

CHIPPEWA COUNTY HEALTH DEPARTMENT

UPPER PENINSULA ENVIRONMENTAL HEALTH CODE TECHNICAL GUIDANCE MANUAL

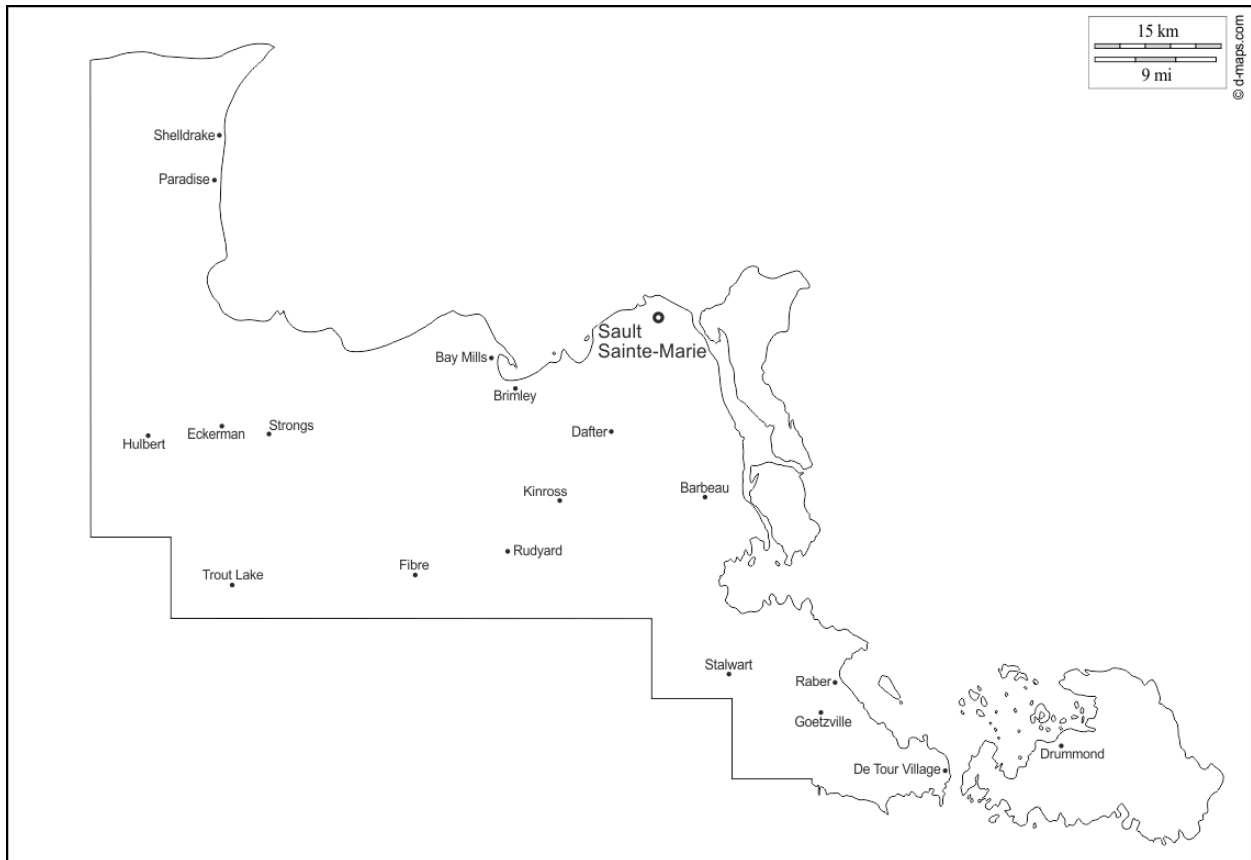


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INTRODUCTION

The Upper Peninsula Environmental Health Code was adopted 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. Due to the dynamic and complex nature of on-site sewage and water systems governed by the Code, an on-going technical guidance document is necessary. This Technical Guidance Manual has been prepared to provide guidelines, specifications, and standard practices used to implement the Code.

DEFINITIONS

Department-	The Chippewa County Health Department.
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.
OSTDS-	An On-Site Treatment and Disposal System having the primary design that incorporates a septic tank and an absorption system, or a privy.
The Code-	The Chippewa County Upper Peninsula Environmental Health Code, effective January 1, 2021.

SEWAGE SYSTEM INSTALLER LICENSING PROCEDURES

1. Applicants will fill out the proper application for licensing and pay the appropriate fee.
2. First time and previously licensed but expired applicants shall complete a written exam provided by an Environmental Health representative of the Department.
3. Upon satisfactory completion of the exam, the results will be reviewed and incorrect answers discussed with the applicant.
4. A minimum score of 80% correct answers is required for licensure.
5. Licenses are valid for three years, from April 1 of 2019, until March 31, 2022. The three-year cycle continues, beginning April 1 of 2022 until March 31, 2024, continuing for each successive three-year licensing period.
6. A septic system installer license will be provided to the successful applicant.
7. Additional testing could be required of all licensed installers as requested by the Department.
8. A list of all licensed installers will be kept by the Department.

