DEPARTMENTS OF TRANSPORTATION, CONSUMER AND INDUSTRY SERVICES, AND

ENVIRONMENTAL QUALITY

SUBDIVISIONS OF LAND

(By authority conferred on the director of the department of environmental quality by section 105 of Act No. 288 of the Public Acts of 1967, as amended, being §560.105 and section 2226 of Act No. 368 of the Public Acts of 1978, as amended, being §333.2226 of the Michigan Compiled Laws. Each part of these rules is promulgated separately by the department whose name appears in the designation of that part.)

PART 4. DEPARTMENT OF ENVIRONMENTAL QUALITY ON-SITE WATER SUPPLY AND SEWAGE DISPOSAL FOR LAND DIVISIONS AND SUBDIVISIONS

R 560.401 Definitions.

Rule 401. As used in this part:

(a) "Alternative system" means a treatment and disposal system which is not a conventional system and provides for an equivalent or better degree of protection for public health and the environment than a conventional system.

(b) "Approval for the suitability of an on-site water supply" means a written statement confirming that an adequate quantity and quality of water is available from a protected source in accordance with R 560.404 issued by the department to a property owner or the owner's designated representative.

(c) "Approval for the suitability of on-site sewage disposal" means a written statement or on-site sewage disposal permit in accordance with R 560.416 issued by the department to the property owner or the owner's designated representative.

(d) "Available sanitary sewer facilities" means sanitary sewers determined accessible upon consideration of the following factors:

(i) The distance from the proposed development site to the nearest existing public services or planned public services that are to be installed.

(ii) The capacity of the existing public sanitary sewer system.

(iii) The policy of the local governing body on utility extensions.

(iv) The service areas denoted in the community's comprehensive sewer and water plan, if a plan is available.

(e) "Certified professional geologist" means a professional geologist certified by The American Institute of Professional Geologists, 7278 Vance Drive, Suite 103, Arvada, Colorado 80003.

(f) "Certified professional soil scientist" means a professional soil scientist certified by ARCPACS, 677 South Segoe Road, Madison, Wisconsin 53711.

(g) "Conventional system" means an on-site sewage treatment and disposal system that contains a watertight septic tank with nonuniform distribution of effluent to

subsurface soil trenches or an absorption bed on sites meeting the criteria contained in R 560.418 to R 560.422.

(h) "Deep cut excavation" means the excavation of unsuitable soil materials below the bottom of the final disposal system to depths more than 6 feet below natural grade to expose acceptable underlying soils.

(i) "Department" means the department of environmental quality, a city health department, a county health department, or a district health department, whichever has jurisdiction.

(j) "Development site" means any parcel or lot as defined by section 102 of the land division act, Act 288 of the Public Acts of 1967, as amended, being §560.102 of the Michigan Compiled Laws.

(k) "Drains" means man-made excavations, piping, or both, that collect groundwater or surface water, and includes road ditches, county drains, and footing drains.

(l) "Drop-off" means a man-made cut or natural slope where side slope is in excess of 50% and which contains semi-impermeable layers that may cause percolating water to vent to the surface.

(m) "Floodplain" means the area of land adjoining a surface water that will be inundated by a 100-year flood.

(n) "Groundwater" means the water in the ground that is in the zone of saturation.

(o) "High groundwater elevation" means the uppermost part of the soil or underlying material wholly saturated with water. The term includes perched and apparent conditions that are seasonally saturated for a time period in excess of two weeks, or permanently saturated.

(p) "Licensed professional engineer" means a professional civil engineer who is licensed under article 20 of the occupational code, Act 299 of the Public Acts of 1980, being §§399.2001 to 339.2014 of the Michigan Compiled Laws.

(q) "Lot" means a measured portion of a parcel or tract of land as defined by section 102 of the land division act, Act 288 of the Public Acts of 1967, being §560.102 of the Michigan Compiled Laws.

(r) "Peak water demand" means the maximum water use rate in gallons per minute.

