



Van Buren/Cass District
Health Department

ENVIRONMENTAL HEALTH CODE

**VAN BUREN COUNTY OFFICE
OFFICE**

**260 SOUTH STREET
STREET**

**LAWRENCE MI 49064
49047**

CASS COUNTY

302 S. FRONT

DOWAGIAC MI

Effective February 1, 1997

Environmental Health Code Van Buren/Cass District Public Health Department

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

- 1-1 **Title** – These regulations shall be identified by the title; The Van Buren/Cass County District Public Health Department “Environmental Health Code”.
- 1-2 **Authority** – The regulations imposed by this code are hereby adopted pursuant to authority conferred upon local health departments by section 2435 (D) & section 2441 (1) of the Michigan Public Health Code, Act 368, P.A. of 1978 as amended.
- 1-3 **Jurisdiction** – (A) The Van Buren/Cass District Public Health Department and its duly appointed employees shall have jurisdiction throughout Van Buren and Cass Counties in all areas incorporated and unincorporated, which includes cities, villages and townships for the administration and enforcement of these regulations.
(B) Nothing herein contained shall be construed to restrict or abrogate the authority of any municipality in Van Buren or Cass County to adopt more restrictive regulations or to enforce existing regulations relating to these regulations, control the issuance of licenses or the renewal or revocation thereof, or to charge and collect required a fee, provided that whenever inspection relating to health or sanitation is required, no such municipality shall issue or renew such license without first having obtained a written statement from the Van Buren/Cass District Public Health Department indicating compliance with the requirements of these regulations.
- 1-4 **Purpose** – These regulations are hereby adopted for the purpose of protecting public health and safety and the quality of the environment as it affects human health and to prevent the occurrence of public health nuisances for all habitants of Van Buren and Cass Counties and persons entering therein.
- 1-5 **Right of Entry and Inspection** – To assure compliance with the provisions of this code, the Health Department may collect samples, make tests, inspect any matter, thing, premise, place, person, record, vehicle, incident, or event as provided for by Section 2446 of the Michigan Public Health Code.
(A) It shall be unlawful for any person to molest, willfully oppose, verbally abuse or otherwise obstruct the Health Department, or any other person charged with enforcement of these regulations, during the routine performance of his or her duties.
(B) The Health Department may request the assistance if the Van Buren and/or the Cass Counties Sheriff Departments or other law enforcement agencies or peace officers when necessary to execute his or her duty in a manner prescribed by law.
- 1-6 **Interference with Notice** – No person shall remove, mutilate or conceal any notice or placard posted by the Health Department, except by permission of the Health Department.
- 1-7 **Abatement of Nuisances, Health and Safety Hazards** – Nothing stated in these regulations may be construed to limit the power of the Health Department to order the immediate and complete abatement of the public health nuisance, health hazard or menace to the public, as well as any place, object or condition which the Health Department reasonably believes would otherwise endanger the public health or safety.

- 1-8 **Severability** – If any section, subsection, clause or phrase of these regulations is for any reason declared unconstitutional or invalid, it is hereby provided that the remaining portions of these regulations shall not be affected.
- 1-9 **Penalty** – Any persons who shall fail to comply with the provisions of these regulations, or any part thereof, an official order of the Health Department, or a ruling of the board of Health, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding the sum of \$200.00 or by imprisonment in the county jail not exceeding 90 days, or by both such fine and imprisonment, in the discretion of the court. Also, every 24 hours that said person permits such violation to continue following such conviction shall be considered as a sperate additional offence against the provisions of these requirements.
- 1-10 **Other Laws and Regulations** – These regulations are supplemental to the Michigan Public Health Code, as amended, Act 368, P.A. 1978, and to other statutes duly enacted by the State of Michigan relating to public health and safety. These regulations shall be liberally construed for the protection of the health, safety and welfare of the people of Van Buren and Cass Counties, and shall control or prevail over a less stringent or inconsistent provision enacted by a local governmental entity for the protection of public health.
- 1-11 **Fees** – (A) All fees collected by the Health Department shall be receipted for and deposited with the Treasurer of Van Buren County to the credit of Van Buren/Cass County District Public Health Department.
- (B) A schedule of fees for licenses and other services authorized by these regulations shall be adopted, and revised periodically by the Van Buren/Cass County District Board of Health.
- (C) Fees required for services and permits authorized by these regulations shall be paid in full prior to the performance of such service or issuance of a permit by this department.
- (D) Fees paid for services or permits authorized by these regulations shall be non-refundable unless requests for refunds are received within one year of receipt and prior to the commencement of actions by the department pursuant to the requested services or permits.
- (E) All fee schedules existing prior to the adoption of these regulations shall remain in effect until revised by the Van Buren/Cass County District Board of Health.
- (F) The Health Department may waive or exempt a fee if he/she has determined that undue hardship will occur from assessing said fee or if an existing or subsequently adopted state law or regulation requires a construction plan approval or written approval by the Health Department before construction begins.
- 1-12 **Approval and Effective Date** – These regulations were approved by action of the Van Buren/Cass County Board of Health on September 14, 1996 and approved by action of the Van Buren and Cass County Board of Commissions on February 1, 1997 to become effective.
- 1-13 **Repeal of Previous Regulations** – (A) Previous regulations entitled “Environmental Health Code for Van Buren County” as amended on July 13, 1993 as adopted by the Van Buren County Board of Health on October 10, 1991 and approved by the Van Buren County Board of Commissions on January 1, 1992 to become effective are hereby repealed.

- (B) Previous regulations entitled “Environmental Health Code for Cass County” as amended on January 20, 1996 as adopted by the Van Buren/Cass Board of Health on October 10, 1991 and approved by action of the Cass County Board of Commissioners on May 1, 1992 to become effective are hereby repealed.
- (C) Any other Van Buren or Cass County regulations existing prior to the adoption of these regulations, and in conflict with these regulations are hereby repealed.
- (D) No violation of any repealed regulation or portion thereof shall be made legal by virtue of adoption of these regulations. Any act, situation or condition which when created or first allowed to exist that was previously a violation shall continue to be a violation under these regulations. Any action, issuance of a permit, etc., that was previously mandatory shall continue under these regulations to be mandatory if a similar requirement is provided herein.

- 1-14 **Power to Establish Policy and Guidelines** – (A) The Health Department and/or the Chief of the Environmental Health Division of the department is hereby granted the authority to propose policies and guidelines, not in conflict with the purpose and intent of these regulations, for the purpose of carrying out the responsibilities herein delegated to the Health Department by law.
- (B) All such policies and guidelines shall be in writing and shall be kept in a policy file available for public inspection upon request, these policies and guidelines are subject to approval by the District Board of Health

- 1-15 **Amendments** – The Van Buren/Cass County District Board of Health may amend, supplement or change these regulations or portions thereof.

Article II – General Definitions

- 2-1 **Interpretation** – When not inconsistent with the context, words used in the present tense include the future, words in the singular number include the plural number, and words in plural number include singular. The word “shall” is always mandatory, and not merely directory. Words, terms or expressions not defined herein shall be interpreted in the manner of their commonly accepted meanings, in accordance with standard English usage.
- 2-2 **Board of Health** – Shall mean the Board approved by the Van Buren and Cass County Board of Commissions to sit as a “Van Buren/Cass County District Board of Health” for the Counties.
- 2-3 **Board of Appeals** – Shall mean the Board that is composed of not less than three persons all of whom also sit on the Van Buren/Cass District Board of Health. This Board shall provide reasonable and equitable interpretations of the provisions of these regulations.
- 2-4 **Health Department** – Shall mean the Van Buren/Cass County District Public Health Department, and may be referred to herein these regulations as the “department”.
- 2-5 **Health Officer** – As used in these rules: “Health Officer” means the administrative officer of the city, county, district, or associated health department who is appointed by the local governing entity or, in the use of a district health department, by the district board of health and who is reasonable for the planning, implementation, and evaluation of a public health program

designed to prevent disease and disability and to promote health. A health officer shall be a medical health officer or administrative health officer. If the health officer is not a physician, a medical director shall also be employed who is responsible to the health officer for medical decisions.

- 2-6 **Owner and Person-in-Charge** – Shall mean both the owner of title record, and those persons occupying or in possession of any property or premises, or their designated representative.
- 2-7 **Person** – Shall mean any individual, firm, partnership, party, corporation, company, society, association, local government entity or other legal entity responsible for the ownership or operation of a premises, or an employee or officer thereof.

Article III – Technical Definitions

- 3-1 **Abandoned Water Supply** – 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 continued use for the purpose of obtaining water is impractical, 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.
- 3-2 **Absorption Field** – (A) Shall mean any system of distributing septic tank effluent by means of a line or a series of lines of drain tile or perforated pipe laid on a bed of aggregate with openings so as to allow the effluent or outflow to be absorbed by the surrounding soil.
- (B) An absorption field may consist of a trench or trenches, a solid bed, a block trench or other approved system for absorption of effluent.
- (C) An absorption field may be located below the original ground surface grade or elevated above surface grade in order to increase the distance above a seasonal high ground water table, or to assist the absorption capability of a marginally suitable soil profile.
- 3-3 **Approved** – Shall mean acceptable for the intended use as judged by the Health Officer, in accordance with public laws, regulations, rules, guidelines and/or other available technical data.
- 3-4 **Automatic Siphon** – Shall mean a mechanical device which will automatically cause a liquid entering a dosing chamber to be retained until a predetermined high-water level has been attained, after which it is automatically released from the receptacle until a second predetermined level has been reached, at which time the flow from such receptacle ceases until the high level has again been attained.
- 3-5 **Available** – Shall mean abuts, is adjacent to, runs laterally across or is within two hundred (200') feet of the structure in which sewage originates.
- 3-6 **Block Trench Absorption System** – Shall mean an underground enclosure connected to the outlet of a septic tank, constructed of concrete blocks or similar material, laid with open joints so as to allow the septic tank effluent or overflow to filter through a layer of aggregate and be absorbed into the surrounding soil.

