



**City of  
Pine Springs**

**City of Pine Springs,  
Washington County, MN**

**Sanitary Sewer Disposal Code**

## Preface

### Adoption by the City

The Washington County Planning Commission created a six chapter Development Code on June 21, 1972. The Code was adopted by the Washington County Board of Commissioners on July 6, 1972 for optional use by unincorporated areas and municipalities in the County. Chapter 4 of the Code, the Sanitary Sewer Disposal Ordinance, was subsequently adopted by the City of Pine Springs on May 31, 1973 in City Ordinance 16. Since that time, the City's Sanitary Sewer Disposal Code has been revised according to the needs of the City.

### Republication

In its current state as of June 2020, the City of Pine Springs Sanitary Sewer Disposal Code document is only available in two parts: 1) facsimile page copies of the original Chapter 4, and 2) City Ordinance No. 16 showing adopted changes to the original pages. Those documents were used as the source for this republished document of the Pine Springs Sanitary Sewer Disposal Code. This new document was created in order to make it more readable, more easily searched and referenced, and more reproducible as needed. During the republishing process, no changes were made to the Code other than obvious spelling errors and minor formatting changes to promote better readability.

### Revision History

Any changes going forward must be documented and approved by the City Council. As this document is revised going forward, a revision history list, as shown below, will be used to track changes.

Ver.	Changes	Date Changed
0.0	Washington County Board of Commissioners adopts a 6 chapter Development Code which includes the Sanitary Sewer Disposal Code.	Jul 6, 1972
1.0	City of Pine Springs passes Ordinance No.16. It adopts "Chapter 4 – Sanitary Sewer Disposal Ordinance" of the Code as its sanitary sewer code. This ordinance contains selected changes to the code. The Code exists as two documents.	May 31, 1973
2.0	The Sanitary Sewer Disposal Code is republished with Ordinance 16 substitution text integrated into the code and readopted by the City Council.	Nov 10, 2020
2.1	Amended by Ordinance 26	Nov 10,2020

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# WASHINGTON COUNTY, MINNESOTA

## CHAPTER 4. SANITARY SEWER DISPOSAL ORDINANCE

AN ORDINANCE FOR THE PURPOSE OF PROMOTING HEALTH, SAFETY, ORDER, CONVENIENCE AND GENERAL WELFARE, BY REGULATING THE SPECIFICATIONS, INSTALLATION, AND MAINTENANCE OF ON-SITE SEWER DISPOSAL SYSTEMS IN THE UNINCORPORATED AREAS OF WASHINGTON COUNTY, MINNESOTA.

THE BOARD OF COUNTY COMMISSIONERS OF WASHINGTON COUNTY, MINNESOTA, DOES ORDAIN:

### SECTION 1. TITLE

101. Short Title. This Ordinance shall be known, cited and referred to as the Pine Springs Pollution Control Ordinance; except as referred to herein, where it shall be known as, "This Ordinance".

### SECTION 2. INTENT AND PURPOSE

201. Purpose. This Ordinance is adopted for the purpose of:

- (1) Protecting the health, safety and welfare of residents and future residents of the City of Pine Springs.
- (2) Regulating individual sewer disposal systems so as to prevent contamination of underground bodies of water or of streams, lakes, rivers or other surface bodies of water.
- (3) Regulating individual water supply systems so as to prevent contamination of water derived from such system and other health hazards.
- (4) Preventing individual sewer disposal systems from creating a health hazard and/or nuisance for the general public or for individuals.
- (5) Making it unnecessary to provide central public sewage disposal systems and water supply systems for the City of Pine Springs in accordance with the Comprehensive Plan for the City.

### SECTION 3. DEFINITIONS

#### 301. Rules.

301.01. Deleted.

301.02. Words used in the present tense include the past and future tense; the singular number includes the plural and the plural includes the singular; the word "shall" is mandatory, and the word "may" is permissive.

### **302. Definitions.**

302.01. For the purpose of this Ordinance, certain terms and words are hereby defined as follows:

(1) Building Drain. The building drain is that part of the horizontal piping of a building drainage system which receives the discharge from all other soil, waste and drainage pipes inside the walls of any building and conveys the same to the building sewer.

(2) Building Sewer. The building sewer is that part of the horizontal portion of the building drainage system extending from the building drain to its connection with the septic tank and carrying the sewage of but one building.

(3) Individual Sewage Disposal System. A sewage disposal system other than a public or community system which receives sewage from an individual establishment. Unless otherwise indicated, the word "system" as it appears in this Ordinance means "individual sewage disposal system."

(4) Inspector. A person duly authorized by ordinance or resolution adopted by the City Council to enforce all or some of the provisions of this Ordinance.

(5) Sewage. Any water-carried domestic waste, exclusive of footing and roof drainage, of any residence, industry or commercial establishment, whether treated or untreated, and includes the liquid wastes produced by bathing, laundry and culinary operations, and from toilets and floor drains. Raw sewage is sewage which has not been subjected to any treatment process.

