
 MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Forbes Lake of the Ozarks Park
Benton County
February 7, 2023

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Department of Natural Resources
573-751-9155


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www.dnr.mo.gov
www.health.mo.gov
www.epa.gov
www.nrcs.usda.gov
www.mosmallflows.org
www.momapss.org
www.nowra.org


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Objectives

- 1) History - Brief Review
- 2) 10 CSR 20-6.030 Rulemaking Status
- 3) Jurisdiction of Wastewater
- 4) Frequently Used Terms
- 5) Basics of Residential Housing Rule,
10 CSR 20-6.030
- 6) Forbes Lake of the Ozarks Park

 **Brief Review**


- Forbes Lake of the Ozark Park Started – 1983
- Land Area - 12,800 acres
- Lots – 3,460
- Method of Wastewater Treatment – Individual OWTS for the individual lots
- Reported Water Supply – Individual wells on individual lots

 **Brief Review**

- Lots Developed with Individual OWTS – ±80 or 2.3 percent (%)
- RV Park – 11 camping sites with bathhouse
- A number of individuals and/or companies that meet the definition of a developer, 10 CSR 20-6.030(1)(A) 3

 **10 CSR 20-6.030 Rulemaking**




 **Frequently Used Terms**

- Common Promotional Plan
- Developer
- Domestic Wastewater
- Individual Sewage Disposal System
- Lot

 **Frequently Used Terms**

- Operating Location
- Residence
- Residential Housing Development
- Soil Scientist
- Subdivision

 Department of Health and Senior Services /
Local Onsite Wastewater Authority

All onsite wastewater treatment (septic) systems (OWTS) that receive $\leq 3,000$ gallons per day (GPD) of *domestic wastewater* only and utilizes subsurface soil dispersal (lateral lines).

They also have jurisdiction for individual lagoons that receive *domestic wastewater* only and serve no more than a single family residence*.

*19 CSR 20-3.060(6)(D) Wastewater Stabilization Ponds (Lagoon)

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Department of Health and Senior Services /
Local Onsite Wastewater Authority

Facilities that Produce Domestic Wastewater

- Offices,
- Motels/hotels,
- RV parks,
- Establishments engaged in canning,
- Theaters,
- Restaurants,
- Small bakeries,
- Preservation of fruits & vegetables.



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Onsite Wastewater Authority Map

- State Administered Counties – Contact DHSS Onsite Sewerage Program
- Contract Counties (State Standards)
- Contract Local Public Health Agency (LPHA)
- Ordinance Counties – Contact LPHA or other Local Authority

DHSS, Onsite Wastewater Treatment Program
573-751-6095

January 2020



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Department of Natural Resources

All direct point discharge or surface irrigation,

All lagoons other than an individual lagoon regardless of flows or type of waste received,

All facilities with maximum daily flow of domestic wastewater >3,000 gpd, and

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All industrial process waste which is anything not defined as domestic wastewater such as waste from a brewery, winery, ice cream manufacturing, stormwater, slaughterhouse, etc.



MISSOURI DEPARTMENT OF NATURAL RESOURCES Calculated Gallons per Day

All new OWTS calculated using Table 2A - "Quantities of Domestic Sewage Flows" - 19 CSR 20-3.060


Single Family Dwelling – 120 gpd/bedroom,
RV Campground (with Shower House) - 100 gpd/space,
Laundromats – 580 gpd/machine,
Restaurants – 40 gpd/seat or 40 gpd/15 sq. ft. of dining area whichever is greater,
Bar (not serving food) – 20 gpd/seat,
Food Stands – 50 gpd/100 sq. ft. of food stand floor space.

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Facilities with two or more cluster systems within the same operating location, the flows are calculated together to determine jurisdiction regardless of the number of cluster systems.

Individual OWTS serving a single-family residence are not used to calculate maximum daily flows for jurisdiction.

OWTS treating process waste are not used to calculate maximum daily flows for jurisdiction.




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10 CSR 20-6.030

Sets requirements to determine the *method of wastewater treatment*.

It is NOT an approval or permit for the specific OWTS to be installed on an individual lot.




US EPA
Aerobic Septic Systems: Design and Install

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10 CSR 20-6.030

Applies to all new developments and existing developments that were required to comply with previous regulations, but had not.



St. Francois County, MO

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19 CSR 20-3.060(1)(B)

19 CSR 20-3.060(1)(B), Applicability, developers must first contact the Department of Natural Resources concerning compliance with the MCWL and its regulations before they apply for any approvals or permits under 19 CSR 20-3.060.




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10 CSR 20-6.030

New developments with seven (7) or more lots each less than five (5) acres are required to receive approval for the method of wastewater treatment, prior to the sale, lease or the commencement of construction by the developer or any person.

The Black River




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10 CSR 20-6.030

Approval is also required for any expansion of an existing RHD with three (3) or more lots each less than five (5) acres.

Prairie State Park
Barton County, MO



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10 CSR 20-6.030

Developments with lots less than 40,000 sq. ft. (0.92 acres) only a centralized wastewater collection and treatment is acceptable, 10 CSR 20-6.030(1)(D) 1. Cluster OWTS are also acceptable.



