# R317. Environmental Quality, Water Quality.

# R317-5. Large Underground Wastewater Disposal (LUWD) Systems.

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**Authorizing, and Implemented or Interpreted Law: 19-5**

**KEY: water pollution, large underground wastewater, sewerage, engineering**

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# R317-5-1. AUTHORITY, PURPOSE, SCOPE, JURISDICTION, WAIVER APPROVAL AND ADMINISTRATIVE REQUIREMENTS.

**1.1 AUTHORITY.**

Construction and operating permits and approvals are issued pursuant to the provisions of Utah Water Quality Act Sections 19- 5-104, 19-5-106, 19-5-107 and 19-5-108. Violation of these permits or approvals including compliance with the conditions thereof, or beginning construction, or modification without the director's approval, is subject to the penalties provided in Section 19-5-115.

**1.2 PURPOSE.**

A. The purpose of this rule is to protect the public health and the environment from potential adverse effects from large underground wastewater disposal systems within the boundaries of Utah.

B. This rule incorporates specific provisions contained in Rule R317-4 that are referenced herein, and pertinent to large underground wastewater disposal (LUWD) systems for the purpose of providing minimum design standards. Where the engineered design includes information supporting a deviation from the minimum requirements within this rule or referenced to in Rule R317-4, then the engineer may request a waiver. This rule also establishes the administrative requirements for obtaining from the division a LUWD system:

1. approval-in-concept;
2. construction permit;
3. authorization to use; and
4. operating permit

**1.3 SCOPE.**

This rule applies to large underground wastewater disposal systems designed to handle more than 5,000 gallons per day of domestic wastewater, or wastewater that originates in multiple units under separate ownership (except condominiums), or any other underground wastewater disposal system not covered under the definition of an onsite wastewater system per Rule R317-4.

A. The engineer shall use recognized practice standards for wastewater treatment to increase long term performance and lessen potential impacts to public health and the environment. Depending on site-specific characteristics, the division may require a LUWD system to pretreat effluent prior to disposal in the absorption system. In general, systems with high waste strength or flows over 15,000 gpd should consider pretreatment. Factors that should be evaluated include, but are not limited to, the following:

1. design flow (gpd)
2. highly variable flows, including seasonal fluctuations;
3. wastewater strength characteristics;
4. site characteristics.
5. proximity to ground water table, considering various soil types and separation distance;
6. ground water classification;
7. proximity to nearby drinking water sources, or location within a drinking water source protection zone; and
8. anticipated system life expectancy.

**1.4 JURISDICTION.**

Large underground wastewater disposal systems are under the jurisdiction of the Division of Water Quality. Local Health Departments may petition the division to require local review for compliance with local requirements prior to the division initiating its review.

**1.5 WAIVER.**

The director may grant a waiver from the minimum requirements stated in this rule, subject to site-specific consideration and justification, but not overriding the safeguarding of public health, protection of water quality or engineering practice. The intent of the waiver is to allow the engineer to utilize site specific information, recognized practice standards, or other acceptable justification while designing an appropriate LUWD system for the property. The engineer is encouraged to discuss waivers with the division staff prior to formal application for feasibility determination review.

# R317-5-2. DEFINITIONS.

**2.1. SCOPE**

Definitions found in Rules R317-1 and R317-4 apply to large underground wastewater disposal systems except where specifically replaced by the following definitions:

"Alternative system" means a LUWD system that is not a conventional system.

"Building sewer" means the pipe that carries wastewater from the building to a public sewer, a LUWD system, or other point of dispersal. It sometimes is synonymous with "house sewer".

"Conventional system" means a LUWD system typically consisting of a building sewer, septic tank, and an absorption system utilizing absorption trenches, absorption beds, or deep wall trenches.

"Curtain drain" means any ground water interceptor or drainage system that is backfilled with gravel or other suitable material and is intended to interrupt or divert the course of shallow ground water or surface water away from the LUWD system.

"Malfunctioning or failing system" means a LUWD system that is not functioning in compliance with the requirements of this rule and may include:

1. absorption systems that seep or flow to the surface of the ground or into waters of the state;
2. systems that overflow from any of their components;
3. systems that cause backflow into any portion of a building drainage system;
4. systems discharging effluent that does not comply with applicable effluent discharge standards of its operating permit;
5. leaking septic tanks; or
6. noncompliance with standards stipulated in or by the construction permit, operating permit, or both.

