

Introduced	Mayor
Date:	2/18/96
Hearing:	3/18/97
Action:	Enacted
Vote:	Unanimous

**KENAI PENINSULA BOROUGH
ORDINANCE 97-14**

**AN ORDINANCE ESTABLISHING REQUIREMENTS FOR SUBDIVISION
WASTEWATER DISPOSAL IN THE KENAI PENINSULA BOROUGH**

WHEREAS, the Alaska State Legislature has eliminated the funding which allowed the Alaska Department of Environmental Conservation to review Subdivision plans for compliance with the provisions of Alaska state law regarding wastewater disposal as set forth in 18 AAC 72.300 72.385 ("the Regulations"); and

WHEREAS, effective July 1, 1996 the Alaska Department of Environmental Conservation no longer reviews preliminary plats submitted to the department; and

WHEREAS, Chapter 20 of the Kenai Peninsula Borough Code of Ordinances does not provide the borough with authority to enforce the Regulations; and

WHEREAS, a wastewater disposal system plan that complies with amended regulations as proposed herein ("the Amended Regulations") must be developed before a subdivision plat should be approved to protect the health, safety, and general welfare of the residents of the Borough; and

WHEREAS, neither the Planning Department or the Kenai Peninsula Borough Planning Commission have the expertise needed to determine whether compliance with the Regulations has been achieved in developing a wastewater disposal system; and

WHEREAS, Alaska certified professional engineers have the expertise to determine whether a proposed wastewater disposal system complies with the Amended Regulations;

NOW, THEREFORE, BE IT ORDAINED BY THE ASSEMBLY OF THE KENAI PENINSULA BOROUGH:

SECTION 1. That KPB 20.16.155 is hereby amended by the addition of a subsection (D) as follows:

D. Engineer's Wastewater Disposal Certificate. In addition to any plat notes required by Chapter 20.14, an engineer's dated signature on the face of the plat is required unless excepted under KPB 20.14.020. By such dated signature, the engineer is certifying that he/she is properly

registered and licensed to practice engineering in the State of Alaska and the wastewater disposal data complies with all relevant sections of KPB Chapter 20.14.

SECTION 2. That a new Chapter 20.14 to the Kenai Peninsula Borough Code of Ordinances entitled "Wastewater Disposal" is enacted as follows:

20.14.010. Wastewater Disposal.

A. All lots within a proposed subdivision in the Kenai Peninsula Borough must meet the following applicable standards of this chapter for wastewater disposal.

B. This Chapter is not applicable to a subdivision proposed under 43 U.S.C. 1613(c) [Alaska Native Claims Settlement Act, sec. 14(c)] before subdividing, platting or disposition under that Act. A person proposing to subdivide land after transfer under that Act must comply with the provisions of this Chapter.

C. Subdivision plans for a no-water carried method of wastewater disposal must conform to the provisions of 20.14.030.

D. Subdivision plans with a holding tank method of wastewater disposal are prohibited.

20.14.020. Wastewater System Review Not Required.

A. Wastewater system review will not be required if the following criteria are satisfied:

1. the existing parent subdivision was approved by the Department of Environmental Conservation, current state agency or the KPB under this chapter, and the proposed subdividing action is limited to:

a. vacating lot lines to create fewer lots; or

b. moving one or more lot lines a distance of 10 feet or less without increasing the number of lots having prior onsite wastewater approval or a combination of 10 feet to keep the area loss the same or less than a 10 foot move; or

c. moving one or more lot lines without increasing the number of developable lots, while maintaining a minimum of 20,000 square feet of contiguous area, as described in 20.14.040.(A)(4), for each lot affected by the lot line movement.

B. Before a final plat is recorded or filed for subdivision, an engineer or surveyor must complete the following plat note which shall be placed on the plat:

WASTEWATER DISPOSAL: The parent subdivision for lots resulting from this platting action was approved by the (Alaska Department of Environmental Conservation) or (Kenai Peninsula Borough) on (DATE). Wastewater treatment and disposal systems must meet the regulatory requirements of the Alaska Department of Environmental Conservation.

20.14.030. Abbreviated Submittal.

If any lots within the proposed subdivision will be at least 200,000 square feet or nominal 5 acres in size, the engineer does not have to submit a soils analysis and report. Before a final plat is recorded or filed for subdivision, the engineer or surveyor must place the following note on the plat:

WASTEWATER DISPOSAL: These lots are at least 200,000 square feet or nominal 5 acres in size and conditions may not be suitable for onsite wastewater treatment and

disposal. Any wastewater treatment or disposal system must meet the regulatory requirements of the Alaska Department of Environmental Conservation.

