



ONSITE WASTEWATER TREATMENT SYSTEM (OWTS): APPLICATION GUIDE FOR

This is only a guide and does not supersede the Saguache County On-site Wastewater Treatment Systems Regulations

NO EXCAVATION FOR THE INSTALLATION OF AN ONSITE WASTEWATER TREATMENT SYSTEM SHALL BE STARTED WITHOUT THE PERMITS ISSUED FROM THE LAND USE DEPARTMENT.

STEPS FOR OBTAINING A SEPTIC PERMIT:

1. **SITE AND SOIL EVALUATION:** A site and soil evaluation shall be conducted by a professional engineer licensed in the State of Colorado or a qualified soils technician approved by the Saguache County Public Health Department or a competent technician 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 preliminary investigation, reconnaissance visit, detailed soil investigation, and report and site plan. (See page 4 for details on what is required as part of the Site and Soil Evaluation.)
2. **DESIGN OF THE PROPOSED SYSTEM:** The proposed system is designed using the findings of the site and soil evaluation. The findings of the site and soil evaluation may determine that an engineered design is required, in which case a professional engineer licensed in the State of Colorado shall complete the design of the system using the findings of the site and soil evaluation. (See page 5 for details on what is required as part of the Site and Soil Evaluation.)
3. **COMPLETE THE APPLICATION:** Submit the completed application to the Land Use Department along with the following items **(incomplete applications will NOT be processed)**
 - **FEES:** OWTS fees are submitted with the application.
 - **NEW OWTS PERMIT:** The permit fee for a new OWTS system is \$225.00 and includes the application and design review, one site inspection and one final inspection (prior to backfill of the project)
 - **REPAIR OR ALTERATION PERMIT:** The fee for a repair to or alteration (Enlargement) of an existing system is \$150.00 and includes the application and design review, one site inspection and one final inspection (prior to backfill of the project).
 - **SITE AND SOIL EVALUATION REPORT:** (see page 4 for details of what is required)
 - **DESIGN DOCUMENT:** (See page 5 for details of what is required)

ONCE THE COMPLETED APPLICATION HAS BEEN SUBMITTED:

1. **STAFF REVIEW OF APPLICATION:** Land Use Department 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 Saguache County OWTS Regulations. Additionally, staff will review the proposal with regard to compliance with the Saguache County Land Use and Development Code and other applicable federal, state and county regulations.
 - The owner, or owners' representative, will be contacted after the review is complete and any additional information that may be needed before a permit can be issued will be requested.
2. **STAFF SITE INSPECTION:** Land Use Department staff may conduct a site inspection of the property in order to verify that the site conditions and design submittal concur with the intent of Saguache County OWTS Regulations and 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 the lot corners, proposed structures, driveways/parking 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 finding of the site inspection concur that the proposed OWTS will comply with the Saguache County OWTS Regulations and the Saguache 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 7 working days after receiving a complete application but due to access, weather seasons or unforeseen circumstances that is not always possible.

Once the permit application has been approved, a Licensed Systems Contractor shall install the approved system. Alternatively, a property owner wishing to install their own system may install the system according to the system design documents.

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 applicants' agent shall notify the Land Use Department and engineer, if engineer-designed, that the work has been sufficiently completed to allow inspection(s) to determine if all work has been performed in accordance with the permit requirements. Staff or the engineer of record will conduct the inspection within three (3) business days after receipt of the notice.

AS-BUILT DRAWING: The as-built drawing is a scale 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. When an engineered stamped design is used, the engineer shall provide the as-built drawing along with an approval letter to the department. When a system is designed by an engineer, but not stamped, or by a Competent Technician authorized by the State, Saguache County staff may complete the as-built drawing.

CERTIFICATION LETTER: When an engineer design is used, the engineer shall certify the construction of the system as designed, and submit an approval letter to the department.