## **SECTION 4. GENERAL PROVISIONS**

### **401. Construction Requirements.**

401.01. All individual sewage disposal systems installed subsequent to the adoption of this Ordinance and all alterations, extensions and repairs to individual sewage disposal systems irrespective of the date of original installation shall be regulated in accordance with all of the requirements of this Ordinance. Any individual sewage disposal system or pertinent part thereof, irrespective of the date of original installation, must be corrected and must as far as practicable conform to these standards within ninety (90) days after written notification, where there is evidence of septic tank effluent percolating from the ground or of other inadequate control of sewage.

### **402. General Requirements.**

402.01. Location and installation of the individual sewage disposal system and each part thereof shall be such that, with reasonable maintenance, it will function in a sanitary manner and will not create a nuisance nor endanger the safety of any domestic water supply. In determining a suitable location for the system, consideration shall be given to the size and shape of the lot, slope of natural and finished grade, soil permeability, depth of ground water, geology, proximity to existing or future water supplies, accessibility for maintenance, and possible expansion of the system.

402.02. No part of the system shall be located so that it is nearer to any water supply than outlined hereinafter, or so that surface drainage from its location may reach any domestic water supply.

402.03. Raw sewage, septic tank effluent, or seepage from a soil absorption system shall not be discharged to the ground surface, abandoned wells, or bodies of surface water, or into any rock formation the structure of which is not conducive to purification of water by filtration, or into any well or other excavation in the ground which does not comply with the requirements of this Ordinance. This requirement shall not apply to the disposal of sewage in accordance with a process approved by the State Board of Health or the Water Pollution Control Commission.

402.04. The lot size shall be sufficient to permit installation of the individual sewage disposal system in accordance with all the requirements pertaining thereto.

402.05. Installations of individual sewage disposal systems shall not be made in low swampy areas or areas which may be subject to flooding.

402.06. In areas with a high ground-water table or where limestone or any geological formation similarly faulty is covered by less than fifty (50) feet of earth, the final disposal unit shall be a tile field. The bottom of the trenches shall be not less than four (4) feet above the highest known or calculated water table or the surface of the faulty rock formation.

402.07. Bulldozers, trucks or other heavy machinery shall not be driven over the system after installation.

402.08. The system or systems shall be designed to receive all sewage from the dwelling, building or other establishment served, including laundry waste and basement floor drainage. Footing or roof drainage shall not enter any part of the system. Where the construction of additional bedrooms, the installation of mechanical equipment, or other factors likely to affect the operation of the system can be reasonably anticipated, the installation of a system adequate for such anticipated need shall be required.

402.09. The system shall consist of a building sewer, a septic tank, and a soil absorption unit. The soil absorption unit shall consist of a subsurface disposal field. All sewage shall be treated in the septic tank and the septic tank effluent shall be discharged to the disposal field. The septic tank drain field system shall be considered the only acceptable system for installation unless it can be demonstrated that the system being proposed as an alternative will not create a pollution problem.

402.10. Soil absorption systems for the disposal of sewage waste shall not be installed on land where the slope exceeds thirteen percent (13%).

### **403. Sewer Construction.**

403.01. No buried or concealed portion of the building sewer, or building drain or branch thereof serving any establishment shall be located less than thirty (30) feet from any water-supply well. The buried or concealed portions of any building sewer, building drain or branches thereof located less than fifty (50) feet from any well shall be constructed of standard cast iron soil pipe with rubber joints. The joints of such sewer, drain, or branch located less than forty (40) feet from a well shall be further protected against leakage by means of bell-joint clamps or six (6) inch concrete encasement or by other equally effective means. The air test shall be made by attaching an air compressor or test apparatus to a suitable opening and closing all other inlets and outlets to the sewer and/or drain under test by means of proper testing plugs. Air shall be forced into the system until there is a uniform pressure of five (5) pounds per square inch in the section being tested. The system shall be considered satisfactorily air tested if the pressure therein remains constant for fifteen (15) minutes without the addition of air.

403.02. The portions of any buried sewer or buried suction line shall be adequate size and constructed of cast iron. No building drain or building sewer shall be less than four (4) inches in diameter.

403.03. Construction of the line shall be such as to secure watertight and root tight joints, free of obstructions, and shall provide a grade of not less than 1/8 inch per foot. The ten (10) feet of sewer immediately preceding the septic tank shall not slope more than 1/4 inch per foot. No 90° ells shall be permitted, and where the direction of the sewer is changed in excess of 22 1/2°, accessible cleanouts shall be provided.

**404. Septic Tank.**

404.01. The location of the septic tank shall be such as to provide not less than the stated distances from the following:

- (1) Property lines, buried pipe distributing water under pressure and occupied buildings - 10 feet
- (2) Any source of domestic water supply or buried water suction line - 50 feet

404.02. The liquid capacity of a septic tank serving a dwelling shall be based on the number of bedrooms contemplated in the dwelling served and shall conform to capacities given in Table 1 which follows. The liquid capacity of a septic tank serving an establishment other than a dwelling shall be sufficient to provide a sewage detention period of not less than 24 hours in the tank but in no instance shall it be less than 1000 gallons.

