

NOTE: All material to be deleted is placed in brackets and *[italic]* typeface and all new material is printed in **bold** typeface.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 6—Permits

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

WORKING DOCUMENT
Strawman Draft

**The Department presents these draft materials for
stakeholder review and discussion only.
Subject to the Red Tape Reduction review.**

The Missouri Department of Natural Resources has identified 10 CSR 20-6, Permits, as a potential rulemaking amendment. This workgroup has been convened for the purpose of informal and voluntary public participation and discussions regarding the development of this rule prior to initiating formal rulemaking.

Under Governor Greitens' leadership, all state agencies are working to reduce regulations and other government processes that unnecessarily burden individuals and businesses while doing little to protect or improve public health, safety, and our natural resources. The Missouri Department of Natural Resources is committed to limiting regulation to what is necessary to protect Missouri's environment, implementing statutory mandates, and maintaining state control of programs. Any further proposed changes to rules discussed on this page are being developed with these goals in mind. We welcome your comments to help ensure that our regulations provide required protections but do not add unnecessary costs.

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

DRAFT AMENDMENTS

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

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

PURPOSE: This rule sets forth requirements for *[developers of]* residential housing **developments** to determine the method of domestic wastewater 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.

This rule applies to all existing developments that propose to change the method of domestic wastewater treatment from a centralized collection and treatment facility to individual onsite wastewater treatment systems, cluster wastewater treatment systems, or a combination thereof.

Once a development receives written approval for the method of wastewater treatment under this rule, it is then the developer(s), lot owner(s), homeowners/property owners association, responsible management entity, etc., obligation to contact the appropriate state or local administrative authority authorized by statute, charter, or other form of enabling authority to issue permit(s) for the authorization to construct a specific domestic wastewater treatment system(s).

(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 **individual lots or residential housing units within a residential housing development** for sale or lease; where land **or residential units** *[is]* **are** offered for sale or lease 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 **or residential housing units** 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. Developer. Any person who directly or indirectly, sells or leases or offers to sell or lease, any lots, **residential housing units, or recreational camping sites**, 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.

4. Effluent. The liquid discharge from a sewage tank or other domestic wastewater treatment device.

5. Fragipan. Dense, brittle, usually acid subsoil horizon which restricts the movement of water, air, and root development; extreme density and compactness is not a result of high clay content but a dense soil fabric arrangement and/or cementation by various chemical constituents.

6. Landscape position. Specific geomorphic component of the landscape in which a site is located; two-dimensional landscape positions may be summit, shoulder, backslope, footslope, or toeslope; three-dimensional views of geomorphic landscape position can be considered as headslope, noseslope, sideslope, baseslope, etc.

[4. Limiting layer. Any soil horizon(s) 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]*7. 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.

8. Operating location. All lands owned, operated or controlled by one (1) or more persons jointly or as tenants no matter if the land is contiguous or not, using common area(s) for the dispersal of effluent. State and county roads are not considered property boundaries for the purpose of this rule.

9. Redoximorphic feature. Soil property that results from the reduction and oxidation of iron and manganese compounds in the soil after saturation with water and subsequent desaturation.

10. Residence. Any structure, dwelling, unit or shelter which is envisioned or used for human habitation as a permanent, vacation, or recreational home or building. The unit may be detached or part of one or more attached units.

A. Multiple-family. Residential housing units that share the same structure, dwelling, unit, shelter or common wall with or without a common social area that includes the right to the exclusive use of a specific portion of real estate, whether for a specific term or in perpetuity; they may include but are not limited to duplexes, condominiums, townhouses, apartments, hotels, motels, hospitals, dormitories, boarding schools, group homes, barracks, etc.

B. Single-family. An individual structure, dwelling, unit or shelter constructed for the purpose of human habitation, with one or more rooms occupied or intended for occupancy by one (1) family for cooking, sanitary and sleeping purposes that includes the right to the exclusive use of a specific portion of real estate, whether for a specific term or in perpetuity; they do not include multiple-family residences.

11. Residential housing development, recreational. A development is considered recreational when land is sold or leased as part of a common promotional plan or operating location, whether contiguous or not for the purpose of camping in recreational vehicles, camping trailers or primitive tent camping on camping sites for a specific term and prohibits continuous year round living and no cabins or structures are constructed that could be used for year round living.

