



# 18 AAC 72

## Regulation Update

### Effective Oct. 1, 2023

Realtors, Lenders, and  
the General Public

Alaska Department of Environmental Conservation  
Division of Water, Water Quality Program  
Engineering Support and Plan Review

# 18 AAC 72 Wastewater Treatment and Disposal

Covers both large and small systems, point sources and non-point sources, domestic and non-domestic wastewater by:

- Specifying minimum treatment requirements
- Establishing minimum separation distance requirements
- Outlining minimum construction standards
- Defining processes for registration or plan approval for all wastewater systems

# 18 AAC 72 Wastewater Treatment and Disposal

**Webinar Focus:** General overall of regulation amendments

**Target Audience:** Realtors, Lenders, and the General Public

**What you will learn:**

- Overview of regulation amendments
- How regulation amendments may or may not affect a home sale
- What you receive from us
- How to search EDMS

# Summary of Restructure

- Article 1 and 2 applies to BOTH domestic and non-domestic wastewater systems
- Article 3 remains fully repealed (subdivision plan reviews)
- Article 4 continues to address requirements for Certified Installers and Approved Homeowners
- Article 5 and 6 were repurposed to cover conventional and alternative wastewater systems
- Article 7 continues to address to general items and fees
  - Definitions updated

See the Crosswalk document available at [septic.alaska.gov](http://septic.alaska.gov)

# Separation Distances to Drinking Water Systems

Amended regulations clarified and changed some separation distance requirements

- Public Water Systems – 18 AAC 80.020
- Private Water Systems – 18 AAC 72.100
- Conventional and Alternative Systems – 72.520 & 72.620

**Minimum Separation Distance tables in New OWSIM**

# Private Water Systems

**New:** 18 AAC 72.100

- Separation distance requirements for private water systems previously contained at 18 AAC 72.020
- Most separation distance requirements remain the same

## Private Well

### To Sewer Line, including community sewer line and sewer main

100 horizontal feet

Previous: 75 horizontal feet, except cleanouts and manholes required to be 100 feet

### To wastewater holding tank

100 horizontal feet

Previous: 75 horizontal feet

# Private Water Systems

**New:** 18 AAC 72.100 (b)

## Private water lines and water holding tanks

**To septic tank, treatment tank, wastewater holding tank, lift station, community sewer line, land surface discharge or leach field**

5 horizontal feet

Previous: Same as UPC which requires 5 horizontal feet

## To private sewer lines

12 horizontal inches

Previous: Same as UPC which requires 12 inches and materials equivalent to water line

At locations where private water lines must cross, locate the water line above sewer line at least 12 vertical inches and joints at least 9 feet apart

## MINIMUM HORIZONTAL SEPARATION DISTANCES TO DRINKING WATER SYSTEMS

all horizontal separation distances must be measured from nearest edge to nearest edge

	Private Sewer Line <sup>a</sup> and Cleanouts, Basement Sump	Sewer Line <sup>b</sup> and Cleanouts, Manholes, Lift Station	Septic Tank, Wastewater Holding Tank, Lift Station, Manholes	Pit Privy, Soil Absorption System	Fuel Tank <sup>c</sup> and Lines	Drinking Water Treatment Waste disposal system	Other Sources of Contamination <sup>d</sup>
<b>Public Water System</b>	100 feet	200 feet	200 feet	200 feet	100 feet	100 feet	200 feet
<b>Private Water System</b>	25 feet	100 feet	100 feet	100 feet	25 feet	25 feet	100 feet
<b>Water line</b>	10 feet	10 feet	10 feet	10 feet	10 feet	10 feet	Contact DWP
<b>Private Water Line</b>	1 foot	5 feet	5 feet	5 feet	10 feet	5 feet	--

Additional separation distance requirements may apply for public water systems; 18 AAC 80 must be referenced for all public water system requirements.

a. A drain pipe buried in the ground below a building is required to meet the same separation distance as a private sewer line to a public water system.

b. Sewer line includes sewer main, community sewer line, and stormwater sewer lines.

c. The separation distance to fuel tanks applies to below-ground fuel tanks and fuel lines, and to above-ground tanks greater than 500 gallons.

d. Other sources of contamination include, but are not limited to, animal byproducts, manure, and agricultural waste. The separation distance to landfills is covered under 18 AAC 60. DWP = Drinking Water Program.

