef. 6-30-11; DEQ 6-2012, f. 10-31-12, cert. ef. 11-1-12; DEQ 8-2013, f. 10-23-13, cert. ef. 11-1-13; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14; DEQ 11-2014, f. & cert. ef. 10-15-14; DEQ 13-2014, f. 11-14-14, cert. ef. 12-1-14; DEQ 4-2015, f. & cert. ef. 2-3-15; DEQ 16-2015, f. 12-10-15, cert. ef. 1-1-16; DEQ 1-2016, f. & cert. ef. 1-27-16

340-071-0150
Site Evaluation Procedures

(1) A site evaluation is the first step in the process of obtaining a construction-installation permit for an onsite system. Except as otherwise provided in these rules, before obtaining a permit to construct an onsite system, a person must obtain a site evaluation report finding the site suitable for an onsite system under this division.

(2) Completed applications for site evaluations must be submitted to the agent with all required exhibits and the applicable site evaluation fee in OAR 340-071-0140(2).

(a) Unless DEQ approves other procedures for a contract county, applicants must provide at least two test pits, with dimensions and configuration as the agent directs, located approximately 75 feet apart and within the area of the proposed system, including the repair/replacement area.

(b) The fee paid for a site evaluation report covers as many site inspections within ninety days of the initial inspection as necessary to determine the suitability of a single lot or parcel for a single system. A site is considered to be suitable as soon as it is found to meet the criteria for any type of onsite system.

(3) Site evaluation report.

(a) The agent must evaluate the site of the proposed system, consider all system options, and provide a report of such evaluation.

(b) The site evaluation report must be on a DEQ-approved form.

(c) The report must contain, at a minimum, a site diagram and observations of the following site characteristics:

(A) Parcel size;

(B) Slope in absorption field and replacement areas (percent and direction);

(C) Surface streams, springs, other bodies of water;

(D) Existing and proposed wells;

(E) Escarpments;

(F) Cuts and fills;

(G) Unstable landforms;

(H) Soil profiles determined from test pits provided by applicant;

(I) Water table levels as indicated by conditions associated with saturation or water table observations;

(J) Useable area for initial and replacement absorption areas;

(K) Encumbrances observed or listed on the application;

(L) Sewerage availability;

(M) Other observations including off-site features as appropriate.

(d) Site evaluation reports for subdivisions or other land divisions must be based on an evaluation of each lot.

(e) Specific conditions or limitations imposed on an approved site must be listed on the evaluation report.

(f) A site evaluation report approving a site for a system qualifies the property owner for a permit to construct a system on that property if other requirements for a permit are met.

(4) Approval or denial:

(a) A site must be approved for a system if the site evaluation report documents the following:

(A) The site evaluation report identifies the types of the initial and replacement systems for which the site is approved.

(B) All criteria for approving a specific type or types of systems, as described in this division are satisfied.

(C) Each lot or parcel has sufficient usable area available to accommodate an initial and replacement system for all existing and proposed uses. The usable area may be located within the lot or parcel or within the bounds of another lot or parcel that is secured under OAR 340-071-0130(11). The initial and replacement systems may be of different types, e.g., a standard subsurface system as the initial system and an alternative system as the replacement system. The site evaluation report must indicate the types of the initial and replacement systems for which the site is approved.

(D) A replacement area is not required in areas under control of a legal entity such as a city, county, or sanitary district if the legal entity gives a written commitment that sewerage service will be provided within five years.

(b) A site must be denied if the conditions identified in subsection (4)(a) of this rule are not met.

(c) Changes in technical requirements in this division may not invalidate a site approval but may require design changes or use of a different type of system.

(d) An agent may require a new site evaluation application if an existing site evaluation record does not include sufficient information for an agent to determine the approval area for a proposed system.

(5) Site evaluation report review. An applicant may request DEQ to review an agent's site evaluation report. The application for review must be submitted to DEQ in writing within 60 days after the site evaluation report issue date and must include the site evaluation review fee in OAR 340-071-0140(2). DEQ will review and approve or disapprove the site evaluation report.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.655 & 454.755
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0155
Existing System Evaluation Report

(1) An evaluation of an existing onsite wastewater treatment system must meet the following requirements:

(a) An evaluation must be performed by a person with one or more of the qualifications listed below:

(A) Professional Engineer under ORS chapter 672 with knowledge and experience inspecting onsite systems;

(B) Registered Environmental Health Specialist or Wastewater Specialist under ORS chapter 700 with knowledge and experience inspecting onsite systems;

(C) A certified installer with knowledge and experience inspecting onsite systems;

(D) A certified maintenance provider with knowledge and experience inspecting onsite systems;

(E) A current NAWT inspector training and certification accreditation with a sewage disposal service license;

(F) Other similar license or certification DEQ approves.

(b) An evaluation must include the following:

(A) An examination of the records available on the existing system, including all permit records and pumping and other maintenance records.

(B) For existing systems without a permit record, the inspector must create a record to document system materials, components, and location. Methods used to create the record may include the use of soil probes, metal detectors, electronic pipe tracers, radio and video technology, and uncovering system components.

(C) A field inspection of the existing system.

(D) A report of findings on a DEQ-approved form including the information obtained relevant to system performance, such as age; usage; records of installation, maintenance, and repairs; type, size, capacity, and condition of components; evidence of any failures; other relevant information, such as condition of repair area if known; and a complete sketch of the system showing location and distances of major components.

(E) The evaluation must include all portions of the system that serve the facility, including any portion located on a lot or parcel different from the lot or parcel on which the facility the system serves is located.

(2) A person may not conduct an existing system evaluation required by this rule unless the person meets the qualifications in subsection (1)(a) of this rule prior to conducting the evaluation.

(3) Any person may request an agent to provide an evaluation report on an existing onsite wastewater treatment system.

(4) A completed application form must be submitted to the agent with all necessary exhibits and the existing system evaluation fee in OAR 340-071-0140(2).

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.755, 468B.015 & 468B.080
Hist.: DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0160
Permit Application Procedures — Construction~~,~~ Installation, Alteration, and Repair Permits

(1) Permittees. A permit to construct a system may be issued under this rule only to the owner of the real property that the system will serve.

(2) Application. A completed application for a construction, installation, alteration, or repair permit must be submitted to the appropriate agent on approved forms with all required exhibits and the applicable permit application fee in OAR 340-071-0140(3).

Applications that do not comply with this section will not be accepted for filing. Except as otherwise allowed in this division, the exhibits must include:

(a) A site evaluation report approving the site for the type and quantity of waste to be disposed. Agents may waive the requirement for the report and fee for applications for repair or alteration permits.

(b) A land use compatibility statement from the appropriate land use authority as required in OAR chapter 340, division 018.

(c) Plans and specifications for the onsite system proposed for installation within the area the agent identified and approved in a site evaluation report. The agent must determine and request the minimum level of detail necessary to ensure proper system construction.

(d) A written statement from the municipality with sewer authority confirming a community or area-wide sewerage is not available if the property is located within a city limit, urban growth boundary, or sanitary district or equivalent.

(e) Any other information the agent determines is necessary to complete the permit application.

(3) Deadlines for action. The agent must either issue or deny the permit within 20 days after receiving the completed application unless weather conditions or distance and unavailability of transportation prevent the agent from timely action. The agent must notify the applicant in writing of any delay and the reason for delay and must either issue or deny the permit within 60 days after the mailing date of notification.

(4) Permit denial. The agent must deny a permit if any of the following occurs:

(a) The application contains false information.

(b) The agent wrongfully received the application.

(c) The proposed system would not comply with applicable requirements in this division or in OAR chapter 340, division 073.

(d) The proposed system, if constructed, would violate a commission moratorium under OAR 340-071-0460.

(e) The proposed system location is encumbered as described in OAR 340-071-0130(8).

(f) A community or area-wide sewerage system is available that can satisfactorily accommodate the proposed sewage discharge. A sewerage system is considered available if the property to be served is located within a city limit, urban growth boundary, or sanitary district or equivalent, and the system is both physically and legally available, as described in paragraphs (A) and (B) of this subsection.

(A) Physical availability. A sewerage system is considered physically available if topographic or man-made features do not make connection physically impractical, as determined by the municipality, and one of the following applies:

(i) For a construction-installation permit a single-family dwelling or other establishment with a maximum projected daily sewage flow not exceeding 899 gallons, the nearest sewerage connection point from the property to be served is within 300 feet.

(ii) For a repair or alteration permit to serve a single-family dwelling or other establishment with a maximum projected daily sewage flow not exceeding 899 gallons, the nearest sewerage connection point from the property to be served is within 200 feet.

(iii) For any permit, a proposed subdivision or group of two to five single-family dwellings or other establishment with the equivalent projected daily sewage flow, the nearest sewerage connection point from the property to be served is not further than 200 feet multiplied by the number of dwellings or dwelling equivalents.

(iv) For proposed subdivisions or other developments with more than five single-family dwellings or equivalent flows, the agent will determine sewerage availability.

(B) Legal availability. A sewerage system is legally available if the system is not under a DEQ connection permit moratorium, is accessible by a right-of-way or existing easement, and the governing municipality determines if a community or area-wide sewerage system is available by local ordinance. Legal availability as determined by local ordinance includes but is not limited to the following considerations:

(i) Distance to a sewerage connection point as a proxy of cost to extend sewer;

(ii) Residential compared to commercial wastewater flow and strength;

(iii) Single-family dwellings and duplexes compared to multi-family dwellings;

(iv) Partitioned and vacant lots compared to existing development;

(v) Statewide planning goals;

(vi) Social and Environmental Justice goals;

(vii) Scope of septic system repairs;

(viii) Age of existing septic systems and evidence of failing septic systems;

(ix) Other environmental and public health concerns;

(x) Extenuating circumstances where the municipality grants a waiver.

(5) Permit effective dates. A permit issued for construction of a system under this rule is effective for one year from the date of issuance. After a system has been installed under the permit and a Certificate of Satisfactory Completion has been issued for the

installation, conditions specified in the Certificate of Satisfactory Completion continue in force as long as the system is in use.

(6) Permit renewal, reinstatement, or transfer. An agent may renew, reinstate, or transfer a permit if the following conditions are met:

(a) The applicant submits a completed application for permit renewal before the permit expiration date or for reinstatement within one year after the permit expiration date.

(b) Applications for transfer of a permit from a permittee to another person must be filed before the permit expiration date. Only the permittee's name may be changed in a transfer.

(c) Applications for permit renewal, reinstatement, or transfer must conform to the requirements of this rule and the permit will be issued or denied under this rule.

(7) Temporary holding tank. If a permit has been issued under these rules but existing soil moisture conditions preclude the construction of the soil absorption system, an agent may approve installing a septic tank for use as a temporary holding tank for up to 12 months. Before approval, the permittee must demonstrate that the outlet of the tank has been sealed with a water tight seal and that the permittee has entered into a pumping contract for the tank. Unless otherwise authorized by the agent, the septic tank must be designed and constructed under OAR 340-071-0340.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.655
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0162
Permit Application Procedures — WPCF Permits

(1) Procedures in this rule are for applications for WPCF permits for onsite systems.

(2) Any person may request a new, modified, or renewal WPCF permit by submitting an application on forms DEQ provides with the specified number of copies of all required exhibits. The name of the applicant and permittee must be the legal name of the owner of the facilities the system serves or the lessee responsible for the operation and maintenance. Applications must be submitted at least 60 days before a permit is needed. Required exhibits include but are not limited to the following:

(a) A land use compatibility statement from the local land use planning agency indicating that the site is approved for the activity for which the applicant is applying. If the activity is approved only upon conditions in a conditional use permit, a copy of the conditional use permit must be provided;

(b) A copy of a site evaluation report approving the site for the type and quantity of wastes to be disposed;

(c) Evidence that the permit processing fees and the first year's annual compliance determination fee in OAR 340-071-0140(4) have been paid to DEQ or agent, as directed; and

(d) A site diagram meeting the requirements of OAR 340-071-0160(2)(c).

(3) DEQ will not accept applications for filing that are obviously incomplete, improperly signed, or lacking required exhibits clearly identified. DEQ will return these applications for completion. DEQ will consider applications that are correctly signed and appear administratively complete timely upon receipt. A request for further information under section (4) of this rule will not affect the timeliness of an application.

(4) Within 45 days after receiving an application, DEQ will preliminarily review the application to determine the adequacy of the information submitted. Failure to complete this review within 45 days does not preclude DEQ from later requesting additional information from the applicant as provided in this section.

(a) DEQ will request in writing from the applicant any additional information needed to review the application. DEQ will consider the application withdrawn if the applicant fails to submit the requested information within 90 days of the request.

(b) If DEQ determines that additional measures are necessary to gather facts regarding the application, DEQ will notify the applicant of measures to be instituted and the timetable and procedures to be followed. DEQ will consider the application withdrawn if the applicant fails to comply with the additional measures.

(5) Draft permit review. Before issuing a permit, DEQ will send a draft permit to the applicant for review. The applicant will have up to 14 calendar days to comment on the draft permit.

(6) Public participation. DEQ will provide for public participation under the requirements for WPCF permits in OAR chapter 340, division 045.

(7) Final DEQ action. DEQ must take final action on the permit application within 45 days of the close of the public comment period if a comment period is required. DEQ will consider all timely comments and other information obtained pertinent to the permit action. DEQ will notify the applicant of the action taken.

(8) Applicant's appeal rights. DEQ's final action is effective 20 days from the date DEQ serves notice to the applicant of DEQ's final action unless the applicant requests a hearing before the effective date. The request for a hearing must be in writing and state the grounds for the request. DEQ will conduct any hearing as a contested case hearing under ORS 183.413 through 183.470 and OAR chapter 340, division 011.

(9) Permit term. The term of a permit issued under this rule may not exceed ten years. The expiration date will be recorded on each permit issued.

(10) For systems that are proposed to be or are operating under a WPCF permit, a person may not construct, alter, or repair the system, or any part thereof, unless that person is licensed under ORS 454.695 or is the permittee.

(11) A person may not connect to or use any system authorized by a WPCF permit unless the system has been inspected and certified under OAR chapter 340, division 052 and DEQ has accepted that certification.

(12) Renewal of a permit. The procedures for issuing a new WPCF permit apply to renewing a permit. A permit may be renewed if the applicant files a completed permit renewal application, on forms DEQ provides, with DEQ at least sixty days before the permit expires. The permit will not expire until DEQ takes final action on a timely renewal application.

(13) DEQ may terminate, revoke, modify, or transfer a permit under the rules in OAR chapter 340, division 045 applicable to WPCF permits.

(14) Rules that do not apply to WPCF applicants or permittees:

(a) Because the permit review, issuance, and appeal procedures for WPCF permits are different from those of other onsite permits in these rules, the following rules do not apply to WPCF applicants or permittees: OAR 340-071-0132(1)(a) and (b), (2)-(4) and (6); 340-071-0135; 340-071-0155; 340-071-0160(1), (2)(a), (b), (d), and (e), (3), (5) and (6); 340-071-0165(1); 340-071-0170; 340-071-0175; 340-071-0185; 340-071-0200; 340-071-0205; 340-071-0210; 340-071-0215(1), (2), (4) and (6); 340-071-0275(4)(c)(A); 340-071-0290(7); 340-071-0295(1); 340-071-0302 (4) and (5); 340-071-0330; 340-071-0345(1)-(7) and (9)-(14); 340-071-0360(2)(b)(B); 340-071-0410; 340-071-0415; 340-071-0420; 340-071-0425; 340-071-0430; 340-071- 0435; 340-071-0440; 340-071-0445; and 340-071-0500.

(b) WPCF permit applicants and permittees are not subject to any WPCF permit-related fees other than those specified in OAR 340-071-0140.

(c) The following rules in OAR chapter 340, division 073 do not apply to WPCF applicants or permittees: OAR 340-073-0030(1); 340-073-0065; 340-073-0070; and 340-073-0075.

Stat. Auth.: ORS 454.625, 468.020 & 468.065(2)
Stats. Implemented: ORS 468.065, 468.070, 468B.050 & 468B.055
Hist.: DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 15-2000, f. & cert. ef. 10-11-00; DEQ 2-2002, f. & cert. ef. 2-12-02; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0170
Pre-Cover Inspections

(1) System installers must request a pre-cover inspection when system construction, alteration, or repair is complete except for backfill (cover) and as a permit otherwise

requires. The agent must inspect the installation to determine whether it complies with this division, unless the agent waives the inspection under section (2) of this rule or OAR 340-071-0400(5).

(2) The agent may waive inspections for a system proposed to serve a single-family dwelling or for a system of similar flow and waste strength if:

(a) The system was installed by a sewage disposal service business licensed under ORS 454.695;

(b) The installer complies with all requirements of this rule; and

(c) Upon the agent's request, the installer submits to the agent photographs of those portions of the construction for which the inspection is waived.

(3) To request a pre-cover inspection, the installer must submit the following information to the agent at the time system construction is complete.

(a) A detailed and accurate as-built plan of the constructed system.

(b) A list of all materials used in the construction of the system.

(c) Certification on a DEQ-approved form signed by the permittee who installed the system or an installer certified under OAR 340-071-0650 on a DEQ-approved form that the system was constructed as the permit, this division, and OAR chapter 340, division 073 require.

(4) An agent may require an owner to pay the inspection fee in OAR 340-071-0140(3) when a pre-cover inspection correction notice requires correction of improper construction and, at a subsequent inspection, the agent finds system construction deficiencies have not been corrected.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.665
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0175
Certificate of Satisfactory Completion

(1) The agent may issue a Certificate of Satisfactory Completion for a system installation if, the agent inspects and system and determines the system complies with applicable requirements in this division and OAR chapter 340, division 073 and the permit's conditions.

(2) If an agent determines an installation does not comply with the requirements in section (1) of this rule, the agent must notify the permittee in writing or post a Correction

Notice on the site. The notice must explain the system deficiencies and corrective action required.

(3) If an agent does not inspect a system within 7 days after notification of completion or waives the inspection under OAR 340-071-0170(2) or 340-071-0400(5)(d), a Certificate of Satisfactory Completion will be deemed to have been issued by operation of law. In such cases, a modified Certificate will be issued to the owner.

(4) A system may be backfilled (covered) after installation only after:

(a) The agent has notified the permittee that the inspection will not be conducted;

(b) The agent has inspected the system and issued a Certificate of Satisfactory Completion; or

(c) A Certificate of Satisfactory Completion has been issued by operation of law under section (3) of this rule.

(5) The permittee must ensure satisfactory completion of a system installation within 30 days after written notification or posting of a Correction Notice under section (2) of this rule unless the agent agrees to a later time.

(6) A person may not connect to or use any system completed after January 1, 1974, unless a Certificate of Satisfactory Completion has been issued for the installation or deemed issued by operation of law under this rule.

(7) Unless the agent requires otherwise, the system installer must backfill (cover) a system within 10 days after issuance of a Certificate of Satisfactory Completion for that system.

(8) A Certificate of Satisfactory Completion is valid for a period of five years for connection of the system to the facility for which it was constructed. After the five-year period, an Authorization Notice, alteration permit, or construction-installation permit may be required under OAR 340-071-0160, 340-071-0205, or 340-071-0210.

(9) A permittee may appeal the denial or revocation of a Certificate of Satisfactory Completion under ORS 183.310 through 183.550 and OAR chapter 340, division 11.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.655
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0185
Decommissioning of Systems

(1) The owner must decommission a system when:

(a) A sewerage system becomes available and the facility the system serves has been connected to that sewerage system;

(b) The source of sewage has been permanently eliminated;

(c) The system has been operated in violation of OAR 340-071-0132(1) and a repair permit and Certificate of Satisfactory Completion have not subsequently been issued for the system;

(d) The system has been constructed, installed, altered, or repaired without a permit required in this division, and a permit has not subsequently been issued for the system; or

(e) The system has been operated or used without a required Certificate of Satisfactory Completion or Authorization Notice and a Certificate of Satisfactory Completion or Authorization Notice has not subsequently been issued for the system.

(2) Procedures for decommissioning.

(a) Tanks, cesspools, and seepage pits must be pumped by a licensed sewage disposal service to remove all septage.

(b) Tanks, cesspools, and seepage pits must be filled with reject sand, bar run gravel, or other material approved by the agent, or the container must be removed and properly disposed.

(3) If, in the judgment of the agent, compliance with section (2) of this rule is not reasonably possible or necessary to protect public health, welfare, safety, or public waters, the agent may waive one or both of those requirements.

Statutory/Other Authority: ORS 454.625 & 468.020
Statutes/Other Implemented: ORS 454.615 & 454.655
History: DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 15-1986, f. & ef. 8-6-86; DEQ 5-1982, f. & ef. 3-9-82; DEQ 10-1981, f. & ef. 3-20-81

340-071-0205
Authorization to Use Existing Systems

(1) Authorization Notice required. Except as this rule specifically allows, a person may not place into service, reconnect to, connect an accessory dwelling unit to, change the use of, or increase the projected daily sewage flow into, an existing onsite system without first obtaining an Authorization Notice, construction-installation permit, or alteration permit as appropriate.

(2) Exceptions.

(a) An Authorization Notice is not required to replace a mobile home with a similar mobile home in a mobile home park or a recreation vehicle with another recreation

vehicle in a lawful recreation vehicle park if the onsite wastewater system has adequate capacity for safely treating wastewater generated within the park.

(b) An Authorization Notice is not required to place into service a previously unused system for which a Certificate of Satisfactory Completion has been issued within five years of the date such system is placed into service if the projected daily sewage flow does not exceed the design flow and the system is in compliance with the requirements of the Certificate of Satisfactory Completion and applicable requirements in this division.

(3) A completed application for the Authorization Notice must be submitted to an agent with all required exhibits and the authorization notice fee in OAR 340-071-0140(3). The exhibits must include:

(a) A land use compatibility statement from the appropriate land use authority as required in OAR chapter 340, division 018;

(b) An accurate property development plan;

(c) An onsite system description;

(d) A lot map or equivalent plat map for the property;

(e) Documentation of any hardship claimed;

(f) All other information the agent finds necessary to complete the application.

(4) An agent may issue an Authorization Notice valid for up to one year to place into service or change the use of an existing onsite system when there is no increase in projected daily sewage flow and the design flow is not exceeded, if:

(a) The existing system is not failing;

(b) All set-backs between the existing system and the structure can be maintained; and

(c) In the agent’s opinion, the proposed use would not create a public health hazard on the ground surface or in public surface waters.

(5) An agent may issue an Authorization Notice valid for up to one year to place into service or change the use of an existing system when projected daily sewage flow would increase by not more than 300 gallons above the design capacity and not more than 50 percent of the design capacity for the system if:

(a) The existing system is not failing;

(b) All set-backs between the existing system and the structure can be maintained;

(c) A full system replacement area is available for each system on the property and meets all siting requirements in this division except those relating to soil conditions and groundwater; and

(d) In the agent's opinion, the proposed increase in sewage flow would not create a public health hazard or pollute waters, as a result of adversely impacting the functioning of the system.

