

Title 10 - DEPARTMENT OF NATURAL RESOURCES
Division 20 - Clean Water Commission
Chapter 6 – Permitting
DRAFT AMENDMENT

10 CSR 20-6.030 **Treatment** [*Disposal*] of Wastewater in Residential Housing Developments

PURPOSE: The purpose of the this amendment is to improve the organization of the rule by incorporating current terminology that will encourage the use of new technology and reduce the potential for adverse effects to the environment and public health, thus aiding in sustainable planning and housing developments throughout the state.

PURPOSE: This rule sets forth requirements for **individuals and** developers of residential housing to determine the method of **domestic wastewater treatment** [*disposal*]. This rule applies to all new residential housing developments, **expansion of existing residential housing developments** and existing [*subdivisions*] **developments** that were required to comply with previous regulations which were effective June 30, 1974, June 26, 1975, [*or*] May 15, 1984, **or March 30, 1999**, but have not received department approval.

(1) General Requirements.

(A) Definitions:

1. Definitions as set forth in the Missouri Clean Water Law and 10 CSR 20-2.010 shall apply to those terms when used in this rule.

2. Common promotional plan. A plan, undertaken by one (1) or more persons, to offer lots for sale or lease; where land is offered for sale by a person or group of persons acting in concert, and the land is contiguous or is known, designated or advertised as a common unit or by a common name or similar names, the land is presumed, without regard to the number of lots covered by each individual offering, as being offered for sale or lease as part of a common promotional plan. **State and county roads are not considered property boundaries for the purpose of this rule.**

3. **Centralized wastewater treatment system. A wastewater collection and treatment system that consists of collection sewers and a centralized treatment facility. Centralized systems are used to collect and treat wastewater from entire communities.**

4 **Cluster system. A wastewater collection and treatment system under some form of common ownership and management that provides treatment and dispersal of wastewater from two or more homes or buildings, but less than the entire community that typically include a comprehensive, sequential land-use planning component.**

[3]5. Developer. Any person who directly or indirectly, sells or leases or offers to sell or lease, any lots, but shall not include any licensed broker or licensed salesman who is not a shareholder, director, officer or employee of a developer and who has no legal or equitable interest in the land.

6. Dispersal area. The entire area used for the dispersion of the effluent into the final receiving environment including the area designated for the future replacement system (reserve area).

[4]7. Limiting layer. Any soil horizon that will severely limit the soil's ability to treat or dispose of effluent. The limiting layer may include a restrictive horizon, or permanent or seasonal high water table as defined in 19 CSR 20-3.060[(1)(A)].

[5]8. Lot. Any portion, piece, division, unit or undivided interest in real estate, if the interest includes the right to the exclusive use of a specific portion of real estate, whether for a specific term or in perpetuity.

9. Onsite wastewater treatment system. A system relying on natural process and/or mechanical components to collect, treat and disperse wastewater into the soil from single family dwellings or multiple family developments and disperse the resulting effluent on property owned by the individual or entity.

[6]10. Residential Housing Development. Any land which is divided or proposed to be divided into three (3) or more lots, whether contiguous or not, for the purpose of sale or lease as part of a common promotional plan. **State and county roads are not considered property boundaries for the purpose of compliance of this rule.**

11. Single Family Lagoon (Stabilization Pond). A system, at minimum incorporating a detention pond with earthen dikes, used to contain effluent and serving a single family residence only (one house – one lagoon).

13. Single Family Residence. Any structure or dwelling which is intended for or is used by a single family. The dwelling unit may be detached from other dwelling units or may be part of one or more attached units and includes the right to the exclusive use of a specific portion of real estate, whether for a specific term or in perpetuity.

14. Subsurface Wastewater Dispersal. The final treatment area of effluent dispersed into the soil allowing the physical, chemical and bacterial breakdown and aerobic treatment in an unsaturated zone of the soil.

