

**Delta and Menominee Counties
Sanitary Code**

Effective January 1, 2009

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PREFACE

A code to promote public health, safety and welfare; to regulate on-site sewage treatment/disposal and on-site water supplies; to prevent and control environmental health hazards; to establish fees; to provide standards and criteria for functions mandated by state law, for licensing and registration of contractors and installers, and to provide penalties for violations of such regulations.

ARTICLE 1.0 AUTHORITY

- SECTION 1.1** These Regulations are adopted under the authority conferred upon the Health Board of the Delta and Menominee County Boards of Commissioners 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 “Delta and Menominee Counties, Sanitary Code.”
- SECTION 1.3** This Code shall be liberally construed for the protection of the health, safety, and welfare of the people of Delta and Menominee Counties. This Code shall supersede inconsistent or conflicting local ordinances.
- SECTION 1.4** Public Health, Delta and Menominee Counties, shall have jurisdiction throughout Delta and Menominee Counties, including cities, villages, and townships, in the administration and the enforcement of this Code or amendments hereafter adopted or otherwise specifically stated.
- SECTION 1.5** Public Health, Delta and Menominee Counties is hereby authorized to develop and adopt a Technical Manual.
- SECTION 1.6** A current Technical Manual shall be provided to the public upon request.
- SECTION 1.7** Previous regulations entitled Delta-Menominee District Health Department, Sanitary Code, On-site Water and Sewage Regulations, are hereby repealed. No violation of any repealed regulation shall be made legal by virtue of adoption of this Code.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 1.8** In the event that any section, subsection, clause, phrase or provision of this Code is deemed to be invalid or unenforceable by any court or administrative agency of competent jurisdiction, then this Code shall be deemed to be restricted in scope or otherwise modified to the extent necessary to render the same valid and enforceable. In the event any section, subsection, clause, phrase or provision of the Code cannot be modified or restricted so as to be valid and enforceable, then the same shall be deemed excised from this Code and this Code shall be construed and enforced as if such section, subsection, clause, phrase, or provision had not originally been contained therein.

SECTION 1.9 This Code shall become effective 45 days after the adoption by the majority vote of both Delta and Menominee Boards of Commissioners.

ARTICLE 2.0 GENERAL DEFINITIONS

SECTION 2.1

Approved Acceptable for intended use as determined by the Health Officer.

Department Public Health, Delta and Menominee Counties

Dwelling Any house, building, structure, tent, shelter, trailer, or vehicle or portion thereof which is occupied or was heretofore occupied in whole or in part as a home, residence, living or sleeping place for one or more humans beings, either permanently or transiently.

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 person officially approved as the Health Officer by the Michigan Department of Community Health as prescribed by the Michigan Public Health Code and as documented in correspondence from the Michigan Department to Community Health approving the appointment of the Health Officer or an 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. A “Nuisance” shall include, but is not limited to, any condition where effluent from any sewage disposal facility is exposed to the surface of the ground or is permitted to drain on or to the surface of the ground into any ditch, storm sewer, lake or stream, or where the odor, appearance, or presence of this material has

detrimental effect on or to the senses and/or health of persons or when it obstructs the comfortable use or sale of adjacent property.

Person An individual, firm, party, society, company, 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 on-site sewage treatment/disposal 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 with the approval of the Board of Health.

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 applicable 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, 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 with the approval of the Board of Health 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 an on-site sewage treatment/disposal system in which septic tank effluent is distributed by arrangement of trenches and beds, that allow the effluent to be absorbed and treated by the surrounding soil.

Absorption Bed An absorption system of suitable thickness of aggregate with a minimum of two lateral lines and wider than three feet.

Absorption Trench An absorption system twelve to thirty six inches (12"-36") in width with one distribution pipe.

Alteration The change in the design or location of an existing on-site sewage treatment/disposal system or any part of a system.

Alternative On-site Sewage Treatment/Disposal System Any on-site sewage treatment system that is not conventional on-site sewage treatment/disposal system and provides enhanced sewage treatment prior to final disposal.

Available Sewer A public sanitary sewer system located in a right of way, easement, highway, street, or public way which crosses, adjoins, or abuts upon the property and passing not more than 200 feet at the nearest point from a structure in which sanitary sewage originates.

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.