TABLE 1  
Minimum Capacities for Septic Tanks  
(Provides for Use of Garbage-Grinders, Automatic Washers, and Other Household Appliances)

	Minimum Tank Capacity	Equivalent Capacity per Bedroom
2 or less	1000	500
3	1200	400
4*	1200	350

\* For each additional bedroom over 4, add 300 gallons of additional capacity.

404.03. The liquid depth of any septic tank or compartment thereof shall be not less than thirty (30) inches. A liquid depth greater than six and one half (6½) feet shall not be considered in determining tank capacity.

404.04. No tank or compartment thereof shall have an inside horizontal dimension less than twenty four (24) inches.

404.05. Inlet and outlet connections of the tank and of each compartment thereof shall be submerged by means of vented tees or baffled so as to obtain effective retention of scum and sludge.

404.06. The space in the tank between the liquid surface and the top of the inlet and outlet baffles or submerged pipes shall be not less than twenty (20) percent of the total required liquid capacity, except that in horizontal cylindrical tanks this space shall be not less than fifteen (15) percent of the total required liquid capacity.

404.07. The inlet baffle or submerged pipe shall extend at least six (6) inches but not more than twenty (20) percent of the total liquid depth, to the nearest inch, below the liquid surface and at least one inch above the crown of the inlet sewer.

404.08. The outlet baffle or submerged pipe and the baffles or submerged pipes between compartments shall extend below the liquid surface a distance equal to forty (40) percent, to the nearest inch, of the liquid depth except that the penetration of the indicated baffles or submerged pipes for horizontal cylindrical tanks shall be thirty five (35) percent, to the nearest inch, of the total liquid depth. They also shall extend above the liquid surface to provide for scum storage as required in item 404.06 above. In no case shall they extend less than six (6) inches above the liquid surface.

404.09. There shall be at least one inch between the underside of the top of the tank and the highest point of the inlet and outlet devices and partitions so as to provide the required ventilation of the system through the main building stack.

404.10. The inlet invert shall be not less than three (3) inches above the outlet invert.

404.11. Construction of the tank shall be such as to assure its being water-tight and to prevent the entrance of rainwater, surface drainage, or ground water.

404.12. The tank shall be constructed of sound and durable material not subject to excessive corrosion or decay. Metal septic tanks shall comply with Commercial Standard 177-62 of the U.S. Department of Commerce and have the capacity required by Table 1.

404.13. Adequate access to each compartment of the tank for inspection and sludge removal shall be provided by a manhole (not less than standard size) or removable cover and by a clean-out pipe of not less than 6-inch diameter extending through the cover to a point above the tank not more than six (6) inches below finished ground level. The point at which the clean-out pipe passes through the cover shall be so located that a downward projection of the pipe clears the inlet and outlet device by not less than two (2) inches. The top of the clean-out pipe shall be provided with a readily removable water-tight cap and its location shall be marked by stake or other means at the ground surface. The inlet device shall be made accessible by either the removable cover or the manhole or by the addition of properly placed hand holes.

#### **405. Subsurface Disposal Field.**

405.01. Location of the disposal field shall be in an unobstructed and preferably un-shaded area, and the distances given below shall be the minimum horizontal separations between the disposal field and the following:

(1) Any water supply well or buried water suction pipe	75 feet
(2) Streams or other bodies of water	75 feet
(3) Occupied buildings	20 feet
(4) Large trees (see alternate in 4.05.06 (4) )	10 feet
(5) Property lines or buried pipe distributing water under pressure	10 feet

405.02. When coarse soil formations are encountered, the distances specified in 405.01 shall be increased appropriately.



405.03. A distribution box with removable cover and of sufficient size to accommodate the necessary tile field lateral lines shall be constructed at the head of each disposal field.

(1) Each tile field lateral line shall be connected separately to the distribution box and shall not be subdivided.

(2) The inverts of all outlets shall be at the same elevation and the inlet invert shall be at least one inch above the outlet inverts.

(3) The outlet inverts shall be at least four (4) inches above the distribution box floor for the purpose of securing equal distribution of the septic tank effluent to each tile lateral.

(4) In the event that septic tank effluent is delivered to the distribution box by pump or siphon, a baffle wall shall be installed in the distribution box. The baffle shall be secured to the bottom of the box and shall extend vertically to a point at least level with the crown of the inlet pipe. The plane surface of the baffle shall be perpendicular to the inlet flow line.

(5) Where the slope of the ground surface does not exceed six (6) inches in any direction within the area utilized for the absorption field, the septic tank effluent may be applied to the absorption field through a system of inter-connected tile lines and trenches in a continuous system. The bottom of the trenches and distribution lines shall be constructed on a relatively level grade, not to exceed six (6) inches difference in elevation.

(6) Where the slope of the ground surface exceeds six (6) inches in any direction within the area utilized for the absorption field, serial distribution may be used. The bottom of the trenches and distribution lines shall be constructed on a relatively level grade. The distribution tile system shall be arranged so that each trench shall be filled with septic tank effluent before effluent flows to succeeding trenches. The invert of the overflow pipe in the first relief line shall be at least four (4) inches lower than the invert of the septic tank outlet.

