



District Sanitary Code

Charlevoix, Emmet, Antrim and Otsego counties

TABLE OF CONTENTS

1. ARTICLE I	AUTHORITY, JURISDICTION AND ADMINISTRATION	
1.1	Intent.....	Page 1
1.2	Authority and Title	Page 1
1.3	Jurisdiction and Administration.....	Page 1
1.4	Enforcement	Page 1
1.5	Right of Entry and Inspection.....	Page 1
1.6	Establishment and Handling of Fees	Page 2
1.7	Abatement of Nuisances.....	Page 2
1.8	Amendments.....	Page 2
1.9	Other Laws and Regulations.....	Page 2
1.10	Reports	Page 2
2. ARTICLE II	DEFINITIONS	
2.1	Abandoned Water Supply.....	Page 2
2.2	Absorption System	Page 3
2.3	Advanced Treatment System (ATS).....	Page 3
2.4	Approved/Approval.....	Page 3
2.5	Available Sewer System.....	Page 3
2.6	Available Water Supply	Page 3
2.7	Bedroom	Page 3
2.8	Benefited Parcel	Page 4
2.9	Burdened Land	Page 4
2.10	Conventional Sewage Disposal System.....	Page 4
2.11	Distribution Devices	Page 4
2.12	Distribution Header/Manifold	Page 4
2.13	Distribution Network.....	Page 4
2.14	District Board of Health	Page 4
2.15	Dosing	Page 5
2.16	Dosing Chamber – Pumping Station	Page 5
2.17	Effluent Burden	Page 5
2.18	Elevated Absorption (Mound) System	Page 5
2.19	Failure – Sewage Treatment and Disposal System.....	Page 5
2.20	Fill Material.....	Page 5
2.21	Garbage	Page 5
2.22	Grade Drop-off.....	Page 5
2.23	Gravity Flow.....	Page 6
2.24	Habitable Building	Page 6

2.25	Health Officer	Page 6
2.26	Holding Tank	Page 6
2.27	Impervious/Limiting Stratum	Page 6
2.28	Infiltrative Surface	Page 6
2.29	Licensed Professional Engineers	Page 6
2.30	Low Pressure Distribution	Page 7
2.31	Maximum High Groundwater Elevation	Page 7
2.32	Mottling	Page 7
2.33	Natural Ground Surface	Page 7
2.34	Ordinary High Water Mark	Page 7
2.35	Owners, Persons Owning Premises	Page 8
2.36	Person	Page 8
2.37	Premises	Page 8
2.38	Privies	Page 8
2.39	Public Water Supply	Page 8
2.40	Replacement Sewage Treatment and Disposal System	Page 8
2.41	Replacement Water Well	Page 8
2.42	Rubbish	Page 8
2.43	Separate Legally Recognized Parcel	Page 9
2.44	Septic Tank	Page 9
2.45	Septic Tank Riser	Page 9
2.46	Sewage	Page 9
2.47	Sewage Treatment and Disposal Facilities	Page 9
2.48	Sewage Treatment and Disposal System	Page 9
2.49	Sewage (Effluent) Filter	Page 9
2.50	Sewer Line	Page 9
2.51	Soil Permeability	Page 10
2.52	Stream	Page 10
2.53	Successor Building	Page 10
2.54	Surface Water	Page 10
2.55	Terms Not Defined Herein	Page 10
2.56	Toe of Mound	Page 10
2.57	Water Supply	Page 10
2.58	Well	Page 10

3. ARTICLE III LAND DIVISIONS, SUBDIVISIONS AND CONDOMINIUM DEVELOPMENTS

3.1	Requirements	Page 11
3.2	Development Proposals	Page 11
3.3	Criteria for Development Approval	Page 12
3.4	Environmental Approval	Page 13
3.5	Deed Restrictions, Restrictive Covenants and Advisories	Page 13
3.6	Final Approval	Page 13

4. ARTICLE IV SEWAGE TREATMENT AND DISPOSAL

4.1	Sewage Treatment and Disposal on all Premises	Page 14
4.2	Construction Permit Required	Page 14
4.3	Permit Application	Page 14
4.4	Term of Applications	Page 14

4.5	Application Response Time.....	Page 15
4.6	Operation Permit Required.....	Page 15
4.7	Term of Permits.....	Page 15
4.8	Changes and Revisions.....	Page 15
4.9	Criteria for Construction Permit Approval – Conventional Sewage Treatment and Disposal System.....	Page 15
4.10	Criteria for Construction Permit Approval –Elevated Absorption Field (Mound).....	Page 16
4.11	Criteria for Construction Permit Approval –Advanced Treatment System (ATS).....	Page 16
4.12	Maintenance Contracts – Advanced Treatment System (ATS).....	Page 17
4.13	Termination of Maintenance Contract – Advanced Treatment System (ATS).....	Page 18
4.14	Criteria for Operation Permit Approval – Advanced Treatment System (ATS).....	Page 18
4.15	Final Inspection and Approvals.....	Page 19
4.16	Inspections – Advanced Treatment System (ATS).....	Page 19
4.17	Failure of Existing Installations.....	Page 19
4.18	Failure of an Advanced Treatment System (ATS).....	Page 19
4.19	Successor Building.....	Page 20
4.20	Change of Use.....	Page 20
4.21	Municipal Sewer Connection.....	Page 20

5. ARTICLE V REQUIREMENTS FOR CONSTRUCTION OF INDIVIDUAL SEWAGE TREATMENT AND DISPOSAL SYSTEMS

5.1	Design Criteria.....	Page 20
5.2	Septic Tanks.....	Page 21
5.3	Septic Tanks – Minimum Volume.....	Page 21
5.4	Septic Tanks – Maximum Burial.....	Page 21
5.5	Compacting.....	Page 21
5.6	Outlet Piping.....	Page 21
5.7	Pump Chambers.....	Page 21
5.8	Pump Discharge Sewage (Effluent) Filters.....	Page 22
5.9	Septic Tank Risers.....	Page 22
5.10	Riser Lids – Weight Standard.....	Page 22
5.11	Vertical Separation Requirements.....	Page 22
5.12	Horizontal Isolation Requirements.....	Page 23
5.13	Absorption Field Area.....	Page 23
5.14	Absorption Trenches – Spacing.....	Page 24
5.15	Absorption Beds.....	Page 24
5.16	Trench and Bed Construction Details.....	Page 24
5.17	Filter Fabric.....	Page 25
5.18	Pumping.....	Page 25
5.19	Dosing.....	Page 25
5.20	Forcemain Construction.....	Page 25
5.21	Low Pressure Distribution.....	Page 26
5.22	Elevated Absorption System (Mound).....	Page 26
5.23	Sewage Treatment and Disposal System Easements.....	Page 27
5.24	Alternative Methods.....	Page 28
5.25	Privies.....	Page 28

6. ARTICLE VI	WELLS AND WATER SUPPLY	
6.1	Water Supplies	Page 29
6.2	Construction Permit Required	Page 29
6.3	Permit Application	Page 29
6.4	Term of Applications.....	Page 29
6.5	Application Response Time.....	Page 29
6.6	Criteria for Permit Approval.....	Page 30
6.7	Permit Issuance.....	Page 30
6.8	Term of Permits.....	Page 30
6.9	Changes and Revisions.....	Page 30
6.10	Inspections.....	Page 30
6.11	Isolation Distances.....	Page 30
6.12	Contaminated Water Supplies	Page 31
6.13	Plugging of Abandoned Wells.....	Page 31
7. ARTICLE VII	PUBLIC HEALTH NUISANCES	
7.1	Health Officer.....	Page 31
7.2	Abatement	Page 31
8. ARTICLE III	GARBAGE AND RUBBISH	
8.1	Scope.....	Page 32
8.2	Accumulation of Garbage	Page 32
8.3	Accumulation of Rubbish.....	Page 32
8.4	Disposal of Garbage and Rubbish	Page 32
9. ARTICLE IX	PERMIT REVOCATION	
9.1	Revocation of Permits	Page 32
9.2	Permit Revocation Procedure.....	Page 33
10. ARTICLE X	VARIANCES	
10.1	Variances.....	Page 33
10.2	Variance Standards.....	Page 33
10.3	Written Decision	Page 34
10.4	Conditions of Variance.....	Page 34
10.5	Denial of Variance	Page 34
10.6	Hearings	Page 34
11. ARTICLE XI	BOARD OF APPEALS	
11.1	Board of Appeals for Each County	Page 34
11.2	Conflict of Interest	Page 35
11.3	Compensation.....	Page 35
11.4	Appeals.....	Page 35
11.5	Hearings	Page 36
11.6	Standards for Decision	Page 36
11.7	Appeals Decision and Conditions	Page 36
11.8	Meetings – Rules of Procedure	Page 36
11.9	Notices	Page 36

12. ARTICLE XII INTERPRETATION, INJUNCTIVE RELIEF, PENALTY, SEVERABILITY AND AMENDMENTS

12.1 InterpretationPage 37
12.2 Injunctive Relief.....Page 37
12.3 Violation – Civil InfractionPage 37
12.4 SeverabilityPage 37
12.5 AmendmentsPage 37
12.6 Internal Policies and RulesPage 38

13. ARTICLE XI BOARD OF APPEALS

13.1 Repeal.....Page 38

Health Department of Northwest Michigan
DISTRICT SANITARY CODE
ANTRIM, CHARLEVOIX, EMMET and OTSEGO COUNTIES

ARTICLE I AUTHORITY, JURISDICTION AND ADMINISTRATION

1-1 INTENT

The intent of this Code is to protect the environment and the public health, safety and welfare in Antrim, Charlevoix, Emmet and Otsego Counties.

1-2 AUTHORITY AND TITLE

The District Board of Health of Antrim, Charlevoix, Emmet and Otsego Counties govern the District Health Department currently known as the Health Department of Northwest Michigan. Under authority Act 368 of the Public Acts of 1978, the District Board of Health may enact these regulations for the protection of public health and sanitation. These regulations shall be known as the District Sanitary Code and may be called the “Code” elsewhere in these regulations.