"Maximum ground water table" means the highest elevation that the top of the "ground water table" or "ground water table, perched" is expected to reach for any reason over the full operating life of a LUWD system at that site.

"Mound system" means an alternative LUWD system where the bottom of the absorption system is placed above the elevation of the original site, and the absorption system is contained in a mounded fill body above that grade.

"Packed bed media system" means an alternative LUWD system that uses natural or synthetic media to treat wastewater. Biological treatment is facilitated via microbial growth on the surface of the media. The system may include a pump tank, a recirculation tank, or both.

"Public health hazard" means, for the purpose of this rule, a condition whereby there are sufficient types and amounts of biological, chemical, or physical agents relating to water or sewage that are likely to cause human illness, disorders or disability. These may include pathogenic viruses and bacteria, parasites, toxic chemicals and radioactive isotopes. A malfunctioning LUWD system constitutes a public health hazard.

"Sand lined trench system" means an alternative LUWD system consisting of a series of narrow excavated trenches utilizing sand media and pressure distribution.

"Unapproved LUWD system" means any LUWD system that is deemed by the division to be any of the following:

1. installation without the required division oversight, permits, or inspections;
2. repairs to an existing system without the required division oversight, permits, or inspections; or

3. alteration to an existing system without the required division oversight, permits, or inspections.

"Waiver" means an acceptable deviation from the requirements established within this rule or referenced rules. The waiver must be acceptable to division staff based on the engineer providing adequate design justification to demonstrate that the deviation proposed will not override the safeguarding of public health, the protection of water quality, or the protection of the receiving environment. Waiver requests should be based on acceptable engineering practice and standards.

## R317-5-3. General Standards, Prohibitions, Requirements, and Enforcement.

### 3.1. Failure to Comply With Rules.
Any person failing to comply with this rule shall be subject to enforcement action as specified in Sections 19-5-115 and 26A-1- 123.

### 3.2. Feasibility.
LUWD systems are not feasible in some areas and situations. If property characteristics indicate conditions that may fail in any way to meet the requirements specified herein, the use of a LUWD system shall be prohibited.

### 3.3. Prohibited Flows.
No ground water drainage, drainage from roofs, roads, yards, or other similar sources shall discharge into any portion of a LUWD system, but shall be disposed of so they will in no way affect the system. Non-domestic wastes such as chemicals, paints, or other substances that are detrimental to the proper functioning of a LUWD system may not be disposed of in such systems.

### 3.4. Increased Flows Prohibited.
Wastewater flow may not exceed the design flow of a LUWD system.

### 3.5. Property Lines Crossed.
Privately owned LUWD systems, including replacement areas, shall be located on the same lot as the building served unless, when approved by the division, a perpetual utility easement and right-of-way is established and recorded on an adjacent or nearby lot for the construction, operation, and continued maintenance, repair, alteration, inspection, relocation, and replacement of a LUWD system, including all rights to ingress and egress necessary or convenient for the full or complete use, occupation, and enjoyment of the granted easement. The easement shall be large enough to accommodate the proposed LUWD system and replacement area. The easement shall meet the setbacks specified in Section R317-4-13 Table 2.

### 3.6. Initial Absorption Area and Replacement Area.
A. All properties that utilize LUWD systems shall be required to have a replacement area.
B. The absorption area, including installed system and replacement area, may not be subject to activity that is likely to adversely affect the soil or the functioning of the system. This may include vehicular traffic, covering the area with asphalt, concrete, or structures, filling, cutting or other soil modifications.

### 3.7. Operation and Maintenance.
Owners of a LUWD systems shall operate, maintain, and service their systems according to the standards of this rule.

### 3.8. No Discharge to Surface Waters or Ground Surface.
Effluent from any LUWD system may not be discharged to surface waters or upon the surface of the ground. Wastewater may not be discharged into any abandoned or unused well, or into any crevice, sinkhole, or similar opening, either natural or artificial.