## MINIMUM VERTICAL SEPARATION DISTANCES TO DRINKING WATER COMPONENTS

	Private Sewer Line, Building Sewer	Community Sewer Line or Cleanout, Sewer Main	Septic Tank, Wastewater Holding Tank	Soil Absorption System	Fuel Tank** and Lines	Drinking Water Treatment Waste disposal system	Other Sources of Contamination*
<b>Water line</b>	18 inches recommended	18 inches	cannot cross	cannot cross	no crossing recommended	10 feet	Contact DWP
<b>Private Water Line</b>	12-inches	12-inches	cannot cross	cannot cross	no crossing recommended	5 feet	--

### Well Classification and Select Abbreviated Definitions (See 18 AAC 80.1990 or 18 AAC 72.990 for complete definitions)

**Public Water System:** a potable water system serving 25 or more people at least 60 days per year or a system that has at least 15 service connections.

**Water Line:** is a pipe or conduit used to carry water as part of a public water system but does not include a water service line or private water line.

**Private Water System:** a potable water system that is not a public water system

**Private Water Line:** is a line, pipe, or conduit used to carry water as part of a private water system. The department interprets regulations to not include a water service line that is connected to a public water system in the definition of private water line.

Note: a private water line does not mean a water service line connected to a PWS



### MINIMUM HORIZONTAL SEPARATION DISTANCES FROM SEWER COMPONENTS

	River, Lake, Stream, Spring, Slough <sup>c</sup>	Slopes >25%	Soil Absorption System	Lot Line <sup>a</sup>	Foundation <sup>a</sup>
Septic Tank, Holding Tank, Lift Station	100 feet	need to be stable	5 feet	10 feet	10 feet
Soil Absorption System	100 feet	50 feet	see b. below	10 feet	10 feet
Pit Privy	100 feet	50 feet recommended	see b. below	10 feet	10 feet

a. Recommended minimum horizontal separation distance. All parts, including ground cover for freeze protection must be wholly located on the property with the facility being served. Locating a septic tank or soil absorption system too close to a building foundation may have negative impacts. The septic tank cleanouts or manhole riser must be accessible for maintenance purposes.

b. 6 feet or 2 times the distribution media depth, whichever is greater.

c. Setbacks is from the mean annual high water level of surface water or the mean higher high water level of tidally influenced water

### MINIMUM VERTICAL SEPARATION DISTANCES FROM SEWER COMPONENTS

	Seasonal High Water Table	Impermeable Soil, Permafrost, Bedrock
Septic Tank, Wastewater Holding Tank	need bouyancy protection	--
Subsurface Soil Absorption System	4 feet	6 feet
Pit Privy	4 feet	--

separation distance tables are available in the  
 2023 Onsite Wastewater Systems Installation Manual (OWSIM)  
 available at [septic.alaska.gov](http://septic.alaska.gov)

## Minimum Septic Tank Size

Residential Dwellings		Commercial Facilities	
Number of Bedrooms	Minimum Tank Size*	Daily Design Flow	Minimum Tank Size*
0 - 3	1,000 gallons	Up to 500 gpd	1,000 gallons
4 - 8	1,000 plus 250 gallons for each bedroom over three	501 to 750 gpd	1,250 gallons
9 - 13	2,500 gallons	751 to 1,000 gpd	1,500 gallons
14 - 18	3,000 gallons	1,001 to 1,250 gpd	2,000 gallons
Greater than 18	1,125 + (0.75 * design flow)	Greater than 1,250 gpd	1,125 + (0.75 * design flow)

\*Tanks may be used in series or in parallel to achieve the minimum septic tank volume. The installation and design of more than one tank must be by a method publicly identified by the department as acceptable guidance under 18 AAC 72.070 and protective of public health, public and private water systems, and the environment.

### What changed (affects commercial facilities and multi-family dwellings):

- Eliminated the 1.5\*daily flow calculation for 750 – 1500 gpd systems resulting in larger tank size
- Minimum size for 501 to 750 gpd systems increase to 1,250 gallons (was previously 1,000 gallons for up to 750 gpd systems)

Note: some existing systems may not have tanks that meet the new minimum required; the next time the system is modified or replaced, the updated regulation must be met.