THE FOLLOWING INFORMATION IS NEEDED FOR THE SUBMITTAL OF ALL OWTS APPLICATIONS:

- **Report from Site and Soils Evaluation And Site Plan.** The report from the site and soil evaluation in accordance with section 43.5: Report and Site Plan of the Saguache County OWTS Regulations (See page 4 for description).
- **Vicinity Map** General area map showing the location of the proposal on a typical U.S Geological Survey map, U.S Forest Service map.
- **System Design.** The system design document shall contain all plan details necessary for permitting, installation and maintenance and shall include a brief description of the facility and its proposed use, basis and calculations of design flow, and influent strength in accordance with Section 4.35-G: Design Document of Saguache County OWTS Regulations (see page 5 for description).
- A copy of the recorded **Property Deed** is required for Proof of ownership. This may be obtained from the Clerk's Office. The Clerk's Office can be reached by phone at 719-655-2512.
- **Letter of Consent.** If applicable, a letter from the property owner acknowledging a person other than the owner may apply for permits.
- Copy of **Well Permit**, if applicable.
- \$225.00 Application Fee.

COMMONLY ASKED SETBACK REQUIREMENTS: (Reg 43.7-Table 7-1)

Well or Spring to a Septic tank	50 feet
Well or spring to a soil treatment area (field)	100 feet
Potable water line to septic tank	10 Feet
Potable water line to a soil treatment area (field)	100 Feet
Water cistern to a septic tank	25 Feet
Water cistern to a soil treatment area (Field)	100 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 a septic tank	50 Feet
Irrigation ditch to soil treatment area (Field)	100 Feet
Lake, stream, water course, wetland to septic tank	50 Feet
Lake, stream, water course, wetland to soil treatment area (Field)	100 Feet

REPORT AND SITE PLAN REQUIREMENTS: (Reg 43.5)

The following shall be submitted with the application:

The report shall describe the results of the preliminary investigation, reconnaissance, and detailed evaluations. The report may be in text and/or tabular form and shall include a drawing locating features relative to the proposed OWTS location and test locations. 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:

1. The name, address, telephone number, e-mail address, credentials, and qualifications of the individuals conducting the site evaluation,
2. Preliminary and detailed evaluations, providing information from the surface site characteristics assessment and soils evaluations;
3. A graphic soil log, to scale, indicating depth of drill hole or excavation, soil description and classification, depth to the ground water encountered during drilling or excavation, type of equipment used to drill the profile hole or excavate the soil profile test pit, date of soils investigation, name of investigator and company name.
4. Setback distances to features listed in Table 7-1, Minimal Horizontal distances in feet between of an On-Site Wastewater Treatment System Installed After November 15, 1973 and Water, Physical and Health Impact Features.
5. A scale drawing that provides the complete property boundary lines. Minimum drawing size shall be 8.5 -inches by 11-inches. If the property is too large to adequately indicate and label the

profile test pits and percolation test holes shall be submitted. The drawing shall include the following features within 400 feet: dimensions of the subject parcel of land; existing and proposed buildings, including agricultural, on the subject parcel of land; proposed location of the OWTS and components; boundaries with all roads; all adjacent parcels of land; uses of adjacent parcels of land; existing and proposed water and sewer systems (if identifiable) on subject parcel and adjacent parcels Of land; all surface water features, including but not limited to streams, lakes, wetland areas and irrigation features.

- a. Drawings shall indicate dimensions, have a north arrow and graphic scale include the following:

- I. Horizontal and vertical reference points of the proposed soil treatment area; soil observations; percolation testing results and 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; II. Contours or slope direction and percent slope;

- III. The location of any visible or known unsuitable, disturbed or compacted soils;

- IV. The estimated depth of periodically saturated soils and bedrock, or flood elevation, if applicable; and

- V. The proposed elevation of the infiltrative surface of the soil treatment area, from an established datum (either ground surface or a benchmark).

6. Any anticipated construction-related issues;
7. An assessment, by the individual conducting the site evaluation, of how known or reasonable foreseeable land use changes are expected to affect the system performance, including, but not limited to, changes are expected to affect the system performance, including, but not limited to, changes in drainage pattern, increased impervious surfaces and proximity of new water supply wells; and
8. A narrative explaining difficulty encountered during the site evaluation, including but not limited to identifying and interpreting soil and landform features and how the difficulties were resolved.

SYSTEM DESIGN DOCUMENT SUBMITTAL REQUIREMENTS: (Reg 43.5)

The following shall be submitted with the application:

- I. 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 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 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 instruction; and
 - i. Other information that may be useful such as photos and cross-section drawings.