[6]12. Residential [H]housing [D]development, subdivision. Any land which is divided or proposed to be divided into three (3) or more lots, **less than five (5) acres for the construction of a single-family residence on an individual lot**, whether contiguous or not, for the purpose of sale or lease as part of a common promotional plan **or operating location**.

13. Responsible Management Entity. The legal entity that has the managerial, financial, and technical capacity to ensure the long-term, cost-effective operation of individual onsite wastewater treatment systems, cluster wastewater treatment systems or a combination thereof in accordance with the Missouri Clean Water Law and its regulations. For the purpose of this rule a responsible management entity can include but is not limited to homeowners/property owners associations, owner of a wastewater treatment system, contracted management service, etc.

14. Rock fragments. Unattached pieces of rock two millimeters (2 mm) in diameter or larger that are strongly cemented or more resistant to rupture and are described by size, shape, and, for some the kind which may include but not limited to chert, sandstone, shale, limestone or dolomite.

15. Single-Family Lagoon (Wastewater Stabilization Pond). At minimum a sealed earthen basin to treat and stabilize domestic wastewater from a single-family residence.

16. Soil. Unconsolidated mineral or organic matter of the surface of the earth that has been subjected to and shows effects of pedogenic and environmental factors of climate (including water and temperature effects) and macro- and microorganisms, conditioned by relief, acting on parent material over a period of time.

17. Soil Color. Reported as a moist color based on the Munsell soil color system that specifies the relative degrees of the three variables of color: hue, value, and chroma, e.g. 10YR 6/4 is the color called 'strong brown' with a hue = 10YR, value = 6 and chroma = 4.

18. Soil consistence. Attribute of soil expressed in degree of cohesion and adhesion, or in resistance to deformation or rupture; general classification of soil consistence include loose, friable, very friable, firm, very firm, extremely firm.

19. Soil horizon. Layer of soil or soil material approximately parallel to the land surface and differing from layers above and below in physical, chemical, and biological properties or characteristics such as color, structure, texture, consistence, etc.

20. Soil horizon, limiting layer. Any soil horizon(s) that will severely limit the soil's ability to treat or hydraulically control effluent. The limiting layer may include but is not limited to a restrictive horizon, or permanent or seasonal high water table, etc.

21. Soil horizon, restrictive. Condition in the soil profile or underlying strata that restricts or limits water and air movement. A restrictive layer may include but not limited to a fragipan, claypan, permanent or perched water table, abrupt textural change, massive soil structure grade or bedrock, etc.

22. Soil morphology. Physical constitution of a soil profile as exhibited by the kinds, thickness, and arrangement of the horizons in the profile; and by the texture, structure, consistence, and porosity of each horizon.

23. Soil permeability. Ability of the porous medium to transport fluids and gases and considers only water, at field saturation, as the working fluid and is measured in units of length per time, e.g. in/hr., cm/hr., etc.

24. Soil profile. Vertical section of the soil through all its horizons and extending into the parent material.

25. Soil porosity. Volume percentage of total bulk not occupied by soil particles.

26. Soil structure. Combination or arrangement of primary soil particle into secondary units or peds; secondary units are characterized on the basis of shape, size class, and grade (degree of distinctness).

27. Soil texture class. Percentage by weight of sand, silt, and clay such that each class possesses unique physical characteristics and management relative to the other textural classes; soil textural classes applicable to describing soils; textural classes to be used as part of this rule are illustrated in the U.S. Department of Agriculture Soil Textural Triangle.

28. Soil Treatment Area. The physical location for the treatment of effluent for the final physical, chemical and biological breakdown of the effluent under aerobic conditions including dispersal into unsaturated (vadose) zone of the soil or surface land application.

29. Soil, vadose zone. Aeriated, unsaturated region of the soil above the zone of saturation.

30. Wastewater treatment system, centralized. A single sewer and treatment system under common ownership and management serving the entire development.

31. Wastewater treatment system, onsite. Wastewater treatment systems used to collect, treat, and disperse or reclaim domestic wastewater from individual homes, clusters of homes, or buildings at or near the point of waste generation and dispersing the soil treatment area.

A. Onsite wastewater treatment system, individual. A system relying on natural processes and/or mechanical components serving one dwelling or building treating and dispersing into the soil onsite.

B. Onsite wastewater treatment system, cluster. A wastewater collection and treatment system under some form of common ownership which collects wastewater from two or more independent dwellings or buildings but not the entire development treating and conveying it to the soil treatment area located near the dwellings or buildings but still within the same operating location (onsite).

