

LUCE-MACKINAC-ALGER-SCHOOLCRAFT
DISTRICT HEALTH DEPARTMENT



**SUPERIOR
ENVIRONMENTAL
HEALTH CODE**

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PREFACE

A code to promote public health, safety and welfare; to prevent and control environmental health hazards; to establish fees; to provide standards and criteria for functions mandated by state law, and to provide penalties.

ARTICLE 1.0 AUTHORITY

SECTION 1.1 These Regulations are adopted under the authority conferred upon the department by Section 2441 of Michigan Public Health Code, Act 368, P.A. of 1978, as amended.

SECTION 1.2 These Regulations shall be entitled the “Superior Environmental Health Code.”

SECTION 1.3 This Code shall be liberally construed for the protection of the health, safety, and welfare of the people of Luce, Mackinac, Alger and Schoolcraft counties. This code shall supersede inconsistent or conflicting local ordinances.

SECTION 1.4 The Luce-Mackinac-Alger-Schoolcraft District Health Department is hereby authorized to develop and adopt a technical guidance manual.

SECTION 1.5 A current technical guidance manual shall be provided to the public upon request.

SECTION 1.6 Previous regulations entitled SEWAGE AND WATER REGULATIONS are hereby repealed. No violation of any repealed regulation shall be made legal by virtue of adoption of this code. Any act, situation or condition which, when created or first allowed to exist, was previously a violation, shall continue to be a violation under this code. Any action or issuance of a license that was previously mandatory shall continue to be mandatory under this code if a similar requirement is provided in this code.

SECTION 1.7 This code shall become effective:
Luce County – February 20, 1998
Mackinac County – February 1, 1998
Alger County – February 27, 1998
Schoolcraft County – April 11, 1998

ARTICLE 2.0 GENERAL DEFINITIONS

SECTION 2.1

Approved	Acceptable for intended use as determined by the health officer.
Department	Any county or District Health Department in the Upper Peninsula of Michigan as defined in Michigan’s Public Health Code.
Dwelling	Any structure or building, or any portion thereof which is used, intended, or designed to be occupied for human living purposes.
Hazard	A condition or practice which could reasonably be expected to cause death, disease, or serious physical harm immediately or before the danger can be eliminated through normal enforcement procedures established in this code.
Health Officer	The individual in charge of a local health department or his or her authorized representative.
His/He	The terms “his” and “he” shall be construed as non-gender specific.
License	Includes the whole or part of a department permit, certificate, approval, registration, charter, or similar form of permission required by law.
Nuisance	A condition or activity which threatens, or could reasonably be expected to threaten, the health or safety of the public. A threat to the health and safety of the public shall include any condition or activity which is reasonably likely to cause death, disease, illness, or physical harm, or is likely to create an unsanitary or unhealthy condition which may cause disease, illness, or death.
Person	An individual, partnership, cooperative, association, private corporation, personal representative, receiver, trustee, assignee, or any other legal entity.
Permit	A written document issued and signed by the health officer which authorizes a person to install a water supply or sewage system or any part of a system.

ARTICLE 3.0 LICENSING AND REGISTRATION

- SECTION 3.1** The department shall have authority to promulgate standards for licenses, registrations, renewals, and examinations.
- SECTION 3.2** In developing minimum standards for licensing or registration, the department shall consider equivalency and proficiency testing and where appropriate, grant credit for past training, education, or experience in related fields.
- SECTION 3.3** An individual shall not make a false representation or impersonation or act as a proxy for another individual to impersonate him or her in connection with an examination or application for licensure or registration or a request to be examined, licensed or registered.
- SECTION 3.4** The department shall issue a certificate of licensure or registration to an applicant who has satisfied all of the requirements set forth in this code.
- SECTION 3.5** A licensee or registrant shall have available for inspection a certificate issued by the department.
- SECTION 3.6** A license or registration is not transferable.
- SECTION 3.7** No person shall permit anyone to operate under his license or registration without supervision by the licensee or registrant.
- SECTION 3.8** The department may deny, suspend, revoke, or refuse to renew any license or registration for fraud or deceit in obtaining the license or registration or for violating, or aiding or abetting in a violation, of this code.
- SECTION 3.9** An applicant or licensee may request an informal hearing in connection with the suspension, revocation, or denial of a license or registration in accordance with Article 9.0.

ARTICLE 4.0 FEES

SECTION 4.1 The department may establish and collect fees for the issuance of permits, licenses, registrations, inspections or any other services provided.

ARTICLE 5.0 SEWAGE

SECTION 5.1 DEFINITIONS:

Absorption System	The part of a sewage system in which septic tank effluent is distributed by arrangement of trenches, beds, or seepage pits that allows the effluent to be absorbed and treated by the surrounding soil.
Absorption Bed	An absorption system with a minimum of two lateral lines in a distribution system wider than three feet.
Absorption Trench	An absorption system twelve to thirty six (12-36”) inches in width with one distribution line.
Alteration	The change in the design or location of an existing sewage system or any part of a system.
Alternative Sewage System	Any on-site sewage treatment system that is not a conventional sewage system.
Available Sewer	A public sewer that is physically and politically available, of acceptable design and capacity, within 200 feet of the proposed origin of sewage.
Building Sewer	That part of the system of drainage piping which conveys sewage into a septic tank or other treatment facility.
Cesspool	A pit which receives raw sewage, allows separation of solids and liquids, retains the solids, and allows liquids to seep into the surrounding soil through perforations in the lining.
Commercial Facility	Any structure or building, or any portion thereof, other than a single or two family dwelling.
Conventional Sewage System	An on-site sewage system containing a septic tank used in conjunction with absorption trenches or an absorption bed that utilizes gravity distribution.
Deep Cut	An excavation beginning at a depth of six (6’) feet below ground surface and extending to a depth not to exceed twelve (12’) feet below ground surface.
Distribution Pipe	Approved pipe used in the dispersion of septic tank effluent.