TEST HOLES

Purpose: A test hole is required to be provided by the property owner for the initial evaluation to allow for Environmental Health staff to conduct a thorough and logical assessment of native soils in the location of the proposed on-site treatment and disposal system. Usually, the test hole is dug by a machine-driven excavator.

1. The following are guidelines as to what is expected by the property owner and acceptable for alternatives to machine driven excavations:
 - a. A test hole must be a minimum of 6 feet in depth with surface dimensions of two feet by four feet (2' x 4').
 - b. The test hole may be hand dug.
 - c. If the test hole is excavated prior to Environmental Health staff arriving on site, it must be covered to prevent an on-site safety hazard.

For some remote sites where it is difficult to maneuver excavators in the area, Environmental Health staff may conduct manual auger digging. This will be done on a case-by-case basis, and only upon prior approval by the Department.

SEWAGE SYSTEM ABANDONMENT

Septic Tank Abandonment

Abandonment shall not proceed until the septic tank is pumped and the contents properly disposed of by a licensed septage waste hauler. Alternative methods of septage and tank disposal may be approved in writing by the Health Officer. Proper abandonment of a septic tank shall consist of one of the following methods:

1. Collapse tank and fill area when feasible, otherwise completely fill it with material approved by the Department. Provide compaction during the filling process to eliminate the potential to develop a sinkhole or any other safety hazard.
2. Remove and haul the tank to a licensed Type II landfill. Containment of the components is required, with particular attention paid to over-the-roadway hauling, so as to avoid exposing the public to a health hazard.
3. A property owner may choose to bury the abandoned septic tank on their own premises, or the premises of another with that owner's permission. All components of the system shall be buried in a manner that does not create an environmental health hazard. All isolation distances for the buried components must meet the minimum requirements for isolation distances for absorption systems as detailed in the Upper Peninsula Environmental Health Code, Table 3-14.2 A.

Absorption System (Drainfield) Abandonment

When it is practical to do so, the absorption system should be left in place. When the area is needed for other purposes, the absorption system may be removed. The disposal method to be used shall be one of the following:

1. Remove and haul the contaminated material to a licensed Type II landfill. Containment of the contaminated material is required, with particular attention paid to over-the-roadway hauling, so as to avoid exposing the public to a health hazard.
2. A property owner may choose to bury the abandoned absorption system on their own premises, or the premises of another with that owner's permission. All components of the system shall be buried in a manner that does not create an environmental health hazard. All isolation distances for the buried components must meet the minimum requirements for isolation distances for absorption systems as detailed in the Upper Peninsula Environmental Health Code, Table 3-14.2 A.

Sewage Lagoon Abandonment

1. Remove and dispose of fencing and posts
2. Pump remaining effluent to ground surface in accordance with the following lagoon discharge requirements:
 - a. Discharge shall be at the direction of the Health Officer for volume control or weed control.
 - b. Discharge water shall be drawn from six inches (6") below the surface and not drawn down below the two foot (2') minimum operating depth.
 - c. Discharge shall be to ridge and furrow/irrigation to an area 100 feet wide by 200 feet long or by other method approved by the Health Officer.
 - d. Discharge area must be isolated in accordance with the code.
 - e. Discharge area may only be used for crops that are not for direct human consumption.
3. Fill lagoon with clean material back to natural grade.

AGGREGATE/FILTER MATERIAL

1. Aggregate shall be washed stone or other material approved by the Health Officer that complies with all of the following specifications:
 - a. One hundred percent (100%) passing through a two and one-half inch (2 ½") sieve.
 - b. No material shall pass a three-eighths inch (3/8") sieve except for fines. Fines are material that will pass through a number two hundred (200) sieve.
 - c. The total fines content passing through a number two hundred (200) sieve, as determined by a loss by wash method, shall not exceed one-half percent (0.5%).
2. Stone aggregate may be field evaluated for hardness acceptability (greater than 3 on Mohs hardness scale) by determining whether it can scratch a copper penny without leaving any rock residue.
3. Aggregate shall be transported, stockpiled, and/or otherwise manipulated in a manner which will not contaminate it with fines exceeding one-half percent (0.5%) loss by wash method.
4. Slag, chipped rubber, synthetics, concrete pavement, and other alternative aggregate may be approved in writing by the Health Officer.
5. Glass shall not be approved as an aggregate.
6. Filter fabric is required on all septic field types. Hay and straw are also approved. Other materials may be approved by the Health Officer.

