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**PUBLIC HEALTH AND
SOCIAL SERVICES DEPARTMENT**

Article IV

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**SANITARY CODE FOR THURSTON COUNTY
ARTICLE IV**

RULES AND REGULATIONS OF THE THURSTON COUNTY BOARD OF HEALTH

GOVERNING TREATMENT AND DISPERSAL OF SEWAGE

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ARTICLE IV

RULES AND REGULATIONS OF THE THURSTON COUNTY BOARD OF HEALTH GOVERNING TREATMENT, DISPERSAL OF SEWAGE

SECTION 1 PURPOSE, OBJECTIVES, AND AUTHORITY.

- 1.1 The purpose of this Article is to protect the public health by:
 - 1.1.1 Minimizing the potential for public exposure to sewage from OSS;
and
 - 1.1.2 Minimizing adverse effects to public health that discharges from
OSS may have on ground and surface waters; and
 - 1.1.3 Setting conditions for the withdrawal or revocation of approvals, for
the cessation of use of OSS and for the elimination of health
hazards; and
 - 1.1.4 Setting conditions of project approval for integration with other
water quality, land use, and wastewater management plans.
- 1.2 This Article regulates the location, design, installation, operation,
maintenance, and monitoring of OSS to:
 - 1.2.1 Achieve long-term sewage treatment, and effluent dispersal; and
 - 1.2.2 Limit the discharge of contaminants to waters of the state.
- 1.3 This Article is adopted by the Board of Health in accordance with the
authority granted in chapter 70.05 RCW, and chapter 246-272A WAC to
establish minimum requirements for the treatment, and dispersal of
sewage and the regulation of OSS. The Rules and Regulations of the
Washington State Board of Health for On-site Sewage Systems as set
forth in chapter 246-272A WAC are adopted and incorporated herein by
reference, except where the provisions of this Article are more stringent. In
the event of conflict between this Article and the provisions of chapter 246-
272A WAC, this Article shall apply unless the provision of chapter 246-
272A WAC is more stringent, in which case the provisions of chapter 246-
272A WAC shall govern.

SECTION 2 ADMINISTRATION.

The Health Officer shall administer this Article under the authority and requirements of chapter 70.05, RCW and chapter 246-272A WAC. Under RCW 70.05.060(7), fees may be charged for this administration.

SECTION 3 DEFINITIONS.

As used in this Article, the terms defined in this section shall have the meanings indicated unless the context clearly indicates otherwise. These definitions supplement those contained in WAC 246-272A-0010, and in the event of a conflict, supersede the definitions in WAC 246-272A-0010 unless the provisions of WAC 246-272A-0010 are more stringent.

"Addition" means any proposed building activity that will not increase sewage flows but will result in an increase in the square footage of:

1. Living space (other than number of bedrooms) outside the envelope (the exterior shell) of the structure's existing living space for residential structures. This includes the construction of a garage or outbuildings on a parcel containing a residential structure.
2. The structure outside the envelope (the exterior shell) of the existing structure for non-residential structures.

"Alternative system" means an OSS other than a conventional gravity OSS or conventional pressure distribution.

"Approved" means a written statement of acceptability issued by the Health Officer.

"Area of special concern" means an area of definite boundaries delineated through public process, where the Board of Health, or Washington State Department of Health in consultation with the Health Officer, determines additional requirements for OSS may be necessary to reduce potential failures, or minimize negative impact of OSS upon public health.

"Bed" means a soil dispersal component consisting of an excavation with a width greater than three feet and not exceeding ten feet.

"Board of Health" means the Thurston County Board of Health established pursuant to RCW 70.05.030.

"BOD" means biochemical oxygen demand, typically expressed in mg/L.

"Building Sewer" means that part of the horizontal piping of a drainage system extending from the building drain, which collects sewage from all the drainage pipes inside a building, to an on-site sewage system. It begins two feet outside

the building wall and conveys sewage from the building drain to the remaining portions of the on-site sewage system.

"CBOD₅" means carbonaceous biochemical oxygen demand, typically expressed in mg/L.

"Cesspool" means a pit or excavation receiving untreated sewage and allowing the liquid to seep into the surrounding soil or rock.

"Common point" means any interconnection of sewerage piping systems whether inside or outside of a building or structure.

"Community On-site Sewage System (COSS)" means any OSS:

1. Designed to serve more than two residential units; or
2. With a design flow, at any common point, more than one thousand (1,000) gallons per day and less than or equal to three thousand five hundred (3,500) gallons per day; or
3. Within the city limits of Lacey, Olympia or Tumwater or their Urban Growth Areas with a design flow, at any common point, more than six hundred (600) gallons per day and less than or equal to three thousand five hundred (3,500) gallons per day.

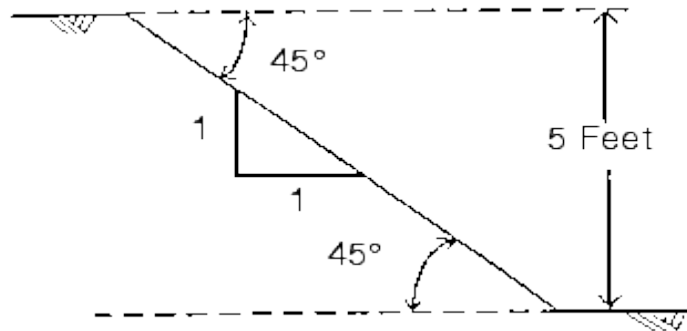
"Conforming system" means any OSS, except an experimental OSS, that is in full conformance with an Operational Certificate, where required, and meets any of the following criteria:

1. The OSS is in full compliance with all requirements for new construction as specified in this Article, including the provision of a reserve area; or
2. The OSS is an existing OSS approved, installed, and operated under a previous edition of this Article; or
3. The OSS is a repair OSS that was permitted to meet the requirements of this Article to the maximum extent permitted by the site; or
4. The OSS or repair was permitted through the waiver process; or
5. The OSS was in existence prior to 1979, is not in failure, and its use is consistent with its size and design.

"Covenant" means an agreement recorded with the Thurston County Auditor stating certain activities and/or practices are required or prohibited.

"Cover" or "Cover material" means soil placed over a soil dispersal component composed predominately of mineral material with no greater than ten percent organic content. Cover material may contain an organic surface layer for establishing a vegetative landscape to reduce soil erosion.

"Cut or bank" means any naturally occurring or artificially formed slope greater than one hundred percent (forty-five degrees) and extending vertically at least five feet from the toe of the slope to the top of the slope as follows:



"Department" means the Thurston County Public Health and Social Services Department.

"Design" means a detailed OSS plan developed in accordance with this Article.

"Designer" means a person who matches site and soil characteristics with appropriate on-site sewage technology. Throughout this Article this term applies to both on-site sewage treatment system designers licensed under chapter 18.210 RCW and professional engineers licensed under chapter 18.43 RCW.

"Design flow" means the maximum volume of sewage a residence, structure, or other facility is estimated to generate in a twenty-four-hour period. It incorporates both an operating capacity and a surge capacity for the OSS during periodic heavy use events. The sizing and design of the OSS components are based on the design flow.

"Development" means the creation of a residence, structure, facility, mobile home park, subdivision, planned unit development, site, area, or any activity resulting in the production of sewage.

"Dispersal component" means a subsurface absorption system (SSAS) or other soil absorption system receiving sewage tank or other pretreatment device effluent and transmitting it into original, undisturbed soil.

"Distribution technology" means any arrangement of equipment and/or materials that distributes sewage within an OSS.

"Down-gradient" means the direction, toward an object, of liquid flow on the surface of the ground or upon encountering a water table or a restrictive layer.

"Drain field" see subsurface soil absorption system (SSAS) and soil dispersal component.

"Drainrock" means clean washed gravel or crushed rock ranging in size from three-quarters inch to two and one-half inches, and containing no more than two percent by weight passing a US No. 8 sieve and no more than one percent by weight passing a US No. 200 sieve.

"Effluent" means liquid discharged from a sewage tank or other OSS component.

"Engineer" means a person who is licensed and in good standing under chapter 18.43 RCW.

"Expanding clay" means a clay soil with the mineralogy of clay particles, such as those found in the Montmorillonite/Smectite Group, which causes the clay particles to expand when they absorb water, closing the soil pores, and contract when they dry out.

"Expansion" means a change in a residence, facility, site, or use that:

1. Results in an increase in the strength of the sewage or in the flow of sewage that may cause an OSS to exceed its existing treatment or dispersal capability. Examples include, but are not limited to, an increase in the number of bedrooms in a residence, or a change in use from an office to a restaurant or from a residential use to a commercial use; or
2. Reduces the treatment or dispersal capability of the existing OSS or the reserve area, for example, when a building is placed over existing OSS components or a reserve area.

"Experimental system" means any alternative OSS that was installed under previous versions of this Article:

1. Without design guidelines developed by the Washington State Department of Health; or
2. A proprietary device or method, which had not yet been evaluated and approved by the Washington State Department of Health.

"Extremely gravelly" means soil with sixty percent or more, but less than ninety percent rock fragments by volume.

"Failure" means a condition of an OSS or component that threatens the public health by inadequately treating sewage or by creating a potential for direct or indirect contact between sewage and the public. Examples of failure include:

1. Sewage on the surface of the ground;
2. Sewage discharged directly to surface water or upon the surface of the ground unless the discharge is under permit from the Washington State

Department of Ecology. This does not apply to septage or sewage sludge handled under a valid permit issued in accordance with Article V of this code;

3. Sewage backing up into a structure caused by slow soil absorption of sewage tank effluent;
4. Sewage leaking from a sewage tank or collection system;
5. Inadequately treated effluent contaminating ground water or surface water. This may be demonstrated upon testing by currently adopted dye test procedures, where the following occur: (1) positive dye test results and (2) a fecal coliform bacteria sample result of at least 200 organisms per 100 milliliters or above established background concentrations collected within six months of the dye test and collected at the same location as the dye-positive site;
6. Surface or ground water intrusion into a sewage tank or collection system;
7. Cesspools;
8. Seepage pits where evidence of ground or surface water quality degradation exists;
9. Metal sewage tanks that have any rusted through, perforated or damaged parts;
10. Noncompliance with standards stipulated on the permit or design.

"Fecal coliform" means bacteria common to the digestive systems of warm-blooded animals that are cultured in standard tests. Counts of these organisms are typically used to indicate potential contamination from sewage or to describe a level of needed disinfection. Generally expressed as colonies per 100 milliliters.

"Gravelly" means soils with fifteen percent or more, but less than thirty-five percent rock fragments by volume.

"Gravity system" means an OSS consisting of a sewage tank and a subsurface soil absorption system with gravity distribution of the effluent.

"Gray water" means sewage from bathtubs, showers, bathroom sinks, washing machines, dishwashers, and kitchen sinks. It includes sewage from any source in a residence or structure that has not come into contact with toilet wastes.

"Ground water" means subsurface water occupying the zone of saturated soil, permanently, seasonally, or as the result of the tides. Indications of ground water may include:

1. Water seeping into or standing in an open excavation from the soil surrounding the excavation or monitoring ports; or
2. Spots or blotches of different color or shades of color interspersed with a dominant color in soil, caused by reduction and oxidation of iron. These color patterns are redoximorphic features, commonly referred to as mottling. Redoximorphic features often indicate the intermittent presence of ground water and may indicate poor aeration and impeded drainage. Also see "Water table".

"Guest residence" means a residence or room(s) in an accessory structure added to a lot with an existing legal residence for the purpose of serving guests. A guest residence is used for the occasional housing of guests of the occupants of the principal structure, and not as rental units or for permanent occupancy as housekeeping units. No kitchens shall be allowed in guest residences

"Health Officer" means the Thurston County Health Officer, or a representative authorized by and under the direct supervision of the Health Officer, as defined in chapter 70.05 RCW.

"Holding tank sewage system" means an OSS which incorporates a sewage tank without a discharge outlet, the services of a sewage pumper/hauler, and the off-site treatment and disposal for the sewage generated.

"Hydraulic loading rate" means the amount of effluent applied to a given treatment step, in this Article expressed as gallons per square foot per day (gal/sq.ft./day).

"Industrial wastewater" means the water or liquid carried waste from an industrial process. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feedlots, poultry houses, or dairies. The term includes contaminated storm water and leachate from solid waste facilities.

"Infiltrative surface" means the surface within a treatment component or soil dispersal component to which effluent is applied and through which effluent moves into original, undisturbed soil or other porous treatment media.

"Installation firm" means a firm certified by the Health Officer to install, modify, or repair an OSS or any of its components in accordance with the provisions contained in this Article.

"Installer" means an OSS professional who installs, modifies, or repairs OSS as specified in section 23.

"Large on-site sewage system (LOSS)" means any OSS with design flows, at any common point, greater than 3,500 gallons per day.

"Maintenance" means the actions necessary to keep the OSS components functioning as designed.

"Management Plan" means the Thurston County On-site Sewage System Management Plan adopted pursuant to WAC 246-272A-0015.

"Marine recovery area" means an area of definite boundaries where the health officer or board of health has determined that additional requirements for existing on-site sewage disposal systems may be necessary to reduce potential failing systems or minimize negative impacts of on-site sewage disposal systems.

"Massive structure" means the condition of a soil layer in which the layer appears as a coherent or solid mass not separated into peds of any kind.

"May" means discretionary, permissive, or allowed.

"Minor repair" means the repair or replacement of any of the following OSS components: tightline pipe between a structure and a sewage tank; tightline between a sewage tank and the dispersal component; a pump; an interceptor drain; sewage tank pumps; pump control floats; effluent filters; pipes connecting multiple sewage tanks; OSS inspection boxes and ports where a sewage tank, treatment component, or soil dispersal component does not need to be replaced; and the replacement of a small section ten (10) feet or less of the SSAS damaged as the result of digging into it as part of an OSS evaluation.

"Moderate structure" means well-formed distinct peds evident in undisturbed soil. When disturbed, soil material parts into a mixture of whole peds, broken peds, and material that is not in peds.

"Monitoring" means periodic or continuous checking of an OSS, which is performed by observations and measurements, to determine if the OSS is functioning as intended and if OSS maintenance is needed. Monitoring also includes maintaining accurate records that document monitoring activities.

"Monitoring firm" means a firm certified by the Health Officer to operate, maintain, and/or monitor an OSS.

"Monitoring specialist" means an OSS professional who performs monitoring and maintenance on OSS as specified in section 23.

"Non-conforming system" means an OSS which is:

1. Not in compliance with the conditions specified on the approved On-site Sewage System Application, approved permit, approved design, or accepted as-built or record drawing; or
2. Not being operated consistent with its size and design; or

3. Not in compliance with an Operational Certificate where one is required; or
4. Failing, or
5. Not in conformance with Section 16.

"O&G" means oil and grease, a component of sewage typically originating from food stuffs (animal fats or vegetable oils) or consisting of compounds of alcohol or glycerol with fatty acids (soaps and lotions). Typically expressed in mg/L.

"On-site sewage system (OSS)" means an integrated system of components located on or nearby the property it serves, that conveys, stores, treats, and/or provides subsurface soil treatment and dispersal of sewage. It consists of a collection system, a treatment component or treatment sequence, and a soil dispersal component. An OSS also refers to a holding tank sewage system or other system that does not have a soil dispersal component.