Drain	A pipe or manmade conduit used to carry surface water or other liquid material via pressure or gravity.
Dwelling	Any house, building, structure, tent, watercraft, shelter, trailer, or vehicle, or portion thereof which is occupied in whole or in part as a home residence, or living and sleeping place for one or more human beings.
Earth Pit Privy	A structure used for the disposal of human waste which is discharged directly into the natural soils.
Effective Soil Depth	The depth of soil between the natural grade and the limiting zone suitable for the installation of an absorption system.
Effluent	Partially treated sewage which is discharged from a septic tank or other sewage treatment system device.
Experimental System	A developed method of on-site sewage treatment that has not been fully proven in field tests.
Failing System	<p>A sewage system is considered to be failing if any one of the following conditions exist:</p> <ol style="list-style-type: none">(1) The sewage system fails to accept effluent at the rate of application.(2) Sewage effluent seeps from, or ponds on or around the sewage system.(3) The health officer has determined that the sewage system has contaminated the groundwaters or surface waters of the state.
Filter Fabric	A permeable geotextile fabric made with polymer used to impede or prevent the movement of sand, silt, and clay into aggregate/filter media.
Floodplain	A nearly level alluvial plain that borders a river, lake, or stream and is subject to flooding unless protected artificially.
Footer	That portion of the sewage system which interconnects the rear portion of the distribution line laterals.
Footing drains	A conduit installed around foundation footings to transport ground water away from the foundation.

Fragipan	A loamy subsurface horizon with high bulk density relative to the horizon above, seemingly cemented when dry, and weakly to moderately brittle when moist. Fragipans are mottled and low in organic matter. They impede movement of water and air, and growth of plant roots.
Groundwater Table	The saturated zone which exists below the ground surface throughout the year.
Habitable Building	Any structure or part thereof, or other place where human beings reside, are employed, or congregate, or adapted for such purposes.
Hardpan	A hardened layer in soil caused by cementation of soil particles with either silica, calcium carbonate, magnesium carbonate, or iron and/or organic matter. The hardness does not change appreciably with changes in moisture content. Hardpan impedes movement of water and air, and growth of plant roots.
Header	That portion of a sewage system which receives effluent from the septic tank and interconnects the front portion of the distribution line laterals.
Holding Tank	A watertight receptacle designed to receive and store sewage effluent to be disposed at another location.
Limiting Zone	Any horizon or condition in the soil profile or underlying strata which will interfere in any way with the treatment of sewage effluent before entering the ground water table. Such horizons include hardpans, fragipans, clay layers, compacted soils, bedrock, saprolite, clayey soils and permanent and perched ground water tables.
Natural Grade	The ground elevation as it exists in the natural state.
Occupant	A person who occupies, lives, habitually uses, or otherwise is in possession of any property or premises.
Perched Water Table	The upper surface of a saturated area resulting from a limiting zone.
Permeability	The quality of the soil which enables it to transmit water or air.
Privy	An enclosed non-portable toilet into which non-water-carried human wastes are disposed.
Public Sewer	A sanitary sewer or combined sanitary and storm sewer used or intended for use by the public for the collection and transportation of sanitary sewage.

Saprolite	Weathered material underlying the soil which grades from soft, thoroughly decomposed rock to rock which has been weathered sufficiently so that it can be broken in the hands or cut with a knife. It does not include hard bedrock or hard fractured bedrock. It has rock structure instead of soil structure.
Saturated Zone	A three (3) dimensional layer, lens, or other section of the subsurface in which all open spaces including joints, fractures, interstitial voids or pores are filled with ground water. The thickness and extent of a saturated zone may vary seasonally or periodically in response to changes in the rate or amount of groundwater recharge or discharge.
Seasonal High Water Table	The elevation of the groundwater at the upper surface of the zone of saturation as may occur during the wettest periods of the year, as indicated by mottling or a water surface in an unlined hole, whichever of the two levels is higher.
Seepage Pit	An absorption system consisting of a series of non-mortared cement blocks laid end to end or approved precast units which form a cylindrical underground enclosure that receives effluent from a septic tank.
Septage Hauler	A person who holds a Septage Waste Servicing License issued by the State of Michigan.
Septic Tank	A watertight receptacle which receives sewage and is designed to separate solids from liquids, digest organic matter during a period of retention, and to allow the liquids to discharge into a second treatment unit or to a soil absorption system.
Sewage	Human wastes from residences, buildings, industrial establishments, or other places, including kitchen, bath, and laundry wastes.
Sewage System	The method and devices, including all septic tanks, pipes, pumps, vents, absorption systems and privies used to treat and/or dispose of all sewage.
Sewage System Installer	A person qualified to engage in sewage system installation, alteration or repair.
Site Evaluation	An investigation to evaluate the suitability of a tract or parcel of land to support an adequate sewage system.
Slope	The rate of fall or drop in feet per one hundred feet (100') of the ground surface. It is expressed as a percent of grade.

Soil Texture The relative proportions of sand, silt, and clay particles in a mass of soil. The major textural classifications are defined as follows:

Sand: Individual grains which can be seen and felt readily. Squeezed in the hand when dry, this soil will fall apart when the pressure is released.

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

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

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

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

Silty Clay Loam	Consists of a moderate amount of clay, a large amount of silt, and a small amount of sand. It breaks into moderately hard clods or lumps when dry. When moist, a thin ribbon or one-eighth inch (1/8") wire can be formed between thumb and finger that will sustain its weight and will withstand gentle movement.
Silty Clay	Consists of even amounts of silt and clay and very small amounts of sand. It breaks into hard clods or lumps when dry. When moist, a thin ribbon or one-eighth inch (1/8") or less sized wire can be formed between thumb and finger that will withstand considerable movement and deformation.
Clay	Consists of large amounts of clay and moderate to small amounts of sand. It breaks into very hard clods or lumps when dry. When moist, a thin long ribbon or one-sixteenth inch (1/16") wire can be molded with ease. Fingerprints will show on the soil, and a dull to bright polish is made on the soil by a shovel.
Stream	A river, watercourse, creek, gully, ravine, or ditch, natural or human-made, which may or may not be serving as a drain, having definite banks, a bed, and visible evidence of flow, either continuous or intermittent, for a period of greater than two (2) months in any one year.
Surface Water	Any natural or man-made body of water that exists on the ground surface for an extended period of time.
Technical Manual	Guidelines, specifications and standard practices used to implement this code.
Test Pit	An open pit of defined size and depth, to permit thorough examination of the soil.
Vaulted Privy	A structure used for the disposal of human waste which is discharged into a watertight receptacle.