(s) "Preliminary plat" means a map as defined by section 102 of the land division act, Act 288 of the Public Acts of 1967, being §560.102 of the Michigan Compiled Laws.

(t) "Primary maximum contaminant level" means the concentration level of a contaminant above which consumption of the water poses a health risk.

(u) "Professional surveyor" means a professional surveyor licensed under article 20 of the occupational code, Act 299 of the Public Acts of 1980, being §§339.2001 to 339.2014 of the Michigan Compiled Laws.

(v) "Public sewer" means a sewerage system as defined in section 4101 of Act No. 451 of the Public Acts of 1994, as amended, being §324.4101 of the Michigan Compiled Laws. Public sewerage systems are generally those that collect and treat sanitary sewage generated by 2 or more dwellings or structures not under the same ownership.

(w) "Public water" means a public water supply as defined in section 2(o) of Act No. 399 of the Public Acts of 1976, as amended, being §325.1002(o) of the Michigan Compiled Laws.

(x) "Registered sanitarian" means a person that is registered under part 184 of Act No. 368 of the Public Acts of 1978, being §333.18401 of the Michigan Compiled Laws.

(y) "Registered well drilling contractor" means a contractor registered under part 127 of Act No. 368 of the Public Acts of 1978, being §§333.12701 to 333.12715 of the Michigan Compiled Laws.

(z) "Sanitary sewage" means water and contaminants discharged from sanitary conveniences, including bathroom, kitchen, and household laundry fixtures of dwellings, office buildings, industrial plants, commercial buildings, and institutions. Commercial laundry wastes and industrial and commercial processes are not considered sanitary sewage.

(aa) "Secondary maximum contaminant level" means the concentration level of a constituent above which the constituent adversely affects water quality properties, such as taste, odor, corrosivity, or scale production.

(bb) "Soil mottling," also known as redoximorphic features, means spots or blotches of contrasting colors, such as, but not limited to, gray or brown or gray and brown colors in close proximity, that are formed in the soil matrix by the processes of reduction, translocation, and oxidation of iron and manganese compounds in soils that have been periodically saturated.

(cc) "Soil permeability" means the rate at which liquid passes in 1 direction through the soil material under saturated conditions.

(dd) "Soil structure" means the morphological aggregates in which the individual soil particles are arranged.

(ee) "Soil textural class" means the United States department of agriculture (USDA) classification system and refers to the coarseness or fineness of the soil relative to the proportion of sand, silt, and clay.

(ff) "Subsurface" means below the natural or altered ground surface elevation.

(gg) "Suitable absorption area" means the portion of a lot which has acceptable soils that remains for construction of a conventional system after identified limiting surface and subsurface features, applicable setbacks, and isolation distances have been excluded.

(hh) "Suitability" means the presence of site conditions that could warrant the development of an on-site sewage treatment and disposal system or on-site water supply system that is in compliance with these rules.

(ii) "Surface water" means any of the following:

(i) The Great Lakes and their connecting waterways.

(ii) Inland lakes.

(iii) Rivers.

(iv) Streams.

(v) Impoundments.

(vi) Perennial open drains.

(vii) Any other watercourses within the jurisdiction of the state as defined in section 3101 of Act No. 451 of the Public Acts of 1994, as amended, being §324.3101 of the Michigan Compiled Laws.

(jj) "Test well" means a well that is used to obtain information on groundwater quantity, quality, or aquifer characteristics for the purpose of designing or operating a water supply well.

History: 1979 AC; 2001 AACS.

R 560.402 Preliminary plats.

Rule 402. The owner or a designated representative shall submit 3 copies of a preliminary plat drawing to the department for review. A preliminary plat drawing shall include all of the following information:

(a) Existing and proposed 5-foot contour intervals. For waterfront property, or where the high groundwater elevation is within 6 feet of existing or proposed finished ground surface, the preliminary plat shall show existing and proposed 2-foot contour intervals. The department may waive the requirements for contours if a lot in the subdivision is more than 1 acre. If extensive cutting or filling of land is anticipated that will affect building sites and sewage disposal facilities in the areas involved, then the plans shall indicate the cutting or filling. The owner or designated representative shall specify the type of fill material to be used when filling is anticipated.