### 3.9. Repair of a Malfunctioning or Unapproved System.
Upon determination by the regulatory authority that a malfunctioning or unapproved LUWD wastewater system creates or contributes to any dangerous or unsanitary condition that may involve a public health hazard, or noncompliance with this rule, the regulatory authority shall order the owner to take the necessary action to cause the condition to be corrected, eliminated or otherwise come into compliance.

A. For malfunctioning systems, the regulatory authority shall require and order:
    1. all necessary steps, such as maintenance, servicing, repairs, and replacement of system components to correct the malfunctioning system, to meet all rule

requirements to the extent possible and may not create any new risk to the environment or public health;
2. effluent quality testing as required by Subsection R317- 5-9.2.D;
3. evaluation of the system design including non-approved changes to the system, the wastewater flow, and biological and chemical loading to the system;
4. additional tests or samples to troubleshoot the system malfunction.

**3.10. PROCEDURE FOR WASTEWATER SYSTEM ABANDONMENT.**

Whenever the use of a LUWD system has been abandoned or discontinued, the owner of the real property on which such wastewater system is located shall render it safe by having the septic tank, any other tanks, hollow seepage pit, or cesspool wastes pumped out or otherwise disposed of in an approved manner. Within 30 days the tanks shall be:

A. crushed in place and the void filled;
B. completely filled with earth, sand, or gravel; or
C. removed and backfilled.

**3.11. SEPTAGE MANAGEMENT.**

A person shall only dispose of septage, or sewage contaminated materials in a location or manner in accordance with the requirements of the division and any local agencies having jurisdiction.

**3.12. MULTIPLE UNITS UNDER SEPARATE OWNERSHIP (EXCEPT CONDOMINIUMS).**

The common components of the LUWD system, including the reserve absorption area, shall be under the sponsorship of a body politic.

A. The subsurface absorption system shall be designed and constructed to provide duplicate capacity, meaning two independent systems. Each system shall be designed to accommodate the total anticipated maximum daily flow. The duplicate system shall be designed with appropriate valving, etc., to allow for periodic alternation of the use of each system.
B. Sufficient land area with suitable characteristics shall be planned and available to provide for a third absorption system capable of handling the total maximum daily wastewater flow. This area shall be kept free of permanent structures, traffic or soil modification.

**3.13. UNDERGROUND INJECTION CONTROL.**

Large underground wastewater disposal (LUWD) systems with design flow rates of 5,000 gallons per day or more are co- regulated by the Utah 1422 Underground Injection Control (UIC) Program in Rule R317-7. LUWD systems are authorized-by-rule under the UIC program provided they remain in compliance with the construction and operating permits issued according to Rule R317-

A. However, if any noncompliance with these permits results in the potential for or demonstration of actual exceedance of any Utah Maximum Contaminant Levels (MCLs) in a receiving ground water, the noncompliance may also be a violation of the Utah UIC administrative rules and therefore be subject to enforcement action. Owners and operators of a large underground wastewater disposal system are required to submit UIC inventory information according to Subsection R317-7-6.4(C) using the approved form for a LUWD system.

## R317-5-4. Feasibility Determination and Approval-in-Concept.

### 4.1. General Criteria for Determining LUWD System Feasibility.

The division shall determine the feasibility of using a LUWD system. Upon favorable determination for feasibility an approval- in-concept will be granted by the division.

A. General Information. The required information shall include:
   1. situs address if available;
   2. name and address of the property owner and person requesting feasibility;
   3. the location, type, and depth of all existing and proposed private and public drinking water wells, and other water supply sources within 1500 feet of the proposed LUWD system;
   4. the location of all drinking water source protection zones delineated on the project site;
   5. the location of all existing creeks, drainages, irrigation ditches, canals, and other surface and subsurface water conveyances within 1500 feet of the proposed LUWD system;
   6. the location and distance to nearest sewer, owner of sewer, whether property is located within service boundary, and size of sewer; and
   7. statement of proposed use if other than a single-family dwelling.

B. If the proposed LUWD system is located in aquifer recharge areas or areas of other particular geologic concern, the division may require such additional information relative to ground water movement, or possible subsurface wastewater flow.

