

State of Alaska
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Wastewater Discharge Program

PLAN SUBMITTAL CHECKLISTS
FOR
ENGINEERING PLANS
DOMESTIC
WASTEWATER TREATMENT AND DISPOSAL
(18 AAC 72)

These checklists are based upon the Wastewater Disposal Regulations, as amended through July 11, 2002

Contact the office in the project area:

Anchorage	269-7519
Fairbanks	451-2177
Juneau	465-5167
Kenai	262-5210
Wasilla	376-1850

(revised 3-15-2006)



WASTEWATER DISCHARGE PROGRAM ENGINEERING PLAN REVIEW INFORMATION AND CHECKLISTS

Purpose

The purpose of this document is to assist homeowners, certified installers, and engineers with making a complete plan submittal when seeking ADEC approval to install or modify a wastewater treatment and disposal system (e.g. septic system, treatment plant, leachfield, etc). These checklists should be completed and used to obtain construction and operational approval of engineered wastewater treatment and disposal systems for:

- New construction,
- Modification or change of use of existing systems,
- Replacement or significant repair of failed systems, and
- Separation distance waiver requests.

These checklists are based on the plan review requirements contained in the State of Alaska Wastewater Disposal Regulations, 18 AAC 72, as amended through July 11, 2002. These checklists are separated into a general checklist that identified the required information for all projects, and a category checklist based on the specific type of project. Each project will require the information from the General Checklist in addition to a project-specific checklist. Filling out and submitting these checklists along with your plans and application package will help to ensure that your submittal is complete, and will expedite the review process.

Plan Review Process

General Information:

There are two steps to getting approval to operate a new or modified wastewater collection, treatment or disposal system. First, Approval to Construct a system must be granted by the Department BEFORE an applicant begins to build or modify a wastewater treatment or disposal system. The second is to obtain Approval to Operate the newly constructed or modified system.

Approval to Construct:

The applicant is encouraged to request a preapplication conference by contacting the ADEC review engineer in the region where the system will be built or modified, prior to finalizing any plan.

An engineered plan must be submitted to the Department and be approved in writing ***before*** constructing, modifying, or installing any part of a domestic wastewater collection, treatment or disposal system. Written approval is not required for an emergency repair or routine maintenance. Prior approval is not required for conventional systems constructed under the Certified Installer Program. (see 18 AAC 72.010 for additional information) **(18 AAC 72.010, 18 AAC 72.200)**

The submittal must include, at a minimum:

1. Plans signed and sealed by a Professional Engineer, registered in the State of Alaska, that completely and accurately show that the proposed system meets the requirements of the State of Alaska Wastewater regulations.
2. Domestic Wastewater Data Sheet,
3. Signed Owner's Statement,
4. Review Fees, and
5. Applicable information from a completed General Checklist and all required project-specific checklist(s).

The **complete** submittal including appropriate fees must be submitted to the Department and approved before construction begins. If construction begins before approval is issued, the applicant runs the risk of building a system that the Department cannot approve for operation.

If the department finds that the plans submitted meet requirements, an Approval to Construct letter will be issued. This letter may contain conditions that must be met before approval to operate will be issued. Approval to Construct is valid for two years (18 AAC 72.225(d)). (You may apply for an extension before the two years expire; the extension may or may not be issued, depending on regulations current at the time of the request). A 90 day interim approval to operate the approved system is included with the Approval to Construct, meaning that the new or modified system may be operated during this time before the Final Approval to Operate is issued. During that 90-day period, you must prepare and submit record drawings to obtain Final Approval. 18 AAC 72.240(b)(1)

The Department will make every effort to complete the review of your submittal within 30 days from receipt. Please note that if the review engineer requires additional information, the 30 day time for review begins when a complete submittal is received. Length of review may also depend on the Department's level of staffing. If you require an expedited review, you should request a meeting with the review engineer. If the application is for replacement of a failed system, please make this clear in the application or by calling the review engineer.

