NOTICE OF SEMI-MONTHLY COUNTY BOARD MEETING

And AUDIT/FINANCE MEETING

PLEASE TAKE NOTICE that the Schoolcraft County Board of Commissioners will meet on **Thursday, May 28, 2026,** in the District Courtroom of the Schoolcraft County Building, Manistique, Michigan, commencing at **5:30 P.M.** The following is the proposed Agenda:

1. Call to Order
2. Roll Call
3. Pledge of Allegiance
4. Approval of Minutes: May 14, 2026, Board and Audit-Finance Meeting

5. Approval of agenda
6. Public Hearings:
7. Brief Public Comment:
8. Unfinished business:
9. New Business:
    - New Chairman and Vice Chairman Vote
    - Indian Lake/McDonald Lake/Gulliver Lake Authorities Update
    - LMAS Elizabeth Suggitt – Proposed Environmental Code
    - Resolution – Change Landbank ByLaws and Intergovernmental Agreement w/State of Michigan

10. Committee and department reports
11. Announcements and notices
12. Public Comment
13. Commissioner's Comments
14. Communications
15. Audit Claims and Vouchers
16. Adjournment

And, to take up and consider any other matter which may lawfully come before the Board at this time.

Daniel P. Hoholik,

Daniel P. Hoholik, Interim Chairman & Chairman Audit-Finance
Schoolcraft County Board of Commissioners

Zoom viewing has been ended until further notice. Available only by request and/or invitation by contacting clerk@schoolcraftcounty.us in advance of scheduled meeting. Request must be made 24 hours prior to scheduled meeting.

SCHOOLCRAFT COUNTY BOARD OF COMMISSIONERS
BOARD MEETING and AUDIT/FINANCE MEETING

The Schoolcraft County Board of Commissioner's Board Meeting / Audit Finance Meeting met on Thursday, May 14, 2026, in the District Courtroom of the Schoolcraft County Building, City of Manistique, Michigan. Vice-Chairman Daniel P. Hoholik called the meeting to order at 5:30 p.m. The roll was called with the following members present and/or absent:

Present: Commissioner Bruce Birr
Commissioner Troy Bassett
Commissioner Daniel P. Hoholik
Schoolcraft County Clerk Beth A. Edwards

Absent: Commissioner Paul Walker and Commissioner Craig Reiter

Vice-Chairman Daniel P. Hoholik led the Schoolcraft County Board of Commissioners and the members of the audience in the Pledge of Allegiance to the Flag of the United States of America.

It was moved by Commissioner Troy Bassett and was seconded by Commissioner Bruce Birr to approve the minutes of April 23, 2026, Board and Audit Meeting of the Schoolcraft County Board of Commissioners. The motion carried by unanimous aye vote of the Board members present. [Copies of minutes are available at the Office of the Schoolcraft County Clerk.]

Vice-Chairman Daniel P. Hoholik asked if there were any additions, deletions, or corrections to the printed agenda. Commissioner Daniel P. Hoholik asked to add Resignation and Posting, Appointment of Interim Chair, and Mi Works Intern Agreement.

It was moved by Commissioner Troy Bassett and was seconded by Commissioner Bruce Birr to approve the amended agenda. The motion carried by a unanimous aye vote of the Board members present.

Public Hearings: None

Brief Public Comment: Peter Hood Recycling Plan and advisory committee.
Jan Hooker addressed Opioid Taskforce.
Dixie Anderson addressed Recycling, Opioid Taskforce and working with other communities.
Manion Enstrom addressed McDonald Lake water level.

Unfinished Business: None

New Business:

Tom Jury from Maner Costerisan appeared via Zoom to give a review of Schoolcraft County FY 24/25 Annual Audit Report.

Brief updates were given by Vice-Chairman Daniel P. Hoholik on Inian Lake Authority, Gulliver Lake Authority, and McDonald Lake Authority.

Zoning Administrator Short-Term Rental Length -Ordinance and Zoning Ordinance Proposed Change Accessory Buildings were tabled to a future meeting.

It was moved by Commissioner Bruce Birr and was seconded by Commissioner Troy Bassett to approve Resolution 26-13 Resolution Affirming Local Health Department Authority to Approve Non-Residential Onsite Wastewater Systems Discharging Less Than 1,000 Gallons per day Pursuant to Lacal Sanitary Codes and Under State Law. The motion carried by a unanimous aye vote of the Board members present.

Commissioner Troy Bassett gave a recap of the Personnel Committee Meeting discussion including Court Restructure, Box Hanger Leases, Assistance Building and Grounds Manager, Sheriff's Department Temporary Full-Time Employee, Equalization Department, and Committee Assignments.

It was moved by Commissioner Troy Bassett and was seconded by Commissioner Bruce Birr to approve the updates needed to make the Schoolcraft County ADA Compliant, expense not to exceed $500. The motion carried by a unanimous aye vote of the Board members present.

It was moved by Commissioner Troy Bassett and seconded by Commissioner Bruce Birr to approve the AWOS Contract for the Schoolcraft County Airport and authorize signature. The motion carried by a unanimous aye vote of the Board members present.

It was moved by Commissioner Bruce Birr and seconded by Commissioner Troy Bassett to approve the Prosecutor Support Grant for FY 2025 in the amount of $28,855 and FY 2026 in the amount of $30,106. The motion carried by a unanimous aye vote of the Board members present.

It was moved by Commissioner Troy Bassett and was seconded by Commissioner Bruce Birr to approve bonding for the debt and maintenance of the McDonald Lake Authority. The motion carried by a unanimous aye vote of the Board members present.

It was moved by Commissioner Troy Bassett and was seconded by Commissioner Bruce Birr to accept the resignation of District 4 Commissioner Paul Walker effective immediately. The motion carried by a unanimous aye vote of the Board members present.

It was moved by Commissioner Bruce Birr and was seconded by Commissioner Troy Bassett to post an ad to fill the vacancy of the district 4 Board of Commissioner seat. The motion carried by a unanimous aye vote of the Board members present.

It was moved by Commissioner Troy Bassett and was seconded by Commissioner Troy Bassett to appoint Daniel P. Hoholik Interim Board Chairman. The motion carried by a unanimous aye vote of the Board members present.

It was moved by Commissioner Bruce Birr and was seconded by Commissioner Troy Bassett to approve the MI Works Work Experience Site Agreement for a worker in the Prosecutor's office up to 205 hours this summer and all expenses paid by the MI Works office. The motion carried by a unanimous aye vote of the Board members present.

Reports, the following matters were heard:

Commissioner Daniel P. Hoholik: attended Building/Grounds & Airport and Audit/Finance Committee meetings.

Commissioner Bruce Birr: attended Manistique City Council (2), Personnel Committee, and Conservation District meetings.

Commissioner Troy Bassett: attended Manistique City Rec Board, Personnel Committee, and Road Commission meetings.

Sheriff Charles Willour advised one corrections officer is currently at the MCOLES Academy which is being paid for with grant dollars.

Timothy Noble, Schoolcraft County Prosecutor, advised that there is one sentenced 19 to 20-year-old in the past that has to be resentenced.

Rob Mach, SMH CEO, advised that Schoolcraft Memorial Hospital got another 5-star rating.

Announcements and Notices: None

Public Comment: Marion Enstrom addressed the flooding on McDonald Lake.
Peter Hood recognized Paul Walker for his activity in the Community addressed the Recycling Advisory Committee with no haulers.
Susan King offered help with outreach for the Recycling Advisory Committee.
Dixie Anderson addressed the Recycling Advisory Committee.
Daniel P. Hoholik addressed the Recycling Advisory Committee.
John Osterout addressed the amended ordinance for Accessory Buildings.

Commissioner's Comment: Troy Bassett addressed diversity on the Recycle Advisory Committee.

Communications: None.

It was moved by Commissioner Troy Bassett and was seconded by Commissioner Bruce Birr to approve the claims and vouchers numbered **5493 through 5708**, inclusive. There was discussion. The motion carried by unanimous aye vote of the Board members present.

It was moved by Commissioner Troy Bassett and was seconded by Commissioner Bruce Birr to adjourn. The motion carried by a unanimous aye vote of the Board members present.

Interim Chairman Daniel P. Hoholik adjourned the Board and Audit Finance Meeting at 6:35 p.m.

_____
Beth A. Edwards, County Clerk

Approved: _____

clerk schoolcraftcounty.us

From: Natasha King <nking@lmasdhd.org>
Sent: Monday, April 20, 2026 11:42 AM
To: clerk schoolcraftcounty.us
Cc: Elizabeth Suggitt
Subject: Proposed Revised Upper Peninsula Environmental Health Code
Attachments: Technical Guidance Manual Draft Orig 2022 (CGA rev 3.25.2026)(202533688.1) (1).docx; 22 March 16 - Alt Section 3 (CGA 3 27 2026)(202542316.1) (1).docx; Upper Peninsula Environmental Health Code Orig 2022 (CGA rev 3.25.2026)(202533683.1) (1).docx

Beth,

Could Elizabeth Suggitt please be added to the **May 28th** agenda to present the proposed changes to the Upper Peninsula Environmental Health Code?

I have attached three documents with the changes shown in redline for review. The commissioners will need to vote on whether to approve these changes.

Following the meeting, could you please send me a copy of the minutes indicating whether the proposed changes were approved or not approved?

Thanks,
Natasha King
Administrative Assistant Coordinator
LMAS District Health Department
14150 Hamilton Lake Road
Newberry, MI 49868
nking@lmasdhd.org

Office: (906) 293-5107 ext.365
Fax: (906) 293-5453

If you would like to fill out a customer satisfaction survey, please visit https://www.lmasdhd.org/customersatisfaction

Section 3:
Minimum Design Parameters - Gravity and Elevated Mound

Description

A soil absorption system consisting of a septic tank, dosing/pump tank (if applicable), and an elevated absorption system (mound).

Conditions for Application Submittal

1. A Michigan Registered Sanitarian, Professional Engineer specializing in environmental or sanitary wastewater treatment, or licensed sewage system installer registered with LMAS to design the particular alternative treatment system proposed shall provide a detailed design plan for each specific application.
2. Provide a scaled site plan detailing all aspects of the proposed work along with the LMAS District Health Department application form.
    a. Plans shall be at least 8 ½" X 11" in size and shall be legible, clear, and permanent copies.
    b. Plans shall include the name of the person who prepared the plan and shall be stamped if prepared by a Michigan Registered Sanitarian or Professional Engineer.
3. A *Submittal Checklist for Alternative Treatment* is available per request for guidance.

Commented [ES1]: These requirements have been removed. LMAS Sanitarian staff are issuing these permits putting installation requirements within the permits.

Sewage Treatment Components

1. Site Preparation - Ultimate success or failure of a system also relies on clear communication along with the understanding of basic site preparation and construction principles. Critical issues include:
    a. Proper procedures must be followed to protect the location area including required greenbelt area during and after construction. After establishing a suitable location for the initial and replacement area including greenbelt area, it should be suitably fenced or otherwise unmistakably identified to prevent further disturbance until actual construction can occur. Site planning resulting in a location for the system that is isolated from other anticipated home construction activities is encouraged.
    b. Soil smearing and compaction, which can reduce infiltration capacity, will occur if soils are worked on when wet. Construction activities should be scheduled only when soils are sufficiently dry. Acceptable soil moisture content of the soils to a depth of one foot should be evaluated by rolling a sample of soil between the hands. If the soil can be rolled into a ¼ inch or smaller "wire" it is considered too wet and should be allowed to dry before preparing. If site is questionable then certification from Design Consultant shall be required.
    c. Excessive vegetation should be removed from the basal area. Remove all tree stumps and the central root system below grade by using a backhoe or excavator with a mechanical "thumb" or similar extrication equipment, lifting or leveraging stump in a manner that minimizes soil disturbance. It is not necessary for the soil of the system site to be smooth when the site is prepared. Avoid soil disturbance, relocation, or compaction. Avoid

mechanical leveling or tampering of dislodged soil. Fill all voids created by stump removal with system sand.

d. The entire basal area of the mound should be suitably prepared by roughening in a ridge and furrow fashion with ridges following the contours. Methods that can be considered for roughening include chisel teeth fastened to the backhoe bucket, plowing with a multiple bottom agricultural chisel plow, or moldboard plow. Rototilling is not acceptable. Sand fill material should be applied immediately after roughening and prior to any subsequent precipitation.
e. Cleanliness of the sand fill should be checked prior to construction. Placement of fill material is to be accomplished from the end and upslope sides utilizing a tracked vehicle or equipment with adequate reach to minimize soil compaction. A minimum of six inches of fill material should be maintained below the tracks to minimize compaction. Wheeled vehicles should be prevented from travel over the mound basal area and downslope of the greenbelt area. Total depth of fill shall be established on a benchmark provided by the design consultant on the design plan.

2. Septic Tank
    a. Tank requirements are established in Section 3-14.5 of the LMAS District Health Department Upper Peninsula Environmental Health Code.
    b. 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 Department, increased capacities may be required. Each additional bedroom shall require an additional 250 gallons. Each garbage grinder shall require an additional 250 gallons.
    c. Septic tanks shall be equipped with an approved effluent filter installed in the outlet baffle, or other approved location.
    d. Septic tanks shall be equipped with a watertight access riser installed to grade to facilitate maintenance. Risers shall be installed with dual lids, leaving the concrete lid in place, or shall be equipped with other Department approved safety device to preclude accidental tank entry.
    e. All septic tanks shall be installed to be level and to flow in accordance with the manufacturer's design intent.
    f. All systems receiving sewage from a grinder pump shall be equipped with a minimum of two 1,000 gallon septic tanks. The first septic tank shall be installed in series to allow the settling of sewage discharged by the pump and shall be equipped with an outlet baffle.
    g. Septic tanks and pump tanks shall be tested and certified to be watertight. Testing and certification must be performed on-site and in-place, by the tank manufacturer, design consultant, or licensed septic installer. Hydrostatic or vacuum test may be utilized to determine if the septic tank and/or pump tank are water tight. Certification shall be submitted prior to or during the final inspection performed by the Department.
3. Pump - See Section 2 of this manual for pump tank and pump design parameters.
4. Mound Components
    a. Fill Requirements

i. The texture of the fill material shall be clean sand with no excessive fines with a permeability rate of 3-10 min./in. A qualitative field check to assess the cleanliness of the sand delivered to the construction site should be conducted.
ii. Fill shall be free of debris, stones, frozen clods, or ice.
iii. The material shall be compacted to avoid settling (or allowed to settle through one fall-winter-spring time period). Settling through the fall-winter-spring is the recommended method of compaction. Compaction of fill can be accomplished by utilizing only tracked equipment.
iv. The depth of fill must be such that the bottom of the absorption area is isolated ≥4 feet above the established high groundwater elevation or limiting layer. Total depth of fill shall be established based on a benchmark provided by the design consultant on the design plan.

b. ~~b.~~ Sizing:

Formatted: Font: (Default) Tahoma, 11 pt

Formatted: List Paragraph, Numbered + Level: 2 + Numbering Style: a, b, c, … + Start at: 1 + Alignment: Left + Aligned at: 0.75" + Indent at: 1"

TABLE 3-14.2 B - Absorption System Sizing - Minimum Sizing 400 ft² bed 300 ft² trench

Texture Class of Native Soil	Estimated Permeability Rate		Sewage Application Rate (gpd/ft²)		Minimum Absorption Area Required (ft²/bedroom)	
	inches/hour	minutes/inch	bed	trench	bed	trench
Coarse Sand, Gravel, Gravelly Sand	>20	<3	Not Suitable – Infiltrates too quickly to provide adequate treatment to protect groundwater/surface water.			
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
Silty Loam, Sandy Clay Loam	2.0-1.35	31-45	0.3	0.4	500	375
Clay Loam, Silty Clay Loam	Not Suitable – Infiltrates too slowly to accept sewage at rates applied.					
Silty Clay						

Formatted: Font: (Default) Tahoma, 11 pt

Formatted: List Paragraph, Indent: Left: 1", First line: 0"

~~Mound sizing will be based on the permeability rate of the native soil, unless design plan indicates that 4 ft of fill will be installed. If 4 ft of fill is installed then sizing will be based on the permeability rate of 3-10 min./in.~~

~~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, Bedrock at Surface	>20	<3	.8	NA	**	NA
Stratified sand and gravel, Med. sand	20-6.0	3-10	.75	NA	200	NA
Fine sand Loamy sand	6.0-3.0	11-20	.5	NA	300	NA
Sandy loam, Loam	3.0-2.0	21-30	.375	NA	400	NA
Silty loam, Sandy clay loam	2.0-1.35	31-45	.3	NA	500	NA
Clay loam, Silty clay loam	<1.35	>45	.3	NA	500	NA
Silty clay, Clay	<1.35	>45	.2	NA	750	NA

** Pressure distribution is highly recommended. Refer to Section 4 of this manual.

c. Berm

A berm shall be constructed around the perimeter of the absorption system. The berm shall be constructed of adequate size and texture to ensure optimum absorption system function. Soil texture shall consist of clean medium sand with no excessive fines. The size of the berm will be dependent on the native soil.

i. Extend a minimum of 4 ft beyond all sides of the absorption system on sites where the native soil has a permeability greater than or equal to 3 inches per hour.

ii. Extend a minimum of 10 ft beyond all sides of the absorption system where the native soil has a permeability less than 3 inches per hour.

d. Taper

The taper is the slope surrounding the berm. The taper shall be constructed of clean sand with no excessive fines and shall be evenly graded from the top of the berm to the natural soil surface with a slope of 3:1 (three horizontal to one vertical). For mounds constructed within a maintained lawn area, it is highly recommended that a slope of 4:1 or 5:1 be installed. Final grading of the mound area should divert surface water drainage away from the mound.

e. Observation port

At least one observation port to gauge ponding depth in the absorption area is necessary. This shall be placed within the aggregate and shall not be connected to a lateral.

f. Cover
   i. Geotextile fabric shall be used between the top of the aggregate and soil cover.
   ii. The entire mound shall be covered with sufficient suitable soil with a permeability $\geq$ 3.0 inches/hour to maintain vegetative growth and seeded/mulched upon completion. If the system is constructed after September 15th, a vegetative cover must be provided. Cover may consist of sod, mulch, straw, or other suitable material to prevent freezing.