1-3 JURISDICTION AND ADMINISTRATION

The Health Officer shall have jurisdiction throughout Antrim, Charlevoix, Emmet and Otsego Counties, including all cities, villages and townships, in the administration and enforcement of these regulations, including all amendments hereafter adopted unless otherwise specifically stated. Nothing herein contained shall be construed to restrict or abrogate the authority of any municipality to adopt more restrictive ordinances. The Health Officer shall have the right to delegate any administrative or enforcement authority or duty granted by this Code to an employee or agent of the Health Department of Northwest Michigan or its successor.

1-4 ENFORCEMENT

All premises affected by these regulations shall be subject to inspection by the Health Officer, and the Health Officer may collect evidence as he or she deems necessary for the enforcement of these regulations.

1-5 RIGHT OF ENTRY AND INSPECTION

The Health Officer may inspect any premises or property, at reasonable times, with the consent of the owner or person in charge of the premises or property or as otherwise authorized by law. No person shall molest or resist the Health Officer in the discharge of the Health Officer’s duty. In the event that a Health Officer is refused permission to inspect any premises at reasonable times, the Health Officer shall have authority to apply for an administrative search warrant pursuant to MCL 333.2241 through MCL 333.2247.

1-6 ESTABLISHMENT AND HANDLING OF FEES

All fees for service shall be established by the District Board of Health. All fees for service shall be collected by the Health Department of Northwest Michigan and shall be deposited with the Charlevoix County Treasurer into the Health Department of Northwest Michigan depository account. If a fee is collected for a service, the fee is non-refundable except where the Health Officer authorizes the refund.

1-7 ABATEMENT OF NUISANCES

Nothing stated in this Code shall be construed to limit the power of the Health Officer to order the immediate and complete abatement of a public nuisance or menace to public health.

1-8 AMENDMENTS

The Health Department of Northwest Michigan, with the approval of all Boards of Commissioners of Antrim, Charlevoix, Emmet and Otsego Counties, may from time to time amend, supplement or change these regulations. Notice of a public hearing on any such proposed changes shall be given by the Health Department of Northwest Michigan as provided in MCL 333.2442.

1-9 OTHER LAWS AND REGULATIONS

The regulations of this Code are standards supplemental to the rules and regulations duly enacted by the Michigan Department of Health and Human Services (MDHHS), and the laws of the State of Michigan relating to public health. Where any of the provisions of this Code and the provisions of any local ordinance, statute, State rule or regulation, the more restrictive shall prevail.

1-10 REPORTS

The Health Officer shall present an Annual Report to the Boards of Commissioners. The report shall be presented after January 1 and before May of each year. The report shall include data regarding the permitting and evaluation of water and wastewater systems, evaluations of land and the inspection and abatement of public health nuisances.

ARTICLE II DEFINITIONS

As used in this Code or a permit that is issued pursuant to this Code, the following definitions shall apply:

2-1 ABANDONED WATER SUPPLY

An abandoned water supply means a water supply whose use has been permanently discontinued, a water supply or portion thereof which is in such disrepair that its use can no longer continue for the purpose of obtaining water for normal use, a water

supply which has been left uncompleted, a water supply which is a threat to other sources of water, or a water supply which is or may be a health or safety hazard.

2-2 ABSORPTION SYSTEM

Absorption system is the collective term for trench excavation, bed excavation or other alternate method used to uniformly distribute septic tank effluent to subsurface soil by means of a network of distribution piping in washed aggregate with covering soil and vegetation or other means of applying effluent to a subsurface soil interface.

2-3 ADVANCED TREATMENT SYSTEM (ATS)

An advanced treatment system (ATS) is an on-site wastewater system that provides for the collection, treatment and uniform disposal of wastewater using advanced technologies to pre-treat wastewater effluent prior to a soil absorption system.

2-4 APPROVED/APPROVAL

Approved or approval denotes that a condition, facility, thing, premise, action or use, has been reviewed by the Health Officer and has been determined to be in satisfactory compliance with the intent, purpose and applicable standards of these regulations.

2-5 AVAILABLE SEWER SYSTEM

Available sewer system means a publicly operated sanitary sewer system or a privately operated community wastewater system located in a right-of-way, easement, highway, street or public way which crosses, adjoins, or abuts upon the property or a tract of land, as defined in the Land Division Act, being Act 288 of 1967 as amended, and when the local governmental agencies having jurisdiction will allow or require connection to that sewer. The limitations of this definition do not apply to the determination of availability of a sewer system for proposed development projects reviewed under Article III of this Code.

2-6 AVAILABLE WATER SUPPLY

Available water supply means a waterworks system that provides water for drinking or household purposes to persons other than the supplier of the water and is located in a right-of-way, easement, highway, street or public way which crosses, adjoins, or abuts upon the property or a tract of land, as defined in the Land Division Act, being Act 288 of 1967 as amended, and when the local governmental agencies having jurisdiction will allow or require connection to that water supply. The limitations of this definition do not apply to the determination of availability of a water supply system for proposed development projects reviewed under Article III of this Code.

2-7 BEDROOM

Any space in the conditioned area of a dwelling unit or accessory structure which could reasonably be expected to be used for the placement of beds or other furniture used for

sleeping and which conforms to the definition of bedroom as defined by the International Residential Code (IRC) R305.1, R310.1, R304.2/R304.4.

2-8 BENEFITED PARCEL

A benefited parcel means a legally recognized parcel of land, separate from the burdened land, which is or will be served by a proposed sewage treatment and disposal system.

2-9 BURDENED LAND

The term burdened land means a separately recognized parcel of land, separate from the benefitted parcel, over or under which any portion of a sewage treatment and disposal system will be located.

2-10 CONVENTIONAL SEWAGE DISPOSAL SYSTEM

A system installed at or below the natural ground surface, which includes a building sewer, one or more septic tanks, a subsurface drain field, and all associated connections, fittings, and appurtenances.

2-11 DISTRIBUTION DEVICES

The term distribution device means a watertight receptacle installed with proper footings, provided with outlets on the same horizontal plane, used for the purpose of assuring the equal distribution of the septic tank effluent when such effluent is being disposed of by means of any absorption system.

2-12 DISTRIBUTION HEADER / MANIFOLD

A conduit used to disperse septic tank effluent in equal amounts to the distribution network in a soil absorption system.

2-13 DISTRIBUTION NETWORK

A distribution network is a system of pipe lines or other means used to disperse septic tank effluent uniformly throughout a soil absorption system.

2-14 DISTRICT BOARD OF HEALTH

The term District Board of Health shall mean the District Board of Health of Antrim, Charlevoix, Emmet and Otsego Counties. The District Board of Health is comprised of two (2) appointed County commissioners from each of the Counties of Antrim, Charlevoix, Emmet and Otsego and the Health Officer, Medical Director and Division Directors of the Health Department of Northwest Michigan.

2-15 DOSING

Application of septic tank effluent to the absorption field in controlled amounts, so as to

intermittently introduce a measured amount of wastewater effluent to the soil interface and allowing for a uniform wetting front that migrates downward through the soil profile permitting for an intermittent phase where soil pores are filled with oxygen.

2-16 DOSING CHAMBER - PUMPING CHAMBER

A watertight tank or receptacle used for the purpose of retaining septic tank effluent pending its automatic discharge of a measured amount of effluent to a designated point in the distribution system.

2-17 EFFLUENT BURDEN

The volume of sewage generated by human activity which includes but is not limited to the number of bedrooms, facility or home occupancy, number and type of water using fixtures, water use characteristics and patterns and other factors.

2-18 ELEVATED ABSORPTION (MOUND) SYSTEM

Any soil absorption system having its infiltrative surface any distance above the natural ground surface other than on fill placed for the sole purpose of leveling the site for installation.

2-19 FAILURE – SEWAGE TREATMENT AND DISPOSAL SYSTEM

Where the drainfield aggregate of a sewage treatment and disposal system has hydraulically saturated or effluent from a sewage treatment and disposal system is exposed to the surface of the ground, backing up into a structure or is permitted to drain onto the surface of the ground or into any lake, river, storm sewer or stream, or where the seepage of effluent is endangering a public or private water supply or where a public health nuisance is created by a system improperly constructed or maintained.

2-20 FILL MATERIAL

Fill material shall mean clean medium textured sand, free of clay, silt, black dirt, and vegetation or other undesirable foreign material, or other material specified and approved by the Health Officer.

2-21 GARBAGE

Rejected food wastes, including waste accumulation of animal, fruit or vegetable matter used or intended for food or that attend the preparation, use, cooking, dealing in or storing of meat, fish, fowl, fruit, or vegetables or other putrescible wastes.

2-22 GRADE DROP-OFF

Drop-off means a man-made cut or natural slope where side slope is in excess of 50% or 1foot of vertical drop in a 1foot horizontal distance.

2-23 GRAVITY FLOW

Flow without induced pressure, as characterized by a free liquid surface.

2-24 HABITABLE BUILDING

The term habitable building shall mean any structure or part thereof where persons live, sleep, reside, are employed, or congregate, for any period of time, and which is occupied in whole or in part. For the purposes of this definition, a structure shall include, but are not limited to houses, mobile homes, campers, motor vehicles and garages or other types of accessory buildings.

2-25 HEALTH OFFICER

The term Health Officer shall mean the Director of the Health Department of Northwest Michigan or successor agency or health department serving the counties of Antrim, Charlevoix, Emmet and Otsego.

The Health Officer shall mean the person appointed by the Board of Health as Health Officer pursuant to Act 368, PA 1978 as amended (The Public Health code). Any action which the Health Officer may perform pursuant to this Code may be performed by an authorized representative of the Health Officer. Such authorization may be made by the Health Officer or Board of Health, in the absence or incapacity of the Health Officer.