(b) The location of all of the following, either existing or proposed, within or adjacent to the area to be platted:

(i) Rivers.

(ii) Streams.

(iii) Creeks.

(iv) Lakes.

(v) County drains.

(vi) Other subsurface drains.

(vii) Lagoons.

(viii) Slips.

(ix) Waterways.

(x) Bays.

(xi) Canals.

(xii) Artificial impoundments.

(c) The location of all soil evaluations performed on the site.

(d) Established 100-year floodplain area and elevation and normal high water level in the case of waterfront property. On lakes where a legal level has been established, the plat drawing shall show the legal level.

(e) The location of existing facilities and structures, including, but not limited to, all of the following:

(i) Buildings.

(ii) Sewage systems.

(iii) High-tension towers.

(iv) Utility easements of record or in use.

(v) Excavations.

(vi) Bridges.
(vii) Culverts.
(viii) Injection wells.
(ix) Oil wells.
(x) Gas wells.
(xi) Water wells.
(xii) Underground storage tanks.

(f) Building setback lines from road, waterfront, or lot lines if lines are established or proposed.

(g) The department may require the location of proposed individual wells to be shown.

History: 1979 AC; 2001 AACS.

R 560.403 Site reports; contents.

Rule 403. For a subdivision, the owner or designated representative shall submit 3 copies of a site report to the department. A site report shall include all of the following information:

(a) The name and location of proposed plat.

(b) The names and addresses of the proprietor of the preliminary plat and the licensed professional engineer or professional surveyor submitting the site report.

(c) A statement of intended use of the proposed plat, such as single-family, 2-family, and multiple residential housing; commercial; industrial; recreational; or agricultural.

(d) A statement of the type of water and sewage system to be provided.

(e) A statement of the existing use of adjacent property and intended use of adjacent undeveloped land, if known, including any adjacent public-owned lands.

(f) The results of all soil profile evaluations performed on the site.

(g) A statement of the site suitability for on-site water supply or on-site sewage disposal according to R 560.404 and R 560.416.

History: 1979 AC; 2001 AACS.

R 560.404 Approval for suitability of on-site water supply.

Rule 404. Before issuing an approval for the suitability of an on-site water supply for a development site that is less than 1 acre in size or a subdivision, the department shall have evidence that a potable, adequate, reliable, and protected on-site water supply has been or can be developed on the parcel as prescribed in these rules.

History: 1979 AC; 2001 AACS.

R 560.405 Water well or test well on parcel.

Rule 405. The completion of a sufficient number of water wells or test wells on the parcel and submittal of water well records for the water wells or test wells under

section 12707 of Act No. 368 of the Public Acts of 1978, as amended, being §333.12707 of the Michigan Compiled Laws, and submittal of water sample results or the submittal of other hydrogeological information to the department constitutes evidence for determining the suitability of an on-site water supply.

History: 1979 AC; 2001 AACS.

R 560.406 Water well records and water sample results for well not on parcel.

Rule 406. If a water well or test well has not been completed on the parcel, then water sample results or other hydrogeological information pertaining to existing wells in the vicinity of the parcel which demonstrates that the proposed on-site water supply will likely result in compliance with these rules constitutes evidence of suitability. If well record data, water sample results, and hydrogeological information are not available, or if the data indicate that unsuitable groundwater quantity or quality may exist, then the department shall either reject the development site of less than 1 acre in size or proposed subdivision under R 560.428 or issue a conditional approval with a recorded deed restriction under R 560.426.

History: 2001 AACS.

R 560.407 On-site water supply construction criteria.

Rule 407. An on-site water supply shall meet the location and construction standards in R 325.1601 to R 325.1676.

History: 2001 AACS.