Operation and Maintenance

1. The owner at his/her sole expense shall comply with a specific maintenance, monitoring, and inspection program specified by the LMAS District Health Department to ensure the optimum operation of the treatment system.
2. Septic Tank and Effluent Filter
   a. Inspect the septic tank at least once every two years under normal usage. The tank shall be emptied of sludge and floating material by a licensed septage hauler at a recommended frequency of 3-5 years
   b. After pumping, inspect the integrity of the septic tank to ensure that no groundwater is entering it. Also check the inlet and outlet and repair if needed.
   c. Effluent filters require on-going maintenance due to their tendency to clog and cut off oxygen to the system. The effluent filter shall be cleaned at every septic tank pump out and inspected every 6-12 months. Follow filter manufacturer's maintenance instructions.
3. Pump Tank and Pump
   a. Inspect at least once a year to assure adequate operation of pump, floats, control panel, alarm, etc.
4. Infiltration Area
   a. It is important that the system site remain free of shrubs, trees, and other woody vegetation. Roots can infiltrate and cause damage or clogging of system components.
   b. Make sure the infiltration area is free of motorized vehicle traffic, is seeded, and that all water is diverted to avoid overloading.
   c. If the system has a vent, make sure it is not obstructed.
   d. Check and immediately report any odor or sign of water breakouts around the system.

Variance

1. Variance requests shall be submitted on the LMAS Variance Request Form. Submittal is necessary prior to issuance of permit.
2. Variances will be reviewed under Article XV of the LMAS District Health Department Upper Peninsula Environmental Health Code.
3. Variances thus granted apply only to the specific project under consideration and do not serve as precedents in other cases.

Permitting

1. Upon completion of the permit application/design review, LMAS shall accept the design, reject the design, require additional information for clarification, or require verification.
2. If the permit application/design is not acceptable, LMAS shall notify the applicant in writing and shall state the deficiencies or actions, or both, necessary to bring the design into compliance with the requirements set forth in this document.
3. When a completed permit application/design is deemed acceptable, LMAS shall issue a construction permit.

Limitation of Responsibility

1. Plan approval by LMAS may not be construed as an assumption of any responsibility for the design of the Alternative Treatment System and associated components.
2. LMAS does not hold itself liable for any defects in design and/or construction, or for any damages that may result from a specific installation.

Final Inspections and Approval to Use System

1. A final inspection shall be conducted by LMAS in accordance with Section 3-11.3 of the LMAS District Health Department Upper Peninsula Environmental Health Code. During this inspection, LMAS will approve or deny covering the system. Approval to use the system will not be granted until all required information has been received:
    a. Request for a final inspection of the alternative system by the contractor, installer, or property owner shall serve as notice to the Department that the system is installed according to the permit and associated design plans. Final inspection conducted by the Department shall identify any items of noncompliance.
    b. No portion of the system shall be covered and the system shall not be placed into service prior to final inspection and approval. Property owner is responsible for maintenance and monitoring of the system following approval from the Department, unless a contract agreement is in place between the property owner and a qualified maintenance provider.
    c. The Design Consultant shall provide the LMAS District Health Department with written certification that the installed system meets their design and the intent of the minimum requirements contained within this document.
    d. Any other information requested by LMAS such as watertight tank test results and pump installation certification.
2. After all required information has been submitted, LMAS shall issue a final drawing/operating approval to the applicant.

Revocation of Permit

1. The Department may revoke any plan approval under this Section when one or more of the following conditions exists:
    a. The location of the system(s) specified in the design is altered.
    b. There is an increase in the scope of the project prior to, during, or following construction.
    c. LMAS acquires new information indicating that any agency rules or regulations are violated before, during, or after construction.

d. LMAS has reasonable cause to believe that an intentional misrepresentation has occurred.

Disclaimer

1. The LMAS District Health Department reserves the right to require special restrictions, in rare circumstances, in addition to those listed herein to ensure that an adequate sewage disposal system is installed. These restrictions may be determined on a site-specific basis.

LMAS DISTRICT HEALTH DEPARTMENT

Technical Manual to the Upper Peninsula Environmental Health Code

Table of Contents

Technical Manual to the Upper Peninsula Environmental Health Code

Introduction

The Upper Peninsula Environmental Health Code (UPEHC) was adopted by the LMAS District Health Department to promote public health, safety, and welfare of the people of the Upper Peninsula of Michigan. Within the Code are the specifications for construction of sewage and water supply systems, along with other requirements encompassing environmental health. Due to the dynamic and complex nature of on-site sewage and water systems governed by the Code, a technical manual is referred to in several sections and is necessary for detail technical guidance. This Technical Guidance Manual has been prepared to provide guidelines, specifications, and standard practices under the authority of Section 1-12 of the Upper Peninsula Environmental Health Code. Each topic of this technical manual is provided with a reference to the associated section of the LMAS District Health Department Upper Peninsula Environmental Health Code.

Licensure - Section 3-1

1. Applicant shall complete a written exam proctored by an environmental health representative of the local health department.

2. The exam may be taken at any of the local health department jurisdictions using the UPEHC.

3. Upon satisfactory completion of the exam, the results will be reviewed and incorrect answers discussed with the applicant.

4. A passing score is 70%. A retest can be scheduled at contractor's discretion.

5. A separate license will be required for each local health department.

6. The license will be valid for three (3) years, starting with the calendar year in which the license is first issued. The license shall expire on December 31.

100 Year Flood Plain Restrictions - Section 3-14.1.A.6

This section of the code states:

"The site of the proposed system shall not be located in a floodplain of 100 years or less, or in an area subject to seasonal flooding, runoff, or ponding of surface waters. It shall be the property owner's responsibility to document the 100 year flood plain as recognized by the Michigan Department of the Environment, Great Lakes, and Energy (EGLE), or appropriate agency, at the request of the department."

Flood plain delineation is currently the responsibility of the Michigan Department of the Environment, Great Lakes, and Energy (EGLE), and is subject to change. Flood plain information can be obtained by contacting the appropriate State agency. Requests to EGLE regarding flood plain delineation and boundaries are made through the MiWaters app available at the EGLE MiWaters website.

When a Sanitarian becomes aware of a concern regarding flood plain during a site evaluation the applicant shall be instructed to coordinate with EGLE through MiWaters to obtain the requested flood plain information. It shall be the applicant's responsibility to provide the current EGLE flood plain information for the parcel to the department prior to permit issuance.

In some instances, the permit applicant may be unwilling to wait for a response from EGLE through MiWaters due to undesired project delays. In these instances, the permit applicant should be offered the option to contract with a third party engineer to delineate the 100-year floodplain boundary at the expense of the permit applicant. It shall be the permit applicant's responsibility to provide the engineering data to the department in writing prior to permit issuance.

For the purpose of flood plain enforcement through the Upper Peninsula Environmental Health Code, the flood plain boundary will be defined as follows:

> "The first point in the landscape between the proposed septic system or well installation area, where the 100-year flood level, as determined by the appropriate State agency, intersects the land."

All proposed septic system and well locations must be outside of this boundary as defined. Permit applications for parcels, which cannot meet this requirement, shall be denied in accordance with department policy, and must pursue a variance to move forward.

Systems installed by variance must be installed so that the entire septic system, including the (up to) 4 feet of soil beneath the aggregate and soil interface, are elevated above the 100-year flood level as determined by the appropriate State agency.

Wells, which are installed within the 100-year flood plain by variance or deviation, must have elevated casings, which raise the wellhead and screened vents above the 100-year flood level.

Note: Permits from EGLE, or appropriate State agency, may be required prior to placing fill for the installation of a septic system below or in a 100-year floodplain elevation.

Abandonment of Onsite Sewage Treatment and Disposal System (OSTDS) - Section 3-16

This section of the Upper Peninsula Environmental Health Code states:

"When an OSTDS is abandoned, it shall be rendered to prevent a potential safety hazard. Abandoned septic tanks shall be pumped and the contents disposed of by a licensed septage waste hauler according to law. The septic tank shall then be collapsed and filled with an approved material or shall be removed and transported and disposed of at a Type II landfill in accordance with law."

Septic Tank

If an abandoned septic tank is left in place after being pumped out in an approved manner, it may be completely filled with clean sand fill or concrete to prevent the safety hazard of a collapse.

If the abandoned septic tank is to be crushed in place after being pumped in an approved method, the tank must be thoroughly crushed and mechanically compacted prior to backfilling. Once crushed and compacted, the tank location shall be backfilled with clean soil and thoroughly mechanically compacted for stability.

If the tanks have to be removed, the tanks can be removed once not containing any free liquids and properly disposed of in a licensed landfill.

Absorption System

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.

To ensure the soil dispersal area does not contain excess liquid waste before removal, it is helpful to dig a hole in the four corners of the soil dispersal area along with a hole in the middle to create sump pits that the liquid septage waste can pool and collect to be pumped out by the licensed septage hauler. This process may take numerous days to ensure the surrounding soil, pipes, and dispersal media are drained. This method should be completed prior to the removal of the dispersal area and bringing it to the ground surface. Removing saturated dispersal media to dry at the ground surface will threaten the public health of nearby residents and the contractors removing the material due to potential exposure to pathogens in the process. Remove and haul the contaminated material to a licensed Type II landfill. Containment of the contaminated material must be provided during transport to avoid creation of a nuisance or environmental hazard. For additional information refer to EGLE document *Soil Dispersal System and Septic Tank Abandonment (10/15/20).*

Aggregate/Stone Material - Section 3-14.3

This section of the Upper Peninsula Environmental Health Code states:

"1. Aggregate shall be washed stone ranging in size from three-eights (3/8") to two and one-half inches (2½") with a total fines content not exceeding five-tenths percent (0.5%) loss by washing. Stone aggregate must rate three or more on Mohs scale of hardness. Sizing and hardness specifications and testing methodology shall be defined in the technical manual."

Determination of Compliance:

When compliance of drainfield aggregate is in question, the Sanitarian may require an official sieve analysis to be conducted on the aggregate in question with a report of analysis provided to the department for review and approval.

Stone Size:

One hundred percent (100%) of aggregate must pass a 2.5 inch (63 mm) sieve. When ninety percent (90%) of stone aggregate is retained by a 7/16" standard mesh during sieve analysis it is considered to meet the three-eights-inch minimum sizing requirement.

Classifying fine grained soils:

If soil that will pass through a 3-inch sieve is passed through a No. 200 sieve, it will be divided into two portions based on particle size. The particles retained on the No. 200 sieve are sand and gravel size and are called coarse-grained. The particles passing the No. 200 sieve are termed fines. There cannot be more than 0.5% fines in the aggregate as indicated on the sieve analysis results.

Sieve Analysis:

The tables below provide a general overview of some of the standard screen sizes used in sieve analysis. The highlighted values are for screens that would be used to determine drainfield aggregate acceptability. The goal is to have 90% of the aggregate retained by the 7/16 inch (or 16 mm) standard mesh, 100% passing the 2.5 inch (63 mm) mesh and 0.5% or less of the aggregate passing the number 200 mesh.

Commonly used US Standard commercial sieve and mesh dimensions.
Source: http://engineeringtoolbox.com

Sieve size	Opening		Standard Mesh
(mm)	*(in)*	*(10^{-6} m)*	*US*
11.2	0.438	11200	7/16"
6.35	0.250	6350	¼"
5.6	0.223		3.5
4.75	0.187		4
4.0	0.157		5
3.35	0.132		6
2.8	0.110		7
2.36	0.0937		8
2.0	0.0787		10
1.7	0.0661		12
1.4	0.0555		14
1.18	0.0469		16
1.0	0.0394		18
0.841	0.0331	841	20
0.71	0.0278		25
0.595	0.0232	595	30
0.5	0.0197		35
0.400	0.0165	400	40
0.355	0.0139		45
0.30	0.0117		50
0.250	0.0098	250	60
0.210	0.0083	210	70
0.177	0.0070	177	80
0.149	0.0059	149	100
0.125	0.0049	125	120
0.105	0.0041	105	140
0.088	0.0035	88	170
0.074	0.0029	74	200
0.063	0.0024	63	230
0.053	0.0021	53	270
0.044	0.0017	44	325
0.037	0.0015	37	400
0.025	0.0010		500
0.020	0.0008		632

Nominal apertures and permissible variation for selection of US woven sire sieves
Source: Powder Sampling and Particle Size Determination, Terrance Allen, 2003

Standard (mm)	Alternative (in)	Tolerance (+ or – mm)	Intermediate (mm)	Maximum (mm)
125.0	5	3.7	130.00	
63.0	2.500	1.9	65.6	66.2
31.5	1.250	1.0	32.9	33.2
16	0.625	0.5	16.7	17.0
8	0.312	0.25	8.41	8.58
4	0.157	0.13	4.23	4.35
2	0.0787	0.070	2.135	2.215

Nominal apertures and permissible variation for selection of US woven sire sieves Source: Powder Sampling and Particle Size Determination, Terrance Allen, 2003				
1	0.0394	0.040	1.080	0.135

Terminology regarding aggregate:

There is some confusion regarding terminology used to describe aggregate as there are multiple conventions used including ISO, ASTM and Michigan Department of Transportation standards. The following are examples of sizing terminologies.

Crushed Stone Grades (http://www.braenstone.com/2013/05/crushed-stone-grades/)

The following list gives a rundown of crushed stone grades and their best uses. While there may be slight variances in the naming convention of crushed stone the following are the most common names and sizes. The highlighted sizes of crushed rock would be suitable for aggregate use under the condition that fines content is 0.5% or less.

- Crushed stone #5 – Sizes are from 1″ down to fine particles. For road and paver base.
- Crushed stone #67 – Sizes from 3/4″ down to fine particles. For fill, road and slab base.
- Crushed stone #1 – Sizes are from 2″ to 4″. The largest of the crushed stone grades. For larger jobs such a culvert ballast.
- Crushed stone #8 – Sizes from 3/8″ to 1/2″. For concrete and asphalt mix.
- Crushed stone #3 -Sizes from 1/2″ to 2″. For drainage and railroad projects.
- Crushed stone #10 (also called stone dust) – Screenings or dust. For fabrication of concrete blocks and pavers and for riding arenas.
- Crushed stone #57 – Sizes of about 3/4″. For concrete and asphalt mix, driveways, landscaping and French drains.
- Crushed stone #411 – A mixture of stone dust and #57 stone. For driveways, roads and as a base for retaining walls. It can also be used to patch holes in paved areas. The dust mixes with the larger stone and settles well.

Table of Crushed Rock Sizes
Source: http://www.rbsinc.com/limestone/pageone.htm

Size Number	Nominal Maximum	Nominal Minimum	Typical Use	Density, PCF (Estimate)
1	3 ½"	1 ½"	Free Draining Heavy Fill Road Base	80-90
2	2 ½"	1 ½"	Road Base, Difficult to Place	100
3	2"	1"		100
4	1 ½"	¾"	Road Base, Easier to Place/Grade	100
57	1"	#4	Free Draining Fill Used under Concrete Slabs	110
67	¾"	#4		110
7	½"	#4		100-110
8	3/8"	#8	Pipe Bedding	100-110
9	#4	#16	Drainage Bed, Snow and Ice	120
Sand (#10 MOD)	#4	#100		130
3" Crusher Run	3"	#100	Driveways, Roads, Compaction Required	130
1½" Crusher Run	1 ½"	#100	Driveways, Roads, Compaction Required	140
¾" Crusher Run	¾"	#100	Driveways, Roads, Compaction Required	140
Rip-Rap	10"	4"		

Field screening tool for fines – Jar Test

A tool known as the 'jar test' can be used to evaluate the relative fines content in a load of drainfield rock (or sand fill) delivered to a construction site. This tool has also been used by licensed installers and local inspectors to help evaluate fines in mound sand and single pass sand filters. For drainfield rock, the procedure can be used as a 'quick check' on fines in a load of drainfield rock. The jar test is not to be used as a replacement for sieve analysis.

After settling for several hours, if the layer of fines that settle on top of the aggregate is thicker than 3.2 mm (1/8 inch), the aggregate contains too many fines and is not suitable for use in a drainfield. An 8-hour jar test must be conducted for best results.

When in doubt the aggregate supplier should provide an aggregate analysis report to confirm the product meets the sieve specification.

Jar test procedure:

- Place approximately 2 inches of aggregate in a glass quart jar.

- Fill the jar with water.
- Shake the jar vigorously to mix the aggregate and water.
- Set the jar on a level platform and allow to settle for several hours (4 - 8 hours).
- Upon settling, after several hours (4 - 8 hours), the layer of fines that settle out of the aggregate should not be thicker than 1/8 inch (3.2 mm).

TIPS:*

- Take a sample from the middle of the pile.
- It may be necessary to jar test a composite sample.
- It may be necessary to conduct two jar tests.
- When in doubt, obtain the sieve analysis report from the aggregate supplier or send a sample to the laboratory. Be sure to ask the laboratory to include the No. 200 sieve size.

Michigan Department of Transportation (MDOT) Aggregate Terminology and Grades:

Many contractors and pit operators will use the MDOT terminology when describing and classifying their aggregate. Below is a table describing the characteristics of each MDOT aggregate classification. Per UPEHC requirements ONLY the 4AA meets the sizing requirements, but ONLY under the condition that it is washed to reduce the fines to a max of 0.5%. The standard 2.0 maximum MDOT allowable fines content is not acceptable for drainfield aggregate.