2-26 HOLDING TANK

A watertight tank of material approved by the Health Officer which has the outlet end of the tank sealed, to prevent the discharge of sewage, is underground and is equipped with an audio/visual high level alarm.

2-27 IMPERVIOUS / LIMITING STRATUM

Impervious / limiting strata shall mean any material which has a permeability rate slower than 60 (min/in) and which includes bedrock formations, peat, muck, marl and soils that have impervious soil structures or other soil characteristics.

2-28 INFILTRATIVE SURFACE

The soil - aggregate interface below an absorption bed, trench, drywell, block trench etc. or soil surface at the base of a chamber, graveless distribution or drip irrigation network where effluent begins to fill the pore spaces of the porous material below a soil absorption system.

2-29 LICENSED PROFESSIONAL ENGINEERS

The term licensed professional engineer shall mean a professional civil engineer who is licensed under article 20 of the occupational Code, Act 299 of the Public Acts of 1980, being §§339.2001 to 339.2014 of the Michigan Compiled Laws.

2-30 LOW PRESSURE DISTRIBUTION

Flow induced by pumping or other means as characterized by minimum pressures of four (4) feet of pressure head (or 1.73 pounds per square inch) in the distribution piping.

2-31 MAXIMUM HIGH GROUNDWATER ELEVATION

Maximum high ground water elevation means the elevation of the upper surface of the zone of saturation as may occur during the normally wet periods of the year. The term includes perched and apparent conditions that are seasonally saturated for a time period in excess of two weeks. For the purpose of this Code, the high ground water elevation will be determined by observing subsurface saturated conditions and/or groundwater indicators, such as soil mottling and redoximorphic features.

2-32 MOTTLING

Mottling, also known as redoximorphic features, is the result of the oxidation, reduction and translocation of soil minerals (primarily iron and manganese) and begins to occur after a soil has been periodically saturated for significant lengths of time. The actual standing water may be above or below the mottled zone resulting from seasonal fluctuations in water table or in response to other temporal climatic events.

2-33 NATURAL GROUND SURFACE

The ground surface formed on the site through the forces of nature and not altered by man through excavating, importing fill soil or other means. Ground surfaces altered directly or indirectly by an individual, independent of the length of time, are not considered natural.

2-34 ORDINARY HIGH WATER MARK

The term “ordinary high water mark”, relative to any surface water body, means the line between upland and bottomland which persists through successive changes in water levels, below which the presence and action of the water are so common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil, and the vegetation.

On an inland lake that has an established legal lake level, it means the high established level. Where water returns to its natural level as the result of the permanent removal or abandonment of a dam, it means the natural ordinary high water mark.

On Great Lakes waters regulated by the Michigan Department of Environmental Quality, the term refers to the known high water elevation established in 1986 (582.35’).

2-35 OWNERS, PERSONS OWNING PREMISES

The terms owners and persons owning premises shall mean both the owner of title and of record and those occupying or in possession or control of any property or premises.

2-36 PERSON

The term person shall mean an individual, firm, partnership, party, corporation, company, society, association or other legal entity.

2-37 PREMISES

Premises shall mean a tract or parcel of land which is occupied or on which a habitable building or buildings are located and shall include the building or buildings.

2-38 PRIVIES

Outdoor toilets utilizing a septic tank or “vault” for the collection and storage of sewage.

2-39 PUBLIC WATER SUPPLY

A public water supply means a water supply which provides water for drinking or household purposes to persons other than the supplier of water and that meets the definitions of public water supplies as outlined in Act 399, P.A. 1976 as amended.

2-40 REPLACEMENT SEWAGE TREATMENT AND DISPOSAL SYSTEM

Any portion of a sewage treatment and disposal system that modifies or replaces a failed, failing or inoperative existing sewage treatment and disposal system or is modified or replaced for the purpose of upgrading or relocating the system.

2-41 REPLACEMENT WATER WELL

A water well that is installed to provide water to a premise as a result of the existing water well or water supply being unable to provide water of adequate quantity or quality, when the construction or location of the existing water well or water supply poses a potential threat to the public health of when its use is no longer intended.

2-42 RUBBISH

Non-putrescible solid wastes excluding ashes consisting of both combustible and non-combustible wastes, such as paper, cardboard, metal containers, wood, glass, bedding, demolished building materials and litter of any kind that will be detrimental to the public health and safety.

2-43 SEPARATE, LEGALLY RECOGNIZED PARCEL

A “separate, legally recognized parcel” means a parcel of land, which is described in a legal description separate from the benefited parcel and which was created in compliance with applicable law.

2-44 SEPTIC TANK

A watertight receptacle used for the purpose of receiving all sewage and so designed as to permit the collection of solids from such wastes and to permit such retained solids to undergo decomposition therein.

2-45 SEPTIC TANK RISER

The term septic tank riser means a device that is connected to a septic tank, pump chamber or other sewage treatment and disposal facilities, extends to ground surface and has a cover or lid which prevents unauthorized access. Risers present a means to readily locate and provide access for inspection and routine maintenance.

2-46 SEWAGE

The liquid waste from all habitable buildings, as well as human excreta, wastes from toilets, urinals, sinks, laundries, shower baths, bath tubs, dishwashers, garbage grinders, and septic tank overflow or effluent and any other liquid waste of organic or chemical nature, either singularly or in any combination.

2-47 SEWAGE TREATMENT AND DISPOSAL FACILITIES

Those devices used in the treatment and disposal of sewage, including but not limited to, a holding tank, privy, seepage pit, dry well, block trench, sewer line, septic tank, pumping chamber, dosing chamber, absorption field, trench, or bed. These facilities are identified as methods of disposal that are routinely encountered, but do not necessarily comprise methods that are approvable under this Code.

2-48 SEWAGE TREATMENT AND DISPOSAL SYSTEM

The term sewage treatment and disposal system shall mean the method of disposing of sewage into the soil by means of a sewer line connected to a septic tank or aerobic tank and a soil absorption system or any other similar device, appurtenances or method approved by the Health Officer.

2-49 SEWAGE (EFFLUENT) FILTER

A device intended to filter suspended solids from sewage effluent prior to conveyance to a soil absorption system.

2-50 SEWER LINE

Any watertight pipe or conduit used for the conveying of sewage.

2-51 SOIL PERMEABILITY

The measure of the rate at which liquid (typically water) passes in one direction through soil under saturated conditions. Soil permeability is determined through standardized field textural analysis procedures, using USDA textural classifications and could include influential soil structure characteristics.

2-52 STREAM

A stream is a natural or artificial body of water that has definite banks, a bed, and visible evidence of a continuous or periodic flow of water.

2-53 SUCCESSOR BUILDING

Any premises where the square footage is replaced or expanded by greater than 50% through construction, remodeling or renovation activities.

2-54 SURFACE WATER

The term surface water means any of the following: The Great Lakes and their connecting waterways, inland lakes, rivers, streams and ponds. Ponds provided with an impermeable liner or manmade ponds that are contained on a parcel of land and which do not have an outlet or connection to other surface water bodies are exempt from this definition.

2-55 TERMS NOT DEFINED HEREIN

Any other terms used herein not defined shall have the natural and usual meaning as found in the trade or as defined by current trade journals or other publications.

2-56 TOE OF MOUND

The perimeter of a mound where it's fill material and cover meets the natural ground surface.

2-57 WATER SUPPLY

Water supply means a system of pipes and structures through which water is obtained, including, but not limited to, the source of the water, such as wells, hauled water storage tanks, and pumping and treatment equipment, storage tanks, pipes and appurtenances, or a combination thereof, used or intended to furnish potable water for domestic or consumer use.

2-58 WELL

Well means an opening in the surface of the earth for the purpose of removing groundwater for domestic use, irrigation, recharge, or open loop geothermal purposes

ARTICLE III LAND DIVISIONS, SUBDIVISIONS AND CONDOMINIUM DEVELOPMENTS

3-1 REQUIREMENTS

A permit or approval of a parcel less than one acre, a proposed platted subdivision development or a proposed condominium development, where the development is not served by a publicly operated water supply system and public sanitary sewer system, shall be issued if the requirements of this Code have been met.

3-2 DEVELOPMENT PROPOSALS

Developments which propose the use of individual water supply and/or sewage treatment and disposal systems, privately owned public water supply and/or privately owned community wastewater treatment and disposal systems or the use of existing water supply and/or sewage treatment and disposal systems shall be submitted to the Health Officer for review and approval. A licensed professional engineer or licensed land surveyor shall prepare and submit for review a development report and supporting documentation regarding the suitability of the site for the proposed use.

The licensed professional engineer or licensed land surveyor shall submit a certification of suitability of the site for the proposed use in regards to the installation of or use of existing water supplies and/or sewage treatment and disposal systems through the submittal of a narrative outlining his/her findings and conclusions which support his/her certification of suitability.

Four copies of the site report, site development plan and supporting documentation shall be submitted to the Health Officer and shall include but not be limited to the following:

- A. A narrative statement and site development plan that articulates and conveys the proposed use, size and arrangement of units and/or lots.
- B. Indicate all areas in excess of twelve (12) percent slope. Also, show all natural drainage areas and structures.
- C. A site development plan in a scale not to exceed 1":60'.
- D. In the case of waterfront property indicate high water elevations and two (2) foot vertical contour intervals if ground water table is within sixty inches (60") of the natural ground surface.
- E. Show maximum high ground water table where such is within sixty inches (60") of the natural ground surface.
- F. The location and results of soil evaluations using procedures acceptable to the Health Officer.
- G. For developments proposing to utilize individual or privately owned public water

supplies, information which demonstrates the availability of ground water that is of acceptable quality and quantity in a formation which is adequately protected with respect to potential sources of contamination must be provided.