20.14.040. Conventional Onsite Soil Absorption Systems.

A. If any lots within a subdivision will utilize conventional onsite soil absorption systems and are less than 200,000 square feet, the following requirements must be met and submitted to the Planning Director or designee:

1. a soils analysis and report, sealed by a registered engineer, which meets the requirements of 20.14.100;

2. a pollution abatement report, sealed by a registered engineer, which meets the requirements of 20.14.090 if:

a. lot size is less than 40,000 square feet; AND

b. there will not be a public water system serving the lots of the subdivision as described in 20.14.090(c);

3. a working map depicting:

a. ground slopes greater than 20%, or 5% where a bed system is proposed, and other topographic features as needed by an engineer to meet the design requirements for wastewater disposal as defined in this chapter;

b. the location of all soils field work, including the location of borings, percolation tests and test holes;

c. each existing source of water for a public drinking water system within the subdivision and within 200 feet of the subdivision boundary;

d. each existing water source for a private drinking water system within the subdivision or within 100 feet of the subdivision boundary; AND

e. an approximate delineation of the apparent usable wastewater disposal area as described in 20.14.040(A)(4);

4. documentation from the engineer that:

a. there is on each lot at least 20,000 square feet of contiguous area suitable for use for an initial and replacement wastewater disposal system, sidewalks, driveways and an average single-family residence with associated appurtenances, but excluding dedicated rights-of-way;

b. the soil types, moisture content (in areas of known or suspected permafrost), soil slopes, distances to downhill terrain breaks, and depths to seasonal high water table and impermeable strata must:

1) meet the requirements of soils analysis and report described in 20.14.100;

2) be suitable for use in a soil absorption system, as shown by the soils analysis and report; AND

c. separation distances in or from any part of the proposed usable wastewater disposal area must be maintained as required by 18 AAC 72.015; if an area outside the subdivision boundary cannot be visually inspected to determine existence and position of water system sources, the applicant may use existing records as the basis for this information;

5. plans for initial and replacement soil absorption systems for each lot that does not contain 20,000 square feet of contiguous suitable area described in 20.14.040(A)(4), the plans shall show the location of the system(s) and must be sealed by a registered engineer.

B. Before a final plat is recorded or filed for subdivision under this section, the KPB will require the engineer to place a note on the final plat as described below:

WASTEWATER DISPOSAL: Soil conditions, water table levels, and soil slopes in this subdivision have been found suitable for conventional onsite wastewater treatment and disposal systems serving single-family or duplex residences and meeting the regulatory requirements of the Kenai Peninsula Borough. Any other type of onsite wastewater treatment and disposal system must be designed by a professional engineer, registered to practice in Alaska, and the design must be approved by the Alaska Department of Environmental Conservation.

(signature of)Engineer

License #

Date

20.14.050. Alternate Onsite Wastewater Treatment And Disposal.

A. If any lots within a subdivision will employ alternate onsite wastewater treatment and disposal, the following requirements must be met and submitted to the Planning Director or designee:

1. a soil analysis and report, prepared and sealed by a registered engineer containing sufficient soils data to:

a. demonstrate that a conventional onsite soil absorption system is not practicable; AND

b. support the functional use of the proposed system;

2. a pollution abatement report, sealed by a registered engineer, meeting the requirements of 20.14.090 if:

a. disposal of wastewater to onsite soils is proposed;

b. the subdivision's minimum lot size is less than 40,000 square feet; AND

c. there will not be a public water system serving the lots of the subdivision, as set out in 20.14.090(C);

3. plans for a treatment and disposal system for each lot (or a single typical design for each group of identical systems), as required by 18 AAC 72.210, the plans must be sealed by a registered engineer;

4. an adequate demonstration that a conventional onsite soil absorption system, collector sewer or collector system and treatment disposal system, individual lot treatment system, or connection to an existing system are not practicable due to either lack of suitable soils or economic considerations;

5. evidence that separation distances set out in 18 AAC 72.015 will be met, if an area outside the subdivision boundary cannot be visually inspected to determine existence and position of water system sources, the subdivider may use existing records as the basis for this information; AND

6. evidence that lots with a minimum size of less than 40,000 square feet for which a pollution abatement report is required meet the requirements of 20.14.090(B).