- 3-7 **Deep Cut** – Shall mean an excavation beginning at a depth of six feet (6') below ground surface and extending to a depth of no greater than twenty feet (20') below ground surface.
- 3-8 **Diversion Valve** – Shall mean a mechanism provided to enable a switching of the effluent flow from one soil absorption system to another separate absorption system so as to permit alternate periods of loading and resting.
- 3-9 **Dredged Soils** – Shall mean soils artificially removed from lake, river, stream or pond bottom onto another location for the purpose of creating developable land. Dredged soils are not considered suitable for the use as fill for sewage absorption systems.
- 3-10 **Dosing Chamber** – Shall mean a watertight tank or receptacle used for the purpose of retaining the overflow or effluent from a septic tank, pending its automatic discharge to a selected point by means of a siphon, pump or other device.
- 3-11 **Dry Well** – Shall mean a cistern or underground enclosure connected to the outlet of a septic tank and constructed of precast concrete with openings so as to allow the septic tank overflow or effluent to be absorbed directly into the surrounding soil. Dry wells may be constructed of concrete blocks, bricks or similar material with open joints only if built in a geometric rectangle or square.
- 3-12 **Dwelling** – Shall mean any house, building/structure, tent, shelter, trailer, vehicle, watercraft or portion thereof which is occupied in whole or in part as a home, residence, living or sleeping place of one or more human beings either permanently or transiently.
- 3-13 **Effluent** – As used in those regulations shall have the same meaning as “sewage” unless the context in which it is used implies otherwise.
- 3-14 **Fill Sand or Filter Material** – Shall consist of medium to coarse, clean sand, unless otherwise specified in the regulations, or as part of a permit condition and approved by the Health Department.
- 3-15 **Flood Water** – Shall mean the temporary overflowing of water onto land or the temporary increase in the water stage or level of a river, stream, lake or other body of water resulting in the inundation of land not normally covered by water.
- 3-16 **Flush Toilet** – Shall mean a type of closet or plumbing receptacle containing a portion of water which receives human excreta and so designed as by means of a flush of water to discharge the contents of the receptacle to an outlet connection.
- 3-17 **Garbage** – Shall mean rejected food waste including waste accumulation of animal, fruit or vegetable matter used or intended for the use as food or that attend the preparation, use, cooking, dealing in or storage of meat, fish, fowl, fruit, or vegetable.
- 3-18 **Habitable Building** – Shall mean any structure or part thereof where persons live, sleep, cooking, reside, are employed or congregate, and which is occupied in whole or in part.
- 3-19 **High Water Table or Elevation (Seasonal Groundwater Table)** – Shall mean the highest level or elevation to which the soil is saturated as may occur during the normally wet periods of the year. The high-water table is commonly interpreted by the presence of distinctive color patterns

(mottles) visible in a natural undisturbed profile resultant from the reduction of the mineral iron which is present in all soils found in Michigan.

- 3-20 **Imminent Danger** – Shall mean a condition or practice which could reasonably be expected to cause death, disease or serious physical harm immediately or before the immense of the danger can be eliminated through normal enforcement procedures established in these regulations.
- 3-21 **Individual Sewage Disposal System** – Shall mean a sanitary privy, flush toilet, septic tank, absorption field or similar device used in the collection and/or disposal of sewage or human excreta other than a public system. This shall include all similar contrivances used in the collection and/or disposal of sewage whether specifically enumerated herein or not.
- 3-22 **Registered Installer** – (A) Shall mean any person, firm or corporation that engages in the installation of any part of a sewage disposal system for another person, and is registered with the Van Buren/Cass County District Public Health Department to install sewage disposal systems.
- (B) The registration of a registered installer may be temporarily or permanently suspended by the Health Department, if, after giving the installer a written warning, the installer continues to install sewage disposal system (s) contrary to the specifications of the Health Department.
- (C) No person shall engage in the business of installing sewage disposal systems or any parts thereof within Van Buren or Cass County without first securing a certificate of registration from the Health Department.
- 3-23 **Nuisance** – Shall refer to any condition or activity on private or public property which, in the judgment of the Health Department, may have or threaten to have a detrimental effect on the health and/or safety of the public.
1. The definition of a nuisance may include, but shall not be limited to the following:
 - (1) Where sewage effluent is permitted to drain upon, or to the surface of the ground, into any ditch, storm sewer, lake, stream, pond or other body of surface water.
 - (2) Accumulations of refuse, animal manure, dead animals, mosquito breeding areas or vermin infestations in a public place or in public housing units.
 - (3) Or when the odor, appearance or presence of an item or substance has an obnoxious or detrimental effect on, or to the senses and/or the health of person, or obstructs the use or sale of adjacent property.
 - (4) All other conditions or activities recognized as nuisances by the statutory and common law of the State of Michigan.
- 3-24 **Permeability** – A Description of the capability of a soil to transmit water and/or air.
- 3-25 **Premises** – Shall mean any tract or parcel of land, with or without a building.
- 3-26 **Refuse** – Shall mean solid waste, except body waste, and includes garbage, rubbish, ashes, incinerator ash and/or residue, street cleanings, solid market and solid industrial waste.
- 3-27 **Privy/Outhouse** – Shall mean a building or other structure not connected with a sewer system or with a properly installed and operated sewage disposal system, and which is used for the

reception, disposition or storage, either temporarily or permanently, of feces or other excreta from the human body.

- 3-28 **Public Water Supply** – “Public Water Supply” means a water supply which provides water for drinking or household purposes other than the supplier of water, except those water supplies which supply water to only one living unit.
- 3-29 **Rubbish** – Shall mean non-putrescible solid waste, excluding ashes, consisting of both combustible and non-combustible waste, such as paper, cardboard, tin cans, yard clippings, wood, glass, bedding, crockery and/or litter of any kind that will be detrimental to the public health and safety.
- 3-30 **Safe and Adequate Water Supply** – Means a water supply which is constructed and located in such a manner as to provide water which will not endanger the health of the user and which provides sufficient water pressure to operate all connected plumbing fixtures.
- 3-31 **Sewage System Failure** – A sewage absorption field is considered to have failed if any one of the following conditions exist:
1. The system refuses to accept effluent at the rate of application.
 2. Sewage effluent seeps from, or ponds on or around the system.
 3. The system contaminates a potable well constructed in conformance with these regulations or surface water of the State.
- 3-32 **Septage** – Shall mean stabilized sludge accumulations removed from a septic tank as part of the routine maintenance of the septic tank after several months usage.
- 3-33 **Septic Tank** – A pre-formed watertight receptacle receiving liquid wastes and having an inlet and outlet so designed to permit the separation of solids in suspension from such wastes and to permit such retained solids to undergo decomposition therein, releasing the liquid effluent or outflow to be distributed through an absorption field.
- 3-34 **Sewage** – Shall mean a combination of the domestic liquid or semi-solid waste conducted away from a dwelling or habitable building. This includes human excreta (black water), garbage disposal waste, dishwashers, bath water and laundry waste, (i.e., Gray waters), excluding roof, water softener discharge, footing and storm drainage.
- 3-35 **Sewer** – Shall mean a watertight conduit carrying sewage.
- 3-36 **Site Evaluation** – (A) Shall mean on-site investigation to evaluate the suitability of a site (i.e., a specific location on each site) to support an adequate sewage disposal system, A complete evaluation shall include at least the following information:
1. Soil permeability, based upon soil texture and structure in the profile to a depth of at least five feet (5') below the surface grade.
 2. A determination of the seasonal high water table evaluation.
 3. Slope limitations.
 4. Location of the site in relationship to flooding or seasonal ponding of surface water.
 5. Availability of sufficient area to design an adequate disposal system.

6. Maintenance of required isolation distance.
 7. A determination of any other limiting factor.
- (B) The Health Department may require as part of the soil evaluation, information including but not limited to engineering plans or drawings, topographic maps of a site indicating surface relief and/or grade elevations, soil analyses, additional soil test borings, ground water and flood elevations, etc.
- 3-37 **Stabilized Soils** – Stabilized soils are filled soils artificially placed on a location which has been permitted to settle through a minimum of one freeze-thaw cycle, or which have been mechanically compacted to at least 90 percent whereby only minor additional settling of the filled soils would be expected to occur.
- 3-38 **Static or Observed Ground Water** – Shall mean ground water in the zone of saturation in which all of the pore spaces of the surrounding soil are filled with water.
- 3-39 **Unsanitary Condition** – An unsanitary condition is any structure or condition which the Health Department reasonably believes to be a potential cause of illness or otherwise poses a threat to the health of the public.
- 3-40 **Vermin** – Shall mean any small destructive or obnoxious animal or insect which carry disease organisms, damage property or is a nuisance.
- 3-41 **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, surface water intakes, or hauled water storage tanks and pumping and treatment equipment, storage tanks, pipes and appurtenances, or a combination thereof, used or intended to furnish water for domestic or commercial use.
- 3-42 **Well** – Means an opening in the surface of the earth for the purpose of obtaining ground water, monitoring the quality of ground water, obtaining geologic information on aquifers, recharging aquifers, purging aquifers, utilizing the geothermal properties of earth formations or removing ground water for any purpose. Wells as defined in this section include:
1. A water supply well used to obtain water for drinking or domestic purposes.
 2. An irrigation well used to provide water for plants, livestock or other agricultural processes.
 3. A test well used to obtain information on ground water quantity, quality or aquifer characteristics, for the purpose of designing or operating a water supply well.
 4. A recharge well used to discharge water into an aquifer.
 5. A dewatering well used to lower the ground water level temporarily at a construction site.
 6. A heat exchange well used for the purpose of utilizing the geothermal properties of earth formations for heating or air conditioning.
 7. An industrial well used to supply water for industrial processes, fire protection or similar nonpotable uses.
 8. A fresh water well at an oil or gas well drilling site, when the fresh water well is to be retained after completion of the oil or gas drilling operation.

3-43 **Other Definitions** – Other technical definitions not described herein this Article, but which may be used in these regulations shall mean the most commonly recognized interpretation of description of the technical term used in the environmental health.

Section IV Sewage Disposal Systems for Single and Two Family Residential Premises

4-1 **Written Permit Required** – (A) After and from the effective date of these regulations, it shall be unlawful for any person to construct, install, alter, repair or extend any sewage disposal system in Van Buren or Cass County unless such person or his/her duly authorized representative has made written application and received written conformation of permit issuance from the Health Department. Application shall be made on such forms and shall contain such reasonable information as required by the Health Department.

(B) The construction of any new and/or the repair or extension of any existing sewage disposal system under a permit shall only be made by a registered installer as defined in this regulation, or by a resident owner of the property.

(C) A Permit shall not be required if the line from the dwelling to the septic tank, or the line from the tank to the absorption field are all that is in need of replace, as well as repairs to the septic tank.

4-2 **Priority Over Building Permits** – (A) No municipality, township or other agency or an officer or an employee thereof shall issue a building permit for new construction or otherwise allow commencement of construction on any land where public sewers are not available until approval has been granted, or a sewage disposal permit has been obtained from the Van Buren/Cass County District Public Health Department.