(6) When the projected daily sewage flow would increase by more than 300 gallons above the design capacity or by more than 50 percent of the design capacity of the system, a site evaluation approval under OAR 340-071-0150 and a construction-installation permit are required to place into service or change the use of a system.

(7) Personal hardship.

(a) The agent may issue an Authorization Notice allowing a temporary dwelling to use an existing system serving another single-family dwelling to provide housing for a person suffering hardship or for an individual providing care for such a person if:

(A) The agent receives a hardship approval issued under local planning ordinances;

(B) The system is not failing; and

(C) The agent receives evidence that local zoning and land use planning regulations allow placing a hardship temporary dwelling on the subject property.

(b) The Authorization Notice remains in effect for a specified period not to exceed 5 years, but may not exceed cessation of the hardship. The Authorization Notice may be extended for additional periods upon application under the requirements in section (3) of this rule.

(c) The agent must impose conditions in the Authorization Notice that are necessary to protect public health.

(8) Temporary placement.

(a) The agent may issue an Authorization Notice allowing a temporary dwelling to use an existing system serving another single-family dwelling to provide temporary housing for a family member in need if:

(A) The agent receives evidence that the family member is in need of temporary housing;

(B) The system is not failing;

(C) A full system replacement area is available; and

(D) The agent receives evidence that local zoning and land use planning regulations allow placement of a temporary dwelling on the subject property.

(b) The Authorization Notice may authorize use for no more than two years and is not renewable. The agent must impose conditions in the Authorization Notice necessary to protect public health. If the system fails during the temporary placement and additional

replacement area is no longer available, the owner must disconnect the temporary dwelling from the system.

(9) If the conditions of sections (4), (5), (7), and (8) of this rule are not satisfied, the agent must either deny the Authorization Notice or withhold issuance until necessary alterations or repairs are made to the system.

(a) Alteration or repair requires a permit under OAR 340-071-0160, 340-071-0210, or 340-071-0215. The agent must credit the Authorization Notice fee submitted with the Authorization Notice application toward the permit fee.

(b) The agent may require submitting the exhibits described in OAR 340-071-0160(2) to complete the permit application and must issue or deny the permit under OAR 340-071-0160.

(10) If the Authorization Notice is denied due to the requirements in section 6, the fees may be applied toward the construction-installation permit fee or site evaluation required under OAR 340-071-0150.

(11) Upon the applicant's request, DEQ will review an Authorization Notice an agent denied. The application for review must be submitted to DEQ in writing within 45 days of the Authorization Notice denial along with the denial review fee in OAR 340-071-0140(3) and other information DEQ finds necessary to complete the review. DEQ will prepare a report of the review.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 11-1991, f. & cert. ef. 7-3-91; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0210
Alteration of Existing Onsite Wastewater Treatment Systems

(1) Permit required. A person may not alter or increase the design capacity of an existing onsite wastewater treatment system not under a WPCF permit without first obtaining an alteration permit under this rule or a construction-installation permit under OAR 340-071-0160, as applicable. The permit application procedure is described in OAR 340-071-0160.

(2) An agent may issue an alteration permit if the requirements of either paragraph (a) or (b) of this section are met.

(a) Alterations do not increase the system's design capacity and:

(A) The existing system is not failing;

(B) The site setbacks in Table 1 can be met except that if the setbacks in Table 1 for septic tanks, treatment units, effluent sewers, and distribution units cannot be met, the agent may allow a reasonable installation; and

(C) In the agent's opinion, use of the onsite system would not create a public health hazard or result in water pollution.

(b) Alterations do not exceed the existing system design capacity by more than 300 gpd or 50 percent, and:

(A) The existing system is not failing;

(B) The setbacks in Table 1 can be met; and

(C) In the agent's opinion, using the onsite system would not create a public health hazard or result in water pollution.

(3) An application for a construction-installation permit under OAR 340-071-0160 is required when the existing system design capacity is proposed to be exceeded by more than 300 gpd or more than 50 percent.

(4) Certificate of Satisfactory Completion required. Upon completing installation of that part of a system for which a permit was issued, the system installer must comply with the requirements for pre-cover inspections in OAR 340-071-0170. The agent must issue or deny the Certificate of Satisfactory Completion for the completed construction under OAR 340-071-0175. The projected daily sewage flow into the system may not be increased until the Certificate is issued.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.655, 454.665 & 454.675
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0215
Repair of Existing Systems

(1) The system owner must ensure a failing system is immediately repaired unless, in the opinion of the agent, adverse soil conditions resulting from climatic conditions would likely preclude a successful repair. In that circumstance, the agent may allow a delay in commencing or completing repairs until the soil conditions improve. If the agent authorizes a delay, the agent must issue a notice of noncompliance to the system owner specifying a compliance date and any interim provisions required to prevent a public health hazard and protect public waters.

(2) Except for emergency repairs, a person may not repair a failing system without first obtaining a repair permit under this rule. A person may make emergency repairs without first obtaining a permit if a repair permit application is submitted to the agent within three

working days after the emergency repairs are begun. The permit application procedure is described in OAR 340-071-0160.

(3) Repairs for properties located within a city limit, urban growth boundary, or sanitary district or equivalent, including emergency repairs, must obtain a written statement from the sewer authority confirming a community or area-wide sewerage is not available prior to repairing a failing system.

(4) Certificate of Satisfactory Completion. Upon completion of installation of that part of a system for which a repair permit was issued, the system installer must comply with the requirements for pre-cover inspections in OAR 340-071-0170. The agent must issue or deny the Certificate of Satisfactory Completion under OAR 340-071-0175.

(5) Criteria for permit issuance.

(a) If the site characteristics and standards in OAR 340-071-0220 can be met, the repair installation must conform to the requirements.

(b) If the site characteristics or standards in OAR 340-071-0220 cannot be met, the agent may allow a reasonable repair installation to eliminate a public health hazard, including installing an alternative system as necessary.

(6) Notwithstanding the permit duration specified in OAR 340-071-0160(5), a permit issued under this rule may be effective for a period of less than one year from the date of issue if specified by the agent.

(7) System owners must decommission failing systems under OAR 340-071-0185 if the systems cannot be repaired.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.655, 454.665, 454.675 & 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0220
Standard Subsurface Systems

(1) Criteria For standard subsurface systems. Each site must meet all of the conditions in this section to be approved for a standard subsurface system.

(a) Effective soil depth must extend 30 inches or more below the ground surface as shown in Table 3. A minimum 6-inch separation must be maintained between the layer that limits effective soil depth and the bottom of the absorption facility.

(b) Water table levels must be predicted using standards in OAR 340-071-0130(22).

(A) The permanent water table must be at least 4 feet below the bottom of the absorption facility, except in defined geographic areas where DEQ has determined

through a groundwater study that less separation will not degrade groundwater or threaten public health. In these exception areas, the permanent water table must be at least 24 inches below the ground surface.

(B) A temporary water table must be 24 inches or more below the ground surface. An absorption facility may not be installed deeper than the top of the temporary water table.

(C) A groundwater interceptor may be used to intercept or drain water from an absorption area on sites with adequate slope to permit proper drainage. An agent may require a demonstration that the site can be de-watered before issuing a site evaluation report approving the site. Where required, groundwater interceptors are an integral part of the system but do not need to meet setback requirements to property lines, wells, streams, lakes, ponds, or other surface water bodies that are required for the wastewater absorption area.

(c) Except as paragraph (d) of this section provides, soil with rapid or very rapid permeability must be 36 inches or more below the ground surface. A minimum 18-inch separation must be maintained between soil with rapid or very rapid permeability and the bottom of absorption trenches.

(d) Sites may be approved with no separation between the bottom of absorption trenches and soil with rapid or very rapid permeability as defined in OAR 340-071-0100(150)(a) and (b) and absorption trenches may be placed into such soil if any of the following conditions occur.

(A) A confining layer occurs between the bottom of absorption trenches and the groundwater table and a minimum 6-inch separation is maintained between the bottom of absorption trenches and the top of the confining layer.

(B) A layer of nongravelly (less than 15 percent gravel) soil with sandy loam or finer texture at least 18 inches thick occurs between the bottom of the absorption trenches and the groundwater table.

(C) The design flow does not exceed a loading rate of 450 gallons per acre per day.

(e) Slopes do not exceed 30 percent or the slope/effective soil depth relationship described in Table 3.

(f) The site has not been filled or the soil has not been modified in a way that would, in the agent’s opinion, adversely affect the system’s functioning.

(g) The site is not on an unstable land form that might adversely affect operation of the system.

(h) The site of the initial and replacement absorption facility is not covered by asphalt or concrete or subject to vehicular traffic, livestock, or other activity that would adversely affect the soil.

(i) The site of the initial and replacement absorption facility will not be subjected to excessive saturation from artificial drainage of ground surfaces, driveways, roads, roof drains, or other circumstances.

(j) Setbacks in Table 1 except as modified by this subsection can be met.

(A) Surface waters setbacks. Setback from streams or other surface waters must be measured from bank drop-off or mean yearly high water mark, whichever provides the greatest separation distance.

(B) Lots created before May 1, 1973. For lots or parcels legally created before May 1, 1973, the agent may approve installing a standard or alternative system with a setback from surface waters of less than 100 feet but not less than 50 feet if all other applicable provisions of this rule can be met.

(C) Water lines and sewer lines. Effluent sewer and water line piping constructed of materials that are approved for use within a building in the Oregon State Plumbing Specialty Code may be run in the same trench or may cross. Where the effluent sewer pipe material is not approved for use in a building, it may not be run or laid in the same trench as water pipe unless:

(i) The bottom of the water pipe at all points is set at least 12 inches above the top of the sewer pipe; and

(ii) The water pipe is placed on a solid shelf excavated at one side of the common trench with a minimum, clear, horizontal distance of at least 12 inches from the sewer pipe.

(D) Septic tank setbacks. The agent must encourage placing septic tanks and other treatment units as close as feasible to the minimum separation from the building foundation to minimize clogging the building sewer.

(E) Pressure transport pipe setback to well. Notwithstanding the setback distance in Table 1, the agent may allow the separation distance between a pressure transport pipe and a well to be less than 50 feet but no less than 25 feet when: [Table not included. See ED. NOTE.]

(i) The pressure transport pipe is Schedule 40 or heavier pressure-rated piping;

(ii) The pressure transport pipe is placed within a larger diameter Schedule 40 or heavier encasement pipe, with the pipe ends located at least 50 feet away from the well; and

(iii) All pipe joints in the pressure transport pipe and encasement pipe are solvent-welded or heat welded in accordance with the manufacturer’s specifications.

(k) The agent makes a determination based on the best available science that the nutrient load from the system would not significantly degrade or pollute public waters, or create a public health hazard.

(2) Criteria for sizing absorption fields. Absorption fields must be designed and sized based on the criteria in this section.

(a) Table 2, specifying quantities of sewage flows, or other information the agent determines is reliable with the following exception. [Table not included. See ED. NOTE.] A system must be sized on the basis of 300 gallons sewage flow per day plus 75 gallons per day for the third bedroom when the system:

(A) Is proposed to serve a single-family dwelling on a lot of record created before March 1, 1978, that is too small to accommodate a system sized for a daily sewage flow of 450 gallons; or

(B) Serves specifically planned developments with living units of three or fewer bedrooms and deed restrictions prohibit an increase in the number of bedrooms.

(b) Table 4, specifying the minimum length of absorption trenches based on soil texture and effective soil depth. [Table not included. See ED. NOTE.]

(c) Table 5, specifying the minimum length of absorption trenches based on soil texture and depth to temporary water. [Table not included. See ED. NOTE.]

(d) Strength of the wastewater. If the strength of the wastewater exceeds the maximum limits for residential strength wastewater or the contents of the wastewater are atypical of residential strength wastewater or pose a threat to groundwater, public health, or the environment, the wastewater must be pretreated to acceptable levels before being discharged into a standard or alternative system.

(3) Septic tank.

(a) Liquid capacity.

(A) The quantity of projected daily sewage flow and design flow for a facility must be estimated from Table 2. For establishments not listed in Table 2, the agent must determine the projected daily sewage flow and design flow. [Table not included. See ED. NOTE.]

(B) A septic tank that serves a commercial facility must have a liquid capacity of at least two times the design flow or projected daily sewage flow, whichever is greater, unless the agent authorizes otherwise. In all cases the capacity must be at least 1,000 gallons.

(C) The capacity of a septic tank that serves a single-family dwelling must be based on the number of bedrooms in the dwelling. For a dwelling with 4 or fewer bedrooms, the tank capacity must be at least 1,000 gallons. Septic tank capacity must be at least 1,500 gallons for dwellings with more than 4 bedrooms.

(D) The agent may require a larger capacity than this subsection specifies as needed for special or unique waste characteristics, such as flow patterns, volumes, waste strength, or facility operation.

(b) Installation requirements.

(A) Septic tanks must be installed on a level, stable base that will not settle.

(B) Septic tanks located in high groundwater area must be weighted or provided with an antibuoyancy device to prevent flotation under the manufacturer's instructions.

(C) Tanks must be installed with at least one watertight riser extending to the ground surface or above. The riser must have a minimum diameter of 20 inches when the soil cover above the tank does not exceed 36 inches. The riser must have a minimum diameter of 30 inches when the soil cover above the tank exceeds 36 inches or when the tank capacity exceeds 3,000 gallons. A gasketed cover must be provided and securely fastened or weighted to prevent unauthorized access.

(D) Tanks must be installed in a location that provides access for maintenance.

(E) Where practicable, the sewage flow from an establishment must be consolidated into one septic tank.

(F) The agent may allow a removable plug to be placed in the top of a septic tank inlet sanitary tee if the septic tank discharges directly into a gravity-fed absorption facility.

(G) After installation all tanks must prove watertightness under OAR 340-073- 0025.

(H) Unless the agent allows otherwise, an effluent filter meeting the requirements of OAR 340-073-0056 must be installed at the septic tank outlet if a tank serves a commercial facility. A service access riser and cover meeting the requirements of 340-071-0220(3)(b)(C) must be placed above the effluent filter.

(c) Construction. Tank construction must comply with minimum standards in OAR chapter 340, division 073, unless otherwise DEQ authorizes otherwise in writing.

(d) Multi-compartment tank requirement.

(A) With the exception in paragraph (B) of this subsection, if a sewage ejector pump precedes a septic tank, the tank must have been manufactured as a multi- compartment tank under requirements in this division and OAR chapter 340, division 073. An effluent filter must be installed unless the agent allows other methods with equal or better performance in preventing suspended solids from passing to the drainfield.

(B) If the sewage ejector pump preceding the septic tank at a single-family residence receives wastewater from only a clothes washing machine and a sink, a single-compartment septic tank may be used in lieu of a multi-compartment septic tank. The tank must meet the minimum capacity requirement in paragraph (a) of this section, and an effluent filter must be installed in the tank's outlet tee fitting. Alternatively, the agent may allow the filter to be placed in a separate vault and riser located just outside the septic tank or may authorize other alternatives as appropriate.

(4) Distribution techniques. Absorption trenches must be constructed according to one of the methods in this section.

(a) Gravity-fed equal distribution (including loop).

(A) Equal distribution must be used on generally level ground. All trenches and piping must be level within a tolerance of plus or minus 1 inch. All lateral piping must be at the same elevation.

(B) A pressure-operated hydrosplitter may be used to achieve equal distribution.

(C) To determine the total useable area of a looped soil absorption facility, the agent must add the sum of the lengths of the parallel absorption trenches and the lengths of up to two absorption trenches intersecting the parallel trenches.

(b) Serial distribution. Serial distribution is generally used on sloping ground. Each trench must be level within a tolerance of plus or minus 1 inch. Serial distribution may be a combination of equal distribution and serial distribution.

(c) Pressurized distribution systems. Pressurized distribution must satisfy the requirements in OAR 340-071-0275.

(5) Distribution boxes and drop boxes.

(a) Construction. Distribution box and drop box construction must comply with standards in OAR 340-073-0035 and 340-073-0040.

(b) Foundation. All distribution boxes and drop boxes must be bedded on a stable, level base.

(c) In all gravity distribution techniques, the connection of the effluent piping to the distribution piping must include at least one distribution or drop box or other device acceptable to the agent as a means for locating and monitoring the absorption field.

(6) Dosing tanks and dosing septic tanks.

(a) Tank construction must comply with the standards in OAR chapter 340, division 73 unless DEQ authorizes otherwise in writing.

(b) The tank must be installed on a stable, level base at a location that provides access for maintenance.

(c) The tank must be provided with at least one watertight service access riser extending to the ground surface or above. The riser must have a minimum diameter of 20 inches when the soil cover above the tank does not exceed 36 inches. The riser must have a minimum diameter of 30 inches when the soil cover above the tank exceeds 36 inches. A gasketed cover must be securely fastened or weighted to prevent unauthorized access.

(d) A tank located in a high groundwater area must be weighted or provided with an antibuoyancy device to prevent flotation under the tank manufacturer's instructions.

(7) Absorption trenches.

(a) Absorption trenches must be constructed under the standards in this section unless otherwise authorized in this division.

(A) Minimum bottom width of trench — 24 inches.

(B) Minimum depth of trench:

(i) Equal or looped distribution —18 inches.

(ii) Serial distribution — 24 inches.

(iii) Pressure distribution — 18 inches.

(C) Maximum depth of trench — 36 inches.

(D) Maximum length of an individual trench — 150 linear feet, unless the agent authorizes otherwise in writing.

(E) Minimum distance of undisturbed earth between trenches — 8 feet.

(b) The bottom of the trench must be level within a tolerance of plus or minus 1 inch end to end and level from side to side.

(c) When the sidewall within a trench has been smeared or compacted, sidewalls must be raked to ensure permeability.

(d) Trenches must be constructed to prevent septic tank effluent from flowing backwards from the distribution pipe to undermine the distribution box, the septic tank, or any portion of the distribution unit.

(e) Drain media must extend the full width and length of the trench to a depth of at least 12 inches with at least 6 inches of drain media under the distribution pipe and at least 2 inches over the distribution pipe.

(f) Before backfilling the trench, the drain media must be covered with filter fabric, untreated building paper, or other material the agent approves.

(g) If trenches are installed in sandy loam or coarser soils, filter fabric or other nondegradable material the agent approves must be used to cover the drain media.

(8) Trench backfill.

(a) The installer must backfill the system. Backfill must be carefully placed to prevent damage to the system.

(b) A minimum of 6 inches of backfill is required. 12 inches is required in serial systems.

(c) Backfill must be free of large stones, frozen clumps of earth, masonry, stumps, waste construction materials, or other materials that could damage the system.

(9) Header pipe. Header pipe must be watertight, have a minimum diameter of 3 inches, and be bedded on undisturbed earth. Where distribution boxes or drop boxes are used, the header pipe between the box and the distribution pipe must be at least 4 feet in length and be installed level.

(10) Distribution pipe.

(a) Distribution pipes must have a minimum diameter of 3 inches.

(b) Each disposal trench must have distribution piping that is centered in the trench and laid level within a tolerance of plus or minus 1 inch.

(c) Distribution pipe must comply with standards in OAR 340-073-0060(4).

(d) All perforated pipe must be installed with centerline markings up.

(11) Effluent sewer. The effluent sewer must extend at least 5 feet beyond the septic tank before connecting to the distribution unit. It must be installed with a minimum fall of 4 inches per 100 feet and at least 2 inches of fall from one end of the pipe to the other. In addition, there must be a minimum difference of 8 inches between the invert of the septic tank outlet and either the invert of the header to the distribution pipe of the highest lateral in a serial distribution field or the invert of the header pipe to the distribution pipes of an equal distribution absorption field. A minimum 18-gauge, green-jacketed tracer wire or green color-coded metallic tape must be placed above the effluent sewer pipe.

(12) Curtain drain construction. Unless the agent authorizes otherwise, curtain drains must comply with the following requirements.

(a) Ground slope must be at least 3 percent, or other landform features such as an escarpment must allow for effective drainage.

(b) The curtain drain must extend at least 6 inches into the layer that limits effective soil depth or to a depth adequate to effectively dewater the site.

(c) Trench width must be a minimum of 12 inches.

(d) Perforated pipe must have a minimum diameter of 4 inches and must meet the requirements in OAR 340-073-0060(4).

(e) Perforated pipe must be installed at least 2 inches above the bottom and along the full length of the trench and must be covered by a minimum of 10 inches of drain media.

(f) The curtain drain must be filled with drain media to within 12 inches of the ground surface.

(g) Outlet pipe must be rigid, smooth-wall, solid Schedule 40 pipe with a diameter of at least 4 inches. A flap gate or rodent guard must be installed.

(h) Filter fabric must be placed over the drain media.

[ED. NOTE: All tables are found in OAR 340-071-0800.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 7-2008, f. 6-27-08, cert. ef. 7-1-08; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14; DEQ 11-2014, f. & cert. ef. 10-15-14

340-071-0260
Alternative Systems, General

(1) Application requirements. The requirements in this division and OAR chapter 340, division 073 for siting, constructing, and maintaining standard subsurface systems apply to alternative systems unless the standards for alternative systems in this division provide otherwise.

(2) Alternative system inspections.

(a) Agents may perform periodic inspections of installed alternative systems. System owners must pay the alternative system inspection fee in OAR 340-071-0140(3) for the inspection upon billing by the agent.

(b) The agent must prepare a report of each inspection listing system deficiencies, corrections required, and timetables for correction, and will provide a copy to the system owner. The agent may follow up as necessary to ensure proper corrections.

(c) The agent may require a certified maintenance provider conduct the alternative system inspection and prepare a report in lieu of an inspection by the agent as follows:

(A) The report must list system deficiencies, corrections required, and an estimated date of correction;

(B) For ATT systems, the maintenance provider must be certified by the manufacturer to do service on the ATT.

(C) The system owner is responsible for any costs associated with alternative system inspections made by maintenance providers, including but not limited to labor, parts, and services.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 9-1984, f. & ef. 5-29-84; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0265
Capping Fills

(1) Criteria for approval. Each site approved for a capping fill system must meet all the following conditions:

(a) Slope does not exceed 12 percent.

(b) Temporary water table is not closer than 18 inches to the ground surface at any time during the year. A 6-inch minimum separation must be maintained between the bottom of the absorption trench and the temporary water table.

(c) Where a permanent water table is present, a minimum 4-foot separation must be maintained between the bottom of the absorption trench and the water table.

(d) Except as provided in paragraph (e) of this section, where material with rapid or very rapid permeability is present, a minimum 18-inch separation must be maintained between the bottom of the absorption trench and soil with rapid or very rapid permeability.

(e) Sites may be approved with no separation between the bottom of the absorption trenches and soil with rapid or very rapid permeability (as defined in OAR 340-071-0100(150)(a) or (b)), and absorption trenches may be placed into such soil if any of the following conditions occur.

(A) A confining layer occurs between the bottom of absorption trenches and the temporary groundwater table and a minimum 6-inch separation is maintained between the bottom of absorption trenches and the top of the confining layer.