- H. The proposed name of the development.
- I. Location as to Section Number, Town, Range, Township and County.
- J. The name and address of the owner, proprietor and applicant.
- K. North point, date, street names, unit and/or lot and development dimensions.
- L. Typical layout of the single family dwelling and facilities for each individual unit and/or lot. If the proposed use of units and/or lots will be for other than single family residences, the use and location shall be indicated and a typical layout showing building and facility locations provided for each unit and/or lot so used.
- M. Existing and proposed contours where site modifications are proposed. Site modifications shall be shown in two (2) foot vertical contour intervals.
- N. Existing and proposed utility easements.
- O. Location of existing structures, wells and sewage treatment and disposal systems.
- P. Location of lakes, rivers, streams or other surface waters or where conditions of ponding or flooding are known to occur and where such conditions may be in conflict with the development of safe and adequate systems for water supply and sewage treatment and disposal systems.
- Q. Any potential sources of contamination of proposed water supplies for the project.
- R. The location of water supplies used to determine water supply suitability relative to development location.
- S. The signature and seal of the licensed professional engineer or licensed land surveyor preparing the report.
- T. Other information as deemed necessary by the Health Officer to demonstrate site suitability.

3-3 CRITERIA FOR DEVELOPMENT APPROVAL

This development plan or a preliminary development plan may be approved for onsite water supply or sewage treatment and disposal if the following conditions exist:

- A. A publicly operated sewer system is not available.
- B. The natural ground surface is greater than sixty (60) inches above any of the following:

1. Maximum high water table elevation.
 2. Impervious soil stratum.
 3. Ordinary high water mark of adjoining lake, stream or other surface waters.
 4. Bedrock formations, peat, muck or marl
- C. The property has sufficient area to provide for the minimum horizontal isolation requirements of Section 5-12 for each water well and/or sewage treatment and disposal system proposed.
- D. The requirements of State of Michigan Act 59 PA 1978 and/or Act 288 PA 1967 as amended or any Administrative Rules promulgated under these Acts can be met. Where the requirements of these Acts conflict with the provisions of this Code, the most restrictive shall prevail.
- E. Ponding or flooding are not known to occur, where such conditions might be in conflict with the development of safe and adequate systems for water supply and sewage treatment and disposal.
- F. An adequate and protected water supply is available.

3-4 ENVIRONMENTAL APPROVAL

A development plan shall be approved when conditions noted in the site report, supporting documentation and certification of suitability and when the unit and/or lot size or arrangement of units and/or lots have been demonstrated to meet the requirements of this Code. The review of the development plan shall take into account the anticipated use to be made of any unit, lot or division of land.

The Health Officer shall review the information submitted and determine if the information is accurate, representative and adequately supports the certification of suitability. If the Health Officer determines the development plan, supporting documentation and certification of suitability adequately demonstrates that the proposed development meets the requirements of this Code and all state statutory requirements or administrative rules, then he shall send to the municipal corporation an approval of environmental suitability.

3-5 DEED RESTRICTIONS, RESTRICTIVE COVENANTS AND ADVISORIES

The agency may require, as a condition of approval, that the owner record deed restrictions, restrictive covenants and/or advisories for the protection of the public health, safety and welfare and the environment or to meet the requirements of this code.

3-6 FINAL APPROVAL

Final approval of a development which proposes the use of individual water supply and/or sewage treatment and disposal systems, privately owned public water supply and/or privately owned community wastewater treatment and disposal systems or the use of existing water supply and/or sewage treatment and disposal systems shall not be

granted until the conditions and/or restrictions for approval have been made part of the master deed and/or restrictive covenants for the proposed development and a copy of the recorded master deed and/or restrictive covenants are submitted for review.

ARTICLE IV SEWAGE TREATMENT AND DISPOSAL

The intent of this article is to provide regulations to control the installation and maintenance of private, semi-private and public sewage treatment and disposal systems where no municipal sewage facility is available; to establish minimum criteria for such installation; to protect the health, safety and welfare of the people of Antrim, Charlevoix, Emmet and Otsego Counties.

4-1 SEWAGE TREATMENT AND DISPOSAL ON ALL PREMISES

It shall be unlawful for any person to construct or alter any premise which is not equipped with a sewage treatment and disposal system that complies with this Code, unless granted approval by the Health Officer. It is also unlawful for any person to occupy or maintain a premise that has a failed sewage treatment and disposal system.

Existing sewage treatment and disposal systems, determined by the Health Officer to be in good functional status, may be granted or allowed continued operation until a change of use is proposed or created or the use of that system results in a failure.

4-2 CONSTRUCTION PERMIT REQUIRED

It shall be unlawful for any person to construct, repair, alter, extend or operate any sewage treatment and disposal facility within Antrim, Charlevoix, Emmet or Otsego Counties unless they have a construction permit issued by the Health Officer and for which a final approval has been granted pursuant to this Code. As used in this Code, the term "permit" includes any conditions contained within the permit.

4-3 PERMIT APPLICATION

A completed Health Officer approved application and fee for a construction or operation permit shall be required for any installation of a sewage treatment and disposal system. The application for the proposed sewage treatment and disposal system shall include information and data required by this Code and, if not specified by this Code, must provide information to demonstrate compliance with the standards or requirements of this Code and be signed by the owner or owner's representative.

An application that is not complete shall not be approved.

If the stated requirements of this Code are met, a construction or operation permit shall be issued by the Health Officer, subject to the terms and conditions established by the Health Officer.

4-4 TERM OF APPLICATIONS

Any application received by the Health Department shall, if incomplete, have a term of one (1) year from the date of application submittal. Any incomplete application

exceeding the expiration date shall be considered invalid and expired and all associated permit application fees will be forfeited.

4-5 APPLICATION RESPONSE TIME

Once the Health Officer has received a completed application and fee, the Health Officer shall within fifteen (15) working days: grant the permit, deny the permit or notify the applicant that the permit process will require additional time to complete due to weather conditions, seasonal considerations or other material reason.

4-6 OPERATION PERMIT REQUIRED

It shall be unlawful for any person to install or operate any Advanced Treatment System (ATS) or any sewage treatment and disposal system that uses an easement for the conveyance or disposal of residential or commercial wastewater within Antrim, Charlevoix, Emmet or Otsego Counties unless they have an operation permit issued by the Health Officer.

4-7 TERM OF PERMITS

Any construction permit issued pursuant to the requirements of the preceding sections shall be valid for the term of two (2) years from the date of issuance, unless revoked as provided in this Code.

An operation permit issued pursuant to the requirements of the preceding sections shall be valid for the term of up to one (1) year, from the date of issuance, for Advanced Treatment Systems, expiring on December 31st of the year of expiration, unless revoked as provided in this Code.

An operation permit issued pursuant to the requirements of the preceding sections shall be valid for the term of up to five (5) years, from the date of issuance, for Off-Site Systems, expiring on December 31st of the year of expiration, unless revoked as provided in this Code.

4-8 CHANGES AND REVISIONS

No changes shall be made in the approved plans without the written consent of the Health Officer and the property owner or the property owner's authorized agent. A revision in development plans, constructing or installing sewage treatment and disposal facilities inconsistent with the permit or a change in site conditions, from those upon which the approval was based, and where the change may reasonably be expected to impact compliance with this code, shall require an application for a new permit. All sections of this Code pertaining to new permits shall then apply.

4-9 CRITERIA FOR CONSTRUCTION PERMIT APPROVAL – CONVENTIONAL SEWAGE TREATMENT AND DISPOSAL SYSTEM

A conventional sewage treatment and disposal system may be permitted at a site where

all of the following site characteristics or conditions exist:

- A. An available sewer system is not available.
- B. The area of the proposed sewage treatment and disposal system complies with the minimum vertical separation requirements for conventional systems in Table 5-11.
- C. The property served includes sufficient area to provide for the minimum horizontal isolation distances required in Table 5-12.
- D. The natural ground slope does not exceed twelve (12) percent. Sites may be approved with greater slopes if design includes methods designed to work with slopes (drip irrigation, step trenches, distribution chambers etc.).

4-10 **CRITERIA FOR CONSTRUCTION PERMIT APPROVAL – ELEVATED ABSORPTION FIELD (MOUND)**

An elevated absorption system (mound) may be permitted at a site where all of the following conditions are met:

- A. An available sewer system is not available.
- B. The area of the proposed sewage treatment and disposal system complies with the minimum vertical separation requirements for elevated absorption systems in Table 5-11.
- C. The property served includes sufficient area to provide for the minimum horizontal isolation distances required in Table 5-12.
- E. The natural ground slope does not exceed twelve (12) percent.
- F. The site is not subject to flooding or significantly impacted by surface runoff.

4-11 **CRITERIA FOR CONSTRUCTION PERMIT APPROVAL – ADVANCED TREATMENT SYSTEM (ATS)**

An Advanced Treatment System shall be permitted where the applicant has provided competent, material and substantive evidence which allows the Health Officer to find that all of the following standards have been met and all of the following required information has been provided:

- A. An available sewer system is not available.
- B. The area of the proposed sewage treatment and disposal system complies with the minimum vertical separation requirements for advanced treatment systems in Table 5-11.
- C. The property served includes sufficient area to provide for the minimum

horizontal isolation distances required in Table 5-12.

- D. The natural ground slope does not exceed twelve (12) percent.
- E. The proposed ATS is capable of producing effluent with:
 - 1. Biological Oxygen Demand (BOD₅) less than or equal to 30 mg/L
 - 2. Total Suspended Solids (TSS) less than or equal to 30 mg/L
 - 3. Total Inorganic Nitrogen (TIN) less than or equal to 30 mg/L
- F. The site is not subject to flooding or significantly impacted by surface runoff.
- G. A wetland determination may be required and, if required by law, a wetland permit shall be obtained prior to issuance of a construction permit.
- H. The applicant shall provide the Health Officer with the maintenance specifications of the manufacturer and the maintenance specifications of the engineer for the entire ATS.
- I. The applicant shall provide the Health Officer with a notarized copy of a Notice of Advanced Treatment System that has been recorded with the Register of Deeds in the county in which the premises is located and which contains the page and liber numbers of the recordation.
- J. An approved operation permit shall be acquired for the proposed Advanced Treatment System (ATS).
- K. A maintenance contract meeting the requirements of Section 4-12 shall be provided prior to permit approval.