Chambers	Commercially manufactured hollow rigid plastic structures that are manufactured for the purpose of replacing the stone aggregate within an absorption system.
Commercial Facility	Any structure or building, or any portion thereof, other than a single or two family dwelling.
Conventional On-site Sewage Treatment/Disposal System	An on-site sewage treatment/disposal system containing a septic tank used in conjunction with absorption trenches or an absorption bed that utilizes gravity distribution.
Distribution Pipe	Approved pipe used in the dispersion of septic tank effluent.
Dosing Chamber	A watertight, covered receptacle designed and constructed to receive septic tank effluent which houses the pumping components in a pressure distribution system.
Drain	A pipe or manmade conduit used to carry surface water or other liquid material via pressure or gravity.
Earth Pit Privy	A structure used for the disposal of non-water carried 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.
Effluent Filter	A physical device placed on the effluent line to enhance solids removal coming from the septic tank.
Evidence of Failure	For the purpose of evaluating an existing OSTDS, evidence of failure includes at least one of the following characteristics: <ol style="list-style-type: none">1. The existing OSTDS cannot accept sewage effluent at the rate of application causing backup of sewage into a structure.2. A discharge of sewage effluent to surface water, ground surface or surface/storm drains is present.

3. The vertical isolation distance between the bottom of the absorption system and the seasonal high water table or bedrock is less than two (2) feet.
4. The sewage absorption system is located in highly permeable soil which has a permeability of less than 3 minutes per inch and has no established biomat.
5. A structural defect or dilapidation of a septic tank exists.

Existing On-site Sewage Treatment/ Disposal System

1. An on-site sewage treatment/disposal system (OSTDS) serving a dwelling which is currently occupied and connected to an OSTDS, or
2. An OSTDS serving a dwelling which is vacant but is in a condition that would allow immediate occupancy and is connected to an OSTDS, or
3. An OSTDS which has a permit on file which indicates a final inspection was conducted by a representative of the Department and the OSTDS was approved, or
4. An OSTDS which has a permit on file at the Department which has a signed affidavit from the installer, or
5. An OSTDS which has a permit on file at the Department and evidence the system was installed in accordance with the permit stipulations is obtained, or
6. An OSTDS which serves a dwelling which was involuntarily demolished within the previous 5 years and is being rebuilt by the same owners.

Experimental System A developed method of on-site sewage treatment that has not been fully proven in field tests.

Failing System An on-site sewage treatment/disposal system is considered to be failing if any one of the following conditions exist:

- (1) The existing system cannot accept sewage effluent at the rate of application causing backup of sewage into a structure.
- (2) Sewage effluent seeps from, or ponds on or around the on-site sewage treatment/disposal system.

(3) The Health Officer has determined based on acceptable science that the on-site sewage treatment/disposal system has contaminated, or has the potential to contaminate the groundwaters or surface waters of the state.

Filter Fabric	A permeable synthetic fabric 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 on-site sewage treatment/disposal system which interconnects the far end of the distribution pipe 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 water 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 an on-site sewage treatment/disposal system which receives effluent from the septic tank and interconnects the front portion of the distribution pipe 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 groundwater table. Such horizons include hardpans, fragipans, clay layers, compacted soils, bedrock, saprolite, clayey soils and seasonal high,

permanent and perched water tables.

New/Increased Use	The connection of a structure to an existing on-site sewage treatment/disposal system or the addition of at least one hundred-fifty gallons per day or one bedroom to a structure connected to an existing on-site sewage treatment/disposal system.
Natural Grade	The ground elevation as it exists in the natural state prior to the placement of any fill material.
Occupant	A person who occupies, lives, habitually uses, or otherwise is in possession of any property or premises.
On-site Sewage Treatment/Disposal System	The method and devices, including but not limited to all septic tanks, pipes, pumps, vents, absorption systems and privies, used to treat and/or dispose of all sewage. Referred to herein as OSTDS.
Operating Permit	An annual permit issued by the Department to assure proper operation and maintenance of an alternative treatment system.
Perched Water Table	The upper surface of a saturated area resulting from a limiting zone.
Permeability	The characteristics of the soil that enable water to move downward through the soil profile.
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.
Pressure Distribution On-site Sewage Treatment/Disposal System	An OSTDS containing a septic tank, dosing chamber used in conjunction with absorption trenches or an absorption bed that utilizes uniform distribution.
Riser	An attachment to the top of a septic tank or dose chamber that allows at grade access to the tank for inspection and maintenance.
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 normally 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 covered receptacle designed and constructed to receive the discharge of sanitary sewage, separate solids from liquids, digest organic matter, store digested solids through a period of detention, and allow the clarified liquids to discharge for final disposal.
Sewage	Human excreta, as well as all waste discharges from toilets, urinals, sinks, laundries, showers, baths, bathtubs, dishwashers, garbage grinders, and septic tank overflow or effluent.
Sewage System Installer	A person qualified to engage in sewage system installation, alteration or repair.
Significant Change in Use	Construction or alteration to an existing structure which adds more than one hundred-fifty gallons per day or one bedroom to the structure from the original use of the OSTDS.
Site Evaluation	An investigation to evaluate the suitability of a tract or parcel of land to support an OSTDS or to evaluate an existing OSTDS.
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.