(B) A layer of non-gravelly (less than 15 percent gravel) soil with sandy loam or finer texture at least 18 inches thick occurs between the bottom of the absorption trenches and the groundwater table.

(C) The design flow does not exceed a loading rate of 450 gallons per acre per day.

(f) Effective soil depth is 18 inches or more below the natural soil surface.

(g) Soil texture from the ground surface to the layer that limits effective soil depth is no finer than silty clay loam.

(h) A minimum 6-inch separation is maintained between the bottom of the absorption trench and the layer that limits effective soil depth.

(i) The system can be sized according to effective soil depth in Table 4.

(2) Installation requirements. The cap must be constructed as the permit requires. Unless the agent requires otherwise, construction must follow this sequence:

(a) The agent must examine and approve the soil before placing the cap. The texture of the soil used for the cap must be the same textural class as or one textural class finer than the natural topsoil unless otherwise allowed in this division.

(b) Capping fills must be constructed between June 1 and October 1 unless the agent allows otherwise. The upper 18 inches of natural soil must not be saturated or have a moisture content that causes loss of soil structure and porosity when worked.

(c) The absorption area and the borrow site must be scarified to destroy the vegetative mat.

(d) The system must be installed as specified in the construction-installation permit with a minimum 10-foot separation between the edge of the fill and the absorption facility.

(e) Filter fabric must be used between the drain media and the soil cap, unless the agent authorizes otherwise.

(f) Fill must be applied to the fill site and worked in so that the two contact layers, native soil and fill, are mixed. Fill material must be evenly graded to a final depth of 10 inches over the drain media for an equal system or 16 inches over the drain media for a serial system to allow for appropriate settled depths. Both initial cap and repair cap may be constructed at the same time.

(g) The site must be landscaped according to permit conditions and be protected from livestock, automotive traffic, and other activity that could damage the system.

(3) Required inspections. Unless the agent waives it, the following inspections must be performed for each capping fill installed.

(a) Inspecting both the absorption area and borrow material before cap construction for scarification, soil texture, and moisture content.

(b) Inspecting the installed absorption facility before covering.

(c) Inspection after the cap is placed to determine adequate contact between fill material and native soil (no obvious contact zone visible), adequate depth of material, and uniform distribution of fill material.

(d) Final inspection after landscaping or other erosion control measures are established.

[ED. NOTE: All table s are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-

20-13, cert. ef. 1-2-14

340-071-0275
Pressurized Distribution Systems

(1) Pressurized distribution systems receiving residential strength wastewater may be permitted on any site meeting the requirements for installation of a standard onsite system and on other sites where this method of effluent distribution is preferable and the site conditions in this rule can be met.

(2) Except as allowed in OAR 340-071-0220(1)(d), pressurized distribution systems must be used where depth to soil with rapid or very rapid permeability as defined in OAR 340-071- 0100(150)(a) and (b) is less than 36 inches and the minimum separation distance between the bottom of the absorption trench and such soil is less than 18 inches.

(3) Pressurized distribution systems installed in soil with rapid or very rapid permeability as defined in OAR 340-071-0100(150)(a) and (b) in areas with permanent water tables may not discharge more than 450 gallons of effluent per 1/2 acre per day except where:

(a) Groundwater is degraded and designated as a non-developable resource by the Oregon Water Resources Department; or

(b) A detailed hydrogeological study discloses loading rates exceeding 450 gallons per 1/2 acre per day would not increase the nitrate-nitrogen concentration in the groundwater beneath the site or at any down gradient location to above 5 mg/L.

(4) Materials and construction.

(a) General.

(A) All materials used in pressurized systems must be structurally sound, durable, and capable of withstanding normal stresses incidental to installation and operation.

(B) Pump wiring must comply with applicable building, electrical, or other codes. An electrical permit and inspection from the Department of Consumer and Business Services, Building Codes Division, or the municipality with jurisdiction, is required for pump wiring installation.

(C) A single-compartment dosing septic tank may not be used in a system with pressurized distribution laterals unless the tank is partitioned with a flow-through below the tank's lowest liquid level. The flow through port must be at 65 to 75 percent of the minimum liquid level and be at least 4" in diameter.

(b) Pressurized distribution piping. Piping, valves, and fittings for pressurized systems must meet the following minimum requirements.

(A) All pressure transport, manifold, lateral piping, and fittings must meet the requirements in OAR 340-073-0060(3).

(B) Pressure transport piping must be uniformly supported along the trench bottom. The agent may require the piping to be bedded in sand or other material approved by the agent. A minimum 18 gauge, green-jacketed tracer wire or green color-coded metallic locate tape must be placed above piping.

(C) Orifices must be located on top of the pipe, except as noted in subsection 4(b)(I) of this rule.

(D) The ends of lateral piping must be constructed with long sweep elbows or an equivalent method to bring the end of the pipe to finished grade. The ends of the pipe must be provided with threaded plugs, caps, or other devices acceptable to the agent to allow for access to and flushing the lateral.

(E) All joints in the manifold, lateral piping, and fittings must be solvent-welded using the appropriate joint compound for the pipe material. Pressure transport piping may be solvent-welded or rubber-ring jointed.

(F) A shut off valve must be placed on the pressure transport pipe in or near the dosing tank when appropriate.

(G) A check valve must be placed between the pump and the shut off valve when appropriate.

(H) All orifices must be covered by a protective, durable, noncorrosive orifice shield designed to keep orifices from being blocked by drain media or other system components. The shields or piping must be removable for access to the orifices.

(I) The agent may specify alternate orifice orientation and valve arrangements for conditions such as extended freezing temperatures, temporary or seasonal use, or effluent characteristics.

(J) Where operating a pump could result in siphonage of effluent to below the normal off level of the pump, an anti-siphon measure in the form of a non- discharging valve designed for the specific purpose must be used. The anti-siphon valve must be installed and operated under manufacturer's specifications.

(c) Absorption trench sizing and construction.

(A) A system using absorption trenches must be designed and sized as OAR 340- 071-0220(2) requires.

(B) Absorption trenches must be constructed using the specifications for the standard disposal trench unless otherwise authorized by the agent.

(C) The trench must contain drain media at least 12 inches deep, with at least 6 inches of media under the pressure distribution laterals and sufficient media above the laterals to meet or cover the orifice shields to provide a smooth, even cover.

(D) The top of the drain media must be covered with filter fabric or other nondegradable material permeable to fluids that will not allow passage of soil particles coarser than very fine sand. In unstable soils, sidewall lining may be required.

(d) Seepage bed construction.

(A) Seepage beds may be used instead of absorption trenches in soil as defined in OAR 340-071-0100(150)(b) if flows do not exceed 600 gpd.

(B) The effective seepage area must be based on the bottom area of the seepage bed. The area must be at least 200 square feet per 150 gallons per day waste flow.

(C) Beds must be installed at least 18 inches deep (12 inches with a capping fill) but not deeper than 36 inches into the natural soil. The seepage bed bottom must be level.

(D) The top of the drain media must be covered with filter fabric or other nondegradable material that is permeable to fluids but will not allow passage of soil particles coarser than very fine sand.

(E) The bed must contain drain media at least 12 inches deep with at least 6 inches of media under the pressure distribution laterals and sufficient media above the laterals to meet or cover the orifice shields to provide a smooth, even cover.

(F) Pressurized distribution piping must be horizontally spaced not more than 4 feet apart and not more than 2 feet away from the seepage bed sidewall. At least 2 parallel pressurized distribution pipes must be placed in the seepage bed.

(G) A minimum of 10 feet of undisturbed earth must be maintained between seepage beds.

(5) Hydraulic design criteria. Pressurized distribution systems must be designed for appropriate head and capacity.

(a) Head calculations must include maximum static lift, pipe friction, and orifice head requirements.

(A) Static lift where pumps are used must be measured from the minimum dosing tank level to the level of the perforated distribution piping.

(B) Pipe friction must be based upon a Hazen Williams coefficient of smoothness of 150. All pressure piping and fittings on laterals must have a minimum diameter of 2 inches unless submitted plans and specifications show a smaller diameter pipe is adequate.

(C) A minimum head of 5 feet at the remotest orifice and no more than a 10 percent flow variation between the nearest and remotest orifice in an individual unit are required.

(b) The capacity of a pressurized distribution system refers to the rate of flow given in gallons per minute (gpm).

(A) Lateral piping must have discharge orifices drilled a minimum diameter of 1/8 inch and evenly spaced no more than 24 inches apart in coarse textured soils or no more than 4 feet apart in finer textured soils.

(B) The system must be dosed at a rate not to exceed 20 percent of the projected daily sewage flow.

(C) The effect of back drainage of the total volume of effluent within the pressure distribution system must be evaluated for its impact on the dosing tank and system operation.

(6) Operation and maintenance. The operation and maintenance of a pressurized distribution system, including service contracts, must meet the requirements under OAR 340-071-0132.

(7) Required inspections. The agent must perform the following inspections for each installed pressure distribution system, unless waived by the agent:

(a) Inspect the installed absorption facility and distribution network before covering.

(b) Inspect to confirm the pump, floats, and controls are powered on, set according to the approved plans, and functioning properly. The agent may require the certified maintenance provider under contract for inspecting, operating, and maintaining the system to conduct this inspection and submit a completed start-up report on a DEQ-approved form to the agent.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.775 & 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0280
Seepage Trench System

(1) Criteria for approval. Construction permits may be issued for seepage trench systems on lots created before January 1, 1974, for sites that meet all the following conditions.

(a) Groundwater will not be degraded.

(b) Lot or parcel size will not accommodate standard subsurface system disposal trenches with a design flow of 450 gpd.

(c) All other requirements for standard subsurface systems can be met.

(2) Design criteria.

(a) The maximum depth allowed for a seepage trench is 42 inches.

(b) The seepage trench system must be sized according to the following formula: length of seepage trench = 4 x (length of standard disposal trench) divided by (3 + 2D), where D = depth of drain media below distribution pipe in feet. Maximum depth of drain media

(D) is 2 feet.

(c) The design flow is limited to a maximum of 450 gallons.

Statutory/Other Authority: ORS 454.625 & 468.020
Statutes/Other Implemented: ORS 454.615 & 454.775
History: DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 15-1986, f. & ef. 8-6-86; DEQ 8-1983, f. & ef. 5-25-83; DEQ 10-1981, f. & ef. 3-20-81

340-071-0290
Conventional Sand Filter Systems

(1) Criteria for approval. Construction of conventional sand filter systems may be approved for single-family dwellings or commercial facilities.

(2) Sites approved for sand filter systems. Sand filters may be permitted on any site meeting requirements for standard onsite systems in OAR 340-071-0220 or for pressurized distribution systems in OAR 340-071-0275 if site conditions in this section can be met.

(a) Separation from the temporary groundwater table must satisfy the requirements in this subsection.

(A) The high level attained by a temporary groundwater table is:

(i) Twelve inches or more below ground surface where:

(I) The ground slope does not exceed 12 percent;

(II) Equal distribution methods are achieved by gravity or using either a hydrosplitter or pressurized distribution method; and

(III) A capping fill is placed under OAR 340-071-0265(2) and 340-071-0265(3)(a) through (c).

(ii) Eighteen inches or more below ground surface where equal distribution methods are achieved by gravity or through the use of a hydrosplitter or pressurized distribution.

(iii) Twenty-four inches or more below ground surface where serial distribution methods are used.

(B) Methods used in OAR 340-071-0315 for tile dewatering systems may be used to achieve separation distances from temporary groundwater.

(C) Absorption trenches may not be installed deeper than the highest level of the temporary water table. The minimum backfill depth within the absorption trenches is 6 inches for trenches using equal distribution methods and 12 inches for trenches using serial distribution.

(b) Separation from the permanent groundwater table must satisfy the requirements in this subsection.

(A) The highest level attained by a permanent water table does not exceed the minimum separation distance from the bottom of the absorption area as follows:

(i) For gravel and Soil Group A: sand, loamy sand, sandy loam — 24 inches;

(ii) For Soil Group B: loam, silt loam, sandy clay loam, clay loam — 18 inches;

(iii) For Soil Group C: silty clay loam, silty clay, clay, sandy clay — 12 inches.

(B) Shallow absorption trenches placed not less than 12 inches into the original soil profile may be used with a capping fill to achieve separation distances from permanent groundwater. The fill must be placed under OAR 340-071-0265(2) and 340-071-0265(3)(a) through (c).

(C) Methods used in OAR 340-071-0315 for tile dewatering systems may be used to achieve separation distances from permanent groundwater.

(c) Sand filter systems installed in soils with rapid or very rapid permeability as defined in OAR 340-071-0100(150)(a) and (b) in areas with permanent water tables may not discharge more than 450 gallons of effluent per 1/2 acre per day except where:

(A) Groundwater is degraded and designated as a nondevelopable resource by the Oregon Water Resources Department; or

(B) A detailed hydrogeological study determines loading rates exceeding 450 gallons per 1/2 acre per day would not increase nitrate-nitrogen concentration in the groundwater beneath the site or any downgradient location to above 5 mg/L.

(d) Sand filter systems may be installed in soils, fractured bedrock, or saprolite diggable with a backhoe if, in the judgment of the agent, the soils, fractured bedrock, or saprolite is permeable to the extent that effluent will absorb adequately and not hinder the performance of the filter or absorption field. The agent may require that an absorption test be conducted to determine the permeability of the bedrock or saprolite. Test methods must be acceptable to DEQ.

(A) Where ground slope does not exceed 12 percent, a capping fill, 12-inch deep trench may be installed under OAR 340-071-0265, except that when installed in fractured bedrock or saprolite, the cap material must be Soil Group B.

(B) Where ground slope exceeds 12 percent but is not greater than 30 percent, a standard 24-inch deep trench may be installed.

(e) A sand filter absorption facility may be installed on slopes of 30 percent or less if other conditions in this section are satisfied.

(f) An absorption facility following a sand filter may be installed on slopes above 30 percent and up to 45 percent where:

(A) Design flow does not exceed 450 gallons and the installation is sized under sand filter absorption area criteria;

(B) The soil is diggable with a backhoe to a depth of at least 36 inches and 12 inches below the bottom of the trench; and

(C) The temporary water table is at least 30 inches below the ground surface and 6 inches below the bottom of the trench.

(g) Setbacks in Table 1 can be met, except the minimum separation distance between the sewage absorption area and surface waters must be at least 50 feet.

(3) Absorption trenches. Absorption trenches for sand filter absorption facilities must satisfy the requirements in this section.

(a) The minimum length of a standard absorption trench per 150 gallons of sewage flow is:

(A) For gravel and Soil Group A: sand, loamy sand, sandy loam -- 35 linear feet;

(B) For Soil Group B: loam, silt loam, sandy clay loam, clay loam -- 45 linear feet;

(C) For Soil Group C: silty clay loam, silty clay, sandy clay, clay -- 50 linear feet;

(D) For permeable saprolite or fractured bedrock -- 50 linear feet;

(E) For high shrink-swell clays (Vertisols) -- 75 linear feet.

(b) On lots created before January 1, 1974, which do not have sufficient, suitable area for an absorption facility sized under this section, the agent may allow seepage trenches if:

(A) The design criteria and limitations in OAR 340-071-0280(2) are met;

(B) The soil is not a high shrink-swell clay;

(C) The temporary water table is at least 30 inches below the ground surface; and

(D) All other requirements of this rule are met.

(c) Trench designs in Vertisols.

(A) Absorption trenches in Vertisols must contain 24 inches of drain media and 24 inches of soil backfill in areas with an annual rainfall of 25 inches or less, minimum slopes of 5 percent, and a temporary water table at least 48 inches below the ground surface.

(B) Seepage trenches in Vertisols containing less than 24 inches of drain media may be used if designed under the criteria and limitations in OAR 340-071-0280 in areas with an annual rainfall of 25 inches or less, minimum slopes of 5 percent, and a temporary water table at least 48 inches below the ground surface.

(d) Seepage bed construction.

(A) Seepage beds may be used instead of absorption trenches in soil as defined in OAR 340-071-0100(150)(b).

(B) The effective seepage area must be based on the bottom area of the seepage bed. The area must be at least 70 square feet per 150 gallons per day waste flow.

(C) Materials and construction requirements from 340-071-0275(4)(c) apply, except as otherwise provided for in this section.

(4) Bottomless sand filter. Sites may use a bottomless sand filter if the site meets the criteria in this section and section (3) of this rule.

(a) Saprolite; fractured bedrock; gravel; or soil textures of sand, loamy sand, or sandy loam occur in a continuous section at least 2 feet thick in contact with and below the bottom of the sand filter.

(b) The agent determines the saprolite, fractured bedrock, gravel, or soil is permeable over the basal area to the extent that effluent will absorb adequately and not hinder the performance of the filter. The agent may require that an absorption test be conducted to determine the permeability of the basal area. Test methods must be acceptable to DEQ.

(c) The application rate is based on the design flow in OAR 340-071-0220(2)(a) and the basal area of the sand.

(d) The water table is at least 24 inches below the ground surface throughout the year, and a minimum 24-inch separation is maintained between a water table and the bottom of the sand filter.

(5) Materials and construction.

(a) All materials used in sand filter system construction must be structurally sound, durable, and capable of withstanding normal installation and operation stresses. Component parts subject to malfunction or excessive wear must be readily accessible for repair and replacement.

(b) All filter containers must be placed over a stable, level base.

(c) In a gravity-operated distribution system, the invert elevation of the outlet end of the underdrain pipe must be at or above the final settled ground elevation of the highest absorption trench.

(d) Piping and fittings for the sand filter distribution system must comply with the requirements for pressure distribution systems in OAR 340-071-0275.

(e) Septic tanks, dosing tanks, and other components must comply with the requirements in OAR 340-071-0220 unless this rule specifies different requirements.

(f) The design and construction requirements in OAR 340-071-0295 must be met. A bottomless sand filter unit does not require a watertight floor, but does require watertight walls unless otherwise authorized by the agent.

(g) A bottomless sand filter unit does not require a minimum 10-foot separation between the original and replacement unit.

(6) Gravelless absorption method.

(a) Absorption trenches following a sand filter may be constructed without using drain media if they meet the criteria in this section.

(A) Absorption trenches must be 12 inches wide by 10 inches deep and incorporate pressurized distribution and a chamber constructed of half sections of

12-inch diameter plastic irrigation pipes or an equivalent pipe material as determined by the agent. DEQ may consider deviations to the depth requirement in this rule for alternative drainfield products.

(B) Trenches must be level end to end and across their width.

(C) The agent may allow trenches on minimum 3-foot centers maintaining at least 2 feet of undisturbed earth between parallel trench sidewalls.

(D) Pressurized distribution piping must meet the requirements of OAR 340-071-0275(4)(b), except that orifice shields are not required.

(E) Distribution piping must be perforated with 1/8 inch diameter orifices on maximum 2-foot centers at the 12 o'clock position. The hydraulic design must provide at least a 2-foot residual head at the distal orifice.

(F) The chambers must have an adequate footing to support the soil cover and all normal activity and at a minimum must be constructed of 12-inch plastic irrigation pipe rated at 43 pounds per square inch and meeting the appendix standards of ASTM D-2241.The agent may allow other pipe materials that demonstrate equivalent durability and strength to 12-inch plastic irrigation pipe. Each line must be equipped with a minimum 6-inch diameter inspection port.

(b) Except as noted in paragraph (a) of this section, all construction and siting criteria for conventional sand filter systems in this division must be met. This includes but is not limited to the absorption field sizing for sand filter systems in OAR 340-071-0290(3) and area sizing for an initial and replacement absorption facility meeting standard trench separations in OAR 340-071-0220(7)(a)(E). Plans must verify that a system can be installed on the parcel that will meet the requirements in OAR 340-071-0290(3) and 340-071-0220(7)(a)(E) and all other applicable rules before a gravelless absorption method is approved.

(c) A gravelless absorption method may be used wherever this division allows a standard or alternative-type absorption trench for sand filter systems, except in Vertisols.

(d) A method to prevent burrowing animals from entering the chamber must be provided in areas where this is likely to occur.

(7) Operation and maintenance. The operation and maintenance of conventional and other sand filter systems, including service contracts for commercial sand filters permitted on or after March 1, 2005, and residential sand filters permitted after January 1, 2014, must meet the requirements under OAR 340-071-0132.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.775 & 454.607
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 19-1981, f. 7-23-81, ef. 7-27-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; Administrative correction 2-16-00; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05, Renumbered from 340-071-0305; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0295
Conventional Sand Filter Design and Construction

(1) Criteria for sizing. Systems must be sized based on quantities of sewage flow under OAR 340-071-0220(2)(a).

(2) Minimum filter area:

(a) A sand filter proposed to serve a single-family dwelling must have an effective medium sand surface area of at least 360 square feet. If the design flow exceeds 450 gallons per day, the medium sand surface area must be determined with the following equation: Area = design flow divided by 1.25 gallons per square foot.

(b) A bottomless sand filter following an ATT system must have an effective medium sand surface area of at least 250 square feet. If the design flow exceeds 450 gallons per day, the medium sand surface area must be determined with the following equation: Area = design flow divided by 1.80 gallons per square foot.

(c) Sand filter influent may not exceed concentrations of 300 mg/L BOD5, 150 mg/L TSS, or 25 mg/L oil and grease.

(3) Design criteria.

(a) The interior base of the filter container must be level or constructed at a grade of 1 percent or less to the underdrain piping elevation.

(b) Except for sand filters without a bottom, underdrain piping must meet the requirements in OAR 340-073-0060(2) and must be installed in the interior of the filter container at the lowest elevation. The piping must be level or on a grade of 1 percent or less to the point of passage through the filter container. The pipe perforations or slots must be oriented in the upright or sideways position.

(c) The base of the filter container with the underdrain piping in place must be covered with a minimum of 6 inches of underdrain media. Unless the agent waives it, the underdrain media proposed for a sand filter must be sieved to determine conformance with the criteria in OAR 340-071-0100(173) and a report of the analysis must be provided to the agent. The underdrain piping must be enveloped in an amount and depth of drain media to prevent migration of the underdrain media to the pipe perforations.

(d) A minimum of 24 inches of approved sand filter media must be installed over the filter fabric or underdrain media. The sand filter media must be damp at the time of installation. The top surface of the media must be level. Unless waived by the agent, the sand filter media proposed for each sand filter must be sieve-tested to determine conformance with the criteria in OAR 340-071-0100(126), and a report of the analysis must be provided to the agent.

(e) A minimum of 3 inches of clean drain or underdrain media is required below the distribution laterals, and sufficient media is required above the laterals to meet or cover the orifice shields to provide a smooth, even cover.

(f) A pressurized distribution system meeting the requirements of OAR 340-071-0275(4) and (5) must be constructed as described in paragraph (e) of this section.

(A) Distribution laterals must be spaced a maximum of 30 inches center to center. Orifices must be spaced no more than 30 inches apart.