## WASTEWATER APPLICATION RATES

Percolation Rate <sup>a</sup> (minutes/inch)	Soil Texture (Unified Soil Classification)	Application Rate in sf/bedroom	Application Rate in gpd/sf for design flows ≤ 2,500 gpd	Application Rate in gpd/sf for design flows >2,500 gpd
Faster than 1	Gravel (GW/GP)	Not Suitable <sup>b</sup>	Not Suitable <sup>b</sup>	Not Suitable <sup>b</sup>
1 – 5	Gravel (GW/GP)	125	1.2	0.79 – 0.98
1 – 15	Medium to coarse sand (SW/SP)	150	1.0	0.67 – 0.89
6 – 15	Fine sand or loamy sand	190	0.8	0.61 – 0.74
16 – 30	Sandy loam, silty gravel (GM), silty sand (SM)	250	0.6	0.52 – 0.61
31 – 60 <sup>c</sup>	Loam, silt loam, silt (ML)	335	0.45	0.25 – 0.52
61 – 120 <sup>d</sup>	Silty clay loam, clay loam <sup>e</sup>	Not Suitable <sup>d</sup>	Not Suitable <sup>d</sup>	Not Suitable <sup>d</sup>

Footnote phrasing is not exactly the same as in regulation

- a. Soils classified as silty sand (SM), silty gravel (GM), or silt (ML) must have a percolation test conducted by either an engineer or the certified installer by a method publicly identified as acceptable (refer to OWSIM)
- b. Soils classified as gravel (GW or GP) with percolation rate faster than one minute/inch may have a shallow trench or bed type system installed with a 2-foot thick sand liner and sized at 150 sf/bedroom or 1.0 gpd/sf.
- c. Soils with percolation rates slower than 30 minutes/inch are unsuitable for seepage pits.
- d. Soils with percolation rates slower than 60 minutes/inch require an engineer design and plan approval. Soils with percolation rates slower than 120 minutes/inch are considered impermeable.
- e. Soils without expandable clays or soil types not listed require engineer design and prior plan approval.

# Plan Approval Required

In order to construct, install, modify, or operate a wastewater collection, treatment, storage, or disposal system, a person must have prior written approval unless the system is exempt from plan review under

- 18 AAC 72.201 – routine maintenance, emergency repairs, sewer service line connections to a wastewater utility, sewer mains for approved utilities
- 18 AAC 72.511 – Conventional onsite wastewater systems
- 18 AAC 72.611 – Alternative onsite wastewater systems

**Wastewater systems that may be installed without plan approval, must still be registered using the Documentation of Construction form**

# What is Plan Review?

Plan Review Steps:

## 1. Approval to Construct

- Engineer submits design to the department before construction
- Department reviews plans for regulatory compliance and protection of public health and the environment

## 2. Wastewater system is constructed

- System is constructed according to approved design
- Major deviations from approved design requires a design change approval

## 3. Approval to Operate

- Engineer submits record drawings to the department
- Department submittal and issues a decision (usually an approval to operate)

# Plan Review Exceptions

## **Onsite Wastewater Systems under 18 AAC 72.511 and 18 AAC 72.611**

- Alternative onsite wastewater systems defined at 72.990(4)
- Conventional onsite wastewater systems defined at 72.990(17)

### **Important parts of those definitions**

- Receives only domestic wastewater
  - ALL nondomestic systems require plan approval
- Located wholly on the property owned by the same entity that also has ownership of the dwellings, buildings, or structures the system serves (condo associations, multiple properties with different owners, etc. still require plan approval)
- Does not discharge to surface water
  - ALL surface water discharges require prior plan approval

# Plan Review - Waivers

**This section applies to onsite wastewater systems that could otherwise be installed without prior plan approval**

## **Separation Distance Waivers**

- Must be granted prior to construction or modification of an onsite wastewater system
- Only valid for the wastewater system configuration as specified in the waiver approval
- Next time the system is modified or replaced, the separation distance waiver is void
  - System components must either be relocated to meet separation distance requirements; OR
  - A new waiver must be requested and granted

## **Construction Standard Waivers**

- New – previously required full plan review and approval

# Restrictions on who and what for Onsite Wastewater Systems

## Approved Homeowner

- Can only install conventional onsite wastewater system serving their owner-occupied private residence

## Certified Installer

- Can only install a conventional onsite wastewater system serving a single private residence, multi-family dwelling with no more than 4 units, or a small commercial facility with total on lot of facility-wide flow not exceeding 1500 gpd

## Engineers

- Any combination of residential and commercial buildings
- Daily flow must not exceed 1500 gpd for the total on lot or facility-wide operations for an alternative onsite wastewater system
- Daily flow must not exceed 2500 gpd for the total on lot or facility-wide operations for a conventional onsite wastewater system



# Registration Process

For onsite wastewater systems that can be installed without plan approval, the following are the steps a qualified person must take:

1. Submit notice of construction at least 24 hours in advance (Part 1 of the electronic form)
  - Applicant (AHO, CI, or Engineer) will receive an automated email confirming receipt
2. Construct the system the system in accordance to all regulations and prescriptive construction requirements
3. Submit Documentation of Construction (Part 2 of the electronic form) with drawings, pictures, and registration fee
  - The drawings must accurately represent what was installed
  - Applicant (AHO, CI, or Engineer) will receive automated email confirming receipt

# Timelines

- The Department's goal is to respond within 30 days of a plan review or DOC submission
- This can be longer depending on the workload (significant backlog of unprocessed DOC's)
- The initial response is usually a corrections request or request for additional information
- The timeline from there depends on the responsiveness of the applicant, then it goes back in the queue....

# New or Clarified Topics

- All wastewater systems are required to be registered or approved
  - “after the fact” process now included in regulations at 72.290, 72.560 or 72.660
- 18 AAC 72.080 – clarifies when registrations or approvals are invalidated
  - Systems modified, replaced, or changes in use require a new registration or approval
- 18 AAC 72.090 – defines system failures and spills
- Systems that are in some stage of the plan approval process but no longer require plan approval (there’s a webpage for that!)

# What you receive from us

- For systems that are only required to be registered
  - Will not receive a letter stating system is “approved”
  - Will receive automated emails notifying applicant when the DOC is
    - Submitted (usually lenders take this) – replaced the “received” stamp on paper applications
    - Processed (takes 30+ days)
- For systems that are required to have an approval
  - Will receive automated emails notifying applicant when submittal is received and processed
  - Department issues an approval on letterhead

**From:** Alaska DEC EDMS <[edms\\_noreply@alaska.gov](mailto:edms_noreply@alaska.gov)>  
**Sent:** Sunday, October 29, 2023 4:05 PM  
**To:** Peterson, Ryan E (DEC) <[ryan.peterson@alaska.gov](mailto:ryan.peterson@alaska.gov)>  
**Subject:** EDMS - Thank you for submitting your DOC! - DOC-00579, Mclay

October 29, 2023

JASON JOHNSON  
JC Johnson and Son  
[jcjohnson1954@gmail.com](mailto:jcjohnson1954@gmail.com)

**Site Details**

**Legal Description:** Dietz Home Estates 3 1  
**Street Address:** 41294 Mclay Road Homer AK 99603  
**Submission Reference #:** DOC-00579

JASON JOHNSON:

Thank you for submitting the Document of Construction (DOC) for a conventional onsite wastewater disposal system at the above-referenced property. **This email acknowledges registration information has been received. The information submitted will be reviewed for conformance with the State of Alaska Wastewater Regulations 18 AAC 72 and the Onsite Wastewater System Installation Manual.**

Submissions will be processed in the order they are received. When processing is complete, you will receive confirmation. For general wastewater questions and/or questions regarding your submittal, please contact your local [area office](#) and reference the above tracking number. For other questions regarding EDMS please visit the general information page for EDMS ([dec.alaska.gov/water/edms](http://dec.alaska.gov/water/edms)) or contact us at [edms.help@alaska.gov](mailto:edms.help@alaska.gov).

## Example automated emails

**From:** Alaska DEC EDMS <[edms\\_noreply@alaska.gov](mailto:edms_noreply@alaska.gov)>  
**Sent:** Thursday, October 12, 2023 12:05 PM  
**To:** Peterson, Ryan E (DEC) <[ryan.peterson@alaska.gov](mailto:ryan.peterson@alaska.gov)>  
**Subject:** EDMS - Schedule Submission Review Notification - DOC-00322, Glacier Bay Park Southwest Addition Lot 41

This message is to notify you that the following compliance schedule for relating to Glacier Bay Park Southwest Addition Lot 41 has an updated review status:

**Schedule Name:** Documentation of Construction - Document of Construction - Part 2  
**Submission Reference Number:** DOC-00322  
**Due Date (if applicable):** September 24, 2023  
**Received Date:** 09/17/2023  
**Submitted By:** KENNETH MARCHBANKS  
**Decision:** Acknowledged  
**Decision Date:** October 12, 2023  
**Reviewer Notes to Submitter:** (No review comments entered)

This is an automated email sent by EDMS.

If you have questions regarding the information in this message, please contact EDMS support at: <https://dec.alaska.gov/water/edms/edms-help>.

# Questions?