"On-site Sewage System Application (OSSA)" means an application, including a site plan and design, by which the Health Officer shall evaluate and may approve or disapprove a particular lot or tract of land for the installation or repair of an OSS.

"On-site Sewage System Permit (OSSP)" means a permit issued by the Health Officer after reviewing and concluding an On-site Sewage System Application meets all the requirements of this Article. This permit grants authority to the permit holder to install an OSS in accordance with the approved design.

"On-site Sewage System Construction Manual" means the written minimum standards and recommendations for the construction of OSS as updated from time to time by the Health Officer.

"Operating capacity" means the average daily volume of sewage an OSS can treat and disperse on a sustained basis. The operating capacity, which is lower than the design flow, is an integral part of the design and is used as an index in OSS monitoring.

"Operational Certificate" means a certificate issued for a specified period by the Health Officer for the operation and/or use of an OSS as specified in Section 16. The Operational Certificate shall contain conditions for the operation, maintenance, sampling and monitoring of the subject OSS.

"Ordinary high-water mark" means the mark on lakes, streams, and tidal waters, found by examining the beds and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland with respect to vegetation, as that condition exists on the

effective date of this Article, or as it may naturally change thereafter. The following definitions apply where the ordinary high water mark cannot be found:

1. The ordinary high-water mark adjoining marine water is the elevation at mean higher high tide; and
2. The ordinary high-water mark adjoining freshwater is the line of mean high water.

"OSS firm" means a person certified by the Health Officer to perform specified work on OSS

"OSS professional" means an individual certified by the Health Officer under section 23 to perform specified work on OSS in accordance with his or her certificate, or the designated representative of the Health Officer.

"Ped" means a unit of soil structure such as blocks, column, granule, plate or prism formed by natural processes.

"Person" means any individual, corporation, company, association, society, firm, partnership, joint stock company, or any governmental agency, or the authorized agents of any such entities.

"Planned unit development" means a development characterized by a unified site design, clustered residential units and/or commercial units, and areas of common open space.

"Platy structure" means soil that contains flat peds that lie horizontally and often overlap. This type of structure will impede the vertical movement of water.

"Pressure distribution" means a system of small diameter pipes equally distributing effluent throughout a SSAS, as described in the "RS&G for Pressure Distribution Systems" by the Washington State Department of Health as updated. A subsurface drip system may be used wherever this Article requires pressure distribution.

"Pressure distribution system" means an OSS consisting of a sewage tank and a subsurface soil absorption system with pressure distribution of the effluent. The acceptable design, operation and maintenance, and performance monitoring requirements are described in the current "Recommended Standards and Guidance for Pressure Distribution Systems" published by the Washington State Department of Health."

"Professional engineer" means an individual who is currently licensed as an engineer under the provisions of chapter 18.43 RCW.

"Proprietary product" means a sewage treatment and distribution technology, method or material subject to a patent or trademark.

“Public domain technology” means a sewage treatment and distribution technology, method, or material not subject to a patent or trademark.

"Public sewer system" means a sewerage system:

1. Owned or operated by a city, town, municipal corporation, county, or other approved ownership consisting of a collection system and necessary trunks, pumping facilities and a means of final treatment and disposal; and
2. Approved by or under permit from the Washington State Department of Ecology, the Washington State Department of Health and/or the Health Officer.

"Pumper" means an OSS professional who removes and transports sewage from OSS and performs limited maintenance as specified in section 23.

"Pumping firm" means an OSS firm certified by the Health Officer to remove and transport sewage or septage from OSS.

"Record drawing" means an accurate graphic and written record of the location and features of the OSS that are needed to properly monitor, operate, and maintain that OSS. The record drawing is often referred to as the “as-built.”

"Registered Sanitarian" means an individual who is registered and in good standing with the Washington State Board of Registered Sanitarians.

"Remediation" means the use of proprietary methods or products short of a repair intended for dispersal component restoration, such as methodologies to reduce the sewage quantity, reduce organic load, rest a drain field, and/or other means to remove or reduce a biomat clog at the infiltrative surface in order to increase the flow of effluent into the soil.

"Repair" means restoration, by reconstruction, addition to, or replacement of an existing OSS or component of the OSS due to failure or damage.

"Reserve area" means an area of land approved for the installation of a conforming OSS and dedicated for replacement of the OSS upon its failure.

"Residential sewage" means sewage having the constituency and strength typical of wastewater from domestic households.

"Restrictive layer" means a stratum impeding the vertical movement of water, air, and/or growth of plant roots, such as hardpan, claypan, fragipan, caliche, some compacted soils, bedrock and unstructured clay soils. This also includes a water table.

"Rock fragment" means rock or mineral fragments having a diameter of two millimeters or more; for example, gravel, cobbles, stones, and boulders.

"RS&G" means on-site treatment systems Recommended Standards and Guidance documents published and updated by Washington State Department of Health.

"Seepage pit" means an excavation more than three feet deep where the sidewall of the excavation is designed to dispose of sewage tank effluent. Seepage pits may also be called "dry wells".

"Septage" means the mixture of solid wastes, scum, sludge, and liquids pumped from within sewage tanks and other OSS components.

"Septic tank" means a sewage tank that is a watertight treatment receptacle receiving the discharge of sewage from a building sewer or sewers, designed and constructed to permit separation of settleable and floating solids from the liquid, detention and anaerobic digestion of the organic matter, referred to as primary treatment, prior to discharge of the liquid.

"Sewage" means any urine, feces, and the water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments or other places. For the purposes of this Article, "sewage" is generally synonymous with domestic wastewater. Also see "residential sewage."

"Sewage quality" means contents in sewage that include:

1. CBOD₅, TSS, and O&G;
2. Other parameters that can adversely affect treatment. Examples include pH, temperature, and dissolved oxygen;
3. Other constituents that create concerns due to specific site sensitivity. Examples include fecal coliform and nitrogen.

"Sewage tank" means a prefabricated or cast-in-place septic tank, pump tank/dosing chamber, holding tank, grease interceptor, recirculating filter tank or any other tanks as they relate to OSS including tanks for use with proprietary products.

"Shall" means mandatory.

"Site Plan" means a to-scale drawing of a residential or non-residential development. This drawing includes all plan detail relating to property access; drinking water and OSS components; designated building envelope(s); setbacks; zoning, critical areas, and other planning issues; and other pertinent aspects.

"Soil dispersal component" means a technology that releases effluent from a treatment component into the soil for dispersal, final treatment and recycling.

"Soil log" means a detailed description of soil characteristics providing information on the soil's capacity to act as an acceptable treatment and dispersal medium for sewage.

"Soil scientist" means an individual certified by the American Society of Agronomy as a Certified Professional Soil Scientist.

"Soil type" means a numerical classification of fine earth particles and coarse fragments as set forth in Table V.

"SSAS" or "subsurface soil absorption system" means a soil dispersal component of trenches three feet or less in width or beds between three and ten feet in width, containing either a distribution pipe within a layer of drainrock covered with a geotextile, or an approved gravelless distribution technology, designed and installed in original, undisturbed unsaturated soil providing at least minimal vertical separation as established in this Article, with either gravity or pressure distribution of the treatment component effluent, for the purpose of receiving effluent and transmitting it into the soil.

"Strong structure" means peds are distinct in undisturbed soil. They separate cleanly when soil is disturbed, and the soil material separates mainly into whole peds when removed.

"Subdivision" means a division of land or creation of lots or parcels, described under chapter 58.17 RCW.

"Subsurface drip system" means an efficient pressurized sewage distribution system that can deliver small, precise doses of effluent to soil surrounding the drip distribution piping (called dripline) as described in the Washington State Department of Health "RS&G for Subsurface Drip Systems."

"Surface water" means any body of water, whether fresh or marine, flowing or contained in natural or artificial unlined depressions continuously for at least four consecutive months, including natural and artificial lakes, ponds, springs, rivers, streams, swamps, marshes, irrigation canals, ditches, and tidal waters.

"Timed dosing" means delivery of discrete volumes of sewage at prescribed time intervals.

"Treatment standard 1" used in previous versions of this Article means a thirty-day average of less than 10 milligrams per liter of biochemical oxygen demand (5 day BOD₅), 10 milligrams per liter of total suspended solids (TSS), and a thirty-day geometric mean of less than 200 fecal coliform per 100 milliliters.

"Treatment standard 2" used in previous versions of this Article means a thirty-day average of less than 10 milligrams per liter of biochemical oxygen demand (5 day BOD₅), 10 milligrams per liter of total suspended solids (TSS), and a thirty-day geometric mean of less than 800 fecal coliform per 100 milliliters.

"Treatment component" means a technology that treats sewage in preparation for further treatment and/or dispersal into the soil environment. Some treatment components, such as mound systems, incorporate a soil dispersal component in lieu of separate treatment and soil dispersal components.

"Treatment level" means one of six levels (A, B, C, D, E, & N) used in this Article to:

1. Identify treatment component performance demonstrated through requirements specified in WAC 246-272A-0110; and
2. Match site conditions of vertical separation and soil type with treatment components. Treatment levels used in this Article are not intended to be applied as field compliance standards. Their intended use is for establishing treatment product performance in a product testing setting under established protocols by qualified testing entities.

"Treatment sequence" means any series of treatment components that discharges treated sewage to the soil dispersal component.

"Trench" means a soil dispersal component consisting of an excavation with a width of three feet or less.

"TSS" means total suspended solids, a measure of all suspended solids in a liquid, typically expressed in mg/L.

"Unit volume of sewage" means:

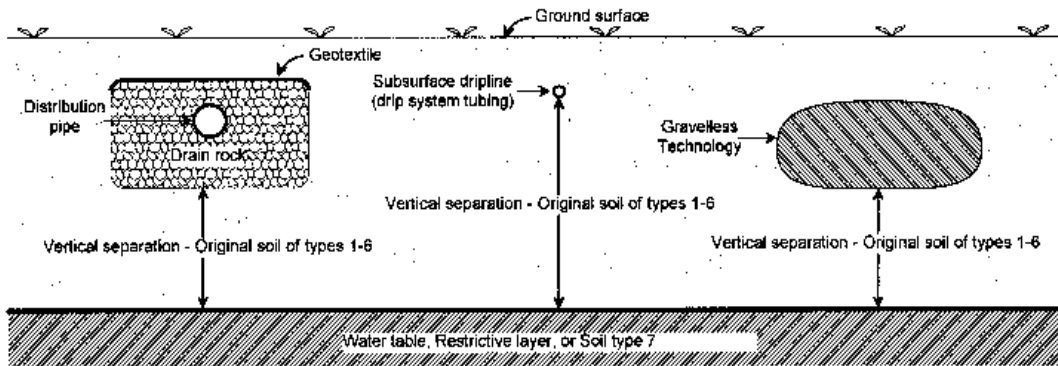
1. Flow from a single-family residence;
2. Flow from mobile home site in a mobile home park; or
3. 450 gallons of sewage per day where the development is not single-family residences or a mobile home park.

"Unknown system" means an OSS that exists without Thurston County sewage system records.

"Up-gradient" means the direction, away from an object, of liquid flow on the surface of the ground or upon encountering a water table or a restrictive layer.

"Vertical separation" means the depth of unsaturated, original, undisturbed soil of soil types 1-6 between the bottom infiltrative surface of a soil dispersal

component and the highest seasonal water table, a restrictive layer, or soil type 7 as illustrated below by the profile drawing of a subsurface soil absorption system:



"**Very gravelly**" means soil containing thirty-five percent or more, but less than sixty percent rock fragments by volume.

"**Water table**" means the upper surface of the ground water, whether permanent or seasonal. Also see "ground water."

"**Well**" means any excavation that is constructed when the intended use of the well is for the location, diversion, artificial recharge, observation, monitoring, dewatering or withdrawal of ground water for agricultural, municipal, industrial, domestic, or commercial use. Excluded are temporary observation or monitoring wells used to determine the depth to a water table for locating an OSS; observation or monitoring wells used to measure the effect of an OSS on a water table; and interceptor or curtain drains constructed to lower a water table.

SECTION 4 APPLICABILITY AND GENERAL REQUIREMENTS.

4.1 The Health Officer:

4.1.1 Shall apply this Article to OSS treating sewage and dispersing or disposing of effluent from residential sewage sources;

4.1.2 Shall apply this Article to OSS for sources other than residential sewage, excluding industrial wastewater, if pretreatment, siting, design, installation, and operation and maintenance measures provide treatment and effluent dispersal equal to that required of residential sewage.

4.1.3 Shall not apply the location and design requirements in this Article to any *conforming* OSS existing as of the effective date of this Article, except when one of the following is proposed:

- 4.1.3.1 A repair or replacement - requirements in section 17 must be met;
 - 4.1.3.2 An expansion - as noted in section 18, new construction standards as defined in this Article must be met; or
 - 4.1.3.3 An addition - must be served by a conforming OSS and the addition shall not reduce the potential for a repair to the OSS should it fail in the future.
- 4.1.4 Shall apply the provisions of this Article in a manner consistent with sewerage, water quality and waste management plans within Thurston County.
- 4.1.5 Shall require OSS to be abandoned and connection to sewer in accordance with section 6.
- 4.1.6 Shall charge the fees set forth in the fee schedule in Article I, Appendix A.
- 4.2 Preliminary plats specifying general methods of sewage treatment, OSS designs and locations approved prior to the effective date of this Article shall be acted upon in accordance with regulations in force at the time of preliminary plat approval for a maximum period of five years from the date of approval.
- 4.3 A complete, valid, unexpired OSSA submitted, but not approved, prior to the effective date of this Article:
- 4.3.1 Shall be acted upon in accordance with regulations in force at the time of application submittal;
 - 4.3.2 Shall be modified to include additional requirements if the Health Officer determines that a serious threat to public health exists.
- 4.4 The Washington State Department of Ecology has authority and approval over:
- 4.4.1 Domestic or industrial wastewater under chapter 173-240 WAC; and
 - 4.4.2 OSS using mechanical treatment, or lagoons, with ultimate design flows above 3,500 gallons per day.
- 4.5 Where this Article conflicts with chapter 90.48 RCW, Water Pollution Control, the requirements of chapter 90.48 RCW apply.

- 4.6 Every residence, place of business or other building where persons congregate, reside or are employed, to which a public sewer system is not physically accessible or available, shall be provided with a water-flush toilet or approved alternative device and shall be connected to a conforming OSS which shall be operated and maintained in such a manner to meet the requirements of this Article. Other places where persons congregate (and no building exists) shall be provided with adequate sewage facilities/devices as may be appropriate to protect the public health.
- 4.7 Sewage from any OSS or any other source shall not be discharged to surface water, upon the surface of the ground, or managed in any manner so as to constitute a failure as defined by this Article. This requirement shall not apply to septage or sewage treatment plant waste discharged in accordance with a permit from the Washington State Department of Ecology or a permit issued pursuant to Article V of this code.
- 4.8 Refusal, failure or neglect to comply with any notice or order of the Health Officer issued pursuant to this Article shall be considered a violation of this code.
- 4.9 Whenever it is brought to the attention of the Health Officer that any unsanitary conditions exist or that any construction or work regulated by this Article is dangerous, unsafe, unsanitary, or a menace to life, health or property, or otherwise in violation of this Article, the Health Officer shall investigate and upon determining the information to be factual, shall order any person using or maintaining any such condition or responsible for the use thereof to repair, alter, change, remove or demolish the same as the Health Officer may consider necessary for the proper protection of life, health or property. The Health Officer may also require vacation of the premises until the violation or nuisance is abated or corrected. Any such order of the Health Officer shall be in writing, addressed to the owner, agent, or person responsible for the premises on which the condition exists and shall specify the date or time for compliance with such order.
- 4.10 This Article does not apply to facilities regulated under chapter 90.46 RCW, Reclaimed Water Use.