(B) The ends of the distribution laterals must be designed and constructed to allow flushing of the piping, collectively or individually, using a corrosion- resistant and accessible valve or threaded endcap. The flushed effluent may be discharged to the septic tank or into the sand filter.

(C) The diameters of the distribution manifold and laterals must be at least 1/2 inch in diameter.

(D) A sand filter must be dosed at a rate not to exceed 10 percent of the projected daily sewage flow.

(g) The top of the media in which the pressure distribution system is installed must be covered with filter fabric.

(h) The top of the sand filter area must be backfilled with a soil cover free of rock, vegetation, wood waste, and other materials that may harm the filter. The soil cover must have a textural class no finer than loam unless otherwise authorized by the agent. The soil cover must be at least 6 inches and no more than 12 inches deep.

(i) All piping passing through the sand filter container must be watertight.

(4) Container design and construction.

(a) A reinforced concrete container with watertight walls and floors must be used where watertightness is necessary to prevent groundwater from infiltrating into the filter or to prevent the effluent from exfiltrating from the filter except as otherwise allowed in this division or OAR chapter 340, division 073. The container structure may require a building permit for construction.

(b) The container may be constructed of materials other than concrete where equivalent function, workmanship, watertightness, and at least a 20-year service life can be documented.

(A) Flexible membrane liner (FML) materials must have properties at least equivalent to 30 mil unreinforced polyvinyl chloride (PVC) described in OAR 340-073-0085. For FML materials to be approved for installation:

(i) Field repair instructions and materials must be provided to the purchaser with the liner; and

(ii) The final materials must have factory-fabricated boots suitable for field bonding onto the liner to facilitate the passage of piping through the liner in a waterproof manner.

(B) Where accepted for use, flexible sheet membrane liners must be installed as OAR 340-073-0085 requires.

(C) The backfill around the container must be no steeper than a 3:1 slope (3 feet for every vertical foot) unless otherwise authorized by the agent.

(5) Internal pump option. Where a pump is used to discharge effluent from a sand filter to another treatment unit, a distribution unit, or an absorption facility, the design and construction of the filter may include an internal pump station if the following conditions are met.

(a) The location, design, and construction of the pump station must not conflict with design, construction, and operation of the sand filter system.

(b) The design and construction of the pump, discharge plumbing, controls, and alarm must meet the requirements in OAR 340-073-0055 except subsections (4)(d) and (4)(h).

(c) The pump and related apparatus must be housed in a corrosion-resistant vault designed to withstand stresses and prevent the migration of drain media, sand, or underdrain media to its interior. The vault must have a durable, affixed floor. The vault and lid must provide watertight access to finished grade with a diameter equal to that of the vault and designed to receive treated effluent from the bottom of the sand filter.

(d) The depth of underdrain media and the operating level of the pump cycle and alarm may not allow effluent to come within 2 inches of the bottom of the sand filter media. The pump off-level may be no lower than the invert of the perforations of the underdrain piping.

(e) The internal sand filter pump must be electrically linked to the sand filter dosing apparatus to prevent effluent from entering the sand filter if the internal sand filter pump fails.

(6) Required inspections. The agent must perform the following inspections for each installed sand filter system, unless waived by the agent:

(a) For bottomless sand filter only, inspect the absorption area for scarification, soil texture, and moisture content

(b) Inspect the box or container construction.

(c) Inspect the media size, cleanliness, and installation.

(d) Inspect the construction of the pressure distribution system.

(e) Inspect the installation of filter fabric over the top of the media the distribution system is installed in.

(f) Inspect the sand filter soil cover.

(g) For conventional sand filter only, inspect the absorption facility before covering.

(h) Inspect to confirm the pump, floats, and controls are powered on, set according to the approved plans, and functioning properly. The agent may require the certified maintenance provider under contract for inspecting, operating, and maintaining the system to conduct this inspection and submit a completed start-up report on a DEQ-approved form to the agent.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.775 & 454.607
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0302
Recirculating Gravel Filter (RGF)

(1) Siting and absorption area construction criteria.

(a) RGFs approved for treatment standard 1 may be sited and sized as follows.

(A) In areas with a temporary water table, as specifications for sand filters in areas with temporary groundwater in OAR 340-071-0290 require.

(B) In areas with permanent groundwater, where 4 feet of separation can be maintained between the bottom of the trench and groundwater and the other criteria in OAR 340-071-0290 can be met.

(C) On sites meeting criteria for standard onsite systems in OAR 340-071-0220 or for pressurized systems in OAR 340-071-0275.

(b) RGFs used in conjunction with approved disinfection and approved nitrogen reduction processes and expected to meet treatment standard 2 may be sited and sized as follows.

(A) On sites meeting the criteria for treatment standard 1 in paragraph (a) of this section.

(B) In areas with a permanent water table, as specifications for sand filters in areas with a permanent water table in OAR 340-071-0290 require.

(c) Any type of absorption area permitted for a sand filter system, including the gravel-less absorption method, may be permitted for an RGF system.

(2) Design criteria.

(a) Filter design and dosing.

(A) The filter’s basal or bottom area must be sized based on a maximum organic load. For residential strength wastewater that has been pretreated through a septic tank, the maximum hydraulic load allowable is 5 gal/ft2/day.

(B) For BOD5 waste strengths stronger than residential strength wastewater but not exceeding 400 mg/L, the filter size must be increased proportionately.

(C) Higher strength wastewaters must be pretreated or will require special consideration. In no case may the concentration of greases and oil applied exceed 30 mg/L.

(b) Filter media.

(A) Where CBOD5 removal must be at least 85 percent based upon the raw sewage concentration applied to the septic tank and nitrification of wastewater is necessary, a filter media must consist of 3 feet of very fine washed gravel, 100 percent passing a 3/8-inch sieve with an effective size between 3 and 5 millimeters and a uniformity coefficient of 2 or less. Washed means that negligible fines (less than 1.0 percent) pass a No. 10 sieve.

(B) Where additional removal of BOD5 and denitrification is intended or required, a treatment media may consist of 2 feet of very coarse washed sand, 100 percent passing a 3/8-inch sieve with an effective size between 1.5 and 2.5 millimeters and a uniformity coefficient of 2 or less. Washed means that negligible fines (less than 4.0 percent) pass the No. 100 sieve.

(C) Sieves of 3/8 inch, 1/4 inch, and Nos. 4, 6, 8, 10, 50, and 100 must be used in gradation analysis.

(D) The permittee must provide fresh samples of the intended media for each project before shipment to the project site. A laboratory gradation analysis must be performed and the gradation data plotted on semi-log paper as a gradation curve. The permittee must submit lab data, gradation curve, and a 5-pound sample of the media to the agent for approval. Only approved media may be used.

(c) Filter media must be overlain by a 3-inch bed of 1/2-inch to 3/4-inch washed gravel. The media and gravel may only lightly cover the distribution piping. Unless otherwise authorized, each orifice must be covered by an orifice shield to prevent aerial spray drift.

(d) Filter dosing must use a low pressure distribution piping system operating under adequate head to pressurize the system. The operating head must be a minimum of 5 feet at the remotest orifice and have no more than 10 percent flow variation between the nearest and remotest orifice in an individual unit. Each lateral pipe end must terminate with a screwed plug or cap accessible for removal and flushing. Wherever practical, a valved backflush system must be installed to flush groups of laterals back to a septic tank or elsewhere.

(e) Pressure-distribution piping must be spaced 2 feet center to center in a parallel grid. Orifice spacing must be every 2 feet on laterals. Piping grid edges should be within 1 foot of the filter basal edge.

(f) Filter media must be underlain by a 6-inch bed of a 1/2 to 3/4-inch washed gravel underdrain media. No filter fabric may cover the underdrain media.

(g) Perforated collection pipes must meet requirements in OAR 340-073-0060(2) and be bedded in the underdrain media. Pipes must be at least 4 inches in diameter with no filter fabric wrap. At least 15 lineal feet of collection pipe is required for each 225 square feet of filter basal area.

(h) The filter container must be watertight to suit the design conditions. Underflow must be contained. Groundwater must be excluded. A concrete container may be used. Other materials may be used if equivalent function, workmanship, watertightness, and at least a 20-year service life can be expected.

(3) Recirculation/dilution tank.

(a) A recirculation tank receives septic tank effluent and underflow from the filter. A pumping system at this tank delivers flow to the filter dose piping network according to a

project design. The recirculation tank volume measured from tank floor to tank soffit must be at least equal to the projected daily sewage flow volume.

(b) The recirculation ratio at design flow must be at least 4. Recirculation ratio is the daily volume of recycle divided by design daily volume of the wastewater. A fabricated "T" or "Splitter T" float valve located in the recirculation tank must be used whenever possible. Minimum recirculation tank liquid volume must be at least 80 percent of the gross tank volume when a float valve is used. Alternatively, where required and reasonable, a splitter basin using orifice or weir control may be used to divide underflow 20 percent to the absorption field and 80 percent to recycle on a daily basis. This alternative must use orifice control wherever possible. Minimum recirculation tank liquid volume must be at least 50 percent of the required tank volume when a splitter basin is used.

(c) Evaluation of and design for overflow and surge control at the recirculation tank must be included in the design plans.

(d) An audible or visual high water alarm must be included in the recirculation tank immediately below the overflow level. A latching electrical relay must retain the audible or visual alarm until a site attendant acknowledges it.

(e) Parallel pump start/stop electric controls (usually floats) must be installed to correct any unforeseen high liquid level event and keep sewage contained. This pump start function precludes overflow and must operate in parallel with the start/stop function of a timer and must not interfere with or depend upon a timer position.

(f) All areas of the filter must be wetted 48 times a day or every 30 minutes to achieve the recirculation ratio of at least 4 unless the agent authorizes otherwise.

(g) Testing must demonstrate the recirculation tank is watertight. The designer must witness the testing. Test protocol must be included in the design plans.

(h) A fence or other effective means must restrict access onto the filter. Design and construction must prevent surface water entry onto the filter.

(i) Access openings to the recirculation tank must be provided at each end. Larger tanks must have additional openings. The smallest dimension of any access must be 18 inches. Larger openings must be provided if partially obstructed with piping or other objects. Provisions must be made to remove dregs (settleable solids). Pumps must be readily removable and replaceable without demolition of piping or other components.

(4) Operation and Maintenance standards. The operation and maintenance of a RGF system must meet the requirements under OAR 340-071-0132 and this rule.

(5) Operation and maintenance manual. The designer of an RGF system must ensure that comprehensive and detailed operation and maintenance instructions are provided to the onsite system owner and agent at the time of installation. The instructions must emphasize operating and maintaining the entire system within the parameter ranges for

which it is designed. The information must be presented in a manner that can be easily understood by the owner and include at a minimum:

(a) As-built plans with the name and contact number of the installer;

(b) A description of how the process functions, including diagrams illustrating basic system design and flow path;

(c) A maintenance schedule for all critical components;

(d) Requirements and recommended procedures for periodic removal of residuals from the system;

(e) A detailed procedure for visually evaluating the function of system components;

(f) A description of olfactory and visual techniques for confirming correct process parameters and system performance;

(g) A recommended method for collecting and transporting effluent samples;

(h) Safety concerns that may need to be addressed; and

(i) Emergency contact numbers for maintenance providers and pumpers.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.607, 468B.050 & 468B.055
Hist.: DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0310
Steep Slope Systems

(1) General conditions for approval. Construction-installation permits may be issued for steep slope systems serving single-family dwellings on slopes in excess of 30 percent if all the following requirements can be met.

(a) Slope does not exceed 45 percent.

(b) The soil is well-drained with no evidence of saturation to a depth of 60 inches.

(c) The soil has a minimum effective soil depth of 60 inches.

(2) Construction requirements.

(a) Seepage trenches must be installed at a minimum depth of 30 inches and a maximum depth of 36 inches below the natural soil surface on the downhill side of the trench and must contain a minimum of 18 inches of drain media and 12 inches of native soil backfill.

(b) The system must be sized at a minimum of 75 linear feet per 150 gallons sewage flow.

Statutory/Other Authority: ORS 454.625 & 468.020
Statutes/Other Implemented: ORS 454.615 & 454.775
History: DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 9-1984, f. & ef. 5-29-84; DEQ 8-1983, f. & ef. 5-25-83; DEQ 10-1981, f. & ef. 3-20-81

340-071-0315
Tile Dewatering System

(1) General conditions for approval. Construction permits may be issued for tile dewatering systems if the following requirements can be met:

(a) The site has a natural outlet that will allow a field tile installed on a proper grade around the proposed absorption facility to daylight above annual high water.

(b) Soils are silty clay loam or coarser textured and drainable.

(c) Soils must have a minimum effective soil depth of at least 30 inches in soils with temporary groundwater and at least 72 inches in soils with permanent groundwater unless otherwise authorized by the agent.

(d) Slope does not exceed 3 percent.

(e) All other requirements for the system, except depth to groundwater, can be met. After the field collection drainage tile is installed, the groundwater levels must conform to the requirements of OAR 340-071-0220(1), 340-071-0265(1), 340-071-0290(2), 340-071-0302(1), or 340-071-0345(8).

(2) Construction requirements.

(a) Field collection drainage tile must be installed on a uniform grade of 0.2 to 0.4 feet of fall per 100 feet. The tile drainage trench must be constructed to the minimum depth required in the approved site evaluation report.

(b) A field collection drainage tile trench must be constructed at least 12 inches wide.

(c) Maximum drainage tile spacing must be 70 feet center to center.

(d) The minimum horizontal separation distance between the drainage tile and absorption facility must be 20 feet.

(e) Field collection drainage tile must be rigid, smooth-wall, perforated pipe or other pipe material the agent approves with a minimum diameter of 4 inches.

(f) Field collection drainage tile must be enveloped in clean drain media or underdrain media to within 30 inches of the soil surface in soils with permanent groundwater or to within 12 inches of the soil surface in soils with temporary groundwater. Drain media

must be covered with filter fabric, treated building paper, or other nondegradable material approved by the agent.

(g) Outlet tile must be rigid, smooth-wall, solid pipe with an interior diameter of at least 4 inches. The agent may require a flap gate or rodent guard.

(h) A silt trap with a 12-inch minimum diameter must be installed between the field collection drainage tile and the outlet pipe unless otherwise authorized by the agent. The bottom of the silt trap must be at least 12 inches below the invert of the drainage pipe outlet.

(i) The discharge pipe and tile drainage system are integral parts of the system but do not need to meet setback requirements to property lines, wells, streams, lakes, ponds, or other surface waterbodies.

(j) Before issuing a final site evaluation report approving the site, the agent may require demonstration that a proposed tile dewatering site can be effectively drained.

(k) The absorption facility must use equal or pressurized distribution.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0340
Holding Tanks

(1) Criteria for approval. Except as section (5) of this rule provides, installing a holding tank system requires a construction-installation or WPCF permit. A construction-installation permit may be issued for sites that meet all the following conditions.

(a) Permanent use.

(A) The site cannot be approved for installation of a standard subsurface system.

(B) No community or area-wide sewerage system is available or expected to be available within five years.

(C) The tank is intended to serve a small industrial or commercial building or an occasional use facility such as a county fair or a rodeo.

(D) Unless DEQ allows otherwise, the projected daily sewage flow is not more than 200 gallons.

(E) Setbacks required for septic tanks can be met.

(b) Temporary use: A holding tank may be installed in an area under the control of a city or other legal entity authorized to construct, operate, and maintain a community or area-wide sewerage system if:

(A) The application for permit includes a copy of a legal commitment from the legal entity to extend a community or area-wide sewerage system meeting the requirements of this division to the property covered by the application within five years from the date of the application; and

(B) The proposed holding tank complies with other applicable requirements in OAR chapter 340, divisions 071 and 073.

(2) Operation and maintenance. The operation and maintenance of a holding tank must meet the requirements under OAR 340-071-0132 and this rule.

(3) Design and construction requirements. Except as provided in section (5) of this rule, holding tanks must comply with the following requirements:

(a) Plans and specifications for each holding tank proposed to be installed must be submitted to the agent for review and approval.

(b) Each tank must:

(A) Have a minimum liquid capacity of 1,500 gallons;

(B) Comply with tank standards in OAR 340-073-0025;

(C) Be located and designed to facilitate removal of contents by pumping

(D) Be equipped with both an audible and a visual alarm placed in locations acceptable to the agent to indicate when the tank is 75 percent full. Only the audible alarm may be user cancelable;

(E) Have no overflow vent at an elevation lower than the overflow level of the lowest fixture served; and

(F) Be designed for antibuoyancy if test hole examination or other observations indicate seasonally high groundwater may float the tank when empty.

(4) Special requirements. The application for a holding tank permit must include:

(a) A copy of a contract with a licensed sewage disposal service that requires the tank to be pumped periodically at regular intervals or as needed and the contents treated in a manner and at a facility the agent approves; and

(b) Evidence that the owner or operator of the proposed treatment facility will accept the pumpings for treatment.

(5) Portable holding tanks may be temporarily placed at sites having limited duration events such as county fairs or construction projects or at temporary restaurants if the following requirements are met:

(a) The tanks must be owned and serviced by a licensed sewage disposal service with sewage pumping equipment having a 550-gallon or larger tank and meeting all other requirements in OAR 340-071-0600(11).

(b) Tank placement and use must comply with all local planning, building, and health requirements.

(c) Only domestic sewage may be discharged into the tank.

(d) The tank must be maintained in a sanitary manner to prevent a health hazard or nuisance.

(e) The tank must not be buried.

(f) A person may not use the tank to serve a dwelling, recreation vehicle, or any other structure having sleeping accommodations, except that a portable holding tank may be used temporarily to serve a contractor's job shack or night watchman's trailer.

(g) The tank must meet the following standards:

(A) The tank must be watertight with no overflow vent lower than the overflow level of the lowest fixture served.

(B) Tank capacity may not exceed 1,000 gallons unless otherwise authorized by the agent.

(C) The tank must be structurally sound and made of durable, noncorrosive materials.

(D) The tank must be designed and constructed to provide a secure, watertight connection of the building sewer pipe.

(E) The tank must be marked with the name and phone number of the licensed sewage disposal service responsible for maintaining the tank.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 13-1997(Temp), f. & cert. ef. 6-23- 97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0345
Alternative Treatment Technologies (ATTs)

(1) Criteria for approval. Construction-installation permits may be issued for onsite systems incorporating alternative treatment technologies (ATTs) for single-family dwellings and commercial facilities if the following criteria are met:

(a) DEQ has listed the ATT, including brand and model or type where applicable, for use in onsite systems pursuant to section (2) of this rule.

(b) The ATT meets the performance and model selection criteria specified for the proposed use in section (4) of this rule.

(c) The site meets the appropriate siting criteria in section (8) of this rule, and the agent has approved the site.

(d) The owner of the property served by the onsite system incorporating the ATT has a written service contract as required in section (12) of this rule.

(2) ATT listing and delisting.

(a) DEQ will maintain a list of ATTs that meet the performance requirements in section

(3) of this rule.

(b) Any person may submit an application for listing an ATT. The application must include:

(A) Documentation that the ATT meets the performance requirements in section

(3) of this rule;

(B) Documentation that the ATT has been tested to NSF/ANSI as a class 1 or equivalent residential wastewater treatment system;

(C) A guide for inspecting the ATT installation;

(D) A plan for training agents on inspecting the ATT and training and certifying system installers on installing the ATT;

(E) A plan for training and certifying maintenance providers on system maintenance for the ATT;

(F) Documentation that the ATT complies with sections (5)-(7) and (9) of this rule; and

(G) The alternative technology review fee in OAR 340-071-0140(5).

(c) DEQ will approve applications to list ATTs that DEQ determines meet the performance requirements in section (3) of this rule under normal operating conditions. ATTs will be listed by brand and model or type for the treatment standards they achieve.

(d) DEQ may approve ATTs that vary from standards in OAR chapter 340, division 073.

(e) Beginning July 1, 2015, DEQ may remove ATTs from the list if it determines the requirements for approval in paragraph (c) of this section are no longer satisfied or if:

(A) Ten percent or more of systems under 10 years of age fail;

(B) The manufacturer fails to submit the annual report in paragraph (g) of this rule by the date specified by DEQ; or

(C) The manufacturer fails to submit the annual compliance determination fee in OAR 340-071-0140(5) by the date specified by DEQ; or

(D) The manufacturer goes out of business.

(f) All ATT listings will expire on June 30, 2016 and will be removed from the list. To renew the ATT listing and remain on the list, the manufacturer of the ATT must submit an application for each ATT model by July 1, 2015. The application must include, but is not limited to:

(A) A current list of each ATT sold in the State of Oregon including the model number, serial number, and the property address the ATT is located;

(B) A current list of all maintenance providers the manufacturer certifies;

(C) The material plan review fee in OAR 340-071-0140(5).

(g) Annual manufacturer report. Unless DEQ authorizes otherwise in writing, the manufacturer must submit an annual report for each ATT model. The report must include, but is not limited to:

(A) A list of each ATT sold in Oregon for the reporting period including the model number, serial number, certified maintenance provider name, status of service contract, and the property address the ATT is located;

(B) A current list of all installers and maintenance providers that are certified by the manufacturer;

(C) The annual compliance determination fee in OAR 340-071-0140(5).

(h) Any person adversely affected by DEQ's listing or delisting decision may appeal that decision through the contested case hearing procedures in ORS Chapter 183 and OAR chapter 340, division 011.

(3) Performance testing and standards for listing ATTs.

(a) Product testing.

(A) ATTs must be tested according to the product standards and testing protocols of NSF/ANSI Standard No. 40 for residential wastewater treatment systems – 2013, NSF/ANSI Standard No. 245 for nitrogen reduction — 2012, or another NSF/ANSI protocol DEQ approves.

(B) For purposes of demonstrating performance to the fecal coliform concentration in treatment standard 2, the ATT shall be followed by a nonchlorinating disinfection device that has been tested according to NSF/ANSI Standard No. 46 – 2012, or the ATT must be tested by collecting and analyzing influent and effluent grab samples at a minimum frequency of 3 days per week and the same duration (26 consecutive weeks) and hydraulic loadings (design and stress loadings) as the NSF/ANSI sample collection requirements for the BOD5, CBOD5, and TSS parameters. The testing must be performed by an ANSI accredited, third-party testing and certification organization whose accreditation is specific to onsite wastewater treatment products, or have been studied under the La Pine National Demonstration Project.

(b) Product performance. An ATT must produce effluent quality equal to or better than treatment standard 1 or 2 defined in OAR 340-071-0100.

(4) ATT model type and size selection. The model, type, and size of the ATT proposed for a system must be consistent with manufacturer recommendations and match the design capacity.

(5) Access ports.

(a) At a minimum, the ATT must have ground-level access ports sized and located to facilitate installing, removing, sampling, examining, maintaining, and servicing components or compartments that require routine maintenance or inspection. Access ports must facilitate:

(A) Visually inspecting and removing mechanical or electrical components;

(B) Removing components that require periodic cleaning or replacement;

(C) Visually inspecting and collecting samples; and

(D) Removing (manual or pumping) accumulated residuals.

