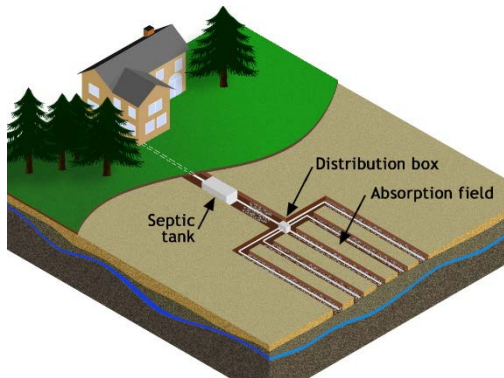


# ONSITE WASTEWATER TREATMENT SYSTEM PERMIT PROCESS

## APPLICATION GUIDE FOR PROPERTY OWNERS AND GENERAL CONTRACTORS

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**WHAT IS AN ONSITE WASTEWATER TREATMENT SYSTEM?** Onsite wastewater treatment systems (OWTS) are used to treat wastewater from a home or business and return treated wastewater back into the receiving environment. They are typically referred to as septic systems, because most involve a septic tank for partial treatment. Correctly designed, installed, and maintained, onsite systems can effectively treat domestic wastewater and disperse it into the environment, thereby protecting from ground or surface water contamination.



- Routt County has adopted [State Regulation 43](#) with local options to regulate OWTS.
- This document is only meant to provide guidance and does not supersede [Routt County On-Site Wastewater Treatment System Regulations](#).
- No excavation for the installation of an Onsite Wastewater Treatment System shall be started without a septic/OWTS permit issued by the Routt County Department of Environmental Health (RCDEH).

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### *STEPS FOR APPLYING FOR A SEPTIC PERMIT IN ROUTT COUNTY, CO:*

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1. **MEETING ZONING CRITERIA:** A parcel must be at least 5 acres in size or platted prior to zoning regulations (1972). The Routt County Planning Department will be able to determine if your lot is exempt from zoning regulations which would allow a system to be installed on a parcel smaller than 5 acres. Exempt lots still must meet setback requirements for an OWTS. See page 5 for information on exemptions and parcels less than 5 acres.
2. **SITE AND SOIL EVALUATION:** A site and soil profile evaluation shall be conducted by a Registered Professional Engineer (RPE) licensed in the State of Colorado in order to determine the suitability of a location to support an OWTS, and to provide the designer with a sound basis to select the most appropriate OWTS design for the location and application. Every site and soil evaluation shall consist of a preliminary investigation, reconnaissance visit, and detailed soil profile investigation that results in a report and site plan. See page 3 for detailed requirements of the report and site plan.
3. **DESIGN OF THE PROPOSED SYSTEM:** The proposed system is designed using the findings of the site and soil evaluation and the number of bedrooms in the home. A Registered Professional Engineer (RPE) licensed in the State of Colorado shall complete the design of the system. See page 4 for details on what is required as part of the design document concurrent with Routt County OWTS Regulations.
4. **SUBMIT THE APPLICATION:** Submit the completed application to the Routt County Department of Environmental Health (RCDEH) along with the following items (incomplete applications will not be processed):

- FEES: OWTS fees are submitted with the application.
  - NEW or EXISTING (UNPERMITTED) OWTS PERMIT: The permit fee for a new or existing and unpermitted OWTS is \$300.00 and includes the application and design review.
  - REPAIR or REMODEL: The fee for a repair to or remodel (enlargement) of an existing system is \$100.00 and includes the application and design review. A major repair may qualify for an increased fee (up to \$300) as determined by RCDEH staff.
- SOIL EVALUATION, SITE PLAN, AND DESIGN REPORT

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*ONCE THE COMPLETED APPLICATION HAS BEEN SUBMITTED:*

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1. **STAFF REVIEW OF APPLICATION:** RCDEH staff will review the information provided in the application, site and soil evaluations, assumptions and calculations, and design to determine if the proposed OWTS is compliant with the Routt County and State adopted OWTS Regulations. Additionally, staff will review the proposal with regard to compliance with the Routt County Land Use and Development Code and other applicable federal, state and county regulations. The owner (or owner's representative,) will be contacted after the review is complete, if additional information is necessary, before a permit can be issued.
2. **SITE INSPECTION:** RCDEH staff may conduct a site inspection of the property before issuing a construction permit. Site inspections are sometimes needed to verify that site conditions and the design submittal concur with the intent of the Routt County and State adopted OWTS Regulations. Also, to review the suitability of the site and the proposed location of the structure(s) and OWTS considering the land use in the area, the proposed use on the site and the size of the property. It is important that the applicant, or applicant's representative, stake and label each pertinent feature, including but not limited to lot corners, proposed structures, driveways/parking areas, streams and riparian areas, proposed soil treatment area, septic tank location, and well location.
3. **ISSUANCE OF PERMIT:** Once review of the completed application, along with any additional requested items, and the findings of the site inspection concur that the proposed OWTS will comply with the Routt County and State adopted OWTS Regulations and the Routt County Land Use and Development Code; the OWTS permit for construction will be made available for issuance. It is the goal that the application review, site inspection and notification of approval will be within 14 working days after receiving a complete application but due to access, weather, seasons or unforeseen circumstances that is not always possible.