Michigan Department of Transportation (MDOT) Grading Requirements for Coarse Aggregates, Dense-Grade Aggregates and Open-Graded Aggregates

Material Type	Class	Item of Work by Section Number (Sequential) (a)	Sieve Analysis (MTM 109) Total Percent Passing										Loss by Washing (MTM 108) % Passing No. 200 (b)
			2.5 in	2 in	1.5 in	1 in	3/4 in	1/2in	3/8in	No. 4	No. 8	No. 30	
Coarse Aggregates	4 AA (c)	602	100	90-100	40-60		0-12						2.0 max
	6 AAA (c)	602			100	90-100	60-85	30-60		0-8			1.0 max (d)
	6 AA (c)	601,602 706,708,806			100	95-100		30-60		0-8			1.0 max (d)
	6 A	205, 401,402,601,602,603,706,806			100	95-100		30-60		0-8			1.0 max (d)
	17 A					100	90-100	50-75		0-8			1.0 max (d)
	25 A	508					100	95-100	60-90	5-30	0-12		3.0 max
	26 A	706, 712					100	95-100	60-90	5-30	0-12		3.0 max
	29 A	508						100	90-100	10-30	0-10		3.0 max
	21 AA	302,304,305											

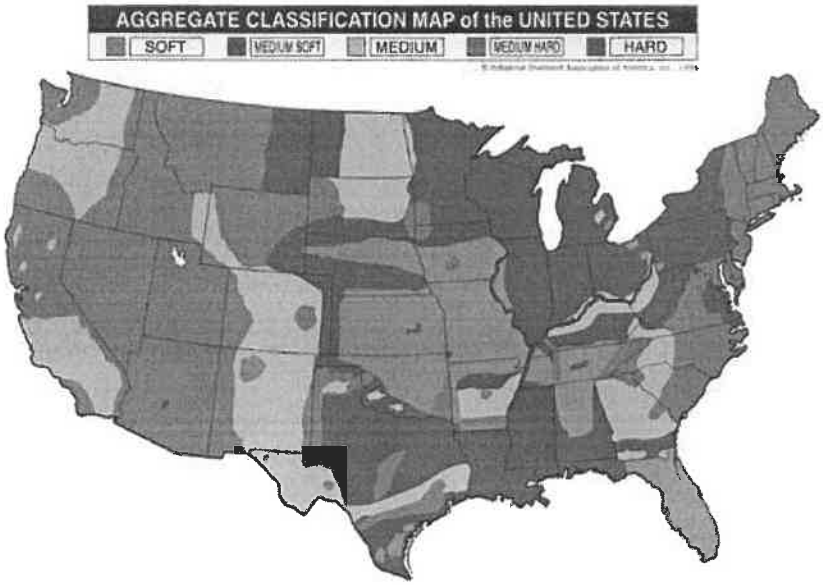
Michigan Department of Transportation (MDOT) Grading Requirements for Coarse Aggregates, Dense-Grade Aggregates and Open-Graded Aggregates

Material Type	Class	Item of Work by Section Number (Sequential) (a)	Sieve Analysis (MTM 109) Total Percent Passing										Loss by Washing (MTM 108) % Passing No. 200 (b)
			2.5 in	2 in	1.5 in	1 in	3/4 in	1/2in	3/8in	No. 4	No. 8	No. 30	
Dense-Graded Aggregates	21 A	302,305			100	85-100		50-75			20-45		4-8 (e)(f)
	22 A	302,305,306,307				100	90-100		65-85		30-50		4-8 (e)(f)(g)
	23 A	306,307				100			60-85		25-60		9-16 (f)
Open-Graded Aggregated	2 G	303(h)			100	85-100		40-70			0-10	0-8	5.0 max
	3 G				100	85-100		40-70			0-30	0-13	5.0 max
	4 G (i)	303			100		60-80	35-65			10-25	5-18	6.0 max
	34 R	404						100	90-100		0-5		3.0 max
	34 G	404						100	90-100		0-5		3.0 max

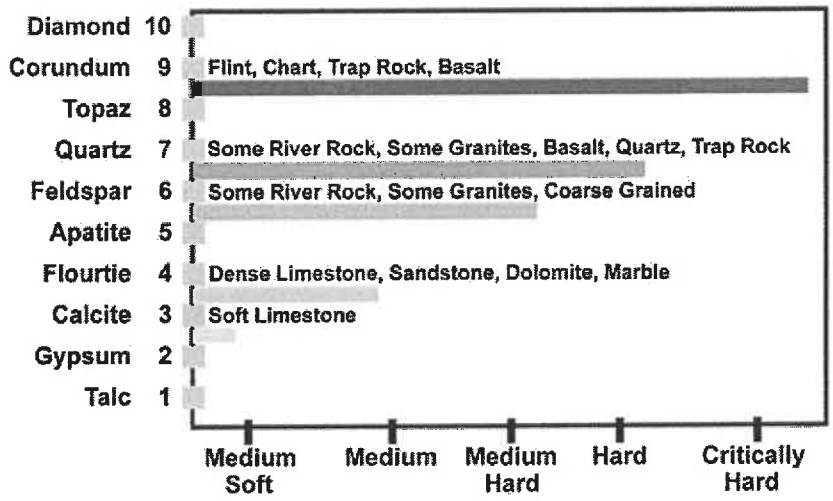
Hardness:

Based upon the graph and the map shown below, all aggregate available in LMAS district should meet the requirement of rating at 3 or higher on Mohs scale of hardness. Calcite (soft limestone) is considered to be a standard for 3 on Mohs scale and is technically acceptable under the Upper Peninsula Environmental Health Code.

Source: http://www.forconstructionpros.com/article/10745911/aggregate-hardness-map-of-the-united-states



Mohs Hardness Scale 1 through 10



Verifying Hardness during production:

Limestone and other potentially soft rocks can decay or deteriorate when exposed to sewage and soil causing premature drainfield failure. There are two specified tests to determine sufficient hardness for suitability of use as drainfield aggregate. The standard tests are loss of abrasion and loss of soundness. The purpose of these two tests is to help ensure that limestone and other potentially soft rock does not break down when transported and used in sewage treatment systems.

The limestone aggregate should be tested at the quarry to ensure the material meets the required specifications in the table below.

Limestone testing requirements for 'hardness'	Method	Results required
Abrasion determines if rock breaks down when moved around	AASHTO Method T 96 (Los Angeles Abrasion Test)	Not more than 40 percent loss
Soundness determines if rock breaks down over time	AASHTO Method T 104 (magnesium sulfate)	Not more than 15 percent loss at end of five cycles

Field screening tool for rock hardness – Mohs Test:

Another field tool that can be used to help evaluate the suitability of drainfield rock is the Mohs Test (Mohs Hardness, 2008). Drainfield rock would typically have a hardness of three or more on the Mohs Scale of Hardness. Hardness is a measure of a rock's resistance to abrasion and is measured against a standard scale called the Mohs Scale of Hardness. The scale consists of ten fairly common minerals of known hardness, which are numerically ordered from the softest rock (1) to the hardest rock (10), as follows:

1. Talc (H=1)	2. Gypsum (H=2)	3. Calcite (H=3)	4. Fluorite (H=4)	5. Apatite (H=5)
6. Orthoclase (H=6)	7. Quartz (H=7)	8. Topaz (H=8)	9. Corundum (H=9)	10. Diamond (H=10)

The Mohs Scale of Hardness is based on the fact that a harder material will scratch a softer one. By using a simple scratch test, you can determine the relative hardness of drainfield rock. Please be advised this simple test is not suitable for all rock types. For example, chert and shale, which would 'pass' using this field tool would, in fact, break down using the American Associations of State Highway and Transportation Officials (AASHTO) Methods for loss of abrasion and soundness tests because of the structure of the rocks.

There are several simple tools that can be used in determining the relative hardness of drainfield rock. For example, your *fingernail* has a hardness of 2.5. If you can scratch the surface of a rock with it, its hardness is less than 2.5; slightly harder than gypsum (H=2) but softer than calcite (H=3). A *penny* has a hardness of 3.0. If you cannot scratch the rock with your fingernail (H=2.5), but can with a penny, the rock is at least as hard as calcite (H=3). The steel blade of the average knife commonly has a hardness of about 5.5. If a penny does not scratch your rock but the knife blade does, then it is harder than calcite (H=3) but softer than orthoclase (H=6).

If your drainfield rock	**Give it a hardness number**
Can be rubbed off on the fingers	1
Can be scratched with a fingernail	2
Can be scratched with a penny1	3
Can be scratched easily with a butter knife	4
Can be scratched with a steel nail but not glass	6
Can be used to scratch glass	7
Too hard to be tested in this scale	8 – 10

Proper Transport and Handling of Aggregate:

Some basic handling practices can be used to minimize contamination of drainfield aggregate with fines, dust, clods of silt and clay, wood, and other undesirable materials. These practices should be used by both equipment operators loading drainfield rock at the pit or quarry and by licensed installers moving rock around the construction site.

Best Handling Practices Pit and Quarry

- Leave a bottom layer of rock (six inches) when loading the truck. Do not scoop up all the aggregate on the ground because it will mix with the underlying soil and the load will become contaminated with soil and/or fines.

- Do not let the aggregate get too dusty – it may need to be washed again due to excess fines. For example, if a stock pile sits in the pit for a number of years, it will likely be contaminated with fines because of dusty conditions found at these facilities.

Best Handling Practices Construction Site

- Take aggregate directly from the truck to the soil treatment system, do not store or stockpile drainfield aggregate, just place it immediately.
- If rock is stockpiled, use a clean, undisturbed area for temporary storage of drainfield aggregate. Consider covering stockpiled materials if conditions are excessively dusty.
- If stockpiled, make sure different materials are kept separate (i.e. clean sand, pea rock and drainfield aggregate).
- Make sure the bucket is clean before scooping up materials.
- Take care not to mix any soil in with drainfield aggregate when moving it around.
- Carefully place drainfield aggregate into the excavation; make sure soil is at the proper moisture content. Make sure the bottom and sides of the excavation are not smeared; minimize walking in the excavation. Place drainfield aggregate into the excavation by minimizing drop distance into the excavation.

Septic Tanks - Section 3-14.5

This section states:

"Septic tanks shall be watertight and constructed of concrete or other materials approved by the Department."

1. In order to provide technical guidance to meet this standard, the following specifications have been established:

    a) Pre-cast concrete tanks shall have a minimum wall, compartment and bottom thickness of two and one-half inches and shall be adequately reinforced. The top shall be at least four inches thick and able to withstand the load for which it was intended.

    b) Concrete block tanks are not permissible.

    c) 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).

    d) The use of polyethylene septic tanks is allowed provided the installer submit a spec sheet demonstrating tank was manufactured for the purpose of holding sewage and the tank capacity meets min. sizing noted in permit.

2. The liquid capacity of all prefabricated septic tanks shall be permanently marked on the

uppermost tank surface.

3. Manufacturers shall demonstrate, upon request of the department, that the septic tanks, which they manufacturer, are watertight.

4. Multiple compartment tanks shall comply with the following:

    a) As measured from the invert elevation of the outlet, the first compartment shall have at least two-thirds of the total required liquid capacity.

    b) Each compartment within a tank shall have an inspection port situated above the outlet baffle.

5. The minimum liquid depth of any compartment shall be thirty-eight inches (38"). Liquid depths greater than seventy-eight inches (78") shall not be considered in determining the working liquid capacity.

6. When a high water table is present, septic tanks shall be weighted to prevent floating or shifting.

7. Septic tank access shall be provided for maintenance. The access lid shall be a minimum of twelve inches by twelve inches (12" x 12") in diameter or a maximum of twenty inches by twenty inches (20" x 20") in diameter. Each septic tank access lid shall be provided with a corrosion resistant strap or handle to facilitate removal.

8. Inspection ports will not be accepted as septic tank access.

9. The tank access lid for cleaning and maintenance purposes shall extend to ground surface by a secure watertight riser. Risers shall be installed with dual lids, leaving the concrete lid in place, or shall be equipped with other Department approved safety device to preclude accidental tank entry. Existing tanks, which will be in continued use for a replacement system, will be required to be retrofitted with an effluent filter in the outlet baffle and an approved riser to grade.

10. A tank shall be located to assure accessibility for inspection and cleaning. No other construction or landscaping shall impede the tank's accessibility.

11. The tank shall be located on the same side of a building that the sewer line exits the foundation wall. The building sewer shall be at least five feet long, but as short as possible, and contain not more than two (2) forty-five degree (450) degree bends, or one long sweeping ninety degree (90^0) bend.

12. The inlet and outlet specifications are as follows:

    a) Have a minimum diameter of four inches (4").

    b) Be placed on opposite ends of the tank, unless otherwise specified by the Health Officer.

c) The invert elevation of the inlet shall be at least two inches (2") higher than the invert elevation of the outlet.

d) The outlet shall be equipped with an effluent filter 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 tank inlet and outlet shall be installed with a rubber or neoprene gasket to provide watertight connections. The Health Officer may approve in writing other watertight connections.

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 'T' fitting.

14. A multiple compartment tank shall have a four-inch (4") minimum diameter 'T' or an effluent filter, placed in the common wall; utilizing the same specifications as established for the effluent filter in section 12.

15. Septic tanks shall be set level side to side and front to back.

16. Tanks shall be installed with the outlet closest to the drainfield as designed by the manufacturer.

Effluent Filters - Section 3-14.5.D

1. An effluent filter is required in all new and/or replacement septic system installations. This will at times require effluent filters to be retrofitted to existing tanks. The filter shall be installed and used in accordance with the manufacturer's recommendations.

2. An effluent filter shall meet the following specifications:

    a) Be constructed of durable and corrosion-resistant materials.

    b) Be designed to prevent the escape of suspended solids during normal operation or malfunction.

    c) Retain all particles greater than one-eighth inch (1/8") in size.

    d) Be designed to accommodate the effluent discharge for the system it serves.

3. Effluent lines shall be 4" diameter schedule 40 PVC, or equivalent, piping with glued joints for the entire length of line between the filter outlet and the drainfield.

4. Effluent lines serving systems that require pumping from the septic tank to the drainfield must be connected to the drainfield header at an angle of 45 degrees or greater. This configuration is to prevent the backflow of effluent from the drainfield to the tank when the pump cycles off.

Absorption System Distribution - Section 3-14.4

Perforated Piping

All perforated piping used within trench or bed infiltration systems shall be 4" diameter PVC meeting ASTM F810 or ASTM 2729 standards or equivalent. Perforated piping in nonconventional engineered systems such as pressure mounds shall meet the specification indicated within the approved engineered plan.

Trench Designs

The following shall be used to design trench absorption systems.

1. Thirty-six inch (36") wide trenches shall be spaced seven feet (7') on center, which would leave approximately four feet (4') of undisturbed soil between trenches.
2. Thirty inch (30") wide trenches shall be spaced at least six feet (6') on center.
3. Twenty-four inch (24") wide trenches shall be spaced at least five feet (5') on center.
4. Eighteen inch (18") wide trenches shall be spaced at least four feet (4') on center.
5. A common header shall be installed per 3-14.4(A). Required footer can be either perforated or solid pipe.
6. Aggregate and pipe trench systems must be constructed of State approved perforated pipe, placed with holes facing downward within the trench, and solid schedule 40 PVC pipe in the header and effluent line.
7. Aggregate must be installed at a thickness of six inches (6") below the perforated pipe and extending to two inches (2") above the perforated pipe and meet requirements noted in 3-14.3.
8. Chamber systems may be used for trench installations without gravel, must be installed in accordance with manufacturer's recommendations and will be sized in accordance with current State guidance regarding chamber sizing.

Chamber System Installation

1. Chamber systems can be installed as a bed configuration or a trench configuration.
2. Sizing for chamber systems will be determined by the current State guidance. At the time of this revision, the State has provided a comparison chart in Microsoft XL format.
3. Bed configuration: Number of chambers required is determined by the make and model of the specific chamber used compared to the required number of chambers per 100 ft^2 of bed without sidewall.

4. Trench configuration: Number of chambers required is determined by the make and model of the specific chamber used compared to the required number of chambers per 100 ft² of bed with sidewall infiltration allowed.
5. Chambers shall be installed in accordance with manufacturer's recommendations on leveled and raked soil which has not been compacted or smeared.
6. The effluent line and the header must be constructed of solid schedule 40 PVC piping with glued joints. Headers must be set level. A standard footer pipe is not required but manufacturer end caps shall be installed.
7. Observation ports shall be installed in the fittings provided by the manufacturer in the end of each row of chambers.
8. Chambers shall be backfilled with clean permeable soil, which is free of rocks, cobbles and boulders, to avoid damage or offset to the chambers.
9. A minimum of six inches (6") and a maximum of thirty inches (30") of soil cover shall be placed over the chambers after final installation.

Mound Site Preparation Procedure (when fill is required on-grade)

1. Check the moisture content of the soil to a depth of eight inches (8"). Smearing and compacting of wet soil will result in reducing the infiltration capacity of the soil. Proper soil moisture content can be determined by rolling a soil sample between the hands. If it rolls into a one-fourth inch (¼") wire, the site is too wet to prepare. If it crumbles, site preparation can proceed. If the site is too wet to prepare, do not proceed until it dries.
2. Lay out the fill area on the site so that the distribution cell runs perpendicular to the direction of the slope whenever possible.
3. Standard Mound Installation: Excess vegetation needs to be mowed and raked. Cut trees flush to the ground and leave stumps, remove surface boulders that can be easily removed. You can also remove all tree stumps and the central root system below grade by using a backhoe or excavator with a mechanical "thumb" or similar extrication equipment, lifting or leveraging stump in a manner that minimizes soil disturbance. It is not necessary for the soil of the system site to be smooth when the site is prepared. Avoid soil disturbance, relocation, or compaction. Avoid mechanical leveling or tampering of dislodged soil. Fill all voids created by stump removal with system sand. Prepare the site by breaking up, perpendicular to the slope, the top six inches (6") to eliminate any surface mat that could impede the vertical flow of liquid into the in situ soil. Chisel type plowing is highly recommended especially in fine textured soils. Rototilling or other means that pulverize the soil is not acceptable. The important point is that a rough, un-smeared surface be left. The sand fill will intermingle between the clods of soil, which improves the infiltration rate into the natural soil. Immediate application of at least 6 inches (6") of fill material is required after tilling. All vehicular traffic is prohibited on the tilled area. For sites where the effluent may move laterally, vehicle traffic is also prohibited for fifteen feet (15'), down slope and

ten feet (10') on both sides of level sites. If it rains after the tilling is completed, wait until the soil dries out before continuing construction.

4. Deep Cut/Cut and Fill Mound Installation: If more permeable soils are available lower in the profile, a deep cut excavation may be made. Deep cut excavations shall be ~~not be greater than six feet (6') in depth unless~~ approved by the Health Officer. Deep cut and fill installations will only be permissible where strata that are more permeable are located in the soil profile, which are determined to be of consistent thickness of no less than twenty-four inches (24") and are not affected by water table. The excavation must expose the permeable layer without contamination.

5. Place the fill material, which has been properly selected, around the edge of the tilled or excavated, area. Work from the end and up slope sides. This will avoid compacting the soils on the downslope side, which, if compacted, affects lateral movement away from the fill and could cause surface seepage at the toe of the fill on slowly permeable soils. Move the fill material into place using a small track type tractor with a blade or a large backhoe that has sufficient reach to prevent compaction of the broken up area. Do not use a tractor/backhoe having tires. Always keep a minimum of six inches (6") of fill material beneath tracks to prevent compaction of the in situ soil.

6. Place the fill material to the required depth.

Fill Material

1. Clean medium sand with little or no fines is to be used to form a sand base to the elevation that is required on the permit and/or site evaluation. Sand fill shall be added from the upslope side or ends to reduce site disturbance whenever possible.

2. When fill is required on-grade (creating a mound), a berm (sand extension) around perimeter of aggregate bed is required. This sand extension prevents effluent from leaching out of the toe of slope. Width is determined by native soil type. Extend a minimum of four feet (4') beyond all sides of the absorption system on sites where the native soil has permeability greater than or equal to three inches (3") per hour. Extend a minimum of ten feet (10') beyond all sides of the absorption system on sites where the native soil has a permeability less than three inches (3") per hour.