(B) Applicability

(1) This rule applies to individuals and developers of residential housing developments who propose to use onsite wastewater treatment systems that utilize subsurface soil dispersal areas or single family lagoons as the method of wastewater treatment. This rule applies to all new residential housing developments with seven (7) or more lots where each is less than five (5) acres in size, expansion of existing residential housing developments by three (3) or more lots where each is less than five (5) acres in size and existing developments that were required to comply with previous regulations which were effective June 30, 1974, June 26, 1975, May 15, 1984, or March 30, 1999, but have not received department approval. Developments that are required to receive written approval from the department shall receive it prior to the sale, lease or the commencement of construction, by the developer or any other individual.

[(B)] **(C) Unless specifically provided otherwise, this rule shall apply to any developer or individual who owns or controls land and-**

1. Develops or divides land into seven (7) or more residential housing lots each less than five (5) acres in size;

2. Develops multiple family developments that propose seven (7) or more units;

[2] **3. Resubdivides land into more lots, adds additional lots to which when added to an existing group of lots which are contiguous or not, or which are known, designated or advertised as a common unit or by a common name, as part of a common promotional plan, will in total constitute a residential housing development; *[and]***

[3] **4. Any expansion of three (3) or more lots each lot less than five (5) acres in any subdivision or development will be subject to this rule~~./~~;**

5. Any expansion of a multiple family development with three (3) or more units; and

6. Any development that was required to comply with previous regulation which where effective June 30, 1974, June 26, 1975, May 15, 1984, or March 30, 1999 but have not received approval.

[(C)] **(D) The following subdivisions or residential housing developments are exempted:**

1. Subdivisions in which control of more than twenty percent (20%) of the lots was permanently relinquished prior to July 1, 1974;

2. Subdivisions which were approved or exempted by the department under the subdivision regulations which were effective June 30, 1974, June 26, 1975, [or] May 15, 1984, **or March 30, 1999;**

3. Residential housing developments with less than 15 lots, in existence prior to [the effective date of this rule] **March 30, 1999;**

4. Lots of five (5) acres and larger in residential housing developments. **To ensure those lots remain exempt they shall not be subdivided into lots less than five acres in size. Those lots shall be configured in a manner that there will be no violation of the Missouri Clean Water Law and regulations. If lots five (5) acres and larger are within a development that is regulated by this rule the developer shall submit a copy of the restrictive covenants prohibiting the subdividing of those lots without first securing written approval from the department;**

5. Residential housing developments located in areas where the department has determined that the local administrative authority has a local program sufficient to meet the goals of this rule;

6. If a developer proposes a centralized wastewater collection and treatment system, the requirements of this rule shall be considered met, provided that all other requirements of the Missouri Clean Water Law and regulations **are [can be] satisfied and continuing authority, in accordance with 10 CSR 20-6.010, is [will be] established prior to the sale or lease of lots or the commencement of construction of residences. Individual onsite wastewater treatment systems shall not be installed on any individual lot in a development that proposes or has been permitted for a centralized collection and treatment facility, unless, the lot owner has obtained a written waiver from the continuing authority of the centralized treatment facility, per 10 CSR 20-6.010(3)(B) and has received written approval from the DNR for that method of wastewater treatment as described in this rule; and**

7. Recreational developments will be subject to section [(5)] (3) **and/or section (4)** of this rule.

8. Multiple family developments will be subject to section (4) of this rule.

[(D)] (E) Unless exempted in this rule, the developer of any residential housing development shall obtain approval from the department for the method of sewage treatment and [disposal] **dispersal** to be used in the development prior to the sale or lease of any lot, or the commencement of construction on any lot by the developer or any person. To obtain approval **for a subdivision or recreational development that proposes individual onsite wastewater treatment systems** the developer **or any person** must submit to the appropriate DNR office a copy of the geohydrologic evaluation, the soils report and the plat map as described in this rule. **To obtain approval for multiple family developments the developer must submit to the appropriate DNR office a copy of the engineers report as described in section (4) of this rule.**

1. The developer may apply for approval to use individual *[on-site]* **onsite wastewater treatment** systems in the proposed development provided that the minimum lot size is forty thousand (40,000) square feet. For residential housing developments with lots of less than forty thousand (40,000) square feet, (0.92 acres) only centralized sewage collection and treatment **systems** are acceptable for the development. However, this minimum lot size does not apply to residential housing developments that do not require approval. Construction and operating permits will be required for [central sewage] **centralized** collection and treatment systems.