(B) A municipality, township, or other agency or an officer or employee hereof shall not issue an occupancy permit for any newly constructed habitable structure until final approval of the structure’s sanitary facilities are approved by the Health Department.

(C) The obtaining of Health Department approval and/or a sewage disposal permit need not precede the issuance of a building permit if said building permit pertains to additions or alterations to an existing dwelling, unless the addition or alteration increases bedroom capacity of the dwelling.

4-3 **Adequate Facilities Required** – (A) It shall be unlawful for any person to build, move onto any parcel of land, occupy or use any premises that are not equipped with adequate facilities for the disposal of sewage in accordance with the provisions of these regulations.

4-4 **Connection Requirements** – (A) All facilities such as flush toilets, urinals, lavatories, sinks, bathtubs, showers, laundry or any other facility from which sewage flows shall be connected to an individual sewage disposal system, except that any such facilities hereafter installed on a premise where public sewer is available, shall be connected to said sewer. Certain type of alternate methods of sewage disposal systems may be exempt from this requirement.

(B) The following apparatus shall not be connected to a sewage disposal system to discharge their liquid wastes therein:

1. Seepage water from footing drains or underground flows.
2. Surface runoff or roof drainage from rainfall or snow melts.
3. A swimming pool or its appurtenances.
4. Brine or recharge water from a water softener or the ion-exchange type.
5. Chemical solutions or other wastes which would interfere with biological action in the treatment facilities.

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

4-5 **Application for Permit** – (A) Application for permit to construct, alter, extend, repair or replace a sewage disposal system shall be made by the property owner or his/her authorized representative, or the purchaser of the property who intends to install a sewage disposal system. Application forms shall include at least the following information:

1. Name and address of the property owner of record and the applicant (i.e., person intending to use the disposal system).
2. The exact address of the application site, or the nearest address or intersection with the directions and exact distance therefrom.
3. Land description of property. A property survey may be required for any parcel of land prior to permit issuance (after site approval).
4. Parcel size, expressed in acreage and lot dimensions.
5. Dwelling size (i.e., number of bedrooms) and type (single or duplex).
6. A legible and detailed plot plan may be required.

(B) The complete application must be submitted before the Health Department will respond for an on-site evaluation.

4-6 **Site Acceptance Criteria** – (A) The Health Department shall conduct an appropriate site evaluation on any parcel of land in Van Buren or Cass County whereupon a complete application was submitted to the Health Department. Proper operation of a subsurface sewage disposal system is directly dependent upon sufficient area of suitable soil for the absorption of septic tank effluent under all anticipated weather conditions. In order to assure the proper operation of a sewage disposal system, the following minimum criteria shall be determined (by the Health Department) to exist before site approval is granted:

1. A disposal system shall not be constructed in an area where deep cut excavations are required unless at least twenty four inches (24") of dry sand is available at the bottom of the deep cut excavation and no saturated soils are found from surface grade to bottom of excavation. It shall also be demonstrated that the shallowest usable aquifer is protected against contamination from systems of this type.
2. A disposal system shall not be located where any other factor would prohibit use of said system.
3. When there is not sufficient are for replacement of the sewage disposal system, the Health Department shall require that upon failure of the original system, the owner of the premises shall select one of the following options as a corrective measure for eliminating the nuisance condition:

- (a) Acquire additional property to install a replacement system.
 - (b) Hook-up to a publicly operated sewage disposal system if it is available.
 - (c) Have all contaminated soils removed (to be determined by the local health department) and disposed of in accordance with the Department of Environmental Quality and all other agencies having jurisdiction and install a replacement system as directed by the Van Buren/Cass District Public Health Department.
4. A disposal system shall not be installed where the minimum required isolation distances specified in this regulation cannot be maintained.
- (B) A fill or elevated type system shall be accepted only under specific written approval of the Health Department. The Health Department shall have the right to deny an application which does not satisfy the minimum acceptance criteria as outlined below:
- 1. Where minimum requirements of Article V of this Code cannot be adhered to.
 - 2. Where the minimum requirements set forth in the policy guideline titles "Policies and Procedures for Installation of an Elevated Drainfield Design" cannot be adhered to.
 - 3. Where a publicly operated sewage system is available as defined by Act 368 P.A. of 1978, Part 127.
 - 4. Where the septic tank would be inaccessible for cleaning or inspection purposes.
 - 5. Where the property served is too small for proper isolation from existing water wells, surface bodies of water or where the property served has insufficient drainage area.
 - 6. Where the soil conditions are deemed to be unsuitable for the disposal of sewage.
 - 7. Where conditions exist or may be created which may endanger the public health environment.
- (C) The Health Department shall have the right to deny an application which does not satisfy the minimum acceptance criteria as outlined above. In addition, the Health Department shall not issue a permit to any premises where:
- 1. A publicly operated sewage system is available as defined by Act 368, P.A. of 1978, Part 127.
 - 2. Where the septic tank would be inaccessible for cleaning or inspection purposes.
 - 3. Where the property served is too small for proper isolation from existing water wells, or the premise's water well, surface bodies of water or where the property served has insufficient drainage area.
 - 4. Where the soil conditions are deemed to be unsuitable for the disposal of sewage.
 - 5. Where conditions exist or may be created which may endanger the public health or environment.

4-7 **Void Permits** – (A) The permit for a private sewage disposal system may be declared void by the Health Department if the location of the disposal system specified on the permit it altered,

or if there is any increase in the scope of the project prior to, during or following construction of said system, or if the department acquires new information that the previous permit approval site does not satisfy the requirements of these regulations.

(B) It shall be a violation of this regulation to misrepresent, omit or withhold pertinent information upon which the minimum requirements contained within this regulation are based. The Health Department may void any permit when he has reasonable cause to believe that an intentional misrepresentation has occurred.

4-8 **Transfer of Permit** – Permits are not transferable from person to person. A new permit shall be required for each new owner of a premises for which a sewage disposal permit was issued.

4-9 **Termination of Permits** – Any permit issued pursuant to the requirements of the preceding sections be valid for the term of twelve (12) months from the date of issuance unless declared void as provided in these regulations, and no construction alteration, and/or extension shall continue without renewal of such permit. In addition, the Health Department shall not conduct any inspection on a premises unless said premises is in possession of a valid permit.

4-10 **Inspection Required** – The Health Department shall deny final approval of any installation which does not comply with any permit condition, or is of faulty workmanship and/or construction materials or otherwise does not meet requirements of these regulations. It shall be unlawful to backfill any septic tank and/or tile disposal installation until an inspection has been completed and approval granted by the Van Buren/Cass County District Health Department.

4-11 **Backfilling Disposal System** – After approval of the disposal system by the Health Department, the disposal system shall be backfilled within 72 hours, unless otherwise approved by the Health Department.

4-12 **Premises Occupancy** – (A) It shall be unlawful for any person to occupy or permit to be occupied, any premise which is not equipped with adequate facilities for the disposal, in a sanitary manner, of sewage. Such facilities shall be constructed in accordance with the provision of these regulations.

(B) Any dwelling or premise not meeting the requirements of this section may be placarded by the Health Department as unfit for human habitation. Such dwellings and premises may be used only upon installation of an approved sewage disposal system meeting the requirements of this regulation and upon written final approval by the Health Department.

4-13 **Condemnation of Existing Installations** – (A) The Health Department shall condemn any existing sewage disposal system where the absorption system is considered to have failed.

(B) Any system so condemned shall be repaired, rebuilt or replaced by a system constructed according to the provisions of these regulations where possible, or by another method approved by the Health Department in order to abate a public health nuisance, within a specified period of time not to exceed 90 days and no less than 30 days after official

notification from the Health Department, unless there is an immediate hazard to the public health, safety and welfare by the continued improper drainage.

- 4-14 **Public or Private Drain of Unknown Course and Origin** – (A) Whenever the Health Department shall determine that improperly treated sewage is flowing from the outlet of any public or private drain, he/she shall notify in writing persons owning, leasing or residing on such premises from which such originates to connect such sewage flow to publicly operated sewage systems, if available, or in the absence thereof to comply with the provisions of the regulations.
- (B) The notice to the owners, leaseholder or residents of such properties shall inform said persons of such unlawful discharge of improperly treated sewage into such drain and shall specify the maximum period of time not to exceed 90 days within which such unlawful discharge shall be terminated, which shall not be less than 30 days except where there is an immediate hazard to the public health, safety and welfare by the continued improper drainage.
- (C) If, after the expiration of the minimum period of time specified in the notice, such unlawful discharge continues, the Health Department may plug or cause to be plugged the outlet(s) from the drain so that the sewage disposal system of the premises is incapable of satisfactory operation without such discharge of improperly treated sewage. Where the Health Department is unable to plug the flow of sewage, the Health Department shall institute all necessary and proper legal remedies to abate the nuisance and threat to the public's health safety and welfare, which shall include restraining orders, temporary and permanent injunctions and summary proceedings to vacate the premises until such time as the sources of pollution have been eliminated or the pollution properly controlled.
- 4-15 **Connection of Public Sewer** – When an approved public sanitary sewer becomes available to a property served by a private sewage disposal system, a connection shall be made no later than 18 months after written notification by the Health Department, or at such time as deemed necessary to abate a public health nuisance. Such connection shall be made in accordance with Act 268, P.A. of 1978, Part 127. When such connection is made, the use of the private system shall be discontinued and the septic tank pumped out and filled with inert material.
- 4-16 **Variance** – (A) A variance to the specific minimum requirements of this Article may be granted by the Director of the Environmental Health Division when sufficient evidence of special factors warranting such variance in his/her opinion does exist. In such event, if the Chief of the Environmental Health Division finds that public health would not be jeopardized, not a potential public health nuisance created, he/she may approve a variance to requirements set forth in this Article and specify any additional conditions he/she may deem necessary.
- (B) The Health Department may, when in his/her professional judgment finds no health hazard or nuisance condition would likely be created, grant approval for usage of

disposal system previously constructed but not meeting the acceptance criteria set forth in this regulation.

- (C) Requested for a variance, an alternative method of sewage disposal or an evaluation of a previously existing disposal system shall be made in writing by the applicant and filed in the Health Department.

4-17 **Van Buren/Cass County District Board of Appeals** – (A) Appeals from the rulings of the Chief of the Environmental Health Division are provided for reasonable and equitable interpretations of the provisions of this article. The Van Buren/Cass County District Board of Appeals shall hear any appeal presented in accordance with rules of procedure established by the Van Buren/Cass District Board of Health.