- Loamy Sand** Consists mainly of sand, but has a small amount of clay, and/or silt to give it some stability. It breaks very easily when handled and will not withstand much handling.
- 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 loamy 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.
- Sandy Clay Loam** Soil material that contains 20 to 35 percent clay, less than 28 percent silt, and 45 percent or more of sand. When moist, a thin ribbon or one-eighth inch (1/8") or less sized wire can be formed between the thumb and finger to a length of one to two inches before breaking under its own weight. Soil feels gritty when excessively wet.
- 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 an extended period of time.
Surface Water	Any natural or man-made body of water that exists on the ground surface for an extended period of time. Water on the ground surface due to frozen soils shall not be considered surface water.
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 non-water carried human waste which is discharged into a watertight receptacle.

SECTION 5.2 APPLICABILITY

1. This Code shall apply to single and two-family OSTDS. The minimum site criteria in this Code shall apply to those OSTDS which serve buildings other than single and two family residences with peak daily flows of less than 1,000 gallons per day. The Department shall use the Michigan Criteria for Subsurface Sewage Disposal for sizing and design criteria for those systems less than 1000 gallons per day serving a structure other than a single or two family residence.
2. OSTDS other than private single or two family residences, which utilize septic tanks and absorption system for peak daily flows between 1,000 and 10,000 gallons per day flow, shall be constructed in accordance with the guidelines set forth by the Michigan Department of

Environmental Quality in the most current revision of the publication entitled “Michigan Criteria for Subsurface Sewage Disposal.”

3. Appeals on all sites which serve buildings other than single and two family residences, including those with peak daily flows of less than 1000 gallons per day evaluated under this Code, shall be made to the Michigan Department of Environmental Quality or current State agency responsible under the Michigan Criteria for Subsurface Sewage Disposal.

SECTION 5.3 PERMITS

5.3.1 Application for Permit

1. An application for a permit to construct, alter, extend or replace an OSTDS shall be submitted to the department by the property owner or his authorized representative.
2. The Health Officer shall not act upon any application unless the application is complete.
3. An application to construct, alter, extend or replace an OSTDS shall be provided by the department.
4. At first contact, the applicant shall be given a Bill of Rights which shall interpret and clarify the permitting process outlined in this code.

5.3.2 Construction Permits

1. No person shall construct, alter, extend, or replace an OSTDS 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 one time for a period of twelve (12) months.
3. A permit shall be issued to the property owner for a particular site. The property owner may authorize a representative to act as an agent by providing the Department with written authorization. The Department may authorize a permit to be transferred from one person to another only when the site conditions have not changed, proposed development is the same and the permit is still valid. The new property owner must agree in writing to all original permit stipulations. Any change of conditions will invalidate the permit.
4. A permit or site approval may be rescinded or declared void by the Health Officer when one or more of the following conditions exist:

- A. The location of the OSTDS 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 or site approval does not satisfy the requirements of this Code.
 - D. The construction standards and prohibitions documented on the permit and/or 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 OSTDS which does not meet minimum criteria set forth in Section 5.7. The reasons for denial shall be furnished to the applicant in writing. Prior to denial of an application, written notification shall be provided to the applicant by the Department giving them opportunity to meet to discuss the basis for a denial and possible alternatives. The applicant shall submit a request in writing for the meeting within fourteen (14) days of the date of the written notification.
 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 variances pursuant to Article 8.0 of this Code.
 9. The Health Officer shall have the authority to issue a construction permit for an alternative OSTDS if the site does not meet the site requirements for a conventional OSTDS.
 10. The Health Officer shall have the authority to issue a replacement construction permit for an existing OSTDS if the site does not meet the minimum criteria set forth in Section 5.7.
 11. The Department may require plans for the design of an OSTDS prior to issuance of a permit if excessive pumping distances or elevation changes are necessary or other conditions warrant. Plans must be prepared by a Registered Sanitarian or Professional Engineer.

5.3.3. Operating Permits

1. The owner of a property served by an alternative treatment technology shall be required to obtain an operating permit from the Department. The Department shall issue/reissue an operating permit when the following requirements are met:
 - A. The property owner has obtained an Operation and Maintenance contract with a third party provider and maintenance visits have been performed which indicate the system is functioning.
 - B. The alternative treatment technology continues to demonstrate compliance of the operation and maintenance specifications and permit requirements.
2. The Department shall provide general operating permit requirements in the Technical Manual.
3. An operating permit shall be valid only when the alternative treatment technology remains in compliance with the permit and standards provided in the Sanitary Code and Technical Manual.
4. The Health Officer may rescind or declare void an operating permit.