B. Before a final plat is recorded or filed for subdivision, the engineer must complete the following plat note which shall be placed on the plat:

WASTEWATER DISPOSAL: Soil conditions in this subdivision have been found unsuitable for conventional onsite wastewater treatment and disposal systems. Plans for a typical alternate wastewater disposal system for use on lots in this subdivision are included in the Engineer's Subdivision and Soils Report and are available from the Kenai Peninsula Borough. All alternate onsite wastewater treatment and disposal system must be designed by a professional engineer registered to practice in Alaska, and the design must be approved by the Alaska Department of Environmental Conservation prior to construction.

(signature of)Engineer

License #

Date

20.14.060. Onsite Treatment Systems with Individual Marine Outfalls.

A. If any lots within a subdivision will employ an onsite treatment system plan with an individual marine outfall, the following requirements must be met:

1. the preliminary subdivision plat must clearly show access from the lot to marine waters for wastewater disposal for each lot with a proposed marine outfall, by direct access, easement, or other authorization (this may require a detail drawing);
2. a soil analysis and report, sealed by a registered engineer, with sufficient soils data to demonstrate that neither a conventional nor an alternate onsite soil absorption system is practicable for the lot in question;
3. plans for the treatment and disposal system proposed for each lot, or single typical design for each group of identical systems, as required under 18 AAC 72.210 - 18 AAC 72.285, not withstanding the provisions of Table E in 18 AAC 72.210, the plans must be sealed by a registered engineer;
4. construction and necessary operation of the treatment system by the lot owners is feasible;
5. dispersion and mixing calculations must show that each outfall and the cumulative impact from all of the outfalls complies with this chapter and 18 AAC 70 or otherwise complies with permit conditions; AND
6. a minimum lot size necessary to maintain the applicable separation distances at 18 AAC 72.015 from any part of the wastewater systems.

B. For a wastewater treatment and disposal system proposed under this section, the requirements of 18 AAC 72.220(b)(4) and 18 AAC 72.255(5) for prior Alaska Department of Environmental Conservation approval of wastewater discharge permits will apply only to persons who propose actual discharges, and will not apply to conceptual plan of wastewater treatment and disposal for a subdivision covered under this section.

C. Before a final plat is recorded or filed for subdivision, the engineer must complete the following plat note which shall be placed on the plat:

WASTEWATER DISPOSAL: Plans for wastewater treatment systems with individual marine outfalls serving single family or duplex residences, that meet the regulatory requirements of 20.14.060, are on file at the Kenai Peninsula Borough. Any type of wastewater treatment and disposal system disposing of wastewater onsite or through an outfall must meet the regulatory requirements of the Alaska Department of Environmental Conservation.

(signature of)Engineer

License #

Date

20.14.070. Connection to an Existing System.

A. If any lots within a subdivision will be connected to an existing collector sewer and treatment system, the following requirements must be met:

1. proof that the owner of the collector sewer and treatment system has agreed to allow the lots to be connected;
2. documentation that the receiving system is adequate to accept the additional hydraulic and organic loading; AND
3. the minimum lot size necessary to maintain the applicable separation distance set out at 18 AAC 72.015 from any part of the wastewater system.

B. Before a final plat is recorded or filed for subdivision, the engineer or surveyor must complete the following plat note which shall be placed on the plat:

WASTEWATER DISPOSAL: Plans for wastewater disposal, that meet regulatory requirements are on file at the Department of Environmental Conservation.

(signature of)Engineer or Surveyor

License #

Date

20.14.080. Subdivisions with No Wastewater Disposal.

A. This section applies to subdivisions where no wastewater will be generated, disposed, and the land use cannot produce wastewater.

B. Before a final plat is recorded or filed for subdivision, the surveyor must complete the following plat note which shall be placed on the plat:

WASTEWATER DISPOSAL: No wastewater will be generated or disposed of on these lots. Conditions might not be suitable for onsite wastewater treatment and disposal systems. Any onsite wastewater treatment and disposal system must meet the wastewater disposal requirements of KPB Chapter 20.14 and regulatory requirements of the Alaska Departmental of Environmental Conservation.