405.04. Minimum seepage area of the disposal field (total flat area of trench bottom exclusive of sidewall area) shall be determined by the following percolation test procedure as applied to Table 2.

(1) Number and location of tests. Two or more tests shall be made in separate test holes spaced uniformly over the proposed absorption field site.

(2) Type of test hole. A hole with horizontal dimensions of four (4) to twelve (12) inches and vertical sides shall be dug or bored to the depth of the proposed absorption trench. The holes may be bored with an auger of not less than four (4) inches in diameter.

(3) Preparation of test hole. The bottom and sides of the hole shall be carefully scratched with a knife blade or sharp pointed instrument to remove any smeared soil surfaces and to provide a natural soil interface into which water may percolate. All loose material shall be removed from the hole and two (2) inches of coarse sand or fine gravel shall be added to protect the bottom from scouring. .

(4) Saturation and swelling of the soil. The hole shall be carefully filled with clear water to a minimum depth of twelve (12) inches over the gravel. Water shall be kept in the hole for at least four (4) hours, and preferably overnight, by refilling if necessary, or by supplying a surplus reservoir of

water, such as in an automatic siphon. In sandy soils containing little or no clay, the swelling procedure shall not be required and the test may be made as described under item 405.04 (5) (c) after the water from one filling of the hole has completely seeped away.

(5) Percolation rate measurement. With the exception of sandy soils, percolation rate measurements shall be made on the day following the procedure described under item 405.04 (4).

(a) If water remains in the test hole after the overnight swelling period, the depth shall be adjusted to approximately six (6) inches over the gravel. From a fixed reference point the drop in water level shall be measured at thirty (30) minute intervals over a two (2) hour period. This drop shall be used to calculate the percolation rate.

(b) If no water remains in the hole after the overnight swelling period, clear water shall be added to bring the depth of water in the hole to approximately six (6) inches over the gravel. From a fixed reference point the drop in water level shall be measured at approximately thirty (30) minute intervals for four (4) hours, refilling six (6) inches over the gravel if necessary. The drop that occurs during the final thirty (30) minute period shall be used to calculate the percolation rate.

(c) In sandy soils or other soils in which the first six (6) inches of water seeps away in less than thirty (30) minutes after the overnight swelling period, the time interval between measurements shall be taken as ten (10) minutes and the test shall be run for one (1) hour. The drop that occurs during the final ten (10) minutes shall be used to calculate the percolation rate.

TABLE 2

Absorption Area Requirements for Private Residences and Other Establishments  
(Per bedroom column provides for residential garbage grinders and automatic sequence washing machines)

Percolation rate (time required for water to fall one (1) inch, in minutes)	Required absorption area in square feet standard trench (1) and seepage pits (2)	
	Per bedroom (3)	Per gallon of waste per day
1 or less	70	.20
2	85	.30
3	100	.35
4	115	.40
5	125	.45
10	165	.65
15	190	.80
30 (4)	250	1.10
45 (4)	300	1.25
60 (4,5)	330	1.65

(1) Absorption area for standard trenches is figured as trench-bottom area.

(2) Absorption area for seepage pits is figured as effective sidewall area beneath the inlet

(3) In every case sufficient area should be provided for at least 2 bedrooms.

(4) Unsuitable for seepage pits if over 30.

(5) Unsuitable for absorption systems if over 60.

405.05. Additional criteria for judging soil suitability.

(1) In areas of shallow ground water, the depth of the water table shall be determined. No soil absorption system shall be installed in an area where the water table is at any time less than six and one-half (6½) feet below ground level or four (4) feet below the bottom of the drain field trench. Soil absorption systems installed in areas where impermeable layers are found at depths of less than six and one-half (6½) feet shall be considered to be of special design.

(2) A modification of the percolation test may be used where the percolation test procedure has been previously used and knowledge is available on the character and uniformity of the soil.

405.06. Construction of disposal trenches.

(1) All trenches in a disposal field shall be constructed in accordance with the following standards:

- (a) Minimum number of lines per field 2
- (b) Maximum length of individual lines 100 feet
- (c) Minimum bottom width of trench 18 inches
- (d) Minimum depth of cover of tile lines 18 inches
- (e) Preferred depth of cover of tile lines 24 inches
- (f) Maximum depth of cover of tile lines 36 inches
- (g) Maximum uniform grade of tile lines 6 inches per 100 feet
- (h) Preferred uniform grade of tile lines 2 to 4 inches per 100 feet
- (i) Size and spacing of trenches Conform to Table 3
- (j) Minimum filter material under tile 6 inches
- (k) Preferred depth of filter material under tile 12 to 24 inches
- (l) Minimum filter material over tile 2 inches

TABLE 3  
Size and Minimum Spacing Requirements for Disposal Trenches

Width at bottom in inches	Effective absorption area in sq. ft. per lin. ft.	Minimum spacing of lines c to c in feet
18	1.5	6.0
24	2.0	6.5
30	2.5	7.0
36	3.0	7.5

Absorption trenches or beds wider than thirty-six (36) inches shall be provided with multiple distribution tile lines spaced not more than thirty-six (36) inches nor less than eighteen (18) inches on center, and not more than eighteen (18) inches from the side walls of the trench or bed, except that where tile lines are supported on a satisfactory under-drain system these spacings may be increased.