4-12 MAINTENANCE CONTRACTS – ADVANCED TREATMENT SYSTEM (ATS)

A maintenance contract shall be submitted to the Health Officer for approval and is required prior to issuance of the operation permit for an Advanced Treatment System (ATS). At a minimum the maintenance contract shall provide that:

- A. The ATS shall be inspected and the effluent sampled and evaluated not less than annually by a maintenance contractor who shall be a licensed professional engineer, State of Michigan or nationally registered sanitarian in private practice or a certified ATS inspector.
- B. The first operation and maintenance inspection shall be conducted thirty (30) to ninety (90) days of ATS start-up.
- C. The inspection(s) and any regular maintenance required by the manufacturer, design engineer and operation permit shall be prepaid for a minimum of one (1) year.

- D. Required inspection(s) shall determine and inspection report(s) shall describe whether the ATS:
 1. Is functioning in compliance with the standards of section 4-11(E) and include all analytical testing which has been done to make this determination.
 2. Continues to be compliance with the maintenance specifications of the manufacturer.
 3. Continues to be compliance with the maintenance specifications of the engineer for the ATS.
 4. Continues to be compliance with conditions imposed by all permits issued by the Health Officer
 5. The ATS is performing in the manner in which it was approved.
- E. The inspection report must include a description of all maintenance performed on the ATS or any of its components since the last inspection report.
- F. The maintenance contract must be assignable to subsequent owners of the premises, which is equipped with the ATS.
- G. The maintenance contractor acknowledges the obligation to notify the Health Officer of a discontinuation of services as required by Section 4-13.
- H. An operation and maintenance inspection report shall be submitted to the Health Officer and the property owner within thirty (30) days of any inspections required by the Health Officer.
- I. The Health Officer, as deemed necessary, may require additional inspections and inspection parameters.

4-13 **TERMINATION OF MAINTENANCE CONTRACT – ADVANCED TREATMENT SYSTEM (ATS)**

The property owner and maintenance contractor shall notify the Health Officer within thirty (30) days if for any reason the services required by the maintenance contract are or will no longer be performed.

4-14 **CRITERIA FOR OPERATION PERMIT APPROVAL – ADVANCED TREATMENT SYSTEM (ATS)**

The initial operation permit shall be issued by the Health Officer for an Advanced Treatment System (ATS) documented to have the capability to meet the requirements of Section 4-11 (E) and which has a maintenance contract meeting the requirements of Section 4-12.

An operation permit renewals shall be issued by the Health Officer if the applicant has provided competent, material and substantive evidence which allows the Health Officer to find that the ATS is in compliance with Section 4-11(E) and that the property owner has a valid maintenance contract in effect as required by this Code.

4-15 FINAL INSPECTIONS AND APPROVALS

The Health Officer shall make such inspections at the premises as deemed necessary to assure that the wastewater system was installed in compliance with the Code and with any conditions required on the permit. The owner or the owner's agent shall notify the Health Officer when the wastewater system is installed and the project is ready for inspection. Notification must be provided a minimum of two (2) working days prior to anticipated system completion and desired final inspection by the Health Officer.

The wastewater system must be left in a condition that allows for proper inspection and may not be put into use prior to an inspection and approval by the Health Officer, except with the permission of the Health Officer and submittal of a sewage treatment and disposal system affidavit.

Where engineered systems are required, the system shall be inspected by the design engineer and an "as-built" drawing shall be submitted to the Health Officer within thirty (30) working days.

4-16 INSPECTIONS – ADVANCED TREATMENT SYSTEMS (ATS)

For Advanced Treatment Systems (ATS), the following inspections shall be performed by a licensed professional engineer and the engineer shall certify, on a form provided by the Health Officer, that the following have been met:

1. The advanced treatment unit or facility is installed according to the engineered site plan.
2. The advanced treatment system is installed in compliance with the ATS construction permit and all conditions.
3. All system components and appurtenances are installed correctly.
4. Advanced treatment unit or facility is in good working condition, functioning properly and meets all manufacturer design parameters.

4-17 FAILURE OF EXISTING INSTALLATIONS

A "failed" sewage treatment and disposal system shall be repaired, rebuilt, or replaced by a system constructed according to stated requirements of this Code or connected to an available sewage system within a reasonable period of time specified by the Health Officer.

4-18 FAILURE OF AN ADVANCED TREATMENT SYSTEM (ATS)

If the ATS fails to meet the standards in Section 4-11(E), any provision of the maintenance contract or a condition of the construction permit or operation permit, the owner shall immediately notify the Health Officer of the failure and immediately take action to identify and correct the cause(s) of the failure. Corrections and additional effluent sampling shall be conducted to demonstrate compliance with Section 4-11(E) without endangerment to public health or the environment.

Where the cause of failure cannot be corrected within a one-month period, the owner shall enter into an agreement approved by the Health Officer to provide for the proper disposal of septage generated on the property. The Health Officer shall approve such an agreement if it provides, in a timely manner, for the lawful disposal of septage by a State of Michigan licensed septage hauler until such time as the ATS can operate as required by the operation permit.

4-19 SUCCESSOR BUILDINGS

A building or mobile home using an existing sewage treatment and disposal system may be replaced or succeeded by a building or mobile home which may use the same treatment and disposal system provided approval of the Health Officer is first obtained and the system is deemed adequate for the replacement building in terms of the provisions of this Code.

4-20 CHANGE OF USE

Any change in use that may increase the objective potential effluent burden of an existing premises or into an existing sewage treatment and disposal system, shall require approval of the Health Officer as to the adequacy of the system in terms of the stated requirements of this Code.

The Health Officer may grant approval for the continued use of an existing sewage treatment and disposal system for a construction project, where the existing sewage treatment and disposal system is currently in substantial compliance with the Code, the project proposal is sized within one (1) bedroom of the requirements stated in the Code, where the system is determined to be in good functional status and where the property has available area of suitable conditions for replacement of the existing system.

4-21 MUNICIPAL SEWER CONNECTION

Where a public sewer is available, all new buildings shall be connected at the time of construction. When a public sewage system becomes available to existing properties where a sewage treatment and disposal system exists that is not in compliance with or can be brought into compliance with the Code, connection to the available sewer system must occur and documentation of connection must be provided to the Health Officer.

ARTICLE V REQUIREMENTS FOR CONSTRUCTION OF INDIVIDUAL SEWAGE TREATMENT AND DISPOSAL SYSTEMS

5-1 DESIGN CRITERIA

The standards herein shall be the minimum design criteria and shall apply to all sewage treatment and disposal systems. For systems serving uses other than single or two-family residences, Michigan established rules, guidelines or criteria or this Code will be applied, whichever is more restrictive.

Where the provisions of this Code or any criteria established by the State of Michigan

do not address critical components of a wastewater system design or installation, other accepted practices may be applied as deemed necessary by the Health Officer.

Where plans are required as part of a permitting process, they shall be submitted along with specification and supporting documents prior to permit issuance. If the plans and specifications meet the requirements of this Code and any applicable state statutes and rules, a permit shall be issued by the Health Officer.

5-2 SEPTIC TANKS

Design and construction of septic tanks shall be subject to the approval of the Health Officer prior to construction or installation. All septic tanks should be designed and installed to be watertight including; watertight seams, penetrations and access risers in high water table conditions. In areas of high groundwater conditions, septic tank buoyancy calculations shall be provided to the Health Officer for review and necessary ballasting provided, at the time of installation, to secure tank placement.

5-3 SEPTIC TANKS – MINIMUM VOLUME

The minimum liquid capacity of a septic tank serving a single dwelling shall be 1,000 gallons for a dwelling having three (3) bedrooms or less, and 250 additional gallons for each additional bedroom in excess of three.

5-4 SEPTIC TANKS – MAXIMUM BURIAL

A septic tank, pump chamber or other tank that is a component of a wastewater system, shall have a maximum burial depth of thirty-six (36) inches below finished grade. If information can be provided by the tank manufacturer that a greater burial depth can be achieved, the tank may be allowed to have a greater burial depth.

5-5 COMPACTING

The soil below a septic tank or pump chamber shall be compacted, levelled and free of stone or other material that could compromise the integrity of the tank bottom. Soils, adjacent to the sidewalls of the tank shall be compacted using non-mechanical methods to prevent settling.

5-6 OUTLET PIPING

Where septic tank effluent is exiting a tank by gravity, the pipe connected to the outlet baffle must be constructed of Schedule 40 PVC or SDR 35 material for a minimum of ten (10) feet from the outlet of the tank.

5-7 PUMP CHAMBERS

The pump chamber shall have a reserve volume that provides for temporary loss of power or other pump failure, shall have a high level warning device and shall be provided with a septic tank riser with a watertight connection to the top of the tank. The minimum liquid capacity of the pump chamber shall be 500 gallons or 1/3 of the total

septic tank capacity requirement, whichever is greater.

All pump and pumping equipment shall be accessible from the finished grade to prevent entry into the pump chamber during routine operation and maintenance. Design and construction of pump chambers shall be subject to the prior approval of the Health Officer.

5-8 PUMP DISCHARGE SEWAGE (EFFLUENT) FILTERS

Pump discharge filters are required where the distribution orifice size is ¼ inch diameter or smaller. Maximum pump discharge filter opening/screening size shall not exceed the maximum orifice size in the distribution network.

5-9 SEPTIC TANK RISERS

Each septic tank installed, where the top of the tank is greater than eighteen inches (18”) below finished grade, shall have a septic tank riser installed and terminated at finished grade. Septic tank risers shall be installed to provide access for routine maintenance, minimize odors and to prevent unauthorized and unsupervised entry.