SEPTIC TANKS

1. All septic tanks shall be constructed of concrete unless otherwise approved. Plastic septic tanks should not be permitted in clay or high-water table sites.
2. 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 (2 ½") and shall be adequately reinforced. The top shall be at least four inches (4") thick and able to withstand the load for which it was intended.
 - b. When a concrete block tank is permitted by the Health Officer, it shall be constructed of concrete block with a minimum thickness of eight inches (8"), laid on a four-inch (4") minimum poured concrete foundation. All block joints shall be adequately mortared. All block holes or cells shall be filled with mortar or concrete. The tank shall be made watertight by application of a waterproof sealant.
 - c. A cast-in-place concrete tank shall be approved by the Health Officer prior to construction and comply with all specification listed in part a.
3. The liquid capacity of all prefabricated septic tanks shall be permanently marked on the uppermost tank surface.
4. Manufacturers shall demonstrate, upon request of the Health Officer, that the septic tanks that they manufacture are watertight.
5. 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 (2/3) of the total required liquid capacity.

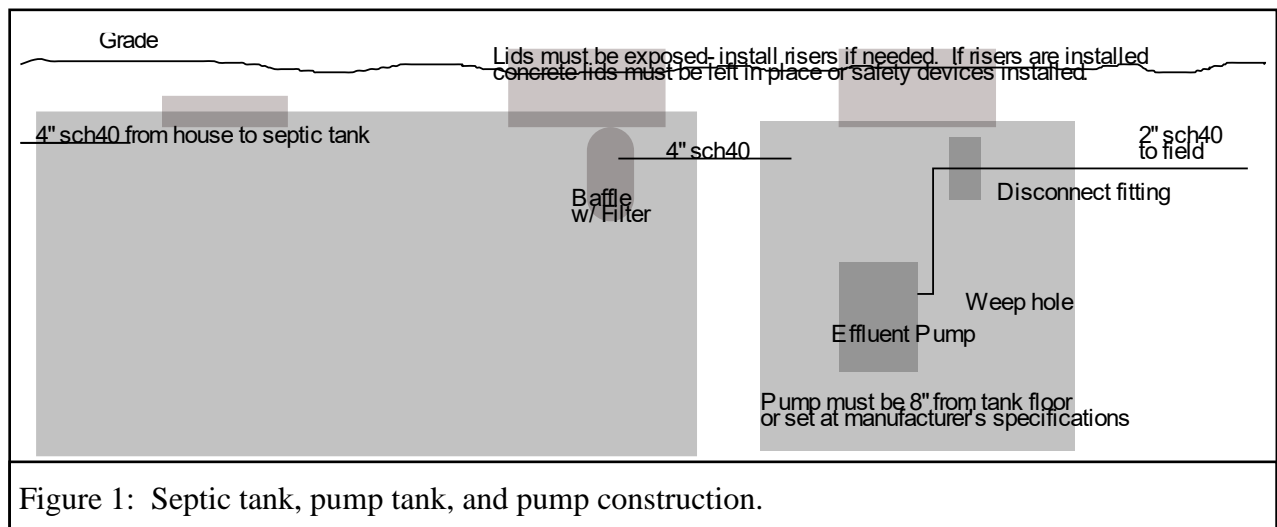


Figure 1: Septic tank, pump tank, and pump construction.

PUMPS AND PUMP TANKS

1. All materials shall be durable, corrosion resistant, and designed for their intended use.
2. The Licensing and Regulatory Affairs of Michigan (LARA) Electrical Division, should approve all electrical components.
3. Electrical components must be installed under electrical permit.
4. The pipe from the septic tank to the pump tank must be four-inch (4") diameter schedule 40 PVC.
5. The pump tank shall be at least 200-gallon capacity and intended to be used in sewage applications, or otherwise be approved by the Department.
6. The pump tank shall be concrete unless otherwise approved by the Department.
7. The pump must be an effluent or grinder pump as required in the permit, and intended for pumping sewage.
8. Commercial pumps and alarms must be wired by a licensed electrician. Residential electrical work may be done by the homeowner.
9. A minimum of a visual alarm is required to be installed in a conspicuous location. Both an audio and visual alarm are recommended.
10. The effluent line leaving the pump tank must be one-and-one-half inch (1 ½") to two-inch (2") schedule 40 PVC or one-and-one-quarter inch (1 ¼") to 2-inch (2") black plastic water line.
11. An accessible pump disconnect fitting is required.
12. A weep hole is required.

EFFLUENT FILTERS

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.
2. The filter shall be installed and used in accordance with the manufacturer's recommendations.
3. 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, in gallons per day, for the system it serves.

SEPTIC AND PUMP TANK INSPECTION PORTS, RISERS, LIDS, SAFETY DEVICES

Inspection Ports

Septic tanks and pump tanks shall contain at least one port, of at least 15 inches in diameter, to serve as an access point for baffle and effluent filter maintenance, access to the pump, and to allow for easy access for pumping the tank.

Risers and Lids

When a new or replacement on-site sewage treatment and disposal system permit is issued, it shall be required to install a riser on the outlet tank inspection port for both existing and new septic tanks. A riser is not needed if the lid of the tank is at grade.