SECTION 5.2 APPLICABILITY

This code shall apply to single and two-family sewage systems.

SECTION 5.3 PERMITS

5.3.1 Application for Permit

1. An application to construct, alter, extend or replace a sewage system shall be provided by the department.
2. An application for a permit to construct, alter, extend or replace a sewage system shall be submitted to the department by the property owner or his authorized representative.
3. The health officer shall not act upon any application unless the application is complete.

5.3.2 Construction Permits

1. No person shall construct, alter, extend, or replace a sewage system without first having been issued a construction permit from the department.
2. Any permit issued pursuant to the requirements of this code shall be valid for the term of twenty four (24) months from the date of issuance unless declared void as provided in this code. After the expiration of the construction permit, a thirty (30) day grace period shall exist for an extension request. A construction permit may be extended for a period of twelve (12) months.
3. A permit shall not be transferable from one person to another.
4. A permit may be rescinded or declared void by the health officer when one or more of the following conditions exist:
 - A. The location of the sewage system specified on the permit is altered.
 - B. There is an increase in the scope of the project prior to, during, or following construction of the system.
 - C. The department acquires new information indicating that the previous permit approval site does not satisfy the requirements of this code.
 - D. The construction standards and prohibitions set forth in this code are violated before, during, or after construction.
 - E. The health officer has reasonable cause to believe that an intentional misrepresentation has occurred.

5. The health officer shall not issue a construction permit for any sewage system which does not meet the minimum criteria set forth in Section 5.7. The reasons for denial shall be furnished to the applicant in writing.
6. The health officer may require specific technologies, procedures, or construction practices as a condition of the permit.
7. The health officer may require a third-party operation and maintenance agreement. Operation and maintenance manuals for specific system designs may be required from manufacturers and contractors for homeowner and/or third-party use.
8. The health officer shall document deviations pursuant to the code.
9. The health officer shall have the authority to issue a construction permit for an alternative sewage system if the site does not meet the site requirements for a conventional sewage system.

SECTION 5.4 PUBLIC SEWERS

All facilities from which sewage flows shall be connected to a public sewer, if available, or a sewage system.

SECTION 5.5 PREMISES OCCUPANCY/CONDEMNATION

It shall be unlawful for any person to occupy, or permit to be occupied, any premises not equipped with an approved sewage system. Any premises constructed or maintained contrary to these regulations may be declared unfit for habitation, posted and ordered to be vacated by the health officer.

SECTION 5.6 SITE EVALUATION RESPONSIBILITY

5.6.1 Minimum Test Excavations

1. The health officer shall conduct a site evaluation for the parameters specific to this Section and to Section 5.7 for any parcel of land where a completed application was submitted to the department.
2. The depth, number and location of test pits shall be determined by the health officer.
3. A site evaluation report shall be valid for not more than twelve months.

5.6.2 Seasonal/Weather Restrictions

A site evaluation shall not occur between the dates of December 1 and March 31st. The health officer may grant written permission on an individual basis during the restricted season if weather conditions are suitable.

SECTION 5.7 SEWAGE SYSTEM SUITABILITY STANDARDS

5.7.1 Minimum Site Requirements

1. Conventional Sewage System

- A. The permeability of the soil shall not exceed forty-five minutes per inch (45 min./in).
- B. The permeability of the soil shall not be less than three minutes per inch (3 min/in).
- C. The effective soil depth or depth to seasonal high water table must be a minimum of twenty-four inches (24") from natural grade in stratified sand, gravel, medium sand; eighteen inches (18") in fine sand, loamy sand; twelve inches (12") in sandy loam, loam, silt loam, sandy clay loam.
- D. The natural slope does not exceed twelve percent (12%).
- E. Deep cut systems shall not exceed twelve (12') feet below natural grade and shall be considered an alternative sewage system.
- F. The isolation distances shall meet the requirements set forth in Section 5.7.2 of this code.
- G. The site shall not be located in a floodplain of less than one hundred years, or in an area subject to seasonal flooding or ponding of surface waters.
- H. The site shall not have a publicly operated sewage system available as defined by Act 368, P.A. 1978, Part 127.
- I. The sewage system must be located so that it is accessible for cleaning or inspection purposes.

2. Alternative Sewage System

Site requirements for alternative sewage systems shall be in accordance with the Technical Guidance Manual.

5.7.2 Sewage System Requirements

LMAS District Health Department - Superior Environmental Health Code

1. As summarized in Table 5.7.2 A in this rule, the proposed sewage system shall satisfy the following isolation requirements:
 - A. Sewer lines from buildings shall be located a minimum of ten feet (10') from all water wells.
 - B. Septic tanks or vaulted privies shall be located a minimum of fifty feet (50') from residential wells; seventy five feet (75') from Type IIb non-community and Type III water supplies, and two hundred feet (200') from Type IIa and community water supplies; ten feet (10') from property lines; five feet (5') from foundation walls; five feet (5') from building footing drains, storm drains and/or other subsoil drains; ten feet (10') from water lines; ten feet (10') from steep embankments or drop-offs, and seventy-five feet (75') from lakes, streams or other surface water impoundments.
 - C. The absorption system shall be located a minimum of fifty feet (50') from residential wells; seventy five feet (75') from Type IIb non-community and Type III water supplies; two hundred feet (200') from Type IIa and community water supplies; ten feet (10') from property lines, ten feet (10') feet from foundation walls; twenty five feet (25') from building footing drains, storm drains and/or other subsoil drains; ten feet (10') from water lines, twenty feet (20') from steep embankments or drop-offs, and seventy five feet (75') from lakes, streams or other surface water impoundments.
 - D. Earth pit privies shall be located a minimum of one hundred feet (100') from residential and Type IIb non-community and Type III water supplies, and two hundred feet (200') from Type IIa and community water supplies, ten feet (10') from property lines, ten feet (10') from water lines, twenty feet (20') from foundation walls, twenty feet (20') from building footing drains, storm drains and/or other subsoil drains, twenty five feet (25') from steep embankments or drop-offs, and seventy five (75') from lakes, streams or other surface water impoundments.
2. The soil depth between the limiting zone or the seasonal high water table and the aggregate/soil interface shall not be less than forty-eight inches (48").
3. Prior to entering the soil absorption system all sewage must first be treated by a septic tank.