(2) Pipe used for the line between the septic tank and the distribution box and between the distribution box and tile laterals to the point where the laterals are separated six (6) feet, shall be vitrified-clay, cement-asbestos, or cast-iron. Joints in such pipe shall be water-tight. Pipe used under driveways or other areas subject to heavy loads shall be bell and spigot cast-iron with

leaded caulked joints. Such water-tight sections laid in the disposal field shall not be considered in determining the effective absorption area.

(3) Field tile used in the disposal field shall be 4-inch agricultural drain tile twelve (12) inches in length and shall be laid with ¼ inch open joints. Alternate materials may be used if equivalent performance is indicated.

(a) All open joints shall be protected on top by strips of asphalt-treated building paper at least ten (10) inches long and three (3) to six (6) inches wide or by other acceptable means.

(b) All bends used in the disposal field shall have tight joints at each end of the bend.

(4) Filter material shall be crushed stone, gravel, or similar insoluble, durable and acceptable material having sufficient voids. This material may vary from ½ to 2½ inches in size and shall be free of dust, sand or clay. The filter materials shall completely encase the tile in accordance with item 405.06 (1 j,k,l). In any case, disposal trenches constructed within ten (10) feet of large trees or dense shrubbery shall have at least twelve (12) inches of filter materials beneath the tile.

(5) The top of the filter material shall be covered with untreated building paper or a two-inch layer of hay or straw so as to prevent settling of backfill material into the filter material.

(6) Where it is necessary to fill an area for construction of tile laterals, the bottom of the tile trenches shall extend not less than one (1) foot into the original soil.

(7) The trench above the filter material shall be overfilled with four (4) to six (6) inches of earth. The backfill shall be hand-tamped.

(8) Before filter material is placed, all smeared or compacted soil in the trench bottom shall be broken up and removed by raking or other effective means to provide natural soil conditions.

#### 405.07. Seepage Pits.

(1) Seepage pits may be used for disposal of septic tank effluent only when it can be clearly demonstrated that a drain field system is not feasible on the particular lot in question and when such use is indicated by favorable conditions of soil, groundwater level, or topography, and where such use does not reduce the safety of surrounding water supplies. The pit excavation shall terminate at least four (4) feet above the highest known or calculated groundwater table. The depth of the excavation shall not exceed fifty percent (50%) of the depth of any well casing in the area or twenty (20) feet, whichever is least.

(2) A distribution box which is constructed in accordance with item 405.03 shall be required when two (2) or more seepage pits are connected and used in parallel.

(3) The location of seepage pits, in addition to the general provisions under item 405.07 (1) shall be not less than the stated minimum distances from the following:

- |  |            |
|--|------------|
| (a) Any water supply well or buried water suction pipe | - 100 feet |
| (b) Streams or other bodies of water                   | - 100 feet |

- (c) Occupied buildings - 20 feet
- (d) Property lines and buried pipe distributing water under pressure - 10 feet
- (e) Other seepage pits - three (3) times the diameter of the largest pit (edge to edge)

(4) Effective absorption area of a seepage pit shall be calculated as the sidewall area below the inlet, exclusive of any hardpan, rock, or clay formations.

(a) Required seepage area shall be determined by the percolation test described in item 405.04 and from Table 2. A percolation test shall be made in each vertical stratum penetrated by the seepage pit, and the weighted average of the results, exclusive of results from soil strata in which the percolation rate exceeds thirty (30) minutes, shall be computed and applied to Table 2 as indicated.

(b) A minimum of four (4) feet composite depth of porous formation for each installation shall be provided in one or more pits.

(c) All pits shall have a diameter of at least four (4) feet.

(5) Construction of all seepage pits shall conform to the following requirements:

(a) To prevent cave-in, the pit shall be lined with brick, stone or block at least four (4) inches thick, laid in a radial arch to support the pit walls.

(b) The brick, stone or block shall be laid water-tight above the inlet and with open joints below the inlet to provide adequate passage of liquids.

(c) A minimum annular space of six (6) inches and preferably twelve (12) inches between the lining and excavation wall shall be filled with crushed rock or gravel.

(d) The seepage pit shall be so constructed at the top as to be capable of supporting the over-burden of earth and any reasonable load to which it is subjected. Access to the pit shall be provided by means of a manhole or inspection hole equipped with a water-tight cover. The seepage pit may terminate in a conventional manhole top, frame and cover. The top of the seepage pit shall be not less than twelve (12) inches below the ground surface. Where the top is more than eighteen (18) inches below the ground surface there shall be provided an inspection pipe of not less than four (4) inch diameter extending through the cover to a point above the tank not more than six (6) inches below finished ground level. The top of the inspection pipe shall be provided with a readily removable water-tight cap and its location shall be marked at the ground surface.