(b) Access ports must be protected against unauthorized intrusion. Acceptable protective measures include but are not limited to padlocks or covers that can be removed only with tools.

(6) Malfunction, failure sensing, and signaling equipment.

(a) The system must be designed to prevent untreated waste passing into the absorption field if the plant malfunctions.

(b) The ATT must possess a mechanism or process capable of detecting:

(A) Failure of electrical and mechanical components that are critical to the treatment process; and

(B) High liquid level conditions above the normal operating specifications.

(c) The ATT must possess a mechanism or process capable of notifying the system owner of failures. The mechanism must have circuits separate from pump circuits and deliver a visible and audible signal.

(A) The visual alarm signal must be conspicuous at a distance of 50 feet from the system and its appurtenances.

(B) The audible alarm signal strength must be between 70 and 90 dbA at 5 feet and discernible at a distance of 50 feet from the system and its appurtenances.

(C) The visual and auditory signals must continue to function in the event of electrical, mechanical equipment, or hydraulic malfunction of the system. The audible signal may be disabled for service as long as the visual signal remains active while cause for the alarm is identified and alleviated.

(d) A clearly visible label or plate with instructions for obtaining service must be permanently located near the failure signal.

(7) Data plate.

(a) The ATT must have permanent and legible data plates located on:

(A) The front of the electrical control box if the ATT has an electrical control box or panel; and

(B) The tank, aeration equipment assembly, or riser at a location accessed during maintenance cycles and inspections.

(b) Each data plate must include:

(A) Manufacturer's name and address;

(B) Model number;

(C) Serial number (required on one data plate only);

(D) Rated daily hydraulic capacity of the system; and

(E) The performance expectations as determined by performance testing and evaluation.

(8) Siting and absorption area construction criteria.

(a) ATTs approved for treatment standard 1 may be sited and sized as follows:

(A) In areas with a temporary water table, as specifications for sand filters in areas with temporary groundwater in OAR 340-071-0290 require.

(B) In areas with permanent groundwater, where 4 feet of separation can be maintained between the bottom of the trench and groundwater and the other criteria in OAR 340-071-0290 can be met.

(C) On sites meeting criteria for standard onsite systems in OAR 340-071-0220 or for pressurized systems in OAR 340-071-0275.

(b) ATTs used in conjunction with approved disinfection and approved nitrogen reduction processes and approved for treatment standard 2 may be sited and sized as follows.

(A) On sites meeting the criteria for treatment standard 1 in paragraph (a) of this section.

(B) In areas with a permanent water table, as specifications for sand filters in areas with a permanent water table in OAR 340-071-0290 require.

(c) Any type of absorption area permitted for a sand filter system, including the gravel-less absorption method, may be permitted for an ATT system.

(d) In known areas of sensitivity to nitrate-nitrogen pollution, including but not limited to coastal lakes, areas of groundwater concern, and Groundwater Management Areas, the agent may limit the use of DEQ-approved ATT models and require models that have proven to provide additional nitrogen reduction beyond the minimum standards provided under treatment standards 1 and 2, and NSF/ANSI 245 standards.

(e) The agent makes a determination based on the best available science that the nutrient load from the system would not significantly degrade or pollute public waters, or create a public health hazard.

(9) Limited warranty. The ATT manufacturer must:

(a) Warrant all components of the ATT to be free from defects in material and workmanship for a minimum of two years from the date of installation; and

(b) Fulfill the terms of the warranty by repairing or exchanging any components that the manufacturer determines may be defective.

(10) Installation. ATTs must be installed under the manufacturer's instructions and this division. The installer must be certified by the ATT manufacturer to install the system and provide written certification to the agent that the ATT component was installed under the manufacturer's instructions and this rule.

(11) Sampling ports. A sampling port must be designed, constructed, and installed to provide easy access for collecting a free falling or undisturbed sample from the effluent stream. The sampling port may be located within the ATT or other system component (such as a pump chamber) if the wastewater stream being sampled is representative of the effluent stream from the ATT.

(12) Operation and maintenance. The operation and maintenance of an ATT system, including service contracts, must meet the requirements under OAR 340-071-0132.

(13) Owner's manual. The designer of each onsite system using an ATT must provide a comprehensive owner's manual prepared by the manufacturer or designer to the system owner, manufacturer's representative, installer, and if requested, the agent before or at

the time of installation. The manual may be a collection of individual system component manuals and must include information on system specifications, system installation, operation and maintenance, and troubleshooting and repair. The information must be presented in a manner the owner can easily understand.

(14) Required inspections. The following inspections must be performed for each installed sand filter, unless waived by the agent:

(a) Inspect the absorption facility before covering.

(b) Inspect the installation of the ATT per the manufacturer's instructions and this division.

(c) Inspect to confirm the pump, floats, and controls are powered on, set according to the approved plans, and functioning properly. The agent may require the certified maintenance provider under contract for inspecting, operating, and maintaining the system to conduct this inspection and submit a completed start-up report to the agent. The form must be provided by the manufacturer or approved by DEQ.

[ED. NOTE: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0360
Absorption Trenches in Saprolite

(1) General conditions for approval. An onsite system construction-installation permit may be issued for a single-family dwelling on a site with soil shallow to saprolite if requirements in either paragraph (a) or (b) of this section can be met.

(a) If slope does not exceed 30 percent:

(A) The saprolite is sufficiently weathered so that it can be textured, crushed, or broken with hand pressure to a depth of 24 inches and can be dug from a test pit wall with a spade or other hand tool to a depth of 48 inches; and

(B) Clay films or iron coatings with moist values of 5 or less and moist chromas of 4 or more, organic coatings with moist values of 3 or less and moist chromas of 2 or more, or both occur on fracture surfaces of the saprolite to a depth of 48 inches.

(b) If slope exceeds 30 percent but not 45 percent:

(A) The saprolite is sufficiently weathered so that it can be textured, crushed, or broken with hand pressure to a depth of 24 inches and can be dug from a test pit wall with a spade or other hand tool to a depth of 60 inches; and

(B) Clay films or iron coatings with moist values of 5 or less and moist chromas of 4 or more, organic coatings with moist values of 3 or less and moist chromas of 2 or more, or both occur on fracture surfaces of the saprolite to a depth of 60 inches.

(c) For saprolite derived from granite or other deposits where clay films or iron coatings are not present, a soil absorption test and the degree of consolidation may be used to predict hydraulic conductivity of the saprolite. Agents may approve sites where conductivity is sufficiently high to ensure adequate drainage. Test methods must be acceptable to DEQ.

(2) Construction Requirements.

(a) Standard absorption trenches must be installed where slope does not exceed 30 percent.

(A) The trenches must be installed at a minimum depth of 24 inches and a maximum depth of 30 inches below the natural soil surface and contain 12 inches of filter material and a minimum of 12 inches of native soil backfill.

(B) The trenches must be sized at a minimum of 100 linear feet per 150 gallons sewage flow.

(b) Seepage trenches must be installed where slope exceeds 30 percent but not 45 percent.

(A) Seepage trenches must be installed at a minimum depth of 30 inches and at a maximum depth of 36 inches below the natural soil surface and contain a minimum of 18 inches of filter material and 12 inches of native soil backfill.

(B) Seepage trenches must be sized at a minimum of 75 linear feet per 150 gallons sewage flow.

Statutory/Other Authority: ORS 454.625 & 468.020
Statutes/Other Implemented: ORS 454.615 & 454.775
History: DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 15-1986, f. & ef. 8-6-86; DEQ 9-1984, f. & ef. 5-29-84

340-071-0400
Geographic Area Special Considerations.

(1) General North Florence Aquifer, North Florence Dunal Aquifer Area, Lane County.

(a) Within the area described in paragraph (b) of this section, an agent may approve sites or issue construction-installation permits for new onsite systems under either of the following circumstances:

(A) The lot and proposed system comply with all rules in effect at the time the site is approved or the permit is issued.

(B) The lot and proposed system comply with paragraph (A) of this subsection except for the projected daily sewage loading rates, and the agent determines the system in combination with all other previously approved systems owned or legally controlled by the applicant will not contribute to the local groundwater more than 58 pounds of nitrate-nitrogen per year per acre owned or controlled by the applicant.

(b) Paragraph (a) of this section applies to the following area designated the General North Florence Aquifer of the North Florence Dunal Area and defined by the hydrologic boundaries identified in the June 1982, 208 North Florence Dunal Aquifer Study. The area is bounded on the west by the Pacific Ocean; on the southwest and south by the Siuslaw River; on the east by the North Fork of the Siuslaw River and the ridge line at the approximate elevation of four hundred (400) feet above mean sea level directly east of Munsel Lake, Clear Lake, and Collard Lake; and on the north by Mercer Lake, Mercer Creek, Sutton Lake, and Sutton Creek and includes all or portions of T17S, R12W, Sections 27, 28, 33, 34, 35, 36, and T18S, T12W, sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 27; W.M., Lane County, except that portion defined as the Clear Lake Watershed, which is the area beginning at a point known as Tank One, located in Section One, Township 18 South, Range 12 West, of the Willamette Meridian, Lane County, Oregon: run thence S. 67° 50' 51.5" E. 97.80 ft. to the True Point of Beginning; run thence S. 05° 40' 43.0" W. 1960.62 ft. to a point; run thence S. 04° 58' 45.4" E. 1301.91 ft. to a point; run thence S. 52° 44' 01.0" W. 231.21 ft. to a point; run thence S. 15° 20' 45.4" E. 774.62 ft. to a point; run thence S. 31°44' 14.0" W. 520.89.ft. to a point; run thence S. 00° 24' 43.9" W. 834.02 ft. to a point; run thence S. 07° 49' 01.8" W. 1191.07 ft. to a point; run thence S. 50° 26' 06.3" W. 731.61 ft. to a point; run thence S. 02° 51' 10.5" W. 301.37 ft. to a point; run thence 36° 37' 58.2" W. 918.41 ft. to a point; run thence S. 47° 12' 26.3" W. 1321.86 ft. to a point; run thence S. 72° 58' 54.2" W. 498.84 ft. to a point; run thence S. 85° 44' 21.3" W. 955.64 ft. to a point; Which is N. 11° 39' 16.9" W. 5434.90 ft. from a point known as Green Two (located in Section 13 in said Township and Range); run thence N. 58° 09' 44.1" W. 1630.28 ft. to a point; run thence N. 25° 23' 10.1" W. 1978.00 ft. to a point; run thence N. 16° 34' 21.0" W. 1731.95 ft. to a point; run thence N. 06° 13' 18.0" W. 747.40 ft. to a point; run thence N. 03° 50' 32.8" E. 671.51 ft. to a point; run thence N. 59° 33'18.9" E. 1117.02 ft. to a point; run thence N. 59° 50' 06.0" E. 1894.56 ft. to a point; run thence N. 48° 28' 40.0" E. 897.56 ft. to a point; run thence N. 31° 29' 50.7" E. 920.64 ft. to a point; run thence N. 19° 46' 39.6" E. 1524.95 to a point; run thence S. 76° 05' 37.1" E. 748.95 ft. to a point; run thence S. 57° 33' 30.2" E. 445.53 ft. to a point; run thence S. 78° 27' 44.9" E. 394.98 ft. to a point; run thence S. 61° 55' 39.0" E. 323.00 ft. to a point; run thence N. 89° 04' 46.8" E, 249.03 ft. to a point; run thence S. 67° 43' 17.4" E. 245.31 ft. to a point; run thence S. 79° 55' 09.8" E. 45.71 ft. to a point; run thence S. 83° 59' 27.6" E. 95.52 ft. to a point; run thence N. 42° 02' 57.2" E. 68.68 ft. to a point; run thence S. 80° 41' 24.2" E. 61.81 ft. to a point; run thence S. 10° 47' 03.5" E. 128.27 ft. to the True Point of Beginning; and containing all or portions of T17S, R12W, Sections 35 and 36; and T18S, R12W, Sections 1, 2, 11 and 12; W.M., Lane County.

(2) Lands overlaying the Alsea Dunal Aquifer.

(a) Within the area set forth in paragraph (c) of this section, the agent may approve a site or issue a permit to construct a single onsite system on lots that were lots of record

before January 1, 1981, or on lots in partitions or subdivisions that have received preliminary planning, zoning, and onsite wastewater treatment system approval before January 1, 1981, if one of the following can be met:

(A) At the time the site is approved or the permit is issued, the lot complies with OAR 340-071-0100 through 340-071-0360 and 340-071-0410 through 340-071-0520.

(B) The site meets all of the following conditions when a pressurized seepage bed is used:

(i) Groundwater levels are not closer than 4 feet from the ground surface or closer than 3 feet from the bottom of the seepage bed.

(ii) The seepage bed is constructed under OAR 340-071-0275(4) and (5).

(iii) The seepage bed is sized on the basis of 200 square feet of bottom area per 150 gallons sewage flow.

(iv) Design flows are limited to 375 gallons per lot, except for lots approved in a site evaluation for a larger flow.

(v) All setbacks identified in Table 1 can be met, except that lots of record before May 1, 1973, must maintain a minimum 50-feet separation to public surface waters.

(vi) Sufficient area exists on the lot to install a seepage bed and a replacement seepage bed, or the area reserved for replacement is waived pursuant to the exception in OAR 340-071-0150(4)(a)(C).

(C) The site meets all of the following conditions when a bottomless sand filter is used.

(i) Groundwater levels are not closer than 1 foot from the ground surface and not closer than 1 foot from the bottom of the sand filter.

(ii) Design flows are limited to 375 gallons per day per lot, except for lots approved in a site evaluation for larger flows.

(iii) The sand filter is sized at 1 square foot of bottom area for each gallon of sewage flow.

(iv) The design and construction requirements in OAR 340-071-0295(3) and (4) must be met. A bottomless sand filter unit does not require a watertight floor, but does require watertight walls unless otherwise authorized by the agent.

(v) All setbacks identified in Table 1 can be met, except that lots of record before May 1, 1973, must maintain a minimum 50 feet separation to public surface waters.

(vi) Sufficient area exists on the lot to install an initial and replacement bottomless conventional sand filter, or the area for replacement is not required under OAR 340-071-0150(4)(a)(C).

(b) An agent may approve a site or issue a construction-installation permit for a new onsite system within the area set forth in paragraph (c) of this section on lots created on or after January 1, 1981, if all rules in this division can be met.

(c) The Alsea Dunal Aquifer is defined as all the land bounded on the East by Highway 101, on the west by the Pacific Ocean, and from Driftwood Beach Wayside South to the southern tip of the Alsea Bay Spit.

(d) If groundwater monitoring in the Alsea Dunal Aquifer indicates unacceptable levels of degradation or if development of the aquifer as a source of drinking water is necessary or desirable, sewage collection and off-site treatment facilities must be installed unless further study demonstrates that such facilities are not necessary or effective to protect the beneficial use.

(3) Christmas Valley Townsite, Lake County.

(a) Within the area set forth in paragraph (b) of this section, the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when issuing site evaluation reports and construction-installation permits.

(b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

(4) Clatsop Plains Aquifer, Clatsop County. The Clatsop Plains Groundwater Protection Plan, prepared by R.W. Beck and Associates and adopted by Clatsop County, provides a basis for continued use of onsite wastewater treatment systems while protecting the quality of groundwater for future water supplies. For the plan to be successful, the following components must be accomplished.

(a) By January 1, 1983, Clatsop County must identify and set aside aquifer reserve areas for future water supply development containing a minimum of 2-1/2 square miles. The reserve areas must be controlled so that the potential for groundwater contamination from nitrogen and other possible pollutants is kept to a minimum;

(b) The agent may approve sites and issue construction permits for new onsite systems within the area generally known as the Clatsop Plains as described in paragraph (c) of this section if the conditions in paragraph (A) and paragraph (B), (C), or (D) of this subsection are met.

(A) The lot or parcel was created in compliance with the appropriate comprehensive plan for Gearhart (adopted by County Ordinance 80-3), Seaside (adopted by County Ordinance 80-10), Warrenton (adopted by County Ordinance 82-15), or Clatsop County (adopted through Ordinance No. 79-10).

(B) The lot or parcel does not violate any rule of this division.

(C) The lot or parcel does not violate DEQ's Water Quality Management Plan or any rule in this division, except that the projected maximum sewage loading rate may exceed the

ratio of 450 gallons per 1/2 acre per day. In this case, the onsite system must be either a sand filter system or a pressurized distribution system with a design flow not to exceed 450 gallons per day.

(D) Use of standard onsite systems to serve single-family dwellings within planned developments or clustered-lot subdivisions complies with the following requirements:

(i) The planned development or clustered-lot subdivision is not located within Gearhart, Seaside, Warrenton, or their urban growth boundaries.

(ii) The lots do not violate any rule of this division, except the projected maximum sewage loading rate may exceed the ratio of 450 gallons per acre per day.

(iii) DEQ is provided satisfactory evidence through a detailed groundwater study that the use of standard systems will not constitute a greater threat to groundwater quality than would occur with the use of sand filter systems or pressurized distribution systems.

(c) The area generally known as Clatsop Plains is bounded by the Columbia River to the North; the Pacific Ocean to the west; the Necanicum River, Neawanna Creek, and County Road 157 on the south; and the Carnahan Ditch-Skipanon River and the foothills of the Coast Range to the east.

(5) Within areas east of the Cascade Range where the annual precipitation does not exceed 20 inches, the agent may issue a construction-installation permit authorizing installation of a standard system to serve a single-family dwelling if the requirements in paragraphs (a) and (b) of this section are met.

(a) Minimum site criteria.

(A) The parcel or lot is 10 acres or larger.

(B) The slope gradient does not exceed 30 percent.

(C) The soils are diggable with a backhoe to a depth of at least 24 inches.

(D) The site complies with the provisions of OAR 340-071-0220(1)(b), (f), (g), (h), (i), (j), and (k).

(b) Minimum construction requirements.

(A) The system must contain at least 225 linear feet of absorption trench for design flows not exceeding 450 gallons per day. Larger design flows must be sized on the basis of 75 linear feet per each 150 gallons of sewage flow.

(B) The system must be constructed and backfilled as OAR 340-071-0220(3), (4), (5), (7), (8), (9), (10), (11), and (12) require.

(c) The owner or owner's authorized representative may submit a single application to the agent for both a site evaluation report and a construction-installation permit. Such

application must be submitted under OAR 340-071-0160 or 340-071-0162 and include the applicable evaluation and permit fees in OAR 340-071-0140.

(d) The agent may waive the pre-cover inspection for a system installed pursuant to this section if the system installer submits the following information to the agent at the time construction of the system is complete:

(A) A detailed, accurate as-built plan of the constructed system;

(B) A list of all material used in the construction of the system; and

(C) A written certification on a DEQ-approved form that the construction complies with the permit and rules in this division and OAR chapter 340, division 73.

(b) The Agent may waive the site evaluation for a single-family dwelling if the requirements in this subsection are met. These conditions are set forth in an addendum to the memorandum of agreement (contract) between the County and DEQ.

(A) Minimum site criteria.

(i) The lot or parcel is 80 acres or larger.

(ii) The separation distance between the proposed onsite system and the nearest dwelling not served by the proposed system is at least 1/4 mile.

(iii) The nearest property line to the proposed system is at least 100 feet; the nearest domestic water source is at least 200 feet; and the nearest public surface water is at least 200 feet.

(iv) In the agent's opinion, topographical and soils information submitted with the application, including but not limited to slope, terrain, landform, and rock outcrops, demonstrates that the property can be approved for an onsite system under this division.

(B) Minimum construction requirements.

(i) Sizing requirements of Tables 4 and 5 must be followed as closely as possible. In all cases the system must contain at least 225 linear feet of absorption trench for design flows not exceeding 450 gallons per day. Larger sewage flows must be sized on the basis of 75 linear feet per each 150 gallons of sewage flow.

(ii) The system must be constructed and backfilled as closely as possible to the requirements in OAR 340-071-0220. The agent may waive watertight testing of tanks in the system.

[ED. NOTE: All tables are found in OAR 340-071-0800.]

Stat. Auth.: ORS 183.335, 454.625, 468.020, 468B.010 & 468B.020
Stats. Implemented: ORS 454.610 & 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 17-1981, f. & ef. 7-10-81; DEQ 2-1982, f. &

ef. 1-28-82; DEQ 16-1982, f. & ef. 8-31-82; DEQ 20-1982, f. & ef. 10-19-82; DEQ 3-1983, f. & ef. 4-18-83; DEQ 8-1983, f. & ef. 5-25-83; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 20-1996(Temp), f. & cert. ef. 10-14-96; DEQ 4-1997, f. & cert. ef. 3-7-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0415
For Cause Variances

(1) An applicant may request variances from any rule or standard in this division.

(2) Variances. Variance officers the director appoints may, after a public hearing, grant variances from any rule in this division to permit applicants.

(3) To grant a variance, the variance officer must find that the proposal demonstrates that the system design is equally or more protective to public health and the environment as the rules or standards in this division, and one of the following:

(a) Strict compliance with the rule or standard is inappropriate; or

(b) Special physical conditions render strict compliance unreasonable, burdensome, or impractical.

(4) Applications.

(a) A separate application for each site considered for a variance must be submitted to DEQ or the contract county as appropriate.

(b) Each application must be signed by the owner of the property served by the system and include:

(A) A site evaluation report, unless the variance officer waives it;

(B) Plans and specifications for the proposed system;

(C) The variance from onsite system rule fee in OAR 340-071-0140; and

(D) Other information the variance officer determines is necessary for a decision.

(5) An applicant for a variance is not required to pay the application fee if at the time of filing the applicant:

(a) Is 65 years of age or older;

(b) Is a resident of Oregon;

(c) Has an annual household income, as defined in ORS 310.630, of $15,000 or less; and

(d) Has not previously applied for a variance under this section.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.657, 454.660 & 454.662
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 9-1984, f. & ef. 5-29-84; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0430
Variance Hearings and Decisions

(1) A variance officer must hold a public information hearing on each variance application for a for cause or hardship variance within 30 days after receiving a completed application.

(2) The hearing must be held in the county where the property described in the application is located.

(3) The applicant must demonstrate the variance is warranted.

(4) The variance officer must visit the site of the proposed system before conducting the hearing.

(5) The variance officer or, for hardship variances, the commission, must grant or deny the variance within 45 days after the hearing is completed. A decision to grant a variance must include the location of the onsite system and the specifications and conditions of the variance. The system owner must comply with the conditions of the variance approval, including but not limited to ongoing sampling or reporting requirements, as deemed necessary by the variance officer or, for hardship variances, the commission, to ensure the intended performance of the system, until the system is decommissioned. Any costs associated with the conditions of approval is the sole responsibility of the system owner.

(6) Except for hardship variances under OAR 340-071-0420, variances run with the land.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.660
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0440
Variance Appeals

(1) For cause variance approvals. Any person adversely affected by a variance officer's approval of a variance under OAR 340-071-0415 may appeal that decision to the commission under ORS 454.660(1). The appeal must be in writing and submitted to the commission within 20 days of the variance officer's approval of the variance. The written appeal must specify the grounds for the appeal. Any person adversely affected by the commission's final order may appeal that decision to a circuit court under ORS 183.484.