Fill Amt on Grade	Total Height at Completion	3:1 slope	4:1 slope
1'	3'	9'	12'
2'	4'	12'	16'
3'	5'	15'	20'
4'	6'	18'	24'
5'	7'	21'	28'

3. In addition to berm extension, a minimum 3:1 slope to natural grade is required. It is recommended that a sand-based soil be used for this slope. 4:1 taper slope is recommended in areas of a maintained lawn. Taper Length - Based on final height at completion of the mound. Total length from top to toe.

Native Soil	Berm Width
Coarse sand, Gravel, Gravelly Sand	4'
Stratified sand & gravel, Medium Sand	4'
Fine sand, Loamy sand	4'
Sandy loam, Loam	10'
Silty loam, Sandy clay loam	10'
Clay loam, Silty clay loam	10'
Silty clay loam	10'
Silty clay, Clay	10'
Bedrock at surface	10'

4. The edge of the aggregate bed must be placed a minimum of ten feet (10') from property lines. In no case shall slope fill cross property lines without direct written and notarized consent of the owner of the impacted parcel.

Observation Ports

1. Observation ports shall extend to the ground surface and remain visible after installation.
2. The observation port shall be constructed of non-perforated PVC, which is four inches (4") in diameter, and be equipped with a removable cap.
3. Observation ports shall be installed 1 foot from the corner of the footer, on each outside lateral of the system using a ninety degree (90◦) 'T' fitting oriented upward vertically. The inspection port shall be glued into the 'T' fitting for permanent installation."

Aggregate Cover

1. Prior to backfilling the absorption system, the aggregate shall be covered with an approved filter fabric.
2. Straw is an approved material for covering the aggregate. Straw must be of sufficient thickness that fines cannot filter through and clog the drainfield (enough so that no aggregate can be seen when covered). However, owner should be consulted on which cover they prefer as straw degrades over time eventually allowing sand into the aggregate. Hay is unacceptable.

3. Soils used to cover the drainfield should not be clay-based soils in order to maximize evapo-transpiration. A minimum of 6 inches (6") and a maximum of 30 inches (30") of soil cover are required.
4. The field area shall be seeded and mulched to provide grass growth and prevent erosion of the field. The area around the field shall be landscaped to drain surface runoff away from the field area. Trees should not be grown on or near the field area as the roots will eventually plug the laterals. Grass is the best cover for your drainfield.
5. To avoid compaction and breakage of drainfield materials, the drainfield should not have structures built upon it and vehicle traffic should not be allowed.

Privies/Outhouses - Section 3-15

Privies/outhouses can only be permitted to be installed on parcels in remote location where power is not accessible and there is no plumbing in the dwelling.

Privy permits will not be issued in areas where the practice is prohibited by local zoning or where other statutes and/or ordinances prohibits without prior approval from the associated authority.

Privy Construction requirements are governed by Act 273 PA 1939 and the rules promulgated there under titled "Department of Environmental Quality, Division of Water and Radiological Protection, Outhouses" including Rule 325.421 through Rule 325.426.

Privy construction requirements:

1. A soil test hole must be evaluated for the primary privy location.
2. Soil conditions must be known, and must meet suitability requirements, for a minimum vertical distance of four feet (3') below the intended bottom of the pit for an earth pit privy. This will require a test hole of minimum eight feet (8') depth.
3. The constructed earth pit shall have a depth minimum of four and one-half feet (4.5') and a depth maximum of six feet (6'). A minimum width of 3' X 3' square is recommended.
4. The floor should be solid and supported by sills to support the outhouse structure.
5. Pit curbing shall be installed to support the excavation from collapse and shall extend the depth of the pit. Pit curbing shall not be used to support the outhouse structure or sills.
6. The floor and seat riser shall be constructed of impervious material or tongue and groove lumber, and in a manner to exclude insects. The seat riser shall be bonded to the floor to prevent seepage, and shall be provided with a seat with a hinge lid.

7. The pit shall be ventilated from the riser to a point outside of the structure by a flue or vent having a cross-sectional area of a minimum twelve square inches (12 in^2). The joints of the vent shall be tight and the opening screened with 16-mesh screening.
8. The privy structure shall be fully enclosed and fly tight.

Vaulted privies can be constructed by using an approved septic tank with a minimum capacity of 1000 gallons, in substitution of a pit and meeting all criteria stated above. Vaulted privies shall be placed where they are accessible to a septic pumping truck.

On-site Storage and Hauling of Sewage (Pump and Haul) - Section 3-10.D

On-site storage and hauling of sewage, or the use of a pump and haul method, in lieu of the handling of sewage through an approved on-site sewage treatment and disposal system (OSTDS) or a municipal sewer connection, for sewage originating from structures other than privies shall be in accordance with the Upper Peninsula Environmental Health Code.

The on-site storage and hauling of sewage originating from structures other than privies may be approved by the LMAS District Health Department, Director of Environmental Health under strictly short-term temporary emergency conditions for the purpose of the protection of public health and the environment until such time that conditions permit the installation of an approved OSTDS or municipal sewer connection.

On-site storage and hauling of sewage, or the use of a pump and haul method, in lieu of the handling of sewage through an approved on-site sewage treatment and disposal system (OSTDS) or a municipal sewer connection, shall not be approved for convenience purposes, financial purposes, or to circumvent environmental limitations that would preclude the installation of an approved OSTDS.

On-site storage and hauling of sewage, or the use of a pump and haul method, will not be approved in areas where the practice is prohibited by local zoning or where other statutes and/or ordinances prohibits without prior approval from the associated authority.

On-site storage and hauling of sewage, or the use of a pump and haul method, shall be reviewed and approved in writing by the Director of Environmental Health and must meet the following conditions for short-term temporary use:

1. Tanks used for the storage of sewage shall be watertight and designed in accordance with the Upper Peninsula Environmental Health Code including statutes and guidelines referred to by reference and the associated Technical Guidance Manual.

2. Tanks used for the storage of sewage shall be sized with a capacity capable of meeting the flow demands of the structure to which they are connected with a capacity sufficient

to meet the scheduling frequency of the licensed septage pumper and hauler with a designed safety margin of a minimum thirty-three percent additional capacity.

3. Under no circumstances shall a tank system used for the storage of sewage be of a capacity that is less than that capable 72 hours of retention of sewage flow from the structure with a 48-hour pump and haul frequency.

4. An ongoing contract for the pumping and hauling of sewage by a licensed septage hauler shall be obtained by the property owner at the property owner's expense. A copy of the current pump and haul contract shall be provided to LMAS and shall be congruent with the volume retention time of the sewage storage tank.

5. At no time shall sewage discharge from the sewage storage tank to the environment.

6. Any discharge from the sewage storage tank to the environment, or any deviation from the approved on-site storage and hauling of sewage, or deviation from the approved pump and haul process shall be grounds for the immediate condemnation of the structure from which sewage is generated.

Alternative or Non-Conventional On-site Sewage Treatment and Disposal Systems - Section 3-14.1(B) & 3-14.2(F)

See separate LMAS guidance document titled:

Minimum Requirements for Alternative On-Site Sewage Treatment Systems

Technical guidance manual per Article III, Section 3-14.1(B) of the LMAS District Health Department Upper Peninsula Environmental Health Code

Geothermal Wells - Section 5-14

The Upper Peninsula Environmental Health Code's definition of a "well" includes the following:

"A heat exchange well used for the purpose of utilizing the geothermal properties of the earth formations for heating or air conditioning. This includes both supply and return wells and vertical bore holes for closed loop systems."

Vertical Closed Loop Systems

Vertical closed loop systems shall be constructed in accordance with current EGLE guidance/best practices. Vertical Closed Loop Systems are any installations vertical or horizontally directionally bored which are at a depth of fifteen feet (15') or greater. Vertical closed loop systems require a permit from the local health department. One permit is required for single and two family residential sites or systems. One permit is required per twenty-five (25) boreholes on a commercial site or system. Permit application shall include a site diagram, the number of proposed boreholes, and proposed heat transfer fluids to be used. A permit application must be submitted to the local health department a minimum of fourteen (14) days prior to installation.

Construction Permit Requirements:

1. Geothermal boreholes must be constructed (drilled and grouted) by a Michigan licensed water well driller or individuals authorized under the Administrative Rules, as amended, of the Michigan Public Health Code, 1978 PA 368, Part 127.
2. All hydronic piping installation must abide by the rules set forth in the 2006 International Mechanical Code.
3. A preliminary site evaluation shall be conducted by the health department and a construction permit issued prior to any drilling or installation.
4. Geothermal boreholes must be constructed and grouted in accordance with Part 127.
5. Grouting of boreholes shall be completed within 24 hours of borehole completion.
6. One record representing the formation must be submitted for each geothermal permit. The formation information, as-built drawing, and all other requested information must be recorded on the EGLE Geothermal Closed –Loop Construction Notice and submitted to the health department within 60 days of completion of the boreholes.
7. Vertical loops shall be isolated in accordance with the following isolation distances:

   Household drinking water well - fifty feet (50') Type IIb or Type III public water well - seventy-five feet (75') Type I or IIa public water well - two-hundred feet (200') Residential on-site sewage system - twenty-five feet (25') Buried water service line or sewer line - ten feet (10') Property line - ten feet (10')

   Note: LMAS District Health Department shall have the authority to grant variances to or increase the isolation distance listed above.

   Heat transfer fluids shall be food-grade propylene glycol, methanol, or ethanol (20 percent) or other nontoxic compounds that meet IGSHPA Closed Loop/Geothermal Heat Pump Systems, Design and Installation Standards, 2007 Edition, Section 3B and 3C, and are compatible with manufactures' specifications. Flammable liquids shall not be used.

9. All underground piping must be a minimum of 160-psi pressure rated high- density polyethylene.
10. All joints in piping must be heat fused by butt, socket, sidewall or electro fusion in accordance with the pipe manufacture's procedures and in compliance with the 2006 International Mechanical Code.
11. Pressure testing must be conducted prior to transfer fluids being installed. Pressure testing must be at 100 psi for thirty (30) minutes in compliance with the International Mechanical Code.
12. A leakage detected shall be immediately excavated and repaired or the loop shall be permanently abandoned in accordance with Part 127.
13. A tag listing contractor's name, chemicals used for heat transfer fluids, and chemical concentrations must be installed on the heat exchanger unit.
14. All buried geothermal piping must have continuous locator tape attached.
15. All vertical boreholes that are to be abandoned must be abandoned in accordance with Part 127. If the loop cannot be removed, the loop shall be permanently sealed by pumping high solids bentonite grout into the loop and completely filling the loop with grout.

Vertical Open Loop Systems

Vertical Open Loops Systems utilize a water well to supply ground water to a heat pump. All open loop wells are regulated under Part 127, require a water well permit from the local health department, and shall be constructed by a Michigan licensed well driller. Wells that are part of a groundwater thermal exchange system may not serve another function, except water may be supplied to the domestic water system if the domestic water system is protected by an air gap or backflow prevention device in accordance with Michigan's Plumbing Code.

Horizontal Closed Loop Systems

Horizontal closed loop systems are regulated by Mechanical Code Authorities.

Well Permit and Construction Restrictions - Sections 5-3.2.D, 5-3.2.F, and 5-3.2.H

The Upper Peninsula Environmental Health Code gives LMAS authority to restrict the permitting of a proposed well as follows:

1. When it is determined that the requirements of the Upper Peninsula Environmental Health Code have not or cannot be met.

2. When the issuance of a well permit or the construction of a well permit there under may create a condition that constitutes a nuisance, or a threat to the public health or the environment.

3. The permit may impose limitations or special construction practices which the Department deems necessary to protect public health or ground water quality.

The installation of a water supply connection to any structure will create a condition under which water carried sewage is or could be generated. Water carried sewage that is not handled by an approved OSTDS or municipal sewer creates a nuisance and a threat to public health and the environment. The following restrictions to well permitting and construction are intended to preclude the creation of a threat to public health and the environment.

Verification of an OSTDS Prior to Well Permitting

To avoid illicit sewage discharge which could create a public health threat or a threat to groundwater surface water or the environment, the availability of an OSTDS or municipal sewer serving the structure and suitable to handle water carried sewage must be verified prior to the issuance of a well permit.

Prior to the issuance of a well permit, the availability of a suitable OSTDS serving the structure must be verified by one of the following methods:

1. The parcel must have an existing home with an existing OSTDS.

2. The permit applicant must simultaneously apply for an OSTDS permit for vacant parcels. The OSTDS shall be installed prior to using the well. If well is drilled first and applicant does not install required OSTDS then owner will be ordered to abandon the unapproved water supply well.

3. If well is proposed in a location in which municipal sewer is available then owner is responsible to contact municipality to determine if any ordinance exists that prevents the installation of an on-site water supply well at the proposed site. Applicant must provide to LMAS verification from municipality that a well is allowed at proposed location along with any stipulations imposed by municipality.

4. If the well is proposed to be an industrial, irrigation, test well, or other well proposed not to be connected to a structure, a site evaluation must be conducted by LMAS to verify that no structure exists on the parcel which could potentially be connected to the proposed water supply well. If a structure, which could potentially be connected to the proposed water supply well, is found to exist on the parcel, one of the conditions in 1-3 above must be satisfied prior to issuance of the well permit.

78724:00003:202533688-1

LMAS DISTRICT HEALTH DEPARTMENT

THE UPPER PENINSULA ENVIRONMENTAL HEALTH CODE

Adopted April 1, 2022

Table of Contents

THE UPPER PENINSULA ENVIRONMENTAL HEALTH CODE

Article I – Title, Purpose, Authority, Jurisdiction, and Administration

1-1 Title

These regulations shall be identified by the title "The Upper Peninsula Environmental Health Code".

1-2 Purpose

These regulations are hereby adopted for the purpose of protecting public health and safety and the quality of the environment as it affects human health and to prevent the occurrence of public health nuisances for all habitants of Luce, Mackinac, Alger and Schoolcraft Counties and persons entering therein.

1-3 Authority

The regulations imposed by this code are hereby adopted pursuant to authority conferred upon local health departments by Section 2435 (D) and Section 2441 (1) of the Michigan Public Health Code, Act 368, P.A. 1978 as amended. (Mich. Comp. Laws § 333.2435(d) and 333.441).

1-4 Jurisdiction

A. The LMAS District Health Department and its duly appointed employees shall have jurisdiction throughout Luce, Mackinac, Alger and Schoolcraft Counties in all areas incorporated and unincorporated, which includes cities, villages, and townships for the administration and enforcement of these regulations.

B. Nothing herein contained shall be construed to restrict or abrogate the authority of any municipality in ~~«Area Within Jurisdiction»~~ Luce, Mackinac, Alger, and Schoolcraft Counties to adopt more restrictive regulations or to enforce existing regulations relating to these regulations, control the issuance of licenses or the renewal or revocation thereof, or to charge and collect a fee, provided that whenever inspection relating to health and sanitation is required, no such municipality shall issue or renew such license without first having obtained a written statement from the «Name of Health Department of Jurisdiction»District Health Department indicating compliance with the requirements of these regulations.

Formatted: Not Highlight

Field Code Changed

1-5 Right of Entry and Inspection

A. To assure compliance with the provisions of this regulation, the Department may conduct investigations which may include collecting samples, conducting tests, inspecting any

matter, thing, premises, place, person, record, vehicle, incident, or event as provided for by Section 2446 of the Michigan Public Health Code, Act 368, P.A. 1978 as amended. (Mich. Comp. Laws § 333.2446).

B. It shall be unlawful for any person to molest, willfully oppose, verbally abuse, or otherwise obstruct the Department, or any other person charged with enforcement of these regulations, during, or as a result of performing, his or her professional duties.

C. The Department may request the assistance of law enforcement agencies when necessary to execute the Department's duty in a manner prescribed by law.

1-6 Interference with Notice

No person shall remove, mutilate or conceal any notice or placard posted by the Department, except by permission of the Department.

1-7 Severability

If any section, subsection, clause or phrase of these regulations is for any reason declared unconstitutional or invalid, it is hereby provided that the remaining portions of these regulations shall not be affected.

1-8 Other Laws and Regulations

These regulations are supplemental to the Michigan Public Health Code, Act 368, P.A. 1978 as amended (Mich. Comp. Laws Ch. 333) and to other statutes duly enacted by the State of Michigan relating to public health and safety. These regulations shall be liberally construed for the protection of the health, safety, and welfare of the people of LMAS District Health Department~~«Name of Health Department Having Jurisdiction»~~, and shall control and prevail over a less stringent or inconsistent provision enacted by a local governmental entity for the protection of public health.

1-9 Fees

The Department reserves the right to set fee schedules, through approval by their governing board, to cover reasonable costs associated with the enforcement and administration of these regulations.
All fee schedules existing prior to the adoption of these regulations shall remain in effect until

revised.

1-10 Approval and Effective Date

These regulations were approved by action of the LMAS District Board of Health on October 4, 2021 and approved by action of the «Name of Jurisdictions»Board of Commissioners on November 16, 2021, the Mackinac County Board of Commissioners on November 23, 2021, the Alger County Board of Commissioners on November 8, 2021 and the Schoolcraft County Board of Commissioners on December 9, 2021 to become effective 45 days from this date.

1-11 Repeal of Previous Regulations

A. Previous regulations entitled "Superior Environmental Health Code for Luce, Mackinac, Alger and Schoolcraft Counties, Michigan" adopted by the LMAS District Board of Health on December 1, 1997 and approved by action of the Luce County Board of Commissioners on February 20, 1998, the Mackinac County Board of Commissioners on February 1, 1998, the Alger County Commissioners on February 27, 1998 and the Schoolcraft County Board of Commissioners on April 11, 1998 to become effective are hereby repealed.

B. Any other LMAS District Health Department regulations existing prior to the adoption of these regulations and in conflict with these regulations are hereby repealed.

C. No violation of any repealed regulation or portion thereof shall be made legal by virtue of adoption of these regulations. Any act, situation or condition which when created or first allowed to exist that was previously a violation shall continue to be a violation under these regulations. Any action, issuance of a permit, etc., that was previously mandatory shall continue under these regulations to be mandatory if a similar requirement is provided herein.

1-12 Power to Establish Policy and Guidelines

A. The Department is hereby granted the authority to adopt guidelines, not in conflict with the purpose and intent of these regulations, for the purpose of carrying out the responsibilities herein delegated to the Department by law and as necessary to conduct associated duties as required by contract with the State of Michigan.
B. All such guidelines shall be in writing and shall be kept in a policy file available for public inspection upon request.

1-13 Amendments

The Department, through approval by the LMAS District Board of Health and the Luce, Mackinac, Alger and Schoolcraft County Board of Commissioners, may amend, supplement or change these regulations or portions thereof.

Article II – General Definitions

2-1 Interpretation

When not inconsistent with the context, words used in the present tense include the future, words in the singular number include the plural number, and words in the plural number include the singular. The word "shall" is always mandatory, and not merely directory. Words, terms or expressions not defined herein shall be interpreted in the manner of their commonly accepted meanings, in accordance with Standard English usage.