SECTION 5 OSS PRODUCTS AND TECHNOLOGIES.

- 5.1 The Health Officer shall only approve OSS for which there are RS&G's or proprietary products that are on the list of registered treatment or distribution products maintained by the Washington State Department of Health under chapter 246-272A WAC. Proprietary devices may only be approved if accompanied by an operation and maintenance manual that meets the requirements of section 16. Design, installation, operation and maintenance of all OSS are required to comply with the applicable RS&G's.

5.2 The Health Officer:

5.2.1 May require performance monitoring or sampling of any OSS in accordance with the RS&G or policies established by the Health Officer.

5.2.2 Shall charge fees to cover the costs for monitoring OSS performance in accordance with Appendix A of Article I.

5.3 The Health Officer may issue a product development permit (PDP) for any proprietary treatment component or sequence in accordance with WAC 246-272A-0170. In order to protect public health during the development period, a complete OSS meeting the requirements of this Article and the site must be installed. The product under development may then be added to the treatment system allowing the product developer to gather data about the product's performance in the field. The PDP allows product developers to explore and develop new technologies prior to product testing and registration under WAC 246-272A-0110 and WAC 246-272A-0120. The PDP is not an alternative to testing and registration.

5.3.1 An application for a PDP shall include all of the following:

5.3.1.1 Proof of an existing conforming OSS in compliance with all Thurston County requirements, or a permit for a conforming OSS. The conforming OSS must be installed in its entirety before the PDP becomes valid;

5.3.1.2 A description of the product under development including performance goals and a description of how the OSS will be used to treat sewage;

5.3.1.3 Documentation of financial assurance that will cover the correction of any potential public health threats or environmental damage resulting from the use of the product under development. Instruments of financial assurance include:

5.3.1.3.1 An irrevocable letter of credit in the amount required by the Health Officer issued by an entity authorized to issue letters of credit in Washington State;

5.3.1.3.2 Cash or security deposit payable to the Thurston County Health Department in the amount required by the Health Officer; or

- 5.3.1.3.3 Any other financial assurance that satisfies the Health Officer.
- 5.3.1.4 Documentation signed by the owner of the proposed product development site allowing access to the Health Officer for inspection of the site; and
- 5.3.1.5 Any other information required by the Health Officer.
- 5.3.2 The Health Officer may stipulate additional requirements for a PDP necessary to assure the performance of the conforming OSS, including providing performance data to the Health Officer.
- 5.3.3 A PDP is a site-specific permit. Product development at multiple sites requires a PDP for each site.
- 5.3.4 During the term of the PDP, product development, testing and sampling are under the full control of the product developer and all data collected is considered proprietary information.
- 5.3.5 A PDP is valid for one year and may be renewed by the Health Officer.
- 5.3.6 The product development period is over when the original PDP or any subsequently renewed permits have expired. At this time the product developer:
 - 5.3.6.1 Shall, at the direction of the Health Officer, remove the product under development from the site, reestablishing all appropriate plumbing and power connections for the conforming OSS.
 - 5.3.6.2 May subject the product to performance testing described in WAC 246-272A-0110 in order to allow the product to be eligible for registration with the Washington State Department of Health.
- 5.3.7 The Health Officer may revoke or amend a PDP:
 - 5.3.7.1 If the continued operation or presence of the product under development:
 - 5.3.7.1.1 Presents a risk to public health or the environment;
 - 5.3.7.1.2 Causes adverse effects on the proper function of the conforming OSS on the site; or

5.3.7.1.3 Leaks or discharges sewage on the surface of the ground.

5.3.7.2 If the developer fails to comply with any requirements stipulated on the permit by the Health Officer.

5.3.8 The Health Officer may charge fees adequate to administer the PDP program.

5.4 OSSA and OSSP are required for the installation or use of a remediation technology. Procedures for permitting, use and installation of remediation shall comply with the RS&G for Remediation Technologies and Processes for On-site Wastewater Treatment Systems. Prior to issuing a permit, an assessment report from a designer shall be submitted to the Health Officer that identifies potential factors that may have contributed to the disorder or deterioration of the OSS and how the factors will be addressed, including construction permit, modification and maintenance records, component settings, a review of the monitoring and maintenance the OSS has received, actual sewage flows, a determination of the actual hydraulic and organic loading rates compared to actual design flows, an inspection and verification of the performance of all OSS components, a review of soils to verify that the soil descriptions in the design are accurate, and any other factors that may be contributing to poor OSS performance.

SECTION 6 CONNECTION TO PUBLIC SEWER SYSTEM.

6.1 When adequate public sewer services are available within two hundred feet of the property line of property served by an OSS, the Health Officer, upon the failure of an existing OSS, may:

6.1.1 Require hook-up to a public sewer system; or

6.1.2 Approve the repair of the OSS only if a conforming OSS can be designed and installed, and if repair of the OSS is acceptable to the sewer utility that would be providing sewer service.

6.2 Except as noted in subsection 6.1, the owner of a failure shall abandon the OSS under section 19 and connect the residence or other facility to a public sewer system when:

6.2.1 The distance between the property line of the property served by the OSS and an adequate public sewer is two hundred feet or less; and

6.2.2 The sewer utility allows the sewer connection.

6.3 The owner of a property served by an OSS where horizontal separation between the dispersal component was reduced as allowed by Table VI

shall abandon the OSS according to the requirements of section 19 and connect the residence or other facility to a public sewer system when:

- 6.3.1 Connection is deemed necessary by the Health Officer to protect public health; and
 - 6.3.2 An adequate public sewer becomes available within two hundred feet of the property line; and
 - 6.3.3 The sewer utility allows the sewer connection.
- 6.4 Any property served by an OSS shall be connected to a public sewer system when the public sewer system is available within 200 feet of the property line and the following conditions are met:
- 6.4.1 The public sewer system has the capacity to handle additional sewage; and
 - 6.4.2 The public sewer lines are designed to accommodate the connection of building sewers; and
 - 6.4.3 The connection is consistent with the Thurston County Sewerage General Plan and municipal comprehensive sewerage plans; and
 - 6.4.4 Such connection is permitted by the sewer utility; and
 - 6.4.5 The Health Officer determines the connection is necessary to protect surface water, ground water, or otherwise protect public health. This determination of necessity will be based on aquifer vulnerability, water quality correction and water contamination prevention information.
- 6.5 The Board of Health may require the abandonment of OSS and connection to public sewer systems where the following conditions exist:
- 6.5.1 The area is within the an incorporated city, its urban growth area, or a public sewer system service area; and
 - 6.5.2 The public sewer system has the capacity and the connection is permitted by the sewer utility; and
 - 6.5.3 A groundwater or surface water pollution problem has been confirmed in excess of state or federal water quality limits or adopted county action levels; the pollutant of concern is associated with OSS; and the area is within the aquifer recharge area or the surface water drainage basin where the water quality problem exists.

- 6.5.4 The Health Officer determines the OSS are, more likely than not, significant contributors to the pollutant level based on the density, design or condition of the OSS and/or the geology where the OSS are located.
- 6.5.5 Where the above criteria are met and the Board of Health determines that connection to sewer is necessary to protect surface water, ground water, or otherwise protect public health based on aquifer vulnerability, water quality correction and water contamination prevention information, the Health Officer shall issue an order to the owners of properties served by OSS in the affected area to connect to sewer or abandon the existing OSS. The Health Officer shall establish a reasonable schedule for compliance. The Health Officer shall make a request to the Board of Health to impose a moratorium on all new OSS within the affected area, in conjunction with the order to abandon the OSS and connect to public sewer. The Health Officer shall notify property owners of the order where OSS permits have been approved but have not yet been constructed.
- 6.6 The Health Officer shall require a new development or a development with a failing OSS to connect to a public sewer system if it is required by the county Sewerage General Plan or a municipal comprehensive sewerage plan.
- 6.7 The Health Officer may require a new development to connect to a public sewer system to protect public health.
- 6.8 Upon connection of any building to a public sewer system, all sewage tanks shall immediately be abandoned in accordance with section 19.

SECTION 7 LARGE ON-SITE SEWAGE SYSTEMS (LOSS).

- 7.1 The jurisdictional authority between the Department and the Washington State Department of Health for the review and approval of LOSS shall be described in a contractual agreement between the departments. Lacking such an agreement, DOH shall retain jurisdictional authority for LOSS.
- 7.2 Persons proposing a new LOSS for which the Health Officer has jurisdiction by contractual agreement with DOH shall meet the requirements of this Article and requirements of chapter 246-272B WAC and design standards adopted by the Washington State Department of Health.

SECTION 8 OSS UNDER 3500 GALLONS PER DAY AND LOSS UNDER HEALTH OFFICER JURISDICTION.

8.1 Prior to beginning the installation of an OSS or component thereof, a person proposing the installation or repair (excluding a minor repair) of an OSS shall submit a complete OSSA to the Health Officer and obtain an OSSP. The OSSA shall contain the following, at a minimum:

8.1.1 General information including:

- 8.1.1.1 Name and address of the property owner and the applicant, if different; and
- 8.1.1.2 Parcel number, address, if available, and the legal description of the site; and
- 8.1.1.3 Source of drinking water supply. If the source is a public water supply, the name and State identification number shall be included; and
- 8.1.1.4 Identification if the property is within the boundaries of a recognized sewer utility; and
- 8.1.1.5 Size of the parcel; and
- 8.1.1.6 Type of approval for which application is being made, for example, new installation, expansion, repair, or modification; and
- 8.1.1.7 Source of sewage, for example, residential, restaurant, or other type of business; and
- 8.1.1.8 Location of utilities; and
- 8.1.1.9 Name, signature and stamp of the designer; and
- 8.1.1.10 Date of application; and
- 8.1.1.11 Name and signature of the property owner or the contract purchaser of the property, or their authorized agent.

8.1.2 The soil and site evaluation as specified in section 10. The soil and site evaluation is not required for applications proposing only the replacement of sewage tanks.

- 8.1.3 A complete, detailed, and dimensional site plan including:
- 8.1.3.1 Designated areas for the proposed primary and reserve OSS; and
 - 8.1.3.2 The location of all soil test pits and other soil tests for the OSS. Test pits are not required for applications proposing only the replacement of sewage tanks; and
 - 8.1.3.3 General topography and/or slope of the site; and
 - 8.1.3.4 Site drainage characteristics; and
 - 8.1.3.5 The location of existing and proposed encumbrances affecting OSS placement, including legal easements and access documents if any component of the OSS is not on the lot where the sewage originates. Copies of legal access documents and/or easements and their recording numbers must be furnished; and
 - 8.1.3.6 Location, size, shape and placement of all existing buildings on the site showing their relationship to the OSS, wells, underground and surface storage tanks, swimming pools, water supply lines, property lines and easements; and
 - 8.1.3.7 The location of all existing and proposed wells and springs on the subject property and the location of all existing wells and springs on adjacent properties within one hundred (100) feet of the property lines. If no wells or springs are located, designer shall so affirm in writing on the design; and
 - 8.1.3.8 Any sewage tank and drain field and designated reserve area locations on the subject property and also any OSS and designated reserve area locations, proposed or existing, on adjacent property within one hundred (100) feet of any existing or proposed wells on the applicant's site. If no OSS are located, designer shall so affirm in writing on the design; and
 - 8.1.3.9 Direction of flow and discharge point of all surface and subsurface water interception drains and ditches; and
 - 8.1.3.10 Location, size and shape of area in which OSS is to be installed, distances from designated area to any cuts, banks, terraces, foundations, property lines,

wells (including those on neighboring property), lakes, streams, swamps, marshes, salt water beaches, driveways, walkways, patios, water lines, drainage ditches or fills shall be indicated; and

8.1.3.11 Location of soil log test pits or sieve sample holes shall be spaced uniformly over the proposed drain field site and reserve area. The test pits shall be identified by numbers. At least three (3) test pits (2 in the proposed primary drain field area and 1 in the proposed reserve area) shall be required for each lot. Additional test pits may be required by the Health Officer as deemed necessary. The number of test pits may be reduced at the discretion of the Health Officer if adequate soils information is available. Test pits shall be provided in sufficient numbers or detail to allow the determination of any restrictive layer; and

8.1.3.12 If the property has been platted, the application shall contain the lot number and the short or large lot plat number or the plat name if a long plat. Additionally, if there have been any other land use actions pertaining to the lot, the appropriate land use action number shall be included; and

8.1.3.13 An arrow indicating north; and

8.1.3.14 Information required by other local agencies.

8.1.4 A detailed OSS design meeting the requirements of section 11. A design is not required for applications proposing only the replacement of sewage tanks. The design shall include all of the following:

8.1.4.1 Dimensional drawings showing the location of components of the proposed OSS, and for the reserve area if site characteristics will require the reserve system to differ significantly from the primary area. Examples of differing significantly may include, but are not limited to, such things as (a) a primary trench SSAS with a reserve area mound or a reserve area proprietary device, (b) a primary proprietary device of one kind with a reserve area proprietary device of another kind, (c) a reserve area that requires an additional major component such as a sand filter, or (d) other similar differing reserve area methods. Examples of methods that do not differ significantly for purposes of this subsection include,

but are not limited to, such things as (a) a primary trench SSAS of one trench size or depth with a reserve area trench SSAS of another size or depth, (b) a primary mound with a reserve area mound/sand filter combination, (c) a primary proprietary device of one category with a reserve area primary proprietary device of the same category but of a different brand or manufacturer, or (d) other similar methods.

8.1.4.2 Vertical cross-section drawings showing:

8.1.4.2.1 The depth of the soil dispersal component, the vertical separation, and depth of cover material; and

8.1.4.2.2 Other OSS components constructed at the site.

8.1.4.3 Calculations and assumptions supporting the proposed design, including:

8.1.4.3.1 Soil type; and

8.1.4.3.2 Hydraulic loading rate in the soil dispersal component; and

8.1.4.3.3 OSS operating capacity and design flow.

8.1.5 Using a bench mark that will remain in place throughout the development of the project as the reference point, relative elevations of the plumbing stub-out invert, the sewage tank inlet invert, the pump “on” and the ground elevation of the dispersal component area before installation and after installation, and elevation of the dispersal component laterals inverts.

8.1.6 Directions of surface drainage after final grading.

8.1.7 Results of all required soil logs and soil analysis.

8.1.8 Drawings that are to scale with dimensions indicated, using a scale of one (1) inch equals twenty (20) feet or one (1) inch equals thirty (30) feet for the design. Other scales may be used for depiction of large parcel dimensions. Accuracy in the design drawings shall be sufficient for review.

8.1.9 Indication that the drain field laterals or corners of other dispersal components are staked in the field for inspection and review.