(2) For cause variance denials: Any person adversely affected by a variance officer's denial of a variance under OAR 340-071-0415 may request a hearing on the variance officer's decision. The request for hearing must be made in writing within 20 days of the date of the variance denial and must state the grounds for the request. The hearing will be conducted as a contested case hearing under ORS 183.413 through 183.470 and OAR chapter 340, division 011.

(3) Hardship variances. Any person adversely affected by the commission's approval or denial of a hardship variance under OAR 340-071-0420 may appeal that decision to a circuit court in accordance with ORS 183.484.

Stat. Auth.: ORS 454.625
Stats. Implemented: ORS 454.660
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-071-0520
Large Systems

Unless DEQ authorizes otherwise, large systems must comply with the following requirements.

(1) Large system absorption facilities must be designed with distribution to the cells by means of pumps.

(2) The absorption area must be divided into relatively equal units. Each unit may receive no more than 1300 gallons of effluent per day.

(3) The replacement (repair) absorption area must be divided into relatively equal units, with a replacement absorption area unit located adjacent to an initial absorption area unit.

(4) Effluent distribution must alternate between the absorption area units.

(5) Each system must have at least two pumps.

(6) The applicant must provide a written assessment of the impact of the proposed system on the quality of public waters and public health, prepared by a registered geologist, a certified engineering geologist qualified as a hydrogeologist, or a subordinate under the direction of either, except as specifically exempted in ORS 672.535.

(7) The owners of all new and existing large systems must register those systems with DEQ as Underground Injection Control (UIC) systems under OAR chapter 340, division 044. Large systems receiving domestic waste are regulated under this division. Drainfields receiving nondomestic waste are also regulated under the UIC rules.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 468B.080
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 8-1983, f. & ef. 5-25-83; DEQ 27-1994, f. 11-

15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0600
Sewage Disposal Service Licenses

(1) License required. A person may not perform sewage disposal services or advertise or represent himself as being in the business of performing such services without a valid license issued by DEQ to perform those services. A separate license is required for each business, organization, or other person conducting sewage disposal services.

(2) Types of licenses. DEQ may issue three types of sewage disposal service licenses.

(a) Installer license. An installer license is required for any person to construct or install onsite systems or parts of onsite systems or to perform the grading, excavating, or earth-moving work associated with constructing or installing onsite systems.

(b) Pumper license. A pumper license is required for any person to pump out or clean onsite systems, including portable toilets or any part of them, and to dispose of the material derived from pumping out or cleaning onsite systems or portable toilets.

(c) Installer/pumper license. The combined installer/pumper license authorizes a person to perform the work authorized by the installer and the pumper licenses.

(3) Duration of license. The duration of a sewage disposal service license may not exceed three years following the issue date. DEQ may issue licenses for periods of less than three years to stagger expiration dates. DEQ will provide licensees written notice of the expiration date assigned and date application for renewal is due.

(4) Certification requirement.

(a) Each business with an installer or installer/pumper license must identify at least one person certified under OAR 340-071-0650 who will supervise installation of onsite systems for the licensee.

(b) Applicants must submit evidence of the certification required by this section to DEQ with their application.

(5) New, renewal, and reinstatement licenses. Persons applying for new, renewal, or reinstatement of existing licenses must submit the following to DEQ for each license:

(a) A complete license application form.

(b) Evidence of a surety bond or equivalent security DEQ-approved in the penal sum of $15,000 for each installer or installer/pumper license or $5,000 for each pumper license and evidence that the security or bond will be continued through the license cycle and satisfies all other requirements of section (7) of this rule.

(c) The applicable license fee in OAR 340-071-0140(6).

(d) Evidence of certification as required in section (4) of this rule.

(e) For pumper licenses:

(A) A completed Sewage Pumping Equipment Description/Inspection form documenting inspection by an agent of all pumping equipment to be used for work under the license; and

(B) On DEQ's request, summary origin-destination pumping information for pumping services.

(6) Transfer or amendment of license. DEQ may amend or transfer a valid sewage disposal service license to reflect changes in business name, ownership, or entity (e.g., from individual to partnership or corporation). Persons applying for a license transfer or amendment must submit the following to DEQ:

(a) A complete application to transfer or amend the license with the applicable license fee in OAR 340-071-0140(6);

(b) A rider to an existing bond or a new form of security as required in subsection (5)(b) of this rule;

(c) The valid sewage disposal service license (not suspended, revoked, or expired) being transferred or amended;

(d) For business name changes, a new Sewage Pumping Equipment Description/Inspection form for each vehicle to be used for work under the license; and

(e) For installer licenses, evidence of certification as required in section (4) of this rule.

(7) Security requirements.

(a) Security this rule requires may be any of the following.

(A) A surety bond executed in favor of the State of Oregon on a form the Attorney General approved and DEQ provides. The bond must be issued by a surety company licensed by the Insurance Commissioner of Oregon. A surety bond must require at least 45 days' notice to DEQ before cancellation is effective and must otherwise remain in effect for at least two years after the sewage disposal service license terminates, except as provided in paragraph (c) of this section.

(B) An insured savings account irrevocably assigned to DEQ with interest earned by such account made payable to the depositor.

(C) Negotiable securities of a character approved by the State Treasurer irrevocably assigned to DEQ with interest earned on deposited securities made payable to the depositor.

(b) Any deposit of cash or negotiable securities under ORS 454.705 must remain in effect for at least two years following termination of the sewage disposal service license except as provided in paragraph (c) of this section. A claim against such security deposits must be submitted in writing to DEQ with an authenticated copy of:

(A) The court judgment or order requiring payment of the claim; or

(B) Written authority by the depositor for DEQ to pay the claim.

(c) When proceedings under ORS 454.705 have been commenced while the security required is in effect, such security must be held until final disposition of the proceedings is made. At that time claims will be referred for consideration of payment from the security so held.

(8) Licensee responsibilities. Each licensee:

(a) Is responsible for violations of any statute, rule, or order of the commission or DEQ pertaining to the licensed business.

(b) Is responsible for any act or omission of any servant, agent, employee, or representative of such licensee that violates any statute, rule, or order concerning the license privileges.

(c) Must deliver written notice, before completing licensed services, to each person:

(A) The rights of the recipient included in ORS 454.705(2); and

(B) The name and address of the surety company that has executed the bond required by ORS 454.705(1); or

(C) A statement that the licensee has deposited cash or negotiable securities for the benefit of DEQ to compensate any person injured by the licensee's failure to comply with ORS 454.605 to 454.745 and rules of this division.

(d) Inform DEQ of changes that affect the license, such as changes in the business, ownership, or entity (e.g., changes from individual to partnership or corporation).

(9) Misuse of license.

(a) A sewage disposal service licensee may not allow anyone to perform sewage disposal services under its license except the licensee's employees.

(b) A licensee may not:

(A) Display or cause or permit to be displayed any license that is fictitious, revoked, suspended, or fraudulently altered;

(B) Fail or refuse to surrender to DEQ any license that has been suspended or revoked.

(C) Give false or fictitious information or knowingly conceal a material fact or otherwise commit a fraud in any license application or any other activities associated with the license.

(10) Denial, suspension, or revocation of licenses.

(a) DEQ may refuse to grant, renew, or reinstate or may suspend or revoke any sewage disposal service license under procedures in ORS 183.310 to 183.540 if it finds:

(A) A material misrepresentation or false statement in connection with a license application;

(B) Failure to comply with any provisions of ORS 454.605 through 454.785, the rules of the commission, or an order of the commission or DEQ;

(C) Failure to maintain in effect at all times the required bond or other approved equivalent security in the full amount specified in these rules; or

(D) Nonpayment by drawee of any instrument the applicant tendered as payment of a license fee.

(b) Whenever a license is suspended or revoked or expires, the licensee must remove the license from display and remove all DEQ-issued labels from equipment used for work under the license. Within 14 days after suspension or revocation, the licensee must surrender the suspended or revoked license and certify in writing to DEQ that all DEQ- issued labels have been removed from all equipment.

(c) A sewage disposal service business may not be considered for re-licensure for a period of at least one year after DEQ revokes its license.

(d) A suspended license may be reinstated if:

(A) The licensee submits to DEQ a complete application for reinstatement of license accompanied by the applicable license fee in OAR 340-071-0140(6);

(B) The grounds for suspension have been corrected; and

(C) The original license would not have otherwise expired.

(11) Requirements for pumping vehicles and equipment. A licensee who pumps onsite systems must ensure that all pumping vehicles and equipment comply with the following requirements.

(a) Tanks used for pumping or transporting septage must:

(A) Have a liquid capacity of at least 550 gallons, except that tanks for equipment used exclusively for pumping chemical toilets not exceeding 80 gallons capacity must have a liquid capacity of at least 150 gallons;

(B) Be of watertight metal construction;

(C) Be fully enclosed; and

(D) Have suitable covers to prevent spillage.

(b) Vehicles used for pumping or transporting septage must be equipped with either a vacuum or other type of pump that is self-priming and will not allow seepage from the diaphragm or other packing glands.

(c) The sewage hose on vehicles must be drained, capped, and stored in a manner that will not create a public health hazard or nuisance.

(d) The discharge nozzle must be:

(A) Provided with either a camlock quick coupling or threaded screw cap;

(B) Sealed by threaded cap or quick coupling when not in use;

(C) Located to minimize flow or drip onto any portion of the vehicle;

(D) Protected from accidental damage or breakage.

(e) Pumping equipment must not have spreader gates unless permitted to land apply alkaline-stabilized septage under chapter 340, division 050.

(f) Each vehicle must at all times be supplied with a pressurized wash-water tank, disinfectant, and implements for cleanup.

(g) Except as specified in paragraph (h) of this section or otherwise authorized in writing by the agent, pumping equipment must be used exclusively for pumping sewage disposal facilities.

(h) The following may be pumped or serviced using pumping equipment without written authorization, whether or not they are connected to an onsite system or a centralized community sewer system: pump stations, lift stations, food grease tanks, vaults or tanks used for domestic sewage not contaminated with industrial or hazardous waste, and spills and backups of uncontaminated domestic sewage.

(i) Chemical toilet pumping equipment may not be used for any other purpose if the pump tank has a liquid capacity of less than 550 gallons.

(j) Equipment must be maintained in a reasonably clean condition at all times and must be operated in a manner that does not create a public health hazard or nuisance.

(12) Vehicle identification. The onsite sewage disposal services licensee must identify vehicles as follows.

(a) The licensee's name or assumed business name must be displayed on both sides of the vehicle or the attached tank and on both sides of a tank trailer.

(A) Letters and numbers must be at least 3 inches high unless DEQ authorizes otherwise.

(B) Letters and numbers must be in a color contrasting with the background.

(b) Tank capacity must be printed on both sides of the tank.

(A) Letters and numbers must be at least 3 inches high unless DEQ authorizes otherwise.

(B) Letters and numbers must be in a color contrasting with the background.

(c) DEQ-issued labels for each current license period must be displayed at all times at the front and rear and on each side of the vehicle. Labels must be returned to DEQ when a vehicle is no longer being used in conjunction with pumping under a sewage disposal service license.

(13) Septage management requirements. The licensee and all persons managing septage:

(a) Must avoid spilling sewage or septage during pumping, cleaning, or transport and must immediately clean up any spill and disinfect the spill area.

(b) Must dispose of septage and sewage only in DEQ-approved disposal facilities.

(c) At all times during pumping, transport, or disposal of septage, must possess origin-destination records for sewage disposal services rendered.

(d) Must maintain on file for at least three years complete origin-destination records for sewage disposal services rendered. The records must be made available for review upon the request of DEQ. Origin-destination records must include the following information for each pumping, transport, and disposal occurrence:

(A) Source of septage, including name and address;

(B) Specific type of material pumped;

(C) Quantity of material pumped;

(D) Name and location of disposal site where septage was deposited;

(E) Quantity of material deposited; and

(F) The license numbers or vehicle numbers assigned by the licensee for all vehicles or trailers used for pumping, transport, and disposal.

(e) Must transport septage in a manner that will not create a public health hazard or nuisance.

(f) Must possess a current DEQ-approved septage management plan. The plan must be kept current, with any revisions approved by DEQ before implementation.

(g) Must comply with the approved septage management plan and the DEQ-issued septage management plan approval letter.

Stat. Auth.: ORS 454.615, 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.625 & 468.020
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 32-1981(Temp), f. & ef. 12-8-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 8-1983, f. & ef. 5-25-83; DEQ 9-1984, f. & ef. 5-29-84; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 10-1996(Temp), f. & cert. ef. 7-16-96; DEQ 12-1997, f. & cert. ef. 6-19-97; Administrative correction 1-28-98; DEQ 16-1999, f. & cert. ef. 12-29-99; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0650
Training and Certification Requirements for System Installers and Maintenance Providers

(1) Certification required.

(a) A person who supervises or is responsible for constructing or installing onsite systems must be a certified installer unless the person is the permittee for constructing or installing the system or the permittee's regular employee.

(b) A maintenance provider who inspects, maintains, or certifies or supervises maintenance on onsite systems using alternative treatment technologies, recirculating gravel filters, sand filters, or pressurized distribution systems must be certified as a maintenance provider.

(2) Training and certification programs. DEQ may enter interagency agreements to provide a program to train and certify onsite system installers, maintenance providers, and other onsite maintenance providers as described in this rule.

(3) Initial training and certification.

(a) Each initial training course for certification must provide the minimum training described in this section. One day of training equals 8 hours including a total of 30 minutes of break time and a one-hour lunch.

(b) Course instructors must have academic credentials or field experience in the course discipline and experience as instructors.

(c) Installer training.

(A) The training course for installers must include at least 8 hours of lectures, demonstrations, hands-on training, course review, and exam. DEQ encourages using audiovisual materials to complement lectures where appropriate.

(B) Installer training must at a minimum adequately address the following topics:

(i) Working knowledge of onsite rules.

(ii) Working understanding of permits.

(iii) Basic math skills.

(iv) Technical drawing.

(v) Field layout of onsite system.

(vi) Installation requirements.

(vii) Job safety practices.

(d) Maintenance provider training.

(A) The training course for maintenance providers must include at least 8 hours of lectures, demonstrations, hands-on training, course review, and exam. DEQ encourages using audiovisual materials to complement lectures where appropriate.

(B) Maintenance provider training must adequately address the following topics:

(i) Working knowledge of onsite rules.

(ii) Working understanding of permits.

(iii) Basic math skills.

(iv) Technical drawing.

(v) Onsite system processes.

(vi) System operation and maintenance.

(vii) Job safety practices.

(4) Examinations and certification.

(a) The training provider must administer an open book examination to persons seeking certification. A person seeking initial certification in a discipline must complete the initial training and pass the examination for that discipline.

(b) Each examination must be approved by DEQ and include questions that adequately cover the topics in the training course for that discipline. Applicants must answer 70 percent correctly to pass.

(c) The training provider must issue a certification to each person who completes the training course and passes the required examination.

(d) Each certification must include the following:

(A) A unique certificate number.

(B) Full name of the person certified.

(C) Dates of the training course.

(D) Date of the examination.

(E) An expiration date three years after the certification issuance date.

(F) The name, address, and telephone number of the training provider that issued the certificate.

(G) A statement that the person receiving the certification has completed the requisite training and examination for the discipline certified.

(e) Certified persons must have proof of certification at the location where they are conducting work requiring certification.

(5) Recertification.

(a) For each discipline, the training provider or DEQ must review and approve continuing education courses and other training for recertification. Training approved for each discipline must cover topics related to that discipline, including the topics addressed in section (1) of this rule.

(b) For each discipline, the training provider must extend recertification to each certified person who completes 18 hours of approved continuing education following his most recent certification and to each formerly certified person who completes these requirements within six months after his certification expires.

(6) Suspension or revocation of certification.

(a) DEQ may suspend or revoke the certification of any person for the following reasons:

(A) Performing work requiring certification at a job site without physically possessing a current certification.

(B) Permitting another person to duplicate or use one's own certification.

(C) Obtaining certification from a person not accredited to provide the certification.

(D) Violating requirements in this division.

(E) Failing to pay civil penalties assessed for violations of this division.

(b) DEQ must notify the person whose certification is being revoked or suspended of the reasons for the action and any conditions that must be met before DEQ will reinstate the certification.

(c) A person may appeal a suspension or revocation by requesting a contested case hearing under OAR chapter 340, division 011.

(d) A person whose certification has been revoked may not be recertified and may not apply for a new certification for 12 months after the revocation date or under exceptional circumstances as approved by DEQ.

Stat. Auth.: ORS 454.615, 454.625 & 468.020
Stats. Implemented: ORS 454.615, 454.625 & 468.020
Hist.: DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05; DEQ 14-2013, f. 12-20-13, cert. ef. 1-2-14

340-071-0800
Tables

Tables for Division 071.

[ED. NOTE: To view attachments referenced in rule text, click here for PDF copy.]

Statutory/Other Authority: ORS 454.615, 454.625 & 468.020
Statutes/Other Implemented: ORS 454.775, 454.780, 454.784, 468.020, 454.605, 454.607, 454.610, 454.615, 454.625, 454.655, 454.665, 454.675, 454.695, 454.725, 454.745, 454.755, 468.035, 468.045, 468.065, 468B.050, 468B.055 & 468B.080
History:
DEQ 11-2024, amend filed 07/15/2024, effective 08/01/2024
DEQ 12-2023, amend filed 09/13/2023, effective 11/01/2023
DEQ 15-2022, amend filed 09/06/2022, effective 11/01/2022
DEQ 15-2021, amend filed 09/30/2021, effective 11/01/2021
DEQ 16-2020, amend filed 07/29/2020, effective 08/01/2020
DEQ 22-2019, amend filed 09/27/2019, effective 09/27/2019
DEQ 193-2018, amend filed 09/17/2018, effective 09/17/2018
DEQ 31-2017, minor correction filed 11/29/2017, effective 11/29/2017
DEQ 16-2017, minor correction filed 11/01/2017, effective 11/01/2017
DEQ 15-2017, adopt filed 10/31/2017, effective 11/01/2017

State of Oregon Department of Environmental Quality

OAR 340-071-0800
Fee Tables

Effective November 1, 2024

OAR 340-071-0220 TABLE 1 MINIMUM SEPARATION DISTANCES (ALL MEASUREMENTS IN FEET UNLESS OTHERWISE NOTED)			
Items Requiring Setback		**From Subsurface Absorption Area Including Replacement Area**	**From Septic Tank and Other Treatment Units, Effluent Sewer and Distribution Units**
1. Groundwater Supplies and Wells		*100	50
2. Springs	Upgradient	50	50
	Downgradient	100	50
**3. Surface Public Waters	Year round	100	50
	Seasonal	50	50
4. Intermittent Streams	Piped (watertight not less than 20' from any part of the onsite system)	20	20
	Unpiped	50	50
5. Groundwater Interceptors	On a slope of 3% or less	20	10
	On a slope greater than 3%: Upgradient	10	5
	On a slope greater than 3%: Downgradient	50	10

OAR 340-071-0220
TABLE 1
MINIMUM SEPARATION DISTANCES
(ALL MEASUREMENTS IN FEET UNLESS OTHERWISE NOTED)

Items Requiring Setback		From Subsurface Absorption Area Including Replacement Area	From Septic Tank and Other Treatment Units, Effluent Sewer and Distribution Units
6. Irrigation Canals	Lined (watertight canal): Downgradient	25	25
	Unlined: Upgradient	25	25
	Unlined: Downgradient	50	50
7. Manmade Cuts Down - Gradient in Excess of 30 Inches (top of downslope cut)	Which Intersect Layers that Limit Effective Soil Depth Within 48 Inches of Surface	50	25
	Which Do Not Intersect Layers that Limit Effective Soil Depth	25	10
8. Downgradient Escarpments	Which Intersect Layers that Limit Effective Soil Depth	50	10
	Which Do Not Intersect Layers that Limit Effective Soil Depth	25	10
9. Property Lines		10	5
10. Water Lines		10	10
11. Foundation Lines of any Building, Including Garages and Out Buildings		10	5
12. Underground Utilities		10	—

* 50-foot setback for wells constructed with special standards granted by WRD.
**This does not prevent stream crossings of pressure effluent sewers.