SECTION 5.4 PUBLIC SEWERS

All facilities that generate sewage shall be connected to a public sewer, if available, or provide an approved OSTDS.

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 OSTDS. 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 and 5.9 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. Backhoe excavations may be required by the Department and shall be provided by the applicant at the expense of the applicant.
4. A site evaluation report shall be valid for the term of five (5) years from the date of the evaluation unless declared void as provided in this Code. After the expiration of the site evaluation report, a thirty (30) day grace period shall exist for an extension request. A site evaluation report may be extended for a period of five (5) additional years upon verification of site conditions by the Department. The Department may authorize a site evaluation report to be extended or transferred from one person to another only when the site conditions have not changed, proposed development is the same and the requirements of this Code are met.
5. If the site evaluation performed does not clarify whether a soil is suitable or unsuitable, the Department reserves the right to request that a site evaluation be performed by a qualified individual approved by the Department.

5.6.2 Seasonal/Weather Restrictions

A site evaluation shall not occur during times of snow cover or times of frozen soils. The Health Officer may grant written permission on an individual basis during the restricted season if weather or individual site conditions are suitable.

SECTION 5.7 ON-SITE SEWAGE TREATMENT/DISPOSAL SYSTEM SUITABILITY STANDARDS

5.7.1 Minimum Site Requirements

1. Conventional and Pressure Distribution OSTDS

Prior to an OSTDS construction permit being issued the proposed location must meet the following site requirements.

- 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 must be a minimum of twenty-four inches (24") from natural grade in stratified sand and gravel, medium sand; eighteen inches (18") in fine sand, loamy sand; twelve inches (12") in sandy loam, loam, silt loam, sandy clay loam.
- D. All of the minimum effective soil depth requirements must be confirmed by a soil profile

with at least six inches of effective soil depth without features of seasonal high water below the topsoil (A horizon). The Department may consider alternate methods proposed by a soil scientist, licensed professional engineer, registered sanitarian or other professional approved by the Department to confirm the effective soil depth.

- E. The natural slope does not exceed twelve percent (12%). If slopes greater than 12% exist, the department may require the submission of a detailed development plan by any of the following professionals demonstrating competence:
 - 1. A licensed professional engineer.
 - 2. A professional surveyor.
 - 3. A registered sanitarian.
 - 4. Other professional approved by the Department.

The detailed plan must be to scale with a maximum 2 foot contour interval, shall show the proposed design for the initial and replacement OSTDS, and shall indicate the location intended for the dwelling and water supply. The professional shall indicate both existing and proposed contours and shall ensure areas defined on the plan for the OSTDS and the water supply are at locations that are readily accessible for future maintenance or replacement, or both.

- 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. The property owner shall be responsible for documenting the 100 year floodplain elevation as recognized by the Michigan Department of Environmental Quality upon the Department's request.
- H. The site shall not have an available sewer.

2. Alternative OSTDS

Site requirements for alternative OSTDS shall be in accordance with the Department's Technical Manual.

5.7.2 On-site Sewage Treatment/Disposal System Requirements

- 1. As summarized in Table 5.7.2A in this rule, the proposed OSTDS shall satisfy the following isolation requirements:
 - A. The building sewer line 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;

- 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
- fifty feet (50') from the ordinary high water levels of 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;
- fifteen feet (15') from building footing drains, storm drains and/or other subsoil drains;
- ten feet (10') from water lines;
- fifteen feet (15') from steep embankments or drop-offs; and
- fifty feet (50') from the ordinary high water levels of lakes, streams or other surface water impoundments.

D. Earth pit 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;
- 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;
- fifteen feet (15') from building footing drains, storm drains and/or other subsoil drains;
- fifteen feet (15') from steep embankments or drop-offs; and
- fifty (50') from the ordinary high water levels of 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.
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 OSTDS must be located so that it is accessible for cleaning or inspection purposes.

6. Alternative OSTDS shall be designed in accordance with the specifications of the Department's Technical Manual and shall provide effluent quality that is better than effluent from a conventional system.