The construction of the riser and lid for all septic tank and pump tank installations shall meet the following minimum requirements:

1. The riser and lid shall be corrosion-resistant, durable, and of watertight construction.
2. There must be a watertight connection between the riser and the tank.
3. The lid shall be installed to grade.
4. The lid shall have acceptable protection to prevent unauthorized access, such as a twist lock or other device requiring a tool for removal, a weight of 60 pounds, or a similar tamper resistant, childproof-type device approved by the Department.
5. If screws are used to secure the lid, stainless steel screws are required.
6. The riser and cover shall be NSF standard 5 approved or equivalent and shall be approved under the authority of the Health Officer prior to permitting and installation.

Safety Devices

1. If a septic tank's original concrete lid cannot be left in place, a secondary safety device shall be installed to preclude accidental tank entry.
2. A safety device shall be installed in a pump tank, if a hazard can occur.

ALTERNATIVE OSTDS

Chamber and EZFlow® Systems

1. Chamber and EZflow® systems may be permitted by the Department in conventional OSTDS applications only.
2. The Department must size these systems according to the manufacturer's specifications for the make and model of chamber or system proposed.
3. For chambers, provide a minimum of 12 inches of sand between rows in absorption beds.
4. For a trenched system, chambers and EZflow® bundles must be installed six feet (6') apart on center, with a minimum of three feet (3') of undisturbed soil between trenches.
5. Chambers and EZflow® bundles must be covered with filter fabric.
6. Cover chambers and EZflow® bundles with 12 to 24 inches of approved cover.
7. Runs should not be more than 50 feet long.

Pump and Haul

See section 3-10, D, 1-5, of the Code for situations in which pump and haul may be permitted.

1. Shall be a septic tank or tanks sized with consideration of estimated daily flow.
2. All septic tanks shall be at least 1,000 gallons.
3. All pipe going to the first tank and in between tanks shall be four-inch (4") diameter schedule 40 PVC.

4. Each tank will be equipped with at least a visual high-level alarm. Audio and visual alarms are recommended.
5. Each septic tank must have at least one port with access above grade. Risers are required if the lid of the tank is not installed at grade.
6. Lids must remain secured at all times except for when the tanks are being pumped.
7. The tanks must be located to allow for easy pumping access.
8. The tanks must meet all isolation distances of the Code.
9. Consider placing the tanks in a position that could be incorporated in a future OSTDS.
10. If the pump and haul system serves a building connected to a water supply, a device must be installed that will turn off the water to the building when the tank's high-water alarm is activated.
11. The tanks may only be pumped by a Michigan Licensed Septage Waste Hauler.
12. The Department may require written documentation showing pumping frequency.
13. The Department shall require a maintenance agreement that allows for inspection at any time.

Vault Privy and Outhouse Buildings

1. A concrete septic tank shall be used on clay sites and sites where the seasonal high-water table is within three feet (3') of natural grade as determined by evaluation of a test hole.
2. A vault privy will utilize at least a 1,000-gallon septic tank.
3. The septic tank should be installed in a location that would allow it to be incorporated into a future OSTDS.
4. The septic tank should be installed in a location that allows easy access for pumping.
5. Tank lids must be secured at all times except for when the tank is being pumped.
6. A suggested building design for the privy is given in the diagram below.
7. Grade area next to the privy in order to direct surface water away from privy.
8. High nitrogen fertilizer or commercial chemical preparation can be used to control odors.