Final Approval to Operate:

After the application is approved and the system is constructed or modified, the applicant must submit the following information to the Department:

1. Record drawings that clearly show changes made to the approved plan during construction,
2. Information verifying the conditions requested in the Approval to Construct have been met, and
3. A completed Certification of Construction form. (Note that if the system was constructed in accordance with the approved plan, record drawings are not required.)

Following Department review and approval of the above items, Final Approval to Operate will be issued.

This completes the process for building or modifying a wastewater treatment and disposal system. Please note that operational requirements may be placed on the system in order to

maintain approved status. These requirements will be identified in either the Approval to Construct or the Approval to Operate.

Plan Review Fees

Plan review fees must be submitted along with the application. The review fees for each type of project are listed in the fee schedule:

FEE SCHEDULE

Wastewater Discharge Program

Inv Code	ADEC Project ID: Description	Fee Amt
WQ40	48728: Domestic WW Plan Review (A) Based on peak design flow of: 0 - 500 gpd	\$270
WQ41	48728: Domestic WW Plan Review (B) Based on peak design flow of: 501 - 1500 gpd	\$340
WQ42	48728: Domestic WW Plan Review (C) Based on peak design flow of: 1,501-2,500gpd	\$360
WQ43	48728: Domestic WW Plan Review (D) Based on peak design flow of: 2,501-15,000gpd	\$730
WQ44	48728: Domestic WW Plan Review (E) Based on peak design flow of: 15,001-50,000gpd	\$1,200
WQ45	48728: Domestic WW Plan Review (F) Based on peak design flow of: 50,001-100,000	\$2,370
WQ46	48728: Domestic WW Plan Review (G) Based on peak design flow of: 100,001-250,000	\$2,960
WQ47	48728: Domestic WW Plan Review (H) Based on peak design flow of: 250,000 and over	\$3,510
WQ50	48728: Domestic WW Modifications to an existing or approved WW system that increase daily peak capacity by: < 20%; 20% of fee in A-H Above	
WQ51	48728: Domestic WW Modifications to an existing or approved Domestic WW system that increase daily peak capacity by: 20% to 50% change; equivalent to % of that in A-H above	
WQ52	48728: Domestic WW Modifications to an existing or approved WW system that increase daily peak capacity by: > 50% change; fee is 100% of fee in A-H above	
WQ53	48728: Waiver/Modification of Provisions under 18AAC72.060: Individual on-site system (single-family or duplex) waiver(s)	\$300
WQ54	48728: Waiver/Modification of Provisions under 18AAC72.060 First Five waivers submitted for a project, other than single-family or duplex	\$250 waiver
WQ60	48728: Line extension/replacements (Including Storm Drain collection) up to 1,000 ft	\$310
WQ61	48728: Line extension/replacements (Including Storm Drain collection) for each additional 1,000 ft or fraction thereof.	\$160
WQ38	48738: Passive Non-Domestic WW Plan Review Does not include stormwater - 2 or fewer treatment methods	\$440
WQ38	48738:Passive Non-Domestic WW Plan Review Does not include stormwater - Each additional treatment method after 2	\$90
WQ39	48739: Complex Non-Domestic WW Plan Review Does not include stormwater - 2 or fewer treatment methods	\$940
WQ39	48739: Complex Non-Domestic WW Plan Review Does not include stormwater - Each additional treatment after 2	\$190

Fees for Modifications to existing systems:

For modifications to a treatment plant that increases the daily peak design capacity of the treatment plant, a little math is involved: **(18 AAC 72.955(a)(2))**

You must know the original daily peak design flow of the treatment plant being modified.

For 1-20% increases in capacity the review fee is 20% of the cost of the original plan review fee. For example if the old plant had a peak design flow of 20,000 gpd and the new capacity is 23,000 gpd, the increase capacity is 15 %. For a 20,000-gpd-treatment plant the plan review fee from the fee schedule WQ44 is \$1,200. For this modification the review fee would be $(0.20)(\$1,200) = \240 .

For an increase in capacity between 21 and 50% use the actual percentage increase.