2-2 Definitions

Approved	Acceptable for intended use as determined by the Department.
Board of Appeals	A board appointed by the Board of Health whose purpose is to hear, pass judgment and make recommendations upon enforcement actions under these regulations that have been appealed above the Health Officer.
Board of Health	The Board approved by the Luce, Mackinac, Alger, and Schoolcraft County ~~«Name of Jurisdictions»~~ Board of Commissioners to sit as the LMAS District Health Department ~~«Name of Health Department of Jurisdiction»~~ Board of Health.
Department	«Name of Health Department Having Jurisdiction»District Health Department having jurisdiction.
Dwelling	Any house, building, structure, tent, watercraft, shelter, mobile home, camper, vehicle, or portion thereof which is occupied or adopted in whole or in part as a home, residence, or living or sleeping place for one or more occupants.
Environmental Health	Per Mich. Comp. Laws § 333.12101, the area of activity that deals with the protection of human health through the management, control, and prevention of environmental factors, which may

	adversely affect the health of individuals. This activity is concerned with the existence of substances, conditions or facilities in quantities, of characteristics, and under conditions, circumstances, or duration which are or can be injurious to human health.
Governing Board	The Board of Health and/or the Board of Commissioners to which the Department reports.
Habitable Building	Any building, or other place where occupants reside, are employed, or congregate, or any building adopted for such 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 administrative officer appointed by the local governing board who is responsible for the operations of the Department and the administration and enforcement of Michigan's Public Health Code, Act 368, P.A. 1978 as amended (Mich. Comp. Laws Ch. 333) and associated statutes within the legal jurisdiction of the Department. Health Officer also includes any employee or designee of the Department acting under the direction of the Health Officer during their normal course of duties.
His/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.
Occupant	Those persons who occupy, live, habitually use, or otherwise are in possession of any property or premise.
Owner	Both the owner of title record, and those persons occupying or in possession of any property or premises, or their designated representative.
Person	Any individual, firm, partnership, party, corporation, company, society, association, local governmental entity or other legal entity responsible for the ownership or operation of a premise, or an employee or officer thereof.

Permit	A written document issued and signed by the Health Officer which authorizes a person to construct, repair, or install an OSTDS or well.
Premises	A tract or parcel of land on which a habitable building or dwelling is, or would be, located and shall include the building or dwelling.

Article III – On-site Sewage Treatment and Disposal

3-1 Applicability

This article shall apply to single and two-family On-Site Sewage Treatment and Disposal Systems (OSTDS) and OSTDS other than private single or two-family residences, which utilize septic tanks and absorption system for peak daily flows less than 1,000 gallons per day.

Appeals on all sites which serve buildings other than single and two-family residences, including those with peak daily flows of less than 1,000 gallons per day evaluated under these regulations, shall be made to the Michigan Department of Environment Great Lakes and Energy or current State agency responsible under the Michigan Criteria for Subsurface Sewage Disposal, as written by the Division of Environmental Health, Bureau of Environmental and Occupational Health, Michigan Department of Public Health, April 1994, By authority of Act 368, P.A. 1978, as amended (Mich. Comp. Laws Ch. 333) and Act 451, P.A. 1994, as amended (Mich. Comp. Laws § 324.101 – 324.90106), or current State requirement.

3-2 Licensure

A. 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.

B. Nothing in this code shall preclude a property owner, who is not a licensed OSTDS installer, from installing an OSTDS for his own use under a valid permit.

C. The Department shall have authority to promulgate standards for licenses, registrations, renewals, and examinations.

D. 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.

E. An individual shall not make a false representation or impersonation or act as a proxy for another individual in connection with an examination or application for licensure or registration or a request to be examined, licensed or registered.

F. 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.

G. A licensee or registrant shall have available for inspection a certificate issued by the Department.

H. A license is not transferable.

I. No person shall permit anyone to operate under his license without supervision by the licensee.

J. The Department may deny, suspend, revoke, or refuse to renew any license for fraud or deceit in obtaining the license or for violating, or aiding or abetting in a violation of this code.

K. 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 XVI.

3-3 Technical Definitions - On-site Sewage Treatment and Disposal

Absorption System	The part of an OSTDS in which septic tank effluent is distributed by arrangement of trenches, beds, 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 installed below natural grade, at natural grade, or above natural grade on fill
Absorption Trench	An absorption system twelve to thirty-six (12-36") inches in width with one distribution line and installed below grade. Native soils shall remain in place between trenches in multiple trench systems.
Alter	To change the design or location of an existing OSTDS or any part of a system.
Alternative Sewage System	Any OSTDS that is not a conventional sewage system and meets ~~NSF/ANSI Standard 40 or equivalent~~the requirements of the Alternative Manual.

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.
Cesspool	A pit which receives raw sanitary 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 OSTDS containing a septic tank used in conjunction with ~~an~~ absorption ~~system~~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.
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 material between the natural grade and the limiting zone suitable for the installation of an absorption system.
Effluent	Partially treated sanitary sewage which is discharged from a septic tank or other sanitary sewage treatment system device.
Effluent Filter	A commercially produced filter designed to be installed in the outlet of a septic tank, or other approved location, for the

Formatted: Not Highlight

Formatted: Not Highlight

Formatted: Not Highlight

purpose of preventing the discharge of solid material from the septic tank to the absorption system.

Experimental System

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

Failing System

An OSTDS is considered to be failing if any one of the following conditions exists:

(1) The OSTDS fails to accept effluent at the rate of application.

(2) Sanitary sewage effluent seeps from, ponds on or around the OSTDS, or backs up into the structure.

(3) The Department has determined that the OSTDS has contaminated the groundwater, surface water, or a water supply.

(4) Any part of the OSTDS is bypassed; the system is the source of an illicit discharge; there is an absence of an absorption system and/or a septic tank, or there is a structural failure of a septic tank or other associated appurtenances.

(5) The OSTDS is creating or contributing to a threat to public health or the environment.

Fill and Fill Material

Soil that is placed beneath the absorption system of an OSTDS for the purpose of improving the infiltrative capacity of the native soil or to elevate the absorption system above a limiting layer to improve system performance.

Fill shall consist of clean medium sand uncontaminated by other soil texture classes or debris of any kind, unless otherwise specified as part of a permit condition and approved by the Department.

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 soil absorption system which interconnects the rear portion of the distribution line laterals.
Footing drains	A conduit installed around foundation footings to transport groundwater 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.
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 soil absorption 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 sanitary sewage effluent to be pumped, hauled, and disposed of in an approved manner by a licensed septage hauler.
Install	To alter, construct, place, or repair an OSTDS or any component thereof, or to provide labor or oversight under formal contract or informal agreement including excavation work, installation of fill material, placement of a tank or installation of associated piping.
Limiting Zone	Any horizon or condition in the soil profile or underlying strata which will interfere in any way with the treatment and/or infiltration of sewage effluent before entering the

	groundwater table. Such horizons include hardpans, fragipans, clay layers, compacted soils, bedrock, clayey soils, permanent and perched groundwater tables, and seasonal high water table.
Native Soil	Naturally occurring soil deposited through geologic processes and undisturbed by human activity. Native soil does not include soil deposited as fill.
Natural Grade	The ground elevation as it exists in the natural state prior to the placement of any fill.
New or Increased Use	The connection of a new structure to an existing OSTDS or the addition to a structure of at least one bedroom, or a change to a structure resulting in an increase in one bedroom or increased sewage flow rate of 150 gallons per day or more.
OSTDS	An On-Site Sewage Treatment and Disposal System having the primary design that incorporates a septic tank and an absorption system, or a privy.
OSTDS Installer	A person licensed to alter, install or repair an OSTDS.
Perched Water Table	The upper surface of a saturation zone resulting from a limiting zone.
Permeability	The quality of the soil which enables it to transmit water or air. Permeability values in these regulations are based upon standard estimates derived from the United States Department of Agriculture (USDA) established soil texture classes.
Privy	An enclosed non-portable toilet into which non-water-carried human wastes are disposed. Privies may be of earth pit or vaulted design.
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. Commonly known as a municipal sewage system.

Riser	A watertight attachment to the top of a septic tank or dose chamber that allows at grade access to the tank for inspection and maintenance.
Sanitary Sewage	Human wastes discharging from any plumbing fixture within a residence, building, commercial establishment, or other place, including toilets, sinks, showers, dish-washing, laundry wastes, and/or other associated fixtures.
Saturated Zone	A three 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 saturation zone 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.
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 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.
Sewer line	That part of the system of drainage piping which conveys sanitary sewage from a building or dwelling into an OSTDS or public sewer.
Site and Soils Evaluation	An on-site investigation to evaluate the suitability of a site (i.e., a specific location on each parcel) to support a functional, legally compliant, and environmentally sound OSTDS.
Slope	The rate of fall or drop in feet per one hundred (100') feet 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 United States Department of Agriculture (USDA) Soil texture classes used in this regulation are 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 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.

Sandy Clay Loam — Consists of 20 to 35 percent clay, less than 28 percent silt, and 45 percent or more of sand. When moist, a thin ribbon of 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.

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 (1/8") inch 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 (1/8") inch 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 (1/16") inch 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 manmade, 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 months in any one year.

Surface Water	Any natural or manmade body of water that exists on the ground surface for ~~greater than two months in any one year~~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 designed and constructed for the purpose of receiving sanitary sewage.

3-4 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 for the disposal of sanitary sewage unless properly connected to a public sewer. 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.

3-5 Public Sewer Connection

All facilities from which sanitary sewage flows shall be connected to an available sewer. When the Department has determined a lack of an available sewer, all facilities from which sanitary sewage flows shall be connected to an approved OSTDS.

3-6 Permits Required

3-6.1 Permit Application

A. An application to construct, alter, extend or replace a residential or commercial OSTDS shall be provided by the Department.

B. An application for a permit to construct, alter, extend or replace a residential or commercial OSTDS shall be submitted by the property owner or his authorized representative using the appropriate form provided by the Department.

C. The Department shall not act upon any application unless the application is complete.

3-6.2 Construction Permits

A. No person shall construct, alter, extend, or replace a residential or commercial OSTDS without first having been issued a construction permit from the Department.

B. Any permit issued pursuant to the requirements of this code shall be valid for the term of 24 months from the date of issuance unless declared void as provided in this code. After the expiration of the construction permit, a 30-day grace period shall exist for an extension request. A construction permit may be extended for a period of 24 months.

C. A permit shall not be transferable from one person to another.

D. A permit may be rescinded or declared void by the Department when one or more of the following conditions exist:

    1. The location of the OSTDS specified on the permit is altered.

    2. There is an increase in the scope of the project prior to, during, or following construction of the OSTDS.

    3. The Department acquires new information indicating that the previous permit approval does not satisfy the requirements of this code.

    4. The construction standards and prohibitions set forth in this code are violated before, during, or after construction.

    5. The Department has reasonable cause to believe that an intentional misrepresentation has occurred, or continued operation of the OSTDS constitutes a nuisance.

E. The Department shall not issue a construction permit for any residential OSTDS which does not meet the minimum criteria set forth in Section 3-14.1. The reasons for denial shall be furnished to the applicant in writing.

F. The Department shall not issue a construction permit for any commercial OSTDS having a sewage flow rate of greater than 1,000 gallons per day, which does not meet the minimum criteria set forth in the Michigan Criteria for Subsurface Sewage Disposal, D48 Rev. 4/94, By authority of Act 368, P.A. 1978, as amended (Mich. Comp. Laws Ch. 333) and Act 451, P.A. 1994, as amended (Mich. Comp. Laws § 324.101 – 324.90106), or current State of Michigan requirement governing the installation of subsurface sewage disposal and treatment systems designed to handle sanitary sewage. The reasons for denial shall be furnished to the applicant

in writing.

G. The Department may require specific technologies, procedures, or construction practices as a condition of the permit.

H. The Department 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.

I. Any variance to the requirements of these regulations shall be documented by the Health Officer.

J. The Health Officer shall have the authority to issue a construction permit for an alternative OSTDS pursuant to an application and the criteria of the alternative manual, if the site does not meet the site requirements for a conventional OSTDS.

K. The OSTDS installation contractor shall have a valid permit in possession on-site at the time of construction.

Formatted: Highlight

Formatted: Not Highlight

Formatted: Not Highlight

3-6.3 Priority Over Building Permits

A. No municipality, township, county, or other governing body shall issue a building permit for, or otherwise allow commencement of construction or placement of, any habitable building on any land not served by an available sewer until a permit has first been obtained from the Department for an OSTDS and proof of a permit has been received.

B. No municipality, township, county, or other governing body shall issue a building permit for, or allow commencement of construction of, any addition to or alteration of any habitable building which would result in an increase in the number of bedrooms and/or additional sewage flows for any habitable building located on any land not served by an available sewer 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 Department.

C. A municipality, township, or other agency or an officer or employee thereof shall not issue an occupancy permit for any newly constructed or placed habitable structure until final approval of the structure's water supply and sanitary sewage connection has been granted by the Department.

3-7 Use of Existing Systems

3-7.1 Authorization to Use an Existing OSTDS

A. No person shall connect any habitable structure to an existing OSTDS except where allowed, in writing, by the Department.

B. Sewage flow to an existing OSTDS shall not be increased beyond the original design capacity of the existing system except where permitted in writing by the Department.

C. Approval of a new/increased use is not required for the following:

1. 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 new or increased use is not proposed.

2. 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, the proposed dwelling was constructed, and new or increased use does not occur.

3. New or increased use was approved within the past two years, through the performance of an existing system evaluation, and an additional new or increased use has not occurred and is not proposed.

3-7.2 Existing OSTDS of Permit Record

When a permit record with a final inspection conducted by the Department is available for the existing OSTDS in question, the new or increased use of the system may be granted when the following conditions are met:

A. A system evaluation, conducted by the Department or an authorized representative thereof, reveals no signs of system failure.

B. The septic tank shall have been pumped and evaluated by a septage hauler within the last three years. A written report shall be provided by the septage hauler to the Department on forms provided. The report shall include information regarding the tank's materials and construction, condition, volume, and presence or absence of an outlet baffle.

C. The proposed new/increased use is no greater than a one bedroom increase for residential structures or 150 gallons per day in the projected sanitary sewage flow

for commercial structures.

D. When the projected sanitary sewage flow is greater than 150 gallons per day or a one bedroom increase, the OSTDS shall be modified or replaced to meet the requirements of these regulations. Permits shall be obtained for any modification or replacement.

3-7.3 Existing OSTDS of No Record or Permitted Systems with No Record of a Final Inspection Performed by the Department.

When a permit record is not available, or when no record of a final inspection conducted by the Department is available, for the existing OSTDS in question, the new or increased use of the OSTDS may be granted when the following conditions are met:

A. When adequate site and soil information, including water table information, is not recorded in the permit file, or when no permit exists, a site and soils evaluation shall be performed in the area of the existing OSTDS by the Department or an authorized representative thereof. It shall be the applicant's responsibility to provide excavations for the purpose of evaluation of soil conditions.

B. Minimum of twenty four inches (24") of soil exists between the limiting zone and the bottom of the absorption system.

C. Isolation distances meet the requirements of this code as specified in Table 3-14.2A.

D. The septic tank shall be pumped and evaluated by a septage hauler, as part of the existing system evaluation process, with results reported to the Department on forms provided.

E. An OSTDS evaluation, conducted by the Department or an authorized representative thereof, reveals no signs of OSTDS failure.

F. The proposed new or increased use is no greater than a one bedroom increase for residential structures or 150 gallons per day in the projected sanitary sewage flow for commercial structures.

G. When the projected sanitary sewage flow is greater than 150 gallons per day or a one bedroom increase, the OSTDS shall be modified or replaced to meet the sizing requirements of this code. Permits shall be obtained for any modification or replacement.

3-7.4 Failing Existing System

A. The Department shall condemn any existing OSTDS meeting the definition of a failing system per these regulations.

B. Any OSTDS so condemned shall be repaired, rebuilt or replaced by an OSTDS constructed according to the provisions of these regulations where possible, or by another method approved by the Department in order to abate a public health nuisance, within a specified period of time not to exceed 90 days after official notification from the Department, unless there is an imminent hazard to the public health, safety, and welfare by the continued improper drainage.

3-8 Connection of Discharges

A. All facilities such as flush toilets, urinals, lavatories, sinks, bathtubs, showers, laundry or any other facility from which sanitary sewage flows shall be connected to an OSTDS, except that any such facilities hereafter installed on a premise where public sewer is available, shall be connected to said sewer.

B. The following shall not be connected to an OSTDS:

1. Seepage water from footing drains or underground flows.
2. Surface runoff or roof drainage from rainfall or snow melts.
3. A swimming pool, hot tub (spa) or its appurtenances.
4. Brine or recharge water from any water treatment system.
5. Chemical solutions or other wastes which would interfere with biological action in the treatment facilities.

C. The Department may require suitable provisions for the proper discharge or disposal of liquid wastes listed above.

3-9 Public or Private Drain of Unknown Course and Origin

A. Whenever the Department determines that improperly treated sanitary sewage is flowing from the outlet of any public or private drain, the Department shall notify in writing persons owning, leasing, or residing on the premises from which sanitary sewage originates to connect to a public sewer, an approved OSTDS, or to otherwise abate the discharge.

B. The notice to the owners, leaseholder, or residents of such properties shall inform

said persons of such unlawful discharge of improperly treated sanitary sewage into such drain and shall specify the maximum period of time not to exceed 90 days within which such unlawful discharge shall be terminated.

C. If after the expiration of the minimum period of time specified in the notice, such unlawful discharge continues, the Department may plug or cause to be plugged the outlet(s) from the drain to render it incapable of discharge of improperly treated sanitary sewage.

D. Where the Department is unable to plug the flow of sanitary sewage, the Department shall institute all necessary and proper legal remedies to abate the nuisance and threat to the public's health, safety, and welfare, which shall include restraining orders, temporary and permanent injunctions and summary proceedings to vacate the premises or condemnation until such time as the sources of pollution have been eliminated or the pollution properly controlled. Citation and proceedings shall be consistent with Article XIV and Article XVI of this code.

3-10 Prohibitions

A. No person shall discharge sanitary sewage to the ground surface or surface water.

B. Any substance not defined as sanitary sewage by this code shall not be discharged to the OSTDS without the approval from the Health Officer.

C. Cesspools are prohibited.

D. On-site storage and hauling of sewage, or the use of a pump and haul method, in lieu of the handling of sewage through an approved OSTDS or a municipal sewer connection, for sewage originating from structures other than privies shall be prohibited.