R 560.408 Well protection.

Rule 408. The owner shall be responsible for the construction of an on-site water supply that is free from sources of contamination. The following methods shall be given consideration:

(a) Penetration of an impervious layer which is of sufficient areal extent, but which is not less than 10 feet thick.

(b) Maintaining a minimum of 50 feet from the static water level to the bottom of the casing or top of the screen in an unconfined aquifer.

(c) An increase in the minimum horizontal isolation distance between the well and a source from which groundwater contamination may occur.

(d) A combination of the methods in subdivisions (a), (b), and (c) of this subrule or another method that the department determines will provide adequate protection for the on-site water supply.

History: 2001 AACS.

R 560.409 Prohibited water sources for new dwellings.

Rule 409. The owner or designated representative shall not obtain water for drinking or household purposes that is intended to furnish new dwellings located on a development site that is less than 1 acre in size or a subdivision from any of the following:

(a) A dug well.
(b) A crock well.
(c) A hauled water system.
(d) A cistern.
(e) A surface body of water.
(f) A spring.
(g) Any other similar device.

History: 2001 AACS.

R 560.410 Deviations to decrease minimum casing depth or isolation distances prohibited.

Rule 410. The department shall not grant deviations to decrease minimum casing depth or to decrease minimum isolation distances under R 325.1613 for development sites less than 1 acre in size or subdivisions.

History: 2001 AACS.

R 560.411 Yield or performance testing.

Rule 411. A registered water well drilling contractor under the supervision of the owner or the owner's designated representative shall perform a yield or performance test to demonstrate that water can be withdrawn from an on-site water supply well for drinking and household purposes at a sustained pumping rate which is not less than 10 gallons per minute (gpm) and which meets or exceeds peak water demand for not less than a 4-hour period of time. If an on-site water well cannot sustain a capacity that meets the peak water demand, then the department shall require demonstration of a combination of the known well yield and storage facilities that can furnish water at a delivery rate sufficient to meet the peak water demand.

History: 2001 AACS.

R 560.412 Collection and analysis of water samples.

Rule 412. (1) The department or a property owner's designated representative shall collect water samples for chemical and bacteriological analyses from each test well or on-site water supply well intended for household purposes.

(2) A state-certified laboratory shall perform all water sample analyses.

(3) The state-certified laboratory shall perform analyses for all of the following parameters:

(a) Chloride.

(b) Fluoride.
(c) Hardness.
(d) Iron.
(e) Nitrate.
(f) Nitrite.
(g) Sodium.
(h) Sulfate.
(i) Coliform bacteria.

(4) The department may require additional sampling or allow a reduction in sampling for specific contaminants based on local site conditions or other pertinent factors.

History: 2001 AACS.

R 560.413 Adoption of standards by reference.

Rule 413. The department adopts by reference in these rules the publication entitled "Drinking Water Regulations and Health Advisories," EPA-822-B-96-002, October 1996. The publication may be obtained free of charge from the Office of Ground Water and Drinking Water, United States environmental protection agency, 401 M street, SW, Washington, DC 20460-0003. The toll-free telephone number is 800-426-4791. A copy of this publication is available on the internet at http:\\www.epa.gov\OST\tools\dwstds.html. Copies of the adopted matter are available for inspection at the offices of the Drinking Water and Radiological Protection Division, Department of Environmental Quality, 3423 N. Martin L. King Blvd., Lansing, Michigan 48906.

History: 2001 AACS.

R 560.414 Primary maximum contaminant levels.

Rule 414. (1) The department shall reject proposed development sites that are less than 1 acre in size and subdivisions if the water sample analysis detects contaminants in concentrations that exceed the primary maximum contaminant levels as defined in R 560.401(t).

(2) The department shall reject proposed development sites that are less than 1 acre in size and subdivisions if the water sample analysis detects a contaminant in a concentration that is more than 50% of the maximum contaminant level and the department has determined that the contaminant is likely to exceed the primary maximum contaminant level in the future after considering the following:

(a) Contaminant transport and modeling.
(b) Land use.
(c) Geology.
(d) Other factors that influence groundwater movement.

