8. A product development permit is a site-specific permit. Product development testing at multiple sites requires a product development permit for each site.

9. During the term of the product development permit, all data collected is to be submitted to the Division and the local public health agency.

10. The local public health agency may revoke or amend a product development permit, if the continued operation or presence of the product under development:

    a. Presents a risk to the public health or environment;

    b. Causes adverse effects on the proper function of the OWTS on the site;

    c. Leaks or discharges effluent on the surface of the ground; or

    d. If the developer of the product fails to comply with any requirements stipulated on the permit by the local public health agency or the Division.

11. If the product development permit is revoked, the product developer must install the replacement system within the time frame established by the local public health agency.

12. Once the system is installed and approved, the local public health agency must supply the Division with a copy of the completed OWTS permit.

J. Prohibition of OWTS in Unsuitable Areas

1. A local board of health may prohibit issuance of OWTS permits in accordance with applicable land use laws and procedures for defined areas in which the local board of health determines that construction and use of additional OWTS may constitute a hazard to public health or water quality.

K. Licensing of Systems Contractors, Systems Cleaners, Systems Maintenance Providers, and Transfer of Title Inspectors

1. The local board of health may adopt regulations which provide for the licensing of systems contractors, systems cleaners, systems maintenance providers, and transfer of title inspectors.

    a. The local public health agency may charge a fee, not to exceed actual costs, for the initial license and for a renewal of the license. The initial licensing and renewals thereof must be for a period of not less than one year.

    b. The local board of health may revoke the license for violation of the applicable provisions of the OWTS Act and the implementing regulations or for other good cause shown, after a hearing conducted upon reasonable notice to the licensee and at which the licensee may be present, with counsel, and be heard.

L. Transfer of Title Inspections

1. A local board of health may choose to require a property owner of a residence or other building/facility served by an OWTS to have an inspection of that system to demonstrate that the system is functioning according to design prior to the sale or transfer of title of the property. A local board of health is not required to develop a transfer of title inspection program.

2. The local board of health may identify types of transfer of title that are not required to have inspections.

3. Transfer of Title inspectors must be certified by the National Association of Wastewater Technicians or an equivalent program approved by CDPHE and the local public health agency. Inspectors for higher level treatment systems must have training relevant to the specific system or certification by the equipment manufacturer.

4. Transfer of title and inspection reports must be provided on forms furnished or approved by the local public health agency. The report must include, as appropriate:

   a. Owner's name and contact information;

   b. Physical address of property;

   c. Legal description of property;

   d. Name of Inspector, Inspector's NAWT or other applicable certification number;

   e. Date and time of the inspection(s);

   f. A record drawing, either from the local public health agency records (verified by the inspector) or from the site inspection;

   g. Statement of the size, type and capacity of the septic tank, pump chamber (when applicable), and soil treatment area;

      (1) A septic tank inspection report completed within the previous 12 months, including a septic tank pumping receipt, when applicable, based on the inspection report;

      (2) An inspection report completed within the previous 12 months for any mechanical components such as pumps, alarms or higher level treatment systems; and

      (3) An inspection report completed within the previous 12 months providing a detailed report noting the condition of the soil treatment area.

   h. All components that are found to be in a state of malfunction.

   j. To the extent possible, the inspector must identify if the OWTS may be encroaching on the required setback to the onsite water supply. Buried wells, snow cover, or other circumstances may prevent the inspector from making this determination. If such circumstances are encountered, they must be stated in the report; and

   k. The local public health agency may require a water quality analysis of the water supply (i.e.: nitrates, *E. coli*, etc.). For example, in cases where the OWTS encroaches on required setbacks to onsite or adjacent water supplies, or localized water quality concerns have been identified.

5. Minimum Criteria

a. Items noted in the inspection report that do not comply with the following criteria and conditions must be corrected along with necessary permits and inspections prior to the issuance of a final acceptance document:

(1) All tanks must be watertight, structurally sound and in good working order and provided with safe and secure lids;

(2) All internal devices and appurtenances such as tees, effluent filters and/or baffles, must be intact and in working order;

(3) Alarms, control devices, and components necessary for the proper operation of the system are present and in good working order;

(4) A soil treatment area, or other means of subsurface wastewater treatment, must be present and not in a state of failure;

(5) Cesspools must be properly abandoned and a conforming OWTS must be installed. Where site conditions preclude the installation of a conforming OWTS, the criteria for repairs established within section 43.10.I must be followed.