#### **406. Maintenance.**

406.01. At least once a year the owner of any septic tank or his agent shall measure or arrange for measurement of the depth of sludge and scum in such septic tank. When, as a result of such measurement, the top of the sludge layer in the tank or any compartment of the tank is found to be less than twelve (12) inches below the bottom of the outlet baffle or submerged pipe, or if the bottom of the scum layer is less than three (3) inches above the bottom of the septic tank outlet baffle or submerged pipe, the owner or agent shall arrange for the removal and sanitary disposal of sludge and scum from the

tank; provided that such requirement for measuring shall be waived for any septic tank which is cleaned as indicated at least once each calendar year.

406.02. At least once each year the owner of any system equipped with a distribution box shall arrange for the opening of the distribution box and the removal of any settled solids therein. Such material shall be disposed of to the septic tank or by other means acceptable to the Zoning Administrator.

406.03. At least once between May 1 and June 30 of each year the depth of liquid in each seepage pit shall be measured. When, as a result of such measurement it is found that the liquid level in the pit is less than one foot below the inlet, a second measurement shall be made eight (8) to twelve (12) hours after the first measurement, during which time no liquid shall be discharged to the seepage pit. If, as a result of the second measurement, it is found that the liquid level in the pit has not lowered at least two (2) feet during the indicated period of time, an additional seepage pit or other acceptable soil absorption system shall be provided.

406.04. Servicing of septic tanks and soil absorption units shall conform to the Minnesota Department of Health and Minnesota Pollution Control Agency specifications. Disposal of sludge and scum removed from the system shall be:

- (1) Into a municipal sewer disposal system where practicable.
- (2) In the absence of a public sewer, at a disposal site approved by the Zoning Administrator.
- (3) Sludge shall not be discharged into any lake or watercourse nor upon land without burial.

#### **407. Alternative Systems.**

407.01. Alternative methods of sewage disposal such as holding tanks, electric or gas incinerators, biological and/or tertiary treatment plants or land disposal systems, wherever required or allowed in particular circumstances, shall be subject to the standards, criteria, rules and regulations of the Minnesota Department of Health and Minnesota Pollution Control Agency, and shall also require approval of the Washington County Zoning Administrator.

## **SECTION 5. REGULATION OF ON-SITE WATER SUPPLY SYSTEMS**

A. Each water supply system shall be so located and constructed that it will not be contaminated by any existing or future sewage disposal system. It shall also be constructed to minimize the possible contamination of the well from all possible external sources within the geological strata surrounding the well.

B. Wells shall be located in a manner to be free from flooding and the top shall be so constructed and located as to be above all possible sources of pollution. No well shall be located closer than three (3) feet to the outside basement wall of a dwelling. The outside basement footing shall be continuous across the opening of the well alcove. No well shall be located closer than fifteen (15) feet to a property line. The following minimum distances between a well and possible sources of contamination shall be complied with:

- (1) Buried or concealed standard cast iron sewer or drain lines with a rubber air tested joints - 30 feet.

(2) Vitrified clay or concrete sewers (or cast iron sewers not of construction described above), septic tanks - 50 feet.

(3) Dry wells, seepage pits, cesspools, and subsurface disposal fields - 75 feet.

C. No well shall hereafter be installed in a pit below the surface of the ground unless such well pit is an alcove opening directly into the main basement area of the building being served by the well. The well pit floor shall be constructed according to the requirements for pump room floors outlined in this Ordinance.

D. No well constructed in the City of Pine Springs shall terminate in the Decorah Shale, Platteville Limestone or Shakopee Oneota Dolomite. No existing well shall be increased in depth to terminate in those formations.

E. The minimum diameter of any finished well casing shall be four (4) inches. Well casings shall be constructed of welded or coupled steel or wrought iron and shall conform to the following specifications for weight and thickness:

Diameter	Wall thickness	Weight per lineal foot with threads and couplings
4"	.237 inches	10.98 lbs
5"	.258 inches	14.8 lbs
6"	.280 inches	19.45 lbs
8"	.322 inches	29.35 lbs
10"	.365 inches	41.85 lbs
12"	.375 inches	51.15 lbs

The casing of any well constructed entirely in unconsolidated earth formations shall extend to a depth of 150 feet below established ground level or through the first impervious soil formation encountered, whichever is deeper, and at least 5 feet below pumping level (level below ground level to which the water surface is lowered in the well during pumping). Where a water-bearing formation is encountered during well construction at a depth which satisfies these minimum requirements, the acceptability of the formation for well development shall be based on the satisfactory results of analysis of the water by a competent laboratory. Any water-bearing formation yielding water which is contaminated, as evidence by the presence of chemicals or bacteria of sewage original, shall be regarded as unsatisfactory for well development.

F. All wells for domestic use, hereafter constructed in the City of Pine Springs shall produce a minimum initial supply of 600 gallons of sand free water per hour.