(B) Applicability

1. This rule applies to all developers of residential housing developments and individuals including lot owners, homeowners/property owners associations, responsible management entities, etc., who propose to use individual onsite wastewater treatment systems, cluster wastewater treatment systems, or a combination thereof, as the method of domestic wastewater treatment.

A. This rule applies to all new residential housing developments, expansion of existing residential housing developments 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 written approval from the department.

B. This rule applies to all existing residential housing developments that propose to change the method of domestic wastewater treatment from a centralized collection and treatment facility to individual onsite wastewater treatment systems, cluster systems, or a combination thereof.

C. It is the developer, lot owner, homeowners/property owners association, responsible management entity, etc., responsibility to demonstrate to the department the development is exempt. If that cannot be demonstrated to the department then it is their responsibility to obtain written approval from the department for the method of domestic wastewater treatment prior to the sale, lease or the commencement of construction of any type of domestic wastewater treatment system.

D. Once a development receives written approval for the method of wastewater treatment under this rule, it is then the developer(s), lot owner(s), homeowners/property owners association, responsible management entity, etc., obligation to obtain the authorization to construct permit(s) from the appropriate state or local administrative authority which is authorized by statute, charter or other form of enabling authority, adopted construction, operating and maintenance standards for those systems.

[(B)] **2.** Unless specifically provided otherwise, this rule *[shall]* applies^{*[y]*} to *[any developer who owns or controls land and-]*

[1.] **A. *[Develops or divides land]* Subdivisions where land is divided into three (3) or more residential housing lots each less than five (5) acres;**

B. Recreational developments that propose three (3) or more recreational camping sites;

C. Multiple-family developments or developments with cluster wastewater treatment systems that propose three (3) or more residential housing units;

[2] **D. *[Resubdivides]* Developments where the land is resubdivided into more lots, *[adds]* additional lots or residential housing units are added 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 or operating location, will in total constitute a residential housing development; *[and]***

[3] **E. *[Any] [e]* Expansion of three (3) or more lots less than five (5) acres in any subdivision or development *[will be subject to this rule.];***

F. Expansion of three (3) or more recreational camping sites in a recreational development; or,

G. Expansion of three (3) or more residential housing units in a multiple-family development or developments that propose cluster wastewater treatment systems;

[(C)] **3.** The following subdivisions or residential housing developments **including recreational and multiple-family developments** are exempted:

[1.] **A.** *[Subdivisions]* **Residential housing developments** in which control of more than twenty percent (20%) of the lots was permanently relinquished prior to July 1, 1974;

[2.] **B.** *[Subdivisions]* **Residential housing developments** 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.] **C.** Residential housing developments with less than 15 lots **or residential housing units**, in existence prior to *[the effective date of this rule]* **March 30, 1999; or,**

D. Residential housing developments with less than seven (7) lots that were less than five (5) acres or developments with less than seven (7) housing units, in existence prior to the effective date of this rule;

[4.] **E.** Lots of five (5) acres and larger in **subdivisions** *[residential housing developments]* **that are;[.]**

(I) Used for single-family residences only,

(II) Configured in a manner that will allow effective treatment and hydraulic control of the effluent from an individual onsite wastewater treatment system, and

(III) Not subdivided into lots less than five acres without first securing written approval from the department for the method of domestic wastewater treatment.

[5.] **F.** 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.]***4.** If a *[developer]* **residential housing development** proposes a centralized wastewater collection and treatment system **or cluster systems, with point discharge**, 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, will be established]* prior to the sale or lease of lots or the commencement of construction of **any** residences:*[: and]*

A. Individual onsite wastewater treatment systems should not be installed on any individual lot within a development that proposes or has a centralized wastewater

collection and treatment system which is part of the same common promotional plan or operating location, unless a written waiver from the continuing authority has been provided and the method of wastewater treatment has received written approval from the department as described in section 2 of this rule.

B. Cluster wastewater treatment systems should not be installed within a development that proposes or has been permitted for a centralized wastewater treatment and collection system which is considered part of the same common promotional plan or operating location, unless a written waiver from the continuing authority has been obtained and the system(s) have received written approval from the department for that method of wastewater treatment as described in section 4 of this rule and the maximum daily flows for all lots connected to the centralized or any cluster system within the development is less than or equal to 3,000 gallons per day.