C. Soil and Site Evaluation.
   1. Soil Exploration Pit and Percolation Test.
      a. A minimum of five soil exploration pits shall be excavated to allow the evaluation of the soils. The soil exploration pits shall be constructed and soil logs recorded as detailed in Section R317-4-14 Appendix C.
      b. The division may require percolation tests in addition to the soil exploration pits.
      c. The division may require additional pits, tests, or both where:
         i. soil structure varies;
         ii. limiting geologic conditions are encountered; or
         iii. the division deems it necessary.
      b. The percolation test shall be conducted as detailed in Section R317-4-14 Appendix D.
      c. Soil exploration pits and percolation tests shall be conducted as closely as possible to the proposed absorption system site. The division shall have the option of inspecting the open soil exploration pits and monitoring the percolation test procedure. All soil logs and percolation test results shall be submitted to the division.
      d. When there is a substantial discrepancy between the percolation rate and the soil classification, it shall be resolved through additional soil exploration pits, percolation tests, or both.
      e. Absorption system feasibility and sizing shall be based on Section R317-4-13 Table 5 or 6.

   2. Wind-Blown Sand.
      The extremely fine grained wind-blown sand found in some parts of Utah shall be deemed not feasible for LUWD systems unless pretreatment is provided, as percolation test results in wind- blown sand will generally be rapid, but experience has shown that this soil has a tendency to become sealed with minute organic

particles within a short period of time.

3. Suitable Soil Depth.
   For conventional systems, effective suitable soil depth shall extend at least 48 inches or more below the bottom of the dispersal system to bedrock formations, impervious strata, or excessively permeable soil. Some alternative LUWD systems may have other requirements.

4. Ground Water Requirements.
   The elevation of the anticipated maximum ground water table shall meet the separation requirements of the anticipated absorption systems.
   a. Maximum Ground Water.
      Maximum ground water table shall be determined where the anticipated maximum ground water table, including irrigation induced water table, might be expected to rise closer than 48 inches to the elevation of the bottom of a LUWD system. Maximum ground water table shall be determined where alternative LUWD wastewater systems may be considered based on groundwater elevations. The maximum ground water table shall be determined by the following.
      i. Regular monitoring of the ground water table, or ground water table, perched, in an observation well for a period of one year, or for the period of the maximum groundwater table.
         (1) Previous ground water records and climatological or other information may be consulted for each site proposed for a LUWDS system and may be used to adjust the observed maximum ground water table elevation.
      ii. Direct visual observation of the maximum ground water table in a soil exploration pit for:
         (1) evidence of crystals of salt left by the maximum ground water table; or
         (2) chemically reduced iron in the soil, reflected by redoximorphoric features i.e., a mottled coloring.
         (3) Previous ground water records and climatological or other information may be consulted for each site proposed for a LUWD system and may be used to adjust the observed maximum ground water table elevation in determining the anticipated maximum ground water table elevation.
      iii. In cases where the anticipated maximum ground water table is expected to rise to closer than 34 inches from the original ground surface and an alternative LUWD system would be considered, previous ground water records and climatological or other information shall be used to adjust the observed maximum ground water table in determining the anticipated maximum ground water table.
   b. Curtain Drains.
      A curtain drain or other effective ground water interceptor may be allowed as an attempt to lower the groundwater table to meet the requirements of this rule. The division shall require that the effectiveness of such devices in lowering the ground water table be demonstrated during the season of maximum ground water table.

5. Ground Slope.

Absorption systems may not be placed on slopes where the addition of fluids is judged to create an unstable slope.

a. Absorption systems may be placed on slopes between 0% and 25%, inclusive.
b. Absorption systems may be placed on slopes greater than 25% but not exceeding 35% if:
    i. all other requirements of this rule can be met;
    ii. effluent from the proposed system will not contaminate ground water or surface water, and will not surface or move off site before it is adequately treated to protect public health and the environment;
    iii. no slope will fail, and there will be no other landslide or structural failure if the system is constructed and operated adequately, even if all properties in the vicinity are developed with a LUWD system; and
    iv. a report is submitted by a professional engineer or professional geologist that is licensed to practice in Utah. The report shall be imprinted with the engineer's or geologist's registration seal and signature and shall include the following.
        (1) Predictions and supporting information of ground water transport from the proposed system and of expected areas of ground water mounding.
        (2) A slope stability analysis that shall include information about the geology of the site and surrounding area, soil exploration and testing, and the effects of adding effluent.
        (3) The cumulative effect on slope stability of added effluent if all properties in the vicinity were developed with LUWD systems.
c. Absorption systems may not be placed on slopes greater than 35%.