- 8.1.10 Such additional information as deemed necessary by the Health Officer.
- 8.2 For a "minor repair" no OSSA or OSSP is necessary. Minor repairs do not include repair, replacement or alterations or combinations of multiple SSAS components, such as replacing pipe and gravel, distribution box replacement, or any repair or replacement activity that disturbs, destroys or may affect the soil at or near the soil absorption interface of a SSAS or other dispersal component.
- 8.3 The Health Officer shall:
- 8.3.1 Issue an OSSP when the information submitted under subsections 5.4 and 8.1 meets the requirements of this Article. A permit for a new or expanding development will not be issued if a violation of Article III of the Sanitary Code or chapter 246-290 WAC or chapter 246-291 WAC exists on the property.
- 8.3.2 Charge fee for reviewing an OSSA and issuing an OSSP in accordance with the fee schedule contained in Appendix A of Article I.
- 8.3.3 Specify the expiration date on the OSSA:
- 8.3.3.1 For any proposal other than a repair, a valid, unexpired OSSA shall expire one year after the date of application. This period may be extended for a single one year period without charge, if specifically requested in writing by the applicant prior to the expiration date. A revision to a design or site plan shall not change the OSSA expiration date for any proposal including a repair.
- 8.3.3.2 For a proposal other than a repair, a valid, unexpired OSSP shall expire three years after the date of the conditional site approval. If a building permit is obtained during the three year period of validity for the OSSP, the OSSP will be valid for three years or as long as the building permit is valid, whichever is greater, but in no case shall the validity of an OSSP exceed five (5) years from the date of the conditional site approval. A revision to a design or site plan shall not change the OSSP expiration date for any proposal including a repair.
- 8.3.3.3 An OSSP for a proposal other than a repair may be renewed after it has expired if all of the following conditions are met:

- 8.3.3.3.1 The applicant pays the renewal fee as specified in Appendix A of Article I; and
 - 8.3.3.3.2 The applicant demonstrates to the satisfaction of the Health Officer that there has been no change to the building site or development proposal which had been previously approved; and
 - 8.3.3.3.3 The Health Officer determines that the previous approval fully complies with all applicable laws in effect at the date of the application for renewal.
- 8.3.3.4 For a repair, the OSSA and OSSP shall expire one year after the date of application. An extension of one year may be authorized by the Health Officer if requested prior to the expiration date of the OSSA or OSSP and if there are extenuating circumstances, such as difficult site conditions, abnormal rainfall, or difficulty in developing an operation and maintenance manual. If an extension is granted, the requirements that applied at the time of the application will be the applicable standards. Expired OSSA and OSSP shall not be renewed or extended.
- 8.3.4 Include a reminder on the OSSA of the applicant's right of appeal.
- 8.3.5 Within 20 working days after submittal of a complete OSSA, either issue an OSSP, disapprove the OSSA or inform the applicant or his/her representative as to the status of the OSSA.
- 8.4 The Health Officer will allow a temporary repair to be made on a failing OSS without a repair OSSA and OSSP on those days when the Health Officer's office is closed and when such repair is essential to the continued use of the OSS. In such a case the owner of the OSS shall submit an OSSA within five (5) working days after the temporary repair has begun. Such repairs will be subject to any additional requirements necessary to assure the repair meets the provisions of this Article.
- 8.5 The Health Officer may revoke or deny an OSSA or OSSP for the installation of an OSS for due cause. Examples include, but are not limited to:
- 8.5.1 Exclusion, misrepresentation or concealment of material fact in information submitted to the Health Officer; or

- 8.5.2 Site conditions that have changed since the designer and/or Health Officer reviewed the site; or
 - 8.5.3 Failure to meet conditions of the approval or this Article, or
 - 8.5.4 Construction or continued use of an OSS that threatens the public health.
- 8.6 Before the Health Officer issues an OSSP allowing the installation of an OSS to serve either structures on more than one lot or a structure or structures with multiple ownership or any LOSS or COSS, the applicant shall show:
- 8.6.1 An approved public entity owning or managing the OSS in perpetuity; or
 - 8.6.2 An arrangement with a management entity acceptable to the Health Officer, recorded as a notice to the title, lasting until the OSS is no longer needed, and containing, but not limited to:
 - 8.6.2.1 A recorded legal easement or other recorded access document, running with the land, whether or not the properties are contiguous or under the same ownership, allowing access for construction, operation and maintenance, and repair of the OSS; and
 - 8.6.2.2 Identification of an adequate financing mechanism to assure the funding of operation, maintenance, and repair of the OSS.
- 8.7 The Health Officer shall not delegate the authority to issue permits.
- 8.8 The Health Officer may stipulate additional requirements for approval of a particular application if necessary for public health protection.

SECTION 9 LOCATION.

9.1 Persons shall design and install OSS to meet the minimum horizontal separations shown in Table I, Minimum Horizontal Separations:

**TABLE I
Minimum Horizontal Separations**

| Items requiring setback | From edge of dispersal component and reserve area | From sewage tank and distribution box | From building sewer, collection, and non-perforated distribution pipe or pressure line |
|--|---|---------------------------------------|--|
| Nonpublic well or suction line | 100 ft. | 50 ft. | 50 ft. |
| Public drinking water well | 100 ft. | 100 ft. | 100 ft. |
| Public drinking water spring measured from the ordinary high-water mark | 200 ft. | 200 ft. | 100 ft. |
| Spring or surface water used as drinking water source measured from the ordinary high-water mark | 100 ft. | 50 ft. | 50 ft. |
| Pressurized water supply line | 10 ft. | 10 ft. | 10 ft. |
| Decommissioned well (decommissioned in accordance with chapter 173-160 WAC) | 10 ft. | N/A | N/A |
| Surface water measured from the ordinary high-water mark | 100 ft. | 50 ft. | 10 ft. |
| Building foundation/in-ground swimming pool | 10 ft. | 5 ft. | 2 ft. |
| Property or easement line | 5 ft. | 5 ft. | N/A |
| Interceptor/curtain drains/drainage ditches: | | | |
| Down-gradient | 30 ft. | 5 ft. | N/A |
| Up-gradient | 10 ft. | N/A | N/A |
| Other site features that may allow effluent to surface: | | | |
| Down-gradient | 30 ft. | 5 ft. | N/A |
| Up-gradient | 10 ft. | N/A | N/A |
| Down-gradient cuts or banks with at least 5 ft. of original, undisturbed soil above a restrictive layer due to a structural or textural change | 25 ft. | N/A | N/A |
| Down-gradient cuts or banks with less than 5 ft. of original, undisturbed, soil above a restrictive layer due to a structural or textural change | 50 ft. | N/A | N/A |
| Other adjacent soil dispersal components /subsurface storm water infiltration systems | 10 ft. | N/A | N/A |

- 9.2 Where any condition indicates a greater potential for contamination or pollution, the Health Officer may increase the minimum horizontal separations. Examples of such conditions include excessively permeable soils, unconfined aquifers, shallow or saturated soils, dug wells, and improperly abandoned wells.
- 9.3 Where a property line, easement line, in-ground swimming pool, or building foundation is up-gradient from an OSS component, its horizontal separation from the OSS component may be reduced to not less than two feet.
- 9.4 Prior to OSS permit approval, any wells within the area of horizontal separation of 100 feet of a dispersal component shall be decommissioned in accordance with Article III, unless the Health Officer allows reduction of the horizontal separation between an OSS dispersal component and an individual water well, individual spring, or surface water that is not a public water source. Except as provided in section 9.4.4, the horizontal separation may be reduced to a minimum of 75 feet if the applicant demonstrates:
- 9.4.1 Adequate protective site specific conditions, such as physical settings with low hydro-geologic susceptibility from contaminant infiltration. Examples of such conditions include evidence of confining layers and or aquatards separating any potable water from the OSS treatment zone, excessive depth to groundwater, down-gradient contaminant source, or outside the *zone of influence*; or
 - 9.4.2 Design and proper operation of an OSS assuring enhanced treatment performance beyond that accomplished by meeting the vertical separation and effluent distribution requirements described in Table II; or
 - 9.4.3 A combination of protective site-specific conditions and enhanced treatment performance measures as set forth in subsections 9. 4.1 and 9.4.2.
 - 9.4.4 No reduction of horizontal separation between an OSS dispersal component and surface water will be allowed if the surface water is Summit Lake, Lake St. Clair or marine tidal waters upon tidelands.
- 9.5 If surface water is used as a public drinking water supply, the designer shall locate the OSS outside of the required source water protection area.
- 9.6 The Health Officer may approve a sewer transport line within 10 feet of a water supply line if the sewer line is constructed in accordance with WDOE's "Criteria for Sewage Works Design," as updated.

- 9.7 Persons shall design and/or install soil dispersal components only where:
- 9.7.1 The slope is less than forty-five percent (twenty-four degrees); and
 - 9.7.2 The area is not subject to any of the following:
 - 9.7.2.1 Encroachment by buildings or construction such as placement of swimming pools, power poles and underground utilities;
 - 9.7.2.2 Cover by impervious material;
 - 9.7.2.3 Vehicular traffic;
 - 9.7.2.4 Other activities adversely affecting the soil or the performance of the OSS; and
 - 9.7.3 Sufficient reserve area for replacement exists to treat and dispose of 100% of the design flow; and
 - 9.7.4 The land is stable; and
 - 9.7.5 Surface drainage is directed away from the site; and
 - 9.7.6 A minimum of 12 inches of native, original undisturbed soil depth exists in the entire primary and reserve OSS areas, except for repairs under Table VI.

SECTION 10 SOIL AND SITE EVALUATION.

- 10.1 Upon request and submission of an application on forms provided, the Health Officer may review:
- 10.1.1 An individual lot to determine the lot's potential for the installation of an OSS.
 - 10.1.1.1 In addition to the application, the following shall be submitted:
 - 10.1.1.1.1 A site plan showing the lot's location and dimensions and the location of soil test pits. Soil test pits shall be dug as per section 10.3; and
 - 10.1.1.1.2 A fee as specified in Appendix A of Article I.
 - 10.1.1.2 This application and review shall be completely separate from an OSSA process and shall constitute neither a valid application for purposes of future

vesting nor permission from the Health Officer to install an OSS.

10.1.2 A proposed development, prior to the submittal of a formal land use application that proposes using OSS.

10.1.2.1 In addition to the application, the following shall be submitted:

10.1.2.1.1 A site plan showing the property's location and dimensions and the location of soil test pits. Soil test pits shall be dug as per section 10.3; and

10.1.2.1.2 A fee as stated in Appendix A of Article I.

10.1.2.2 This application and review shall constitute neither a valid application for purposes of future vesting nor permission from the Health Officer to install an OSS.

10.2 Soil evaluations are required to be done by designers, soil scientists or the Health Officer. Site evaluations are required to be done by designers or the Health Officer. The person evaluating the soil and/or site shall:

10.2.1 Record all of the following:

10.2.1.1 Unless a reduced number of soil logs is authorized by the Health Officer, observed conditions in soil logs from at least:

10.2.1.1.1 Two soil test pits in the initial soil dispersal component; and

10.2.1.1.2 One soil test pit in the reserve area.

10.2.1.2 The ground water conditions, the date of the observation, and the probable maximum height;

10.2.1.3 The topography of the proposed initial OSS, the reserve area, and those areas immediately adjacent that contain characteristics impacting the design;

10.2.1.4 The drainage characteristics of the proposed initial OSS, the reserve area and those areas immediately adjacent that contain characteristics impacting the design;

- 10.2.1.5 The existence of structurally deficient soils subject to major wind or water erosion events such as slide zones and dunes;
- 10.2.1.6 The existence of designated flood plains;
- 10.2.1.7 The location of existing encumbrances affecting OSS placement, such as:
 - 10.2.1.7.1 Wells and suction lines;
 - 10.2.1.7.2 Water sources and supply lines;
 - 10.2.1.7.3 Surface water;
 - 10.2.1.7.4 Decommissioned/abandoned wells;
 - 10.2.1.7.5 Outcrops of bedrock and restrictive layers;
 - 10.2.1.7.6 Buildings;
 - 10.2.1.7.7 Property lines and lines of easement;
 - 10.2.1.7.8 Interceptors such as footing drains, curtain drains and drainage ditches;
 - 10.2.1.7.9 Cuts, banks, and fills;
 - 10.2.1.7.10 Driveways and parking areas;
 - 10.2.1.7.11 Existing OSS;
 - 10.2.1.7.12 Designated reserve areas;
 - 10.2.1.7.13 Underground utilities; and
 - 10.2.1.7.14 Stormwater infiltration areas.

10.2.2 Use the soil and site evaluation procedures and terminology in accordance with chapter 5 of the On-site Sewage System Construction Manual, United States Environmental Protection Agency, EPA-625/R-00/February 2002 or later version except where modified by, or in conflict with, this Article;

10.2.3 Use the soil names and particle size limits of the United States Department of Agriculture Natural Resources Conservation Service classification system;

- 10.2.4 Determine texture, structure, compaction and other soil characteristics that affect the treatment and water movement potential of the soil by using normal field and/or laboratory procedures such as particle size analysis;
- 10.2.5 Classify the soil as in Table V, Soil Type Descriptions and Maximum Hydraulic Loading Rate:

10.3 The applicant shall:

10.3.1 Prepare the soil log test pit excavation to:

10.3.1.1 Allow examination of the soil profile in its original position by:

10.3.1.1.1 Excavating pits of dimensions that enable observation of soil characteristics by visual and tactile means to a depth sufficient to meet the vertical separation requirements of Table II, or

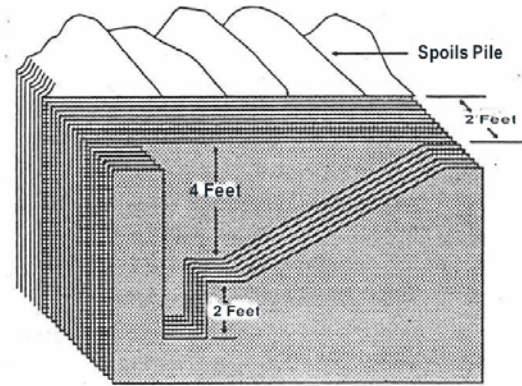
10.3.1.1.2 Stopping at a shallower depth if a water table or restrictive layer is encountered; and

10.3.1.2 Allow determination of the soil's texture, structure, color, bulk density or compaction, water absorption capabilities or permeability, and elevation of the highest seasonal water table; and

10.3.2 Be responsible for constructing and maintaining the soil log excavation in a manner to prevent injury as required by chapter 296-155 WAC.

10.3.3 Prepare access to the test pits by (1) identifying the site location with a sign posted conspicuously at the site entrance along the public road, (2) provide a cleared and marked path through any brush, fences or obstacles to all test pits, and (3) numbering each test pit by a flagged stake or a painted stake.

10.3.4 Place test pits in the proximity of the primary and reserve drain field areas in a manner and location that clearly represents the soil characteristics of the primary and reserve drain field areas. Additional test pits may be required if soil or site anomalies are revealed.



Example of Soil Log Test Pit

10.4 The Health Officer:

10.4.1 Shall require water table measurements to be recorded during months of probable high-water table conditions, if insufficient information is available to determine the highest seasonal water table. When such a wet season study is required or requested, the Health Officer shall render a decision on the height of the water table within 12 months of receiving the application if precipitation conditions are representative for the region, but not before the completion of the wet season study when such study has been required or requested in accordance with policies and procedures adopted by the Health Officer. A longer period of study may be required if precipitation conditions are not representative for the region.