TABLE 5.7.2 A Isolation Distances

From / To	Building Sewer Line	Septic Tank or Vaulted Privy	Absorption System	Earth Pit Privies
Residential Well	10	50	50	50
Non Community (Type IIb, Type III)	10	75	75	75
Community Well (Type I, Type IIa)	10	200	200	200
Property Lines	--	10	10	10
Foundation Wall	--	5	10	20
Building/Storm/Subsoil Drains	--	5	15	15
Water Lines	--	10	10	10
Embankments	--	10	15	15
Lakes or Streams	--	50	50	50

5.7.3 Seasonal/Weather Restrictions

OSTDS shall not be installed during times of snow cover or times of frozen soils. The Health Officer may grant written permission on an individual basis during the restricted seasons if weather or individual site 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	Absorption Bed	Absorption Trench	Absorption Bed	Absorption Trench
Gravel Gravelly sand	>20	<3				
Coarse sand Stratified sand and gravel Medium sand	20-6.0	3-10	0.75	1.0	200	150
Fine sand Loamy Sand	6.0-3.0	11-20	0.5	0.75	300	200
Sandy loam Loam	3.0-2.0	21-30	0.375	0.5	400	300
Silt loam Sandy clay loam	2.0-1.35	31-45	0.3	0.4	500	375
Clay loam Silty clay loam						
Silty clay Clay						

Soils with percolation rates less than 3 minutes/inch and greater than 45 minutes/inch are unsuitable.

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. These proposals must be in accordance with the Department's Technical Manual.

SECTION 5.9 EXISTING ON-SITE SEWAGE TREATMENT/DISPOSAL SYSTEMS

5.9.1 Authorization to Use an Existing On-Site Sewage Treatment/Disposal System

1. No person shall cause a new/increased use of an existing on-site sewage treatment/disposal system (OSTDS) except when approved in writing.
2. Approval of a new/increased use is not required for the following:
 - A. A permit with a final inspection indicating OSTDS approval is on file and

- Department documentation indicates the water supply meets the required isolation distances and the proposed dwelling was not constructed and a significant change in use does not occur.
- B. A permit with a final inspection indicating OSTDS approval was performed within the past five years and Department documentation indicates the water supply meets the required isolation distances and the proposed dwelling was constructed and a significant change in use does not occur.
 - C. A new/increased use was approved within the past two years and significant change in use is not proposed.
3. When a person requests a new/increased use, he shall provide a copy of, or assist in acquiring a copy of, the permit under which the OSTDS was installed.
- A. When the permit is available and a final inspection has been performed by the department and the new/increased use does not meet the exemptions as defined under section 5.9.1(2), the new/increased use may be approved when a site evaluation of the OSTDS reveals no evidence of failure.
 - B. When the permit is available and an affidavit has been submitted by the installer, a permit is available with no final inspection or affidavit on file or a permit is not available, the new/increased use may be approved when the following conditions are met:
 - i. A site evaluation of the OSTDS reveals no evidence of failure.
 - ii. The septic tank shall be pumped by a licensed septage hauler within the past three years and a written report provided to the department. The report must include the tank's condition, construction material, capacity, and whether tank is equipped with an outlet baffle.
4. If a significant change in use is proposed, or an existing OSTDS, as defined by this code, is not present the minimum requirements of this code must be met.
5. If the new/increased use is not approved, the property owner is responsible to repair or replace the OSTDS.
6. When a site evaluation reveals required isolation distances do not meet current code requirements, the situation will be brought to the Health Officer for a decision.
7. If it is determined the OSTDS was installed after November 28, 1974 without a permit the new/increased use shall not be approved unless the site and OSTDS meet the requirements of this Code.

5.9.2 Failure of Existing On-Site Sewage Treatment/Disposal Systems

1. The owner of a failing OSTDS 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 following:
 - A. Abandonment shall not proceed until the septic tank is pumped and the contents properly disposed of by a licensed septage waste hauler.
 - B. Proper abandonment of a septic tank, if applicable, shall consist of one of the following methods:
 - i. Collapse tank when feasible; otherwise completely fill it with material approved by the Health Officer. Provide compaction during the filling process to eliminate the potential to develop a sinkhole or any other safety hazard.
 - ii. Remove and haul the tank to a licensed Type II landfill.
 - iii. Alternative methods of tank disposal may be approved in writing by the health officer.
 - C. When it is practical to do so, the absorption system should be left in place. When the area is needed for other purposes, the absorption system may be removed. The disposal method to be used shall be one of the following:
 - i. Remove and haul the contaminated material to a licensed Type II landfill.
 - ii. Containment of the contaminated material is required with particular attention paid to over-the-roadway hauling so as to avoid exposing the public to a health hazard.

5.9.3 Abandonment of On-Site Sewage Treatment/Disposal System

The owner is responsible to abandon an OSTDS when any of the following exist:

1. The source of the sewage effluent has been permanently eliminated.
2. The OSTDS creates a public health hazard.
3. The OSTDS has been installed or otherwise repaired without first obtaining a permit and does not meet the requirements of this Code.