(6) There are no unapproved wastewater discharges from the system or structures; and

(7) Any items meeting the conditions of a “Failure”, as defined in this regulation, have been corrected to the acceptance of the local public health agency.

6. Issuance of an Acceptance Document

a. When the criteria set forth above have been met, the local public health agency must issue an acceptance document, using terminology adopted by the local public health agency, setting forth the terms and conditions of approval; including, as appropriate:

(1) Statement of the size, type and capacity of the system and a record drawing, either from the local public health agency records (verified by the inspector) or from the inspection reports;

(2) A copy of the inspection report that was provided to the local public health agency.

(3) Evidence of past system failures as shown in local public health agency records;

(4) Circumstances or factors that may have affected the ability of the inspector to evaluate the system;

(5) Whether the system meets the permitting requirements of the local public health agency; and

(6) Other information the local public health agency may require.

7. The acceptance document will remain valid until the date of real estate closing or for a maximum period of twelve months, whichever comes first.

8. Renewal of an Acceptance Document

   a. If a local public health agency has established a time period for the acceptance document of 6 months or less and provided it has not expired, an acceptance document may be renewed one time for a period of up to six months upon completion of the appropriate form and payment of the required fee.

9. Waiver of an Acceptance Document

   a. If it is determined by the local public health agency that an OWTS does not meet the requirements for issuance of an acceptance document, a conditional acceptance document may be issued, provided that the purchaser of the property agrees to obtain a permit and complete all necessary repairs to the system (or connect to a sanitation district, if appropriate) within the time frame established by the local public agency.

10. Revocation of an Acceptance Document

    a. An acceptance document must be revoked if it is determined that the system is no longer functioning in accordance with this regulation or that false or misleading material statements were made on the application or inspection reports.

11. Penalties

    a. Failure to obtain an acceptance document for a covered transaction as provided by this regulation will subject the owner who failed to obtain the document to a penalty assessed under section 25-10-113, C.R.S.

M. Permit for the Continued Use of an On-site Wastewater Treatment System

1. A local board of health may choose to issue a permit authorizing the continued use of an OWTS. A local board of health is not required to develop an additional permit program for the continued use of an OWTS.

2. A local board of health may set fees for permits authorizing the continued use of an OWTS. The fees must be no greater than required to offset the actual indirect and direct costs of the services for this program; 25-10-107, C.R.S.

3. Permits for the continued use of an OWTS may be issued for purposes, including but not limited to:

   a. An “Operating permit” used for maintenance and inspections performed on an OWTS at regular intervals;

   b. A “Use permit” used for transfer of title inspections; or

   c. Other situations deemed necessary or useful by a local public health agency.

4. A local public health agency may determine the time frame for the permit either at equal time intervals or based on recurring events.

5. A local public health agency may revoke the permit for non-compliance.

3. The separation distance between a component and the crest of a dry gulch or cut bank will be evaluated for potential erosion or slope instability if the component and the slope are in close proximity. If there is potential for erosion or instability, the separation distance must be increased until the risk is minimized.

D. Components of an OWTS listed in Table 7-1 must be installed or located in accordance with the minimum distance requirements provided in the table or such increased distances provided by local board of health regulations, unless otherwise noted below:

1. A local board of health may choose to allow the local public health agency to permit the installation of an OWTS at a reduced property line setback in accordance with the following criteria:

a. If a property can accommodate the installation of an OWTS no closer than the required minimum 10-foot property line setback, it must do so. If the proposal complies with the requirements of this section and is deemed acceptable by the local public health agency, the local public health agency may administratively allow a reduction to the setback.

b. The property line setback must not be reduced to any less than 3 ft., unless a variance by the Board of Health is provided.

c. The property line setback encroachment must be proposed at the time of permit application and must include the following information:

(1) A statement from the applicant and/or designing engineer providing the reason for the reduced property line setback request.

(2) The applicant must demonstrate that the allowance of encroachment of the property line setback will not inhibit the development of surrounding properties (i.e. by allowing the encroachment of the property line setback, a neighboring property would not be able to meet the minimum setback requirement between the subject OWTS and a proposed adjacent well).