(3) If the department requires additional analysis under R 560.412(4), then the department shall use the drinking water regulations and health advisories adopted in R 560.413 to determine primary maximum contaminant levels.

History: 2001 AACS.

R 560.415 Secondary maximum contaminant levels.

Rule 415. If water sample analyses from a test well or on-site water supply well for a development site less than 1 acre in size or a subdivision detects a contaminant in a concentration that exceeds the secondary maximum contaminant level in Table 1, then the department shall disclose by means of recorded advisories according to R 560.426, the nature of the impact on drinking water quality.

Table 1
Secondary Maximum Contaminant Levels

Contaminant	Secondary Maximum Contaminant Level in Milligrams Per Liter
Chloride	2
Hardness (as calcium carbonate)	2 50
Iro	0
Sodiu	2
Sulfate	2
Corrosivity	Noncorrosive

History: 2001 AACS.

R 560.416 Approval for suitability of conventional on-site sewage treatment and disposal.

Rule 416. Before issuing an approval for the suitability of a conventional on-site sewage treatment and disposal system for a development site less than 1 acre in size or a subdivision, the department shall have evidence that site conditions meet these rules.

History: 2001 AACS.

R 560.417 Soil absorption area for conventional treatment and disposal systems.

Rule 417. (1) A suitable absorption area for at least 1 original and 1 replacement system shall exist for each development site less than 1 acre in size or each lot where a conventional treatment and disposal system is proposed. Location of each absorption area shall conform to the minimum isolation distances found in Table 2

Table 2
Minimum Horizontal Isolation Distances

From Absorption Area* To:	Minimum Horizontal Isolation Distance (feet)
Private individual well	50
Surface waters	100
Basement foundation walls	10
Top of drop-off	20
Property lines	10
Footing drains installed in water table without direct connection to	25
Footing drains installed in water table with direct connection to surface	50
Drains designed to lower the water table	100

*measured from edge of stone

(2) The department shall establish the required minimum area available for a development site less than 1 acre in size or on each lot for initial and replacement systems in accordance with the regulations of the city, county, or district health department having jurisdiction under the authority granted by Act No. 368 of the Public Acts of 1978, as amended, being §325.1101 et seq. of the Michigan Compiled Laws. For lots or development sites less than 1 acre in size proposed to be served by individual wells and on-site sewage disposal systems or lots or development sites less than 1/2 acre in size proposed to be served by a public water supply and on-site sewage disposal systems, the department may require the submission of a detailed development plan by any of the following persons demonstrating competence:

(a) A licensed professional engineer.

(b) A professional surveyor.

(c) A registered sanitarian.

A professional approved by the department.The professional person shall draw the detailed plan to scale with a maximum 2-foot contour interval, shall show the proposed design for the initial and replacement sewage disposal systems, and shall indicate the location intended for the home and individual water supply well. The professional person shall indicate both existing and proposed contours.The professional person shall ensure that areas defined on the plan for sewage systems and the well are at locations that are readily accessible for future maintenance or replacement, or both.

History: 2001 AACS.

R 560.418 Slopes.

Rule 418. (1) A development site less than 1 acre in size or a lot shall have sufficient areas of suitable soils in areas that have slopes conducive to the construction of initial and replacement on-site sewage disposal systems.

(2) If a development site less than 1 acre in size or a lot has slopes of more than 12%, then the department may require the submission of a detailed development plan by any of the following persons demonstrating competence:

(a) A licensed professional engineer.
(b) A professional surveyor.
(c) A registered sanitarian.
(d) A professional approved by the department.

The professional person shall draw the detailed plan to scale with a maximum 2-foot contour interval, shall show the proposed design for the initial and replacement sewage disposal systems, and shall indicate the location intended for the home and individual water supply well. The professional person shall indicate both existing and proposed contours. The professional person shall ensure that areas defined on the plan for sewage systems and the well are at locations that are readily accessible for future maintenance or replacement, or both.