DESIGNED BY REGISTERED PROFESSIONAL ENGINEER When a design by a professional engineer licensed in The State of Colorado is required, the site design shall also include:

1. **INSPECTION SCHEDULE:** An inspection schedule including written verification of the supervision of the installation by a professional engineer licensed in the State of Colorado.
2. **ENGINEER'S STAMP OR SEAL:** The stamp or seal and signature on the plans by a professional licensed in the State of Colorado, certifying the design.

THINGS TO KNOW AND COMMONLY ASKED QUESTIONS

How long will it take to get my septic permit?

About two weeks, once we have a completed application.

How can I determine if my property is within a 100-year floodplain?

We have flood maps and can help to determine if your property is within the 100-year floodplain. Come into our office or give us a call for assistance.

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

The site and soil evaluation can be conducted by a professional engineer licensed in the State of Colorado or a qualified soils technician approved by the Environmental Health Office.

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

The Saguache County OWTS Regulations are available for download on our website at <http://saguachecountv.net/>, you can call our department and request that a copy be sent by email to you, or you can request a paper copy.

What if my parcel is less than one-acre minimum?

The Saguache County OWTS Regulations require that a parcel be a minimum of one acre in size in order to receive a permit. The application will be given a formal denial after review. An applicant may then apply for an appeal or variance. Contact the Land Use Department for more information.

How long is an OWTS permit valid for?

An OWTS permit is valid for one year from the date of issuance (the day you, or 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 final approval by the Land Use Department given. A permit may not be extended or renewed.

Can I have a composting toilet?

Composting, incinerating and chemical toilets require a public hearing before the Board of Public Health for a variance. See Section 4.3.4-0 of the Saguache County OWTS Regulations for more information on variances.

Can I have a "graywater" system?

The State of Colorado, Water Quality Control Divisions 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.

Regulation 43: and Soil Evaluation Completeness Checklist

Section	Description			
	Written Report to Include:			
43.5 B	PRELIMINARY INVESTIGATION	YES		NLA
43.5 B	Property Information:			
	Address			
	Legal Description			
	Existing Structures			
	Location of Existing or Proposed Wells			
43.5 B2	Saguache County Public Health			
43.5 B3	Published Site Information			
	Topography Information			
	Natural Resources Conservation (NRCS) Soil Data			
<u>43.5 84</u>	Location of physical features, on and off property that will require setbacks, per table 7-1			
<u>43.5 B5</u>	Preliminary Soil Treatment Area (STA) size estimate based on information on existing or planned facility and local regulation.			
43.5 B7	Additional Information			
	Survey			
	Easements			
	Floodplain Maps			
	Geology and basin maps			
	Aerial Photographs			
	Climate information			
	Delineated wetland maps			

43.5 c	RECONNAISSANCE (SITE) VISIT EVALUATION	YES		
	Landscape Position			
	Topography			
	Vegetation			
	Natural and cultural features			
	Current and historic land use			
<u>43.5 D</u>	DETAILED SOIL INVESTIGATION, TO INCLUDE ONE OF THE FOLLOWING (CHECK ONE)	<u>YES</u>		

	1. Visual and tactile evaluation of two or more soil profile Test Pit Excavations.			
	2. Percolation			
	3. Percolation tests plus one or more Soil Profile holes (allowed until 7-1-16 only)			
<u>43.5 D</u>	IF CHECKED NO. 1(43.5D)-EVALUATE TWO OR MORE SOIL PROFILE TEST PITS TO DETERMINE	<u>YES</u>		
	Soil Types			
	Soil Structure			
	Restrictive layer			
	Evidence of seasonal high ground water			
	Best depth of STA with infiltrative area			
43.5.5	VISUAL AND TACTILE EVALUATION OF SOIL REQUIREMENTS	YES	NO	
	Evaluate soils under adequate light conditions			
	Location at or immediately adjacent to STA, but preferably not under the bed or trench.			
	Method must allow observation of different soil horizons that constitute the soil profile.			
	MINIMUM DEPTH OF SOIL PROFILE TEST PIT (CHECK ONE)	<u>YES</u>		
	To periodically saturated layer			