SECTION 5.10 CONSTRUCTION STANDARDS

5.10.1 Aggregate/Filter Material

1. Aggregate shall be washed stone ranging in size from three-eighths inch (3/8") to one and one-half inches (1 1/2") and be free from excessive dust, sand or fine material.
2. Alternative aggregate may be approved.
3. Documentation shall be provided to the Health Officer upon request that all aggregate used in OSTDS meets sizing requirements and is free from excessive dust, sand or fine material.

5.10.2 Aggregate Installation

1. There shall be a minimum of six inches (6") of aggregate below the distribution pipe and a minimum of two inches (2") over the 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 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 exiting the septic tank shall be schedule 40.
 - B. The septic tank effluent line shall connect to the header at a ninety degree (90°) angle between the centermost laterals.
 - C. A double header or wye (Y) shall be installed when seven (7) or more laterals are used.
 - D. The header shall be level to allow even distribution of effluent throughout its length. The header shall be solid and shall connect all lateral distribution pipes within the absorption trench/bed.

- E. The footer shall be perforated and shall connect to all distribution pipe laterals within the absorption system.
 - F. Absorption bed distribution pipe laterals shall be placed four feet (4') on center unless otherwise approved by the Health Officer.
 - G. Absorption trench distribution pipe laterals shall be placed a minimum of six feet (6') on center unless otherwise approved by the Health Officer.
 - H. The slope of the distribution pipes shall not exceed four inches (4") in one hundred feet (100').
 - I. All piping and distribution products shall be approved. Perforated plastic pipe and fittings shall comply with Michigan Department of Environmental Quality's "Standards for Certification and Utilization of Perforated Plastic Tubing for Drainfields."
 - J. Chambers may be used in place of stone and aggregate for absorption systems located at or below grade.
2. All perforated pipe shall be installed with centerline markings facing up to allow for proper drainage.

5.10.4 Aggregate Cover

Prior to backfilling the absorption system, the aggregate shall be covered with approved filter fabric.

5.10.5 Final Soil Cover

Final earth cover provided over the subsurface disposal system shall be not less than twelve inches (12") to a maximum of thirty inches (30").

5.10.6 Alternative On-Site Sewage Treatment/Disposal System

Construction standards for alternative OSTDS shall be in accordance with the Department's Technical Manual and shall meet the following requirements:

1. Each alternative OSTDS must have an operation and maintenance contract with an approved maintenance provider. A maintenance contract must be provided for the life of the system.

2. An approved deed advisory must be filed with the County Register of Deeds for each alternative OSTDS. Proof of filing must be provided prior to issuance of a permit to construct an alternative OSTDS.

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 OSTDS without the approval of the Health Officer. Prohibited discharges include, but are not limited to, the following: swimming pool water, hot tub water, water softener brine, roof and footing drainage, and groundwater sump pump discharge.
3. Cesspools and seepage pits 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. When the installation of an approved OSTDS has been delayed by weather conditions or seasonal construction limitations.
 - C. When the holding tank is serving a temporary construction site.
 - D. For existing development where previous OSTDS 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 Department's Technical Manual.

SECTION 5.12 SEPTIC TANKS

1. Septic tanks shall be watertight and constructed of concrete or other materials approved by the Health Officer. The structural design and materials used shall be in accordance with generally accepted good engineering practice providing a sound durable tank which will safely sustain all dead and living loads and liquid and earth pressure involved in each case.

- A. Pre-cast concrete tanks shall have a minimum wall, compartment and bottom thickness of two and one half inches (2½”) and shall be adequately reinforced. The top shall be at least four inches (4”) thick and able to withstand the load for which it is intended.
 - B. A cast-in-place concrete tank shall be approved by the health officer prior to construction and comply with all specifications listed in part A. The applicant shall demonstrate water tightness using approved methods.
 - C. The use of polyethylene septic tanks or tanks manufactured with materials other than concrete shall have written approval from the Health Officer. The manufacturer’s installation procedures must be followed.
2. Risers shall be required to provide access for pumping the tank and to provide access to the effluent filter and dosing chamber mechanical components. Riser lids shall be sealed closed with bolts, screws and/or locks to prevent entry.
 3. All septic tanks shall be connected to an absorption system complying with requirements of this Code.
 4. 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 total liquid capacity be less than 1,000 gallons.
 5. A dual compartment tank shall have a manhole on the top of each compartment and the first compartment shall be a capacity equal to ½ to 2/3 the total capacity.
 6. 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 capacity of 250 gallons. Each garbage grinder shall require an additional capacity of 250 gallons.
 7. The liquid capacity of all prefabricated septic tanks shall be permanently marked on the top of the tank surface.
 8. Manufacturers shall demonstrate, upon request of the health officer, that the septic tanks which they manufacture, are watertight.
 9. The inlet and outlet specifications are as follows:
 - A. Have a minimum diameter of four inches (4”).
 - B. Septic tanks shall have a cast-in rubber boot on the inlet and outlet.