(3) If extensive site modifications are required to provide for areas that have a slope amenable to construction of the on-site sewage system, then the department may require necessary site work to be completed before final recording of a subdivision or before approval for on-site sewage disposal of a development site that is less than 1 acre in size.

History: 2001 AACS.

R 560.419 Floodplains.

Rule 419. (1) The areas for initial and replacement on-site sewage disposal systems shall have natural ground surface elevation above the elevation defining the 100-year floodplain, where a floodplain exists.

(2) The department shall ensure that the soil infiltrative surface of the sewage disposal system is located at an elevation that is above the elevation defining the 100-year floodplain.

History: 2001 AACS.

R 560.420 Soil profile evaluations for subdivisions and land divisions.

Rule 420. (1) Any of the following persons demonstrating competence shall provide the results of soil profile evaluations to the department for the area designated for initial and reserve on-site sewage disposal systems:

(a) A licensed professional engineer.
(b) A professional surveyor.
(c) A registered sanitarian.
(d) A certified professional geologist.
(e) A certified professional soil scientist.
(f) A professional approved by the department.

Soil profile evaluations shall confirm the existence of suitable soils on each development site that is less than 1 acre in size or proposed lot.

(2) The person conducting soil profile evaluations shall complete them to a minimum depth of 6 feet below the natural ground surface or 6 feet below the elevation that will exist after cutting unless waived by the department. Soil data shall be reported in accord with the United States department of agriculture (USDA) soil classification system. A soil profile evaluation shall identify all of the following:

(a) Soil horizon depths.
(b) Soil texture.
(c) Soil structure.
(d) Soil mottling.
(e) Depth-to-high groundwater elevation or bedrock.

(3) The person providing the results of soil profile evaluations shall complete them using either soil pits or soil borings.

History: 2001 AACS.

R 560.421 Soil suitability for conventional systems.

Rule 421. (1) The department shall ensure that soil texture and permeability conforms to the types and ranges specified in Table 3.

Table 3
Suitable Soil Texture and Permeabilities

Soil Texture	Permeability* (minutes/inch)
Sand, loamy sand	1 - 15
Sandy loam	16 - 30
Sandy clay loam, light loam	31 - 60
Clay loam, silty clay loam, clay	Above 60

*soil structure shall also be considered when evaluating permeability.

(2) To provide for adequate soil treatment capability, a minimum of 3 feet of unsaturated soil shall exist between high groundwater elevation or bedrock and the bottom of the infiltrative surface. Greater vertical separation may be required in accordance with the regulations of the city, county, or district health department having jurisdiction under the authority granted by Act No. 368 of the Public Acts of 1978, as amended, being §325.1101 et seq. of the Michigan Compiled Laws. Greater vertical separation may also be required where groundwater mounding underneath the soil absorption system or other factors would limit the treatment to protect on-site water supplies or surface waters. For lots or development sites less than 1 acre, the soil below the infiltrative surface of the absorption system shall meet the texture and permeability requirements of Table 3.

(3) If the required 3 feet of unsaturated soils cannot be provided naturally, then the department will consider proposals for fill. Fill is acceptable only if the depth to high groundwater elevation or bedrock, or both, is a minimum of 2 feet below the natural, unaltered ground surface. Fill is only acceptable over soils specified in Table 3 as suitable by texture and permeability.

(4) Fill materials shall consist of medium to coarse sands in accordance with the USDA classification system without excessive fines. Fill materials may be required to be placed for both the initial and reserve sewage disposal system areas before final recording of the plat or approval for on-site sewage disposal of a development site that

is less than 1 acre in size. Any of the following persons demonstrating competence shall provide certification of fill materials and placement to the department:

(a) A licensed professional engineer.

(b) A professional surveyor.

(c) A registered sanitarian.