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Residential Housing Development

- 1) Request a Geohydrologic Evaluation.
- 2) Generate a Soils Report.
- 3) Produce a preliminary plat map.
- 4) Submit for approval..

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Approval


When approval is required it shall be obtained from the Department of Natural Resources prior to the sale or lease or the commencement construction on any lot by the developer or any person, 10 CSR 20-6.030(1)(D).



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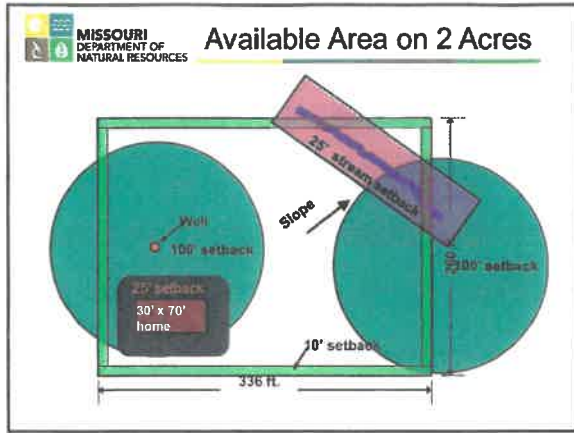
Approval

Once written approval under 10 CSR 20-6.030 is issued the DHSS or local authority will then have jurisdictional responsibility to issue the construction permit for the OWTS.



US EPA

Please note: Right-of-way may require to be noted.



MISSOURI DEPARTMENT OF NATURAL RESOURCES Forbes Lake of the Ozarks Park

Geohydrologic Evaluation

MISSOURI DEPARTMENT OF NATURAL RESOURCES Forbes at Lake of the Ozarks Park

Geohydrologic Evaluation Report Dated -
December 30, 2022

Performed by the Department's,
Missouri Geological Survey,
Environmental Assistance Unit

November 30, 2022 to December 6, 2022

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Forbes Lake of the Ozarks Park


Geologic Zone	Water Supply	Minimum Lot Size (Acres)
1	Community Public Water	3.6
1	Multiple Wells – Individual Wells with Full Length Grout	4.0
1	Individual Domestic Wells	4.8
2	Community Public Water	4.4
2	Multiple Wells – individual Wells with Full Length Grout	4.8
2	Individual Domestic Wells	5.0

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Geologic Zone	Water Supply	Minimum Lot Size (Acres)
3	Community Public Water	5.0
3	Multiple Wells – individual Wells with Full Length Grout	5.0
3	Individual Domestic Wells	5.0



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Path Forward

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To protect public health the Benton County Department of Health or the Missouri Department of Health and Senior Services' Onsite Wastewater Treatment Program (DHSS) shall maintain oversight for those existing individual OWTS within the Forbes Lake of the Ozarks Park RHD.


This should not be construed as an approval for the method of wastewater treatment on any of those lots within the Forbes Lake of the Ozarks Park RHD.

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Wastewater Alternatives

1) Approval under 10 CSR 20-6.030

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Approval under 10 CSR 20-6.030


- If a lot is within geohydrologic zone with an acceptable acreage, continue with the approval process.
- Next steps:
 - Soil Report – 10 CSR 20-6.030(3)
 - Plat – 10 CSR 20-6.030(4)
 - Submit for Approval – 10 CSR 20-6.030(7)

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Wastewater Alternatives

- 1) Approval under 10 CSR 20-6.030,
- 2) **Combine Lots**

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Combine Lots


- Combine lots into one (1), resulting in a lot that is five (5) acres or greater.
- To ensure this satisfies the exemption as contained in 10 CSR 20-6.030(1)(C) 3, the lot shall be recorded as one (1) lot - five (5) acres or greater.
- Single family residence only.

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Wastewater Alternatives

- 1) Receive approval under 10 CSR 20-6.030,
- 2) Combine Lots
- 3) Cluster System

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Cluster Systems

- Install Cluster OWTS with subsurface soil dispersal to serve two (2) or more lots but not the entire development.
- Need to satisfy 10 CSR 20-6.030(1)(C) 6, prior to the sale, lease or the commencement of construction of residences.
- Continuing Authority will also need to be established

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Wastewater Alternatives

- 1) Receive approval under 10 CSR 20-6.030,
- 2) Combine Lots
- 3) Cluster System
- 4) Centralized Collection

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Scenarios

Developer's Lots, Not Sold, That Meet Acreage or Can be Combined	Developer's Lots, That Cannot be Combined	Land Owner Lot, Not developed, Meet Acreage or Can Be Combined	Land Owner Lot, Not developed, That Cannot be Combined	Existing Lot(s), Developed with OWTS
Approval under 10 CSR 20-6.030	Cluster System	Approval under 10 CSR 20-6.030	Cluster System	Local Public Health Agency Or DHSS
Combine Lots	Centralized Collection	Combine Lots	Centralized Collection	

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Thank You