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*ONCE THE PERMIT HAS BEEN ISSUED:*

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1. **A LICENSED SYSTEMS CONTRACTOR (PREFERRED) SHALL INSTALL THE APPROVED SYSTEM IN ACCORDANCE WITH THE APPROVED PLAN AND PERMIT**
2. **ONCE THE SYSTEM IS INSTALLED AND BEFORE COVERING COMPONENTS:**
  - **FINAL INSPECTION:** When the installation of the OWTS has been completed, but before the

system is placed into service and before any component of the system has been covered, the applicant or applicant's agent shall notify RCDEH and the design engineer that work has been sufficiently completed to allow inspection(s), to determine if all work has been performed according to the design and in accordance with the permit requirements. **Staff or the engineer of record will conduct the inspection after receipt of the notice.**

- **AS-BUILT DRAWING:** The as-built is a scaled drawing showing the OWTS as installed, including its location from known and findable points, dimensions, depths, sizes, and other information relative to locating and maintaining the system components. The engineer will provide the as-built drawing to the department.
- **CERTIFICATION LETTER AND REPORT:** The engineer shall certify the construction of the system as designed, and submit the final inspection report to RCDEH for review.

**3. ONCE ALL REQUIRED DOCUMENTATION HAS BEEN VERIFIED AND REVIEWED**

- Certificate of Occupancy requirement from RCDEH will be fulfilled and final OWTS permit will be issued.

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*DETAILS OF REPORT AND SITE PLAN REQUIREMENTS:*

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1. The report shall describe the results of the preliminary investigation, reconnaissance, and detailed evaluations.
2. The report shall either be included as part of the OWTS design document or shall be attached to the design document. The report shall include, but is not limited to:
  - a. The name, address, telephone number, e-mail address, credentials, and qualifications of the individuals conducting the site evaluation;
  - b. Preliminary and detailed evaluations, providing information from the surface site characteristics assessment and soils evaluations;
  - c. A graphic soil log (to scale) indicating depth of pit or excavation, soil description and classification, depth to ground water encountered during excavation, date of soils investigation, name of investigator and company name.
3. A scale drawing that provides the complete property boundary lines as well as physical features. Minimum drawing size shall be 8.5-inches by 11-inches with dimensions of the subject parcel of land. Drawings shall indicate dimensions, have a north arrow and graphic scale and include the following:
  - a. Horizontal and vertical reference points of the proposed soil treatment area, soil observations, pertinent distances from the proposed OWTS to all required setbacks, lot improvements, easements, ordinary high water mark of a pond, creek, stream, lake, wetland or other surface waters, and detention or retention ponds, and property lines, contours or slope direction and percent slope, the location of any visible or known unsuitable, disturbed or compacted soils, the estimated depth of periodically saturated soils and bedrock, or flood elevation (if applicable), and the proposed elevation of the infiltrative surface of the soil treatment area all from an established datum (either ground surface or a benchmark).

4. A detail of the portion of the site containing the test pits and OWTS and also the following features within 400 feet:
  - a. All existing and proposed structures or buildings and roads
  - b. Proposed location of the OWTS and components
  - c. Existing and proposed water and sewer systems (if identifiable) on subject parcel and adjacent parcels of land
  - d. All surface water features, including but not limited to streams, lakes, wetland areas and irrigation features.
  - e. Setback distances to features are listed in Table 7-1 of Regulation 43.
5. Any anticipated construction-related issues;
6. An assessment, by the individual conducting the site evaluation, of how known or reasonably foreseeable land use changes are expected to affect the system performance, including, but not limited to, changes in drainage patterns, increased impervious surfaces and proximity of new water supply wells;
7. A narrative explaining any difficulty encountered during the site evaluation, including but not limited to identifying and interpreting soil and landform features and how the difficulties were resolved.

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***SYSTEM DESIGN DOCUMENT SUBMITTAL REQUIREMENT DETAILS:***

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**The following shall be submitted with the application:**

1. The design document shall include a brief description of the facility and its proposed use, basis and calculations of design flow, and influent strength.
2. The design document shall contain all plan details necessary for permitting, installation and maintenance, including the following:
  - a. Assumptions and calculations for each component;
  - b. A scale drawing showing location of each OWTS component and distances to water, physical and health impact features requiring setbacks;
  - c. Layout of soil treatment area, dimensions of trenches or beds, distribution method and equipment, distribution boxes, drop boxes, valves, or other components used;
  - d. Depth of infiltrative surface of soil treatment area, depth of the septic tank, depth of other components;
  - e. Specifications of each component. Specifications for septic tanks or other buried components shall include loads due to burial depth, additional, additional weight of pressure loads, and highest elevation of ground water. Resistance to local water composition such as high sulfates shall be included in the specification if such conditions

- exist at the site;
- f. References to design manuals or other technical materials used;
- g. Installation procedures;
- h. Operation and maintenance manuals or instructions;
- i. Other information that may be useful such as photos and cross-section drawings.