(d) A certified professional geologist.

(e) A certified professional soil scientist.

(f) A professional approved by the department.

(5) If filling is required, any of the following persons may be required to submit a detailed development plan as the basis for approval:

(a) A licensed professional engineer.

(b) A professional surveyor.

(c) A registered sanitarian.

(d) A professional approved by the department.

The person shall draw the detailed plan to scale showing both existing and proposed contours that have a maximum 2-foot interval and shall indicate the area for the initial and replacement sewage disposal system at locations that will be accessible for maintenance or replacement, or both.

History: 2001 AACS.

R 560.422 Deep cut excavations.

Rule 422. (1) If suitable soils, as specified in Table 3, are not present within the upper 6 feet of the soil profile and alternative methods of sewage treatment and disposal have been considered under R 560.424, then the department may approve the use of deep cut excavations to expose acceptable underlying soils that exist within 20 feet of the natural grade.

(2) Acceptable underlying soils shall consist of a minimum of 4 feet of soils which have a permeability of greater than 30 minutes per inch and which are not permanently or seasonally saturated as confirmed by soil profile evaluations.

(3) Deep cut excavations are not allowed if the soils that are cut through are seasonally or permanently saturated. Exceptions may be considered where drainage of groundwater from overlying soils would not be expected to adversely impact the function of the sewage disposal system.

(4) Deep cut excavations are not allowed unless hydrogeologic information confirms that the underlying soils being exposed have no direct hydraulic connection to a useable aquifer intended for drinking or household purposes.

(5) For deep cut excavations the department may require alternative methods of sewage treatment. The department may require such excavations to be completed and filled with medium to coarse sands in accord with the USDA classification system before final recording of the plat or approval for on-site sewage disposal of a development site that is less than 1 acre in size. Any of the following persons demonstrating competence shall provide certification of fill materials and placement to the department:

(a) A licensed professional engineer.

(b) A professional surveyor.

(c) A registered sanitarian.
(d) A certified professional geologist.
(e) A certified professional soil scientist.
(f) A professional approved by the department.

(6) The owner or owner's designated representative shall complete deep cut excavations over 100% of the required initial and reserve absorption system area for the upper 6 feet; however, excavations may be reduced to a minimum of 50% of the required absorption system area between 6 and 20 feet deep.

History: 2001 AACS.

R 560.423 Proposals to lower high groundwater elevation.

Rule 423. (1) The department may approve the use of a proposal that includes surface and subsurface drainage systems to control high groundwater elevation conditions for a development site that is less than 1 acre in size or subdivision.

(2) Before approval, the owner or his designated representative shall install drainage systems specified in subrule (1) of this rule and shall monitor high groundwater elevations during the normally wettest time period of the year and at least from March 1 to June 1. Any of the following persons shall provide monitoring results to the department:

(a) A licensed professional engineer.
(b) A professional surveyor.
(c) A registered sanitarian.
(d) A certified professional geologist.
(e) A certified professional soil scientist.
(f) A professional approved by the department.

In addition, the designated person shall substantiate that high groundwater elevation has been lowered to meet the requirement of R 560.421.

(3) The designated person shall monitor high groundwater elevations by placing a monitoring well at representative locations approved by the department. The designated person shall make observations on the first day of the monitoring period and at least once every 7 days thereafter until the monitoring period is complete.

(4) The designated person shall provide representative precipitation data for the time period of September 1 to May 31 and shall supply the data as part of the observations required in subrule (3) of this rule. Results of high groundwater elevation monitoring are inconclusive if recorded precipitation totals are less than 90% of normal averages during the time period of September 1 to May 31.

(5) For a proposal to lower high groundwater elevation to be approved by the department, a county drain commissioner or other responsible governmental agency shall have approved the drain design and a responsible governmental agency shall have accepted responsibility for perpetual maintenance of the drain.

History: 2001 AACS.

R 560.424 Alternative methods of sewage treatment and disposal.