2. *[Only residential housing developments with seven (7) or more lots must receive approval for the method of sewage treatment and disposal prior to the sale or lease of any lots.]* **Subdivisions and recreational developments that propose seven (7) or more lots where each lot is less than five (5) acres in size and use individual onsite wastewater treatment systems must receive written approval for the method of wastewater treatment prior to the sale, lease or the commencement of construction on any lot by the developer or any other individual.**

3. **Subdivisions and recreational developments that propose to expand by three (3) or more lots where each lot is less than five (5) acres in size and use individual onsite wastewater treatment systems must receive written approval for the method of wastewater treatment prior to the sale, lease or the commencement of construction on any lot by the developer or any other individual.**

4. **Multiple family developments that propose to have seven (7) or more units that use cluster systems with subsurface wastewater dispersal must receive written approval for the method of wastewater treatment prior to the sale, lease or the commencement of construction by the developer or any individual.**

5. **Multiple family developments that propose to expand with three (3) or more units that use cluster systems with subsurface wastewater dispersal must receive written approval for the method of wastewater treatment prior to the sale, lease or the commencement of construction by the developer or any individual.**

(2) Subdivisions

***[(2)]* (A) Geohydrologic Evaluation**

*[(A)]*1. All developers required to **comply** by this rule shall apply for a geohydrologic evaluation pertaining to the use of **individual *[on-site]* onsite wastewater treatment systems *[facilities]*** from the Department of Natural Resources, Division of Geology and Land Survey, Geological Survey Program (GSP). The evaluation will include a review of available geologic data and may include a field evaluation conducted by the GSP.

[1]2. A written request for the geohydrologic evaluation must be submitted on forms provided by the department and within forty-five (45) days the developer will be notified in writing by the department of the results.

[2]3. The request for a geohydrologic evaluation shall include a map of the proposed development along with the legal description, total number of acres and type of water supply being proposed.

[3]4. The criteria contained in the document entitled *Residential Housing Development Geohydrologic Groundwater Evaluation Ranking, DNR, Division of Geology and Land Survey, Geological Survey Program, October 1997* shall be used to determine the minimum lot size as related to the geology and possibility of groundwater contamination in the area.

[(B)]5. Residential housing developments may be exempted from [obtaining] the geohydrologic evaluation in areas where bedrock and surficial materials exhibit low overall permeability and groundwater recharge is limited, or the groundwater gradient is low and groundwater velocity is slow. A determination of whether a residential housing development meets the criteria for an exemption from obtaining a geohydrologic evaluation will be determined by GSP based on the information supplied on the request form and data on file at GSP. **The exemption does not excuse the developer or any other individual from further requirements of this rule.**

[(3)](B) Soils Report.

[(A)]1. A soils report for each residential housing development must be prepared by a soil scientist as defined in [19 CSR 20-3.080] **701.040.1(2) e RSMo**. The report must indicate if the proposed systems **to be used on the individual lots [are] is either a subsurface soil absorption system or [other system] [(] a single family lagoon [)]**. The soils report can be generated only after a thorough, systematic investigation of the soil properties and landscapes in the proposed development. Soil observation pits (backhoe or hand dug) dug to a depth to reveal the major soil horizons shall be utilized. The minimum number of pits shall be one every 10 acres, however, in developments with the majority of lots less than two acres, the minimum number of pits shall be one every five acres. These pits may be supplemented by soil borings to help determine the extent of similar soil properties. Profile descriptions which include horizon designations, depth, color, texture **including percentage clay**, structure **including size and grade**, consistence, **percentage and size of coarse fragments**, mottling **including quantity and size** and other pertinent features shall be submitted.