TABLE 5.7.2 A Isolation Distances

From / To	Sewer Lines	Septic Tanks	Absorption System	Earth Pit Privies	Vaulted Privies
Residential Well	10	50	50	100	50
Non Community Well (Type IIB, Type III)	10	75	75	100	75
Community Well Type IIA	10	200	200	200	200
Property Lines	--	10	10	10	10
Foundation Wall	--	5	10	20	5
Building/Storm/ Subsoil Drains	--	5	25	25	5
Water Lines	--	10	10	10	10
Embankments	--	10	20	25	10
Lakes or Streams	--	75	75	75	75

4. The absorption system selected for use in a specific soil shall meet the minimum application rates and required absorption area as determined by the native soil and Table 5.7.2B.
5. The absorption system shall not be sized for less than two bedrooms.
6. Alternative sewage systems shall be designed in accordance with the specifications of the technical guidance manual and shall provide effluent quality that is better than effluent from a conventional system.

5.7.3 Seasonal/Weather Restrictions

Sewage systems shall not be installed between the dates of December 1 and March 31st. The health officer may grant written permission on an individual basis during the restricted seasons if weather conditions are suitable and total installation shall be completed within forty-eight hours.

TABLE 5.7.2 B Absorption System Sizing Requirements

Native Soil Texture/ Structure	Permeability		Application Rate gpd/ft. ²		Minimum Absorption Area (Ft. ² /Bedroom)	
	in/hr	min/in	Bed	Trench	Bed	Trench
Coarse sand, Gravel, Gravelly sand	> 20	< 3				
Stratified sand and gravel, Med. sand	20-6.0	3-10	.75	1.0	200	150
Fine sand Loamy sand	6.0-3.0	11-20	.5	.75	300	200
Sandy loam, Loam	3.0-2.0	21-30	.375	.5	400	300
Silty loam, Sandy clay loam	2.0-1.35	31-45	.3	.4	500	375
Clay loam, Silty clay loam						
Silty clay loam						
Silty clay, Clay						

- Soils with percolation rates in excess of 3 minutes/inch are unsuitable unless modified.

SECTION 5.8 GROUNDWATER CONTROL/DIVERSION

The health officer may consider the use of controls to modify surface runoff or groundwater elevation to permanently increase the effective soil depth by lowering the water table.

SECTION 5.9 EXISTING SEWAGE SYSTEMS

5.9.1 Authorization to Use an Existing Sewage System

1. No person shall connect a dwelling to an existing sewage system except where allowed, in writing, by the health officer. Nor shall any person increase sewage flow to an existing sewage system by greater than one bedroom or one hundred fifty gallons per day except where allowed, in writing, by the health officer.
2. When a person requests the new/increased use of an existing sewage system, he shall provide a copy of, or assist in acquiring a copy of, the permit under which the system was installed.
 - A. When the original permit or copy of the permit is available, the new/increased use of the existing sewage system may be granted when the following conditions are met:
 1. A site evaluation of the sewage system reveals no obvious signs of failure.
 2. The proposed new/increased use is less than a two bedroom increase in the projected sewage flows over the previous use. In the event the projected sewage flow increase is greater than one hundred fifty gallons per day or one bedroom, the system shall be modified to meet the sizing requirements of this code.
 - B. Where the original permit or copy of the permit is not available, or the sewage system serves a home prior to any regulation, an evaluation of the existing sewage system will be required. The new/increased use of an existing sewage system may be granted when the following conditions are met:
 1. The site conditions have been determined to meet the requirements of this Code.
 2. A site evaluation of the sewage system reveals no obvious signs of failure.
 3. The proposed new/increased use is less than a two (2) bedroom increase in the projected sewage flow over the previous use. In the event the projected flow increase is greater than one hundred fifty gallons per day or one bedroom, then a replacement system is required.
 4. The septic tank shall be pumped by a licensed septage hauler and reported to the department on forms provided.

5.9.2 Failure of Existing Sewage Systems

1. The owner of a failing sewage system is responsible for its correction. The method of correction shall be approved by the health officer.
2. Failing systems which cannot be repaired, replaced, expanded, or altered shall be abandoned in accordance with the Technical Manual.

5.9.3 Abandonment of Sewage Systems

The health officer shall order the owner to abandon a sewage system when any of the following exist:

1. The source of the sewage effluent has been permanently eliminated.
2. The sewage system creates or has the potential to create a public health hazard.
3. The sewage system has been installed or otherwise repaired without first obtaining a permit.

SECTION 5.10 CONSTRUCTION STANDARDS

5.10.1 Aggregate/Filter Material

1. Aggregate shall be washed stone ranging in size from one-half inch ($\frac{1}{2}$ "") to two and one-half inches ($2\frac{1}{2}$ "") with a total fines content not exceeding five-tenths percent (0.5%) loss by washing. Stone aggregate must rate three or more on Moh's scale of hardness. Sizing and hardness specifications and testing methodology shall be defined in the technical manual.
2. Alternative aggregate may be approved.
3. Documentation shall be provided to the health officer upon request that all aggregate used in sewage systems complies with the above size and fines requirements in this section as determined by a Michigan Certified Aggregate Technician.

5.10.2 Aggregate Installation

1. The aggregate in an absorption system shall be a minimum of twelve inches (12") in depth. There shall be a minimum of six inches (6") of aggregate below the distribution pipe. The aggregate in an absorption bed system shall extend a minimum of two feet (2') beyond the header, footer, and laterals.
2. The aggregate shall be continuous throughout the full width and length of the absorption bed or trench.

3. Aggregate shall not be mounded around the distribution pipe and shall be uniform in depth throughout the absorption bed or trench.