Rule 424. (1) The department may approve an alternative treatment and subsurface disposal system for a development site less than 1 acre in size or a lot deemed suitable or not suitable for a conventional subsurface sewage system.

(2) The department of environmental quality shall provide technical guidance in defining minimum site suitability and design and long-term operation and maintenance requirements considered essential for the proper functioning of specific alternative systems.

(3) The owner may utilize an alternative system if the specific alternative is provided for under the regulations of the city, county, or district health department having jurisdiction and if the department of environmental quality has authorized the alternative system's use.

History: 2001 AACS.

R 560.425 Industrial and commercial subdivisions.

Rule 425. (1) The department may consider approval for the suitability of development sites less than 1 acre in size or subdivisions intended for industrial or commercial usage if both of the following conditions are met:

(a) The proposed development is strictly limited to those uses that generate and dispose of on-site, sanitary sewage only.

(b) Quantities of sanitary sewage intended to be disposed of are limited to low volumes which have been determined to be compatible with site or lot size and soil conditions.

(2) Where an on-site water supply is proposed, it shall meet the requirements of Act 399 of the Public Acts of 1976 being §§325.1001 to 325.1023 and part 127 of Act 368 of the Public Acts of 1978 being §§333.12701 to 333.12715 of the Michigan Compiled Laws.

(3) The aquifer shall be protected in accordance with R 560.408 and yield an adequate quantity of water for the intended usage.

History: 2001 AACS.

R 560.426 Recorded deed restrictions and advisories.

Rule 426. (1) The department may require, as a condition of approval of a development site that is less than 1 acre in size or a preliminary plat, that the owner records deed restrictions and advisories. The deed restrictions and advisories may include any of the following:

(a) Minimum well construction features needed to provide an acceptable on-site water supply.

(b) Possible need for water treatment.

(c) An advisory to complete an on-site water supply well before beginning site development.

(d) Other advisory information needed to protect public health or groundwater resources.

(e) Location of the sewage disposal system on the lot in relation to the property lines and structures.

(f) Type of fill material needed.

(g) Type of sewage disposal system or alternative system and requirements related to design, construction, operation, and maintenance.

(h) Isolation above high groundwater elevation.

(2) Before construction of a water well, the department shall advise the owner or designated representative of the existence of any applicable deed restrictions or advisories.

History: 2001 AACS.

R 560.427 Variances.

Rule 427. (1) A development site that is less than 1 acre in size or a subdivision shall comply with the requirements of these rules; however, the Michigan department of environmental quality may grant a variance. Such variances will be considered by the department of environmental quality when all of the following conditions are met:

(a) The requirements contained within the rules cannot be met.

(b) Other acceptable alternatives are not available.

(c) The requested variance will not create the potential for a health hazard, nuisance condition, or pollution of surface or groundwater. The requested variance will not violate laws governing water supply, water pollution, or sewage disposal. The proprietor shall make a request for the variance in writing to the department of environmental quality.

Variances granted apply only to the specific site under consideration.

History: 2001 AACS.

R 560.428 Plat approval or rejection.

Rule 428. (1) Within 30 days of receipt of the preliminary plat, the department shall issue a written approval or rejection to the proprietor.

(2) Before issuing a rejection for the suitability of an on-site water supply or a sewage disposal system, the department shall have information that site conditions are not suitable for the development of an on-site water supply or a sewage disposal system that complies with these rules.

(3) The department shall reject a development site less than 1 acre in size or a preliminary plat if any of the following provisions apply:

(a) There has been a failure to provide for connection to an available public sanitary sewer required by the municipality for a development site that is less than 1 acre in size or subdivision.

(b) The site conditions are not suitable for on-site sewage or on-site water systems where 1 or both is proposed.

(c) Information submitted is not sufficient to make a determination as to the suitability of conditions for on-site water supply or on-site sewage disposal.

(d) The department determines that submitted information is in error with respect to on-site water supply or sewage disposal in accordance with these rules.

History: 2001 AACS.