6. Other Factors Affecting a LUWD System Feasibility.
    a. The locations of all rivers, streams, creeks, dry or ephemeral washes, lakes, canals, marshes, subsurface drains, natural storm water drains, lagoons, artificial impoundments, either existing or proposed, that will affect building sites, shall be provided.
    b. Areas proposed for LUWD wastewater systems shall comply with the setbacks in Section R317-4-13 Table 2.
    c. If any part of a property lies within or abuts a flood plain area, the flood plain shall be shown within a contour line and shall be clearly labeled on the plan with the words "flood plain area".

7. Unsuitable.
    Where soil and other site conditions are clearly unsuitable for the placement of a LUWD system, there is no need for conducting soil exploration pits or percolation tests.

## R317-5-5. Engineering Reports, Plans and Construction Permits.

All engineering reports, plans and specifications shall be prepared by a registered professional engineer licensed to practice in the State of Utah and certified Level 3 in accordance with Rule R317-11.

**5.1. Engineering Report.**

An engineering report shall be submitted which shall contain design criteria along with all other information necessary to clearly describe the proposed project and demonstrate project feasibility as described in feasibility determination and approval-in-concept of Section R317-5-4.

**5.2. Plan Review.**

Submission of plans for review. Plans for new, alterations, repairs and replacements of large underground wastewater disposal systems shall be submitted to the division for review as required by Rule R317-1 and include the following:

A. Local Health Departments Requirements.
It is the applicant's responsibility to ensure that a LUWD System application to the division is in compliance with local health department requirements regarding the location, design, construction and maintenance of a LUWD system prior to the applicant submitting a request for a construction permit to the division. Where the petition has been approved by the director, the applicant is required to submit documentation that the local health department has approved the proposed LUWD system before a construction permit may be issued.

B. Information Required.
Plans submitted for review shall be drawn to scale, 1" = 10', 20' or 30', or other scale as approved by the division. Plans shall be prepared in such a manner that the contractor can read and follow them in order to install the system properly. Depending on the individual site and circumstances, or as determined by the division, some or all of the following information may be required.

1. Applicant Information.
    a. The name, current address, and telephone number of the applicant.
    b. Complete address, legal description of the property, or both to be served by this LUWD system.
2. LUWD System Site Plan.
    a. Submittal date of plan.
    b. North arrow.
    c. Lot size and dimensions.
    d. Legal description of property.
    e. Ground surface contours, preferably at 2 foot intervals, of both the original and proposed final grades of the property, or relative elevations using an established bench mark.
    f. Location and explanation of type of dwelling(s) or structure(s) to be served by a LUWD system.
    g. Location and dimensions of paved and unpaved driveways, roadways and parking areas.
    h. Location and dimensions of the essential components of the wastewater system including the replacement area for the absorption system.
    i. Location of all soil exploration pits and all percolation test holes.
    j. Location of building sewer and water service line to serve the building.
    k. Location of sewer mains, manholes, clean-outs, and other appurtenances.
    l. Location of easements or drainage right-of-ways affecting the property.
    m. Location of all intermittent or year-round streams, ditches, watercourses,

ponds, subsurface drains, etc. within 100 feet of proposed LUWD system.

n. The location, type, and depth of all existing and proposed water supply sources
o. Delineation of all drinking water source protection zones located on the project site.
p. Distance to nearest public water main and size of main.
q. Distance to nearest public sewer, size of sewer, and whether accessible by gravity.