10.4.2 May accept a technical justification report from a soil scientist along with a designer's assessment for review in lieu of wet season study water table measurements described in section 10.4.1. To be accepted, the report shall present evidence that substantiates soil and site suitability for sewage treatment and must include analysis of the following to establish the suitability of the soils and site for an OSS:

- 10.4.2.1 Soil logs in the area of the proposed dispersal component, located in accordance with section 10.2, including a complete description of the soil in accordance with sections 10.2.2, 10.2.3, 10.2.4, and 10.2.5.
- 10.4.2.2 Soil absorption characteristics for soils within the soil profile.
- 10.4.2.3 Redoximorphic features for soils within the soil profile.

- 10.4.2.4 Soil loading rates for all soil textures within the soil profile.
 - 10.4.2.5 A description of any soil compaction or expanding clays within the soil profile.
 - 10.4.2.6 Any saturated soil conditions that appear to exist including restrictive layers and depths.
 - 10.4.2.7 Any disturbed soil conditions that appear to exist including a description of the cause of the disturbance.
 - 10.4.2.8 An evaluation of actual and anticipated water movement through the soil horizons that establishes the soil scientist's conclusion regarding whether or not presumption can be made that unsaturated sewage effluent flow will successfully be achieved.
 - 10.4.2.9 An accompanying assessment from a designer, having the designer's signature and stamp, describing dispersal and subsurface treatment performance presumptions for the dispersal component proposed within the receiving soils that are analyzed in the soil scientist's report. The designer's assessment shall include the designer's result in a conclusion that effective vertical and horizontal separations are adequate so as to protect the ground water and surface water.
- 10.4.3 May require any other soil and site information affecting location, design, or installation.

SECTION 11 DESIGN.

- 11.1 OSS designs shall meet the requirements of the On-site Sewage System Construction Manual and the RS&G's as adopted by the Health Officer. In the event of any conflicting provisions of this Article, the On-site Sewage System Construction Manual or the RS&G's, the provisions shall apply in the following order of precedence: (1) this Article, (2) the On-site Sewage System Construction Manual, and (3) the RS&G's.
- 11.2 OSS may only be designed by designers.
- 11.3 The Health Officer shall require the following design criteria:
 - 11.3.1 All the sewage from the building served shall be directed to the OSS;

- 11.3.2 Sewage tanks shall be on the registered list maintained by the Washington State Department of Health;
- 11.3.3 Sewage tanks shall be shown on the OSS design as having protection against ground water intrusion and surface water inflow in high ground water areas;
- 11.3.4 Drainage from the surface, footing drains, roof drains, subsurface stormwater infiltration systems and other non-sewage drains shall be prevented from entering sewage tanks and the areas where the dispersal component and the reserve area are located;
- 11.3.5 The OSS shall be designed to treat and disperse all sewage generated within the facility to be served by the OSS:
 - 11.3.5.1 For single-family or multiple family residences:
 - 11.3.5.1.1 The operating capacity shall be based on 45 gpd per capita with two people per bedroom;
 - 11.3.5.1.2 The minimum design flow per bedroom per day shall be the operating capacity of ninety gallons multiplied by 1.33 resulting in a minimum design flow of one hundred twenty gallons per bedroom per day;
 - 11.3.5.1.3 A factor greater than 0.33 to account for surge capacity may be required by the Health Officer;
 - 11.3.5.1.4 The Health Officer may require an increase of the design flow for dwellings with anticipated greater flows, such as larger dwellings;
 - 11.3.5.1.5 The minimum design flow shall be two hundred forty gallons per day per residence.
 - 11.3.5.1.6 The minimum design flow shall be one hundred twenty gallons per day per guest residence.
 - 11.3.5.2 For non-residential facilities the design flows noted in the On-site Sewage System Construction Manual United States Environmental Protection Agency, EPA-625/ R-00/008, February 2002, or later version shall be used. Sewage flows from other sources of information may be used in determining OSS design flows if they incorporate both an operating capacity and a surge capacity.

11.3.5.3 For non-residential development where a full set of water conservation methods for a facility can be documented, and where there is an adequate on-going guaranteed use of such methods, the Health Officer may permit a decreased flow with an associated decrease in soil dispersal component sizing.

11.3.5.4 An additional connection to an existing OSS shall not be allowed unless the design flow originally provided for an additional connection.

11.4 The OSS shall be designed to address sewage quality as follows:

11.4.1 For all OSS, the designer shall consider and address:

11.4.1.1 CBOD₅, TSS, and O&G;

11.4.1.2 Other parameters that can adversely affect treatment anywhere along the treatment sequence. Examples include pH, temperature and dissolved oxygen;

11.4.1.3 The sensitivity of the site where the OSS will be installed. Examples include areas where fecal coliform constituents can result in public health concerns, such as shellfish growing areas, designated swimming areas, and other areas identified by the Board of Health through management plan activities;

11.4.1.4 Nitrogen contributions. Where nitrogen has been identified as a contaminant of concern by the Board of Health, nitrogen contamination shall be addressed through lot size and/or treatment.

11.4.2 When proposing the use of OSS for nonresidential sewage, the design shall include:

11.4.2.1 Information to show the sewage is not industrial wastewater;

11.4.2.2 Information to establish the sewage strength and identify chemicals not found in similar levels in residential sewage; and

11.4.2.3 A design providing treatment equal to that required of residential sewage.

11.5 The vertical separation shall be used by the designer consistently throughout the design process to establish the treatment levels and loading rates. The designer shall use the following criteria when developing a design for an OSS:

11.5.1 Treatment levels:

11.5.1.1 Requirements for matching treatment component and method of distribution with soil conditions of the soil dispersal component are listed in Table II. The treatment levels correspond with those established for treatment components under the product performance testing requirements in WAC 246-272A-0110. The method of distribution applies to the soil dispersal component.

11.5.1.2 Disinfection may not be used to achieve the fecal coliform requirements to meet:

11.5.1.2.1 Treatment levels A or B in Type 1 soils; or

11.5.1.2.2 Treatment level C.

TABLE II
Treatment Component Performance Levels and Method of Distribution¹

| Vertical Separation in inches | Soil Type | | |
|----------------------------------|---|---|---|
| | 1 | 2 | 3-6 |
| 12 < 18 | A – pressure distribution with timed dosing | B – pressure distribution with timed dosing | B – pressure distribution with timed dosing |
| ≥ 18 < 24 | B – pressure distribution with timed dosing | B – pressure distribution with timed dosing | B – pressure distribution with timed dosing |
| ≥ 24 < 36 | B – pressure distribution with timed dosing | C – pressure distribution | E – pressure distribution |
| ≥ 36 < 60 | B – pressure distribution with timed dosing | E – pressure distribution | E – gravity ² |
| ≥ 60 | C – pressure distribution | E - gravity ² | E - gravity ² |

¹The treatment component performance levels correspond with those established for treatment components under the product testing requirements in WAC 246-272A-0110.

² When an OSS is proposed to be installed in soil types 1 through 5 that are included in the list of Category I soil series in Chapter 17 of the Thurston County Code (Critical Areas Ordinance) pressure distribution is required at a minimum.

TABLE III
Product Performance Requirements for Proprietary Treatment Products

| Treatment Component/Sequence Category | Product Performance Requirements | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------|---------------|------------------|--------------|--|--|--|-----------------------------|---------------|---------------|------------------|--------------|----------|----|----|------|-----|------|----------|----|----|------|-------|------|----------|----|----|------|--------|------|----------|----|----|------|------|------|----------|-----|----|----|------|------|----------|------|------|------|------|----|
| <p>Category 1 Designed to treat sewage with strength typical of a residential source when sewage tank effluent is anticipated to be equal to or less than treatment level E.</p> | <p align="center">Treatment System Performance Testing Levels</p> <table border="1" data-bbox="643 562 1443 1020"> <thead> <tr> <th data-bbox="643 562 764 615">Level</th> <th colspan="5" data-bbox="764 562 1443 615">Parameters</th> </tr> <tr> <th data-bbox="643 615 764 688"></th> <th data-bbox="764 615 899 688">CBOD₅ (mg/L)</th> <th data-bbox="899 615 1019 688">TSS (mg/L)</th> <th data-bbox="1019 615 1140 688">O&G (mg/L)</th> <th data-bbox="1140 615 1321 688">FC (#/100 ml)</th> <th data-bbox="1321 615 1443 688">TN (mg/L)</th> </tr> </thead> <tbody> <tr> <td data-bbox="643 688 764 741">A</td> <td data-bbox="764 688 899 741">10</td> <td data-bbox="899 688 1019 741">10</td> <td data-bbox="1019 688 1140 741">----</td> <td data-bbox="1140 688 1321 741">200</td> <td data-bbox="1321 688 1443 741">----</td> </tr> <tr> <td data-bbox="643 741 764 793">B</td> <td data-bbox="764 741 899 793">15</td> <td data-bbox="899 741 1019 793">15</td> <td data-bbox="1019 741 1140 793">----</td> <td data-bbox="1140 741 1321 793">1,000</td> <td data-bbox="1321 741 1443 793">----</td> </tr> <tr> <td data-bbox="643 793 764 846">C</td> <td data-bbox="764 793 899 846">25</td> <td data-bbox="899 793 1019 846">30</td> <td data-bbox="1019 793 1140 846">----</td> <td data-bbox="1140 793 1321 846">50,000</td> <td data-bbox="1321 793 1443 846">----</td> </tr> <tr> <td data-bbox="643 846 764 898">D</td> <td data-bbox="764 846 899 898">25</td> <td data-bbox="899 846 1019 898">30</td> <td data-bbox="1019 846 1140 898">----</td> <td data-bbox="1140 846 1321 898">----</td> <td data-bbox="1321 846 1443 898">----</td> </tr> <tr> <td data-bbox="643 898 764 951">E</td> <td data-bbox="764 898 899 951">125</td> <td data-bbox="899 898 1019 951">80</td> <td data-bbox="1019 898 1140 951">20</td> <td data-bbox="1140 898 1321 951">----</td> <td data-bbox="1321 898 1443 951">----</td> </tr> <tr> <td data-bbox="643 951 764 1020">N</td> <td data-bbox="764 951 899 1020">----</td> <td data-bbox="899 951 1019 1020">----</td> <td data-bbox="1019 951 1140 1020">----</td> <td data-bbox="1140 951 1321 1020">----</td> <td data-bbox="1321 951 1443 1020">20</td> </tr> </tbody> </table> <p>Values for Levels A - D are 30-day values (averages for CBOD₅, TSS, and geometric mean for FC.) All 30-day averages throughout the test period must meet these values in order to be registered at these levels. Values for Levels E and N are derived from full test averages.</p> | Level | Parameters | | | | | | CBOD ₅ (mg/L) | TSS (mg/L) | O&G (mg/L) | FC (#/100 ml) | TN (mg/L) | A | 10 | 10 | ---- | 200 | ---- | B | 15 | 15 | ---- | 1,000 | ---- | C | 25 | 30 | ---- | 50,000 | ---- | D | 25 | 30 | ---- | ---- | ---- | E | 125 | 80 | 20 | ---- | ---- | N | ---- | ---- | ---- | ---- | 20 |
| Level | Parameters | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CBOD ₅ (mg/L) | TSS (mg/L) | O&G (mg/L) | FC (#/100 ml) | TN (mg/L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | 10 | 10 | ---- | 200 | ---- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | 15 | 15 | ---- | 1,000 | ---- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | 25 | 30 | ---- | 50,000 | ---- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 25 | 30 | ---- | ---- | ---- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | 125 | 80 | 20 | ---- | ---- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | ---- | ---- | ---- | ---- | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Category 2 Designed to treat high-strength sewage when sewage tank effluent is anticipated to be greater than treatment level E. (Such as at restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc.)</p> | <p>All of the following requirements must be met:</p> <p>(1) All full test averages must meet Level E; and (2) Establish the treatment capacity of the product tested in pounds per day for CBOD₅.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Category 3 Black water component of residential sewage (such as composting and incinerating toilets).</p> | <p>Test results must meet the performance requirements established in the NSF test protocol.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Total Nitrogen Reduction in Categories 1 & 2 (Above)</p> | <p>Test results must establish product performance effluent quality meeting Level N, when presented as the full test average.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

11.5.2 The designer shall determine the minimum treatment level and method of distribution based on the coarsest textured soil within the vertical separation.

11.5.3 Septic tanks shall:

11.5.3.1 Be on the list of on-site sewage tanks maintained by the Washington State Department of Health;

11.5.3.2 Have at least two compartments with the first compartment liquid volume equal to two-thirds of the total liquid volume and configured in accordance with the On-site Sewage System Construction Manual;

11.5.3.3 Have the following minimum liquid volumes:

11.5.3.3.1 For a single-family residence use Table IV, Required Minimum Liquid Volumes of Septic Tanks:

TABLE IV
Required Minimum Liquid Volumes of Septic Tanks

| Number of bedrooms | Required minimum liquid tank volume in gallons |
|-------------------------|--|
| ≤4 | 1000 |
| Each additional bedroom | 250 |

11.5.3.3.2 For OSS treating sewage from a residential source other than one single-family residence, or from a nonresidential source, three times the design flow.

11.5.3.4 Have clean-out and inspection accesses at or above finished grade;

11.5.4 Pump chambers shall:

11.5.4.1 Be on the list of on-site sewage tanks maintained by the Washington State Department of Health;

11.5.4.2 Be sized in accordance with the applicable RS&G and the On-site Sewage System Construction Manual;

11.5.4.3 Have clean-out and inspection accesses at or above finished grade;

11.5.5 All soil dispersal components, except one using a subsurface dripline product, shall be designed to meet the following requirements:

11.5.5.1 Maximum hydraulic loading rates shall be based on the rates described in Table V.

TABLE V
Soil Type Descriptions and Maximum Hydraulic Loading Rate

| Soil Type | Soil Textural Classification Description | Loading Rate for Residential Effluent Using Gravity or Pressure Distribution gal./sq. ft./day |
|--|---|---|
| 1 | Gravelly and very gravelly coarse sands, all extremely gravelly soils excluding Soil types 5 & 6, all soil types with greater than or equal to 90% rock fragments. | 1.0 |
| 2 | Coarse sands. | 1.0 |
| 3 | Medium sands, loamy coarse sands, loamy medium sands. | 0.8 |
| 4 | Fine sands, loamy fine sands, sandy loams, loams. | 0.6 |
| 5 | Very fine sands, loamy very fine sands; or silt loams, sandy clay loams, clay loams and silty clay loams with a moderate structure or strong structure (excluding a platy structure). | 0.4 |
| 6 | Other silt loams, sandy clay loams, clay loams, silty clay loams. | 0.2 |
| 7 Unsuitable for treatment or dispersal | Sandy clay, clay, silty clay and strongly cemented firm soils, soil with a moderate or strong platy structure, any soil with a massive structure, any soil with appreciable amounts of expanding clays. | Not suitable |

- 11.5.5.2 Calculation of the absorption area is based on:
 - 11.5.5.2.1 The design flow in section 11.3; and
 - 11.5.5.2.2 Loading rates equal to or less than those in Table V applied to the infiltrative surface of the soil dispersal component or the finest textured soil within the vertical separation selected by the designer, whichever has the finest texture.
- 11.5.5.3 SSAS beds are only designed in soil types 1, 2, 3 with a width not exceeding 10 feet.
- 11.5.5.4 Individual SSAS laterals greater than one hundred feet in length shall use pressure distribution.
- 11.5.5.5 Community OSS shall:
 - 11.5.5.5.1 Be located only in soil types 1 - 5;
 - 11.5.5.5.2 Be located on slopes of less than thirty percent (17 degrees); and
 - 11.5.5.5.3 Have pressure distribution with timed dosing.
- 11.5.5.6 The infiltrative surface shall not be deeper than three feet below the finished grade. This shall not preclude the use of deeper trenches that are designed per applicable RS&G's. The depth of such an OSS shall not exceed ten feet from the finished grade;
- 11.5.5.7 A minimum of six (6) inches of sidewall must be located in original, undisturbed soil;
- 11.5.5.8 When graveled, use clean gravel covered with a geotextile;
- 11.5.5.9 A spacing center-to-center of three times the trench width; and
- 11.5.5.10 An initial unsettled layer of cover material of between twelve and twenty-four inches, except that drip system cover shall conform to RS&G.
- 11.5.5.11 All soil dispersal components using a subsurface dripline product must be designed to meet the following requirements:

11.5.5.11.1 Calculation of the absorption area is based on the design flow in section 11.3 and loading rates that are dependent on the soil type, other soil and site characteristics, and the spacing of dripline and emitters.