OAR 340-071-0220 TABLE 2 QUANTITIES OF SEWAGE FLOWS			
Type of Establishment		**Column 1** **Gallons Per Day**	**Column 2** **Minimum Gallons Per Establishment Per Day**
Airports		5 (per passenger)	150
Bathhouses and swimming pools		10 (per person)	300
Camps:(4 Persons per Campsite, where Applicable)	Campground with central comfort stations	35 (per person)	700
	With flush toilets, no showers	25 (per person)	500
	Construction camps — semi- permanent	50 (per person)	1000
	Day camps — no meals served	15 (per person)	300
	Resort camps (night and day) with limited plumbing	50 (per person)	1000
	Luxury camps	100 (per person)	2000
Churches		5 (per seat)	150
Country clubs		100 (per resident member)	2000

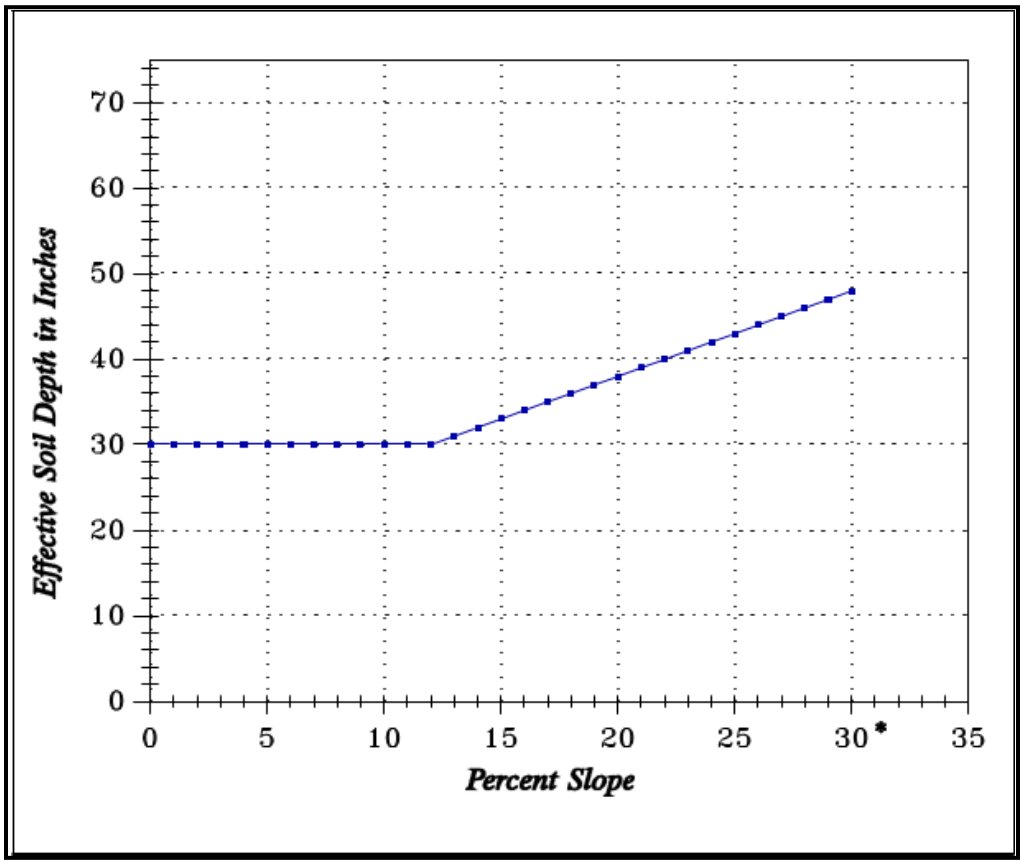
OAR 340-071-0220 TABLE 2 QUANTITIES OF SEWAGE FLOWS			
Country clubs		25 (per non- resident member present)	—
Dwellings:	Boarding houses	150 (per bedroom)	600
	Boarding houses – additional for non-residential boarders	10 (per person)	—
	Rooming houses	80 (per person)	500
	Condominiums, Multiple family dwellings — including apartments	300 (per unit)	900
Type of Establishment		**Column 1**	**Column 2**
		Gallons Per Day	**Minimum Gallons Per Establishment Per Day**
Dwellings:	Single family dwellings	300 (not exceeding 2 bedrooms)	450*
	Single family dwellings — with more than 2 bedrooms	75 (for third & each succeeding bedroom)	450
	Single family dwellings – with accessory dwelling unit (ADU)	600 (not exceeding 2 bedrooms in either dwelling)	750
	Accessory dwlling units (ADU)	300 (per unit)	-
Factories (exclusive of industrial wastes — with shower facilities)		35 (per person per shift)	300
Factories (exclusive of industrial wastes — without shower facilities)		15 (per person per shift)	150
Hospitals		250 (per bed space)	2500
Hotels with private baths		120 (per room)	600
Hotels without private baths		100 (per room)	500
Institutions other than hospitals		125 (per bed space)	1250
Laundries — self-service		500 (per machine)	2500

OAR 340-071-0220 TABLE 2 QUANTITIES OF SEWAGE FLOWS			
Mobile home parks		250 (per space)	750
Motels — with bath, toilet, and kitchen wastes		100 (per bedroom)	500
Motels — without kitchens		80 (per bedroom)	400
Picnic Parks — toilet wastes only		5 (per picnicker)	150
Picnic Parks — with bathhouses, showers, and flush toilets		10 (per picnicker)	300
Restaurants		40 (per seat)	800
Restaurants — single-service		2 (per customer)	300
Restaurants — with bars and/or lounges		50 (per seat)	1000
Type of Establishment		**Column 1**	**Column 2**
		Gallons Per Day	**Minimum Gallons Per Establishment Per Day**
Schools:	Boarding	100 (per person)	3000
	Day — without gyms, cafeterias, or showers	15 (per person)	450
	Day — with gyms, cafeterias and showers	25 (per person)	750
	Day — with cafeteria, but without gyms or showers	20 (per person)	600
Service Stations		(per vehicle served)	500
Swimming pools and bathhouses		10 (per person)	300
Theaters:	Movie	5 (per seat)	300
	Drive-In	20 (per car space)	1000
Travel trailer parks — without individual water and sewer hookups		50 (per space)	300
Travel trailer parks — with individual water and sewer hookups		100 (per space)	500
Workers:	Construction — as semi- permanent camps	50 (per person)	1000
	Day — at schools and offices	15 (per shift)	150

OAR 340-071-0220
TABLE 2
QUANTITIES OF SEWAGE FLOWS

* Except as otherwise provided in these rules.

OAR 340-071-0220
TABLE 3
SLOPE, EFFECTIVE SOIL DEPTH RELATIONSHIP



OAR 340-071-0220
TABLE 4

Minimum length of absorption trench (linear feet) required per 150 gallons sewage flow determined from soil texture versus effective soil depth.

Effective Soil Depth	Soil Group		
	A	B	C
18" to Less than 24"	125	150	175
24" to Less than 36"	100	125	150
36" to Less than 48	75	100	125
48" or more	50	75	125

Soil Group A — Sand, Loamy Sand, Sandy Loam.
Soil Group B — Sandy Clay Loam, Loam, Silt Loam, Silt, Clay Loam.
Soil Group C — Silty Clay Loam, Sandy Clay, Silty Clay, Clay.
If sand grains are fine or very fine, site according to Group B soils.

OAR 340-071-0220
TABLE 5

Minimum length of absorption trench (linear feet) required per 150 gallons design flow determined from soil texture versus depth to temporary groundwater.

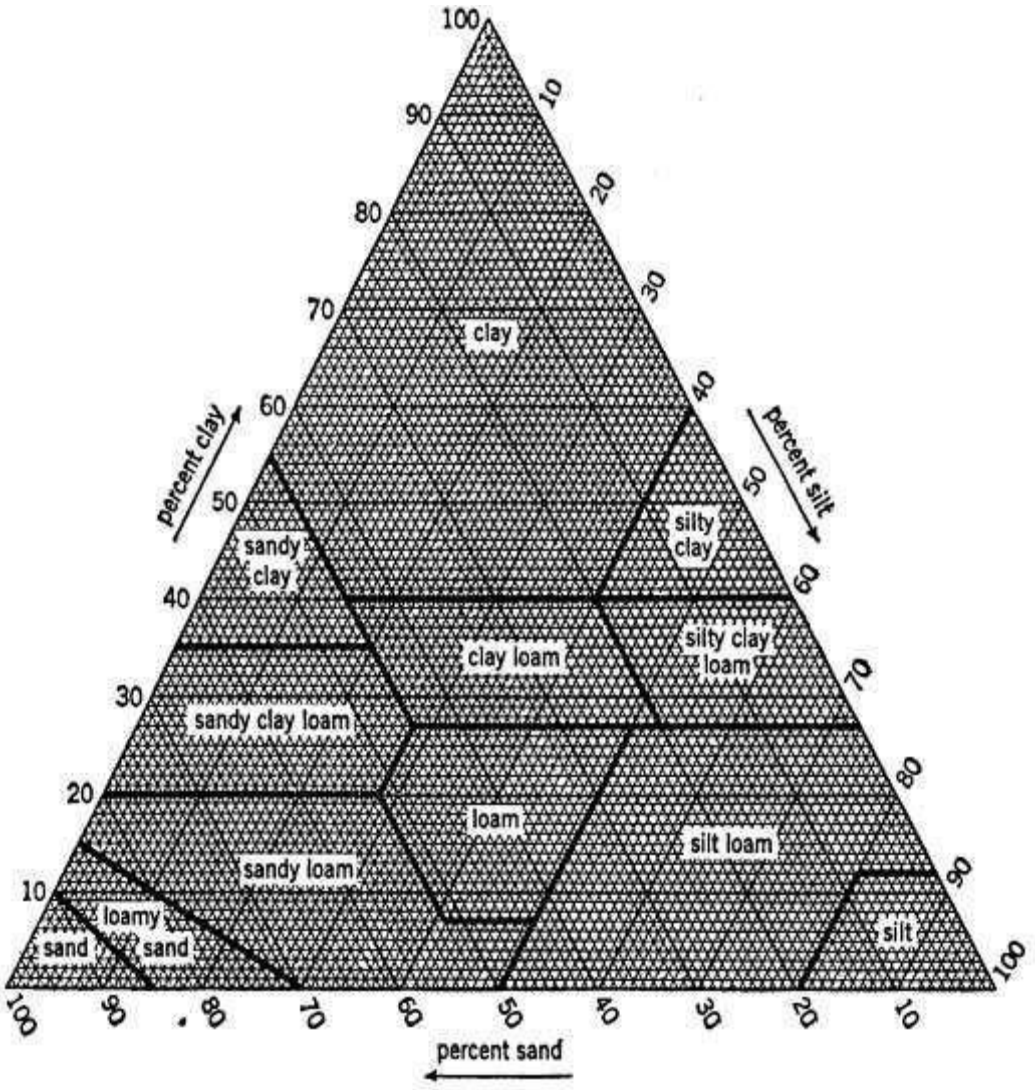
Depth to Temporary Groundwater	Soil Group		
	A	B	C
24" to Less than 48"	100	125	150
48" or More	50	75	125

Soil Group A — Sand, Loamy Sand, Sandy Loam.
Soil Group B — Sandy Clay Loam, Loam, Silt Loam, Silt, Clay Loam.
Soil Group C — Silty Clay Loam, Sandy Clay, Silty Clay, Clay.
If sand grains are fine or very fine, site according to Group B soils.

OAR 340-071-0100

TABLE 6

SOIL TEXTURAL CLASSIFICATION CHART



OAR 340-071-0100 TABLE 7 USDA SOIL CLASSIFICATION SIZES OF SOIL SEPARATES		
Material	**Sieve Sizes**	**Millimeters**
Clay		.002
Silt	270	.050
Very Fine Sand	200 140	.075 .1
Fine Sand	60	.25
Medium Sand	35	.5
Coarse Sand	18	1.0
Very Coarse Sand	10	2.0
Fine Gravel	4 3/8” 1/2	4.75 9.5 12.5
Course Gravel	3”	76.2
Cobbles	10”	250

OAR 340-071-0330
TABLE 8
MINIMUM SEPARATION DISTANCES FOR NONWATER-CARRIED WASTE DISPOSAL FACILITIES

Items requiring separation	Self-Contained Nonwater-Carried Waste Disposal	Unsealed Earth Type Privies, Graywater Waste Disposal Sump and Seepage Chambers
Groundwater supplies including springs and cisterns	50'	100'
Surface public waters, excluding intermittent streams	50'	100'
Intermittent streams	50'	50'
Property line	25'	25'

OAR 340-071-0140 TABLE 9A SITE EVALUATION AND EXISTING SYSTEM EVALUATION FEES Effective August 1, 2024	
New Site Evaluation Fees Fees in this section apply to each system for which site suitability is evaluated	
Single family dwelling - First lot	$819
Single family dwelling - Each additional lot evaluated during initial visit	$819
Commercial facility with a design capacity of 1,000 gpd or less	$819
Commercial facility with a design capacity of 1,001-1,500 gpd	$1,031
Commercial facility with a design capacity of 1,501-2,000 gpd	$1,243
Commercial facility with a design capacity of 2,001-2,500 gpd	$1,455
Commercial facility s with a design capacity of 2,501-3,000 gpd	$1,668
Commercial facility with a design capacity of 3,001-3,500 gpd	$1,880
Commercial facility with a design capacity of 3,501-4,000 gpd	$2,091
Commercial facility with a design capacity of 4,001-4,500 gpd	$2,303
Commercial facility with a design capacity of 4,501-5,000 gpd	$2,516
Commercial facility with a design flow greater than 5,000 gpd	$2,776
Site Evaluation Report Review fee	$771
Existing System Evaluation Report fee	$771

OAR 340-071-0140
TABLE 9B
PERMITTING FEES FOR SYSTEMS NOT SUBJECT TO WPCF PERMITS
Effective August 1, 2024

Type of Fee		System Type					Plan Review fees for Commercial Facility Systems
		A	B	C	D	E	
Construction-Installation Permit Fees	For systems with a design capacity of less than 600 gpd	$539	$1,041	$1,214	$1,488	$1,832	$0
	For systems with a design capacity of 601-1,000 gpd	$539	$1,041	$1,214	$1,488	$1,832	$443
	For systems with a design capacity of 1,001-1,500 gpd	$655	$1,157	$1,330	$1,581	$2,000	$520
	For systems with a design capacity of 1,501-2,000 gpd	$771	$1,272	$1,446	$1,676	$2,062	$597
	For systems with a design capacity of 2,001-2,500 gpd	$886	$1,388	$1,561	$1,770	$2,178	$675
Reinspection fee		$120	$120	$120	$120	$120	$120
Pump Evaluation fee. For all permits that specify the use of a pump except for sand filter, Alternative treatment technologies, Recirculating gravel filter, and pressurized distribution systems		$77	$77	$77	$77	$77	$77

System Type Key:
Type A = Gray Water waste disposal sumps
Type B = Holding tanks
Type C = Standard subsurface, Absorption trenches in saprolite, Redundant, Seepage trench, Steep slope
Type D = Alternative treatment technologies, Capping fill, Pressurized distribution, Tile dewatering
Type E = Recirculating gravel filter, Sand filter (commercial or residential)

OAR 340-071-0140
TABLE 9C
OTHER PERMITTING FEES FOR SYSTEMS NOT SUBJECT TO WPCF PERMITS
Effective August 1, 2024

Fee Subject	Fee	Field Visit required	No Field Visit required
Minor Alteration Permit	$318		
Major Alteration Permit	$665		
Minor Repair Permit - Single Family Dwelling	$308		
Major Repair Permit - Single Family Dwelling	$644		
Minor Repair Permit - Commercial Facility	$559		
Major Repair Permit - Commercial Facility	$1214		
Permit Denial Review	$424		
Permit Transfer, Reinstatement, or Renewal		$627	$183
Authorization Notice		$752	$193
Authorization Notice Denial Review	$771		
Renewal of hardship authorization for temporary dwelling		$397	$120
Alternative system inspection - Holding tanks	$463		
Variance from onsite system rules	$2,506		
Land use clearance	$60		
Annual report evaluation - Holding tanks – hard copy submittal	$36		
Annual report evaluation - Holding tanks – online submittal	$30		
Alternative system inspection - Other alternative systems listed in Table 9B	$636		

OAR 340-071-0140
TABLE 9C
OTHER PERMITTING FEES FOR SYSTEMS NOT SUBJECT TO WPCF PERMITS

Type	Fee	Field Visit required	No Field Visit required
Annual report evaluation - Sand filters, pressurized distribution systems, recirculating gravel filters, and alternative treatment technology – hard copy submittal	$72		
Annual report evaluation - Sand filters, pressurized distribution systems, recirculating gravel filters, and alternative treatment technology – online submittal	$60		

OAR 340-071-0140 TABLE 9D

WPCF PERMIT FEES

Effective November 1, 2024

	Application filing fee (all systems)	Permit processing fees for onsite systems with a design capacity of 1,200 gpd or less	Permit processing fees for onsite systems with a design capacity over 1,200 gpd
New application	$126	$1,025	$5,125
Permit renewal (involving request for effluent limit modifications)	$126	$509	$2,565
Permit renewal (without request for effluent limit modifications)	$126	$257	$1,279
Permit modification (involving increase in effluent limitations)	$126	$509	$2,565
Permit modification (not involving an increase in effluent limits)	$126	$382	$1,279
Plan Review fee			
For commercial facilities with a design capacity less than 600 gpd	$0		
For commercial facilities with a design capacity of 600 - 1,000 gpd	$487		
For commercial facilities with a design capacity of 1,001 - 1,500 gpd	$574		
For commercial facilities with a design capacity of 1,501 - 2,000 gpd	$661		
For commercial facilities with a design capacity of 2,001 - 2,500 gpd	$745		
For commercial facilities with a design capacity of 2,501 - 3,000 gpd	$875		
For commercial facilities with a design capacity of 3,001 - 3,500 gpd	$960		
For commercial facilities with a design capacity of 3,501 - 4,000 gpd	$1,044		
Plan Review fee			

OAR 340-071-0140 TABLE 9D WPCF PERMIT FEES Effective November 1, 2024	
For commercial facilities with a design capacity of 4,001 - 4,500 gpd	$1,128
For commercial facilities with a design capacity of 4,501 - 5,000 gpd	$1,216
Commercial facilities with a design capacity greater than 5,000 gpd	$1,279
Single family dwelling	$257
Annual Compliance Determination fee	
Onsite sewage lagoon with no discharge	$1,535
Treatment Standard 1 or better systems with design capacities less than 2,500 gpd	$640
Treatment Standard 1 or better systems with design capacities of 2,500 - 20,000 gpd	$1,279
Holding tanks, if by the date specified by DEQ, the owner does not submit written certification to DEQ that the holding tank has been operated the previous calendar year in full compliance with the permit or that the previous year's service logs for the holding tanks are not available for inspection by the DEQ	$509
Holding tanks, if by the date specified by DEQ, the owner submits written certification to DEQ that the holding tank has been operated the previous calendar year in full compliance with the permit and that the previous year's service	$54
Other systems with design capacities less than 20,000 gpd	$640
Other systems with design capacities 20,000 gpd or more	$1,279

OAR 340-071-0140 TABLE 9E SEWAGE DISPOSAL SERVICE LICENSE AND TRUCK INSPECTION FEES Effective August 1, 2024	
New 3-year business license	$512 per year
Renewal of business license	$386 per year
Additional license fee for additional pumper vehicles	$18/vehicle
Transfer of or amendments to license	$241
Reinstatement of suspended license	$301
Pumper truck inspections - First vehicle, each inspection	$120
Pumper truck inspections - Each additional vehicle, each inspection	$60

OAR 340-071-0140 TABLE 9F OTHER FEES Effective August 1, 2024	
Innovative or Alternative Technology Review	$1,928
Alternative Technology Review (greater than 1,500 gpd)	$3,856
Alternative Treatment Technology Annual Compliance Determination Fee (per listed model)	$602
Material Plan Review	$577
Department Surcharge	$117

OAR 340-048-0055 TABLE 9G 401 Fees Effective November 1, 2024	
Tier 1	$1,014
Tier 2A	$4,521
Tier 2B	$12,468
Tier 3	$18,313
Tier 4 - $14,020 per month or average monthly cost of a senior level technical staff position.	$14,440

OAR 340-049-0065
TABLE A
Wastewater System Operator Certification: Operator Certification Fee Schedule

Application Type	Fee
Small Wastewater Systems	$144
Grade I or Grade I Provisional Treatment or Collection	$144
Grade I or Grade I Provisional Treatment and Collection	$206
Grade II Treatment or Collection	$175
Grade III Treatment or Collection	$206
Grade IV Treatment or Collection	$247
Examination Fee	$103
Re-examination or Reschedule Examination Fee	$247
Post-examination Application Fee	$51
Two-year Certification Renewal Fee – One Certificate or Two	$164
Certificate Reinstatement and Renewal Fee — One certificate or two	$288
Reciprocity Application Type	**Fee**
Grade I — Treatment or Collection	$164
Grade I — Treatment and Collection	$247
Grade II Treatment or Collection	$195
Grade III Treatment or Collection	$226
Grade IV Treatment or Collection	$267

OAR 340-049-0065
TABLE B
Wastewater System Operator Certification: Operator Certification Program Support Fee Schedule

Wastewater System Average Dry Weather Flow (ADWF)	Annual Operator Certification Program Support Fee
ADWF less than 0.075 MGD	$82
ADWF 0.075 — 0.499 MGD	$103

ADWF 0.500 — 0.999 MGD	$195
ADWF 1.0 — 1.999 MGD	$370
ADWF 2.0 — 4.999 MGD	$865
ADWF 5.0 — 9.999 MGD	$1,895
ADWF 10.0 — 19.999 MGD	$3,708
ADWF 20.0 — 29.999 MGD	$6,180
ADWF 30.0 — 39.999 MGD	$8,652
ADWF 40.0 — 59.999 MGD	$12,360
ADWF 60.0 — 79.999 MGD	$17,304
ADWF 80.0 — 119.999 MGD	$24,720
ADWF 120.0 MGD or greater	$34,608
Late Fee: $51 or 10 percent of the appropriate annual operator certification program support fee in Table B (above), whichever is greater.	$51

DIVISION 73 CONSTRUCTION STANDARDS

340-073-0025
Tank Construction

The following construction and manufacturing requirements apply to all septic tanks, holding tanks, dosing tanks, multiple-compartment combination septic and dosing tanks, and dosing septic tanks manufactured for use in Oregon unless specifically exempted by OAR chapter 340, divisions 071 or 073.

(1) Compartments. Tanks may have single or multiple compartments.

(a) Single-compartment tanks and multiple-compartment tanks must meet or exceed the minimum volume requirements described in OAR chapter 340, divisions 071 and 073.

(b) Multiple-compartment tanks must comply with the following requirements:

(A) The liquid capacity of the first compartment must be at least 2/3 of the total required liquid capacity, as measured from the invert elevation of the first compartment's outlet Tee fitting;

(B) A compartment may not have an inside horizontal dimension of less than 24 inches.

(c) The liquid depth of any compartment must be at least 30 inches. Liquid depths greater than 72 inches may not be considered in determining the working liquid capacity unless the tank has a capacity greater than 3,000 gallons.

(2) Service access manhole. All tanks must have at least one service access manhole measuring at least 18 inches across its shortest dimension in each compartment.

(3) Watertightness. After installation, all tanks must be watertight. The installer must test each tank for watertightness by filling the tank to a point at least 2 inches above the point of riser connection to the top of the tank. During the test there may be no more than a one gallon leakage over a 24 hour period. The tank manufacturer must deliver watertight tanks and should test each tank for watertightness before the tank is shipped from the manufacturing plant.

(4) If the tank manufacturer does not fully assemble the tank, as with a two-piece concrete tank, the manufacturer must provide the bonding and sealing agents and an instruction manual for assembling the tank.

(5) Structure: All tanks must be able to support an earth load of at least 300 pounds per square foot when the maximum coverage does not exceed 3 feet. Tanks installed with more than 3 feet of cover must be reinforced to support the additional load. Lateral load must be 62.4 pcf of equivalent fluid pressure (EFP). Tanks must be able to withstand long-term external hydrostatic loads in addition to soil loads. Internal hydrostatic

pressures must be omitted to allow for septage pumping during critical groundwater conditions. A 2,500 pound wheel load concentrated over the critical elements of the tank shall also be considered.

(6) Service access riser and cover. All tanks must be manufactured to accommodate installation of a watertight service access riser above one service access manhole. The riser must have a minimum nominal diameter of 20 inches when tank burial depths do not exceed 36 inches. Tanks designed for burial depths deeper than 36 inches must also be designed to accommodate installation of a 30-inch minimum diameter service access riser above each service access manhole. A gasketed riser cover must be provided and securely fastened or weighted to prevent unauthorized access.

(7) Inlet and outlet Tee fittings.

(a) The inlet and outlet Tee fittings must be of Schedule 40 PVC plastic, Schedule 40 ABS plastic, or other equally durable materials approved by DEQ with a minimum diameter of 4 inches.

(b) The distance between the inlet and outlet Tee fittings in a single-compartment tank must at least equal the liquid depth of the tank.

(c) The inlet and outlet Tee fittings in a single-compartment tank, where applicable, must be located at opposite ends of the tank. The inlet Tee fitting must be readily accessible by way of a watertight, 8-inch minimum diameter riser (with cover) and access hole positioned directly above the inlet Tee. The fittings must be attached in a watertight manner acceptable to DEQ.