5.10.3 Building Sewer

Building sewers shall be constructed of schedule 40 PVC plastic with watertight joints or other approved materials.

5.10.4 Absorption System Distribution

1. Piping within a gravity distribution network of an absorption system shall meet the following conditions:
 - A. The septic tank effluent line shall connect to the header at a ninety (90°) degree angle between the centermost laterals.
 - B. A double header or wye (Y) shall be installed when seven (7) or more laterals are used.
 - C. The header shall be level to allow even distribution of effluent throughout its length. The header shall connect all lateral distribution pipes within the absorption trench/bed.
 - D. The footer shall connect to all distribution line laterals within the absorption system.
 - E. Distribution line laterals shall be placed four feet (4') on center unless otherwise approved by the health officer. The slope of the distribution lines shall not exceed four inches (4") in one hundred feet (100').
 - F. All piping and distribution products shall be approved.
2. All perforated pipe shall be installed with centerline markings facing up to allow for proper drainage.

5.10.5 Aggregate Cover

Prior to backfilling the absorption system, the aggregate shall be covered with one of the following:

1. Approved filter fabric
2. Other approved materials

5.10.6 Alternative System

Construction standards for alternative sewage systems shall be in accordance with the Technical Guidance Manual.

SECTION 5.11 PROHIBITIONS

1. No person shall discharge sewage to the ground surface or surface waters.
2. Any substance not defined as sewage by this code shall not be discharged to the sewage system without the approval from the health officer. Prohibited discharges include, but are not limited to, the following: water softener brine, roof and footing drainage, and groundwater sump pump discharge.
3. Cesspools are prohibited.
4. The disposal of sewage by facilities utilizing on-site storage, hauling and final disposal at an off-site receiving facility (pump and haul) is prohibited, except as follows:
 - A. During construction of municipal sanitary sewers or approved sewage treatment facilities to serve the proposed development.
 - B. The installation of an approved sewage system has been delayed by weather conditions or seasonal construction limitations.
 - C. The holding tank is serving a temporary construction site.
 - D. For existing development where previous sewage systems have failed and there are no other alternatives for on-site sewage disposal as determined by the health officer.
5. When an exception has been granted, the on-site storage, hauling and disposal methods and facilities shall be designed, constructed, and operated in accordance with the provisions of the "Technical Guidance for Pump-and-Haul Facilities" adopted by the WRC-DEQ.

SECTION 5.12 SEPTIC TANKS

1. Septic tanks shall be watertight and constructed of concrete or other materials approved by the health officer (see Technical Manual).
2. Septic tanks shall have a liquid capacity of at least the average volume of sewage flowing into it during any 24 hour period, but in no case shall the liquid capacity of the first septic tank be less than 1,000 gallons.
3. The minimum capacity for septic tanks for a one, two, or three bedroom dwelling shall be 1,000 gallons, except where in the opinion of the health officer, increased capacities may be

required. Each additional bedroom shall require an additional 250 gallons. Each garbage grinder shall require an additional 250 gallons.

SECTION 5.13 PRIVIES

1. The base of the pit of an Earth Pit Privy shall be a minimum of forty-eight (48") inches above the limiting zone or the seasonal high water table.
2. Vault privies may be approved.

SECTION 5.14 EXPERIMENTAL SYSTEMS

The use of experimental systems may be authorized at the discretion of the health officer. This authorization shall be for the purpose of testing new technologies.

SECTION 5.15 INSPECTIONS

1. Before any portion of the system has been covered and/or placed into operation, the installer shall notify the department. This notification shall occur at least one department working day prior to the completion of the system. The department shall inspect the installation within three working days to determine if it is in compliance with this code. The department shall reserve the right to extend the notification period for weekends and legal holidays.
2. The health officer may waive the sewage system inspection for single and two-family dwellings. The installer shall provide a written certification within ten days after completion of the system, on a form provided by the department certifying that the system was installed in accordance with this code.
3. It shall be unlawful to backfill and/or operate any portion of the sewage system installation until authorization has been granted by the department.
4. The department may deny final approval of any installation which does not comply with any of the conditions stipulated on the permit or otherwise does not meet the requirements of this code. In the event that a final approval for backfilling cannot be granted, the department shall provide notification to the owner/installer as follows:
 - A. The sewage system shall be tagged in a conspicuous location indicating that it does not meet this code and that approval for backfilling shall not be granted.
 - B. The department shall provide written notification to the installer indicating the deficiencies noted at the time of inspection, methods of correction, and a time frame for corrections to be made.

SECTION 5.16 INSTALLER LICENSING

1. All sewage system installers shall be licensed by the department. No person shall install, alter, or repair a sewage system unless they are a licensed sewage system installer or unless they qualify for the exception in Section 5.18.
2. The license requirements shall be in effect within one year of the effective date of this code.

SECTION 5.17 REVOCATION OF LICENSE

An installer's license issued in accordance with this code may be suspended or revoked in accordance with Article 3.0 and 9.0.

SECTION 5.18 PRIVATE PROPERTY OWNERS

Nothing in this code shall preclude a property owner, who is not a licensed sewage system installer, from installing his own sewage system under permit for his permanent residence.

SECTION 5.19 COMPLETION OR CORRECTION OF REQUIRED WORK

The health officer may order the property owner to complete or correct remaining work or eliminate any health hazard or nuisance that may exist after a permit has been revoked or stop-work order issued.

SECTION 5.20 PRIORITY OVER BUILDING AND OCCUPANCY PERMITS

No municipality, township, or other governing body shall issue a building permit or allow construction of any structure on a premise requiring a sewage system until the appropriate construction permit has been issued by the health officer.

SECTION 5.21 SEWAGE DISCHARGE NOTICE

1. When the health officer determines that sewage is discharging into any private or public drain or ditch, he shall order the person owning the premises from which the sewage originated, to connect the sewer line to a public sewer. If a public sewer is not available, the health officer shall order the property owner to install a sewage system or seek other remedies in accordance with this code.
2. The health officer shall give a written notice of correction to a property owner known to be discharging sewage unlawfully.
3. The health officer may plug, or cause to be plugged, any drainpipe outlet that is discharging sewage to ground surface or into surface water, private or public drain or ditch.