- C. Be placed on opposite ends of the tank, unless otherwise specified by the health officer.
 - D. An effluent filter shall be required at the septic tank outlet baffle or on the effluent line.
 - i. The effluent filter shall be commercially manufactured, installed and used in accordance with the manufacturer's recommendations.
 - ii. The effluent filter shall be constructed of durable and corrosion-resistant materials.
 - iii. The effluent filter shall be designed to prevent the escape of suspended solids during normal operation or maintenance.
 - iv. The effluent filter shall retain all particles greater than one-sixteenth inch (1/16") in size.
 - v. The effluent filter shall be designed to accommodate the effluent discharge for the system it serves.
 - vi. If an external effluent filter is used, the outlet shall be equipped with a baffle extending below the tank's liquid level a distance equal to but not less than thirty-five percent (35%) or greater than fifty percent (50%) of the liquid level.
 - E. The outlet baffle shall extend into the middle one-third of the liquid level of the septic tank. The invert of the outlet shall be located not less than ten (10) inches below the top of the tank and not less than two (2) inches below the invert of the inlet.
10. The minimum liquid depth of any compartment shall be thirty-four inches (34"). Liquid depths greater than seventy-eight inches (78") shall not be considered in determining the working liquid capacity.
11. The tank shall be provided with manholes of sufficient size to facilitate the inspection and cleaning of the tank. Access ports shall be provided for maintenance. They shall be a minimum of twelve inches by twelve inches (12" x 12"), twelve inches (12") in diameter, or a maximum of twenty-four inches by twenty-four inches (24" x 24") or twenty-four inches (24") in diameter. Each access port cover should be provided with corrosion resistant strap or handle to facilitate removal.
12. Inspection ports with a minimum opening of six inches (6") shall be located above all baffles. Access ports may be substituted for inspection ports.
13. Tank ventilation shall be provided by means of a minimum of eight inches (8") of air space between the underside of the top of the tank and the top of the "tee" fitting.
14. A multiple compartment tank shall have a four inch (4") minimum diameter "tee" placed on each common wall, utilizing the same specifications as established for the outlet baffle

in Section 5.12(9)(E).

15. A tank shall be located to assure accessibility for inspection and cleaning. No other obstruction or landscaping shall impede the tank's accessibility.
16. When a high water table is present, septic tanks shall be weighted to prevent floating or shifting.

SECTION 5.13 PRIVIES

5.13.1 Minimum Site Requirements

1. Earth Pit Privies

Prior to an earth pit privy construction permit being issued the proposed location must meet the following site requirements.

- 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 must be a minimum of sixty inches (60") from natural grade.
- D. The isolation distances shall meet the requirements set forth in Section 5.7.2 of this Code.
- E. 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. The property owner shall be responsible for documenting the 100 year floodplain elevation as recognized by the Michigan Department of Environmental Quality upon the Department's request.
- F. The site shall not have an available sewer.

2. Vaulted Privies

Prior to a vaulted privy construction permit being issued the proposed location must meet the following site requirements.

- A. The isolation distances shall meet the requirements set forth in Section 5.7.2 of this Code.
- B. 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. The property owner shall be responsible for documenting the 100 year floodplain elevation as recognized by the Michigan Department of Environmental Quality upon the Department's request. If the site

is located within the 100 year floodplain the top of the vault must be above the 100 year floodplain elevation.

- C. The site shall not have an available sewer.

5.13.2 Construction Standards

- A. The base of the pit of an earth pit privy shall be a minimum of forty-eight inches (48”) above the limiting zone and be a minimum of twelve inches (12”) below grade.
- B. Vaulted privies shall not contain an outlet.
- C. Earth pit and vaulted privies shall not have an inlet other than the opening in the top of the tank where human excreta is deposited.
- D. In no instance shall a privy have water carried sewage plumbed to the pit or vault.

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. The OSTDS installer shall notify the department prior to any portion of the system being covered and/or placed into service. 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 OSTDS inspection for single and two-family dwellings. The installer shall provide a written certification and an as-built drawing of the OSTDS 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 and any permit stipulations.
3. It shall be unlawful to backfill the header, footer and entire length of the last line of drain tile installed, and/or operate any portion of the OSTDS installation until authorization has been granted by the department. Failure to notify the department may result in an order to uncover the top of the septic tank and key areas of the absorption field to verify installation is in accordance with permit requirements.