11.5.5.11.1.1 The dripline must be installed a minimum of six inches into original, undisturbed soil;

11.5.5.11.1.2 The drip line shall require timed dosing.

11.5.5.12 Observation ports with caps shall be installed in each independent lateral of SSAS, in mounds, sand-lined trenches and beds, and in sand filters. The observation ports shall extend from the bottom of the gravel (also from the bottom of the sand in mounds and sand filters) to final grade and shall be adequately anchored. Observation ports shall be installed with non-perforated pipe in the gravel and sand portions of the trenches or mound or sand filter so that sewage is not allowed to bypass the treatment component. The portion of the observation ports in the gravel shall be slotted or perforated.

11.5.5.13 OSS shall conform with the On-site Sewage System Construction Manual and the United States Environmental Protection Agency, EPA-625/R-00/008 February 2002 or later version except where modified by, or in conflict with, this Article or other local regulations.

11.5.5.14 For SSAS with drainrock and distribution pipe:

11.5.5.14.1 A minimum of two inches of drainrock is required above the distribution pipe;

11.5.5.14.2 The sidewall below the invert of the distribution pipe is located in original undisturbed soil.

11.5.5.15 The Health Officer may increase the loading rate in Table V up to a factor of two for soil types 1-4 and up to a factor of 1.5 for soil types 5 and 6 if a product tested to meet treatment level C or greater is used. This reduction may not be combined with any other SSAS size reductions.

11.5.6 The primary and reserve areas:

11.5.6.1 The primary and reserve areas must be sized to at least one hundred percent of the loading rates listed in Table V.

11.5.6.2 The Health Officer may allow a legal lot of record created prior to the effective date of this Article that cannot meet this primary and reserve area requirement to be developed if all the following conditions are met:

11.5.6.2.1 The lot cannot meet the minimum primary and reserve area requirements due to the loading rates for medium sand, fine sand and very fine sand listed in Table V;

11.5.6.2.2 The primary and reserve areas are sufficient to allow installation of a SSAS using maximum loading rates of 1.0 gallons/square foot per day for medium sand, 0.8 gallons/square foot/day for fine sand, and 0.6 gallons/square foot/day for very fine sand; and

11.5.6.2.3 A treatment product meeting at least Treatment Level D and pressure distribution with timed-dosing is used.

11.5.7 The building sewer shall:

11.5.7.1 Consist of pipe that meets all standards of the On-site Sewage System Construction Manual and is a minimum of three (3) inches in diameter;

11.5.7.2 Be on a uniform, positive grade in conformance with the On-site Sewage System Construction Manual;

11.5.7.3 Have cleanouts installed per the On-site Sewage System Construction Manual including at intervals of not more than 100 feet with a minimum of one between the structure and the sewage tank.

11.5.8 All pipe in the OSS shall comply with standards specified in the On-site Sewage System Construction Manual, and RS&G's, or other applicable standards.

11.6 The Health Officer:

- 11.6.1 Shall approve only OSS designs meeting the requirements of this Article. OSS designs shall meet specifications of the On-site Sewage System Construction Manual and the RS&G's as implemented by the Health Officer, except where in conflict with or modified by this Article.
- 11.6.2 Shall not approve:
 - 11.6.2.1 Cesspools;
 - 11.6.2.2 Seepage pits; or
 - 11.6.2.3 Gravity OSS in soil type 1.
- 11.6.3 May approve a design for the reserve area different from the design approved for the initial OSS, if both designs meet the requirements of this Article for new construction.
- 11.7 Designs shall facilitate operation, monitoring and maintenance and shall include the following:
 - 11.7.1 Sewage tank, distribution box access, component service accesses, and effluent filter access, shall be at finished grade.
 - 11.7.2 The building sewers shall have a cleanout with a screw cap for service access.
 - 11.7.3 Sewage tanks must have service access manholes and monitoring ports for the inlet and outlet. Surge, flow equalization or other sewage tanks must have service access manholes.
 - 11.7.4 Other pretreatment units (such as aerobic treatment units and packed-bed filters) must have service access manholes and monitoring ports to all components.
 - 11.7.5 Pump chambers, tanks and vaults must have service access manholes.
 - 11.7.6 Disinfection units must have service access and be installed to facilitate complete maintenance and cleaning. UV disinfection units must have audible and visual alarms designed to alert a resident of a malfunction.
 - 11.7.7 Soil dispersal components shall have monitoring ports for both distribution devices and the infiltrative surface. Monitoring ports shall be at finished grade.

- 11.7.8 For OSS using pumps, clearly accessible controls and warning devices are required including:
 - 11.7.8.1 Process controls such as float and pressure activated pump on/off switches, pump-run timers and process flow controls;
 - 11.7.8.2 Diagnostic tools including dose cycle counters and hour meters on the sewage stream, or flow meters on the sewage stream; and
 - 11.7.8.3 Audible and visual alarms designed to alert a resident of a malfunction. The alarm must be placed on a circuit independent of the pump circuit.
- 11.7.9 All accesses must be designed to allow for monitoring and maintenance and shall be secured to minimize injury or unauthorized access.

SECTION 12 HOLDING TANK SEWAGE SYSTEMS.

- 12.1 Persons shall not install or use holding tank OSS or vault privies for residential development or expansion of residences, whether seasonal or year-round, except as set forth under subsection 12.2.
- 12.2 The Health Officer may approve installation of holding tank sewage OSS only:
 - 12.2.1 For permanent uses limited to commercial situations that are part-time, controlled through other governmental permitting and/or licensing either of which is specifically conditioned on continued compliance with holding tank monitoring and maintenance performance requirements, and where a drain field cannot be installed; or
 - 12.2.2 For interim uses limited to handling of emergency situations or repairs as permitted under section 17.
- 12.3 A person proposing to use a permanent holding tank shall:
 - 12.3.1 Follow established design criteria established in the applicable RS&G;
 - 12.3.2 Submit a management program to the Health Officer assuring ongoing operation and maintenance before the Health Officer issues approval. Unless on-going management or back-up will be provided by a public entity, the person shall demonstrate an adequate financial guarantee. The financial guarantee may include

a bond, certificate of moneys on deposit, or other financial instrument acceptable to the Health Officer. The value of the financial guarantee shall cover the cost for operating and maintaining the OSS for the proposed life of the OSS or a period of not less than 12 months.

SECTION 13 INSTALLATION.

- 13.1 No person shall install or cause to be installed a new OSS, nor perform any repair (except for a minor repair), extension, or relocate an existing OSS without a valid permit issued by the Health Officer. All OSS shall be installed by a certified installer.
- 13.2 The installer shall:
 - 13.2.1 Follow the approved design including component specifications;
 - 13.2.2 Have the approved design on site during installation;
 - 13.2.3 Make no changes to the approved design without the prior authorization of the designer and the Health Officer;
 - 13.2.4 Be on the site at all times during the excavation and construction of the OSS including backfilling;
 - 13.2.5 Install all components of the OSS, except the soil dispersal component, to be watertight;
 - 13.2.6 Cover the installation only after the requirements in section 14 have been met;
 - 13.2.7 Backfill with twelve to twenty-four inches of cover material and grade the site to prevent surface water from accumulating over any component of the OSS only after obtaining approval from the Health Officer and the designer.
 - 13.2.8 Assure that all OSS excavations and backfill are free from construction debris or any waste materials.

SECTION 14 INSPECTION.

- 14.1 The Health Officer shall:
 - 14.1.1 Visit the OSS site at least once during the site evaluation, construction, or final construction inspection process;
 - 14.1.2 Inspect the OSS before cover, or require a designer to inspect and certify the OSS if:

- 14.1.2.1 The designer is not also the installer of the OSS; and
- 14.1.2.2 The OSS is considered by the Health Officer to be on a site that does not pose an increased public health risk.
- 14.1.3 Conduct any pre-cover final inspection of an OSS within two (2) working days after the day of receiving notification from the installation firm that the OSS is ready for the Health Officer's inspection. The Health Officer shall conduct at least a sufficient number of final inspections to assure the integrity of the final inspection process;
- 14.1.4 Notify the OSS installation firm if the final inspection reveals the installation is not per the approved design. Notification shall be given by leaving written notice at the site as well as by phoning the installation firm with the corrections needed;
- 14.1.5 Not accept designs from any designer or design firm that is more than thirty (30) calendar days late in submitting an "as-built" or record drawing for an OSS;
- 14.1.6 Process the record drawings within 10 working days of receipt. Record drawings determined to be unacceptable will be returned to the designer within this same time period with a specified time period required for resubmittal. Once the record drawing has been reviewed and accepted by the Department, the OSS shall be considered to have final construction approval;
- 14.1.7 Keep a copy of the accepted record drawings and designs on file.
- 14.2 The Health Officer may:
 - 14.2.1 Require additional inspections of OSS by designers as follows:
 - 14.2.1.1 Prior to the installation of a designed OSS, the designer may be required to certify to the Health Officer that the OSS is installable as per the design;
 - 14.2.1.2 For mound or sand filter OSS: inspections before sand placement, after sand placement, inspection of the installation prior to final cover, inspection of the final cover, and inspection of finished contour and landscaping;
 - 14.2.1.3 For OSS where sand is used to line the bottom and sides of trenches or beds: inspection of the

excavation, inspection of the sand in place before placement of any gravel, and inspection of the installation before final cover;

- 14.2.1.4 For OSS using pressure distribution an inspection and pump test after pump and distribution network installation is complete; and
- 14.2.1.5 Other OSS may require inspections to ensure proper installation.

14.3 Upon completion of the OSS installation, the installer shall:

14.3.1 Notify the Health Officer and the designer the OSS is ready for final inspection. The installation firm shall verify to the designer and the Health Officer that the installation is per the approved design, including any approved modifications. The installation firm shall be responsible for those installation actions that are not readily visible once the OSS has been installed and is ready for final inspection, including, but not limited to, trench or bed bottom grade and depth of sand.

14.3.2 Backfill the OSS only:

14.3.2.1 When the OSS has been inspected by the designer and the Health Officer.

14.3.2.1.1 The Health Officer may waive the Health Officer's inspection unless the OSS is within a marine recovery area, an area of special concern, or an area that poses an increased public health risk.

14.3.2.1.2 After notifying the Health Officer that the OSS is ready for final inspection, the installer is required to wait five (5) days to backfill the OSS unless the Health Officer instructs that backfilling may occur sooner. If the Health Officer has notified the installer that corrections are required prior to backfilling, the installer must re-notify the Health Officer in accordance with 14.3.1 after the corrections have been completed.

14.4 Unless the designer notifies both the Health Officer and property owner in writing that he/she is no longer working on the OSS project the designer shall:

- 14.4.1 Notify the OSS installer if the final inspection reveals the installation is not per the approved design. Notification shall be given by leaving written notice at the site as well as by phoning the installation firm with the corrections needed; and
- 14.4.2 Certify to the Health Officer that the OSS installation is per the approved design, including, but not limited to, verification of the plan dimensions and the location of the installation, the materials used, and any pressure testing.

SECTION 15 RECORD DRAWING.

- 15.1 The designer shall submit a complete, detailed, and to scale (not greater than one inch equals 30 feet) "record drawing" (including reserve area location) to both the Health Officer and the OSS owner within thirty (30) calendar days of being notified the OSS installation is ready for final inspection. This thirty day period may be extended only upon notifying the Health Officer in writing that the OSS is not approved for backfill and that changes are being required. When further changes are needed the "record drawing" must be submitted within five (5) days of final approval. The designer of an OSS may be relieved of record drawing responsibility if the designer notifies both the Health Officer and the property owner in writing within five (5) days of OSS installation that said designer is no longer working on the OSS project. All record drawings shall include, but not be limited to:
 - 15.1.1 Measurements and directions accurate to +/- 1/2 foot, unless otherwise determined by the Health Officer, to assure the following parts of the OSS can be easily located:
 - 15.1.1.1 All sewage tank openings requiring access;
 - 15.1.2 Pump size, pump model, monitoring port number and locations and any valves including valve settings;
 - 15.1.3 The ends, and all changes in direction, of installed and found buried pipes and electrical cables that are part of the OSS;
 - 15.1.4 Any other OSS component which, in the judgment of the Health Officer or the designer, must be accessed for observation, maintenance, or operation;
 - 15.1.5 Location and dimensions of reserve area;
 - 15.1.6 Record that materials and equipment meet the specifications contained in the design;

- 15.1.7 Initial settings as installed/hard wired of electrical or mechanical devices that must be known to operate the OSS in the manner intended by the designer or installer;
 - 15.1.8 For proprietary products, manufacturer's standard product literature, including performance specifications and maintenance recommendations needed for operation, monitoring, maintenance or repair of the OSS.
 - 15.1.9 A cross-section drawing of the dispersal component; and
 - 15.1.10 The well or other water source location, with a notation that the water source is located as shown on the approved design.
- 15.2 Installation firms may complete record drawings for tank placements, component rebuilds, and when a designer was not involved with the project, to complete permit records.

SECTION 16 OPERATION AND MAINTENANCE.

- 16.1 Every OSS owner is responsible for properly operating, maintaining and monitoring their OSS in compliance with this Article, RS&G's, and the conditions of their Operational Certificate when one is required. At a minimum every OSS owner shall:
- 16.1.1 Have a complete inspection of all OSS components performed, by an individual qualified to determine function, maintenance needs, and compliance with regulations and permits according to the following requirements:
 - 16.1.1.1 For OSS consisting solely of a sewage tank and gravity SSAS, except food establishments regulated by Article II of this Code, the inspection shall be done once every three (3) years. The inspection is required to be performed by an individual certified by the Health Officer or by an OSS professional, except, when an Operational Certificate is NOT required, the inspection may be performed by the owner if qualified as set forth in policies adopted by the Health Officer.
 - 16.1.1.2 For all other OSS, the inspection shall be done annually, unless more frequent inspections are specified in an Operational Certificate. Inspections for renewal of an Operational Certificate must be performed by an individual certified by the Health Officer or an OSS professional. Annual inspections on non-renewal years and inspections of systems that do not require an Operational Certificate may be

performed by the owner, if qualified as set forth in policies adopted by the Health Officer, or by an individual certified by the Health Officer, or by an OSS professional.