[1] a. The soils report shall contain a topographic map delineating the proposed development into the following slope categories: 0-2%, [3-14] **2-15%**, 15-30% and [31] **30%** and greater.

[2] b. A map delineating the depth of acceptable soil into the following categories: less than 18 inches, 18 to 30 inches over bedrock, 18 to 30 inches over a limiting layer, and greater than 30 inches shall also be provided.

[3] c. Table 1 shall be used to determine the minimum lot size based on soil properties and site conditions. More than fifty percent (50%) of each lot must be in a single acreage category or more than fifty percent (50%) may be in that and smaller acreage categories in order to use that minimum sized lot.

TABLE 1

Minimum Lot Size (Acres) for Soil Absorption Systems Based on Soil Depth and Slope

Acceptable Soil (inches)

		>30"	18-30" Limiting Layer	18-30" Bedrock	<18"
	0-2	0.92	2	2	3
Slope (%)	[3-14]2-15	0.92	1	2	3
	15-30	1	2	3	5
	[31]30+	2	3	5	>5

[4]2. Lots with less than eighteen inches (18") of acceptable soil should be evaluated carefully to determine if a soil absorption system will function properly on the site. It must be shown that mitigation of the limiting soil condition is a feasible option. Lots with less than twelve inches (12") of acceptable soil will not be approved for soil absorption systems unless the limiting condition is a high water table and the soil scientist determines that water table lowering schemes may be effective.

[(B)]3. Acceptable soil will have the following properties:

[1] a. Any structure except strong platy or massive;

[2] b. Fifty percent (50%) and less coarse fragments (>2 mm);

[3] c. No limiting layer; and

[4] d. Available area and landscape position suitable for an [on-site] **individual onsite wastewater treatment system or single family lagoon.**

[(C)]4. [Wastewater stabilization ponds (] **Single family** lagoons [)] may be allowed for the single-family residence wastewater treatment facilities if local regulations do not prohibit them.

[1]a. Minimum lot size for **single family** lagoons is two and one-half (2.5) acres; larger lot sizes are recommended in order to provide for all wastewater to be contained on the lot and handled in a manner that there will be no violation of the Missouri Clean Water Law and regulations. **No reduction will be given from the minimum lot size determined by the geohydrologic evaluation or soils report.**

[2] b. Report must show that the soils, available area and landscape position is suitable for **single family** lagoons. A minimum of four feet (4') of soil is required if the natural soil is to be used as the liner. Strongly sloping areas should be avoided. Areas with slopes greater than fifteen percent (15%) will not be considered suitable for **single family** lagoons.

[(4)](C) Plat Map.

[(A)]1. A map drawn to a scale of one inch (1") equals from fifty to two hundred feet (50-200') showing the location of the individual lots, roads, existing **or proposed** wells, and known **or proposed** easements shall be provided. The number of lots, lot sizes and type of water supply shall also be provided. *[A copy of the United States Geological Survey topographic map and the soil map and legend from the United States Department of Agriculture County Soil Survey if available must be provided with the area of development clearly outlined.]*

a. **A copy of the United States Geological Survey topographic map must be provided with the area of development clearly outlined;**

b. **A copy of the soil map and legend from the United States Department of Agriculture County Soil Survey must be provided with the area of development clearly outlined.**

c. **A copy of the developments restrictive covenants stating there shall be no deviation or change that may adversely affect the geohydrologic evaluation, soils report, lot sizes, number of lots, or the proposed water supply, by either the developer, the individual lot owner(s) or any other individual(s) without first securing written approval from the department shall be provided.**

[(5)] (3) Recreational Development.