For example: (using our previous 20,000 gpd plant flow) If our modification increased the peak flow to 29,000 gallons, a 45% increase is planned. The fee would be $(0.45)(\$1,200) = \540

For an increase of more than 50% of the original capacity, 100% of the original peak flow plan review fee is required. For the 20,000-gpd plant in the previous examples the fee would be \$1200 for an increase of 10,001 gpd or more in capacity.

Please note that replacement of a failed leachfield is NOT considered a modification to an existing system because a new disposal system is being built.

Waivers:

For waivers requested under a plan review for a single-family home or duplex, the fee is as stated on WQ53 of the fee schedule, regardless of the number of waivers requested. **18 AAC 72.955(a)(3)(A)**

For waivers requested under a plan review for a project other than a single family home or duplex the fee is as stated on WQ54 of the fee schedule for **each** waiver requested. **18 AAC 72.955(a)(3)(B)**

Exemptions:

No fees are required if:

1. The owner is a charitable organization that is exempt from taxation under 26 U.S.C. 501(c)(3). (IRS tax code). Owner must provide verification of this exemption.
2. The project is being constructed with money awarded under AS 46.03.030 (Village Safe Water or Facility Construction & Operation monies are used) for construction of the project.
3. The project construction is supervised by the Department under AS 46.07.040 (Village Safe Water or Facility Construction & Operation is supervising the construction of this project.)
4. The project is part of a private or public school.

ADEC Onsite Wastewater Treatment and Disposal System Staff Contacts:

Anchorage	269-7519
Fairbanks	451-2177
Juneau	465-5167
Kenai	262-5210
Wasilla	376-1850

Plan review requirement tables

The following tables will assist you in determining what is needed in the plan submittal, and if an engineered plan submittal is required or if the owner or the owner's representative can submit the required information.

Locate the system type that you are planning to install in the left column, review the plan approval steps, then review the Checklists, Forms and Submittal Requirements. Once you have found what items are required you can obtain the appropriate checklists and forms either online or from your local ADEC office. All plan submittals require completion of Owner's Statement/Data Sheet information, General Checklist, and a project-specific checklist. The General Checklist and the project-specific checklist(s) will describe needed calculations and other items required for complete plan submittal.

TABLE 1-SUMMARY TABLE: WASTEWATER SYSTEM PLAN SUBMITTAL

System Type/Size	Plan Approval Steps	Checklists, Forms and Submittal Requirements
<p>Conventional onsite system serving a single family or duplex residence, or a conventional system serving a single commercial building discharging 500 gallons per day or less of wastewater.^{1,2}</p>	<p>1. Plan approval prior to installed is not required. System must be installed by an approved Certified Installer, or the installation must be inspected by a Professional Engineer, or system must be installed by an Approved Homeowner.</p> <p>2. Documentation of Construction submitted to ADEC within 90 days of installation.</p> <p>No review fee is required for these systems.</p> <p>18 AAC 72.015</p>	<p>If installed by a Certified Installer, the installer must submit, in accordance with 18 AAC 72.010(c), a completed Documentation of Construction form with photos and testhole log within 90 days of completing the install.</p> <p>If the system is inspected by an engineer, the inspecting engineer must seal and sign the completed Documentation of Construction form and submit with 90 days.</p> <p>If installed by an approved homeowner, a completed Documentation of Construction form with photos and engineer's soil rating must be submitted within 90 days.</p>
<p>Conventional onsite systems discharging between 500-2500 gallons per day and serving one building.^{1,2}</p>	<p>1. Plans must be submitted to DEC and approved prior to construction.</p> <p>2. Approval to Construct and Approval to Operate both issued with Approval to Construct letter. Changes made during construction must be approved prior to construction.</p> <p>Refer to Fee Schedule (Appendix A) for associated fees. 18 AAC 72.240(a)</p>	<p>Data Sheet/General Checklist</p> <p>Community and Alternate Soil Absorption System Checklist</p> <p>Soils Analysis and Report prepared by a Professional Engineer registered in the State of Alaska.</p> <p>Owner's Statement</p> <p>These systems do not require an engineer's signature and seal on the plans. Submittal may be made by the owner or owner's representative.</p>
<p>¹A Conventional Onsite System uses a septic tank followed by a discharge into a conventional soil absorption system in undisturbed native soil, with or without a sand liner (defined in 18 AAC 72.990 as a system treating domestic wastewater that meets the requirements of 18 AAC72.035 and 18 AAC 72.260). ²Engineered plan submittal is required for any conventional system that is installed in an area where is there is known permafrost, high ground water table, poor soils conditions or similar systems have been known to fail (18 AAC 72.205(b) (2) (B)). This includes all of Southeast Alaska. Engineered plan submittal is also required if soils encountered perc at 61 minutes per inch or slower.</p>		