	To bedrock			
	Four feet below proposed depth of STA infiltrative surface, whichever is greater			
	LTAR determined based on soil type at infiltrative surface, or more restrictive type within treatment depth			
	Previous soil data, verified by evaluation of Soils Profile Test Pit Excavation			
	IF CHECKED NO.2(43.5D)- EVALUATE ONE OR MORE soils Profile Test Pits to Determine:	<u>YES</u>		
	Requirements in No. 1, plus			
	Utilize soil test pit(s) to determine:			
	Whether soils are suitable to warrant percolation tests			
	If soil is suitable to determine depths of percolation tests; then conduct percolation test in accordance with section 43.504E			
	IF CHECKED NO. 3(43.5D)-(APPLICABLE UNTIL 7-1-16)	YES		
	Conduct percolation test in accordance with section 43.5.4E			

Regulation 43: Report Site Plan & Design Document

Section	Description			
<u>43.5 F.I.</u>	Written Report to Include	Yes		
	Results of preliminary investigation			
	Results of site visit			
	Dates of preliminary investigation and site visit			
	Results of detailed evaluations			
	Scale drawing locating features and test locations			
	Name, address, phone number, email address and credentials and qualifications of site evaluator			
	Preliminary and detailed evaluations, with information from site characteristics assessment and soils investigation			
<u>43.5 F I-d</u>	Graphic Soil Log to Scale Indicating			
	Depth of soil profile test pit on submitted drawings			
	Soil Description and classification on submitted			
	Depth of ground water, if applicable			
	Date of Soils Investigation			
	<u>Name of Investigator and company name</u>			
	<u>Table 7-1- Minimum horizontal distances between OWTS components and features</u>			
	<u>Table 7-2-OWTS design and treatment requirements-distance from STA</u>			
<u>43.5-F1-g</u>	Scale Drawing to include:			
	Complete boundary property lines			
	Minimum size 11 x 17 inches			

	<u>If property is too large, show a detail of the portion of the site with soil profile test pits and percolation test holes</u>			
	Dimensions			
	North Arrow			
	Graphic Scale			
	Proposed soil treatment area			

	Soil Profile holes or soil profile pit locations			
	Percolation Holes, if applicable			
	<u>Pertinent distances from proposed OWTS to all features</u>			
	<u>Easement</u>			
	<u>Ordinary high water mark of all relevant water features (e.g pond. creek etc.)</u>			
	Contours or slope directions and percent slope			
	<u>Locations of any visible or known unsuitable. disturbed or compacted soils</u>			
	<u>The estimated depth of periodically saturated soils and bedrock or flood elevation if applicable</u>			
	<u>Proposed elevation of the infiltrative surface of the soil treatment are from established datum</u>			
<u>43.5-H</u>	As-Built Drawings:	YES	NO	
	Scale drawing showing the OWTS as installed			
	Including its location from known and findable points			
	<u>Dimensions</u>			
	Depths			
	<u>Sizes</u>			
	<u>Manufactures names and models</u>			
	<u>Information relative to locating and maintaining the OWTS components</u>			

43.5-G	Design Document To Include:	YES		
	<u>Facility description and proposed use</u>			
	Basis and calculations of design flow and wastewater strength			
<u>43.5.3</u>	All Plan Details Necessary for Permitting and installation:	YES		
	Assumptions and calculations for each component			
	<u>Scale drawing showing location of each OWTS component and distances to features.</u>			
43.5.3-c	Layout of:	<u>YES</u>		
	Soil Treatment Area			
	Dimensions of trenches and beds			
	Distribution method and equipment			
	Distribution boxes			
	Valves			
	Other Components used			
43.5.3-d	Depths of:			
	Infiltrative Surface			
	Septic Tank			
	Other Component Used			

	Specifications of Each Components:			
<u>43.5.3-1</u>	Specifications for Septic Tanks or Other Buried Components must Include:	<u>YES</u>		
	Loads due to burial depth			

Permit Number _____
Date Approved _____
Parcel Number _____
Received Date _____

Saguache County Land Use
Department
PO Box 326 - Saguache, CO 81149
(719) 655-2321 Fax (719) 655-2635
Individual Sewage Disposal System Application Permit

Property Owner _____ Phone _____

Mailing Address _____

City _____ State _____ Zip _____

Installer _____ Phone _____

Address _____

City _____ State _____ Zip _____

Property Address _____

Legal Description:

Quarter Section _____ Section _____ Township _____ Range _____

Number of Acres _____

OR

Subdivision _____ Lot _____ Block _____

ATTATCH A PLOT PLAN SHOWING DITCHES, LAKES, RIVERS, WELLS, BUILDINGS, INSTALLED SEWAGE SYSTEM ETC.