- (B) The Appeals Board may grant individual variances from the requirements of this Article when the Board has determined that all of the following conditions exist:

1. That no substantial health hazard or nuisance is likely to occur there from.
2. That strict compliance with the code requirement would result in unnecessary or unreasonable hardship to an appellant.
3. That no state or local statute or other applicable laws would be violated by such variance.
4. That any such variance would provide essentially equivalent protection in the public interest of the citizens of Van Buren and Cass Counties.

- (C) Procedures for appealing a decision of the Chief of the Environmental Health Division are as follows:

1. Submit in writing to the Chairperson of the Van Buren/Cass County District Board of Health a request for an appeal, it shall include the following:
 - a) Nature of appeal and circumstances surrounding said appeal.
 - b) Name, address, telephone number of person requesting appeal.
 - c) A non-refundable check for \$200 made out to the Van Buren/Cass County District Public Health Department.
2. The appeals Boards shall promptly furnish the appellant with a written report of its findings and decision of the Appeals Board shall be final, other than for such judicial review as may be provided by the statutory and common laws of the State of Michigan.

4-18 **Maintenance** – Every sewage disposal system shall be maintained in a satisfactory operating condition at all times.

Article V – Requirements for the Construction and Maintenance of Conventional Water Carried Sewage Disposal Facilities.

5-1 **Sewers** – (A) No sewer shall be installed within ten feet (10') of a private of Type II or III public water supply. All such sewers installed within fifty feet (50') of a private water well of seventy-five feet (75') of a public TYPE II or III water well shall be of cast iron service weight,

Schedule 40 plastic or any other material approved by the Michigan Department of Environmental Quality.

(B) The size of sewer lines shall be based upon fixture units as set forth in the State Plumbing Code.

5-2 **Septic Tank** – (A) Location: No septic tank shall be located where it is inaccessible for cleaning or inspection purposes, nor shall any structure be placed over any existing tank making the same inaccessible for cleaning and inspection purposes.

(B) **Manholes:** Every septic tank shall be provided with one or more suitable openings with a minimum eighteen inches (18”) diameter with covers. One of the openings is to be located over the outlet to permit inspection and cleaning. Where the top of the septic tank is located more than eighteen inches (18”) below the finished grade, manholes shall be built up to within eighteen inches (18”) of the finished grade and shall be of material approved by the Health Department.

(C) **Inlets and Outlets:** The bottom of the inlet into the septic tank shall be at least two inches (2”) above the operating water level of the tank. A straight inlet shall be provided. Tees or baffles shall be required to be installed on the interior outlet side of a septic tank and shall permit withdrawal of liquid from the middle third of the depth of liquid. This is to prevent the escape of floating or settled solids. All pipe connections to a septic tank shall be watertight and surrounding excavation shall be properly backfilled. The tank shall have a liquid depth of not less than four feet (4’).

(D) Septic tanks hereafter used in Van Buren and Cass Counties shall be legibly marked with its liquid capacity readily visible, or the installer shall provide the Health Officer with a copy of the septic tank purchase receipt prior to the final inspection for approval to backfill said disposal system.

(E) **Sizing:** Septic tanks shall be sized in accordance with Sections 5-4, Table #1 for single family and two family dwellings. Septic tanks serving other than single and two family dwellings shall be sized with an effective liquid capacity sufficient to provide at least 24 hours retention, except that septic tanks serving food service establishments shall provide enough capacity to insure at least 72 hours of retention time.

5-3 **Subsurface Sewage Disposal System** – (A) Shall serve only one dwelling at any time, unless approved in writing by the Health Department.

(B) **Location:** In no case shall the disposal field be laid under any drive, parking are, paved surface or building unless written approval is granted by the Health Department and in no case shall a disposal field be placed in an area subject to the 100 year flood plain.

(C) **Distribution Header and Footer:** A header or distribution box shall be set true so as to afford an even distribution of all septic tank effluent throughout the subsurface laterals. The header shall be a solid tile while the footer shall be perforated.

(D) **Dosing Tanks and Automatic Siphon:** The Health Department may require that dosing tanks and automatic siphons or pumps be used to allow for intermittent dosing of

effluent through the absorption field. These devices shall discharge their effluent to the absorption field by means of a sewer line with a minimum working pressure of 160 psi.

- (E) **Distribution System:** The absorption field may be constructed of open joint clay or concrete sewer tile or perforated, non-metallic pipe which shall comply with the Michigan Department of Environmental Quality Standards for Certification and Utilization of Perforated Plastic Tubing for Drainfields, or other durable material which has been approved for use by the Health Department. Drain tile shall be laid with ¼” to ½” inch open joints. Untreated building paper, straw, hay or other approved materials shall be placed between the stone and final cover of soil to prevent soil from filtering into the stone.
- (F) The Health Department may require that the owner obtain specifications and/or installation certification from a registered professional engineer or registered Sanitarian on specially constructed disposal systems where sewage is pumped from the septic tank to the disposal field.
- (G) The terminal ends of each tile run shall be interconnected with drain tile.
- (H) Optional design features which may be approved and/or required by the Health Department as a condition of permit issuance include:
 - 1. Devices to allow for intermittent dosing of effluent through the absorption field, including pumps and siphons.
 - 2. Multiple absorption field shall be allowed when the “Van Buren/Cass County District Health Department, Policy for the Division of Absorption Field Square Footage” is utilized.
 - 3. Aggregated material (stone) beneath sewer tile greater than minimum required depth.
 - 4. Installation of snorkels or breather tubes on subsurface sewer tile to promote aerobic bacterial action and to allow for periodic inspections.
 - 5. Low water using toilets, water saving shower heads, self-closing faucets, etc., may be required to gain permit approval.
- (I) A subsurface absorption system shall be sized in accordance with Section 5-5, Table #2, for single and two family dwellings. Absorption systems serving other than single and two family dwellings shall be sized on the basis of the maximum daily sewage flows as contained in the “Michigan Criteria for Subsurface Sewage Disposal”.

5-4 **Table #1, Septic Tank Sizing**

1-2 Bedrooms.	1000 gallons
3-5 Bedrooms.	1500 gallons

For each additional bedroom (add 250 gallons).
 For garbage disposal (add 500 gallons).

5-5 **Table #2 Sizing of Absorption System:**

Soil Texture & Structure	(Min. Per/Inch) Permeability	Absorption Are (sq. ft.) Per Bedroom Trench	Absorption Are (sq. ft.) Per Bedroom Bed	Block Trench/Dry Well
Coarse Sand & Gravel, Medium Sand	0-5	150	250 with a minimum of 600 sq. ft.	150 blocks 600 gal.
Fine Sand & Loamy Sand	6-15	200	325 with a minimum of 700 sq. ft.	Unacceptable
Sandy Loam	16-30	230	425 with a minimum of 800 sq. ft.	Unacceptable
Loam: Sand Clay Loam	31-45	300	550 with a minimum of 900 sq. ft.	Unacceptable
Clay	Over 45	350	600 with a minimum of 1200 sq. ft.	Unacceptable

5-6 **Table #3 Isolation Distances in Feet:**

FROM: TO:	SEPTIC TANK	ABSORPTION FIELD	DRYWELLS/BLOCK TRENCH	PRIVIES
WELLS	50 (1)	50 (1)	50 (1)	50 (1)
Property Lines	10	10	10	10
Foundation Wall with Basement	10 10	15 15	15 15	15 15
Building Footing Drain/Strom Drain	10	25	25	25
Pressurized Water Lines	10	10	10	10
Dry Well	10	05	10	--
Lake or Stream (2)	50	50	50	50
Swimming Pool Ingrade	15	25	25	25
Bank/Drop-off 25% or More	10	10	15	15
Septic Tank	03	05	05	--
Absorption Field	05	05	05	--

(1) – 75' Required from well serving other than single family dwelling.

(2) – 100' Required isolation in all cases except private single family residents.

Absorption Field Construction Requirements – (A) All absorption fields must be a minimum of twenty four inches (24") above the seasonal high ground water table.

- (B) Drainfields shall contain not less than two lines, the length of each line shall not exceed one hundred feet (100'), and the diameter of the drain tile shall be a minimum of four inches (4"). The drain tile shall be covered with at least twelve inches (12") but not more than twenty four inches (24") of fill material capable of growing vegetation. The slope or grade of the tile lines shall not exceed four inches (4") on one hundred feet (100'). There shall be a minimum of six inches (6") of stone beneath the tile across the entire width of the trench or bed, and a minimum of two inches (2") of stone over the tile for the entire width of the trench or bed. A stone material shall be a washed stone, or other materials acceptable to the Van Buren/Cass County District Public Health Department. Such materials shall be graded ranging in diameter and size from ½" to 1 ½ " inches and shall be free from dust, sand, or excessive fine materials. When bed drainfield systems are used, the tile lines shall be a minimum of three feet (3') from tile center to tile center and the stone must extend outward from end laterals and footer at least twelve inches (12"). When trench drainfield systems are used, tile lines shall be a minimum of four feet (4') from tile center to tile center but not greater than eight feet (8') and the trench width shall be a minimum of eighteen inches (18") but not greater than thirty six inches (36").

All drainfields shall be constructed with a level header and level footer. All lines must connect to the header and footer so that the entire system is interconnected. The line from septic tank to absorption field shall be connected at the mid point of the header tile. When perforated non-metallic drain tile is used, the tiles shall be joined with the appropriate couplings, tees, and elbows.

- (C) Block trench, and drywell type absorption fields will be allowed when being used for replacement systems only, and when:
1. The per/ich permeability rate must be 0-5 minutes or less (see Section 5-5, Table #2).
 2. In the case of a block trench installation a minimum of 150 blocks will be used and eight inches (8") of ½ to 1 ½ " washed stone shall surrounds the entire trench system.
 3. In the case of drywell installation, the units in combination must equal or exceed capacity of septic tank in volume. Units shall be installed so that the tops of units are within twenty four inches (24") of finished grade. Units shall be placed at least ten feet (10') apart in series. If individual units are 600 gallon capacity or larger, then a diversion valve may be present between units. Stacking of drywells is prohibited. Each unit installed shall have twelve inches (12") of washed ½" to 1 ½" stone surrounding its circumference. Units shall be sloped 1/8" to ¼" per foot and connected with approved tile only.