5-10 RISER LIDS – WEIGHT STANDARD

For new or replacement wastewater systems permitted under the authority of the Health Department of Northwest Michigan, septic tank and pump chamber riser lids must be constructed of concrete, cast iron or other durable material heavy enough or weighted to prevent access by children, meeting **ASTM 1227 07-C** standards, which specify a minimum weight of 59 pounds.

5-11 VERTICAL SEPARATION REQUIREMENTS

**TABLE 5-11 MINIMUM VERTICAL SEPARATION DISTANCES
(INCHES OF SEPARATION)**

The infiltrative surface of a sewage treatment and disposal system shall be separated by the minimum vertical distances from the item named:

<u>Water Table¹</u>	<u>Ordinary High Water Mark²</u>	<u>Impervious/Limiting Stratum</u>
48	48	60

The natural ground surface within the entire sewage treatment and disposal system area shall be separated by the minimum vertical distances from the items named for the types of systems noted:

<u>Type of System</u>	<u>Water Table</u>	<u>Ordinary High Water Mark²</u>	<u>Impervious/Limiting Stratum</u>
Conventional	48	48	60
Low Pressure Dist. Mound	24	24	36
Advanced Treatment (ATS)	12	12	24

¹Water table cannot be artificially lowered to meet requirement. ²Measurement from relative elevation of ordinary high water mark

5-12 HORIZONTAL ISOLATION REQUIREMENTS

The components of a sewage treatment and disposal system shall be located not closer than the following horizontal distances away from the item named:

**TABLE 5-12 MINIMUM HORIZONTAL ISOLATION DISTANCES
(FEET TO SEWAGE TREATMENT AND DISPOSAL SYSTEM COMPONENT)**

FROM	<u>Absorption Field</u>	<u>Sewers¹</u>	<u>Sewers²</u>	<u>Septic Tank³</u>
Wells ⁴ or Suction Lines	50	10	50	50
Pressure Water Line (buried)	10	10	10	10
Property Line	10	10	10	10
Wastewater Easement Boundary	10	5	10	10
Road ⁵ , Access or Utility Easement	NA	NA	NA	10
Foundation Wall or Footing Drain	10	NA	5	5
Slab On-Grade	3	NA	3	3
Drainage Tile	10	NA	10	10
Grade Drop-Off	20	5	10	10
Lake, Stream or Surface Water ⁶	100	10	50	50

¹Ductile Iron, Schedule 40 PVC (plastic) or equivalent. ²Other materials, including force main. ³Includes pump and dosing chambers. ⁴Applies to individual residential water supply wells, for Type II A or B, and Type III water supplies refer to Act 399, P.A. 1978. ⁵Includes road right-of-way boundaries ⁶In the case of Lake Michigan or connected water bodies, isolation shall be measured from the Ordinary High Water Mark as defined in Article II. In the case of other lakes or streams, isolation shall be measured from the known high water mark.

5-13 ABSORPTION FIELD AREA

A new wastewater absorption field shall provide a basal area for a minimum of two (2) bedrooms. An absorption field, trench or bed shall provide not less than the following basal areas for each bedroom served:

**TABLE 5-13 MINIMUM SOIL ABSORPTION FIELD BASAL AREA
(SQUARE FEET PER BEDROOM)**

SOIL TEXTURAL CLASSIFICATION ¹	TRENCH AREA REQUIRED	BED AREA REQUIRED
Course to Medium Sand	125	250
Fine Sand	165	330
Loamy Sand	190	380
Sandy Loam	250	500
Silt Loam, Loam	300	Not Suitable

Sandy Clay Loam	330	Not Suitable
Clay Loams and Clays ²	Not Suitable	Not Suitable

¹ Soils can have varying amounts of sand, silt and clay and therefore can have a wide range of permeabilities. Soil structure can have a greater effect on permeability than texture alone and will be considered in determining permeability rates and absorption area requirements. Engineering tests may be conducted to determine site-specific soil permeability ² There are other soils with permeabilities over 60 min/in which would fall into the “Not Suitable” category (Silt, Silty Clay, Sandy Clay etc.).

5-14 ABSORPTION TRENCHES - SPACING

An absorption trench shall have one (1) distribution pipe centered in the trench width. Trench system spacing shall be constructed to provide a minimum of four (4) feet of undisturbed soil between trenches.

5-15 ABSORPTION BEDS

An absorption bed shall have two (2) or more parallel distribution pipes. The outermost pipes shall be located not closer than six (6) inches and not further than twenty-four (24) inches from the bed side wall. The maximum spacing center to center of distribution pipes shall be four (4) feet for gravity flow and five (5) feet for low pressure distribution.

5-16 TRENCH AND BED CONSTRUCTION DETAILS

The following additional requirements shall apply to trenches and beds:

TABLE 5-16 TRENCH AND BED CONSTRUCTION DETAILS

ITEM	MAXIMUM	MINIMUM
Number of trenches	----	2
Length of single lateral pipe (feet)	75	----
Width of trench (inches)	36	18
Trench or bed bottom below finished grade (inches)	42	----
Depth of aggregate below laterals (inches)	18	6
Depth of aggregate above laterals (inches)	----	2
Total depth of aggregate	----	12
Size of Aggregate ¹ (inches)	1 ½ ½	
Depth of Cover	18	6
Slope of trench or bed bottom	Level	Level
Slope of gravity flow pipe (inches per 75 feet)	1.5	Level
Diameter of gravity flow pipe (inches)	----	4

¹ Fines not to exceed 1% as determined by ASTM 117 for materials finer than 75 um (No. 200) Sieve in mineral aggregates by washing.

5-17 FILTER FABRIC

Filter (geotextile) fabric is required for all soil absorption systems at the interface between the top of the drainfield aggregate and the final disposal field soil cover. Filter fabric must be a non-woven fabric with a weight greater than ½ oz. per square yard and not to exceed 2.0 oz. per square yard.

5-18 PUMPING

Where site conditions require, wastewater effluent may be pumped to another septic tank or the absorption system. Where wastewater effluent is pumped to a septic tank, the receiving tank must be a two-compartment tank or two separate tanks prior to final disposal. Pumping capacity shall be sufficient to deliver the required flow against static head and pipe friction.

5-19 DOSING

A sewage treatment and disposal system may include provisions for dosing the absorption field. When dosing is employed, the frequency shall be at a volume which does not exceed 1/3 of the total maximum daily design flow, or 1 times the total distribution pipe volume.

5-20 FORCEMAIN CONSTRUCTION

A septic system forcemain shall be constructed of schedule 40 PVC/ SDR 21 (or equivalent) with the use of solvent welded couplings. High density polyethylene (HDPE) pipe may be used if installed as a single seamless pipe or with fusion joints only. All forcemain pipe shall have a minimum pressure rating of 160PSI regardless of diameter and shall be protected from freezing either by depth of bury below anticipated frost lines or by adequate insulation.

Forcemain installations which cross under drives, roads, or other anticipated traffic areas shall be installed greater than 6.5 feet, in groundwater, or be properly insulated to prevent freezing for shallower installation depths.

Tracer wire shall be required on all forcemain installations greater than 300' on the same property where sewage originates, or any installation to an off-site drainfield location. The tracer wire shall be rated for direct burial with HDPE, high molecular weight polyethylene HMWPE coating, or high strength copper clad steel (CCS). The coating shall be **green** in color per the American Public Works Association (APWA) uniform standards. Installation shall be in accordance with industry standards which includes, but is not limited to, adequately protected termination points that are marked for future use.

5-21 LOW PRESSURE DISTRIBUTION

When effluent is applied by means of low pressure distribution piping, the distribution network and its perforations (orifices) shall be sized to provide acceptably uniform application rates when lateral pipe friction is considered. As a guide, the calculated application flow rates should not differ by more than ten (10) percent in the orifices of a

single lateral pipe, nor by more than fifteen (15) percent in the orifices of all the lateral pipes.

The minimum inside diameter of low pressure distribution piping shall be one inch (1) and the minimum diameter of pipe perforations shall be one-eighth inch (1/8"). Orifice shields shall be utilized to uniformly distribute septic tank effluent and to prevent orifice obstruction. The design of a low pressure distribution system shall be in accordance with generally accepted engineering practices.

5-22 ELEVATED ABSORPTION SYSTEM (MOUND)

Any elevated absorption field, including those associated with Advanced Treatment Systems (ATS), shall be subject to all applicable requirements stated elsewhere in Article V, and to the following additional requirements:

- A. Preferred location shall be on level ground or at the crest of slopes. In any location, adequate means for diverting surface run-off shall be provided.
- B. An elevated absorption field on sloping ground shall have its longer dimension across the slope. Vertical requirements for isolation from water or unsuitable soils shall be measured at the up-slope edge or corner of the field.
- C. The ground below a mound shall be free of brush, stumps, and long grasses. The natural soil shall be scarified in a manner which provides good interface with the sand fill, but which does not compact or otherwise alter the soil structure. Plowing to eight (8) inches deep is an acceptable method. Rototilling is not. On sloping ground, furrows shall be made to lie across the slope. Site preparation shall not proceed when unusual moisture content has made the soil vulnerable to smearing or compacting.
- D. Before the absorption aggregate is placed, the fill material shall be compacted sufficiently to insure against future settlement and loss of vertical isolation distance.
- E. The absorption field area shall be as required in Table 5-13 for the fill material used. The preferred shape for a bed is long and narrow.
- F. The base of the fill material at the natural soil (i.e., toe of mound) shall have an area which equals or exceeds the area required in Table 5-13 for the natural soil type in the column for bed bottom. On a sloping site, only the area directly below the absorption field and downslope to the toe of the mound may be considered as contributing to the required area.
- G. Effluent shall be distributed by means of low-pressure distribution piping. Distribution piping shall be provided with a means to clean and maintain the distribution network (clean-outs, lateral sweeps etc.)