~~D.~~E. The disposal of sanitary 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:

1. During construction of a public sewer or approved sewage treatment facilities to serve the proposed development.

2. The installation of an approved OSTDS has been delayed by weather conditions or seasonal construction limitations.

3. The holding tank is serving a temporary construction site.

Formatted: Font:

Formatted: Indent: Left: 1", No bullets or numbering

4. 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.

F. Notwithstanding the prohibition in Subsection D above, the on-site storage and hauling of sewage originating from existing structures, other than privies, may be approved by the Department of Environmental Health under strictly short-term temporary emergency conditions, not longer than 1 year, for the purpose of the protection of public health and the environment until such time that conditions permit the installation of an approved OSTDS or municipal sewer connection.

G. On-site storage and hauling of sewage, or the use of a pump and haul method, must meet the following conditions for short-term temporary use in an emergency:

1. Tanks used for the storage of sewage shall be watertight and designed in accordance with the code including statutes and guidelines referred to by reference.

2. Tanks used for the storage of sewage shall be sized with a capacity capable of meeting the flow demands of the structure to which they are connected with a capacity sufficient to meet the scheduling frequency of the licensed septage pumper and hauler with a designed safety margin of a minimum of 33% additional capacity.

3. Under no circumstances shall a tank system used for the storage of sewage be of a capacity that is less than the capable 72 hours of retention of sewage flow from the structure with a 48-hour pump and haul frequency.

4. An ongoing contract for the pumping and hauling of sewage by a licensed septage hauler shall be obtained by the property owner at the property owner's expense. A copy of the current pump and haul contract shall be provided to LMAS and shall be congruent with the volume retention time of the sewage storage tank.

5. At no time shall sewage be discharged from the sewage storage tank to the environment.

6. Any discharge from the sewage storage tank to the environment, or any deviation from the approved on-site storage and hauling of sewage, or deviation from the approved pump and haul process shall be grounds for the immediate termination of any approval and/or condemnation of the structure from which sewage is generated.

~~E.~~ On-site storage and hauling of sewage, or the use of a pump and haul method, in lieu of the handling of sewage through an approved OSTDS or a municipal sewer

Formatted: Indent: Left: 0.76", No bullets or numbering

Formatted: Font: 12 pt

Formatted: Indent: Left: 0.5", Space After: 8 pt, Line spacing: Multiple 1.08 li, No bullets or numbering, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: Indent: Left: 1.5", No bullets or numbering

Formatted: Indent: Left: 1.5", No bullets or numbering

Formatted: Indent: Left: 1.5", No bullets or numbering

Formatted: Indent: Left: 1.5", No bullets or numbering

Formatted: Indent: Left: 1.5", No bullets or numbering

Formatted: Font: 12 pt

Formatted: List Paragraph, Add space between paragraphs of the same style

Formatted: Justified

connection, shall not be approved for convenience purposes, financial purposes, or to circumvent environmental limitations that would preclude the installation of an approved OSTDS. ~~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 manual.~~

H.

I. On-site storage and hauling of sewage, or the use of a pump and haul method, will not be approved in areas where the practice is prohibited by local zoning or where other statutes and/or ordinances prohibit the same without prior approval from the applicable authority.

Formatted: Font: 12 pt

Formatted: List Paragraph, Indent: Left: 0.76", Add space between paragraphs of the same style, No bullets or numbering, Widow/Orphan control, Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

3-11 Site and System Evaluations

3-11.1 Minimum Test Excavations

A. Prior to the issuance of a permit to install a commercial or residential OSTDS, the Department shall conduct a site and soils evaluation to determine the ability of the parcel to meet the minimum requirements of these regulations. Backhoe cut excavations may be required and shall be provided at the expense of the applicant.

B. The depth, number, type and location of soil excavations required to evaluate site suitability for the installation of a permitted OSTDS shall be determined by the Department and shall be consistent with the contract requirements of the State.

C. A complete site and soil evaluation shall include, but shall not be limited to, the following information:

1. Soil permeability, based upon soil texture and structure in the native soil profile to a depth of at least three feet below the proposed infiltrative surface beneath the absorption system.
2. A determination of the seasonal high water table elevation.
3. Slope limitations.
4. Location of the site in relationship to flooding or seasonal ponding of surface water.
5. Availability of sufficient area to install an adequate compliant OSTDS and an area for a replacement OSTDS when required.
6. Adequate area to maintain all required isolation distance.
7. A determination of any other limiting factor to the installation and

performance of the proposed OSTDS.

D. The Department may require as part of a soil evaluation, information including but not limited to engineering plans or drawings, topographic maps of a site indicating surface relief and/or grade elevations, soil analyses, additional soil test borings, groundwater elevations, flood elevations, information specific to easements, right-of-ways, parcel boundaries etc.

E. A site and soil approval for the suitability of installation of an OSTDS shall be valid for not more than 24 months.

F. Approval or denial of a site proposed for the installation of an OSTDS shall be provided in writing to the applicant.

3-11.2 Seasonal/Weather Restrictions

A. A site and soils evaluation shall not occur when depth of snow cover, frost, or other impeding condition prohibits adequate evaluation of a parcel of land to determine the suitability of a site proposed for the installation of an OSTDS.

B. Installation of an OSTDS shall not occur when it is reasonable to assume that weather and site conditions will result in a compromise to the construction, installation, and/or long-term operation of the proposed system.

3-11.3 Final Construction Inspections

A. All permitted OSTDS installed shall receive a final construction inspection prior to being placed into use and prior to being approved by the Department.

B. It shall be unlawful to backfill or cover any portion of a newly installed component of any OSTDS until a final construction inspection has been completed and/or approval to backfill has been granted by the Department.

C. The Department shall deny final approval of any installation which does not comply with any permit condition, is of faulty workmanship and/or construction materials or otherwise does not meet requirements of these regulations.

D. Installation contractors shall notify the department 72 hours in advance of the date of completion of the OSTDS to schedule the final construction inspection. The Department shall perform the final inspection of the OSTDS within 72 hours of completion of installation, if advanced notification is provided as required.

E. After Department final approval inspection of the construction of a newly installed OSTDS, or any newly installed component thereof, backfilling/covering shall be

completed within 72 hours unless otherwise approved by the Health Officer.

F. When a final construction inspection cannot be performed due to unforeseen circumstances, the Health Officer may allow submission of an affidavit of construction on a form provided by the Department in lieu of a final construction inspection.

3-12 Commercial OSTDS

A. All OSTDS proposed to receive sanitary sewage from habitable buildings other than single and two-family residential structures shall comply with these regulations and the requirements of the Michigan Criteria for Subsurface Sewage Disposal, as written by the Division of Environmental Health, Bureau of Environmental and Occupational Health, Michigan Department of Public Health, April 1994, By authority of Act 368, P.A. 1978, as amended (Mich. Comp. Laws Ch. 333) and Act 451, P.A. 1994, as amended (Mich. Comp. Laws § 324.101 – 324.90106), or current State requirements governing commercial OSTDS designed to receive sanitary sewage.

B. The minimum site criteria for residential systems as specified in Section 3-14.1 of 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.

~~C. The Department shall use the Michigan Criteria for Subsurface Sewage Disposal, as written by the Division of Environmental Health, Bureau of Environmental and Occupational Health, Michigan Department of Public Health, April 1994, By authority of Act 368, P.A. 1978, as amended (Mich. Comp. Laws Ch. 333) and Act 451, P.A. 1994, as amended (Mich. Comp. Laws § 324.101 – 324.90106), or current State requirement, for sizing and design criteria for those systems less than 1,000 gallons per day serving a structure other than a single or two-family residence.~~

Formatted: Indent: Left: -0.31"

~~D.~~C. The minimum size of any OSTDS proposed to receive sanitary sewage from habitable buildings other than single and two-family residential structures shall be a system of a 1,000 gallon septic tank connected to a 200 ft^2 absorption system or greater based upon estimated sewage flows and loading rates.

~~E.~~D. 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 sited and constructed in accordance with the guidelines set forth by the Michigan Department of Environment, Great Lakes, and Energy in the most current revision of the publication entitled Michigan Criteria for Subsurface Sewage Disposal, as written by the Division of Environmental Health, Bureau of Environmental and Occupational Health, Michigan Department of Public Health, April 1994, By authority of Act 368, P.A. 1978, as amended (Mich. Comp. Laws Ch. 333) and Act 451, P.A. 1994, as amended (Mich. Comp. Laws §

324.101 – 324.90106), or current State statute.

F. All OSTDS proposed to receive sanitary sewage from habitable buildings other than single and two-family residential structures shall be equipped with the following:

1. A septic tank outfitted with an effluent filter designed for commercial applications.

2. A septic tank equipped with a water-tight access riser installed to facilitate the pumping of the septic tank and the maintenance of the effluent filter, or other internal components, without the need to excavate the lid.

3-13 Lots less than 1 Acre, Subdivisions and Site Condominiums

Site and soils evaluations for an OSTDS proposed to be located on a parcel of less than one acre as created after March 31, 1997, a parcel within a subdivision, a parcel which is classified as a site condominium, or a parcel that was otherwise created in excess of the allowable number of exempt parcel splits under the Land Division Act, Act 288, PA 1967, (Mich. Comp. Laws Section 560) shall comply with all aspects of the rules entitled Part 4. Department of Environmental Quality On-site Water Supply and Sewage Disposal for Land Divisions and Subdivisions, being R560.401-R560.428 of the Michigan Administrative Code, or current State statute, prior to permitting.

Appeals on all such sites shall be made to the Michigan Department of Environment, Great Lakes, and Energy or current State agency responsible under the Michigan Criteria for Subsurface Sewage Disposal, as written by the Division of Environmental Health, Bureau of Environmental and Occupational Health, Michigan Department of Public Health, April 1994, By authority of Act 368, P.A. 1978, as amended (Mich. Comp. Laws Ch. 333) and Act 451, P.A. 1994, as amended (Mich. Comp. Laws § 324.101 – 324.90106), or current State requirement.

3-14 Residential Single and Two-family On-site Sewage Treatment and Disposal System (OSTDS) Construction

The following requirements shall apply to the construction and installation of all OSTDS.

3-14.1 Minimum Site Requirements

A. Conventional Sewage System

1. Soil permeability rates of the native soil in the proposed infiltrative area of the absorption system shall be between 3 and 45 minutes per inch, as estimated by the USDA soil texture class.

2. The effective native soil depth or depth to seasonal high water table shall 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.

3. The natural slope in the proposed infiltrative area of the system shall not exceed twelve percent (12%). When natural slopes are greater than 12%, the department may require a detailed development plan to be submitted for review and approval by the Department.

   Development plans shall be drafted by a licensed professional engineer, a professional surveyor, a registered sanitarian, a registered environmental health specialist, or other professional approved by the health department.

   Development plans shall be to scale with a maximum two foot (2') contour interval, with both the existing and proposed contours indicated. The development plan shall show the proposed design for the initial and replacement OSTDS, and shall indicate the location of the existing or proposed dwelling and water supply well. Locations of the OSTDS and the water supply well shall facilitate ease of access for future maintenance and/or replacement.

4. Deep cut excavations to remove undesirable soil horizons shall be made to a soil horizon meeting the requirements of Section 3.14.1.A.1 and 2.

5. The isolation distances shall meet the requirements set forth in Section 3-14.2.A of this code.

6. The site of the proposed system shall not be located in a floodplain of 100 years or less, or in an area subject to seasonal flooding, runoff, or ponding of surface waters. It shall be the property owner's responsibility to document the 100 year flood plain as recognized by the Michigan Department of Environment Great Lakes and Energy (EGLE), or appropriate agency, at the request of the Department.

7. The system shall be located so that it is accessible for cleaning or inspection purposes.

8. The proposed site shall not have an available sewer by definition.

B. Alternative OSTDS

Specific site requirements for the installation of an OSTDS employing alternative treatment technologies may be defined by the Health Officer on a case by case basis or may be defined in the Alternative Ttechnical Mmanual.

C. 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.

3-14.2 Construction Requirements

A. The proposed OSTDS shall satisfy the isolation requirements as summarized in Table 3-14.2.A.

B. The soil depth between the limiting zone and the aggregate/soil interface shall not be less than thirty-six inches (36").

C. Prior to entering the soil absorption system, all sewage shall first be treated by a septic tank.

D. 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 3-14.2B.

E. The absorption system shall have a minimum absorption area of 400 ft^2 for a bed system, or 300 ft^2 for a trench system.

F. Alternative sewage systems shall be designed in accordance with the specifications of the technical manual.

TABLE 3-14.2 A - Isolation Distance

From	To				
	Sewer Lines	Septic Tanks	Absorption System	Earth Pit Privies	Vaulted Privies
Residential Well	10	50	50	50	50
Type IIB and Type III Public Water Supply Wells	10	75	75	75	75
Type IIA and Type I Public Water Supply Wells	10	200	200	200	200
Property Lines	n/a	10	10	10	10

Foundation Wall/Footing Drains	n/a	5	10	10	5
Storm/Subsoil Drains	n/a	5	25	25	5
Water Lines	n/a	10	10	10	10
Embankments	n/a	10	20	20	10
Surface Water	n/a	75	75	75	75

TABLE 3-14.2 B - Absorption System Sizing - Minimum Sizing 400 ft² bed 300 ft² trench

Texture Class of Native Soil	Estimated Permeability Rate		Sewage Application Rate (gpd/ft²)		Minimum Absorption Area Required (ft²/bedroom)	
	inches/hour	minutes/inch	bed	trench	bed	trench
Coarse Sand, Gravel, Gravelly Sand	>20	<3	Not Suitable – Infiltrates too quickly to provide adequate treatment to protect groundwater/surface water.			
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
Silty Loam, Sandy Clay Loam	2.0-1.35	31-45	0.3	0.4	500	375
Clay Loam, Silty Clay Loam Silty Clay	Not Suitable – Infiltrates too slowly to accept sewage at rates applied.					

3-14.3 Aggregate/Stone

A. Aggregate/Stone Material

1. Aggregate shall be washed stone ranging in size from three-eighths inch (3/8") to two and one-half inches (2½") with a total fines content not

exceeding five-tenths percent (0.5%) loss by washing. Stone aggregate shall rate three or more on Mohs scale of hardness. Sizing and hardness specifications and testing methodology shall be defined in the technical manual.

2. Alternative aggregate may be approved by the Department.

3. Documentation shall be provided to the Department upon request that all aggregate used in sewage systems complies with above size and fines requirements.

B. Aggregate/Stone 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.

C. Aggregate Cover

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

2. Other materials used as aggregate cover shall be approved by the Department or shall be consistent with the current technical manual.

3. The septic system shall be backfilled with a minimum of six inches (6") and a maximum of thirty inches (30") of soil cover.

3-14.4 Absorption System Distribution

A. Piping within a gravity distribution network of an absorption system shall meet the following conditions:

1. The septic tank effluent line shall be solid schedule 40 PVC and connect to the header at a ninety (90°) degree angle between the centermost laterals.

2. A double header or wye (Y) shall be required when seven or more laterals

are used.

3. The header shall be solid piping installed to be level to allow even distribution of effluent throughout its length. The header shall connect all lateral distribution pipes within the absorption system.

4. The footer shall connect to all distribution line laterals within the absorption system.

5. Distribution line laterals for absorption bed installations shall be placed a minimum of three feet (3') and a maximum of four feet (4') on center unless otherwise approved by the Department.

6. The slope of the distribution lines shall not exceed four inches (4") in one hundred feet (100').

7. Trenches shall be installed so that a minimum of thirty-six inches (36") of undisturbed soil remains between each trench.

8. All piping and distribution products shall be approved by the Department.

B. All perforated pipe shall be installed with centerline markings facing up to allow for proper drainage.

C. Installation of technologies not comprising a conventional stone aggregate and perforated pipe design shall obtain approval of the Department prior to permitting and installation, or shall be designed specifically in accordance with the Department's technical manual.

3-14.5 Septic Tanks

A. Septic tanks shall be watertight and constructed of concrete or other materials approved by the Department.

B. 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.

C. 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 Department, increased capacities may be required. Each additional bedroom shall require an additional 250 gallons. Each garbage grinder shall require an additional 250 gallons.

D. Septic tanks shall be equipped with an approved effluent filter installed in the outlet baffle, or other approved location.

E.

F. Septic tanks shall be equipped with a water tight access riser installed to grade to facilitate maintenance. Risers shall be installed with dual lids, leaving the concrete lid in place, or shall be equipped with other Department approved safety device to preclude accidental tank entry.

G. The Department may require septic tank vendors delivering septic tanks to construction sites to record addresses and names of locations and individuals receiving tanks. These records may be required to be made available to the department for a running 24-month period.

H. All septic tanks shall be installed to be level and to flow in accordance with the manufacturer's design intent.

I. All systems receiving sewage from a grinder pump shall be equipped with a minimum of two 1,000 gallon septic tanks. The first septic tank shall be installed in series to allow the settling of sewage discharged by the pump and shall be equipped with an outlet baffle.

J. When septic tanks, privies, temporary privies, or portable toilets are cleaned or serviced, the agency performing such service shall comply with Part 117 P.A. 451 of 1994 (Mich. Comp. Laws § 324.11701 et seq.), as amended, or current State of Michigan requirement, and 40 CFR, Part 503 or current Federal requirements.

3-14.6 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.

3-15 Privies/Outhouses

A. Permitting of Privies

1. Privies may be permitted for public or private use.

2. Privies shall not be installed where not compliant with State of Michigan construction codes, associated Technical bulletins, policies, and advisories.

3. Privies shall not be permitted in lieu of the installation of a septic system for structures served by pressurized plumbing, or otherwise generating water carried sewage.

4. Vaulted or earth pit privies may be permitted if there is no available sewer for connection.

5. Privies shall not be permitted within a 100 year floodplain boundary. The property owner shall be responsible for documenting the 100 year floodplain elevation as recognized by the Michigan Department of Environment Great Lakes and Energy upon the Department's request.

B. Earth Pit Privies

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

1. Soil permeability rates of the native soil in the proposed infiltrative area of the absorption system shall be between 3 and 45 minutes per inch, as estimated by the USDA soil texture class.

2. The effective soil depth shall be a minimum of sixty inches (60") from natural grade.

C. Privy Construction

1. All privies shall be constructed and maintained in accordance with Section 12771 of Act 368, P.A. of 1978 (Mich. Comp. Laws § 333.12771) and R 325.421 et seq. of the Michigan Administrative Code promulgated there under, or current State requirement.

2. The bottom of the pit of an earth pit privy shall terminate a minimum of thirty six inches (36") above the limiting zone.

3. Vault privies shall have a minimum tank capacity of 1,000 gallons, shall be of water tight construction, and shall be located to facilitate pumping of waste.