5-8 **Special Construction Methods (Alternate Systems)** – Nothing contained in this Article shall prevent the use of special construction methods, materials or installation techniques, provided the materials, installation techniques and design of such system is first approved by the Health Department and meets on an equivalent basis, the construction standards and intent of this Article.

5-9 **Pump and Haul Systems** – Pump and haul sewage disposal systems for new construction are prohibited. Pump and haul for existing dwellings shall be considered only after all other possible remedies have been found to be no feasible. Any approval to use pump and haul under extenuating circumstances shall require renewable contracts for at least one year in length with a licensed liquid waste or septage hauler, and a copy of the contract shall be filed with the department. Sewage from a pump and haul operation shall not be disposed of on ground surface or otherwise disposed of as septic tank sludge or septage unless the disposal site is licensed as a Part 117 P.A. 451 Dumpsite. The Health Department may regularly inspect any pump and haul operation and charge an inspection fee. Pump and haul records and receipts shall be kept for a period of five (5) years by the owner of any premise utilizing the pump and haul disposal method.

Article VI – Construction and Maintenance of Privies

6-1 **Privy Construction and Maintenance** – All privies shall be constructed and maintained in accordance with Section 12771 of Act 368, P.A. of 1978 and administrative rules promulgated therefrom.

6-2 **Prohibition of Privies** – No privy shall be maintained or be constructed on or moved to any premises where the service of a sewer is available for public use.

6-3 **Location of Privies** – Privies shall be located at least seventy five feet (75”) from all dwellings other than that which they serve. No privy shall be closer than fifty feet (50’) from a well serving a single family residence or seventy five (75’) from all other habitable buildings. A privy shall also be fifty (50’) from a surface water body.

6-4 **Temporary Privies** – Temporary privies used at construction sites, places of public assembly, camps, etc. shall comply with Act 368, P.A. of 1978, Section 12771, and when cleaned or serviced, the agency performing such service shall comply with Part 117 P.A. 451 of 1994.

Article VII - Sewage Disposal Systems Other Than Single or Two Family Dwellings

7-1 **Permit Required** – Any person wishing to install an on-site sewage disposal system for other than a single or two family dwelling, shall first obtain a permit from the Van Buren/Cass County District Health Department. Application forms shall be supplied by the Van Buren/Cass County District Health Department.

- 7-2 Michigan Guidelines – The “Michigan Criteria for Subsurface Sewage Disposal”, in accordance with the Water Resource Commission Policy Statement adopted August 18, 1983 (Appendix A), which supersedes a similar policy statement adopted September 22, 1977, shall be the basis for acceptance or rejection of proposed sewage disposal systems regulated in this Article.
- 7-3 Other Provisions – The following items required under the provisions of Article IV of this code shall also apply herein as requirements of this Article 4-1 through 4-18 except 4-6.

Article VIII – Subdivision Control and Site Condominiums

- 8-1 Act 288 – (A) The Subdivision Control Act of 1967 (Act 288, P.A. of 1967) and the rules of the Michigan Department of Public Health (R560.118 Section 118) shall be the basis for the acceptance or rejection of proposed subdivisions that are not served by public sewers and public waters.
 (B) Site condominiums shall be accepted or rejected on the basis of requirements set forth in Act 113 of Public Acts 1983.

Article IX – Water Supply

- 9-1 **Scope** – This regulation shall apply to all premises not connected to Type I or Type II public water supplies, as defined by Michigan’s Safe Drinking Water Act, Act 399 of the Public Acts of 1976, and Administrative Rules, as amended, or any premises with a Well or where a person intends to install a Well (as defined in Section 9-16 (B)).
- 9-1 **Unlawful to Occupy** – No person shall occupy, permit to be occupied, or offer for rent, lease or occupancy any habitable building which is not provided with an approved water supply, which is adequate in design and capacity to meet the peak water demands of the habitable building. Any habitable building which is not served with an approved water supply may be declared unfit for habitation and may be posted by the Health Department. The Health Department may order the owner to connect the building to a municipal water supply, if available, or to construct a water supply in compliance with this code within 30 days.
- 9-3 **Incorporation of Other Regulations** – The Van Buren/Cass County District Public Health Department incorporates by reference and adopts as part of this code, the following:
 - (1) The “Safe Drinking Water Act”, Act No. 399 of the Public Acts of 1976, being sections 325.1001 through 325.1023 of the Michigan Compiled Laws, and the following sections of Administrative Rules promulgated pursuant to the Act: Part 1, being R325.10101 to R325.10115, Part 4, being R325.10401 to R325.10409; parts 7 and 8 being R325.10701 to R325.10833; and Parts 1- through 14, being R325.11001 to R325.11407 of the Michigan Administrative Code and any subsequent revisions thereto, and;

- (2) Part 127 of Act No. 368 of the Public Acts of 1978, of Michigan's Public Health Code, being sections 333.12701 through 333.12715 of the Michigan Compiled Laws, and the administrative rules promulgated pursuant to the Act, being R325,1601 through R325.1676 of the Michigan Administrative Code, and any subsequent revisions thereto.

9-4 **Water Supply Construction Permit Required** – (A) No person shall begin construction of a new water supply, or make extensive changes to existing water supplies, without first obtaining a water supply construction permit from the Van Buren/Cass County District Public Health Department. Extensive changes include replacing the well casing, removing a well casing from the ground, changing aquifers or sources of water, changing screen elevation, deepening or plugging back a bedrock well, changing the pump type, installing a liner pipe and a significant increase in the capacity of the water supply.

(B) A water supply construction permit will not be required for the installation of:

1. An irrigation well used to provide water for plants, livestock, or other agricultural process.
2. A test well used to obtain information on water quantity, quality, or aquifer characteristics, for the purpose of designing or operating a water supply well.

(a) A water supply construction permit shall be required when a test well is to be converted into a production well that will provide water for drinking or domestic purposes.

3. A recharge well used to discharge water into an aquifer.
4. A dewatering well used to lower the ground water level temporarily at a construction site.
5. A heat exchange well used for the purpose of utilizing the geothermal properties of earth formations for heating or air conditioning.
6. An industrial well used to supply water for industrial processes, fire protection or similar nonpotable uses.
7. A fresh water well at an oil or gas well drilling site, when the fresh water well is to be retained after completion of the oil or gas drilling operation.

(a) A water well construction permit shall be required when a fresh water well installed at an oil or gas drilling site provides water for drinking or domestic purposes.

(C) All Wells within a Restricted Zone must comply with Section 9-16 regulating Groundwater Use Restricted Zones regardless of whether a construction permit is required.

9-5 **Late Application Penalty** – If a person fails to obtain a permit prior to beginning construction of a water supply, a penalty fee equal to the normal application fee shall be charged. Within five (5) working days of being notified of the permit violation, the person shall submit a water supply construction permit application, accompanied by the normal application fee and the penalty fee, to the Health Department. Payment of the late application penalty fee shall not exempt said person from any further penalties prescribed for the violation of this code.

- 9-6 **Priority Over Building Permits** – Where an approved municipal water supply is not available, a municipality, township or other agency shall not issue a building permit, or otherwise allow construction to commence, for any habitable building, until a water supply construction permit has first been issued by the Health Department.
- 9-7 **Project Permit** – Where multiple wells of a similar nature are proposed to be constructed for the same project, a project permit may be issued. This shall be a single permit.
- 9-8 **Permit Application Procedure** – (A) Application Form: The water supply construction permit application shall be made on forms provided by the Health Department.
(B) Complete Application: A completed application shall include:
(1) The signature of the property owner(s) or their authorized representative.
(2) The appropriate application fee.
(3) A site plan of the proposed or existing water supply showing the location of the proposed source of water (well, hauled water storage tank, etc.) in relation to the buildings, property lines, all contamination sources (i.e., known, suspected or potential) and all wells whether usable or abandoned, and data which may be required by the Health Department. For water supplies utilizing other than a well as the source of water, a scaled engineering drawing may be required.
(C) Health Department Response: The Health Department shall make a written decision on a completed permit application within 14 days after the receipt of the application. If the Health Department fails to act within this 14 day period, the permit shall be considered issued as applied for.
- 9-9 **Water Supply Construction Permits** – (A) Issuance: The Health Department shall issue a water supply construction permit when the data obtained indicates that the requirements of this code and/or applicable state statutes have been or will be met, and that the quality of the ground water will not be graded. A site evaluation shall be required prior to the issuance of the permit. The permit may impose limitations or conditions which the Health Department deems necessary to protect the public health or ground water quality.
(B) Expiration: A water supply construction permit expires and becomes invalid one year from the date of issuance.
(C) Transfer: Should the ownership of the property for which a permit has been issued, changes, the permit may be transferred to the new owner, provided that no change in the scope of the project has or will occur. The transfer must be requested in writing and signed by both the new property owner and the previous permit holder. Permits are not transferable with respect to property or specific land parcel served.
(D) Avoidance: The Health Department may declare a previously issued water supply construction permit to be null and void for any of the following reasons:
(1) False, inaccurate or incomplete information supplied by the permit holder.
(2) A change in the plans of the permit holder affecting circumstances relative to the water supply design, location or use.
(3) Acquisition of new knowledge or information about the aquifer in the area that may result in a health hazard.

(E) **Denial:** The Health Department may deny an application for a water supply construction permit when incomplete, inaccurate or false information has been supplied by the applicant, or when the Health Department determines that the requirements of this code and/or applicable state statutes have not or can not be met. The denial shall be furnished to the applicant in writing.

9-10 **Inspection** – The Health Department shall make inspections of water supplies during and/or after completion of construction. In addition, the water well record shall be reviewed not later than 30 days from the date of submission from the driller. The driller in accordance with Section 12707 shall have submitted a water well record within 60 days after completion of the water well.

9-11 **Approval** – A new water supply shall not be used until the construction and installation have been approved by the Health Department. The following conditions shall be met before the Health Department may approve a new water supply:

(1) An on-site inspection has been completed by the Health Department, and the water supply is found to be in compliance with applicable code and permit requirements.

(2) The Health Department has received copies of the results of the analysis of water samples indicating that raw water quality meets minimum public health standards. Water sample analysis shall include coliform bacterial and any other parameter deemed necessary by the Health Department. Analysis of water samples shall be performed by laboratories certified by the Michigan Department of Community Health. All water samples shall be collected by the Health Department or other person specially designated by the Health Department.

9-12 **Stop Work Order** – If the Health Department determines that a water supply under construction does not comply with the requirements of this code, the Health Department may issue a written stop work order. Work shall not resume until the owner and/or contractor have agreed to make corrections to comply with this code, and the Health Department rescinds the stop work order.