[7. Recreational developments will be subject to section (5) of this rule.];

(C) Requirements

[(D)] **1.** Unless exempted in this rule, *[the developer of any]* residential housing developments shall *[obtain]* **receive written** approval from the department for the method of **domestic wastewater** *[sewage]* treatment *[and disposal]* to be used in the development prior to the sale or lease of any lot **or any residential housing unit**, or the commencement of construction *[on any lot]* by the developer, **lot owner(s), homeowners/property owners association, responsible management entity**, or any person(s) **or group of persons**. To obtain written approval for a subdivision or recreational development that proposes individual onsite wastewater treatment systems serving a single-family residence or individual recreational camper on an individual lot *[the developer]* documentation as described in section (2) of this rule must be submitted to the appropriate *[DNR]* Department of Natural Resources office along with a copy of a signed *[geohydrologic evaluation, the soils report and the, plat map]* application as described in section (5) of this rule. To obtain written approval for multiple-family or any development that propose the use of cluster wastewater treatment systems with subsurface soil dispersal documentation as described in section (4) of this rule must be submitted to the appropriate Department of Natural Resources office along with a copy of a signed application as described in section (5) of this rule.

[1.] **A.** *[The developer may apply for]* [a]Approval to use individual *[on-site]* **onsite wastewater treatment** systems **on individual lots for a single-family residence** in *[the]* a *[proposed]* development **can be applied for** provided that the minimum lot size is forty thousand (40,000) square feet **or greater**. For residential housing developments with lots of less than forty thousand (40,000) square feet, (0.92 acres), only a centralized **wastewater** *[sewage]* collection and treatment **system or cluster wastewater treatment system(s)** 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 collection and treatment systems.]*

(I) Construction and operating permits will be required for all point source discharging wastewater treatment systems.

(II) Construction and operating permits will be required for all wastewater treatment systems that disperse effluent into subsurface soil absorption system when the maximum daily flow of domestic wastewater generated is greater than 3,000 gallons per day.

(III) Construction and operating permits from the department will be required for cluster wastewater treatment systems subject to section 4 of this rule that disperse effluent into subsurface soil absorption fields when the accumulated flow for all of the systems serving the development under the same common promotional plan or operating location is greater than 3,000 gallons per day. Individual onsite wastewater treatment systems serving single-family residences should not be used in these calculations.

[2.]B. [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 three (3) or more lots where each lot is less than five (5) acres within a new or an expansion of an existing development utilizing individual onsite wastewater treatment, cluster wastewater treatment systems or combination thereof need to 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, lot owner, homeowners/property owners association, responsible management entity, any individual or group of individuals.**

C. All developments that propose to have three (3) or more residential housing units within a new or an expansion of an existing multiple-family units or a development that use cluster systems with subsurface soil absorption fields need to receive written approval from the department for the method of wastewater treatment prior to the sale, lease or the commencement of construction by the developer, lot owner, homeowners/property owners association, responsible management entity, or any individual or group of individuals.

(2) Subdivisions

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

[(A)]1. All *[developers]* **subdivisions or any part thereof** required to **comply [by] with** this rule shall apply for a geohydrologic evaluation pertaining to the use of **individual [on-site] onsite** wastewater treatment **systems [facilities] on individual lots** from the Department of Natural Resources, *[Division of Geology and Land Survey]***Missouri Geological 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] **Geological Survey Program**.

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

[2]3. The request for a geohydrologic evaluation shall include **the requester's and property owner's signature**, a map of the proposed development along with the legal description, total number of acres and type of **drinking** water supply being proposed.

[3]4. The criteria contained in the document entitled *Residential Housing Development Geohydrologic Groundwater Evaluation Ranking, Department of Natural Resources [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 **where** 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] **the Geological Survey Program** based on the information supplied on the request form and data on file at [GSP] **the Geological Survey Program**. **Exemption from the geohydrologic evaluation does not excuse the development, developer, lot owner, homeowners/property owners association, responsible management entity, or any individual, or group of individuals 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 **qualified** soil scientist as defined in [19 CSR 20-3.080] **701.040(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. **The minimum number of soil observation pits may be greater based upon the complexity of soils and landscapes within the proposed development.** 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, structure, consistence, coarse fragments, mottling and other pertinent features shall be submitted.]