20.14.090. Pollution Abatement Report.

A. In addition to the foregoing, a subdivision must be planned so it will not:

1. contribute to nitrate concentrations in groundwater that exceed existing State standards;

2. contribute to fecal coliform bacteria contamination; OR
3. cause other pollutants to exceed concentrations beyond the acceptable limits set by 18 AAC 70.

B. Except as provided in (C) of this section, if an applicant proposes disposal of wastewater to onsite soils for a single-family or duplex residential lot of less than 40,000 square feet the applicant shall submit a pollution abatement report containing calculations showing that the nitrate concentration of the groundwater aquifer, most likely to be affected by the proposed disposal systems, will not be increased beyond State drinking water standards at the property line of each lot

smaller than 40,000 square feet. The calculations must be sealed by a registered engineer. To prepare the calculations required under this subsection, there are many groundwater modeling references from which to choose, including those listed in 18 AAC 72.950(9),(11), and (14). For a subdivision with lot sizes of 40,000 square feet or more, these calculations are not required.

C. The requirements of (B) of this section do not apply to lots in subdivisions that have, or will have, a public or community water system capable of delivering water to each lot. If a public or community water system is proposed for a subdivision, but not constructed, construction assurance for the water system is required.

20.14.100. Soil Analysis And Report.

A. The soil analysis and report required by this chapter must demonstrate subsurface conditions and soils are suitable for designation as a usable wastewater disposal area under 20.14.040(A)(4). Soils testing, test results, and the soils report must meet the following criteria:

1. the soil analysis and report must be sealed by a registered engineer;
2. test holes and borings must be located to yield representative data for, and provide coverage of, the entire subdivision;
3. test holes and borings must have the following minimum depth below the ground surface;
 - a. in areas known or suspected to contain permafrost, the lesser of
 - 1) 20 feet deep; OR
 - 2) a depth below seasonal high groundwater table;
 - b. the least depth associated with the following conditions, where applicable;
 - 1) two feet below the initial encounter with the water table;
 - 2) 10 feet deep for shallow trench or bed systems;
 - 3) 12 feet deep for areas where deep trench or seepage pits will likely be used; or
 - 4) the depth to bedrock, clay, or other impermeable strata with an expected percolation rate slower than 120 minutes per inch;
4. soils in a usable wastewater disposal area must be:
 - a. shown to be visually classified as GW, GP, SW, or SP under Unified Soils Classification System, and expected to have percolation rate faster than 60 minutes per inch; OR
 - b. shown to be GM or SM under the Unified Soils Classification System by a sieve analysis; OR
 - c. shown by a percolation test conducted in accordance with 18 AAC 72.270(10) to have a percolation rate as described in 18 AAC 72.270(8); AND
5. the restrictions of 18 AAC 72.025(b)(1)(E) must be met.

B. Use of soils with percolation rates other than those set out in 18 AAC 72.270(8) must be on a case-by-case basis as described in Table F in 18 AAC 72.265. A definitive explanation authored and stamped by a registered engineer must be submitted.

C. In areas known or suspected to contain permafrost, a soil moisture content profile analysis derived from laboratory testing methods, and taken from each test hole used for soils testing in the subdivision, must show that the soils throughout the subdivision are adequately drained.

D. Subject to (E) of this section, the minimum number of test holes and soil analysis required under this section is at least one per two acres of subdivision, with at least one test hole and one soil analysis for a subdivision of two acres or less.

E. The engineer may use less than the minimum number of test holes and soil analysis required by (D) of this section if sufficient soils data indicates general consistency throughout all or a portion of the subdivision. A definitive explanation authored and stamped by a registered engineer must be submitted.

F. Soil testing requirements for subdivision lots equal or greater than nominal 5 acres consist of general soils and water table description with sufficient detail to support the applicability of the proposed means of wastewater disposal; the description must be based on:

1. existing information; OR
2. visual analysis by, or local knowledge of, a registered engineer.

G. Except as provided in (H) of this section, the minimum depth from the ground surface to seasonal high water table and impermeable strata must conform to the values listed below. The listed depth must provide at least the following:

1. four feet or reduced by depth of freeze calculations by a registered engineer;
2. one foot for the distribution pipe, sewer rock and barrier material;
3. four feet of separation from the bottom of the system to the seasonal high water table;
4. four feet minimum ground cover over the soil absorption system including tank, piping and affective leach area;
5. nine feet minimum depth to seasonal high water; and
6. eleven feet to impermeable strata.