(A) A development is considered recreational when land is sold or leased for the purpose of camping in recreational vehicles. In order to be considered a recreational development, restrictive covenants must prohibit continuous year round living on the lot and no cabins or other structures will be allowed that could be used for year round residential purposes.

1. The minimum lot size for a recreational development that will use individual *[on-site]* **onsite** wastewater treatment **systems** *[facilities is twenty thousand (20,000) square feet]* **will be the same as evaluated for a single family residence on an individual lot as described in section (2).** *[No reduction will be allowed from the minimum lot size determined by the geohydrologic evaluation. A one-half (1/2) reduction in minimum lot size as indicated by the soils report may be allowed.]*

2. In recreational developments where sewage collection and treatment is provided by sewage dump stations, the sewage dump stations will be considered centralized sewage collection and treatment for the purposes of compliance with this rule.

3. The developer must submit a copy of the restrictive covenants along with any plans for sewage dump stations or centralized sewage collection and treatment systems.

4. **A copy of the developments restrictive covenants stating there shall be no deviation or change that may adversely affect the geohydrologic evaluation, soils report, lot sizes, number of lots, or the proposed water supply, by either the developer, the individual lot owner(s) or any other individual(s) without first securing written approval from the department shall be provided.**

5. **The restrictive covenants must also clearly state the specific number of days throughout the year that each recreational lot is to be occupied.**

(B). If a developer proposes cluster systems with subsurface wastewater dispersal as the method of wastewater treatment they must receive approval as described in section (4) of this rule.

[(6)] **(4) Multiple Family Housing [Units] Developments.**

(A) Residential housing developments that propose to build multiple family housing *[units]* **developments** (duplexes, quadplexes, **hotels, motels recreational developments,** etc.) shall submit an engineers report in accordance with 10 CSR 20-8.020 Design of Small Sewage Works. Each housing unit (**duplex, apartment, hotel room, RV campsite, etc.**) shall be considered equal to a single family residence for the purposes of compliance with this rule.

(B) The following must be included within the engineers report.

1. **Nature of use (duplex, apartment, recreational development, etc.).**

2. **Documentation of ownership and responsibility. For the purpose of compliance with this rule the owner is defined as the individual or individuals responsible for the continued operation and maintenance activities required to ensure the dependable function and financial responsibility of the entire collection and treatment system(s);**

3. Description of the method wastewater treatment, alternatives and why this type of system is proposed as compared to others, which are feasible and practical. The report must discuss the options and the reason for selecting the recommended treatment and dispersal system. If more than one cluster system using subsurface wastewater dispersal is proposed, documentation shall be submitted ensuring they act independently (collection, treatment and dispersal) along with why they are necessary. The wastewater collection and treatment system facility design is not required as part of this engineers report. If submitted it will be returned to the applicant;

4. All developers required to comply with this rule shall apply for a geohydrologic evaluation pertaining to the use of multiple family subsurface dispersal cluster systems from the Department of Natural Resources, Division of Geology and Land Survey Program (GSP). The evaluation will include a review of available geologic data and include a field evaluation conducted by the GSP.

a. A written request for the geohydrologic evaluation must be submitted on forms provided by the department and within forty-five (45) days the developer will be notified in writing by the department of the results.

b. The request for a geohydrologic evaluation shall include a map of the proposed development along with the legal description, total number of acres and type of water supply being proposed.

5. The engineers report must also include a thorough and systematic soil investigation conducted by a qualified Soil Scientist as defined in 701.040.1(2) e RSMo. Soil observation pits (backhoe or hand dug) must be dug to a depth to reveal the major soil horizons. The number of observation pits must be sufficient to adequately represent the soils and landscape of the primary and reserve dispersal areas. These pits may be supplemented by soil borings to help determine the extent of similar soil properties. Profile descriptions which include horizon designations, depth, color, texture with percentage clay, structure including size and grade, consistence, percentage and size of coarse fragments, mottling including quantity and size and other pertinent features shall be submitted.

a. The soils report must contain a topographic map delineating the proposed dispersal site(s) into the following categories: 0-2%, 2-15%, 15-30% and 30% and greater;

b. A map delineating the depth of acceptable soils into the following categories: less than 18 inches, 18 to 30 inches and greater than 30 inches over bedrock or a limiting layer shall also be included.