3. Statement with Site Plan.
   Statement indicating the source of culinary water supply, whether a well, spring, non-public or public system, its location and distances from all LUWD systems.
4. Soil Evaluation.
   a. Soil Logs, Percolation Test Certificates, or both.
   b. Statement with supporting evidence indicating the maximum anticipated ground water table and the flooding potential for LUWD system sites.
5. Relative Elevations.
   Show relative elevations of the following, using an established bench mark.
   a. Building drain outlet.
   b. The inlet and outlet inverts of any septic tanks.
   c. Septic tank access cover, including height and diameter of riser, if used.
   d. Pump tank inlet, if used, including height and diameter of riser.
   e. The outlet invert of the distribution box, if provided, and the ends or corners of each distribution pipe lateral in the absorption system.
   f. The final ground surface over the absorption system.
6. System Design.
   Details for said site, plans, and specifications are listed in Design in Section R317-4-6.
   a. Schedule or grade, material, diameter, and minimum slope of building sewer and effluent sewer.
   b. Septic tank and pump tank capacity, design, cross sections, etc., materials, and dimensions. If tank is commercially manufactured, state the name and address of manufacturer.
   c. Absorption system details, including the following:
      i. details of drop boxes or distribution boxes, if provided;
      ii. schedule or grade, material, and diameter of distribution pipes;
      iii. length, slope, and spacing of each absorption system component;
      iv. maximum slope across ground surface of absorption system
      v. area;
      vi. distance of absorption system from trees, cut banks,
      vii. fills, or subsurface drains; and cross section of absorption system showing the:
         (1) depth and width of absorption system excavation;
         (2) depth of distribution pipe;
         (3) depth of filter material;
         (4) barrier material, i.e., synthetic filter fabric, straw, etc., used to separate filter material from cover; and
         (5) depth of cover.
   d. Pump, if provided, details as referenced in Section R317- 4-14 Appendix B.
   e. If an alternative LUWD system is designed, include all pertinent information to allow plan review and permitting for compliance with this rule.

C. Plans Submitted.

1. All applicants requesting plan approval for a LUWD shall submit two copies of the above required information to enable the division to retain one copy as a permanent record.
2. Applications may be rejected if proper information is not submitted.

**5.3. CONSTRUCTION PERMIT REQUIRED.**

No person shall make or construct any device for treatment or discharge of wastewater without first receiving a permit to do so from the director.

# R317-5-6. Design Requirements.

## 6.1. Exceptions

Designs shall meet the requirements of Section R317-4-6, with these exceptions:

A. When a LUWD serves multiple single family dwellings the wastewater flow shall be estimated at 400 gpd per dwelling.

B. Minimum separation distance from the bottom of the absorption trenches to the anticipated maximum ground water table is 48 inches. If a mound, sand lined trench, or packed bed pretreatment unit is designed and installed on the LUWD system, the horizontal separation distance may be reduced to 24 inches.

## 6.2. Components Required in a LUWD System:

A. A septic tank;

B. An effluent filter;

C. A pressurized subsurface disposal system.

1. This may be an absorption field, deep wall trenches, absorption beds, or, for packed bed media applications, drip irrigation dispersal, depending on location, topography, soil conditions and maximum ground water level.
2. Pressurized systems require cleanouts at the end of pressurized laterals and typically require a dosing chamber or dosing tank.
3. The Utah Guidance for Performance, Application, Design, Operation and Maintenance: Pressure Distribution Systems document shall be used for design requirements, along with the following:
    a. Dosing pumps, controls and alarms shall comply with Section R317-4-14 Appendix B.
    b. Pressure distribution piping.
        i. All pressure transport, manifold, lateral piping, and fittings shall meet PVC Schedule 40 standards or equivalent.
        ii. The ends of lateral piping shall be constructed with sweep elbows or an equivalent method to bring the end of the pipe to the final grade. The ends of the pipe shall be provided with threaded plugs, caps, or other devices acceptable to the division to allow for access and flushing of the lateral.

D. Accessibility components to insure proper maintenance and servicing. These include that all tanks shall have access risers to the surface of the ground; and absorption field inspection ports.

E. Additional components may also be required depending on the waste stream characteristics and the need to provide adequate protection to groundwater. These components may include pretreatment devices such as grease traps, or may involve secondary treatment using packed bed media systems.

## R317-5-7. CONSTRUCTION AND INSTALLATION.

Shall meet the requirements of Section R317-4-7.

## R317-5-8. Final Inspection and Authorization to Use.

### 8.1. Final inspection.

Upon completion of construction, but before backfilling, the system designer must notify the division of completion and schedule a final inspection with the division. Where the local health department has the authority to issue operating permits they shall be included in the final inspection. The final inspection shall meet the requirements of Section R317-4-8. No wastewater may be introduced into a LUWD system until an authorization to use has been issued by the division.