System Type or Facility Served by System	PLAN APPROVAL STEPS	Checklists, Forms and Submittal Requirements
<p>Community or Alternate Soil Absorption System</p> <p><u>Community soil absorption system</u> means a soil absorption system serving : one or more multi-family dwellings (3-plex or larger); a mobile home park, a trailer park or a recreational vehicle park; two or more single-family homes, duplexes, commercial establishments, or institutions; or a combination of two or more of the structures listed above.</p> <p><u>Alternate soil absorption system</u> means a method of soil absorption treatment and disposal other than a conventional system (i.e., a mound system). Does not include nonwater-carried disposal methods such as composting, incineration, or privies.</p>	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. Approval to Construct issued.(valid for two years) 3. Record drawings and confirmation all conditions met. 4. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.260; 18 AAC 72.990</p>	<p>Data Sheet/General Checklist</p> <p>Community and Alternate Soil Absorption System Checklist</p> <p>Soils Analysis and Report</p> <p>Owner’s Statement</p> <p>Plans must be signed and sealed by a Professional Engineer.</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>
<p>Package Treatment Plants (less than 1,500 GPD)</p>	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. Approval to Construct issued.(valid for two years) 3. Record drawings and confirmation all conditions met. 4. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.263</p>	<p>Data Sheet/General Checklist</p> <p>Package Plant Checklist</p> <p>Soils Analysis and Report</p> <p>Owner’s Statement</p> <p>Plans must be signed and sealed by a Professional Engineer.</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>

System Type or Facility Served by System	PLAN APPROVAL STEPS	Checklists, Forms and Submittal Requirements
<p>Wastewater Treatment Plants, new or modification to existing treatment plant. Includes pre-manufactured treatment systems greater than 1,500 gpd.</p>	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. Approval to Construct issued.(valid for two years) 3. Record drawings submitted to ADEC and confirmation all conditions met. 4. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.245</p>	<p>Data Sheet/General Checklist</p> <p>Treatment Plant Checklist</p> <p>Soils Analysis and Report</p> <p>Owner's Statement</p> <p>Plans must be signed and sealed by a Professional Engineer.</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>
<p>Surface Water Outfall Disposal System</p>	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. May require a permit. 3. Approval to Construct issued.(valid for two years) 4. Record drawings and confirmation all conditions met. 5. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.275(a) and 18 AAC 72.215</p>	<p>Data Sheet/General Checklist</p> <p>Surface Waters Outfall Disposal System Checklist</p> <p>Owner's Statement</p> <p>Plans must be signed and sealed by Professional Engineer</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>

System Type or Facility Served by System	PLAN APPROVAL STEPS	Checklists, Forms and Submittal Requirements
Land Surface Disposal System	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. May require a permit. 3. Approval to Construct issued.(valid for two years) 4. Record drawings and confirmation all conditions met. 5. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.275(b) and 18 AAC 72.215</p>	<p>Data Sheet/General Checklist</p> <p>Disposal to Land Surface Checklist</p> <p>Soils Analysis and Report</p> <p>A vegetative report should be included, if this is going to be part of the treatment.</p> <p>Owner's Statement</p> <p>Plans must be signed and sealed by a Professional Engineer.</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>
Stabilization Ponds	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. May require a permit. 3. Approval to Construct issued.(valid for two years) 4. Record drawings and confirmation all conditions met. 5. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.255</p>	<p>Data Sheet/General Checklist</p> <p>Stabilization Pond Checklist</p> <p>Soils Analysis and Report</p> <p>Owner's Statement</p> <p>Plans must be signed and sealed by a Professional Engineer</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>