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 OSTDS 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 and property owner 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 OSTDS installers shall be licensed by the department. No person shall install, alter, or repair an OSTDS unless they are a licensed sewage system installer or unless they qualify for the exception in Section 5.17.
2. The license requirements shall be in effect within one year of the effective date of this Code.
3. The Department shall facilitate licensing of installers.

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 OSTDS under permit.

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, county, or other governing body shall issue a building permit or otherwise allow commencement of construction of any habitable building on any land where public sewers are not available until a permit has first been obtained from the Health Officer for an OSTDS and proof of a permit has been received. No municipality, township, county or other governing body shall issue a permit or allow commencement of construction of, or conversion to, additional bedrooms and/or additional sewage flows located on any land where public sewers are not available until a permit has first been obtained for construction of an OSTDS or acceptance of continued use of existing OSTDS has been obtained from the Health Officer.

SECTION 5.21 SEWAGE DISCHARGE NOTICE

1. When the Health Officer determines that sewage is discharging to the ground surface or 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 an OSTDS 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

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 one 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.
Predrilling Site Review	Initial phase of the well permitting process that assesses the proposed well drilling site for compliance with the requirements of Part 127 of Act 368, P. A. 1978, as amended, and this Code. A predrilling site review consists of an office component and field component.
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	A system of pipes and structures through which water is obtained including, but

Supply System 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 and the vertical boreholes for closed loop systems.
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 and the Michigan Safe Drinking Water Act, 1976 PA 399 and applicable regulations, including R 325.1601 *et seq.* 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, such as replacing the entire casing, removing a casing from the ground, or changing aquifers, 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 be issued to the property owner. The property owner may authorize a representative to act as an agent by providing the Department with written authorization. The Department may authorize a permit to be transferred from one person to another only when the site conditions have not changed, proposed development is the same and the permit is still valid. The new property owner must agree in writing to all original permit stipulations. Any change of conditions will invalidate the permit.
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 been 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 predrilling site review 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 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.
11. Pressurized water shall not be plumbed to any dwelling without an approved OSTDS.

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 mineral wells under the jurisdiction of the supervisor of mineral wells pursuant to Part 625 of 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 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 unless prohibited by other regulations.
2. When a public water supply is available the Department will contact the municipal water supplier prior to issuing a permit.

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 well is hydraulically fractured.
8. 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. An on-site inspection has been conducted and the water supply system is found to be in compliance with this regulation, applicable codes, and permit requirements.
2. A completed “Water Well and Pump Record” has been submitted, reviewed, and approved.
2. 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, Water Bureau, which was developed to assist in the application of Rule 137(3) of Part 127, 1978 PA 368.

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

1. 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.
2. No appearance ticket shall be issued for a violation of this Code without the Health Officer 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 their 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 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.
3. Before the Department suspends or revokes a license, the 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 Department shall issue a notice of a formal hearing, followed by a hearing, in accordance with the procedures outlined in Section 9.3 below. The Health Officer may order a summary suspension of the license if the public health, safety, or welfare requires emergency action.
4. Appeals on all sites which serve buildings other than single and two family residences, including those with peak daily flows of less than 1000 gallons per day evaluated under this Code, shall be made to the Michigan Department of Environmental Quality or current State agency responsible under the Michigan Criteria for Subsurface Sewage Disposal.

SECTION 9.2 BOARD OF APPEALS

1. 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 four but not more than five members, appointed by a majority vote of the Board of Health. The appeals board shall consist of at least two members from Delta County and two members from Menominee County who are not presently members of the County Board of Commissioners or Board of Health. The appeals board shall be representative of varied interests with subject matter expertise.
2. The members of the board of appeals shall be appointed for two-year terms. Members of the Board of Appeals shall be reimbursed per diem and mileage to be set by the Board of Health. 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 by majority vote of the Board of Health to serve as needed to fill in for vacant members.

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 Department for a formal administrative hearing before the board of appeals. The petitioner has up to 60 days after the receipt of an adverse decision to do so. The formal hearing shall be held within 60 days after 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 and any further investigation, 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 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 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 may affirm, reverse, wholly or in part, a decision of the Health Officer. In deciding an appeal, the Board of Appeals shall determine (1) whether the Health Officer properly interpreted the code and (2) whether the decision of the Health Officer was factually complete and correct. The Board of Appeals may include any conditions in its decision that the Health Officer could have made. Decisions shall be made by a majority of a quorum of the Board of Appeals.
6. The decision of the board of appeals in all cases is final within the department's jurisdiction 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.