### 8.2. Authorization to Use

The following documents, sealed by the engineer, must be provided to the division in order to receive authorization to use:

A. Written certification that the system was installed in accordance with the construction permit and any approved change orders.
B. Two record drawings of the completed system.
C. Two Operation and Maintenance Manuals. Manuals must include details of:
    1. individuals of contact for the installed system;
    2. list of all key components of the system;
    3. maintenance and service instructions of each component;
    4. schedule of maintenance inspections and servicing.
D. Written recommendation to the owner to place the facilities into service, pending issuance of the authorization to use by the division.

# R317-5-9. Operation and Maintenance.

## 9.1. Owner Maintenance

Operation and maintenance shall be provided by the owner to ensure the disposal system is functioning properly at all times.

## 9.2. Owner responsibility

The owner is responsible for maintaining a LUWD system and for performing periodic inspections, servicing and monitoring of its system as detailed in the issued operating permit, including the following:

A. Any new system installed after April 2009 must have a written operation and maintenance manual document describing the treatment and disposal system and outlining routine maintenance procedures, including checklists and maintenance logs needed for proper operation of the system.
B. Each LUWD Conventional System shall be assessed after the first year of operation and annually thereafter.
C. Each LUWD Pressure Distribution System shall be inspected as outlined in Section R317-4-23 Tables 7.1 and 7.2.
D. LUWD Alternative Systems.
    1. Each alternative system shall be inspected as outlined in Section R317-4-13 Tables 7.1 and 7.2.
    2. Each packed bed media system shall be sampled a minimum of every six months as outlined in Section R317-4-13 Table 7.3.
        a. The grab sample shall be taken before discharge to an absorption system.
        b. Effluent not meeting the standards of Section R317-4-13 Table 7.3, shall be followed with two successive weekly tests of the same type within a 30 day period from the first exceedance.
    3. If two successive samples exceed the minimum standards, the system shall be deemed to be malfunctioning, and shall require further evaluation and a corrective action plan, see Subsection R317-5-3.9.

## R317-5-10. Operating Permits and Annual Inspection Reports.

### 10.1. Operating Permit required.

An operating permit is required for all LUWD systems to monitor that proper operation and maintenance is occurring for the protection of the environment and public health. The operating permit shall be issued by the director or, by delegated authority, the local health department having jurisdiction, and shall be effective for a period not to exceed 5 years from the date of issuance.

### 10.2. Local Health Department Authority to Issue Operating Permits.

Local health departments may request delegated authority to administer the operating permit program. The request must include an agreement to implement and enforce inspection, servicing, monitoring, and reporting requirements of this rule. The local health department must submit an annual report on or before September 1 of each calendar year, to the division containing:

A. A list of LUWD systems under delegation.
B. A summary listing the compliance status of each system, showing those systems that are currently failing, and those systems that have been repaired.
C. A summary of any enforcement actions taken, identifying those actions that are still pending, and those that been resolved.

### 10.3. Annual Inspection Report.

The owner of a LUWD system shall summit an annual inspection report covering the period of July 1 to June 30, the "reporting year", to the permitting agency no later than August 1 of each year. In this report, the owner shall report on all requirements listed in the operating permit. As a minimum, the report shall include the following items:

A. Facility name and address; owner name, address, and phone number;
B. List of facility components, e.g., septic tank, pump tank, gravel drainfield trench, gravelless chambers, pressure drainfield, etc.;
C. Design flow in gallons per day and number and type of connections;
D. Type of waste treated and disposed, i.e., residential, restaurant, other commercial establishment, etc.;
E. Checklist of inspections performed including the date of the inspection and a list of findings. The report must include, where pertinent:
    1. measured sludge and scum levels;
    2. date tanks were last pumped;
    3. verify pumps, floats; and control panel are operating as designed;
    4. date pump filter last cleaned;
    5. date pressure laterals last cleaned and flushed and squirt height recorded;
    6. any surfacing in absorption field; and
    7. any observed or suspected system malfunction;
F. Packed Bed media system sampling results, where pertinent;
G. Name of the certified individual per Rule R317-11 conducting the inspection;
H. Signature of owner or certified operator, and date.