SECTION 5.22 INTERFERENCES WITH NOTICES

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No person shall remove, mutilate, or conceal any notice posted by the health officer.

ARTICLE 6.0 WATER SUPPLIES

SECTION 6.1 DEFINITIONS:

- Bedrock** Consolidated and continuous geologic material, such as limestone, dolomite, shale, sandstone, basalt, or granite.
- Bentonite** A plastic, colloidal clay which has extensive ability to absorb fresh water and swell in volume and which is composed predominantly of the mineral Montmorillonite.
- Concrete Grout** A mixture of Portland cement, sand, and water in the proportion of 1 bag of cement (94 pounds), an equal volume (1 cubic foot) of dry and or gravel aggregate, and not more than six gallons of clean water.
- Extensive Change** Includes, but is not limited to, replacing the entire well casing, removing a well casing from the ground, changing aquifers, or increasing well capacity by more than 10 gpm.
- Hydraulic Fracturing** The application of liquids or gasses exceeding 250 pounds per square inch via confinement in a predetermined portion of borehole for the purpose of parting the rock matrix or opening existing rock fractures to increase permeability. The pressure is pump pressure, measured at the ground surface.
- Neat Cement** A mixture of one bag of Portland cement (94 pounds) and not more than six gallons of fresh water. Drilling fluid bentonite that is not more than 5% by weight of cement and additional water that is not more than 0.6 gallons for each 1% of bentonite may be added to neat cement. Other additives and admixtures shall be approved by the health officer before use.
- Pump Installer** A person qualified to engage in the installation, removal, alteration, or repair of water well pumping equipment.
- Rental Property** A tract of land or dwelling offered for lease to the public for human living purposes which may consist of short or long-term use.
- Water Supply System** A system of pipes and structures through which water is obtained including, but not limited to, the source of water such as wells, surface water intakes, and hauled water; pumping and treatment equipment; storage tanks; pipes, and appurtenances, or a combination thereof, used or intended to furnish water for domestic or commercial use.

Well An opening in the surface of the earth for the purpose of obtaining groundwater, monitoring the quality and quantity of groundwater, obtaining geologic information on aquifers, recharging aquifers, purging aquifers, utilizing the geothermal properties of earth formations or removing groundwater for any purpose. Wells, as defined in this Section, include but are not limited to:

1. A water well used for human consumption or domestic purposes.
2. A test well/monitoring well used to obtain information on groundwater quality, quantity, or aquifer characteristics for the purpose of designing or operating a water supply system.
3. A recharge well used to discharge water into an aquifer.
4. A heat exchange well used for the purpose of utilizing the geothermal properties of the earth formations for heating or air conditioning. Includes both supply and return wells.
5. An industrial well used to supply water for nonpotable uses.
6. An irrigation well used to provide water for plants, livestock, or other agricultural processes.

Well Driller A person qualified to engage in well construction, well alteration, or well repair and pump installation, who supervises the construction of water wells and the installation of pumps, and who owns, rents, or leases equipment used in the construction of water wells.

SECTION 6.2 APPLICABILITY

This Article is intended to regulate the installation of water wells and water supply systems. Installation, operation, alteration, and maintenance shall be consistent with, and complementary to the Administrative Rules, as amended, of the Michigan Public Health Code, 1978 PA 368, Part 127, the Michigan Safe Drinking Water Act, 1976 PA 399. This Article does not apply to the installation of wells, water mains, service lines, etc., which are part of a Type I public water supply as defined by the Michigan Safe Drinking Water Act.

SECTION 6.3 PERMITS

6.3.1 Application for Permit

1. An application for a water supply construction permit shall be provided by the department.
2. An application for a water supply construction permit shall be made by the property owner or his authorized representative.

3. The health officer shall not act upon an application unless the application is complete.

6.3.2 Construction Permits

1. No person shall begin construction of a well or water supply or make an extensive change to an existing water supply without first obtaining a water supply construction permit from the department.
2. Any construction permit issued pursuant to the requirements of this Article shall be valid for a term of twenty-four (24) months from the date of issuance unless declared void as provided in this code. After the expiration of the construction permit, a thirty (30) day grace period shall exist for an extension request. A permit may be renewed (extended) one time for a period of twelve (12) months.
3. A permit shall not be transferable from one person to another.
4. The health officer may deny a water supply construction permit when incomplete, inaccurate, or false information has been supplied or when determined that the requirements of this code and/or applicable state statutes have not or cannot be met. The reasons for denial shall be furnished to the applicant in writing.
5. The health officer may allow a change in the proposed well location for a permitted supply without additional application fees. The health officer may require a site plan signed by the property owner(s) or their authorized representative.
6. A permit may be rescinded or declared void by the health officer when one or more of the following conditions exist:
 - A. A change in the plans of the permit holder affecting circumstances relative to the water supply design, location, or use.
 - B. Misrepresentation, omission, or withholding pertinent information upon which the minimum requirements contained within this code are based.
7. The health officer shall issue a water supply construction permit when an application containing all of the requested information has been received and the proposal satisfies all the requirements of this code. A site evaluation may be required prior to issuance of the permit.
8. The permit may impose limitations or require special construction practices which the health officer deems necessary to protect public health or groundwater quality. An on-site inspection conducted by the department during construction or portions thereof, may be required as part of the water supply construction permit.

9. The well driller/contractor shall have a valid permit in possession on site at the time of construction.
10. A separate water supply construction permit for each well on the premises may be required by the health officer.

6.3.3 Construction Permit Not Required

1. A permit is not required for minor repairs to the system such as replacing a telescoped well screen; changing a screen; deepening or plugging back a bedrock well; installing a liner pipe; replacing a pump, pump controls, pump drop pipe or pressure tank, or chemical treatment or disinfection of the well.
2. A permit is not required from the department for the installation of any wells under the jurisdiction of Michigan's *Mineral Well Act* (Part 625, 1994 P.A. 451).
3. If the owner, owner's agent, well driller, or pump installer is required to obtain a permit directly from the Michigan Department of Environmental Quality in accordance with the requirements established under the provisions of the 1976 PA 399, Michigan's Safe Drinking Water Act, they shall not be required to obtain a permit from the local health department. When the health officer issues a permit for the installation or extensive change of a public water supply system under agreement, contract or cooperative arrangement as stated in Act 399, the permit shall be issued in accordance with Section 6.3 of this Article.