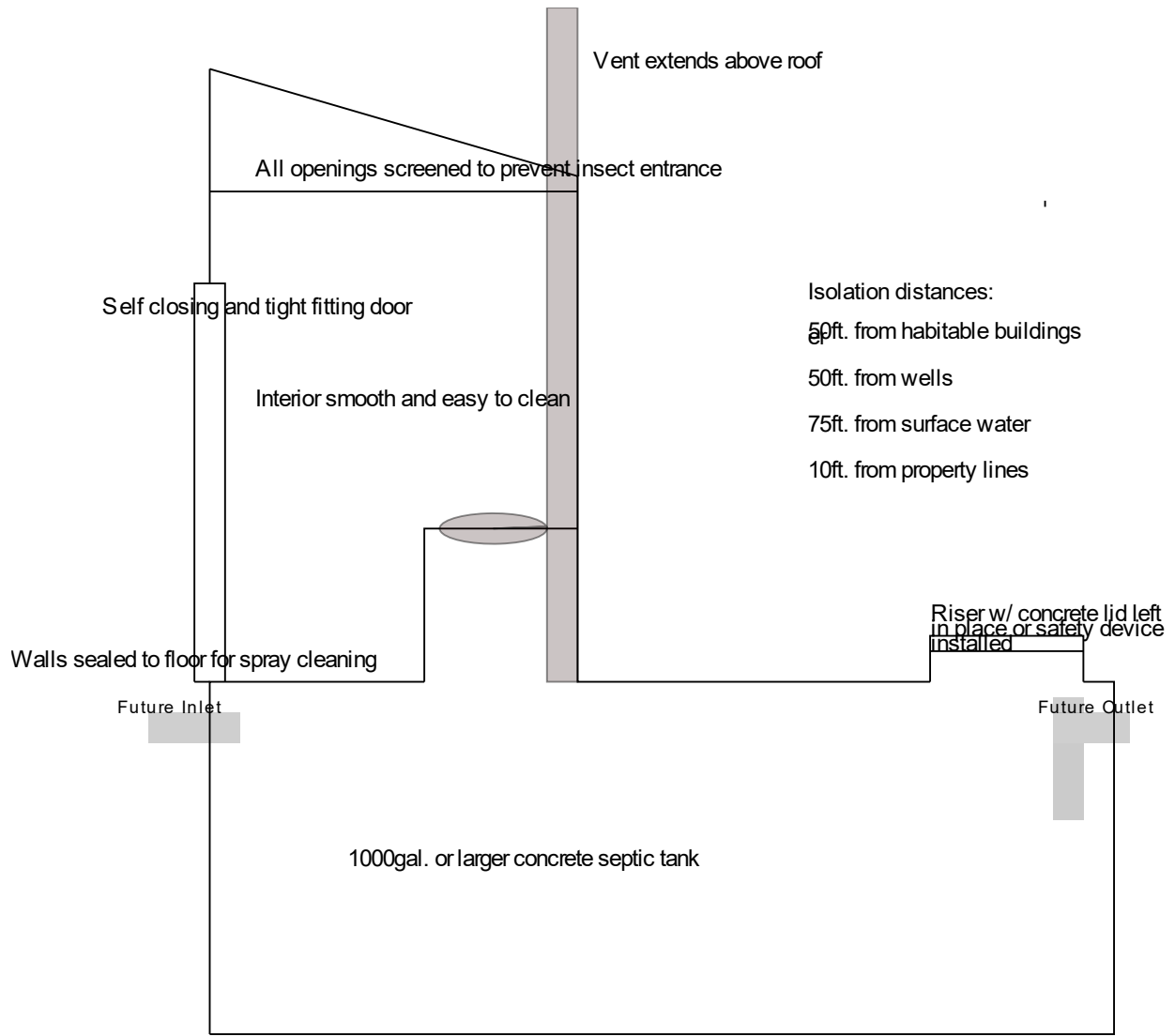


Figure 2: Vault Privy/ Outhouse Construction

Elevated Mound

1. Effective Soil Depth:
 - a. Level ground: A minimum of three feet (3') of soil shall be maintained between the bottom of the absorption system and the limiting zones when sewage effluent is untreated.
 - b. Sloping ground: For untreated effluent, the effective soil depth is three feet (3').
2. Limiting zones include:
 - a. Excessively permeable zones: fractured bedrock, coarse sand, gravel.
 - b. Seasonal high-water table.
 - c. Clay and clay loam.
3. Fill requirements include:
 - a. The texture of the fill material shall be medium sand.
 - b. Fill shall be free of debris, stones, frozen clods, or ice.
 - c. The material shall be compacted to avoid settling (or allowed to settle through one fall-winter-spring time period).
 - d. Other soil textures other than medium sand will be considered, but must be approved by the Department before installation.
4. The minimum absorption area, in square feet of bottom area, is 300 square feet per bedroom.
5. Pipe and stone raised mound systems require filter fabric, straw, or hay cover.
6. The estimated minimum drain field stone requirements are:

Bed Area (ft ²)	Cubic Yards	Tons
400	17	23
500	21	29
600	24	33
700	27	38
750	30	41
800	32	44
900	35	48
1000	39	54
1200	46	64
1400	54	75
1500	58	80
1600	61	85
1800	69	96
2000	76	106

7. In systems where the absorption field is located above the natural ground surface, a berm of soil shall be added around the perimeter of the absorption system such that the edges of the level berm are:
 - a. Ten feet (10') beyond the nearest sidewall of the absorption system for all mound systems installed on clay sites.
 - b. Four feet (4') beyond the nearest sidewall of the absorption system for all mound systems installed on any sites other than clay, where the base of the stone in the absorption system will be a full 36 inches above existing natural grade.

- c. Two feet (2') beyond the nearest sidewall of the absorption system for all mound system installed on any sites other than clay, where the base of the stone in the absorption system is less than 36 inches above existing natural grade.
- 8. Beyond the level berm, soil 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).
- 9. The disposal field area shall be covered with sufficient suitable soil to maintain vegetation growth and be seeded/mulched upon completion.
- 10. Chambers of any kind are not permitted in an elevated mound system due to a higher risk of failure.