A. Each soil profile description submitted shall include the following: describers name; date described; slope – aspect, gradient, shape and position; horizon – nomenclature, depth (thickness), boundary, matrix color, mottling - quantity, orientation and size, redoximorphic features – kind, quantity and size, texture - percentage clay and sand (if applicable), structure - type, size and grade, consistence, rock fragment – size and percentage; water table – depth and kind; drainage class; flooding - frequency and duration; ponding – frequency, depth and duration; vegetative cover; other pertinent features related to the treatment and hydraulic control of the effluent within the soils.

[1] **B.** 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] **C.** The soils reports shall contain a *[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]*.

D. The location of all soil observation pits will need to be clearly marked and labeled on the above referenced maps.

E. A general discussion describing the soil scientist’s findings and conclusions should be included.

F. The soils report must be signed and dated by the soil scientist responsible for the documentation contained within it.

[3] **2.** 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 (%)	<i>[3-</i>	0.92	1	2	3

		>30"	18-30" Limiting Layer	18-30" Bedrock	<18"
	<i>14</i> 2- 15				
	15-30	1	2	3	5
	<i>31</i> 30 +	2	3	5	>5

[4]A. 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.)] Acceptable soils will have the following properties:

[1] (I) Any structure except strong platy or massive;

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

[3] (III) No limiting layer; and

*[4] (IV) Available area and landscape position suitable for an [on-site] **individual onsite wastewater treatment** system.*

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

*[1] (I) Minimum lot size for **single-family** lagoons [is] **will not be less than** 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.*

(II) There is no reduction in lot size for the use of single-family lagoons below that determined by either the geohydrologic evaluation or soils report.

*[2] (III) **The Soils Report [must] should** show that the soils, available area and landscape position [is] **are** 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 **for the purpose of this rule.***

[(4)](C) Preliminary Plat Map.

[(A)]1. A **preliminary plat** 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, ponds, streams, [and] known or proposed easements [shall be provided] along with other site characteristics that could influence the treatment and hydrologically control of the effluent within the development shall be provided.** The number of lots, lot sizes, **nature of use** and type of **drinking** 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. Minimum lot size shall be the larger of the values calculated in the geohydrologic evaluation or the soils report. More than fifty percent (50%) may be of the smaller acreage categories in order to use the minimum sized lot based on the soils investigation but no lot size shall be less than the minimum acreage determined in the geohydrologic evaluation.

B. The individual lots should be configured in such a manner to treat and hydrologically control the effluent so there will be no violation of the Missouri Clean Water Law and its regulations.

C. Lot size(s) as calculated and described above cannot reduced by proposing a specific type of individual onsite wastewater treatment system on any lot.

D. The individual lots are to be used for single-family residences and only one is to be constructed on each lot.

E. A copy of the United States Geological Survey topographic map must be provided with the area of development clearly delineated;

F. 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 delineated.

(D) Cluster Systems

1. Unless approval is required under section (4), cluster wastewater treatment system(s) can be used within a subdivision that received written approval from the department for the method of wastewater treatment under this or previous rule without additional requirements when the following conditions are met:

A. No reduction in lot size.

B. Only one single-family residence is to be constructed on each lot.

- C. Lots are not to be subdivided or reconfigured into additional lots.**
- D. Lagoons shall not be used as a component of any cluster wastewater treatment system(s) under this section.**
- E. All cluster wastewater treatment system(s) shall use subsurface soil absorption system(s) to disperse the effluent.**
- F. The combined flows of all the cluster wastewater treatment system(s) within the development or operating location shall be less than or equal to 3,000 gallons per day.**
- G. Cluster wastewater treatment system(s) shall be operated and maintained in such a manner so there will be no violation of the Missouri Clean Water Law and regulations.**
- H. A letter of intent will be submitted to the appropriate state or local administrative authority authorized by statute, charter, or other form of enabling authority to issue permit(s) for the authorization to construct a specific domestic wastewater treatment system(s) prior to construction of the cluster system and contain the following information;**
 - (I) Name of development,**
 - (II) Lot numbers or physical address to be serviced by the cluster systems(s),**
 - (III) Statement of ownership and responsible management entity if different from the owner. For the purpose of compliance with this rule the owner is defined as the individual(s) or entity responsible for the continued operation and maintenance activities required to ensure the dependable function and financial responsibility of the cluster wastewater treatment system(s).**

[(5)] **(3) Recreational Development.**

(A) A development is considered recreational when land is sold or leased **as part of the same common promotional plan or operating location** for the purpose of camping in recreational **camping vehicles, camping trailers or primitive tent camping on camping sites for a specific term.** For the purpose of this rule, *[(1)]* in order to be considered a recreational development, restrictive covenants must prohibit continuous year round living on the lot(s) **or camping site(s)** and no cabins or other structures will be allowed that could be used for year round residential purposes.