SECTION 6.4 AVAILABILITY OF A PUBLIC WATER SUPPLY

1. The existence or availability of a public water supply shall not preclude the issuance of an individual water supply construction permit under this code.
2. When a public water supply is available and the health officer has issued a water supply construction permit, the owner of the municipal water supply shall be notified.

SECTION 6.5 WATER WELL AND PUMP RECORDS

A water well and pump record shall be submitted to the department in accordance with Part 127, of Act 368, Rule 175 and when any of the following conditions apply:

1. A well is deepened after completion.
2. A liner pipe is installed.
3. The capacity of the well is increased by 10 gpm or more.
4. A well screen is replaced.

5. A different aquifer is utilized.
6. A bedrock well is plugged back.
7. A pump is replaced.
8. An underground pressure tank is installed.
9. A pitless adapter is installed.
10. A well is hydraulically fractured.
11. A water well and pump record is requested by the health officer.

SECTION 6.6 PRIORITY OVER BUILDING AND OCCUPANCY PERMITS

Where a municipal water supply is not available, a municipality, township, or other agency shall not issue a building permit or otherwise allow construction to commence for any dwelling unless one of the following conditions exist:

1. A water supply construction permit has first been issued.
2. Provisions for a water supply system have been accepted by the health officer.
3. The health officer does not require a water supply system.

SECTION 6.7 STOP WORK ORDER

The health officer may issue a stop work order when the water supply under construction does not comply with the requirements of this Code and all applicable laws, regulations and ordinances. Work shall not resume until the owner and/or authorized agent has agreed to comply and the health officer rescinds the stop work order.

SECTION 6.8 NOTIFICATION

The health officer may require the well driller to notify the department prior to or during construction of the water supply.

SECTION 6.9 WELL INSPECTION AND APPROVAL

6.9.1 Inspection

1. The department may inspect the water system construction or well drilling process.

2. An inspection of a new or extensively changed water supply system may be required by the department before the system is put into use.

6.9.2 Approval

The final approval of a water supply system shall not be granted until all of the following conditions have been met:

1. The water supply system is found to be in compliance with this ordinance, applicable codes, and permit requirements.
2. A completed "Water Well and Pump Record" has been submitted, reviewed, and approved.
3. The health officer, upon review of the required water sample analysis results, has determined that the water quality meets safe drinking water standards for the parameters tested.

SECTION 6.10 RENTAL PROPERTIES

1. Water supplies serving rental properties may be condemned and ordered corrected by the health officer when any one of the following conditions exists:
 - A. The water quality from the well does not meet safe drinking water standards.
 - B. The health officer determines that continued use of a well represents a health hazard.
 - C. A well is found to be in violation of previous applicable rules which were in effect at the time of construction.
2. A condemnation order shall be provided by the health officer in writing to the owner of the water supply. The order must specify the conditions and methods of correction and establish a compliance date not to exceed 90 days.
3. The owner, upon receiving an order of condemnation, shall notify all tenants that continued use of the water supply represents a potential health hazard, and that precautionary measures should be taken to protect their health.

SECTION 6.11 EMERGENCY CONDITIONS

When a lack of water results in undue hardship and the department is closed, a well driller or property owner may initiate repair work or construction of a new well or water supply without prior notification or permit. The well driller or property owner shall contact the department on the next working day to obtain a permit. The well driller or property owner shall be responsible for complying with all other provisions of this code.

SECTION 6.12 GROUTING REQUIREMENTS - BEDROCK WELLS

Where bedrock is encountered within 25 feet of ground surface, an oversized borehole shall be drilled and the entire length of casing grouted with neat cement or concrete grout.

SECTION 6.13 HYDRAULIC FRACTURING

Hydraulic fracturing to improve well capacity must be in accordance with the hydraulic fracturing request review policy procedure #1996-5, effective October 10, 1996, adopted by the Michigan Department of Environmental Quality, Drinking Water and Radiological Protection Division, which was developed to assist in the application of Rule 137(3) of Part 127, 1978 PA 368, Michigan's Public Health Code.

ARTICLE 7.0 ENFORCEMENT

SECTION 7.1 CRIMINAL ENFORCEMENT

1. A person who violates this code or the rules promulgated under it is guilty of a misdemeanor.
2. By authority of Act 368, P.A. of 1978, Section 2441, as amended by P.A. 1986, No. 76, Section 1, a misdemeanor committed under this code is punishable by imprisonment for not more than 90 days, or a fine of not more than \$200 or both.
3. Each act of violation shall constitute a separate offense.

SECTION 7.2 CIVIL ENFORCEMENT

1. Whenever the health officer determines that this code has been violated, he shall issue a notice of violation to the person responsible. The health officer shall issue this notice no later than 90 days after the discovery of the alleged violation.
2. The notice shall be in writing and include the following information:
 - A. The nature of the violation, including reference to the section alleged to have been violated.
 - B. The civil penalty, if any, established for the violation.
 - C. The remedial action required to comply with this code.
 - D. A reasonable time, not to exceed 90 days, for compliance.
 - E. A statement that failure to correct or abate the violation in the prescribed manner shall result in the issuance of an appearance ticket.
 - F. A statement that the alleged violator has the right to appeal the Notice in accordance with Article 9.0.
 - G. The Notice of Violation shall be served upon the alleged violator by delivering the Notice to him in person; or by sending a copy of the Notice by certified mail or by regular mail with proof of mailing to his last known address; or if the person to be served is unknown, by posting the Notice in a conspicuous place on the premises.

SECTION 7.3 APPEARANCE TICKETS

The health officer is authorized, by authority of Act 368, P.A. of 1978, Section 2463, pursuant to Sections 9a to 9g of Chapter 4 of Act No. 175, P. A. of 1927, as amended, being MCLA 764.9a to 764g, to issue and serve appearance tickets for violations of this code.