16.1.2 Employ a certified pumper to remove the septage from the sewage tank, pump chamber, and other sewage tanks when the level of solids and/or scum indicates that removal is necessary, and ensure that a copy of the pumper's report is submitted to the Health Officer.

16.1.3 Ensure that any maintenance needs identified as a result of the inspection or required by an Operational Certificate are completed and OSS deficiencies corrected promptly and in compliance with this Article.

16.1.4 Keep the flow of sewage to the OSS at or below the approved operating capacity and sewage quality.

16.1.5 Protect the OSS area and the reserve area from:

16.1.5.1 Cover by structures or impervious material;

16.1.5.2 Surface drainage and direct drains, such as footing or roof drains, to ensure that drainage is directed away from the area where the OSS is located;

16.1.5.3 Soil compaction, for example by vehicular traffic or livestock; and

16.1.5.4 Damage by soil removal and grade alteration.

16.1.6 Operate and maintain the OSS as directed by the Health Officer and meet any conditions specified in the approval of the OSS.

16.1.7 Ensure that inspection and maintenance reports required for Operational Certificate renewal are submitted to the Health Officer.

16.1.8 Report to the Health Officer, upon occurrence of an OSS failure or suspected OSS failure, and promptly take appropriate action to correct the failure.

16.2 Persons shall not:

16.2.1 Use or introduce strong bases, acids, chlorinated organic solvents, or other hazardous substances into an OSS for the purpose of OSS cleaning, or for any other purpose; or

- 16.2.2 Use an OSS additive unless it is specifically approved by the Washington State Department of Health; or
- 16.2.3 Use an OSS to dispose of waste atypical of residential sewage.
- 16.3 The Health Officer shall:
 - 16.3.1 Establish required conditions for inspections, maintenance, monitoring, sampling, reporting, and OSS use and protection to assure proper on-going operation and maintenance for all OSS. The conditions will vary depending on the type of OSS, the location of the OSS, population or facility(ies) served, the sensitivity of the site, and applicable RS&G's.
 - 16.3.2 Provide educational opportunities to assist the OSS owner in understanding their OSS and how to comply with the requirements of this Article.
 - 16.3.3 Establish a program to notify OSS owners when to perform required and recommended OSS inspections and maintenance.
 - 16.3.4 Establish and maintain a data base of OSS within Thurston County. The data base shall include the following: parcel number, site address, name of owner, OSS type, site specific information, inspection, operation, maintenance, monitoring and repair history, and any other information determined to be appropriate by the Health Officer.
 - 16.3.5 Establish a program to monitor the cumulative effects of OSS on the quality of the ground water and surface water resources of Thurston County.
 - 16.3.6 Adopt policies establishing the qualifications and training required of individuals authorized to perform inspections, monitoring and maintenance of OSS. These requirements shall be supplemental to the requirements set forth section 23 regarding OSS professionals.
 - 16.3.7 Review property transfer inspection reports required by section 16.8 and report to the applicant regarding the status of the OSS.
- 16.4 The Health Officer may require a renewable Operational Certificate for any OSS in order to establish conditions for proper maintenance and operation of the OSS to avoid OSS failure and to prevent the OSS from posing a threat to public health. The Operational Certificate shall be required as long as there is an OSS present unless the Health Officer determines that an Operational Certificate is no longer required for the OSS. When an Operational Certificate is required, the Health Officer shall:

- 16.4.1 Establish conditions within the Operational Certificate which must be met for continued use of the OSS. The conditions shall include operating and maintenance conditions, inspection, monitoring, and sampling conditions, and reporting schedules and methods. The conditions may include a requirement to connect to a public sewer system within a specific time frame in accordance with section 6 of this Article.
- 16.4.2 Establish Operational Certificate renewal frequencies and send renewal notices to the OSS owners when Operational Certificate renewals are due.
- 16.4.3 Charge fees for performing these activities as per Appendix A of Article I.
- 16.4.4 Renew Operational Certificates once all conditions of the certificate have been fulfilled and fees for renewal have been paid.
- 16.4.5 Change conditions in the Operational Certificate as appropriate as a result of changes to the OSS or its use. For example, conditions could be changed due to OSS modifications, repairs, or use.
- 16.4.6 Withhold issuance of an Operational Certificate on any OSS that is in failure.
- 16.4.7 Withhold approvals for permits, or recommend denial of permits or approvals for future property development or land use projects, if a required Operational Certificate has not been obtained or renewed, or the OSS is non-conforming.
- 16.4.8 Require annual Operational Certificate inspections of OSS serving food establishments, and require pumping as needed.
- 16.4.9 Establish appropriate operation and maintenance requirements for OSS in areas posing increased public health risk, marine recovery areas, and areas of special concern in accordance with section 22 of this Article.
- 16.5 Renewable Operational Certificates are required for the following categories of OSS:
 - 16.5.1 Experimental OSS or OSS for which there is a proprietary product development permit;
 - 16.5.2 COSS;
 - 16.5.3 LOSS, except when regulated by Washington State Department of

Health;

16.5.4 OSS serving food establishments regulated by Article II of this Code;

16.5.5 OSS in marine recover areas, areas of special concern, and areas of increased public health risk established in accordance with section 22 following the requirements adopted by the Board of Health; and

16.5.6 OSS that include any of the following components or methods of treatment or dispersal:

16.5.6.1 A Category I or II proprietary treatment product that is, or was, registered for use per Chapter 246-272A WAC;

16.5.6.2 Disinfection unit or method;

16.5.6.3 Drip line distribution product;

16.5.6.4 Recirculating gravel filter;

16.5.6.5 Holding Tank;

16.5.6.6 Mound;

16.5.6.7 Intermittent Sand filter;

16.5.6.8 Stratified Sand Filter;

16.5.6.9 Remediation technology permitted by the Health Officer;

16.5.6.10 Where soil loading rates are increased under section 11.5.5.15; and

16.5.6.11 Other OSS as determined by the Health Officer.

16.6 Every owner of any of the following types of OSS shall maintain a service contract with a certified monitoring specialist to perform the inspections, maintenance, sampling and monitoring as required in the Operational Certificate, the manufacturer's service manual, and the RS&G's:

16.6.1 LOSS, except when regulated by Washington State Department of Health;

16.6.2 COSS that have three or more residential connections OR a design

flow of greater than 1000 gpd EXCEPT COSS consisting solely of one or more sewage tanks and gravity SSAS;

16.6.3 OSS that include, as a component of the system:

16.6.3.1 A Category I or II proprietary treatment product that is, or was, registered for use per Chapter 246-272A WAC, except a Glendon BioFilter;

16.6.3.2 Drip line distribution products; or

16.6.3.3 Recirculating gravel filters;

16.6.4 OSS that include disinfection units; and

16.6.5 Other OSS, when required by the Health Officer as a condition of an Operational Certificate.

16.7 The owner of an OSS which is required to have an Operational Certificate is responsible for complying with the conditions in the Operational Certificate and for renewing the Operational Certificate at the required frequency. Failure to comply with required conditions in an Operational Certificate or to renew the Operational Certificate at the required frequency is a violation of this Article.

16.7.1 If an OSS has been classified as non-conforming because of failure to maintain a valid Operational Certificate, the OSS may be reinstated as a conforming OSS only after all of the following conditions have been met:

16.7.1.1 The sewage tanks have been pumped and an inspection report has been submitted to the Health Officer by a pumper;

16.7.1.2 All past renewal fees have been paid; and

16.7.1.3 All other applicable requirements of the expired Operational Certificate have been satisfied.

An inspection of the OSS by the Health Officer may be required to verify the status of the OSS and confirm that it is not in failure.

16.8 Prior to the time of any property transfer that occurs after September 1, 2010, the owner is required to have the OSS inspected by an OSS professional. The inspection shall include the preparation of an inspection report and, if an as-built or record drawing is not on file with the Health Officer, a sketch of the OSS. A property transfer includes sale or conveyance by the owner, but does not include a foreclosure, sheriff's

sale, court-ordered transfer, gift, inheritance or devise.

16.8.1 The OSS inspection shall:

- 16.8.1.1 Include an evaluation of all OSS components serving the property being transferred, even if they are on a separate legal lot or on property owned by others;
- 16.8.1.2 Include pumping of all sewage tanks, unless they were pumped and inspected within 12 months prior to the date the property transfer application was submitted, a pumping inspection report was submitted to the Department, and all components were functioning properly at the time of the inspection; and,
- 16.8.1.3 Be conducted by a certified monitoring specialist for any OSS type listed under section 16.6.

16.8.2 The OSS inspection report shall:

- 16.8.2.1 Be signed by the OSS professional who conducted the inspection;
- 16.8.2.2 Be submitted on a form approved by the Health Officer and fully report on all elements included on the form;
- 16.8.2.3 Include a sketch of the OSS on a form approved by the Health Officer including all features required on the form, if as-built or record drawings are not on file with the Department;
- 16.8.2.4 Be filed with the Health Officer and a copy provided to the person to whom the property is sold or transferred; and,

16.8.2.4.1 Not be required for an OSS with a current

operational certificate when the OSS was inspected and all sewage tanks were pumped within 12 months prior to the date of the property transfer, the inspection and pumping reports were submitted to the Department, and all components were functioning properly at the time of inspection.

16.8.3 The Health Officer shall review the property transfer inspection reports and report to the applicant regarding the status of the OSS.

16.8.4 An inspection report that meets the requirements of this section will remain valid for one (1) year unless any condition reported in the report or sketch is known by the owner or OSS professional to have materially changed.

16.8.5 Failure to comply with the requirements of section 16.8 will result in the OSS being classified as non-conforming and shall be a violation of section 4.6. If an OSS has been classified as non-conforming because of failure to satisfy the property transfer requirements, the OSS may be reinstated as a conforming OSS only after all requirements of section 16.8 are satisfied.

SECTION 17 REPAIR OF FAILURES.

17.1 When an OSS failure occurs, the OSS owner shall:

17.1.1 Repair the OSS either on the:

17.1.1.1 Property served; or

17.1.1.2 Nearby or adjacent property if easements are obtained; or

17.1.2 Connect the residence or facility to a:

17.1.2.1 Publicly owned LOSS; or

17.1.2.2 Privately owned LOSS where it is deemed economically feasible; or

17.1.2.3 Public sewer; or

17.1.3 Perform one of the following when the requirements in subsections 17.1.1 or 17.1.2 are not feasible:

17.1.3.1 Use a holding tank as an interim use per subsection 12.2.2; or

17.1.3.2 Obtain a National Pollution Discharge Elimination System or State discharge permit from the Washington State Department of Ecology issued to a public entity or jointly to a public entity and the OSS owner only when the Health Officer determines:

17.1.3.2.1 An OSS is not feasible; and

17.1.3.2.2 The only realistic method of final dispersal of treated effluent is discharge to the surface of the land or into surface water; or

17.1.3.3 Abandon the property.

17.2 Prior to repairing the OSS, the OSS owner shall submit an OSSA.

17.3 The person responsible for designing the repair shall locate and design OSS components to:

17.3.1 Meet the requirements of Table VI if the effluent treatment and dispersal component to be repaired or replaced is closer to any surface water, well, or spring that is not used as a public water source as prescribed by the minimum separation required in Table 1. Pressure distribution with timed dosing in the soil dispersal component is required in all cases where a conforming OSS is not feasible.

TABLE VI
Treatment Component Performance Levels for Repair of OSS
Not Meeting Vertical and Horizontal Separations¹

| Vertical Separation (inches) | Horizontal Separation ² | | | | | | | | | | | |
|------------------------------|------------------------------------|---|-----|--------------|---|-----|----------------------------|---|-----|----------------|---|-----|
| | < 25 feet | | | 25 < 50 feet | | | 50 < 100 feet ³ | | | ≥ 100 feet | | |
| | Soil Type | | | Soil Type | | | Soil Type | | | Soil Type | | |
| | 1 | 2 | 3-6 | 1 | 2 | 3-6 | 1 | 2 | 3-6 | 1 | 2 | 3-6 |
| < 12 | A | A | A | A | A | A | A | A | B | B | B | B |
| ≥ 12 < 18 | A | A | A | A | B | B | A | B | B | Conforming OSS | | |
| ≥ 18 < 24 | A | A | A | A | B | B | A | B | C | | | |
| ≥ 24 < 36 | A | B | B | B | C | C | B | C | C | | | |
| ≥ 36 | A | B | B | B | C | C | B | C | E | | | |

¹The treatment component performance levels correspond with those established for treatment components under the product performance testing requirements in WAC 246-272A-0110C.

² The horizontal separation indicated in this table (Table VI) is the distance between the soil dispersal component and the surface water, well, or spring. If the soil dispersal component is up-gradient of a surface water, well, or spring to be used as a potable water source, or beach where shellfish are harvested, the next higher treatment level shall apply unless treatment level A is already required.

³On a site where there is a horizontal setback of 75 - 100 feet between an OSS dispersal component and an individual water well, individual spring, non-marine surface water or surface water that is not a public water source and a vertical separation of greater than twelve inches, a conforming OSS that complies with section 9 shall be installed if feasible.

- 17.3.2 Protect drinking water sources and shellfish harvesting areas;
- 17.3.3 Prevent the direct discharge of sewage to ground water, surface water, or upon the surface of the ground;
- 17.3.4 Meet the horizontal separations under subsection 9.1 to public drinking water sources;
- 17.3.5 Meet other requirements of this Article to the maximum extent permitted by the site, including the installation of service access and monitoring ports at finished grade for all OSS components in accordance with section 11;
- 17.3.6 Maximize the:
 - 17.3.6.1 Vertical separation;
 - 17.3.6.2 Distance from a well, spring, or suction line; and
 - 17.3.6.3 Distance to surface water.
- 17.3.7 Minimize nitrogen discharge in areas where nitrogen has been identified as a contaminant of concern by the Board of Health.
- 17.4 Prior to designing the repair OSS, the designer shall assess and address the contributing factors of the failure to enable the repair to address identified causes.
- 17.5 Metal sewage tanks that have any rusted through, perforated or damaged parts shall be replaced by approved sewage tanks and shall not be repaired.
- 17.6 For a repair, if the vertical separation is less than twelve inches, the Health Officer may permit ASTM C-33 sand or coarser to be used as fill to prevent direct discharge of treated effluent to ground water, surface water, or upon the surface of the ground.
- 17.7 For a repair using the requirements of Table VI, disinfection may not be used to achieve the fecal coliform requirements to meet:
 - 17.7.1 Treatment levels A or B where there is less than eighteen inches of vertical separation;
 - 17.7.2 Treatment levels A or B in type 1 soils; or
 - 17.7.3 Treatment level C.