1. For the purpose of this rule continuous year round living is when an developer, individual lot owner, homeowners/property owners association, responsible

management entity, etc. or any individual or group of individuals with their permission occupies the same residence (recreational vehicle camping site) within a development for more than two hundred and ten (210) days within any one calendar year. The occupancy does not need to be continuous, but the days are totaled together to determine whether occupancy exceeds two hundred and ten (210) days.

[1.] **2.** The minimum lot size for a recreational development that will use **an individual [on-site] onsite wastewater treatment system on an individual lot [facilities is twenty thousand (20,000) square feet] for an individual camping vehicle, trailer or tent will be the same as evaluated and 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.] **3.** In recreational developments where sewage collection *[and treatment]* is provided by sewage dump stations, the sewage dump stations **requires written approval by the department under this rule provided the maximum daily flow of domestic wastewater received by any individual or combination of “dump station” is less than or equal to 3,000 gallons per day if not prohibited by any other state or local regulations.** *[will be considered centralized sewage collection and treatment for the purposes of compliance with this rule]*

A. Sewage dump stations will be used to collect domestic wastewater only generated by recreational camping vehicles or camping trailers,

B. The domestic wastewater collected in sewage dump stations will be pumped and hauled to a permitted facility,

C. Lagoons (earthen basins) shall not be used as a component of any dump station for the purpose of this rule,

[3] **4.** *[The developer must submit a]* A copy of the restrictive covenants **will be submitted with the application [along with any plans for sewage dump stations or centralized sewage collection and treatment systems.] and clearly prohibit continuous year round living on any lot or camp site and that no cabins or other structures will be allowed that could be used for year round residential purposes.**

(B) If cluster wastewater treatment systems are proposed with subsurface wastewater dispersal as the method of wastewater treatment on individual lots within a new recreational development, an expansion of an existing recreational development or on lots that were previously approved for single-family residences they are required to receive written approval for that method of wastewater treatment as described in Section (4) of this rule.

(C) If cluster wastewater treatment systems with subsurface wastewater dispersal are proposed as the method of wastewater treatment within a recreational development to

serve camping sites within a new or an expansion of an existing development they are required to receive written approval for that method of wastewater treatment as described in Section (4) of this rule.

[(6)](4) Multiple-Family Developments [*Housing Units*] or Cluster Wastewater Treatment Systems.

(A) Residential housing developments that propose to build multiple-family housing [*units*] **developments [*duplexes, quadplexes, etc.*] or developments that propose the use of cluster wastewater treatment systems as the method of wastewater treatment shall submit a report as described within this section [*an engineers report in accordance with 10 CSR 20-8.020 Design of Small Sewage Works*]. Each residential housing unit shall be considered equal to a single family residence for the purposes of compliance with this rule regardless of the estimated maximum gallons per day produced by each unit.**

1. For the purpose of this rule multiple-family developments include but are not limited to duplexes, condominiums, townhouses, apartments, hotels, motels, hospitals, dormitories, boarding schools, group homes, barracks, etc.

2. For the purpose of this rule cluster wastewater treatment systems serve two or more dwellings (residential housing units), but less than the entire development which include but is not limited to multiple-family developments as previously described, multiple single-family residences, multiple recreational camping sites, multiple resort cabins, etc.

3. For the purpose of this section the five acre exemption does not apply.

(B) The report shall include the following.

1. The intended use (single-family residences on individual lots, recreational camping, hotel, motel, duplex, group home, etc.).

2. If the system is to serve a recreational development, a copy of the restrictive covenants prohibiting continuous year round living. The covenants must also prohibit cabins and/or other structures from being used as year round residences.

3. Statement of ownership and responsible management entity if different from the owner. For the purpose of compliance with this rule the owner is defined as the individual(s) or entity responsible for the continued operation and maintenance activities required to ensure the dependable function and financial responsibility of the cluster wastewater treatment system(s).