9-13 **Plugging of Well** – The Health Department may require the plugging of a well that is constructed without a permit or is constructed in violation of this code or permit requirements.

9-14 **Emergency Conditions** – In the event an emergency arises where the lack of water will result in undue hardship and the office (s) of the Van Buren/Cass County District Public Health Department is/are closed, or when the well driller is involved with repair work and it is deemed necessary to begin construction immediately on a new well, a registered well driller may begin extensive changes to or construction of a new water supply without notification or permit. The well driller shall contact the Health Department on the next regular working day and obtain a permit for such installation. The late application penalty specified in Section 10.0 of this code is waived in these cases.

- 9-15 **Existing Water Supplies** – (A) Inactive Water Supplies: A water supply which has not been in use for more than one year shall not be put back into operation unless it can be shown to be in substantial compliance with this code.
- (B) Change in Use: A change in use of a premise which may result in a significant increase in the demand on the water supply shall not be allowed unless it can be shown that the water supply is in substantial compliance with this code.

9-16 **Groundwater Use Restricted Zones**

(A) Purpose: The Health Department has determined that:

1. In certain areas of the counties, the use of Groundwater resources for human consumption or other purposes may constitute a public health risk and endanger the safety of the residents of Van Buren and Cass counties.
2. These identified public health risks affect parcels of land that are contained within a Restricted Zone or Zones established under this Section 9-16.
3. Restricted Zones are located on or in the vicinity of a source or location of Contaminated Groundwater, or where there is a threat from Contaminated Groundwater.
4. It is in the best interest of public health, safety and welfare to prohibit certain uses of Groundwater from Wells located in Restricted Zones found within Van Buren and Cass Counties.

(B) Definitions: The following words, terms and phrases, when used in this Section 9-16, shall have the meanings ascribed to them below:

1. Affected Premises – means a parcel or any part of a parcel of property located within a specified Restricted Zone where U.S. EPA or EGLE have identified Contaminated Groundwater or have required a buffer zone, as shown on an Appendix Map.
2. Appendix Map – means a map derived from a plat or other map showing the Affected Premises within a specific Restricted Zone. Such map shall be added or deleted by subsequent ordinance amending this section in accordance with Section 9-16(D). An Appendix Map shall contain a brief explanation and history of the Contaminated Groundwater source as well as requirements specific to that Restricted Zone. The Health Department will maintain and publish notice of the Appendix Maps, listing them by general location of the known geographical locations of the Affected Premises, and identifying the Affected Premises by address and property tax identification number or tax assessment parcel number.
3. Contaminated Groundwater or Aquifer -- means Groundwater in which there is present, or likely to be present, one or more hazardous substances which, individually or collectively, exceed legally applicable criteria for residential consumption of water, including but not limited to Maximum Contaminant Levels promulgated by EGLE or U.S. EPA pursuant to the Michigan Safe Drinking Water Act or the Federal Safe

Drinking Water Act, respectively, or by EGLE pursuant to Part 201 of Michigan's Natural Resources and Environmental Protection Act (NREPA); and includes "Contaminant" as defined by R 325.1602(5) of the Michigan Well Construction Code Administrative Rules.

4. EGLE -- means the Michigan Department of Environment, Great Lakes, and Energy, or its successor agency.
5. Groundwater -- means water below the land surface in the zone of saturation and capillary fringe.
6. Influential Well -- means a Well outside a Restricted Zone that has the potential, through pumping, to affect the horizontal or vertical migration of Contaminated Groundwater.
7. Owner -- means the holder of record title for a parcel of land or the occupant of a parcel of land in possession under a land contract.
8. Permit -- means a written document issued by the Health Department permitting the installation, construction, or extensive alteration, of a water supply system or Well as required under this regulation.
9. Potable Water -- means water which is free of contaminants in concentrations that may cause disease or harmful physiological effects and which is safe for human consumption.
10. Proof of No Influence -- means Groundwater data or other documentation or evidence demonstrating that a Well does not have the potential to affect the horizontal or vertical migration of Contaminated Groundwater or is otherwise a threat to Groundwater resources. Documentation or evidence necessary to demonstrate Proof of No Influence includes, but is not limited to: valid analytical data collected for an acceptable time period; hydrogeologic evaluations including pump tests; an analysis of the degree of protection from horizontal or vertical migration of Contaminated Groundwater within an aquifer or through geologic barriers; and Groundwater modeling.
11. Restricted Zone (RZ) -- means an area described in the Appendix Map(s) appended to this Health Code showing the Affected Premises for which the prohibition of Wells and the restriction on the use of Groundwater applies.
12. RZ Applicant -- means a person who applies or applied for the establishment of a Restricted Zone pursuant to this Section 9-16.
13. U.S. EPA -- means the United States Environmental Protection Agency, or its successor agency.
14. Well -- means an opening in the surface of the earth for the purpose of removing fresh water, or a test well, recharge well, waste disposal well, a well used temporarily for dewatering purposes during construction, as defined in Part 127, MCL 333.12701(d), Groundwater monitoring wells or wells used for remediating Contaminated Groundwater that are approved by EGLE or U.S. EPA, and also includes all of the following:
 - a. "Water Supply Well" means a well that is used to provide Potable Water for drinking or domestic purposes.
 - b. "Irrigation Well" means a well that is used to provide water for plants, livestock, or other agricultural purposes.
 - c. "Heat Exchange Well" means a well for the purpose of utilizing the geothermal properties of earth formations for heating or air conditioning.

d. "Industrial Well" means a well that is used to supply water for industrial purposes, fire protection, or similar non-potable uses, including a cathodic protection well.

(C) **Restricted Zone:** The described areas in the Appendix Map(s) appended to this Health Code showing the Affected Premises shall be the Restricted Zone(s). Additional Restricted Zones may be added by amending this Code in accordance with Paragraph (D) and all other applicable laws.

(D) **Modification, Addition or Repeal of Restricted Zones:**

1. An RZ Applicant, Owner, or other interested party may request in writing to the Health Department to add Affected Premises to or delete Affected Premises from a Restricted Zone, establish an additional Restricted Zone or to otherwise amend or repeal a Restricted Zone.
2. At least 30 days prior to any amendment or repeal in whole or in part of this Section 9-16, or the addition or deletion of any Appendix Map or part thereof, the Health Department shall notify EGLE, or, if the Restricted Zone is or was part of a federal Superfund site, the Health Department shall notify EGLE and U.S. EPA, which shall include U.S. EPA's assigned Remedial Project Manager, of its intent to so act. The request must describe the justification for the addition, repeal or amendment of the Restricted Zone. The Health Department shall not modify, add to, or repeal a Restricted Zone until it has received EGLE's, or, in the case of a federal Superfund site, U.S. EPA's, written and specific concurrence, as applicable, with the requested action, except that if EGLE or U.S. EPA does not respond to the request within sixty (60) days, then the Health Department may proceed with the addition, repeal, or amendment.
3. A request to delete parcels by amendment shall only be granted if it can be shown that Wells on such Affected Premises no longer pose a public health risk.
4. Before the Health Department approves a new Appendix Map, the RZ Applicant must show, to EGLE's satisfaction, that (a) the Owners of the Affected Premises have been notified of the application and the hearing date set for its consideration as set forth in Section 9-16(M); and (b) the RZ Applicant has provided for the connection to municipal water service or an EGLE-approved substitute water supply Well used to provide Potable Water for drinking or domestic purposes for all Affected Premises consistent and in compliance with Section 9-16(G).

(E) **Prohibition of Wells and Groundwater Use Within a Restricted Zone: Unless specifically excepted by Paragraph (F):**

1. After the effective date of this Amendment, no Well may be installed, utilized, or allowed, permitted, or otherwise provided for on any Affected Premises. The use of any Well on an Affected Premises or the use of groundwater derived from an Affected Premise is prohibited.
2. Any existing Well at the time of the enactment of this Amendment on any Affected Premises within that Restricted Zone shall be properly plugged at the expense of the RZ Applicant for that particular Restricted Zone and as provided for in Paragraph (H) and in accordance with applicable laws, regulations and ordinances, unless such existing Well falls within one of the exceptions listed in Paragraph (F).

3. Except as provided in Paragraph (F), no person shall use any Groundwater from any Affected Premises.

(F) **Exceptions:** The following Wells are exempt from the prohibition in subsection (E):

1. **Agency Approved Potable Wells:** If EGLE or U.S. EPA and the Health Department determines that the use of a Well for potable purposes will not allow for exposure to Contaminated Groundwater or cause migration or movement of Contaminated Groundwater into an uncontaminated aquifer, the potable Well can be granted an exception for use. The Health Department shall keep a list of Agency Approved Wells and make that list available to the public, upon request.
2. **Groundwater Monitoring/Remediation:** A Well may be used for Groundwater monitoring and/or remediation as part of a response activity or corrective action approved by EGLE or U.S. EPA.
3. **Construction Dewatering:** A Well may be used for construction dewatering if the following conditions are satisfied:
 - (A) the use of the dewatering Well will not result in unacceptable exposure to Contaminated Groundwater, possible cross-contamination between saturated zones, or cause the vertical or horizontal migration of Contaminated Groundwater; and
 - (b) water generated by that activity is properly handled and disposed of in compliance with all applicable laws, rules, regulations, Permit and license requirements, orders and directives of any governmental entity or agency of competent jurisdiction.

Any contribution to migration of Contaminated Groundwater caused by the use of the Well under this exception shall be the responsibility of the person operating the de-watering Well, as provided in Part 201 of NREPA.

4. **Agency Approved Heat Exchange Well:** If EGLE determines that the use of a Well for loop geothermal heating/cooling involved in residential, industrial or commercial activities will not allow for exposure to contamination or cause migration or exacerbation of Contaminated Groundwater, and proof of that determination is delivered to the Health Department, such use of the Well under terms and conditions specified by EGLE will be allowed. All information necessary for EGLE's determination described in this subsection shall be provided by the person seeking this exception. Any vertical or horizontal migration of Contaminated Groundwater caused by the use of the Well under this exception shall be the responsibility of the person operating the Well, as provided in Part 201 of NREPA.
 - (a) If the use of a Well for loop geothermal heating/cooling involved in residential, industrial or commercial activities is located on a U.S. EPA-lead Superfund Site within Van Buren or Cass counties, then the same requirements for Section 9-16(F)(4) apply for EGLE and U.S. EPA.