H. The minimum depth from the ground surface to the seasonal high water table set out in (G) of this section may be reduced by up to two feet by insulating with non-absorbing insulation or by mounding above grade to provide protection from frost penetration. Insulation material may be substituted for up to two feet of earth cover if material type and thickness allow. To have a lesser vertical separation distance from the requirements of (G) of this section, in addition to the other applicable requirements of this chapter, a typical system design sealed by a registered engineer is required.

I. When the water table is encountered in the test holes, the depth to the seasonal high water table must be determined by:

1. monitoring test holes or soil borings at times between May and October (inclusive); OR
2. soil mottling analyses; OR
3. interpretation of levels of standing open water; OR
4. local knowledge and experience; OR
5. a combination of these methods.

J. The depth to any seeps must be noted, and may require subsequent monitoring.

20.14.110. Definitions.

In this chapter, unless the context otherwise requires:

A. "alternate onsite wastewater treatment and disposal" and "alternate soil absorption system" mean a method of soil absorption treatment and disposal other than a conventional soil

absorption system, but exclude holding tanks or no-water carried disposal methods such as composting, incineration, or privies.

B. "ADEC" means Alaska Department of Environmental Conservation.

C. "ADEC approval" means Alaska Department of Environmental Conservation letter to construct or operate.

D. "collector sewer" means that line used as a common receiver of sewage from more than one service line.

E. "collector system" means a wastewater collection system using methods of collection other than pipes.

F. "community soil absorption system" means a soil absorption system serving more than one single-family or duplex residence.

G. "conventional soil absorption system" means a soil absorption system of typical trench, bed, or seepage pit design as described by On-Site Wastewater Treatment and Disposal Systems (Design Manual), EPA 625/1-80-012, 1980, or A 1979 State of The Art Manual of On-Site Wastewater Management, 1979, The National Environmental Health Association, using natural subsurface undisturbed soils for the treatment media, or any soil absorption system with the same characteristics;

H. "disposal system" means a system, whose sole function is to provide a means of final disposal of domestic wastewater to the environment.

I. "domestic wastewater" means waterborne human wastes or graywater derived mainly from dwellings, commercial buildings, institutions, or similar structures; domestic wastewater includes contents from individual removable containers used in dwellings to collect human waste.

J. "domestic wastewater disposal system" means a device, structure, or formation used to dilute, dispose, treat, or discharge domestic wastewater, including injection wells, soil absorption systems, pits, crevices, sinkholes, depressions, outfalls, percolating lagoons, and land irrigation systems.

K. "duplex" means a single structure designed to house two family dwelling units.

L. "engineering plans" mean a set of plans approved and sealed by a registered engineer.

M. "groundwater" means the subsurface water permanently or seasonally occupying the zone in which the voids in the rock or soil are filled with water at a pressure greater than atmospheric.

N. "holding tank" means of a watertight vessel or tank for the temporary storage of wastewater, urine, or excrement.

O. "onsite treatment system with marine outfall" means a treatment system located on each lot, or shared by adjacent lots, from which effluent is discharged through a single outfall extending to marine water.

P. "nominal 5 acres" mean of, like, or relating to an aliquot 5 acre part.

Q. "registered engineer" means a professional engineer registered to practice in Alaska under AS 08.48.

R. "registered land surveyor" means a professional land surveyor registered to practice in Alaska under AS 08.48.

S. "sealed" means prepared by a registered engineer or registered land surveyor, or a person under his or her direct supervision, and bearing the signature and seal of that engineer or surveyor as required by AS 08.48.221 and 12 AAC 36.185. The particular sealing requirement in this


chapter, is covered by one or more seals and signatures (whichever applies) of a registered engineer or registered land surveyor, appearing on the plans, drawings, reports, or other documents.

T. "soil absorption system" means a surface or subsurface system using soil for the treatment and disposal of effluent from a domestic wastewater treatment works; "soil absorption system" includes a filtering field, leaching field, seepage bed, or seepage pit, but does not include a cesspool.

SECTION 3. That enactment of this ordinance supersedes Kenai Peninsula Borough Planning Commission Resolution 88-02.


SECTION 4. That this ordinance shall take effect immediately upon its enactment.

ENACTED BY THE ASSEMBLY OF THE KENAI PENINSULA BOROUGH THIS 18th DAY OF MARCH, 1997.



Jack E. Brown, Assembly President

ATTEST:



Shirley Olsen, Deputy Borough Clerk