(3) The applicant must demonstrate that all activities associated with the installation of the proposed OWTS will not encroach on a neighboring property, and/or provide written permission from the adjacent owner or property manager of said property allowing the encroachment of machinery or excavated materials in order to install the proposed OWTS.

(4) The proposed OWTS must comply with all other required setbacks noted in Table 7-1. The local public health agency approval of the encroachment must only be for the referenced property line setback.

(5) The applicant must submit a survey of the property line(s) that the proposed setback encroachment will impact. The survey must include:

(i) A survey completed by a Colorado registered professional land surveyor in accordance with section 12-120-301 *et seq.*, C.R.S.

(ii) A legal description and drawing of the subject property. Said drawing must also include the location of the proposed OWTS, onsite and adjacent wells.

(iii) The surveyor must clearly mark the surveyed property line(s) in a manner that is clearly defined and will not degrade over time due to exposure to the elements. The markings must remain in place until after system construction and final approval by the local public health agency.

d. Prohibitions

(1) Approval for an encroachment of the property line setback must not be provided after installation of the OWTS. Any post-construction reduction will require a variance by the Board of Health.

(2) A reduction in the setback to a property line may only be granted where a minimum separation of six feet between soil treatment areas on all adjacent properties is provided.

(3) The size of the soil treatment area must comply with section 43.10.C of Reg. 43.

(4) Property line setback reductions are prohibited where multiple systems on the subject property are proposed and the combined capacity of the systems exceeds 2,000 GPD.

E. Table 7-2 provides the required site evaluation, design, and treatment level considerations necessary to evaluate the site and to design and locate the soil treatment area component of an OWTS.

1. Items 1, 2 and 3 in Table 7-2 address the allowable horizontal setback distance between the soil treatment area and the following physical features:

a. Setback distance from soil treatment area to on-site well (Item 1);

b. Setback distance from soil treatment area to water features (Item 2); and

c. Setback distance from soil treatment area to a dry gulch or cut bank (Item 3).

2. Item 4 in Table 7-2 addresses the required vertical separation distance between the infiltrative surface of the soil treatment area and the limiting layer, or the required depth, of soil comprising the soil treatment area.

3. The designer may select the level of treatment from Table 7-2 to be applied to the soil treatment area that is necessary in order to accommodate the site conditions, if higher level treatment for that purpose is permitted by the local public health agency.

5. Access

a. The pump or dosing system tank, chamber, or compartment must have a minimum 24-inch nominal diameter access riser, made of corrosion-resistant material, extending to or above ground level. A smaller diameter riser may only be installed if it is accepted by the Division as an integral component of a specific product during the product review process.

b. The access riser must have a watertight connection to the pump or dosing chamber/compartment to prevent infiltration or exfiltration. All other intrusions to the riser for electrical or other component access must also be watertight.

6. Splice Box (Junction box)

a. Splice boxes must be located outside the pump system access riser and be accessible from the ground surface.

b. Wire splices are prohibited inside the tank, dosing chamber or riser. Wire splicing must be completed with corrosion-resistant, watertight connectors.

7. Controls

a. Control panels or other electrical boxes used to control the functions of an OWTS must comply with the following, as appropriate:

(1) The pump system must have an audible and visual alarm notification in the event an excessively high water condition occurs.

(2) The pump must be connected to a circuit breaker separate from the alarm breaker and from any other control system circuits.

(3) An electrical disconnect must be provided within the line of sight of the pump chamber.

(4) The pump system must be provided with a means that will allow the pump to be manually operated; such as an H.O.A. switch (Hand/Off/Auto).

(5) The pump system for pressure dosing and higher level treatment systems must have a mechanism for tracking both the amount of time the pump runs and the number of cycles the pump operates.

(6) Must bear the seal indicating acceptable product testing from a U.S. Department of Labor, Occupational Safety and Health Administration Nationally Recognized Testing Laboratory (NRTL) (https://www.osha.gov/dts/otpca/nrtl/nrtllist.html), such as UL or ETL.

(7) The bottom of the control panel must be at least 30 inches above grade.

J. Effluent Filters

1. A local public health agency may require that effluent filters be installed in all septic tanks in new installations and repairs where the septic tank is replaced.