5. **Public Emergencies:** A Well may be used in the event of a public emergency. Notice of such use shall be provided to U.S. EPA and EGLE as soon as practicable.

6. **Agency Approved Irrigation and Industrial Wells:** If EGLE determines, based on the Proof of No Influence information provided to it by the person seeking this exception, that the use of a Well in a Restricted Zone for Irrigation or Industrial purposes will not cause unacceptable vertical or horizontal migration of Contaminated Groundwater and that water from the proposed Well is not and will not cause an unacceptable exposure to Contaminated Groundwater or otherwise pose a threat to the environment, and proof of the determination is delivered to the Health Department, the Well may be so used.

(a) If the use of a Well in a Restricted Zone for Irrigation or Industrial purposes involved in residential, industrial or commercial activities is located on a U.S. EPA-lead Superfund Site within Van Buren and Cass counties, then the same requirements for Section 9-16(F)(6) apply for EGLE and U.S. EPA.

(G) Responsibility for Costs: Except in the case when the RZ Applicant is EGLE or a local unit of government that is not responsible or liable for the Contaminated Groundwater:

1. For Affected Premises that are not already connected to the municipal water system on the day of enactment of a Restricted Zone, the RZ Applicant for the establishment of the Restricted Zone shall be responsible for the costs to connect those Affected Premises within that Restricted Zone to the municipal water system. If it is not possible from an engineering perspective to provide service from a municipal system, or a municipal system is not available in the municipality, the RZ Applicant must show that any existing Well is either excepted from the prohibition on use under Paragraph (F) or properly plugged as outlined in Paragraph (H). The RZ Applicant retains responsibility for costs to connect Affected Premises that had a potable Well on the day of enactment of a Restricted Zone to a municipal water supply when one becomes available at any time in the future, regardless of whether potable Wells on those Affected Premises were previously granted an exception.

2. The RZ Applicant shall be responsible for all costs associated with the proper plugging of all non-excepted Wells in the Restricted Zone, as well as being responsible for all costs associated with providing a suitable replacement Well that will have EGLE and Health Department approval.

3. For Affected Premises that have a non-excepted Well on the day of enactment of a Restricted Zone that is used primarily for irrigation, the RZ Applicant for the establishment of the Restricted Zone shall be responsible for the costs to connect the irrigation piping on the Affected Premises within that Restricted Zone to the municipal water system, if desired by the Property Owner and available.

- (H) Abandonment of Non-Conforming Wells:** Any existing Well, the use of which is prohibited by Paragraph (E) and not granted an exception by Paragraph (F) shall be abandoned in conformance with all applicable laws, rules, regulations, Permit and license requirements, orders and directives of any governmental entity or agency of competent jurisdiction, or, in the absence of applicable law, rule, regulation, requirement, order, or directive, in conformance with a method acceptable to the Health Department. Any non-conforming Well shall be abandoned within 30 days following establishment of the Restricted Zone.
- (I) Influential Wells / Wells Affecting Contamination:** No Influential Well nor a Well within a Restricted Zone may be used or installed if it will cause the unacceptable migration of Contaminated Groundwater unless it is part of monitoring and/or remediation in conjunction with a response activity or corrective action approved by EGLE or the U.S. EPA. A person seeking to install or utilize a potentially Influential Well shall provide Proof of No Influence for EGLE's approval.
- (J) Prohibition on using Existing Restricted Zones for Future Closures:** Once a Restricted Zone has been established by this Section, future RZ Applicants may not utilize existing Restricted Zones to achieve closure under Part 201 or Part 213 of NREPA. An RZ Applicant must petition the Health Department to add an additional Restricted Zone by amending this Environmental Health Code as outlined in Paragraph (D) in order to assure that the closures and their associated institutional controls remain separate and distinct in the event of the repeal of a portion of this Environmental Health Code.
- (K) Enforcement:** The Health Department shall have the authority to enforce this Section. Where, upon information available to the Health Department, it is suspected that a Well is being used on an Affected Premises in violation of this Section, the Health Department may inspect such Affected Premises and serve an appropriate notice and order to cease such violation requiring that action be taken promptly by the Owner or occupant to bring the Affected Parcel into compliance. If the Owner or occupant fails to act in accordance with such order, the Health Department may seek appropriate remedies and penalties.
- (L) Severability:** If any section, clause, or provision of this Section shall be declared to be unconstitutional, void, illegal, or ineffective by any Court of competent jurisdiction, such section, clause, or provision declared to be unconstitutional, void, or illegal shall thereby cease to be a part of this Section, but the remainder of this Section shall stand and be in full force and effect.
- (M) Notification to Affected Premises Owners in Restricted Zone:** After the Health Department sets the public hearing concerning the passing of a proposed Restricted Zone, the RZ Applicant shall cause a written notice of the hearing to be sent by first class mail to all persons having an interest as Owner, tenant, easement holder, or mortgagee in any of the Affected Premises included in the proposed Restricted Zone. The notice:

1. Shall include a brief statement regarding the application designed to inform the recipients of its main features and potential impact on the recipients in general.
2. Shall be mailed at least ten days prior to the hearing.
3. Shall also be published in plain language in a newspaper of general circulation in the appropriate area at least seven (7) days before the hearing.

(N) Notification of Intent to Amend, Lapse, or Repeal: At least thirty (30) days prior to adopting a modification to the text of this Section, or prior to lapsing or revocation of this Section, the Health Department shall notify EGLE of its intent to so act, and U.S. EPA if the modification, lapse, or revocation impacts a U.S. EPA-lead Superfund site within Van Buren or Cass Counties. Notifications related to modification, addition, or repeal of Restricted Zones are governed by Section 9-16(D).

(O) Notification to the Local Unit of Government: The local unit of government in the area of the Restricted Zone shall be notified in writing by the RZ Applicant of the public hearing for the consideration of the proposed Restricted Zone not less than five days prior to the meeting; the RZ Applicant must also provide notice to the local unit of government of the potential passage of the Restricted Zone not less than 5 days before the effective date of the passage.

(P) Publication and Recording:

1. The Health Department shall publish notice of a Restricted Zone in a newspaper of general circulation within thirty (30) days of passage.
2. If the release, for which a Restricted Zone is sought, is regulated pursuant to Part 201, then the Restricted Zone shall be published and maintained in the same manner as zoning ordinances.
3. If the release, for which a Restricted Zone is sought, is regulated pursuant to Part 213, then the Restricted Zone shall be filed by the RZ Applicant with the register of deeds as an Amendment affecting multiple properties.

(Q) Appendix Maps:

1. West KLA Landfill Site, Alma Township. For purposes of the West KLA Landfill Site, the West KL Avenue Landfill Group, and each of its individual members, being The Upjohn Company, the City of Kalamazoo, the County of Kalamazoo, and Oshtemo Township, are collectively and individually the RZ Applicant.

Article X – Refuse, Hazardous Materials, Vermin, Dead Animals

10-1 **Accumulation of Garbage** – No person shall permit to accumulate upon his/her premises any garbage except in covered containers of rodent-proof, fly-proof and water tight construction.

- 10-2 **Accumulation of Rubbish** – (A) No person shall permit to accumulate upon his/her premises any garbage except in durable containers with close fitting covers except that bulky rubbish such as tree limbs, weeds, large cardboard boxes, etc., may be bundled and so stored as not to provide a harborage or breeding place for rodents.
 (B) The occupant and/or owner of property, and the owner of unoccupied property shall at all times maintain the premises occupied or owned in a clean and orderly condition. The deposit of or accumulation of garbage, rubbish, rags, tin cans, glass, paper, empty barrels, boxes or any litter which because of its character, condition or improper storage may invite the breeding or collection of flies, mosquitos or rodents, or which may in any manner, endanger the public health, safety or welfare is prohibited.
- 10-3 **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 in accordance with the provisions of Act 641, P.A. of 1978. Any person or property owner disposing of garbage or rubbish from his/her own household upon property under his/her control can dispose of such materials as long as such disposal method does not create a nuisance or hazard to health.
- 10-4 **Unlawful Dumping** – It shall be unlawful for any person to dump any refuse upon any street, alley or property, public or private. Excluded is the placing of front yard and curb/lawn leaves into the street where an organized pick-up by the municipality having jurisdiction exists.
- 10-5 **Nuisance and Safety Hazard** – It shall be unlawful to permit a nuisance or safety hazard to exist on private or public property if such nuisance or safety hazard could reasonable be expected to harm public health.
- 10-6 **Animals and Vermin** – (A) It shall be unlawful for any person to create or maintain a vermin or rodent infested condition premises owned or occupied by him/her. When the Health Department shall find an infestation of rodents, insects or evidence of such infestation on or with such property, the Health Department may order the owner or other responsible persons to take whatever measure are deemed to be reasonably necessary to abate he condition.
 (B) It shall be unlawful for any person to allow a dead animal to remain for over twenty-four (24) hours after death on premises owned or occupied by him/her to the injury of the public health or the annoyance of the citizens of Van Buren and/or Cass County as provided in Act 328 of 1931 being Section 750.57 of Michigan Compiled Laws of 1963. Such animals shall be buried to a depth of four feet (4') or otherwise disposed of in a manner specified by the Health Department.

Article XI Food Service Establishments

- 11-1 **Scope** – All food service establishments in Van Buren or Cass County are subject to inspection by the Health Department, after proper identification during normal business hours. No person shall prohibit the Health Department from conducting an inspection of a food service

establishment, not shall any person otherwise interfere with the Health Department during the course of this inspection.

- 11-2 Licensing, Operation and Inspection – The licensing, operation and inspections of a food establishment in Van Buren or Cass County shall be in accordance with Act 368, P.A. of 1978, Part 129, and administrative rules promulgated by the Michigan Department of Agriculture, and shall by reference be considered part of this code.

Article XII Public Swimming Pools

- 12-1 **Act 368, P.A. 1978, Part 125** – All public pools in Van Buren or Cass County shall meet requirements set forth in Act 368, P.A. 1978, Part 125 and the rules promulgated therewith.

Article XIII Campgrounds

- 13-1 **Act 368, P.A. 1978, Part 125** – All campgrounds in Van Buren or Cass County except the children’s camps licensed by the Michigan Family Independent Agency, shall meet the requirements set forth in Act 368, P.A. 1978, Part 125 and the rules promulgated therewith.

Article XIV Mobile Home Parks

- 14-1 **Act 96 of P.A. 1987** – All mobile home parks in Van Buren or Cass County shall meet the requirements set forth in Act 96 of P.A. 1987

Article XV Septic Tank Pumpers

- 15-1 **Part 117 of the Natural Resources and Environmental Protection Act 1994 P.A. 451** – All persons engaged in the business of servicing or maintaining septic tanks of other sewage holding reservoirs in Van Buren or Cass County shall meet the requirements of said part and act.