G. The pump and equipment shall be installed in a manner satisfactory to the City of Pine Springs and shall conform to the following:

- (1) Pump and equipment shall be designed to assure a pollution proof and frost proof installation.
- (2) The pump base shall be constructed so as to permit installation of a water tight mounting.
- (3) A well seal shall be used. Such well seal shall be of simple construction, easily installed, removal and reinstalled should it become necessary to remove the drop pipe for repair.
- (4) The top of well casing shall be a minimum of 18 inches above the basement floor level and the seal shall be so constructed and installed as to maintain its watertight feature, should flooding occur. The pump room floor shall be at least 6 inches above the surrounding grade and the concrete platform shall be minimum 4 inches above grade at the edge.
- (5) Suction lines installed through the well casing, or where otherwise installed less than 10 feet below grade, shall be provided with an outline, protective casing. Such protective casing shall be

set watertight into the well casing. The suction line shall be caulked into the protective casing to provide a watertight joint which will permit easy removal. The suction line shall slope upward toward the pump. Where a suction line is brought into a basement from a well located some distance from the basement, the pump shall be located at least 18 inches above the basement floor.

(6) Provisions shall be made in the well seal for future measurements of static and pump levels.

H. After final installation of the pumping equipment, the well shall be pumped continuously until the water is free of turbidity, and then chlorinated heavily in accordance with the following procedure:

(1) Introduce into the well one pound of high test (70% or equivalent) calcium hypochlorite (chlorinated lime) by scattering same over the surface of the water in the well so that the powder will sink to the bottom thereby permeating the supply.

(2) If powder cannot be introduced directly, then mix one pound of calcium hypochlorite, high test (70% or equivalent), with five gallons of water and pour the mixture into the well.

(3) Allow the chemical to remain in the well for at least twelve hours then pump to waste until the odor and taste of the chemical have practically disappeared.

(4) Where calcium hypochlorite tablets meeting the above requirements are used, they shall remain in the well for a minimum period of 48 hours before the water is pumped to waste as described above.

(5) Wells larger than four inches in diameter require proportionally larger doses of the chemical for chlorination but shall not have a concentration of applies solution less than 150 parts per million for twelve hours.

I. All commercial wells shall comply with the requirements of the Minnesota State Department of Health for public water supplies.

J. Upon completion of drilling a well, a pumping test of sufficient duration to determine the yield and maximum drawdown shall be conducted. Within fifteen days after inspection of the well, the permit holder shall file an affidavit with the City Clerk setting forth the results of the pumping test, the capacity of the well, the pumping level, the depth of casing from grade, and length and size of screen if one is used.

A geological log of the formation encountered in drilling each well shall be kept by the driller. A copy of said log, typed on 8-1/2 X 11" paper shall be filed along with the well affidavit and such log shall specifically state where impervious formation is encountered. Failure to provide such a log or affidavit, or willful failure to provide accurate information with respect thereto shall constitute a violation of this Ordinance.

K. The construction of a well for the purpose of disposing of any liquids, including surface waters, air conditioning or commercial wastes, shall be prohibited in the City of Pine Springs.

L. The following terms used in this Ordinance are clarified as follows:

(1) Drawdown - The change in surface elevation of a body of water as the result of the withdrawal of water there from.

(2) Glacial Drift - An assemblage of deposits left by the melting of an ice sheet or glacier. It is composed of an accumulation of unstratified material of all sizes which formed at the margin of the ice.



- (3) Grout - A thin mortar consisting of Portland cement and water or Portland cement, sand and water in the following proportions:
  - (a) one sack cement to 4-1/2 to 5-1/2 gallons of water.
  - (b) one part cement, one part clean sand, and 4-1/2 to six gallons water. The sand grout shall be used only where abnormal loss of grout to crevices or faults occurs.
- (4) Log - A chronological record of the soil and rock formations encountered in the operation of drilling a well, with either their thickness, or the elevation of the top and bottom of each formation given. It also includes statements as to the composition and water bearing characteristics of each formation.
- (5) Porosity - An index of the void characteristics of a soil as it pertains to percolation.
- (6) Turbidity - A condition of a liquid due to fine visible material in suspension, which may not be of sufficient size to be seen as individual particles by the naked eye but which prevents the passage of light through the liquid.
- (7) Yield - The quantity of water flow (gallons per minute or per hour) which can be collected (pumped) from the well.

## **SECTION 6. ADMINISTRATION**

### **601. Enforcing Officer**

601.01 The City Council of the City of Pine Springs shall be responsible for the administration of this Ordinance, provided that the City Council may appoint an individual to assist it in carrying out any such duties and powers and to lawfully delegate to him such functions as are appropriate for this purpose.

### **602. Issuance of Permits**

602.01. No building permit for any building requiring an onsite sewage disposal system or water supply system shall be issued until the permit, as required by this Ordinance has been issued.

### **603. Inspection**

603.01 A person duly authorized by the City Council by Ordinance or resolution shall make such inspection or inspections as are necessary to determine compliance with this Ordinance. No part of the onsite sewage system shall be covered until it has been inspected and accepted by such inspector. It shall be the responsibility of the applicant for the permit to install such system to notify the inspector that the job is ready for inspection or re-inspection and it shall be the duty of the inspector to make the indicated inspection within twenty-four (24) hours after such notice has been given.

It shall be the duty of the owner or occupant of the property to give the inspector free access to the property at reasonable times for the purpose of making such inspections.