4. Privies shall be located at least fifty feet (50') from all habitable buildings other than that which they serve.

5. Privies shall be located as prescribed in Table 3-14.2.A of these regulations.

3-16 Abandonment of OSTDS

When an OSTDS is abandoned, it shall be rendered to prevent a potential safety hazard. Abandoned septic tanks shall be pumped and the contents disposed of by a licensed septage waste hauler according to law. The septic tank shall then be collapsed and filled with an approved

material or shall be removed and transported and disposed of at a Type II landfill in accordance with law.

Article IV – Commercial OSTDS 1,000 gallons/day to 10,000 gallons/day

4-1 Applicability

This article shall apply to OSTDS other than private single or two-family residences, which utilize septic tanks and absorption system for peak daily flows greater than 1,000 gallons per day flow and less than 10,000 gallons per day flow.

Appeals on all sites which serve buildings other than single and two-family residences, including those with peak daily flows of less than 1,000 gallons per day evaluated under these regulations, shall be made to the Michigan Department of Environment, Great Lakes, and Energy or current State agency responsible under the Michigan Criteria for Subsurface Sewage Disposal, as written by the Division of Environmental Health, Bureau of Environmental and Occupational Health, Michigan Department of Public Health, April 1994, By authority of Act 368, P.A. 1978, as amended (Mich. Comp. Laws Ch. 333) and Act 451, P.A. 1994, as amended (Mich. Comp. Laws § 324.101 – 324.90106), or current State requirement.

4-2 Requirements

A. All OSTDS proposed to receive sanitary sewage from habitable buildings other than single and two-family residential structures shall comply with these regulations and the requirements of the Michigan Criteria for Subsurface Sewage Disposal, as written by the Division of Environmental Health, Bureau of Environmental and Occupational Health, Michigan Department of Public Health, April 1994, By authority of Act 368, P.A. 1978, as amended (Mich. Comp. Laws Ch. 333) and Act 451, P.A. 1994, as amended (Mich. Comp. Laws § 324.101 – 324.90106), or current State requirements governing commercial OSTDS designed to receive sanitary sewage.

Article V – Water Wells

5-1 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 (Mich. Comp. Laws §333.12701), the Michigan Safe Drinking Water Act, 1976 PA 399 (Mich.

Comp. Law Section 325), or current State requirement. This Article does not apply to the installation of wells, water mains, service lines, etc., which are part of a Community water supply as defined by the Michigan Safe Drinking Water Act.

5-2 Technical Definitions

Abandoned Well	A well which has its use discontinued, has been left uncompleted, is a threat to the groundwater resource, is or may be a health or safety hazard, or that is in such disrepair, or its construction is such, that its use for the purpose of obtaining groundwater is impractical.
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 (one cubic foot) of dry sand 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 freshwater. 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 Department 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 supply well used to obtain water for drinking 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. This includes both supply and return wells and vertical bore holes for closed-loop systems.
5. An industrial well used to supply water for non-potable 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.

5-3 – Well Permits

5-3.1 Application for Permit

A. An application for a water supply construction permit shall be provided by the Department.

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

C. The Department shall not act upon an application unless the application is complete. To avoid illicit sewage discharge which could create a public health threat or a threat to groundwater, surface water, or the environment, the availability of an OSTDS or municipal sewer serving the structure and suitable to handle water carried sewage must be verified prior to the issuance of a well permit.

5-3.2 Construction Permits

A. 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.

B. Prior to the issuance of a well permit, the availability of a suitable OSTDS serving the structure must be verified by one of the following methods:

1. The parcel must have an existing home with an existing OSTDS.

2. The permit applicant must simultaneously apply for an OSTDS permit for vacant par4cels. The OSTDS shall be installed prior to using the well. If the well is drilled first and the applicant does not install the required OSTDS, then owner will be ordered to abandon the unapproved water supply well.

3. If the well is proposed in a location in which the municipal sewer is available, then owner is responsible for contacting the municipality to determine if any ordinance exists that prevents the installation of an o-site water supply well at the proposed site. Applicant must provide LMAS verification from the municipality that a well is allowed at the proposed location along with any stipulations imposed by the municipality.

4. If the well is proposed to be an industrial well, irrigation well, test well, or other well proposed not to be connected to a structure, a site evaluation must be conducted by LMAS to verify that no structure exists on the parcel which could potentially be connected to the proposed water supply well. If a structure, which could potentially be connected to the proposed water supply well, is

Formatted: Font: 12 pt

Formatted: Indent: Left: 1", No bullets or numbering

Formatted: Indent: Left: 1.25", No bullets or numbering

Formatted: Indent: Left: 1.25", No bullets or numbering

Formatted: Font: 12 pt

Formatted: Indent: Left: 1.25", No bullets or numbering

found to exist on the parcel, one of the conditions in subsections 1-3 above must be satisfied prior to the issuance of the well permit.

Formatted: Font: 12 pt

Formatted: Indent: Left: 1.25", No bullets or numbering, Tab stops: 1.5", Left

~~B.~~C. Any construction permit issued pursuant to the requirements of this Code shall be valid for a term of 24 months from the date of issuance unless declared void as provided in this code. After the expiration of the construction permit, a 30-day grace period shall exist for an extension request. A permit may be renewed (extended) one time for a period of 24 months.

~~C.~~D. A permit shall not be transferable from one person to another.

~~D.~~E. The Department 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.

~~E.~~F. The Department may allow a change in the proposed well location for a permitted supply without additional application fees. The Department may require a site plan signed by the property owner(s) or their authorized representative.

~~F.~~G. A permit may be rescinded or declared void by the Department when one or more of the following conditions exist:

1. A change in the plans of the permit holder affecting circumstances relative to the water supply design, location, or use.

2. Misrepresentation, omission, or withholding pertinent information upon which compliance with the minimum requirements contained within this code are based.

3. Issuance of the permit, and/or the construction of facilities thereunder, may create a condition that constitutes a nuisance, or a threat to public health or the environment.

~~G.~~H. The Department 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. An onsite evaluation may be required prior to issuance of the permit.

~~H.~~I. The permit may impose limitations or require special construction practices which the Department 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.

~~I.~~J. The well driller/contractor shall have a valid permit in possession and on-site at the time of construction, unless operating under emergency conditions per Section 5-11.

~~J.~~K. A separate water supply construction permit for each well on the premises may be required by the Department.

~~K.~~L. Pressurized water shall not be plumbed to a building without an approved connection to an OSTDS, or available sewer.

5-3.3 Construction Permit Not Required

A. A permit is not required for minor repairs to the water supply system such as replacing a telescoped well screen, changing a screen elevation, 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.

B. 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, (Mich. Comp. Laws Section 324) amended, or current State statute regulating mineral exploration.

C. If the owner, owner's agent, well driller, or pump installer is required to obtain a permit directly from the Michigan Department of Environment, Great Lakes, and Energy in accordance with the requirements established under the provisions of the 1976 PA 399, Michigan's Safe Drinking Water Act (Mich. Comp. Laws Section 325), they shall not be required to obtain a permit from the local health department. When the Department 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 (Mich. Comp. Laws Section 325), the permit shall be issued in accordance with Section 5-3 of this Article.

5-4 Availability of Public Water Supply

A. 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.

B. When a public water supply is available the Department will contact the municipal water supplier prior to issuing a permit.

5-5 Water Well and Pump Record

A water well and pump record shall be submitted to the Department in accordance with Administrative Rule 325.175 adopted under authority of Part 127, of Act 368 (Mich. Comp. Laws Section 333), Michigan's Public Health Code, or current State requirement, and when any of the following conditions apply:

A. A well is deepened after completion.

B. A liner pipe is installed.

C. The capacity of the well is increased by 10 gpm or more.

D. A well screen is replaced.

E. A different aquifer is utilized.

F. A bedrock well is plugged back.

G. A pump is replaced.

H. An underground pressure tank is installed.

I. A pitless adapter is installed.

J. A well is hydraulically fractured.

K. A water well and pump record is requested by the Department.

5-6 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 exists:

A. A water supply construction permit has first been issued.

B. Provisions for a water supply system have been accepted by the Department.

C. The Department does not require a water supply system.

5-7 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.

5-8 Notification

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

5-9 Well Inspection and Approval

5-9.1 Inspection

A. The Department may inspect the water supply system construction or well drilling process.

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

5-9.2 Approval

A. 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 Code, other applicable codes, and the permit requirements.

2. A completed "Water Well and Pump Record", and the associated abandoned well plugging record if applicable, has been submitted, reviewed, and approved.

3. The Department, upon review of the required water sample analysis results, has determined that the water quality meets safe drinking water standards for the parameters tested.

5-10 Rental Properties

A. Water supplies serving rental properties may be condemned and ordered corrected by the Department when any one of the following conditions exists:

1. The water quality from the well does not meet safe drinking water standards.

2. The Department determines that continued use of a well represents a potential health hazard.

3. A well is found to be in violation of previous applicable rules which were in effect at the time of construction.

B. A condemnation order shall be provided by the Health Officer in writing to the owner of the water supply. The order shall specify the conditions and methods of correction and establish a compliance date not to exceed 90 days.

C. 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.

5-11 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.

5-12 Grouting Requirements for Bedrock Wells

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

5-13 Hydraulic Fracturing

A. Hydraulic fracturing to improve water well capacity shall be in accordance with the Michigan Department of Environment, Great Lakes, and Energy, Office of Drinking Water and Municipal Assistance, Policy and Procedure #ODWMA-368-127-005 (original effective date October 10, 1996, reformatted date April 3, 2013) which was developed to assist in the application of Administrative Rule 325.16137 adopted under authority of Part 127, 1978 PA 368 (Mich. Comp. Laws Section 333, Michigan's Public Health Code, or current State requirement.

B. All wells that have been hydraulically fractured shall be tested for the presence of coliform bacteria after completion of the hydraulic fracturing process and the disinfection/chlorination of the well.

5-14 Geothermal Wells

Vertical closed-loop geothermal wells shall be permitted as a water well and shall be constructed in accordance with Michigan Water Well Construction and Pump Installation Code, Ground Water Quality Control (R325.1601 et seq.), by authority provided in Part 127, Act 368, PA 1978 as amended(Mich. Comp. Laws § 333.12714) and rules, the Michigan Department of Natural Resources and Environment, Best Practices for Geothermal Closed-Loop Installations, April 2010, and the Upper Peninsula of Michigan Geothermal Technical Guidance document, or current State and regional technical guidance and/or statute.

5-15 Lots Less than 1 acre, Subdivisions, and Site Condominiums

Permit evaluations for wells proposed to be located on a parcel of less than one acre as created after March 31, 1997, a parcel within a subdivision, a parcel which is classified as a site condominium, or a parcel that was otherwise created in excess of the allowable number of exempt parcel splits under the Land Division Act, Act 288, PA 1967 (Mich. Comp. Laws Section 560), shall comply with all aspects of the rules entitled Part 4. Department of Environmental Quality On-site Water Supply and Sewage Disposal for Land Divisions and Subdivisions, being R560.401-R560.428 of the Michigan Administrative Code, or current State statute, prior to permitting.

5-16 Well Abandonment and Plugging

A. Any abandoned well, dry hole, or well that has been determined to be contaminated or to be a safety hazard shall be plugged in accordance with Part 127 of Act 368, P.A. 1978 (Mich. Comp. Laws 333.12701 et seq.), as amended, or current State requirement.

B. The plugging of any well or dry hole on a parcel containing a well that serves the public, or a residence other than that of the owner, shall be plugged by a State of Michigan registered well-drilling contractor.

C. When a replacement well has been permitted and constructed, the existing well previously in service shall be abandoned and plugged unless remaining active and serving a beneficial use, or unless placed in a temporarily abandoned status in accordance with Part 127 of Act 368, P.A. 1978 (Mich. Comp. Laws 333.12701 et seq.), as amended, or current State requirement.

Article VI – Public Health Nuisance/Imminent Danger

6-1 Technical Definitions

Imminent Danger — An environmental health-related condition or practice which could reasonably be expected to cause death, disease, or serious physical harm immediately or before the imminence of the danger can be eliminated through enforcement procedures otherwise provided.

Public Health Nuisance — An environmental health-related activity, or failure to act, resulting in a condition known to, or reasonably expected to be capable of, significantly adversely affecting the health of the general public.

6-2 Public Health Nuisances Prohibited

A person shall not engage in an activity or create or permit a condition to exist, which is or may become a public health nuisance.

6-3 Public Health Nuisance Investigation

The Department may initiate investigations of public health nuisances and take all necessary action to abate the same. The Department may also investigate complaints concerning alleged public health nuisances as hereafter provided.

6-4 Complaints Concerning Public Health Nuisance

Complaints shall include specific details regarding the situation, including the nature and location of the alleged nuisance condition, the date and time of occurrence, the person responsible, the names of witnesses, and the contact information of the complainant. The Department may require such complaints to be submitted in writing and signed.

6-5 Investigation of Complaints

The Department, upon receipt of a complaint concerning a public health nuisance, may consider the information provided and may conduct such investigations, as deems necessary. If the investigation by the Department discloses that the alleged public health nuisance no longer exists or does not represent a threat to the health and safety of the public, the complainant may be notified of such findings.

If the investigation of the Department reveals that the complaint pertains to an activity or condition subject to the statutory regulation of an official agency, bureau, or department other

than the Local Health Department, the Department may notify the appropriate agency, bureau, or department of the complaint, or otherwise refer the complaint to the appropriate authority.

6-6 Abatement of Public Health Nuisance

A. The Department may issue an order to avoid, correct, or remove any condition the department reasonably believes to be a public health nuisance.

B. Upon issuance of an order by the Department to avoid, correct, or remove a public health nuisance, the person so named in the order shall immediately abate, mitigate, remove, or otherwise control the public health nuisance.

C. All costs incurred as a result of the abatement of a public health nuisance shall be at the expense of the owner of the parcel and/or property from which the nuisance emanates.

6-7 Imminent Danger

A. Upon determination that an imminent danger to the health or lives of individuals exists, the Department shall immediately inform the individuals affected by the imminent danger.

B. Where imminent danger has been determined to exist, the Department shall issue an order to the person authorized to avoid, correct, or remove the condition creating the imminent danger. The order may be posted by the Department at or near the imminent danger. The order may specify actions to be taken, or prohibit the presence of individuals in locations or under conditions where the imminent danger exists. Authorization for presence or access may be given to individuals whose presence is necessary to avoid, correct, or remove the imminent danger.

C. Upon issuance of an order by the Department to avoid, correct or remove an imminent danger, the person so named in the order shall immediately abate, mitigate, remove, or otherwise control the imminent danger.

D. The owner of the parcel or property from which the imminent danger emanates, or the person otherwise responsible for the creation or control of the imminent danger shall be responsible for all costs and expenses associated with the abatement, mitigation, removal, or control of the imminent danger.

E. In accordance with Mich. Comp. Laws § 333.2451, the Department may petition the court to restrain the condition or practice or require action to avoid, correct or remove the imminent danger. Upon failure of the person to comply promptly with an order issued under this section, the Department may petition a circuit court or district court having jurisdiction to restrain a condition or practice which the Department determines causes the imminent danger or to require action to

avoid, correct, or remove the imminent danger. Any action taken to correct, abate, or mitigate an imminent danger shall be at the expense of the owner of the parcel or property from which the imminent danger emanates.

Article VII – Food Service

7-1 Compliance with State Law

All operations, establishments, individuals, and entities providing food to the public shall fully comply with Michigan Food Law, Act 92 of 2000, as amended, (Mich. Comp Laws §§ 289.1101-289.8111), and the regulations adopted pursuant to this act, or current State requirement.

7-2 Plan review for New Construction

No jurisdiction of authority shall issue a construction permit or building permit for a structure proposed to be used as a food service establishment without prior approval from the Department. Commencement of construction without Department approval will result in the issuance of a stop work order by the Department.

Article VIII - Public Swimming Pools and Hot Tubs

8-1 Compliance with State Law

All public swimming pools and hot tubs shall be fully compliant with the requirements of Part 125 of Article 12, Act 368, PA 1978, (Mich. Comp. Laws §§ 333.12521-333.12534) and the regulations adopted pursuant to this authority, or current State requirement.

8-2 Certified Pool Operator

All facilities operating and/or housing a public swimming pool or hot tub shall employee an operator possessing the National Swimming Pool Foundation (NSPF) Certified Pool Operator (CPO) credential or equivalent. The certified swimming pool operator shall be available for immediate response to the facility within 15 minutes.

Article IX - Campgrounds

9-1 Compliance with State Law

All permanent and temporary campgrounds, except children's camps that are licensed by the Michigan Department of Health and Human Services, shall be fully compliant with the requirements of Part 125 of Article 12, Act 368, PA 1978 (Mich. Comp. Laws §§ 333.12501-333.12515) and the regulations adopted pursuant to this authority, or current State requirement.

Article X - Septic Tank Pumping and Land Application of Septage

10-1 Compliance with State Law

All entities providing septic tank pumping service, or performing land application of septage waste, shall fully comply with Part 117 of the Natural Resources and Environmental Protection Act, Act 451, PA 1994, (Mich. Comp. Laws § 324.11701 et seq.) and the regulations adopted pursuant to this authority, or current State requirement.

Article XI - Body Art

11-1 Compliance with State Law

All body art facilities, or individuals, performing tattooing, body piercing, branding, scarification, or other applicable body art activities shall fully comply with Act 375, PA 2010, as amended(Mich. Comp. Laws §§ 333.13101-333.13112) and the regulations adopted pursuant to this authority, or current State requirement.

Article XII – Cemeteries and Burials

12-1 Establishing Cemeteries

A. Prior to the establishment of a cemetery, the landowner shall make application to the Department for review and plat approval of the proposed cemetery.

B. The applicant shall submit two copies of a recorded survey with the location of the plat to the Department for review and approval. The plat plan shall include the following:

1. The legal definition of the property.

2. A scaled site plan with five foot (5') contour intervals, number lots, and the location of test holes.

3. Soil information and seasonal water table elevation within the upper ten feet (10') of the soil profile.

4. Current groundwater well locations and construction records in the vicinity and any proposed wells to be located within the proposed cemetery.

5. Distances and locations to the nearest surface water bodies.

6. Information regarding land uses, both current and future, for adjacent properties.

7. Signature and seal of registered land surveyor or professional engineer.

C. A landowner may establish a "Family Cemetery" as allowable and defined under Section 128.111 of Michigan Act 88 of 1875 as amended (Mich. Comp. Laws § 128.111), or current State regulation. A Family Cemetery shall meet the requirements of local zoning and Department review. Family cemeteries shall be one acre or less in size and be platted and deeded as a cemetery. Individuals applying for approval of a Family Cemetery shall be advised of potential future complications during land sale or transfer and of the potential necessity of legally vacating and relocating the cemetery at a future date.