West KLA Landfill Groundwater Restricted Zone (GRZ)

Appendix Map

Brief History and Explanation:

The West KL Avenue Landfill is located in Oshtemo Township, in Kalamazoo County, approximately three miles to the east of Alma Township. In the 1950s, the Landfill was operated as a private landfill. From 1960 to 1979, the Landfill was operated as a municipal landfill, first by Oshtemo Township and then by Kalamazoo County. An estimated five million cubic yards of refuse, and an unknown amount of bulk liquid and drummed chemicals, were disposed of at the Landfill between 1950 and 1979.

Due to the discovery of hazardous substances in some nearby residential wells, in 1979, the Michigan Department of Environment, Great Lakes and Energy (EGLE) ordered the Landfill to cease operations, and required Kalamazoo County to provide an alternate water supply to affected residents. The Landfill remains closed and has not received any wastes since 1979. In 1982 the Landfill was added to the United States Environmental Protection Agency (EPA) National Priorities List, primarily due to risks posed by the release of hazardous substances from the Landfill to groundwater. The Landfill is currently under EPA oversight.

The KLA Group, comprised of The Upjohn Company, the City of Kalamazoo, the County of Kalamazoo, and Oshtemo Charter Township, has worked in cooperation with U.S. EPA and EGLE since 1992 to investigate and address the Site. In 2005 and 2006, the KLA Group was required by U.S. EPA to place an impermeable cap on the Landfill, which was designed to contain the hazardous substances in the Landfill and prevent them from migrating offsite. In addition to the impermeable cap, the KLA Group was required to monitor for hazardous substances that have migrated offsite. As evidenced by the KLA Group's continued groundwater monitoring, most of the hazardous substances that have migrated offsite have broken down or been diluted to the point they no longer present a concern.

While most of the hazardous substances that have migrated offsite no longer present a concern, a few hazardous substances that are resistant to biodegradation are still found in the groundwater downgradient of the Landfill at concentrations that exceed Michigan drinking water criteria. In particular, 1,4-dioxane is found in groundwater in an area extending from the Landfill to a portion of eastern Alma Township in Van Buren County. This area in Alma Township is encompassed by the West KLA Landfill GRZ, described below. In 2016, Kalamazoo County enacted a similar groundwater restricted zone for the impacted area within Kalamazoo County.

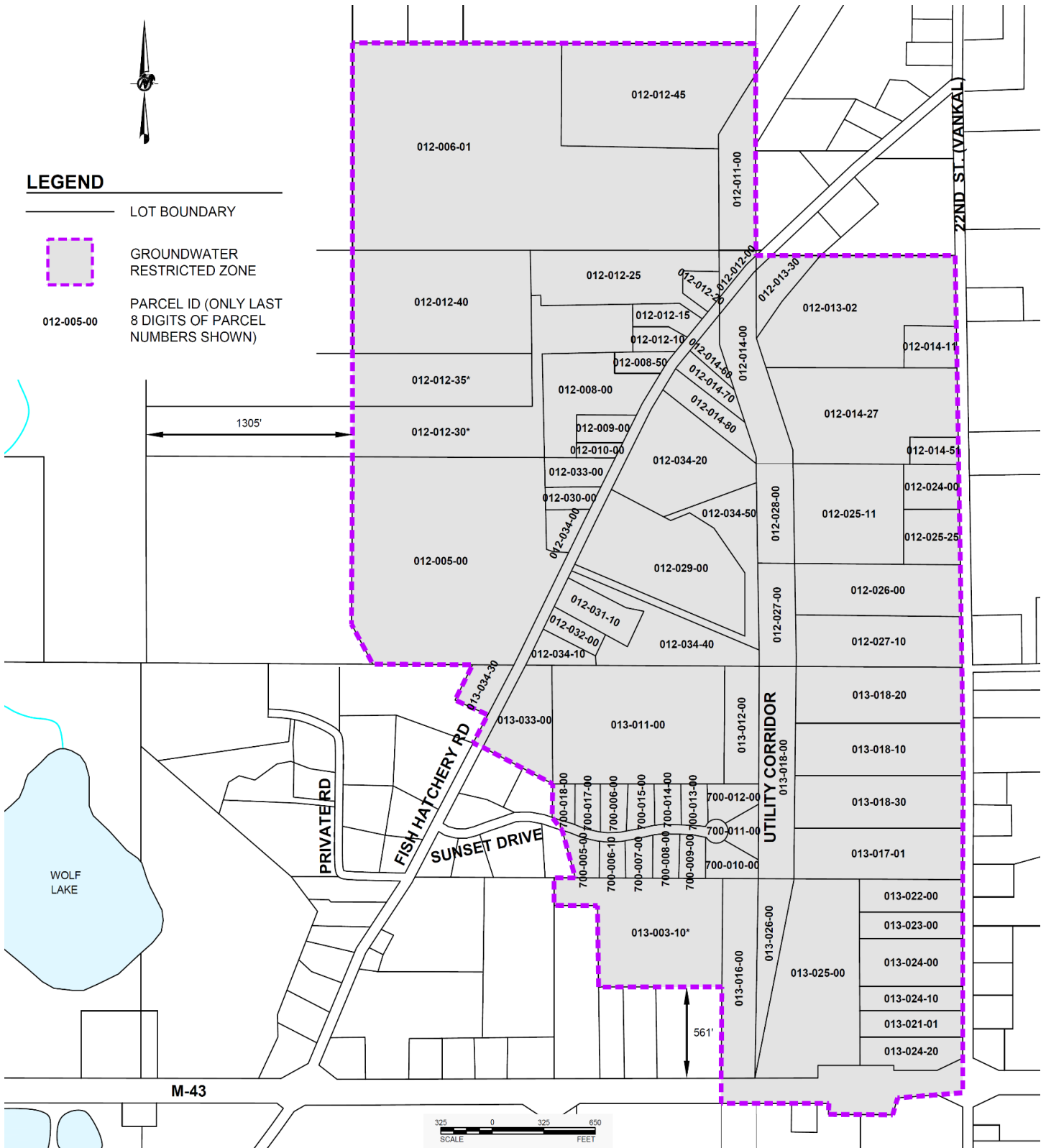
In its decision document Explanation of Significant Differences for K&L Avenue Landfill Superfund Site (August 2021), U.S. EPA noted the establishment of "a groundwater restricted zone in the affected area as the preferred approach to establish the needed [institutional controls] to ensure future protectiveness." Ground water quality will also continue to be monitored to confirm that the West KLA Landfill GRZ remains protective, and the GRZ will be amended, if warranted.

	Parcel Number
	80-01-013-024-20
	80-01-013-025-00
	80-01-013-003-10*
	80-01-012-014-11
	80-01-012-014-27
	80-01-012-024-00
	80-01-012-025-11
	80-01-012-025-25
	80-01-012-026-00
	80-01-012-027-10
	80-01-013-018-20
	80-01-013-018-10
	80-01-013-018-30
	80-01-013-022-00
	80-01-013-023-00
	80-01-013-024-00
	80-01-013-024-10
	80-01-012-012-20
	80-01-012-012-10
	80-01-012-008-50
	80-01-012-014-80
	80-01-012-008-00
	80-01-012-009-00
	80-01-012-034-20
	80-01-012-033-00
	80-01-012-029-00
	80-01-012-034-00
	80-01-012-034-50
	80-01-012-034-40
	80-01-012-031-10
	80-01-012-005-00
	80-01-012-032-00
	80-01-012-034-10
	80-01-013-034-30
	80-01-013-033-00
	80-01-700-011-00
	80-01-700-010-00
	80-01-700-012-00

	Parcel Number
	80-01-700-009-00
	80-01-700-013-00
	80-01-700-008-00
	80-01-700-014-00
	80-01-700-007-00
	80-01-700-015-00
	80-01-700-006-00
	80-01-700-017-00
	80-01-700-018-00
	80-01-700-005-00
	80-01-700-006-10
	80-01-012-006-01
	80-01-012-010-00
	80-01-013-021-01
	80-01-012-011-00
	80-01-012-012-00
	80-01-012-012-15
	80-01-012-012-25
	80-01-012-012-30*
	80-01-012-012-35*
	80-01-012-012-40
	80-01-012-012-45
	80-01-012-013-02
	80-01-012-013-30
	80-01-012-014-00
	80-01-012-014-51
	80-01-012-014-60
	80-01-012-014-70
	80-01-012-027-00
	80-01-012-028-00
	80-01-012-030-00
	80-01-013-011-00
	80-01-013-012-00
	80-01-013-016-00
	80-01-013-017-01
	80-01-013-018-00
	80-01-013-026-00

* Property only partially in restricted zone (see map)

Map of Groundwater Restricted Zone:



Additional Requirements Specific to this GRZ:

The following requirements apply in addition to the requirements and prohibitions set forth in Section 9-16 of the Environmental Health Code.

All Wells within the GRZ must be approved by EGLE or U.S. EPA, and the Health Department. The Health Department will maintain a list of approved Wells and make that list available to the public upon request.

Wells within the GRZ are subject to the following:

1. Existing and new wells will be monitored by the RZ Applicant (the KLA Group) to ensure that the concentration of 1,4-dioxane that EGLE or U.S. EPA requires the Applicant to monitor, remains below one half of its Michigan drinking water criterion. The RZ Applicant shall notify U.S. EPA, EGLE, and the Health Department as soon as possible if the RZ Applicant is unable to secure access to sample a Well from an Owner of an Affected Premise.
2. The RZ Applicant shall replace a potable water supply Well, or connect the Affected Premises to a municipal water supply, where feasible, or provide an alternate potable water supply, if the confirmed concentration of 1,4-dioxane in the Well is at or above one half of the Michigan drinking water criterion.
3. Except as expressly authorized by EGLE and U.S. EPA, new and replacement Wells near 22nd Street shall be installed above 750 feet mean sea level (MSL) or below 600 feet MSL; and along Fish Hatchery Road and Sunset Drive below 600 feet MSL, subject to confirmation when the replacement Well is installed.
4. Potable supply Wells that are replaced are to be properly abandoned in accordance with the Environmental Health Code.
5. The RZ Applicant (the KLA Group) may be required to conduct additional work for other Landfill-related hazardous substances as required by U.S. EPA or EGLE.