4. A general description of the method of wastewater treatment.

A. The detailed facility plans for each cluster wastewater treatment system is not required as part of this report.

5. For the purpose of this rule calculations of the maximum daily flows of domestic wastewater will be determined by using the most current table(s) used by the state administrative authority authorized by statute to develop and maintain law and regulations governing onsite wastewater treatment systems with maximum daily flows of less than or equal to 3,000 gallons per day.

A. Existing facilities that were required to receive approval but had not can determine their maximum daily flows (not average) by using accurate and verifiable water use data.

6. Description of the drinking water supply and placement along with set-back distances.

7. A copy of a geohydrologic evaluation as related to the use of subsurface soil absorption system from the Geological Survey Program. The evaluation will include a review of available geologic data and may include a field evaluation conducted by the Geological Survey Program.

A. A written request for the geohydrologic evaluation will be submitted on forms provided by the department for a Liquid-Waste Treatment Facility/Site, and within forty-five (45) days the requester will be notified in writing by the department of the results.

B. The request for a geohydrologic evaluation will include the requester's and property owner's signature, a map of the proposed soil treatment area along with the legal description, the total number of acres and the type of treatment.

8. 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 soil treatment areas and is dependent upon the complexity of soils and landscapes. The soil observation pits may be supplemented by soil borings to help determine the extent of similar soil properties.

A. Each soil profile description will include the following: describers name; date described; slope – aspect, gradient, shape and position; horizon – nomenclature, depth (thickness), boundary, color, mottling - quantity, orientation and size, redoximorphic features – kind, quantity and size, texture - percentage clay and sand (if applicable), rock fragment – size and percentage, structure - type, size and grade, consistence; water table – depth and kind; drainage class; flooding - frequency and duration; ponding – frequency, depth and duration; vegetative cover; other

pertinent features related to the treatment and control of the effluent within the soils.

B. A map delineating the proposed soil treatment area(s) into the following categories: 0-2%, 2-15%, 15-30% and 30% and greater;

C. A map delineating the depth of acceptable soils within the soil treatment area(s) 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.

D. The location of all soil observation pits should be clearly marked and labeled on the above referenced maps.

E. A discussion concerning the orientation of water movement through the soils including the influence of the adjacent soils and landscapes.

F. The soils report signed and dated by the soil scientist responsible for the documentation contained within it.

9. A site map showing the extent and location of the primary and reserve soil treatment areas, including all setback distances. Also included on the map should be all soil observation pits, drinking water supply, existing and proposed easements, natural drainage ways, all known or proposed utilities, location of multiple family and/or individual residences, camping sites or lots, along other site characteristics that affect the design, installation, operation and maintenance of the treatment system(s).

A. A copy of the United States Geological Survey topographic map with the area of development clearly delineated.

B. A copy of the soil map and legend from the United States Department of Agriculture County Soil Survey with the area of development clearly delineated.

[(7)] (5) Department Review.

(A) The department shall determine if the requirements of this rule are satisfied. [Minimum lot size 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 the installation of a soil absorption system.]

(B) A written application for approval of the method of wastewater treatment must be submitted on forms provided by the department and within ninety (90) days of receipt of the completed requirements and any other documents or information required by the department, the department will approve or disapprove the method wastewater treatment 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.

(C) Any residential housing development required to obtain approval from the department, shall obtain written approval for the method of wastewater treatment 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, recreational camping site, multiple-family unit or the commencement of construction within the development by any developer(s), lot owner(s), homeowners/property owners association any individual or group of individual(s).

(D) There shall be no deviation or change that may adversely affect the geohydrologic evaluation, soils report, lot sizes, number of lots, nature of use, number of multiple-family units, maximum gallons per day (cluster system) or the proposed drinking water supply for a residential housing development following departmental approval without first securing written approval of the proposed changes from the department.

(E) Approval under this rule does not guarantee that a domestic wastewater treatment system(s) will be approved by the state or local administrative authority responsible for the permitting of the specific wastewater treatment 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, or the commencement of construction on any lot by any developer(s), o] owner(s).]

[(C) There shall be no deviation or change that may adversely affect the geohydrologic evaluation, lot sizes, number of lots, nature of use, 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)](F) Any [developer or person owning any] residential housing development [or lots] covered by this rule **that [who] has a proposal for **the method of wastewater treatment [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)](G) 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)]~~**(H)** 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)]~~**(I)** 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.

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