Pressure Dosed Mound

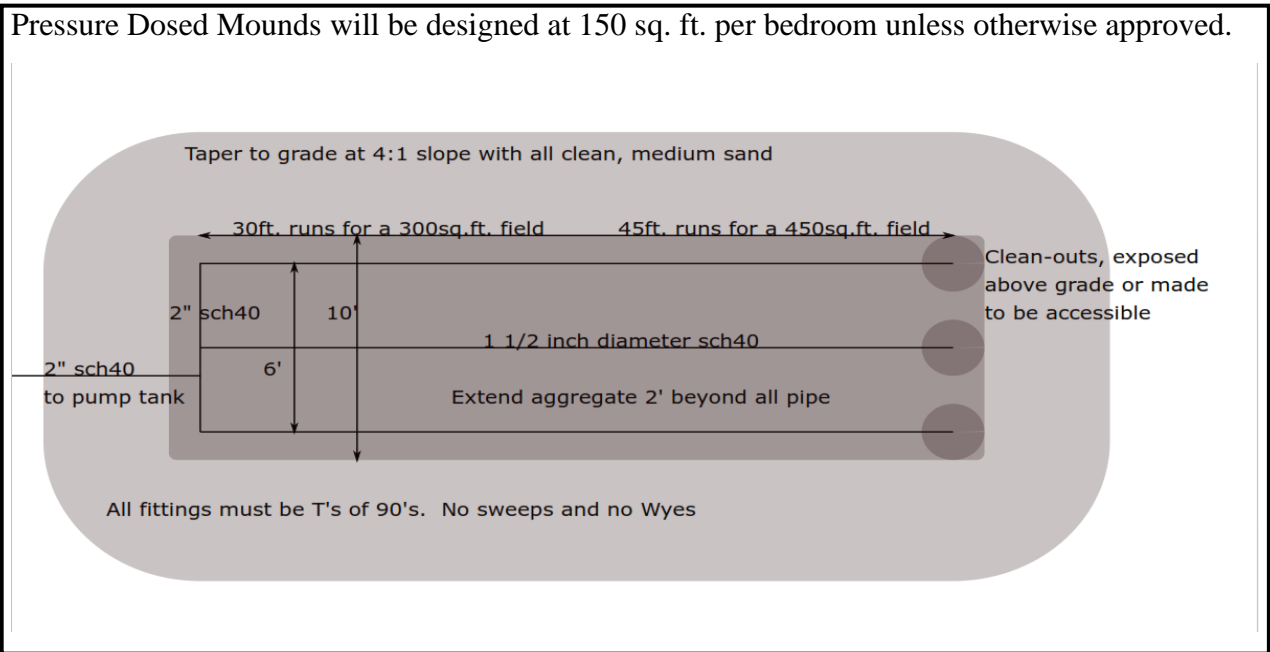


Figure 3: Pressure Dosed Mound Construction

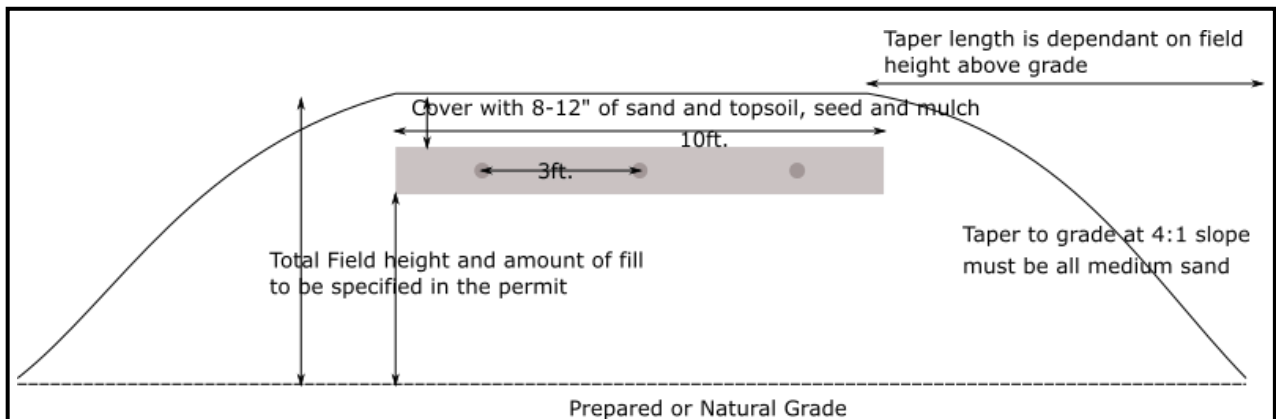


Figure 4: Pressure Dosed Mound Cross Section

Advanced Treatment Units

Advanced treatment units (ATUs) provide additional effluent treatment, typically between a septic tank and the drainfield, reducing suspended solids, oxygen demand, nutrients, and pathogens. ATUs are often installed as a way to decrease drainfield size and/or amount of fill above a restricting layer or seasonal high-water table.

Conditions for Approval

1. Provide a scaled site plan detailing the proposed work. Include the following:
 - a. Locations of: property lines, all structures, driveways, and roads, applicant's water supply well, applicant's sewer line, septic tank, treatment tank, effluent disposal mechanism, adjacent property wells and sewage disposal/treatment systems within 50 feet of applicant's property line, surface water, wetlands.
 - b. Soil profile/conditions: soil type and depth above limiting layer.
2. A Michigan registered sanitarian, a professional engineer specializing in environmental or sanitary wastewater treatment, or a registered sewage system installer shall provide the design.
3. Manufactured mechanical treatment devices shall be NSF approved, and all materials shall be durable, corrosion resistant, and designed for their intended use.
4. Maintenance Contracts
 - a. The property owner shall maintain a maintenance contract with the manufacturer, distributor, or installer of an extended aeration or other advanced sewage treatment system.
 - b. A copy of the maintenance contract shall be submitted to the Department.
 - c. The contract will give the Department permission to conduct maintenance and operation inspections.
5. An affidavit/attachment to the deed shall be filed with the County Clerk indicating the property contains an extended aeration sewage treatment system and the property limitation imposed by such a system. The property owner is responsible for filing and paying any associated fees. The property owner shall provide evidence that such affidavit/attachment has been filed before the Department issues the construction permit.