- H. Perimeter fill material must extend from the final finished grade and extend in all directions from the absorption field in a 3:1 slope, three (3) feet of horizontal extent for every one (1) feet of vertical height.
- I. The covering material above the absorption field shall be sand to loamy sand in texture and shall have grass cover established and maintained to prevent soil erosion.
- J. An elevated absorption system shall be required to be designed by a licensed professional engineer or the Health Department may, upon request by the applicant, agree to design the system. If engineered plans are required, plans and specifications shall be in accordance with generally accepted engineering practices and shall bear the engineers stamp or seal.

5-23 SEWAGE TREATMENT AND DISPOSAL SYSTEM EASEMENTS

Any sewage disposal and treatment system that requires the use of burdened land other than the premises benefitted parcel for any portion of the sewage disposal and treatment system must be in compliance with the following.

- A. If the applicant will place any portion of the sewage disposal system on a burdened land, then an easement must be prepared and recorded in accordance with this section. If burdened land(s) are owned by the applicant, then the applicant shall comply with section 5-23(C).
- B. The easement shall be in a recordable form approved by the Health Officer. The Health Officer shall determine whether the form of the easement meets this Code, whether the easement document is ambiguous and the easement document is legally binding. The easement document must include at a minimum all of the following:
 - 1. Legal description of the easement
 - 2. Legal description of the benefitted parcel and burdened land(s)
 - 3. Purpose or use of the buildings served by the septic system
 - 4. Maximum effluent burden which can be placed on the burdened land
- C. If the applicant will place any portion of the sewage disposal system on a burdened land that is also owned by the applicant, then the applicant shall have prepared and sign an affidavit in a form approved by the Health Officer that contains at a minimum the legal descriptions of the burdened land and the benefitted parcel; the names of all owners; the existence of the portion of the sewage disposal system that is located on the burdened parcel; and a statement that, at the time of separation of the common ownership of the benefitted and burdened parcels, an easement document must be prepared and recorded with the County Register of Deeds as required by this regulation and the terms of the septic permit that is located on the benefitted parcel.

- D. The Health Officer shall require proof that all documents which must be in recordable form have been recorded with the County Register of Deeds prior to the issuance of the sewage disposal system construction permit.
- E. An operation permit must be obtained from the Health Officer for any sewage disposal system requiring an easement. The operation permit shall allow the use of off-site or remote disposal of residential or commercial wastewater for a maximum of five (5) years from the time of permit issuance.

A new operation permit must be obtained every five (5) years for as long as the easement is used in conjunction with a benefited parcel for the purposes of sewage conveyance and disposal and also when there is any change in use of the benefited parcel.

- F. An operation permit shall be issued by the Health Officer if the applicant has provided competent, material and substantial evidence which allows the Health Officer to find that the permit conditions are being complied with, no safety hazards exist and there are no reported or visible indications of failure or malfunction of the system have occurred.
- G. No person shall:
 - 1. Use or occupy a premises on a benefited parcel when the sewage disposal system that serves the benefited parcel is not in compliance with these regulations, the operation permit or operation permit conditions.
 - 2. Use or occupy a premises that is required by law to be served by a sewage disposal system when any portion of the sewage disposal system is located on two (2) or more legally recognized parcels of land unless there is compliance with these regulations.

5-24 ALTERNATIVE METHODS

An alternative method of sewage treatment and disposal may be approved by the Health Officer if it provides equal or better on-site treatment of sewage than the methods provided in this Code. Proposals for alternative methods must be submitted for review by the Health Officer. If approved, all conditions required by the Health Officer must be complied with.

5-25 PRIVIES

All privies shall be constructed and maintained in a manner that does not create a public health nuisance. All premises are restricted from having water under pressure or plumbing where privies are permitted for wastewater disposal. All privies must be constructed using a watertight vault approved by the Health Officer. Privies can only be approved on sites that meet the site approval criteria outlined in Section 4-9.

ARTICLE VI WELLS AND WATER SUPPLIES

It is recognized that supply of safe potable water is fundamental to individual, public, and community health; that water supply facilities installed and operated in a proper manner are necessary for safeguarding public health; that water supplies furnishing water for human consumption need to be isolated and protected from sewage or other sources of pollution; and that contamination of water resources and supplies, or the creation of conditions menacing the public health, should be prevented.

6-1 WATER SUPPLIES

All water supplies shall be located, constructed and maintained in accordance with the specifications outlined in Act 399, P.A. 1978 and Part 127 of Act 368, P.A. 1976 and administrative rules.

6-2 CONSTRUCTION PERMIT REQUIRED

It shall be unlawful for any person to install a water supply within Antrim, Charlevoix, Emmet or Otsego County unless a well construction permit has been issued by the Health Officer.

6-3 PERMIT APPLICATION

An application signed by the applicant, for a permit to install a water well shall be required for any installation. A plan of the proposed water well installation, with such data as the Health Officer may require shall be submitted on forms supplied by the Health Officer.

6-4 TERM OF APPLICATIONS

Any application received by the Health Department shall, if incomplete, have a term of one (1) year from the date of application submittal. Any incomplete application exceeding the expiration date shall be considered invalid and expired and all associated permit application fees will be forfeited.

6-5 APPLICATION RESPONSE TIME

Once the Health Officer has received a completed application and fee, the Health Officer shall within fifteen (15) working days: grant the permit, deny the permit or notify the applicant that the permit process will require additional time to complete due to weather conditions, seasonal considerations or other material reason.

6-6 CRITERIA FOR PERMIT APPROVAL

The Health Officer shall approve a permit where all of the following conditions exist:

- A. An available public water supply does not exist.

- B. The property served has sufficient area to achieve the minimum isolation distances required in Table 6-8 and in applicable state law and regulations.
- C. The site is not subject to ponding or flooding.
- D. Wastewater facilities are proposed, exist or are allowable on the site.

6-7 PERMIT ISSUANCE

If the proposed installation meets the requirements of this Code, a permit shall be issued by the Health Officer.

6-8 TERM OF PERMITS

Any construction permit issued pursuant to the requirements of the preceding sections shall be valid for the term of two (2) years from the date of issuance, unless revoked as provided in this Code.

6-9 CHANGES AND REVISIONS

No changes shall be made in the approved plans without the written consent of the Health Officer and the property owner or the property owner’s authorized agent. A revision in development plans, constructing or installing a water supply inconsistent with the permit or a change in site conditions, from those upon which the approval was based, and where the change may reasonably be expected to impact compliance with this code, shall require an application for a new permit. All sections of this Code pertaining to new permits shall then apply.

6-10 INSPECTIONS

The Health Officer shall make such inspections at the premises as he or she deems necessary.

6-11 ISOLATION DISTANCES

A private residential well shall be located not closer than the following horizontal distances away from the source of pollution named:

TABLE 6-11 MINIMUM HORIZONTAL ISOLATION DISTANCES

<u>SOURCE OF POLLUTION</u>	<u>MINIMUM DISTANCE (FEET)</u>
Septic Tank	50
Absorption Field	50

Building Sewer of Cast Iron, Schedule 40 PVC (plastic) or equivalent	10
Building Sewer of other materials, including force mains	50
Oil and Gas Wells	300
Other sources	50

Other water supply wells shall be isolated in accordance with state statutes and administrative rules.

6-12 CONTAMINATED WATER SUPPLIES

When at least two (2) consecutive samples of water from an existing well show coliform organisms present or where an established EPA Maximum Contaminant Level (MCL) has been exceeded, such water supplies shall be considered contaminated. Consecutive samples shall mean those taken by the Health Officer at least seven (7) days apart.

Contaminated water supplies shall be repaired or replaced to meet the requirements of this Code within a time reasonable period specified by the Health Officer. Contaminated water supplies which represent an immediate health hazard shall be posted with suitable signs at each outlet, or the outlet shall be made inoperative.

6-13 PLUGGING OF ABANDONED WELLS

At the time a replacement water well is installed, an approved public water supply is connected to a premise or if an existing water well is no longer in use or becomes a potential threat to the public health or groundwater supply or otherwise determined to be abandoned; the existing water well shall be plugged in accordance with the requirements outlined in Part 127, Act 368, of the Public Acts of 1978 and Administrative Rules as amended.

ARTICLE VII PUBLIC HEALTH NUISANCES

7-1 HEALTH OFFICER

It shall be the duty of the Health Officer to investigate all nuisances, sources of filth, and potential sources of illness that may be injurious to the health of the inhabitants of Antrim, Charlevoix, Emmet or Otsego counties.

7-2 ABATEMENT

Whenever any nuisance, source of filth, or potential cause of illness shall be found, the Health Officer shall order the owner or occupant thereof to remove or abate same within a specified time, but such correction shall not be required in less than twenty-four (24) hours, unless the Health Officer determines that the condition has created an imminent threat to public health. Failure to comply with such an order shall be a violation of this Code, if the Health Officer determines that the condition continues to be an imminent threat to public health.

ARTICLE VIII

GARBAGE AND RUBBISH

8-1 SCOPE

These regulations are intended to complement the requirements of Part 115 of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended, and the administrative rules promulgated pursuant to that Act.

8-2 ACCUMULATION OF GARBAGE

No person shall permit to accumulate upon their premise any garbage except in durable, covered containers of rodent proof, fly proof and watertight construction. Garbage containers shall not be filled to overflowing or permitted to become foul smelling or a breeding place for vermin or flies.

8-3 ACCUMULATION OF RUBBISH

No person shall permit to accumulate upon their premise any rubbish except in durable containers adequately sized to enclose all accumulated wastes.

8-4 DISPOSAL OF GARBAGE AND RUBBISH

Garbage and rubbish shall be disposed of in a manner which creates neither a nuisance nor a menace to health, and in accordance with the provisions of Part 115 of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended, and the administrative rules promulgated pursuant to that Act.

An individual disposing of garbage and rubbish from their own household upon their own property shall do so in a manner that does not create a nuisance or hazard to public health. The disposal or accumulation of garbage or rubbish that may invite the breeding or collection of flies, mosquitoes, rodents or vermin is prohibited.