D. Backhoe cut test holes for the purpose of soil suitability determination shall be provided by the applicant for on-site evaluation by the department. The number of test holes required for approval shall be at the discretion of the department based upon local soil, geological and hydro-geological conditions. Test holes shall be excavated to a depth of ten feet (10') below natural grade, or to a depth at which bedrock or water table is encountered.

E. Crematory remains are exempt from these requirements. Cremated remains need not be buried. Ashes may be scattered, stored, or saved.

12-1.1 Minimum Site Criteria

A. Casket or Natural Burial

1. A minimum soil depth of ten (10) feet shall be required prior to encountering evidence of seasonal high water table or bedrock for a site to be considered suitable, allowing 4 feet of suitable soil to lie beneath the casket/body and 4 feet of soil cover once buried.

2. The initial 4 feet of soil located beneath the casket or body shall not have a percolation rate greater than 3 minutes per inch.

B. Burial Using Burial Vault

Commented [ES2]: Move to next page

1. Where a watertight burial vault is used, sufficient soil depth shall be available to install the burial vault so that the bottom of the vault is above seasonal high water table, or bedrock.

2. A minimum of four feet (4') of soil cover shall be installed over the burial vault.

C. Clean soil fill with a percolation rate less than 3 minutes per inch may be installed to meet the vertical isolation and cover requirements of these rules. Fill containing sufficient organic content and possessing a percolation rate that optimizes nutrient and contamination removal should be used.

D. Construction of cemeteries will not be allowed in environmentally sensitive areas, such as: floodplains, swamps, wetlands, ravines, steep slopes, or drainage areas to rivers, lakes, or other waterways.

E. No burials shall lie at the cemetery boundary. A buffer zone of at least 25 feet shall be required along the cemetery boundary. A fence shall also surround the cemetery.

F. There is no minimum lot size for gravesites. However, for a "family cemetery", the cemetery area cannot exceed one acre.

12-1.2 Required Isolation Distances

A. All burial sites within the cemetery shall be at least 100 feet from surface water.

B. All burial sites in a cemetery shall be located beyond the 100-year floodplain boundary.

C. All burial sites shall be located seventy five feet (75') from any water wellhead.

D. All burial sites shall maintain required isolation distance to wellheads and/or wellhead protection zones of public water supply wells.

12-1.3 Approval of Cemetery Plat

A. Upon approval, one copy of the plat and a letter of approval shall be returned to the applicant and the second copy and a copy of the letter of approval shall remain on file at the Department.

B. The approved plat shall be recorded with the Register of Deeds by the applicant and shall meet the zoning/land use requirements of the local township.

C. The Department shall reject the proposed cemetery if the conditions of these regulations cannot be met, or if any potential threat to public health, public safety, or the environment would be created by its approval.

D. The owner of the cemetery shall be required to maintain retrievable and accurate records of burial dates and locations.

12-2 Disinterments and Vacating Cemeteries

A. Pursuant to Mich. Comp. Law § 333.2853, a permit application shall be submitted to the Department on forms provided by the State and signed by a funeral director prior to being granted an approval and permit from the Health Officer, associated with any disinterment and reinterment of human remains or the vacating of a cemetery containing human remains

B. The Health Officer shall approve any disinterment or re-interment requests pursuant to Mich. Comp. Laws § 333.2853. A fee may be charged for review of disinterment and re-interment requests. The affidavit for interment or burial shall be signed by a licensed funeral director and specify surviving relatives. If the required signatures cannot be obtained, the licensed funeral director shall be advised to obtain a circuit court order.

C. If a cemetery is to be vacated, a circuit court order is required and the Michigan Historical Commission shall be contacted. The Health Officer shall supervise the actual disinterment and re-interment of bodies and remains as required by Mich. Comp. Laws § 333.2458.

12-3 Cemetery Related Complaints

A. All complaints regarding cemetery maintenance and operation are under the legal jurisdiction of the Cemetery Commissioner under authority of Michigan Cemetery Regulation Act, Act 251 of the Public Acts of 1968, as amended (Mich. Comp. Laws §§ 456.521-456.453), or current State regulations. Complaints regarding human cemeteries should be addressed to the Michigan Department of Licensing and Regulatory Affairs (LARA), or current designated State department.

B. Complaints associated with animal burial fall under authority of the Bodies of Dead Animals Act (Mich. Comp. Laws §§ 287.651-287.683) and administrative rules adopted thereunder (Mich. Admin. Code R287.651-R287.657). Complaints associated with animal burial should be referred to the Michigan Department of Agriculture and Rural Development (MDARD) or current designated State department.

Article XIII – Clandestine Drug Related Contamination

13-1 Clandestine Drug Laboratories

The Department shall condemn and prohibit occupancy of any habitable building, or portion thereof, for which credible evidence or notification has been received indicating that a clandestine drug laboratory has been operated within that habitable building in accordance with Michigan Public Health Code (Mich. Comp. Laws § 333.12103) and the Housing Law of Michigan (Mich. Comp. Laws § 125.485a).

13-2 Other Drug-Related Contamination

The Department shall condemn and prohibit occupancy of any habitable building or portion thereof for which credible evidence or notification has been received indicating that drug-related contamination exists within the structure posing a significant health risk to the occupants. Contaminants of concern may include, but are not limited to, methamphetamine, fentanyl, and carfentanyl.

13-3 Expansion of Condemnation

Condemnation of an individual residence or area within a habitable building may extend into other areas or residences in a habitable building based upon interconnectivity of building design. Justification for expansion of condemnation may include, but is not limited to, interconnectivity and environmental assessment of heating, ventilation and air conditioning (HVAC) ductwork. Environmental assessment and associated costs shall not be at the expense of the Department.

13-4 Lifting of Condemnation

Habitable buildings, or any portion thereof, condemned under this Article shall remain condemned until the Department has received and approved the laboratory results and reporting from an environmental assessment deemed acceptable by the Department and performed by a qualified third party environmental consulting professional, company, firm or agency and until

such time that the Department has lifted the condemnation. The decontamination, environmental assessment, and associated costs shall not be at the expense of the Department.

Article XIV – Enforcement

14-1 Criminal Enforcement

A. A person who violates this code or the rules promulgated under it is guilty of a misdemeanor.

B. By authority of Michigan's Public Health Code, Act 368, P.A. of 1978, Section 2443, as amended (Mich. Comp. Laws § 333.2443), a misdemeanor committed under this code is punishable by imprisonment for not more than six months, or a fine of not more than $200 or both.

C. Each act of violation shall constitute a separate offense.

14-2 Civil Enforcement

A. 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.

B. The notice shall be in writing and include the following information:

1. The nature of the violation, stated with particularity, including reference to the section alleged to have been violated.

2. The civil penalty, if any, established for the violation.

3. The remedial action required to comply with this code.

4. A reasonable time, not to exceed 90 days, for compliance.

5. A statement that failure to correct or abate the violation in the prescribed manner shall result in the issuance of an appearance ticket.

6. A statement that the alleged violator has the right to appeal the notice in accordance with Article XVI.

7. 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 registered

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.

14-3 Appearance Tickets

A. The Health Officer is authorized, by authority of Michigan's Public Health Code Act 368, P.A. of 1978, Section 2463 (Mich. Comp. Laws § 333.2463), pursuant to Sections 9a to 9g of Chapter 4 of Act No. 175, P. A. of 1927, as amended, (Mich. Comp. Laws §§ 7.64.9a-7.64.9g), to issue and serve appearance tickets for violations of this code.

B. 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.

14-4 Schedule of Civil Penalties

A. Monetary civil penalties shall be imposed according to the following schedule for subsequent violations occurring within a rolling 24-month period. Violations occurring beyond 24 months of the initial violation will be considered first violation:

1. First violation: $200.00
2. Second violation: $500.00
3. Third and subsequent violations: $1,000.00.

B. 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.

14-5 Inspections, Investigations and Warrants

To enforce this code, the Department may inspect or investigate any matter, thing, premises, place, person, record, vehicle, incident, or event. The Department may collect samples for laboratory examination. The standards and procedures for issuance of an inspection or investigation warrant shall be in accordance with Mich. Comp. Laws §§ 333.2242-2247.

14-6 Injunctions

The 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.

14-7 Obstruction of Health Officer

It shall be unlawful for any person to molest, willfully oppose, or otherwise obstruct the Health Officer.

Article XV – Variances

15-1 Variances

A. A variance from the specific requirements of this code may be granted by the Health Officer when all of the following conditions exist:

   1. No substantial health hazard or nuisance is likely to occur.

   2. Strict compliance with the code requirements would result in unnecessary or unreasonable hardship to the petitioner.

   3. No state, local statute, or other applicable laws would be violated.

   4. The protection of the health, safety, and general welfare of the public is assured.

B. The variance request shall be in writing. The applicant shall demonstrate that the variance would pose no hazard to the public or the environment.

C. The Health Officer may specify conditions necessary for the granting of the variance.

Article XVI - Appeals

16-1 Board of Appeals

A. In order to provide for reasonable and equitable interpretations of the provisions of this code and associated technical manual, a board of appeals may be formed to hear appeals. The board shall have not less than three but not more than five members, appointed by the board of health. The appeals board shall be representative of varied interests.

B. The membership of the board of appeals shall elect their own chairperson from among its membership.

C. The Department shall provide administrative support to the board of appeals.

D. Appeals on all sites which serve buildings other than single and two-family residences, including those with peak daily flows of less than 1,000 gallons per day evaluated under these regulations, shall be made to the Michigan Department of Environment, Great Lakes, and Energy or current State agency responsible under the Michigan Criteria for Subsurface Sewage Disposal, as written by the Division of Environmental Health, Bureau of Environmental and Occupational Health, Michigan Department of Public Health, April 1994, By authority of Act 368, P.A. 1978, as amended (Mich. Comp. Laws Ch. 333) and Act 451, P.A. 1994, as amended (Mich. Comp. Laws § 324.101 – 324.90106), or current State requirement.

Formatted: Highlight

16-2 Informal Resolution of Disputes

A. 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.

B. Before the Health Officer suspends or revokes a license, the Health Officer 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.

C. In the absence of compliance, the Health Officer shall issue a notice of a formal hearing, followed by a hearing, in accordance with the procedures outlined in Section 16-3 below. The Health Officer may order a summary suspension of the license if the public health, safety, or welfare requires emergency action.

16-3 Formal Hearings

A. 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 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 registered 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.

B. 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 argument and evidence first, followed by the respondent.

C. 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.

D. The hearing shall be recorded, but need not be transcribed unless requested by a party, who shall pay for the transcription.

E. 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:

1. In violation of the constitution or a statute.
2. In excess of the statutory authority or jurisdiction of the Department.
3. Made upon unlawful procedure resulting in material prejudice to a party.
4. Not supported by competent material and substantial evidence.
5. Arbitrary, capricious or clearly an abuse or unwarranted exercise of discretion.
6. Affected by other substantial and material error of law.

F. 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 Department is located for review. The petition shall be filed not later than 60-days following the receipt of the final decision.

Formatted: File Stamp Paragraph Char

Formatted: File Stamp Paragraph, Tab stops: Not at 2.93"

clerk schoolcraftcounty.us

From:	Heather LaLonde
Sent:	Tuesday, May 19, 2026 10:22 AM
To:	clerk schoolcraftcounty.us
Cc:	Troy Bassett
Subject:	Board Agenda Addition
Attachments:	SCOE2215C2526051910180.pdf

Good morning Beth,

Can you please add the attached resolution to the next County Board meeting? The resolution is for adjustments made to the Land Bank By Laws & Intergovernmental Agreement with the State of Michigan. When the by laws were originally approved it only had a 5 member board, after the fact the EDC wanted to make the board a 7 member board. Therefore, we have to make the adjustment with the SOM through this IGA resolution.
I will not be able to attend the board meeting so if you need any more information for the board please let me know.

Thank you,

Heather A LaLonde

Heather A LaLonde
Schoolcraft County Treasurer
300 Walnut Street, Room 169
Manistique, MI 49854
P 906 341-3622 F 906 341-5680
treasurer@schoolcraftcounty.us

RESOLUTION NO. ____

A RESOLUTION TO APPROVE AN AMENDMENT TO THE INTERGOVERNMENTAL AGREEMENT ESTABLISHING THE SCHOOLCRAFT COUNTY LAND BANK AUTHORITY TO MODIFY BOARD COMPOSITION AND TERMS OF OFFICE

WHEREAS, the County of Schoolcraft, Michigan (the "County"), pursuant to the authority granted under the Land Bank Fast Track Act, Public Act 258 of 2003, as amended, established the Schoolcraft County Land Bank Authority (the "Land Bank Authority") by Intergovernmental Agreement (the "Agreement"); and

WHEREAS, the Land Bank Authority serves as a public body corporate and exercises essential governmental functions to promote the reutilization, development, and return to productive use of tax-reverted, abandoned, and foreclosed properties within Schoolcraft County; and

WHEREAS, the Agreement currently provides for a five (5) member Board of Directors to govern the Land Bank Authority; and

WHEREAS, the County and participating governmental units have determined that increasing the size of the Board of Directors to seven (7) members will enhance representation, capacity, and effectiveness in carrying out the mission of the Land Bank Authority; and

WHEREAS, the parties further desire to amend the Agreement to revise and clarify the terms of office for Board members, including provisions related to term length, staggering of terms, and appointment procedures, in order to promote continuity and effective governance; and

WHEREAS, the parties also desire to amend the Agreement to update and clarify provisions related to the removal of Board members from office and the filling of vacancies, to ensure transparency, consistency, and orderly administration; and

WHEREAS, the proposed Amendment to the Agreement reflects these changes, including all necessary conforming revisions throughout the Agreement to ensure consistency with the updated Board composition, terms of office, and governance provisions; and

WHEREAS, the Schoolcraft County Board of Commissioners finds that the proposed Amendment is in the best interests of the County and its residents and will improve the administration and effectiveness of the Land Bank Authority;

NOW, THEREFORE, BE IT RESOLVED, that the Schoolcraft County Board of Commissioners hereby approves the Amendment to the Intergovernmental Agreement establishing the Schoolcraft County Land Bank Authority, which Amendment provides for:

Expansion of the Board of Directors from five (5) members to seven (7) members;
Revision of the terms of office for Board members, including term length and staggering;
Updates to provisions governing the removal of Board members from office;
Updates to provisions governing the filling of vacancies on the Board; and
All necessary conforming changes throughout the Agreement to reflect these modifications

BE IT FURTHER RESOLVED, that the County Treasurer is authorized and directed to execute the Amendment on behalf of the County, and the County Clerk is authorized to attest to the same; and

BE IT FURTHER RESOLVED, that all actions taken prior to the adoption of this Resolution that are consistent with the intent of this Resolution are hereby ratified and confirmed; and
BE IT FURTHER RESOLVED, that this Resolution shall take effect immediately upon adoption.

AYES: _____
NAYS: _____
ABSENT: _____
RESOLUTION DECLARED ADOPTED.

CERTIFICATION
I hereby certify that the foregoing is a true and complete copy of a resolution adopted by the Schoolcraft County Board of Commissioners at a regular meeting held on _____, 2026.

County Clerk

First Amendment
to the
Intergovernmental Agreement
between the
State Land Bank Authority
and the
Treasurer of the County of Schoolcraft, Michigan
creating the
Schoolcraft County Land Bank Authority

This First Amendment (the "Amendment"), dated May 14, 2026, to the Intergovernmental Agreement, executed by all parties as of September 3, 2025, (the "Agreement") is entered between the State Land Bank Authority (f/k/a Michigan Land Bank Fast Track Authority), a Michigan public body corporate and politic, of Post Office Box 30766, Lansing, Michigan 48909 (the "SLBA") and the Treasurer of the County of Schoolcraft, Michigan, of 300 Walnut Street, Room 169, Manistique, Michigan 49854 (the "County").

Pursuant to Section 9.11 of the Agreement, the parties agree to amend the Agreement as follows:

1. Delete Section 4.01 of the Agreement in its entirety and replace with the following:

"**Section 4.01 County Authority Board Composition.** The County Authority shall be governed by the County Authority Board, a board of directors that shall be appointed within thirty (30) calendar days of the Effective Date. Elected officials and other public officers are eligible to serve as members of the County Authority Board to the extent permitted under Michigan law. The County Authority Board shall consist of the following members, except as provided in 4.02:

a) The Treasurer.
b) One member of the County Board regardless of where residing, appointed by the County Board.
c) One member representing the Schoolcraft County Planning Commission, appointed by the County Board.
d) Two members from the Schoolcraft County Economic Development Corporation board, appointed by the County Board
e) Two members at large, appointed by the County Board"

2. Delete Section 4.03 of the Agreement in its entirety and replace with the following:

"**Section 4.03 Terms of Office.** Of the six (6) directors appointed, staggered terms will be established as follows: two (2) members shall be appointed for a one-year term, two (2) members shall be appointed for a two-year term, and two (2) members shall be appointed for a three-year term. After the expiration of the initial terms, members shall be appointed for terms of three (3) years. There shall be no limit on the number of successive terms of office a director may serve. An elected official appointed under Section 4.01(b) may serve on the County Authority Board only while he/she maintains that elected status. A vacancy resulting from an election will be filled by appointment of the County Board, except for the Treasurer, who holds a statutory position on the County Authority for so long as he/she holds that office."

3. Delete Section 4.04 of the Agreement in its entirety and replace with the following:

"**Section 4.04 Removal.** A member of the County Authority Board appointed under Sections 4.01(b) through (e) may be removed for cause by the County Board"

4. Delete Section 4.05 of the Agreement in its entirety and replace it with the following:

"**Section 4.05 Vacancies.** A vacancy among the appointed members of the County Authority Board appointed under Sections 4.01(b) through (e) caused by death, resignation, or removal of a County Authority Board member shall be filled in the same manner as the original appointment for the balance of the unexpired term. An official appointed under Sections 4.01(c) and (d) may serve on the County Authority Board only while he/she maintains that status on the Schoolcraft County Planning Commission or the Schoolcraft County Economic Development Corporation board respectively. A vacancy resulting from no longer qualifying shall be filled in the same manner as the original appointment for the balance of the unexpired term."

The remainder of the Agreement shall remain in full force and effect and is restated and incorporated as through fully re-written herein.

The parties have executed this Amendment effective as of the date first written above.

STATE LAND BANK AUTHORITY

_____

By: Joseph Rivet
Its: Executive Director

Date: _____

TREASURER OF THE COUNTY OF SCHOOLCRAFT, MICHIGAN

_____

By: Heather LaLonde

Date: _____