2. When effluent filters are required, the septic tank outlet, or the outlet of the last septic tank in series, must include an effluent filter that retains solids greater than one-eighth inch in size. Effluent filters must be sized to meet the estimated daily design flow and waste strength.

3. If a pump is used to remove septic tank effluent from the final compartment of the septic tank, the effluent must be filtered prior to dispersal into the soil treatment area. An effluent filter, pump vault equipped with a filter cartridge, or a filter on the discharge pipe, would all be considered acceptable.

4. The effluent filter must be cleaned at manufacturer-recommended intervals, or more often, if use patterns indicate.

5. An alarm may be installed on an effluent filter indicating need for maintenance. A local public health agency may require all effluent filters to be equipped with alarms.

6. Where an ejector pump, grinder pump or non-clog pump is proposed for use prior to the septic tank, an effluent filter must be installed on the outlet of the septic tank.

7. The handle of the effluent filter must extend to within 12 inches of grade.

K. Grease Interceptor Tanks

1. All commercial food service facilities and other facilities generating fats, oils and greases in their waste must install a grease interceptor tank.

2. Grease interceptor tanks shall treat only those portions of the total wastewater flow in which grease and oils are generated.

3. The grease interceptor must have a minimum of two compartments and must be sized proportionate to the amount of fats, oils and grease it receives, the peak flow rate through the tank, and the expected cleaning frequency.

4. The inlet and outlet tees or baffles must extend into the bottom 1/3 of the liquid volume, but must be at least 12 inches off the inside floor of the interceptor.

5. The inlet and outlet tees or baffles must extend at least 5 inches above the liquid level and must provide for a free vent area across the liquid surface.

43.10 Design Criteria – Soil Treatment Area

A. The size and design of the soil treatment area must be based on the results of the site and soil evaluation, design criteria, and construction standards for the proposed site and OWTS selected.

B. At proposed soil treatment area locations receiving domestic wastewater, where any of the following conditions are present, the OWTS must be designed by a professional engineer and approved by the local public health agency:

1. For OWTS installed in soil types 3A, 4, 4A, 5, FBR, DBR, R-0, R-1 R-2, and R-3, as specified in Tables 10-1 and 10-1A of this regulation;

2. For OWTS that include components which provide Treatment Levels TL2, TL2N, TL3, TL3N and TL3ND effluent; or an NDDS;

a. Distribution between laterals in a soil treatment area must be as level as possible. Uneven settling of portions of the distribution system following construction must be addressed by provisions in the design to adjust flows between laterals.

b. The maximum length of distribution laterals must not exceed 150 feet.

c. Distribution laterals longer than 100 feet must be pressure dosed or the application of the effluent must be at the center of the lateral through a distribution box.

d. A local public health agency may limit the length of distribution laterals to a maximum of 100 feet.

e. For absorption beds, the separating distance between parallel gravity distribution laterals must not exceed six feet (center-to-center), and a distribution lateral must be located within three feet of each sidewall and end-wall.

f. The end of a distribution pipe must be capped, unless it is in a bed or trenches in a level soil treatment area, where the ends of the pipes may be looped.

g. To promote equal distribution to the soil treatment area, the effluent pipe on a gravity flow system must be connected to as near to the middle of the distribution header as possible. However, it must be offset from any distribution lateral so as to not provide a direct pathway into a single lateral. Note that the installation of a distribution box with flow levelers is preferred, as this will further assist in better distribution of the effluent.

h. Orifices must be oriented downward unless pressure distribution is used and provision for pipe drainage is included.

3. Pressure Distribution

a. Design plans for pressure distribution systems must identify the exact specifications for the following items:

(1) General Design Parameters: Not all combinations of the variables noted below will result in a proper distribution system design. The design engineer must justify through calculations &/or design software that the selected values will concur with the requirements noted below.

(i) Distribution pipe size: 3/4 inch – 1.5 inches (PVC Class 200, min.). 2-inch distribution pipe may only be used where other design modifications cannot overcome a greater than 10% variation in the pressure head between the initial and distal orifices.

(ii) Distribution pipe spacing: 18 inches – 48 inches

(iii) Orifice size: 1/8 inches – 3/8 inches

(iv) Orifice spacing: 18 inches – 48 inches

(v) Proposed dose volume: Will vary with design (0.25 – 1.0) gallons/orifice/dose, or 3 - 5 times distribution pipe volume