



Arkansas Department of Health

Engineering Section

PLAN REVIEW POLICY CONCERNING THE USE OF DRIP DISPERSAL FOR WASTEWATER TREATMENT AND DISPOSAL FOR COMMUNITY AND LARGE INDIVIDUAL SYSTEMS

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I. INTRODUCTION

The Arkansas Department of Health (ADH) regulates wastewater collection, treatment plants and disposal methods through the ADH's plan review and approval process under the "Rules and Regulations Pertaining to General Sanitation". The ADH has long recognized the public health importance of minimizing human exposure concerning wastewater and treated wastewater.

A significant part of the ADH review process has been ensuring that the location, design, installation and operation of proposed wastewater treatment plants and disposal methods provide public health protection.

II. DRIP DISPERSAL SYSTEMS

A drip dispersal system is a technology for the distribution of treated wastewater uniformly over a large area beneath the soil surface.

Drip dispersal systems proposed to individual facilities with design capacities of greater than 5,000- gallons per day and all systems proposed to serve a community with two or more connections from different properties or are typically considered engineered systems and this policy is to address the design, installation and operation requirements of these systems. These systems require engineering plans and specifications be submitted to the ADH Engineering Section for review and written approval issued prior to the start of construction. The plans shall include appropriate design details, hydraulic analysis and operation plan and a certified report of the soils evaluation prepared by a Professional Soil Classifier.

These drip dispersal systems shall meet the general design and operation requirements of Section 2 through Section 21 of the ADH "Rules and Regulations Pertaining to Drip Dispersal Systems". The aforementioned regulations are a part of ACT 96 of 1913 and ACT 402 of 1977 regarding onsite wastewater systems.

The total hydraulic loading for the proposed system shall be based on the applicable facilities to be served in Appendix A of the ADH "Rules and Regulations Pertaining to Drip Dispersal Systems". For systems serving multiple Residences, the hydraulic design loading from "Recommended Standard for Wastewater Facilities" (Ten States Standards) is typically used for these Residences upon concurrence from the ADH Engineering Section. ADH may also consider the use of daily flow records from similar facilities for determining system size, any use of said records is at the sole discretion of the Arkansas Department of Health.

III. REQUIREMENTS OF THE DISPERSAL FIELD

Proposed drip dispersal field locations shall meet the requirements of Sections 3 - 4, and 7 - 20 of the ADH "Rules and Regulations Pertaining to Drip Dispersal Systems". The certified soil report as prepared by a Professional Soil Classifier shall include a letter of concurrence from an ADH senior soil program specialist who was onsite during the time of the soil evaluation.

The proposed dispersal site (primary and secondary) shall have soil pits evaluated on a grid of no less than 100-feet between pits.

The proposed wastewater design loading rate shall be based on either the lowest soil pit application rate or designed to vary by zones within the dispersal area based on the application rates of the nearest soil pits to each zone.

The drip dispersal site shall provide for a 100% secondary area based on soil loading rates to apply the design hydraulic capacity of the treatment system.

Installation of the drip dispersal field tubing, emitters and appurtenances used in these systems shall be by a licensed contractor experienced in drip dispersal system installation or has completed an approved training course. Installation of individual drip dispersal system shall be by a contractor holding a valid individual septic system installer license issued by the Department.

The ADH senior program specialist shall be notified prior to the installation of the proposed installation time to allow for inspection of the installation process.

IV. PRETREATMENT REQUIREMENTS

Drip dispersal systems require adequate pretreatment of the wastewater prior to the application of the wastewater to the disposal field. The pretreatment facilities must meet the requirements of Sections 5 and 6 of the ADH "Rules and Regulations Pertaining to Drip Dispersal Systems".

V. PRETREATMENT AND SUBSURFACE DISPOSAL FIELD SETBACKS

The treatment facilities and subsurface disposal field shall meet the ADH Engineering Section "Plan Review Policy Concerning Wastewater Treatment Plants and Required Buffer Areas and Setback Distances".

VI. INSTALLATION AND START-UP REQUIREMENTS

Prior to installing the drip dispersal tubing, contact the ADH Engineering Section a minimum of 10 days prior to the start of the installation.

Prior to connecting any sewer service to the drip dispersal system, the owner/operator shall contact the ADH Engineering Section to arrange for a start-up inspection and demonstration test to verify the as-built construction of the system and demonstrate the system is able to operate properly as designed and approved.

No permanent water service connection shall be made to any residence or facility proposed to be served by the drip dispersal system without written approval from the ADH Engineering Section after the start-up inspection. Temporary water service meters may be utilized to provide water for construction and testing related activities.

Permits may also be required by the Department of Environmental Quality, Water Division – No-Discharge Permits Section under the Arkansas Pollution Control and Ecology Commission Regulation #17. If applicable, these permits shall be obtained prior to the ADH start-up inspection.

VII. OPERATIONS

Drip dispersal systems require regular operation and maintenance to ensure their operation continues to meet the design conditions and permit requirements and prevent the surfacing or unpermitted discharge of wastewater (treated or untreated).

All operations personnel shall be trained and certified per Section 21 of the ADH “Rules and Regulations Pertaining to Drip Dispersal Systems”.

Wastewater treatment operators may also require a license by the Arkansas Department of Environmental Quality.