6. A site map drawn to a scale of one inch (1") equals from fifty to two hundred feet (50-200') showing the location of the primary and reserve dispersal sites, including all setback distances shall be included. The map shall also show all soil observation pits, supplemental borings, potable water sources, existing and proposed easements, natural drainage ways, all known or proposed utilities, location of all multiple family facilities and other cultural features that effect the design, installation, operation and maintenance of the treatment system(s).

a. A copy of the United States Geological Survey topographic map and the soil map and legend from the United States Department of Agriculture County Soil Survey must be provided with the area of development clearly outlined.

7. A copy of the developments restrictive covenants stating there shall be no deviation or change that may adversely affect the geohydrologic evaluation, soils report, number of systems, estimated daily flows, or the proposed water supply, by either the developer, the individual lot owner(s) or any other individual(s) shall be provided. If a change is proposed it can only be performed after first securing written approval from the department.

8. Other information as determined by the department.

(7) Department Review.

(A) The department shall determine if the requirements of this rule are satisfied **for a subdivision, a recreational development or a multiple family development**. Minimum lot size **for developments that propose individual onsite wastewater treatment systems for individual residences or RV Campsites** will be the larger of the values calculated in the geohydrologic evaluation if required or the soils report. Approval under this rule does not guarantee that each lot in the residential housing development will be approved for an **individual onsite wastewater treatment subsurface soil absorption** *[soil absorption]* system.

(B) The developer of any residential housing development required to obtain approval from the department, shall obtain written approval and comply with all conditions and requirements set forth in writing by the department as contained in the Missouri Clean Water Law and corresponding regulations, prior to the sale or lease of any lot, **multiple family unit** or the commencement of construction on any lot by any developer(s), *[or]* owner(s) **or any other individual(s)**.

(C) There shall be no deviation or change that may adversely affect the geohydrologic evaluation, **soils report**, lot sizes, number of lots, **number of multiple family units** or the proposed water supply for a residential housing development following departmental approval without first securing written approval of the proposed changes from the department.

(D) Within ninety (90) days of receipt of the completed requirements and any other documents or information required in this rule by the department, the department will approve or disapprove the wastewater disposal plans and attach any conditions to an approval which it deems necessary to protect waters of the state in accordance with the Missouri Clean Water Law and regulations.

(E) Any developer or person owning any residential housing development or lots covered by this rule who has a proposal for wastewater disposal denied, or any condition in an approval in all or in part, may appeal to the Missouri Clean Water Commission within thirty (30) days of issuance of the denial or conditioned approval.

(F) Nothing in this rule shall preclude any local, municipal, county or other lawful authority from establishing subdivision, sewer or single-family residence *[on-site]* **onsite wastewater treatment** systems regulations and ordinances equal to or more stringent than those contained in this rule.

(G) Compliance With Other Law. Nothing in this rule shall excuse any person from complying with or from liability for violations of the Missouri Clean Water Law and regulations or any other laws of Missouri.

(H) Severability. If any section, paragraph, sentence, clause or phrase of this rule, or any part of each, be declared unconstitutional or invalid for any reason, the remainder of this rule shall not be affected and shall remain in full force and effect.

AUTHORITY: section 644.026, RSMo Supp. 1997.* Original rule filed June 14, 1974, effective June 24, 1974. Amended: Filed June 16, 1975, effective June 26, 1975. Rescinded and readopted: Filed Oct. 12, 1983, effective May 15, 1984. Rescinded and readopted: Filed July 13, 1998, effective March 30, 1999.

*Original authority 1972, amended 1973, 1987, 1993, 1995.