ARTICLE IX

PERMIT REVOCATION

9-1 REVOCATION OF PERMITS

Any permit issued pursuant to this Code may be revoked by the Health Officer if the Health Officer finds that one or more of the following circumstances exist:

- A. Changes have taken place on or to the site so that the construction or operation of the object of the permit cannot comply with this Code;
- B. The object of the permit is not constructed, is not operated, is not maintained or does not perform as required by this Code or the applicable permit;
- C. The premises to be served by the object of the permit is not constructed or operated as stated in the permit application;

- D. The permit holder does not comply with the requirements of this Code or the terms of the applicable permit; or
- E. The permit application is inaccurate.

9-2 PERMIT REVOCATION PROCEDURE

The revocation of a permit shall be taken pursuant to notice to the permit holder by the mailing of the notice of revocation via certified first class mail to the permit holder at the mailing address of the permit holder as provided in the application for the permit. The Health Officer may, but is not required to post the notice of revocation on the premises.

The notice of revocation shall contain the reasons for the revocation and notice that the permit holder has the right to request a meeting with the Health Officer. The request for the meeting shall be in writing and shall be made within sixty (60) days of the date of the posting of the notice of revocation. After the meeting, the Health Officer may continue the revocation, rescind the revocation or impose such conditions of the reinstatement of the permit as are necessary to require that the water supply or sewage treatment system is constructed as required by this Code. If the permit holder is not satisfied with the decision of the Health Officer after the meeting, then the permit holder may appeal the Health Officer's decision to the Board of Appeals.

ARTICLE X VARIANCES

10-1 VARIANCES

As provided in this Article, one or more variances may be granted by the Health Officer or Board of Appeals. The granting of such variances shall be limited to the fewest variances needed to achieve substantial compliance with this Code. A variance may be granted by:

- A. the Health Officer for a variance request related to an existing sewage treatment and disposal system or its replacement or an existing water supply system or its replacement.
- B. the Board of Appeals for a variance request related to any condition or situation.

10-2 VARIANCE STANDARDS

A variance from the requirements of this Code may be granted only if the applicant shows by competent, material and substantive evidence that all of the following special conditions have been met:

- A. Strict compliance with the Code cannot be achieved.
- B. There are exceptional or extraordinary circumstances or conditions applicable to the subject property, and is not created for personal convenience or due to

economic hardship.

- C. The request for the variance is not a self-created condition or the result of actions of the property owner or previous property owner(s) which occurred after the enactment of the Code provisions for which the variance is sought.
- D. The granting of such variance will constitute an improvement of existing conditions and will provide a greater level of protection to the health, welfare and safety of the public and will not be materially injurious to other properties in the area which it is located.

10-3 WRITTEN DECISION

A decision regarding a request for a variance made by the Health Officer or the Board of Appeals shall be made in writing and shall include the facts and the basis for the determination regarding whether the variance standards were met or not met. The minutes of a meeting of the Board of Appeals shall be considered a written decision once those minutes have been approved by the Board of Appeals.

10-4 CONDITIONS ON VARIANCE

Conditions may be imposed on the variance that are designed to implement compliance with the performance standards of this Code or that are necessary to provide the same protection to persons or the environment as if there had been strict compliance with the provisions of this Code.

10-5 DENIAL OF VARIANCE

The denial of a variance by the Health Officer may be appealed to the Board of Appeals. The denial of a variance by the Board of Appeals may be appealed to the Circuit Court only as provided by law.

10-6 HEARINGS

The Health Officer is not required to hold a public hearing on a variance request. The Board of Appeals shall consider a variance request at a public hearing that is held consistent with section 11-5.

ARTICLE XI BOARD OF APPEALS

11-1 BOARD OF APPEALS FOR EACH COUNTY

The Board of Commissioners of each county shall appoint five (5) persons, who are residents of the subject County, and who shall serve as a Board of Appeals for that county. One (1) or more alternates may also be appointed. An alternate may serve in the absence or disqualification of a regular member of the Board of Appeals. The duty of such Board shall be to consider appeals from the decision of the officials charged with the enforcement of the Code and which relate to property that is located within that county.

11-2 CONFLICT OF INTEREST

Where an appointed member of the Board of Appeals has a conflict of interest under Michigan law, the member must recuse himself from hearing the appeal and the decision making process. If the member, who may have or is alleged to have a conflict of interest, disagrees that a conflict of interest exists, then the matter shall be referred to the attorney of the Health Department. After obtaining all relevant facts and reviewing Michigan law, the attorney shall issue a written legal opinion in advance of the hearing on the Appeal or provide an oral opinion at the hearing on the Appeal. The member, who is the subject of the opinion, and the Board of Appeals shall abide by the legal opinion.

11-3 COMPENSATION

The compensation for each member shall be that sum established by the County Board of Commissioners.

11-4 APPEALS

An applicant may appeal to the Board of Appeals any order, requirement, decision or determination that is made the Health Officer. Except for the filing of an appeal, which must be filed with the Health Officer as described below.

Each appeal shall be in writing and shall be filed with the Health Officer. Such appeal must specify the following: the order, requirement, decision or determination that is being appealed; the section(s) of this Code that apply to the appeal; and those facts on which the appellant will rely to support the appeal. An appeal that is incomplete is not ripe for decision by the Board of Appeals.

An appeal must be filed within sixty (60) days after the date of the decision that is being appealed. An untimely appeal shall be dismissed by the Board of Appeals. The appellant shall deposit a fee with the Health Officer when the appeal is filed. Fees for appeals shall be as established by the Board of Commissioners and the amount of the fee shall reflect the cost of processing the appeal, including legal or other professional services.

The Health Officer shall transmit to the Board of Appeals a summary report of all previous action taken and the entire file pertaining to the subject of the appeal.

The final disposition of such appeal shall be in writing, concurred in by three (3) or more members of the Board, and may reverse, modify, or affirm the decision or the determination made by the Health Officer.

11-5 HEARINGS

The Board of Appeals shall set a reasonable time for the hearing and give written notice to the appellant not later than ten (10) days prior to the date of the hearing. The notice of hearing shall be deemed "given to the applicant" if personal service is made on the

applicant or the date of mailing, when sent by first class mailing. The Board of Appeals shall decide the appeal within a reasonable time. The hearing shall be held in the county in which the property that is related to the subject matter of the appeal is located.

11-6 STANDARD FOR DECISION

The decision of the Board of Appeals shall be the final administrative decision, shall be in writing, and shall include specific findings of fact by the Board of Appeals, and further, shall be subject to such judicial review as by law may be provided.

In deciding an appeal, the Board of Appeals shall determine the following:

- A. The Health Officer accurately determined the existing site conditions.
- B. The Health Officer properly interpreted and applied the requirements of the Code for the existing site conditions.
- C. The applicant has shown by competent, material and substantial evidence that the appeal should be granted.
- D. Variances granted as part of an appeals decision shall comply with Section 10-2 of the Variance section.

11-7 APPEALS DECISION AND CONDITIONS

The Board of Appeals may affirm, reverse, wholly or in part, a decision of the Health Officer. The Board of Appeals may include any conditions in its decision that the Health Officer could have made. The Board of Appeals may grant a variance or variances or impose conditions on the appellant or the property or premises in its decision.

11-8 MEETINGS - RULES OF PROCEDURE

The Board of Appeals shall meet at such times as the Board may determine. The Board shall set a place of meeting and all meetings shall be open to the public. The Board shall adopt its own rules of procedure, and keep a record of its proceedings, showing the question(s) considered. The presence of three (3) members of the Board or alternate members of the Board shall constitute a quorum. Said meetings shall be conducted in accordance with the "Open Meetings Act", as amended.

11-9 NOTICES

The Board of Appeals shall send notice to the adjoining land owners surrounding the parcel of land in question, or any other interested person. For the purpose of surrounding properties; includes properties that are adjacent, contiguous or located across streets, roads or public easements.

ARTICLE XII

INTERPRETATION, INJUNCTIVE RELIEF, PENALTY, SEVERABILITY AND AMENDMENTS

12-1 INTERPRETATION

Where not inconsistent with the text, words used in the present tense include the future; words in the singular include the plural; and words in the plural include the singular. The word “shall” is always mandatory and not merely directory. Words or terms not defined herein shall be interpreted in the manner of their common meaning.

12-2 INJUNCTIVE RELIEF

Notwithstanding the existence or pursuit of any other remedy, the Health Officer may maintain in a court of competent jurisdiction, an action for an injunction or other process against any person to restrain or prevent violations of the Code.

12-3 VIOLATION - CIVIL INFRACTION

No person or legal entity shall violate any provision or requirement of this Code or any permit issued pursuant to this Code. A violation of this Code shall be a municipal civil infraction as provided in MCL 600.113(c). A minimum fine of \$200.00 plus all damages, attorney fees and costs allowed by law shall be imposed for each violation. The failure to pay a court order authorized under MCL 600.8727 as amended shall allow the Health Officer to file a lien against the premises or property that is related to the violation as authorized by MCL 600.8737, as amended. Each day in which a person fails to comply with the provisions of this Code shall constitute a separate and complete violation.

12-4 SEVERABILITY

The provisions of this Code are hereby declared to be severable and if any clause, sentence, word, section or provision is declared void or unenforceable for any reason by a court of competent jurisdiction, the remaining portions of said Code shall remain in full force and effect.

12-5 AMENDMENTS

The District Board of Health, with the approval of Antrim, Charlevoix, Emmet and Otsego County Boards of Commissioners, may from time to time amend, supplement or change these regulations with the approval of all Boards. Any such amendment, supplement, or change of these regulations shall be preceded by such public hearings and notice as are required by state statute.

12-6 INTERNAL POLICIES AND RULES

The Health Officer may create internal policies or rules applicable to employees of the Health Department to assist in the implementation of this Code and promote the fair, equal treatment of all citizens.

ARTICLE XIII

REPEAL

13-1 REPEAL

All prior sanitary codes, effective in any county which comprises a portion of the Health Department of Northwest Michigan, are repealed.