603.02. If upon inspection the inspector discovers that any part of the system is not constructed in accordance with the minimum standards provided in this Ordinance, he shall give the applicant written notification describing the defects. The applicant shall pay an additional fee as determined by resolution of the City Council of the City of Pine Springs for each re-inspection that is necessary. The applicant shall be responsible for the correction or elimination of all defects, and no system shall be placed or replaced in service until all defects have been corrected or eliminated. The applicant may take an appeal to the City Council of any decision or determination made by any inspector.

## **SECTION 7. LICENSES**

### **701. Licensing.**

701.01. No person, firm or corporation shall engage in the business of installing and constructing sewer disposal systems or water supply systems within the City of Pine Springs without first obtaining a license to carry on such occupation from the City Council or such person as is duly authorized by the City Council to issue such licenses. Applicant shall file with the City Council policies of public liability and property damage insurance which shall remain in force and effect during the entire term of said license and which shall contain a provision that they shall not be cancelled without ten (10) days written notice to the City. Public liability insurance shall not be less than One Hundred Thousand (\$100,000) Dollars for injuries including accidental death to any one (1) person and subject to the same limit for each person in an amount not less than Three Hundred Thousand (\$300,000) Dollars on account of any one (1) accident, and property damage insurance in the amount of not less than Fifty Thousand (\$50,000) Dollars for each accident and not less than One Hundred Thousand (\$100,000) Dollars aggregated. In addition the applicant shall file with the City Council a bond in the amount of Two Thousand Five Hundred (\$2,500) Dollars in favor of the City and the public, conditioned upon the faithful performance of the contracts and compliance with this Ordinance. No work shall be done under license until said insurance policies and performance bond have been filed and approved by the City Council or its designated administrator. Said license shall be renewable annually and may be revoked or refused renewal for cause. Any installation, construction, alteration or repair of a sewage disposal system or water supply system by licensee in violation of the provisions of this Ordinance or refusal on the part of the licensee to correct such defective work performed by such Licensee shall be cause for revocation of or refusal to renew the license.

701.02. Before any license issued under the provisions of this section may be revoked or its renewal refused, the licensee shall be given a hearing by the City Council to show cause why such license should not be revoked or refused. Notice of the time, place and purpose of such hearing shall be in writing. The annual license fee shall be Twenty-five (\$25) Dollars. Application for such license shall be made annually on a form furnished by the City. Licenses shall be effective from July 1 to June 30 of the following year.

## **SECTION 8. SANITARY SEWER AND WATER PERMITS**

801.01 No person, firm or corporation shall install, alter, repair, or extend any individual sewage disposal system or water supply system in the City of Pine Springs without first obtaining a permit therefore from the City for the specific installation, alteration, repair or extension; and at the time of applying for said permit, shall pay a fee as determined by resolution of the City Council of the City of Pine Springs.

801.02. Applications for permits shall be made in writing upon printed blanks or forms furnished by the City and shall be signed by the applicant.

801.03 Each application for a permit shall have thereon the correct legal description of the property on which the proposed installation, alteration, repair or extension is to take place, and each application for a permit shall be accompanied by a plot plan of the land showing the location of any proposed or existing buildings located on the property with respect to the boundary lines of the property and complete plans of the proposed system and percolation tests, if applicable, attesting to the compliance with the minimum standards of this Ordinance. A complete plan shall include the location, size, and design of all parts of the system to be installed, altered, repaired or extended. The application shall also show the present or proposed location of the water supply system or sewage disposal system, as the case may be, and shall provide such further information as shall be required by the City Council or its designated administrator.

## **SECTION 9. ENFORCEMENT**

### **901. Violations and Penalties.**

901.01. It is declared unlawful for any person to violate any of the terms and provisions of this Ordinance. Violation thereof shall be a misdemeanor. Each day that the violation is permitted to exist shall constitute a separate offense.

901.02. In the event of a violation or a threatened violation of this Ordinance, the City Council, or any member thereof, in addition to other remedies, may institute appropriate actions or proceedings to prevent, restrain, correct, or abate such violations and it is the duty of the City Attorney to institute such action.

901.03. Any taxpayer of the City may institute mandamus proceedings in District Court to compel specific performance by the proper official or officials of any duty required by this Ordinance.

## **SECTION 10. EFFECTUATION**

### **1001. Separability**

1001.01. It is hereby declared to be the intention that the several provisions of this Ordinance are separable in accordance with the following:

1001.02. If any court of competent jurisdiction shall adjudge any provision of this Ordinance to be invalid such judgment shall not affect any other provisions of this Ordinance not specifically included in said judgment.

1001.03. If any court of competent jurisdiction shall adjudge invalid the application of any portion of this Ordinance to a particular property, judgment shall not affect the application of said provision to any other property, building or structure not specifically included in said judgment.

1001.04. Nothing contained in this Ordinance repeals or amends any ordinance requiring a permit or license to engage in any business or occupation.

### **1002. Effective Date**

1002.01. This Ordinance shall take effect upon its passage and publication.

Passed by the City Council of the City of Pine Springs this 31st day of May, 1973.

Paul Linnerooth (signature)  
Mayor

Attest:  
R. G. Zietlow (signature)  
Clerk