System Type or Facility Served by System	PLAN APPROVAL STEPS	Checklists, Forms and Submittal Requirements
Utilidors	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. Approval to Construct issued.(valid for two years) 3. Record drawings and confirmation all conditions met. 4. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.250</p>	<p>Data Sheet/General Checklist</p> <p>Utilidor, Collection and Pumping Checklist</p> <p>Soils Analysis and Report</p> <p>Owner's Statement</p> <p>Plans must be signed and sealed by a Professional Engineer</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>
<p>Extension of sewer line</p> <p>Plan review is not required for a service line from an approved wastewater collection system to a single building</p>	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. Approval to Construct issued.(valid for two years) 3. Record drawings and confirmation all conditions met. 4. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.040</p>	<p>Data Sheet/General Checklist</p> <p>Utilidor, Collection and Pumping Checklist</p> <p>Soils Analysis and Report</p> <p>Owner's Statement</p> <p>Statement from owner of receiving system accepting increase</p> <p>Plans must be signed and sealed by a Professional Engineer</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>

System Type or Facility Served by System	PLAN APPROVAL STEPS	Checklists, Forms and Submittal Requirements
Collection and Pumping System	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. Approval to Construct issued.(valid for two years) 3. Record drawings and confirmation all conditions met. 4. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.270</p>	<p>Data Sheet/General Checklist</p> <p>Utilidor, Collection and Pumping Checklist</p> <p>Owner's Statement</p> <p>Plans must be signed and sealed by a Professional Engineer</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>
Holding Tank	<ol style="list-style-type: none"> 1. Plans must be submitted to DEC and approved prior to construction. 2. Approval to Construct issued.(valid for two years) 3. Record drawings and confirmation all conditions met. 4. Final Approval to Operate issued. <p>Refer to Fee Schedule (Appendix A) for associated fee.</p> <p>18 AAC 72.025</p> <p>Does not apply to marine sanitation devices, or holding tanks contained in a mobile food unit permitted under 18 AAC 31.</p>	<p>Data Sheet/General Checklist</p> <p>Holding Tank Checklist</p> <p>Soils Analysis and Report</p> <p>Owner's Statement</p> <p>Plans must be signed and sealed by a Professional Engineer.</p> <p>Record drawings must be signed and sealed by a Professional Engineer.</p>

TABLE 2-SUMMARY TABLE: WAIVERS REQUESTS

System Type or Facility Served by System	PLAN APPROVAL STEPS	Checklists, Forms and Submittal Requirements
<p>Waiver Requests:</p> <p>(A) For a Reduction in Separation Distance between a wastewater disposal system and surface waters.</p> <p>(B) For Installation of Soil Absorption Systems on Steep Slopes:</p> <p>(C) For Reduction in Sewer Design Criteria required under 18 AAC 72.040(b)(4)</p> <p>(D) For Reduction in Treatment Level required by 18 AAC 72.050</p> <p>(E) For Installing Sewer Lines within 10 feet horizontal Distance to Potable Water Lines and Water/Sewer Line Crossings:</p>	<p>1. Submit request for waiver, with supporting information.</p> <p>Waivers are for current system only.</p> <p>Refer to Fee Schedule (Appendix A) for associated fee. 18 AAC 72.060</p> <p>(A) = 18 AAC 72.020 (e)(1-4) (B) = 18 AAC 72.035 (e) (C) = 18 AAC 72.040 (c)(1-2) (D) = 18 AAC 72.050 (d) (E) = 18 AAC 72.020(g) and (h)</p>	<p>Data Sheet/General Checklist</p> <p>Waiver Requests Checklist</p> <p>Soils Analysis and Report</p> <p>Owner's Statement</p> <p>All requests for waiver require engineer signature and seal.</p>