Inspections and Maintenance

1. An annual inspection will verify that the following are satisfactory:
 - a. Alarm panel.
 - b. Effluent clear and odorless.
 - c. Scum layer.
 - d. Aerator and filters.
 - e. Water levels.
 - f. Bolts and physical parts.
 - g. Sludge level in ATU.
 - h. Disposal field for breakouts or soft spots.
 - i. Additional inspection as needed.
2. If any part above is not satisfactory, corrections will be made including the following as needed:
 - a. Repair of alarm panel, circuit breaker, and alarm light.

- b. Correction of scum layer problem.
 - c. Cleaning and repairing/replacing aerator filters.
 - d. Repair of liquid flow through outflow pipe.
 - e. Routine physical maintenance on equipment and mechanical parts.
 - f. Pumping ATU and/or septic tank.
 - g. Repair/replacement of disposal field.
 - h. Additional corrections as needed.
3. Periodic sampling of the effluent may include the following tests:
 - a. Five-day Biological Oxygen Demand (BOD₅).
 - b. Total suspended solids (TSS).
 - c. Fecal coliform bacteria.
 - d. Additional testing as required.
 4. Effluent quality that exceeds the following limits will require investigation as the reason and correction:
 - a. BOD – 30 mg/L
 - b. TSS – 30 mg/L
 - c. Monthly geometric mean of 100,000 fecal coliform-colony forming units (CFU) per 100 mL or 30-day geometric mean of less than 200-800 fecal coliform per 100 mL.

Wastewater Treatment Pond (Lagoon)

Currently, New Permits for Lagoon Systems Are Not Being Issued

A lagoon is a pond sealed with a natural or synthetic liner and into which sewage from a household or small business is discharged, after first being treated by a septic tank(s). Bacteria digest the solids in the presence of oxygen, and the liquid is evaporated into the atmosphere. A second cell may be utilized to provide very slow infiltration into the surrounding soils.

Conditions for Approval

1. Site Criteria
 - a. The minimum parcel size for the installation of a wastewater treatment pond shall be ten (10) acres. The edge of a lagoon berm shall be located a minimum of 100 feet from the nearest lot line.
 - b. In addition to parcel size, the site must be isolated to provide surface discharge, if necessary, and isolation from private and/or public development.
 - c. The site must be unsuitable for conventional on-site sewage disposal by containing clay soils with an estimated percolation rate of 60 minutes per inch or greater.
 - d. The bottom of the finished lagoon must not be constructed within six inches of the maximum seasonal high groundwater.
 - e. The site must be located in an area of maximum exposure to sun and wind.
 - f. Slope must not be greater than twelve (12) percent.
2. Restrictive Covenant
 - a. A restrictive covenant in the form of an affidavit stating the minimum agreed upon site size shall be signed by the applicant and recorded with the Register of Deeds in Chippewa County.

- b. An agreement shall be executed between the applicant and the Department to allow access for inspection, performance of required maintenance, and conformance to discharge requirements.
3. Design Criteria
- a. Lagoon size: The lagoon shall be sized to provide at least six (6) months effective storage capacity according to the following usage:
- i. One, two, and three bedrooms: 340 gallons/day, 60 feet diameter = 2,826 square feet surface area, 74,374 gallons total volume, 51,573 gallons effective storage.
 - ii. Four bedrooms: 440 gallons/day, 70 feet diameter = 3,846 square feet surface area, 106,650-gallon total volume, 72,345 gallons effective storage.
 - iii. Commercial establishments use the following calculation to determine lagoon size:

$$A = \frac{(\text{gallons/day}) (\text{BOD,mg/l})(8.35 \times 10^{-6})}{20 \text{ lbs/acre/day}} \times 43,560 \text{ ft}^2$$
- b. Pond Shape
- i. The shape of all ponds shall be that there are no narrow or elongated portions.
 - ii. Round, square, or rectangular ponds with a length not exceeding three (3) times the width.
 - iii. Dikes shall be rounded at corners to minimize accumulations of floating materials and allow for wind action.
4. Location
- a. In an area not subject to surface water runoff, flooding, or natural drainage as evident by contour.
 - b. In an area convenient to a discharge area.
 - c. Isolation from:
 - i. Public water supplies:
 - Type I – 800 ft.
 - Type II – 200 ft.
 - Type III – 200 ft.
 - ii. Private water supplies – 50 ft.
 - iii. Surface water – at least 200 ft.
 - iv. Slopes greater than 6% – minimum of 25 ft.
 - v. Property lines – at least 100 ft.
 - vi. Dwelling that is served by the lagoon – 200 ft.
 - vii. Dwellings (adjoining or adjacent) – 400 ft.
5. Construction
- a. Berms shall be constructed of impervious material such as clay or bentonite, and compacted. Vegetation and other unsuitable materials shall be removed from the area where the berm is placed. Berm shall be constructed clay-on-clay.
 - Top width – four (4) feet minimum.
 - Slopes:

	Maximum	Minimum
Inner	3:1	4:1
Outer	3:1	N/A
 - b. The berm shall be seeded or adequately protected from erosion.
 - c. Free Board – two feet (2') minimum with a recommended slope of 3:1.
 - d. The lagoon depth below natural grade must be three to five feet.
 - e. Influent line:

- i. Must be four-inch (4") diameter schedule 40 PVC or 4-inch (4") SDR 35 for gravity flow.
 - ii. Must be one-and-one-half inch (1 ½") to 2-inch (2") diameter schedule 40 or black plastic water line for pump systems.
 - iii. Placed horizontally, not to exceed eight inches (8") above zero grade.
 - iv. Terminating at the center of the pond.
 - v. Must have bi-directional clean-outs every 100 feet.
 - vi. Gravity flow from septic tank with the outlet of the tank at or above the berm elevation, or
 - vii. If the sewage is pumped to the lagoon, a valve must be installed in the line which will permit repairs without draining the lagoon and which will prevent backflow of effluent from the lagoon to the pumping chamber.
6. Discharge Criteria
 - a. Discharge shall be at the direction of the Health Officer for volume control or weed control.
 - b. Discharge water shall be drawn from six inches (6") below the surface and not drawn down below the two foot (2') minimum operating depth.
 - c. Discharge shall be to ridge and furrow/irrigation to an area 100 feet wide by 200 feet deep or by other method approved by the Health Officer. Discharge area must be isolated in accordance with Section 4 above.
 - d. Discharge area may only be used for crops that are not for direct human consumption.
7. Fencing
 - a. The system must be fenced to exclude children, pets, and livestock.
 - b. Location of the fence shall be a minimum of four feet (4') outside the top of the berm's inner slope.
 - c. Warning sign required designating the nature of the facility and advising against trespassing.
8. Maintenance
 - a. The berm and pond are to be maintained in a manner to prevent insect breeding, odors, erosion, silting, and weed growth.
 - b. Volume control – The bottom two feet (2') shall be filled within the first two months of operation and this volume shall be maintained at all times thereafter.
 - c. The fence is to be maintained in good repair.

EVALUATING EXISTING OSTDS

Purpose: These evaluations are done when a new dwelling or commercial structure is connected to an existing septic system. They are also done when an increase in sewage volume is added to an existing system such as adding bedrooms or expansion of commercial buildings. An increase in sewage volume can only be determined by this Department. The Upper Peninsula Environmental Health Code gives specific guidance on evaluation of existing systems in Section 3-7. The Code states that approval of all new/increase usage needs to be made in writing by the Department.

Evaluation Procedures

1. The client should contact the Department to determine what information is available in the archive files. The Department can approve connection without evaluation in accordance with Code section 3-7.1. Written approval must be given.
2. When an evaluation must be done, the client must submit the application, complete questionnaire in detail, and pay the appropriate fee. The process for approval after inspection is given in sections 3-7.2 and 3-7.3.
 - a. Depending on the information available, the Department may require the following:
 - i. Septic tank pumped and lids left open for inspection of the tank, baffle, and filter.
 - ii. A test hole dug next to the drainfield in order to determine soil type.
 - iii. Exposing the corners of the drainfield and/or parts of the header to determine the field's size and construction.
 - iv. Access to the house or basement to inspect plumbing.
 - v. The Department may require the homeowner to obtain written information from licensed plumbers, septage haulers, or septic installers.
 - b. Approval must be given in writing. Recommendations and required corrections may be indicated.
 - i. Recommendations might include increasing tank pumping frequency, removal of woody vegetation from drainfield.
 - ii. Requirements with deadlines for correction might include: replacing baffle and filter, fixing lids, adding risers, fixing pump alarms, removing sump or footing drains or water treatment system discharges connected to the system, fencing of lagoons, removing vegetation from lagoons, repairing lagoon berm.
3. If the system cannot be approved, correction must be made or a written condemnation order must be issued by the Department. Systems that cannot be approved would include:
 - a. Failing systems (sewage back up in structure or discharge to ground or water, lack of a septic tank or absorption system)
 - b. Collapsed tanks, leaking tanks, or tanks not meant for septic applications.
 - c. Septic tanks less than 75% of required capacity.
 - d. Drainfield less than 75% of required size.
 - e. Structure over 50% or more of the drainfield.
 - f. Failure to meet isolation distances including field height above soil limiting layer and high-water table.