Water Source: Private Well (_____), Community Well (_____), Spring, Stream, or Creek (_____)

Permit Number _____ attach copy of permit to application

Permit is for: New Installation (_____), Modification (_____), Repair (_____)

Waste Type: Dwelling (_____), Non-Domestic (_____), Commercial/ Institutional (_____)

System Type: Standard System (_____), Engineer-designed System (_____), Vault (_____), Compost (_____)

Is this facility within the boundaries of a city or sanitation district? _____. If yes, have negotiations been attempted with owner to connect?

If yes please explain _____

DWELLING SPECIFICS:

Total of Existing Structures on property _____

Total of existing residences on property _____

Number of Bedrooms _____ Number of People to be served _____

Does the Proposed building have the following?

Bathroom _____ If Yes, how many? _____ Kitchen _____ Garbage Grinder _____

Automatic Washer _____ Electric Dish Washer _____

WHEN SCHEDULING AN INSPECTION, WE NEED **AT LEAST A 48 HOUR NOTICE!** **PROPERTY OWNER AND APPLICANT SIGNATURE IS REQUIRED ON BACK OF THIS APPLICATION.** A CERTIFIED ENGINEER MUST DESIGN ANY SEWAGE DISPOSAL SYSTEM THAT HAS A FAILED STANDARD STATE PERCOLATION TEST.

PLEASE READ THIS BEFORE SIGNING!!

A fee of \$225.00 plus mileage shall be required of applicants for a new individual sewage disposal system payable before work on the system starts. A fee of \$150.00 will be charged for alteration, repair, or replacement of systems which have been in operation two (2) years or more, in addition permit approval and inspection shall be required. Violation of this procedure will constitute a punishable offense as defined in Regulations Applying to Individual Sewage Disposal System, Section 3.5.

The State of Colorado requires that all dwellings within the State be provided with adequate sewage disposal either through a centralized sewer system or through a County approved and permitted Independent Sewage Disposal System. Failure to install and maintain these facilities is punishable by law.

Permission is hereby granted to the owner or his agent to perform the work indicated above, in accordance with the Saguache County Individual Sewage Disposal System Regulations. Permits shall expire upon completion of the sewage disposal system for which the permit is written or at the end of twelve months from date of issue, unless work is in progress or unless revoked for non-compliance. Plans and specifications for this proposed sewage disposal system, when reviewed and ATTACHED to this permit will have been considered satisfactory.

TO OWNER: you must give the Saguache County Land Use Office **AT LEAST 48 HOURS** notice prior to the percolation test or final inspection. Leave entire sewage disposal system uncovered until final inspection can be scheduled and done properly. **A CERTIFIED ENGINEER MUST DESIGN ANY SEWAGE DISPOSAL SYSTEM THAT HAS FAILED A STANDARD STATE SOIL ANALYSIS TEST!!**

The septic inspection officer shall assume no responsibility in case of failure or inadequacy of sewage disposal system beyond consulting in good faith with the property owner or representative. Malfunction, should they occur, may be due to improper maintenance and usage, high groundwater table, soil compaction and another factor. These regulations are intended to reduce these types of problems.

SPECIAL NOTICE: Effective January 1, 1986 you must have plumbing permits and inspections on all buildings within the State, including Mobile Homes. Please contact Andy Medina at 303-869-3469 for more information. If you have any questions regarding this application, feel free to call Saguache County Land Use Office at (719)655-2321.

Return to: Saguache County Land Use Department
PO Box 326
Saguache, CO 81149
Phone (719)655-2321 FAX. (719) 655-2635

By signing below certifies I have read and understand the above and agree to the conditions as stated above.

Applicant needs to be aware that by signing this application you are giving the Saguache County Land Use office staff permission to access your property for purposes relating to this application.

Property Owner Signature _____ Date _____

Applicant Signature _____ Date _____

Received by _____ Date _____

OFFICE USED ONLY

FEE \$ _____ Perc Date _____/_____/_____ Final Date _____/_____/_____
Inspected _____ Mileage Paid _____/_____/_____