**The site design shall also include:**

1. ENGINEER'S STAMP OR SEAL: The stamp or seal and signature on the plans by a professional engineer licensed in the State of Colorado, certifying the design.

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*THINGS TO KNOW AND COMMONLY ASKED QUESTIONS:*

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**1. How long will it take to get my septic permit?**

About two weeks, once we have a complete application.

**2. How can I determine if my property is within a 100 year floodplain?**

The FEMA Flood Map Service Center (MSC) is the official public source for flood hazard information produced in support of the National Flood Insurance Program (NFIP). Use the MSC to find your official flood map, access a range of other flood hazard products, and take advantage of tools for better understanding flood risk. <https://msc.fema.gov/portal>

**3. Who do I hire to conduct my Site and Soil Evaluation?**

The site and soil evaluation must be conducted by a Registered Professional Engineer licensed in the State of Colorado.

**4. Where can I find a copy of the OWTS Regulations to read them for myself?**

The Routt County OWTS Regulations are available for download on our website at <http://www.co.routt.co.us/163/On-Site-Wastewater>.

**5. What is the minimum size parcel I can construct an OWTS?**

The Routt County OWTS Regulations require that a parcel be a minimum of five acres in size in order to receive a permit.

**6. How long is an OWTS permit valid?**

An OWTS permit is valid for one year from the date of issuance (the day you, or your representative, signs and receives the permit). This means that one year from the date of issuance, construction of the system needs to be completed and the final report submitted to RCDEH.

**7. What about alternative systems such as Incinerating, Composting and Chemical Toilets?**

Depending on the circumstances, RCDEH may consider allowing incinerating, composting or chemical toilets. The use of such alternative systems may not be used to reduce the required size of the OWTS and designs must meet the criteria outlined in section 43.12.E of [State Regulation 43](#).

## **8. Vault Systems**

The only area in Routt County allowed to have a sealed vault system is located within the Stagecoach subdivisions. These lots must have roads developed to the lot per specifications by the Morrison Creek Water and Sanitation District and permitted by the same. This is to allow trucks to be able service the vault. Water wells drilled on these lots become the property of the District. The owners of properties should contact the Morrison Creek W&S for information. <http://mcwater.org/>

## **9. Can I have a “graywater” system?**

The State of Colorado, Water Quality Control Division’s definition of “graywater” means “that portion of wastewater that, before being treated or combined with other wastewater, is collected from fixtures within residential, commercial, or industrial buildings or institutional facilities. Sources of graywater may include discharges from bathroom and laundry room sinks, bathtubs, showers, laundry machines, and other sources authorized by rule. Graywater does not include the wastewater from toilets, urinals, kitchen sinks, dishwashers, or non-laundry utility sinks.” In the future, graywater re-use regulations may be developed that would allow for separated graywater treatment options. For now, all wastewater whether gray or black is treated the same and a full OWTS system is required.

## **10. What if my parcel is less than the five acre minimum?**

Some subdivisions that were created prior to 1972, when the Planning Department was established, are exempt from the five acre minimum. Examples include, Captains Cove, Moon Hill Meadows and Soda Creek Highlands. These subdivisions do not have developed water and sewer districts, but are allowed to drill water wells (approved through the Colo. Division of Water Resources) and install an approved septic system by the Routt County Department of Environmental Health Department even though they do not possess the required 5 acres for a well and septic system on the same lot. Please contact the Routt County Planning Department for a complete list of exempt subdivisions (<http://www.co.routt.co.us/189/Planning>)

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### *QUICK REFERENCE OF SETBACK REQUIREMENTS:*

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- Well or spring to a septic tank - 50 feet
- Well or spring to a soil treatment area (field) - 100 feet
- Potable water line to a septic tank - 10 feet
- Potable water line to a soil treatment area (field) - 25 feet
- Water cistern to a septic tank - 25 feet
- Water cistern to a soil treatment area (field) - 25 feet

- Dwelling Occupied Building to a septic tank - 5 feet
- Structure to a soil treatment area (field) - 20 feet
- Property line to a septic tank - 10 feet
- Property line to a soil treatment area (field) - 10 feet
- Irrigation ditch to septic tank - 50 feet
- Irrigation ditch to soil treatment area (field) - 50 feet
- Lake, stream, water course, wetland to septic tank - 50 feet
- Lake, stream, water course, wetland to soil treatment area (field) - 50 feet

***Refer to Table 7.1 of Regulation 43 for more detailed descriptions of setback requirements***