(d) The inlet fitting in all single-compartment tanks, except dosing tanks, and in each compartment of multiple-compartment tanks, must be a "sanitary tee" extending at least 6 inches above and at least 12 inches below the normal high and low liquid levels, respectively.

(e) The outlet Tee fitting, holes, or ports provided in a vault or outlet effluent filter must be positioned to withdraw effluent horizontally from the clear zone at an elevation measured from the inside bottom of the tank to 65 to 75 percent of the lowest operating liquid depth. The net area of the ports must be at least 6 square inches. The outlet fitting in single-compartment tanks and in each compartment of multiple-compartment tanks must extend at least 6 inches above the highest normal liquid depth to provide scum storage. When the single-compartment tank is used as a holding tank, dosing septic tank, or dosing tank, the outlet Tee fitting must be provided with a watertight plug or omitted. The outlet Tee fitting may also be plugged or omitted in the last compartment of a multiple-compartment tank when a pump is placed in that last compartment.

(f) Ventilation must be provided through the fittings by means of a 2-inch minimum space between the top of the inlet Tee fittings and the adjacent tank surfaces.

(g) The invert of the inlet fitting must be at least 1 inch and preferably 3 inches above the invert of the outlet fitting or the highest normal liquid level.

(h) A convenient means of monitoring sludge and scum accumulation must be provided, with access extending to ground level.

(i) The tank manufacturer must provide with each Tee fitting an appropriate coupler that will provide a watertight connection between the fittings and the building and effluent sewer pipes.

(8) At least 10% of the inside volume of a tank must be above the highest normal liquid level to provide scum storage and reserve.

(9) Except as provided in OAR 340-073-0026, tanks shall be constructed of concrete, fiberglass, or other noncorrosive materials approved by DEQ:

(a) Precast concrete tanks must have a minimum wall, compartment, and bottom thickness of 2-1/2 inches and must be adequately reinforced. The top must be at least 4 inches thick.

(b) Cast-in-place tanks must be designed by a civil or structural engineer to the requirements of these rules, and the tank construction must be certified by the designer or qualified representative. A structural permit from the Building Codes Division or the municipality with jurisdiction (as defined in 455.010(4)) may be required when cast-in-place concrete tanks are used.

(c) Tanks made of other corrosion resistant materials must be constructed to provide structural integrity to meet the requirements of sections (3), (4), and (5) of this rule.

(10) All prefabricated tanks must be marked on the uppermost tank surface over the outlet with the liquid capacity of the tank, the burial depth limit, date of manufacture, and either the manufacturer's full business name or the number assigned by DEQ.

(11) Each commercial manufacturer of prefabricated tanks must provide two complete sets of plans and specifications, prepared by a registered professional engineer licensed to practice in Oregon, to DEQ for review and approval. Plans submittal must include the structural analysis, calculation of total gallons, operating gallons, gallons per inch, and buoyancy, including predetermined countermeasures.

(12) Each commercial manufacturer of pre-fabricated tanks must provide DEQ with written certification that tanks for use in onsite systems in the State of Oregon will comply with all requirements of this rule.

(13) An installation manual, on waterproof paper or placed within a weather-resistant container, must be provided by the manufacturer with each tank distributed. The manual must describe proper installation of the tank, riser(s) and lid, pipe connections, watertight testing procedures, backfill, and any special precautions or limitations.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615

Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f.11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0026
Septic Tanks

Septic tanks must be constructed of concrete, fiberglass, or other non-corrosive materials approved by DEQ.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0030
Dosing Septic Tank

(1) A dosing septic tank may discharge effluent with a pump from the clear zone at the outlet end of the tank. These may be considered for installations where the design flow does not exceed 600 gallons per day.

(2) Special Configuration:

(a) The minimum total primary volume of the tank must be 1,100 gallons for flows less than or equal to 450 gallons per day and 1,500 gallons for flows greater than 450 and up to 600 gallons per day.

(b) The submerged volume at the lowest operating liquid level must be at least 900 gallons. The remaining capacity must be used to ensure optimum surge capacity and reserve storage capacity.

(c) Liquid levels must be controlled in a manner that is consistent with pump dosing requirements described in OAR chapter 340, divisions 071 and 073.;

(d) All apparatus must be constructed and installed to facilitate ease of service without having to alter any other component.

(e) The installation manual described in OAR 340-073-0025(13) must include additional information about installation of the pump vault and screen, pump control and alarm levels, and the watertight pass-through methods for electrical wiring and pipe.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0035
Distribution Boxes

(1) Distribution boxes must be constructed of concrete, fiberglass, or other materials acceptable to DEQ.

(2) Distribution boxes must be constructed of durable, watertight materials resistant to deterioration and be designed to accommodate watertight connections for the effluent sewer and header pipes. The top, walls, and bottom of concrete distribution boxes must be at least 1-1/2 inches thick. All distribution boxes must be able to support an earth load of at least 200 pounds per square foot.

(3) The invert elevation of all outlets must be the same and must be at least 2 inches below the inlet invert.

(4) Each distribution box must be provided with a sump extending at least 2 inches below the invert of the outlets unless otherwise authorized by DEQ.

(5) Distribution box covers must be marked with the manufacturer's full business name or number assigned by DEQ.

(6) Each manufacturer must provide DEQ with complete, detailed plans and specifications of the distribution box and must certify, in writing, that distribution boxes manufactured for use in onsite sewage systems in Oregon will comply with all requirements of this rule. Plans and specifications must be prepared under the supervision of and designed by a professional engineer licensed in accordance with ORS chapter 672.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0040
Drop Boxes

(1) Drop boxes must be constructed of concrete, fiberglass, or other materials acceptable to DEQ.

(2) Drop boxes must be constructed of durable, watertight materials resistant to deterioration and be designed to accommodate watertight connections for the effluent sewer and header pipes. The top, walls, and bottom of concrete drop boxes must be at least 1-1/2 inches thick. All drop boxes must be able to support an earth load of at least 200 pounds per square foot.

(3) The inverts of the inlet and overflow port must be at the same elevation. The invert of the header pipe port(s) leading to the absorption trench(es) must be 6 inches below the inlet invert.

(4) Drop box covers must be marked with the manufacturer's full business name or number assigned by DEQ.

(5) Each manufacturer must provide DEQ with complete, detailed plans and specifications of the drop box and must certify, in writing, that drop boxes manufactured for use in onsite systems in Oregon will comply with all requirements of this rule. Plans and specifications must be prepared under the supervision of and designed by a professional engineer licensed in accordance with ORS Chapter 672.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0050
Distribution Boxes, Drop Boxes, and Diversion Valves: Dosing Tanks

(1) Dosing tanks must meet the standards described in OAR 340-073-0025, except as otherwise allowed in this rule.

(2) Each dosing tank employing one or more pumps must have a minimum liquid capacity equal to the design flow for flows up to 1,200 gallons per day. DEQ will determine tank sizing for dosing tanks with design flows greater than 1,200 gallons per day. The liquid capacity of dosing tanks must be as measured from the invert elevation of the inlet fitting.

(3) Each dosing tank must be provided with a service access manhole having a minimum horizontal measurement of 18 inches.

(4) Each dosing tank proposed to serve a commercial facility containing more than one pump must be provided with at least one service access manhole that provides adequate space to construct, install, service, and operate the equipment in accordance with the requirements of OAR chapter 340, divisions 071 and 073.

(5) The installation manual described in OAR 340-073-0025(13) must include additional information about installation of the pump screen, pump control and alarm levels, and the watertight pass-through methods for electric wiring and pipe.

(6) The inlet fitting must extend below the lowest operating level of the pump.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020

Stats. Implemented: ORS 454.615

Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0055
Dosing Assemblies: Effluent Pumps, Controls and Alarms

(1) Design and equipment must emphasize ease of maintenance, longevity, and reliability of components and must be proven suitable by operational experience, test, or analysis acceptable to DEQ.

(2) Easy means of electrical and plumbing disconnect must be provided. All apparatus must be constructed and installed to facilitate ease of service without having to alter any other component.

(3) Component materials must be durable and corrosion-resistant such as Type 316 stainless steel, suitable plastics, or 85-5-5-5 bronze.

(4) Pumps, Controls, and Alarms. All pumps, controls and related apparatus must be field tested under working conditions and found to operate and perform satisfactorily. Electrical components used in onsite systems must comply with applicable requirements of the State of Oregon Electrical Code and the standards in this rule.

(a) Motors must be continuous-duty with overload protection.

(b) Pumps must have durable impellers of bronze, cast iron, or other materials approved by DEQ.

(c) Submersible pumps must be provided with an easy, readily accessible means of electrical and plumbing disconnect and a noncorrosive lifting device to remove the pump for servicing.

(d) Except where the agent specifically authorizes it in writing by the agent, the pump must be placed within a corrosion-resistant screen or vault with a filtering device that extends into or above the tank's service access manhole. The screen or filtering device must have at least 12 square feet of surface area, with 1/8-inch openings. In lieu of the screen, the agent may allow other methods with equal or better performance for preventing suspended solids from passing to the pump.

(e) Pumps must be automatically controlled by float switches with a minimum rating of 12 amps at 115 volts A.C. or by a DEQ-approved, equally reliable switching mechanism. Except as otherwise required in this division, the switches must be installed so that no more than 20% of the design flow is discharged each cycle. The pump "off" level must be set to maintain the liquid level above the top of the pump or to the designer and pump manufacturer's specifications.

(f) An audible and visual high water level alarm with manual silence switch must be located in or near the building served by the pump. Only the audible alarm may be user-cancelable. The switching mechanism within a dosing tank or chamber controlling the high water level alarm must be located so that at time of activation the tank has a remaining volume equal to 1/3 or more of the system's design flow, as measured below the invert of the inlet, for effluent storage. The alarm and pump must be on separate circuits. Commercial applications using duplex pumps are not subject to the 1/3 storage reserve requirement.

(g) When a system has more than one pump, DEQ may require the pumps to be wired into the electrical control panel to function alternately after each pumping cycle. If either pump should fail, the other pump will continue to function while the high water level alarm activates. A cycle counter must be installed in the electrical control panel for each pump.

(h) All pump installations must be designed with adequate sludge storage volume below the effluent intake level of the pump.

(i) All commercial systems with a design flow greater than 600 gallons must be constructed with two or more alternating pumps unless otherwise authorized in writing by DEQ. Controls must be provided such that an alarm will signal when one1 of the pumps malfunctions.

(j) All pumps serving commercial systems must be operated through a pre-manufactured electrical control panel. There must be a means of monitoring pump performance with elapsed-time meters and cycle counters.

(k) Where multiple pumps are operated in series, an electrical control panel must be installed to prevent the operation of a pump or pumps preceding a station that experiences a high level alarm event.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 23-1981(Temp), f. & ef. 9-2-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 15- 1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 12-1997, f. & cert. ef. 6-19-97; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0056
Distribution Boxes, Drop Boxes, and Diversion Valves: Effluent Filters

Effluent filters used in onsite systems must meet the following criteria.

(1) Filters must be of durable, resilient, corrosion resistant, non-degradable materials resistant to deformation under normal operating conditions.

(2) Filters must be designed to prevent the escape of sludge or scum during normal operation and in the event of a malfunction, including filter clogging.

(3) The filter must retain all particles greater than 1/8 inch.

(4) The filter assembly must baffle the sludge and scum layers to prevent the escape of gross solids during sludge bulking or gas ebullition.

(5) Filters must be designed and positioned to allow for easy, trouble-free removal from and reinstallation to the screen apparatus from the assembly.

(6) The assembly must be capable of withstanding stresses placed upon it by installation, operation, and service.

(7) The assembly in the septic tank must perform as a conventional tank outlet that meets the requirements of OAR 340-073-0025(6) when the filter is removed.

(8) The filter must be designed to handle the flow of the system it is to serve without excessive maintenance. For a single-family dwelling, maintenance is considered "excessive" when the filter requires service or cleaning more than one time per year. Service must be performed each time the tank is pumped and in accordance with the manufacturer's specifications.

(9) To obtain DEQ approval, the manufacturer of an effluent filter must provide DEQ with the necessary technical data to show that the design and materials comply with this rule. The manufacturer must provide an operation and maintenance manual with each unit distributed.

(10) Effluent filter units external to the tank must be watertight.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0060
Distribution Boxes, Drop Boxes, and Diversion Valves: Pipe Materials and Construction

(1) Effluent Sewer Pipe: The effluent sewer and header must be constructed with materials that conform to state building sewer standards. The effluent sewer and header pipe must have a diameter of at least 3 inches. When the septic tank is fitted with an effluent filter, the nominal diameter of effluent sewer piping may be reduced to at least 1-1/4 inches.

(2) Underdrain pipe. Underdrain pipe must meet or exceed Schedule 40 pipe. The pipe and fittings must be marked as required by ASTM Specification D 2241. The underdrain pipe must be perforated in accordance with subsection (4)(d) of this rule or with 1/4-inch slots cut halfway through the pipe at 4 inches center to center.

(3) Pressure transport pipe, pressure manifolds, and pressure lateral pipe and fittings must meet or exceed Schedule 40 and be pressure rated. High density polyethylene (HDPE) pipe must be pressure rated under the standards referenced in Chapter 17 of the Oregon Plumbing Specialty Code. Any transitional fittings between material must be manufacture for that purpose

(4) Distribution Pipe and Fittings.

(a) Polyethylene distribution pipe in 10 foot lengths or greater must meet the current ASTM Specification F 667. Pipe and fittings must also pass a deflection test withstanding 350 pounds per foot without cracking or collapsing using the method in ASTM 2412. Pipe used in absorption facilities must be heavy duty. Markings must meet requirements in ASTM F 667.

(b) Polyvinyl chloride (PVC) distribution and fittings must current **ASTM Specification D 2729**. Pipe and fittings must pass a deflection test withstanding 350 pounds per foot without cracking or collapsing using the method found in ASTM 2412. Markings must meet requirements in ASTM Specification D 2729.

(c) Polyethylene smooth wall distribution pipe in 10-foot length and fittings must meet ASTM Specification F 810. Pipe and fittings must also pass a deflection test of 350 pounds per foot without cracking or collapsing by using the method found in ASTM 2412. Markings shall meet the requirements in **ASTM Specification F 810**, **Section 9**.

(d) The three types of plastic pipe described above must have two rows of holes spaced 120 degrees apart and 60 degrees on either side of a center line. For distribution pipe, a line of contrasting color must be provided on the outside of the pipe along the line furthest away and parallel to the two rows of perforations. Durable ink markings must cover at least 50% of the pipe. Markings may consist of a solid line, letters, or a combination of the two. Intervals between markings must not exceed 12 inches. The holes of each row may not be more than 5 inches on center and must have a minimum diameter of 1/2 inch.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 5-1982, f. & ef. 3-9-82; DEQ 9-1982, f. & ef. 6-16-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0075
Non-water-Carried Waste Disposal Facilities, Materials, and Construction: Self-Contained Nonwater-Carried Toilet Facilities

(1) General Standards. All self-contained, nonwater-carried toilet facilities must comply with the following requirements.

(a) They must have water-tight chambers constructed of reinforced concrete, plastic, fiberglass, metal, or other material of acceptable durability and corrosion resistance, approved by DEQ, and designed to facilitate the removal of the wastes.

(b) Black wastes must be stored in an appropriate chamber until removal for final treatment elsewhere. Wastes must be removed from the chamber whenever necessary to prevent overflow.

(c) Chemicals containing heavy metals such as copper, cadmium, and zinc, must not be used in self-contained toilet facilities.

(d) All surfaces subject to soiling must be impervious, easily cleanable, and readily accessible.

(2) Vault Toilet Facilities.

(a) The capacity of vaults must be at least 350 gallons or, in places of employment, 100 gallons per seat.

(b) Caustic must be added routinely to vault chambers to control odors.

(3) Chemical Toilet Facilities.

(a) Toilet bowls must be constructed of stainless steel, plastic, fiberglass, ceramic, or other material approved by DEQ.

(b) Waste passages must have smooth surfaces and be free of obstructions, recesses, or cross braces that would restrict or interfere with flow of black wastes.

(c) Biocides and oxidants must be added to waste detention chambers at rates and - intervals recommended by the chemical manufacturer and approved by DEQ.

(d) Chambers and receptacles must provide a minimum storage capacity of 50 gallons per seat.

(e) Portable shelters housing chemical toilets must display the business name of the licensed sewage disposal service that is responsible for servicing them.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.775
Hist.: DEQ 10-1981, f. & ef. 3-20-81; DEQ 9-1984, f. & ef. 5-29-84; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05

340-073-0085
Non-water-Carried Waste Disposal Facilities, Materials, and Construction: Flexible Membrane Liners for Sand Filters Treating Septic Tank Effluent

(1) Unsupported polyvinyl chloride (PVC) must have the following properties (Property -- Test Method).

(a) Thickness -- ASTM D1593, Para 9.1.3, 30 mil, minimum

(b) Specific Gravity (minimum) -- ASTM D792, Method A

(c) Minimum Tensile Properties (each direction) -- ASTM D882

(A) Breaking Factor (pounds/inch width) -- Method A or B (1 inch wide), 69

(B) Elongation at Break (percent) -- Method A or B, 300

(C) Modulus (force) at 100% Elongation (pounds/inch width) -- Method A or B, 27

(d) Tear Resistance (pounds, minimum) -- ASTM D1004, Die C, 8

(e) Low Temperature -- ASTM D1790, -20° F

(f) Dimensional Stability (each direction, percent change maximum) -- ASTM D1204, 212° F;, 15 min., ±5

(g) Water Extraction -- ASTM D1239, 0.35% max

(h) Volatile Loss -- ASTM D1203,Method A, 0.7% max

(i) Resistance to Soil Burial (percent change maximum in original value) -- ASTM D3083:

(A) Breaking Factor, -5

(B) Elongation at Break, -20

(C) Modulus at 100% Elongation, ±10.

(j) Bonded Seam Strength (factory seam, breaking factor, ppi width) -- ASTM D3083, 55.2

(k) Hydrostatic Resistance -- ASTM D751, Method A, 82.

(2) Installation Standards.

(a) Patches, repairs, and seams must have the same physical properties as the parent material.

(b) Site considerations and preparation.

(A) The supporting surface slopes and foundation to accept the liner must be stable and structurally sound with appropriate compaction. Particular attention must be paid to the potential of sink hole development and differential settlement.

(B) Soil stabilizers such as cementations or chemical binding agents may not adversely affect the membrane; cementations and chemical binding agents may be potentially abrasive agents.

(c) Only fully buried membrane liner installation may be considered to avoid weathering.

(d) Unreinforced liners have high elongation and can conform to irregular surfaces and follow settlements within limits. Unreasonable strain reduces effective thickness and may reduce life expectancy by lessening the chemical resistance of the thinner (stretched) material. Every effort must be made to minimize the strain (or elongation) anywhere in the flexible membrane liner.

(e) Construction and installation.

(A) Surface condition.

(i) Preparation of earth subgrade. The prepared subgrade must be of soil types no larger than Unified Soil Classification System (USCS sand (SP) to a minimum of 4

inches below the surface and free from loose earth, rock, fractured stone, debris, cobbles, rubbish and roots. The surface of the completed subgrade must be properly compacted, smooth, uniform, and free from sudden changes in grade. Importing suitable soil may be required.

(ii) Maintenance of subgrade. The earth subgrade must be maintained in a smooth, uniform, and compacted condition during installation of the lining.

(B) Climatic conditions.

(i) Temperature. Placing liner outside the desirable temperature range must be avoided. The desirable temperature range for membrane installation is 42° F. to 78° F. Lower or higher temperatures may have an adverse effect on transportation, storage, field handling, and placement, seaming, and backfilling; and attaching boots and patches may be difficult.

(ii) Wind. Placing the liner in high wind must be avoided. Wind may have an adverse effect on liner installation such as interfering with liner placement. Mechanical damage may result. Cleanliness of areas for boot connection and patching may not be possible. Alignment of seams and cleanliness may not be possible.

(iii) Precipitation. Seaming, patching, and attaching "boots" must be done under dry conditions. When field seaming is adversely affected by moisture, portable protective structures and other methods must be used to maintain a dry sealing surface. Proper surface preparation for bonding boots and patches may not be possible.

(C) Structures. Where penetrations are necessary, liners must be attached to pipes with a mechanical type seal supplemented by a chemically compatible caulking or adhesives to effect a liquid-tight seal. Maximum compaction must be provided in the area adjacent to pipes to compensate for any settlement.

(D) Liner Placement.

(i) Size. The final cut size of the liner must be carefully determined and ordered to generously fit the container geometry without field seaming or excess straining of the liner material.

(ii) Transportation, handling, and storage. Transportation, handling, and storage procedures must be planned to prevent material damage. Material must be stored in a secured area and protected from adverse weather.

(iii) Site inspection. A site inspection must be carried out by the agent and the installer before liner installation to verify surface conditions and other conditions important to installation.

(iv) Deployment. Panels must be positioned to minimize handling. Seaming should not be necessary. Bridging or stressed conditions must be avoided with proper slack allowances for shrinkage. The liner must be secured to prevent movement and promptly backfilled.

(v) Anchoring trenches. The liner edges must be secured frequently in a backfilled trench.

(vi) Field seaming. Field seaming, if absolutely necessary, must be attempted only when weather conditions are favorable. The contact surfaces of the materials must be clean of dirt, dust, moisture, or other foreign materials. The contact surfaces must be aligned with sufficient overlap and bonded in accordance with the suppliers recommended procedures. Wrinkles must be smoothed out and seams must be inspected by nondestructive testing techniques to verify their integrity. As seaming occurs during installation, the field seams must be inspected continuously, and any faulty area repaired immediately.

(vii) Field repairs. Traffic on the lined area must be minimized. Any necessary repairs to the liner must be patched using the same lining material and following the recommended procedure of the supplier.

(viii) Final inspection and acceptance. Completed liner installations must be visually checked for punctures, rips, tears, and seam discontinuities before placement of any backfill. At this time the installer must also manually check all factory and field seams with an appropriate tool. In lieu of or in addition to manual checking seams, either of the following tests may be performed:

(I) Wet Test. The lined basin must be flooded with water to the 1-foot level after inlets and outlets have been plugged. There may not be any loss of water in a 24 hour test period.

(II) Air Lance Test. All bonded seams must be checked using a minimum 50 PSI (gauge) air supply directed through a 3/16 inch (typical) nozzle held not more than 2 inches from the seam edge and directed at the seam edge. Riffles indicate unbonded areas within the seam or other undesirable seam construction.

Stat. Auth.: ORS 454.625 & 468.020
Stats. Implemented: ORS 454.615 & 454.607
Hist.: DEQ 5-1982, f. & ef. 3-9-82; DEQ 15-1986, f. & ef. 8-6-86; DEQ 27-1994, f. 11-15-94, cert. ef. 4-1-95; DEQ 11-2004, f. 12-22-04, cert. ef. 3-1-05