No appearance ticket shall be issued for a violation of this code without first having served the alleged violator with a written Notice of Violation.

SECTION 7.4 SCHEDULE OF CIVIL PENALTIES

Monetary civil penalties shall be imposed according to the following schedule:

1. First violation: \$200.00
2. Second violation: \$500.00
3. Third and subsequent violations: \$1000.00.

A civil penalty levied under this Section shall be for each violation or day that the violation continues. The civil penalty may be assessed for a specified violation of this code or order issued which the health officer has the authority and duty to enforce. A civil penalty may be recovered in a civil action brought in the county in which the violation occurred or the defendant resides.

SECTION 7.5 INSPECTIONS, INVESTIGATIONS AND WARRANTS

To enforce this code, the health officer may inspect or investigate any matter, thing, premises, place, person, record, vehicle, incident, or event. The health officer may collect samples for laboratory examination. The standards and procedures for issuance of an inspection or investigation warrant shall be in accordance with MCLA 333.2242-333.2247.

SECTION 7.6 IMMINENT DANGER

When the health officer determines that an imminent danger to the health or lives of individuals exists, he shall immediately inform the individuals affected by the danger and issue an order. This order shall be delivered to a person authorized to avoid, correct, or remove the danger or be posted at or near the danger. The order shall incorporate the findings of the health officer and require immediate action necessary to avoid, correct, or remove the danger. The order may specify action to be taken or prohibit the presence of individuals in locations or under conditions where the danger exists.

SECTION 7.7 INJUNCTIONS

The local health officer, without posting bond, may maintain injunctive action to restrain, prevent, or correct a violation of a law, rule, or order which he has the duty to enforce, or to restrain, prevent, or correct an activity or condition which he believes adversely affects the public health. This remedy may be used notwithstanding the existence and pursuit of any other remedy.

SECTION 7.8 OBSTRUCTION OF HEALTH OFFICER

It shall be unlawful for any person to molest, willfully oppose, or otherwise obstruct the health officer, or any other person charged with enforcement of this code during the performance of his or her duties.

ARTICLE 8.0 VARIANCES

SECTION 8.1 VARIANCES

1. A variance from the specific requirements of this Code may be granted by the health officer when all of the following conditions exist:
 - A. No substantial health hazard or nuisance is likely to occur.
 - B. Strict compliance with the code requirements would result in unnecessary or unreasonable hardship to the petitioner.
 - C. No state, local statute, or other applicable laws would be violated.
 - D. The protection of the health, safety, and general welfare of the public is assured.
2. The variance request shall be in writing. The applicant shall demonstrate that the variance would pose no hazard to the public or the environment.
3. The health officer may specify conditions necessary for the granting of the variance.

ARTICLE 9.0 APPEALS

SECTION 9.1 BOARD OF APPEALS

In order to provide for reasonable and equitable interpretations of the provisions of this Code and Technical Manual, a board of appeals is available to hear appeals. The board shall have not less than three but not more than five members, appointed by the chairperson of the board of health. The appeals board shall be representative of varied interests.

The members of the board of appeals shall be appointed for two-year terms. Vacancies shall be filled by appointment for the balance of the unexpired terms. The membership of the board of appeals shall elect their own chairperson from among its membership. The health department shall provide administrative support to the board of appeals. An alternate member may be appointed to serve as needed to fill in for vacant members.

SECTION 9.2 INFORMAL RESOLUTION OF DISPUTES

1. A person who disagrees with a decision of the health officer, arising out of this Code, is encouraged to meet and resolve the dispute with the director of environmental health or the health officer. At any time a person may cease efforts to reach an informal resolution and may request a formal hearing before the board of appeals.
2. Before the local health department suspends or revokes a license, the local health department shall give notice, personally or by mail, to the licensee. The licensee shall be given an opportunity, at an informal meeting, to show compliance with all lawful requirements for retention of the license. In the absence of compliance, the local health department shall issue a notice of a formal hearing, followed by a hearing, in accordance with the procedures outlined in Section 9.4 below. The health officer may order a summary suspension of the license if the public health, safety, or welfare requires emergency action.

SECTION 9.3 FORMAL HEARINGS

1. A person who disagrees with the decision of the health officer, and who has been unable to resolve the dispute informally, may petition the local health department for a formal administrative hearing before the board of appeals. The petitioner has 20 days after the receipt of an adverse decision to do so. The formal hearing shall be held within 30 days after the receipt of the petition. The petitioner shall be notified in writing by certified mail, or personally served, at least five days before the hearing, of the time, date, and place. After the administrative hearing, the board of appeals, by resolution of the majority of the board, may affirm, dismiss, or modify the decision. The board of appeals shall state

its decision on the record or shall furnish the petitioner with a written decision within 15 days following the hearing.

2. Hearings shall be conducted in an impartial manner. The parties shall be given an opportunity to present oral and written arguments on issues of law and policy and an opportunity to present evidence and argument on issues of fact. The petitioner shall be allowed to present his or her argument and evidence first, followed by the respondent.
3. A party may cross-examine a witness, including the author of a document prepared by, on behalf of, or for use of the local health department and offered in evidence. A party may submit rebuttal evidence.
4. The hearing must be recorded, but need not be transcribed unless requested by a party, who shall pay for the transcription.
5. The board of appeals shall set aside a decision of the health officer only if substantial rights of the petitioner have been prejudiced because the decision is any of the following:
 - A. In violation of the constitution or a statute.
 - B. In excess of the statutory authority or jurisdiction of the local health department.
 - C. Made upon unlawful procedure resulting in material prejudice to a party.
 - D. Not supported by competent material and substantial evidence.
 - E. Arbitrary, capricious or clearly an abuse or unwarranted exercise of discretion.
 - F. Affected by other substantial and material error of law.
6. The decision of the board of appeals in all cases is final and shall be subject to judicial review as provided by law. A person aggrieved by a decision of the board of appeals may petition the circuit court of the county in which the principal office of the health department is located for review. The petition shall be filed not later than 60 days following the receipt of the final decision.