- 17.8 The Health Officer shall identify Table VI repair permits for the purpose of tracking future performance.
- 17.9 An OSS owner receiving an OSSP for a repair from the Health Officer shall:
 - 17.9.1 Immediately report any failure to the Health Officer;
 - 17.9.2 Monitor the performance of the OSS according to the operation and maintenance guidelines in the RS&G's and maintenance documents for the specific technology of the OSS and the Operational Certificate, and report the results to the Health Officer at a minimum frequency of:
 - 17.9.2.1 Quarterly when treatment component performance levels A and B are required; and
 - 17.9.2.2 Annually for other treatment levels;
 - 17.9.3 Comply with all local and state requirements of the OSSP and the Operational Certificate issued for the OSS.

SECTION 18 EXPANSIONS.

The Health Officer shall require an OSS and a reserve area in full compliance with the new OSS construction standards specified in this Article for an expansion of a residence or other facility. The new OSS must serve the entire residence or facility.

SECTION 19 ABANDONMENT.

Persons permanently removing a sewage tank, seepage pit, cesspool, or other sewage container from service shall:

- 19.1 Submit an OSSA;
- 19.2 Have the septage removed by a pumper;
- 19.3 Remove or destroy the lid; and
- 19.4 Fill the void with soil or gravel.

SECTION 20 SEPTAGE MANAGEMENT.

- 20.1 Only pumpers certified by the Health Officer as per section 23 may remove septage for disposal from an OSS.
- 20.2 A pumper removing septage from an OSS shall:

- 20.2.1 Transport septage or sewage only in vehicles clearly identified with the name of the business and approved by the Health Officer;
- 20.2.2 Record and report septage removal to as required by the Health Officer; and
- 20.2.3 Dispose of septage, or apply septage biosolids to land only in a manner consistent with applicable laws.

SECTION 21 DEVELOPMENTS, SUBDIVISIONS, AND MINIMUM LAND AREA REQUIREMENTS.

- 21.1 A person proposing any development shall obtain approval from the Health Officer prior to any development where the use of OSS is proposed. Any new development proposing to use OSS shall be required to have an OSS which meets new construction standards.
- 21.2 The Health Officer shall require the following prior to approving any development:
 - 21.2.1 Site evaluations in accordance with section 10;
 - 21.2.2 Where a development with individual wells is proposed:
 - 21.2.2.1 Configuration of each lot to allow a 100-foot radius water supply protection zone to fit within the lot lines; or
 - 21.2.2.2 Establishment, through protective or restrictive covenants, as appropriate, of a 100-foot protection zone around each existing and proposed well site and a note as approved by the Health Officer on the face of the final map.
 - 21.2.3 Where a development to be served by a community well or wells is proposed, all requirements of chapter 246-290 WAC and chapter 246-291 WAC shall be met.
 - 21.2.4 Where preliminary approval of a development is requested, at least one soil log must be provided per proposed lot, unless the Health Officer determines existing soils information allows fewer soil logs. The applicant or his/her representative shall place test pits in the proximity of the proposed primary and reserve drain field areas in a manner and location that clearly represents the soil characteristics of the primary and reserve drain field areas. Additional test pits may be required if soil or site anomalies are revealed.

21.2.5 Determination of the minimum lot size or minimum land area required for the development using Method I and/or Method II:

21.2.5.1 **METHOD I.** Table VII, Single-family Residence Minimum Lot Size or Minimum Land Area Required Per Unit Volume of Sewage, shows the minimum lot size required per single-family residence. For developments other than single-family residences, the minimum land areas shown are required for each unit volume of sewage. The Health Officer may require larger lot sizes where the Board of Health has identified nitrogen as a concern either through the management plan activities described within this Article or another process.

TABLE VII
Minimum Land Area Requirement
Single-Family Residence or Unit Volume of Sewage

| Type of Water Supply | Soil Type (defined by section 10 and Table V) | | | | | |
|-------------------------------|---|----------------|----------------|----------------|----------------|----------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Public | 0.5 acre | 12,500 sq. ft. | 15,000 sq. ft. | 18,000 sq. ft. | 20,000 sq. ft. | 22,000 sq. ft. |
| Individual, on or to each lot | 1 acre | 1 acre | 1 acre | 1 acre | 2 acres | 2 acres |

21.2.5.2 **METHOD II.** A minimum land area proposal using Method II is acceptable only when the applicant:

21.2.5.2.1 Justifies the proposal through a written analysis of the:

21.2.5.2.1.1 Soil type and depth;

21.2.5.2.1.2 Area drainage, and/or lot drainage;

21.2.5.2.1.3 Public health impact on ground and surface water quality;

21.2.5.2.1.4 Setbacks from property lines, water supplies, etc;

21.2.5.2.1.5 Source of domestic water;

- 21.2.5.2.1.6 Topography, geology, and ground cover;
 - 21.2.5.2.1.7 Climatic conditions;
 - 21.2.5.2.1.8 Availability of public sewers;
 - 21.2.5.2.1.9 Activity or land use, present, and anticipated;
 - 21.2.5.2.1.10 Growth patterns;
 - 21.2.5.2.1.11 Reserve areas for additional subsurface treatment and dispersal;
 - 21.2.5.2.1.12 Anticipated sewage volume;
 - 21.2.5.2.1.13 Compliance with current planning and zoning requirements;
 - 21.2.5.2.1.14 Possible use of alternative OSS or designs including the use of systems designed for removal of nitrogen;
 - 21.2.5.2.1.15 Existing encumbrances, such as listed in subsections 8.1.3.5 and 10.2.1.7;
 - 21.2.5.2.1.16 Estimated nitrogen loading from OSS effluent to existing ground and surface water; and
 - 21.2.5.2.1.17 Any other information required by the Health Officer.
- 21.2.5.2.2 Shows development with public water supplies having:
- 21.2.5.2.2.1 At least 12,500 square feet lot sizes per single-family residence; and
 - 21.2.5.2.2.2 No more than 3.5 unit volumes of sewage per day per acre for developments other than single-family residences.
- 21.2.5.2.3 Shows development with individual water supplies having at least one acre per unit volume of sewage; and

21.2.5.2.4 Shows land area under surface water is not included in the minimum land area calculation.

21.2.6 Regardless of which method is used for determining required minimum lot sizes or minimum land area, the maximum density permitted is 3.5 single-family residences or unit volumes per acre. The applicant or his/her representative shall submit to the Health Officer information consisting of field data, plans, and reports supporting a conclusion the land area provided is sufficient to:

21.2.6.1 Install conforming OSS;

21.2.6.2 Assure preservation of reserve areas for proposed and existing OSS;

21.2.6.3 Properly treat and disperse the sewage; and

21.2.6.4 Minimize public health effects from the accumulation of contaminants in surface and ground water.

21.2.7 Evidence that a minimum of twenty-four (24) inches of original, undisturbed and unsaturated soil exists above the maximum seasonal water table, a layer of creviced or porous bedrock, or any other restrictive layer. Certain climatic, soil permeability, slope and OSS configuration factors can exist which would indicate that the required depth may be increased or decreased. In order to decrease the depth, sufficient technical justification must be developed and submitted that will:

21.2.7.1 Allow installation of conforming OSS;

21.2.7.2 Assure preservation of reserve areas for all proposed and existing OSS;

21.2.7.3 Assure proper treatment and dispersal of the sewage;

21.2.7.4 Assure preservation of sufficient areas with sufficient soil depths will exist in proposed drain field and reserve areas, as well as areas immediately downslope, when the OSS is ready to be installed; and

21.2.7.5 Assure minimizing of adverse public health effects from the accumulation of contaminants in surface and ground water.

- 21.2.8 The proposal is consistent with requirements in city sewerage plans and/or the Thurston County Sewerage General Plan, depending on the project's location.
- 21.3 The Health Officer shall require lot areas of 12,500 square feet or larger except when a person proposes:
 - 21.3.1 OSS within the boundaries of a recognized sewer utility having a finalized assessment roll; or
 - 21.3.2 A planned unit development with:
 - 21.3.2.1 A signed, notarized, and recorded deed covenant restricting any development of lots or parcels above the approved density with the overall density meeting the minimum land area requirements of subsection 21.2.5; and
 - 21.3.2.2 A public entity responsible for operation and maintenance of all the OSS, or a single individual owning all the OSS; and
 - 21.3.2.3 Management requirements under subsection 8.6 when installing a LOSS; and
 - 21.3.2.4 An overall density not greater than 3.5 single-family residences or unit volumes per acre; and
 - 21.3.2.5 Extinguishment of the deed covenant and higher density development allowed only when the development connects to public sewers.
- 21.4 The Health Officer may:
 - 21.4.1 Allow inclusion of the area to the centerline of a road or street right-of-way in a Method II determination under subsection 21.2.5.2 to be included in the minimum land area calculation if:
 - 21.4.1.1 The dedicated road or street right-of-ways are along the perimeter of the development;
 - 21.4.1.2 The road or street right-of-ways are dedicated as part of the proposed development; and
 - 21.4.1.3 Lots are at least 12,500 square feet in size.
 - 21.4.2 Require technical justification with site plans prepared by a designer for one or more proposed lots prior to preliminary or final

approval of development proposals in order to verify that a proposed lot or lots can meet the requirements of this Article. If site plans are required, the following shall apply:

21.4.2.1 At a minimum, the following is required:

- 21.4.2.1.1 Lot corners shall be marked and shown on the site plan;
- 21.4.2.1.2 At least two test pits shall be dug where the primary soil dispersal component is proposed and at least one test pit shall be dug where the reserve area is proposed to be located on each lot for purposes of developing soil logs;
- 21.4.2.1.3 After the soils investigation, the Health Officer may require that the project designer submit a complete design to the Health Officer for each lot indicating the proposed locations of the soil dispersal component and the reserve area and the specifications of the soil dispersal component. Designs submitted for this purpose must meet all requirements of sections 8.1.4 and 11.
- 21.4.2.1.4 A demonstration that site conditions are sufficient and soils and topography are suitable for public domain technology for OSS primary and reserve area.
- 21.4.2.1.5 A demonstration that lot size and project density are suitable for public domain OSS technology.
 - 21.4.2.1.5.1 Ground water modeling and assimilative capacity analysis shall be based on the treatment characteristics of public domain technology.
 - 21.4.2.1.5.2 The use of proprietary devices capable of providing enhanced treatment shall not result in more lots or higher project density than can be achieved using public domain technology.

21.4.3 Require larger land areas or lot sizes to achieve public health protection.

21.4.4 Prohibit development on individual lots within the boundaries of an approved development if the proposed OSS design does not protect public health by meeting requirements of this Article. Priority shall be given to locating OSS dispersal components in soil conditions that provide optimum sewage treatment and dispersal, such as in deeper suitable soils or soil textures that provide enhanced public health protection. The Health Officer shall require proposed lot lines to incorporate OSS on the same lot as the building to be served unless the designer can demonstrate through technical justification that lot line configurations cannot incorporate OSS. On developments that cannot be adjusted to keep the OSS on the same lot as the building to be served, the Health Officer may allow, or may require, OSS components to be located on a separate lot with an easement if the soil or site condition on the separate lot is determined to result in optimal treatment and dispersal of sewage.

21.4.5 Permit the installation of an OSS, where the minimum land area requirements or lot sizes cannot be met, only when all of the following criteria are met:

21.4.5.1 The lot is registered as a legal lot of record created prior to January 1, 1995, and

21.4.5.2 The lot is outside marine recovery areas, areas of special concern, and areas posing increased public health risk; and

21.4.5.3 The proposed OSS meets all requirements of this Article other than minimum land area without the need for any waiver pursuant to section 24.

21.4.5.4 No violation of Article III of the Sanitary Code exists on the property.

21.5 When a COSS or a LOSS will be used, the person responsible for the development shall accomplish one of the following prior to final approval of the plat:

21.5.1 Install the COSS or LOSS and obtain approval by the appropriate agencies; or

21.5.2 Provide a financial guarantee in favor of the Department and sign an agreement with the Department. The financial guarantee and agreement shall guarantee that construction will be completed within one (1) year from the date of the approval of the agreement. The amount of the financial guarantee shall be based on an estimate prepared by a designer, plus thirty-five (35) percent. The

financial guarantee and agreement shall be to the satisfaction of the Department. The Health Officer may release a portion of the financial guarantee when he/she is satisfied that a portion of the project is complete and has been certified by the appropriate agency or person.

SECTION 22 MARINE RECOVERY AREAS, AREAS OF SPECIAL CONCERN AND AREAS OF INCREASED PUBLIC HEALTH RISK.

- 22.1 The Health Officer may investigate and take appropriate action to minimize public health risk in formally designated marine recovery areas, areas of special concern or areas posing an increased public health risk established by the Board of Health such as
- 22.1.1 Shellfish protection districts or shellfish growing areas;
 - 22.1.2 Sole Source Aquifers designated by the U.S. Environmental Protection Agency;
 - 22.1.3 Areas with a critical recharging effect on aquifers used for potable water as designated under chapter 17.15 of the Thurston County Code (Critical Areas Ordinance);
 - 22.1.4 Designated public water supply wellhead protection areas;
 - 22.1.5 Up-gradient areas directly influencing water recreation facilities designated for swimming in natural waters with artificial boundaries within the waters as described by the Water Recreation Facilities Act, chapter 70.90 RCW;
 - 22.1.6 Areas designated by the Washington State Department of Ecology as special protection areas under WAC 173-200-090, Water Quality Standards for Ground Waters of the State of Washington;
 - 22.1.7 Wetland areas under production of crops for human consumption;
 - 22.1.8 Frequently flooded areas delineated by the Federal Emergency Management Agency;
 - 22.1.9 Areas identified and delineated by the Board of Health in consultation with the Washington State Department of Health to address public health threats from OSS;
 - 22.1.10 Marine waters that are listed by the Washington State Department of Ecology under section 303(d) of the federal clean water act (33 U.S.C. Sec. 1251 et seq.) for low dissolved oxygen or fecal coliform; and

- 22.1.11 Marine waters where nitrogen has been identified as a contaminant of concern by the health officer.
- 22.2 The Board of Health may impose more stringent requirements on any new development and corrective measures to protect public health upon existing developments in marine recovery areas, areas of special concern or areas posing increased public health risk, including:
 - 22.2.1 Additional location, design, and/or performance standards for OSS;
 - 22.2.2 Larger land areas for new development;
 - 22.2.3 Prohibition of development;
 - 22.2.4 Additional operation, maintenance, and monitoring of OSS performance;
 - 22.2.5 Requirements to upgrade, alter or modify existing OSS;
 - 22.2.6 Requirements to abandon existing OSS; and
 - 22.2.7 Monitoring of ground water or surface water quality.
- 22.3 Within marine recovery areas, areas of special concern or areas posing increased public health risk, in addition to the operation and maintenance requirements of section 16, the owner of an OSS is required to have an inspection conducted by a person approved, certified or authorized by the Health Officer who shall:
 - 22.3.1 Inspect every OSS at least once every three years;
 - 22.3.2 Submit the following written information to both the Department and the property owner within 30 days following the inspection:
 - 22.3.2.1 Location of the tank, if not on file with the Department;
 - 22.3.2.2 Structural condition of the tank(s), including baffles, and OSS components;
 - 22.3.2.3 Depth of scum and solids in the tank;
 - 22.3.2.4 Problems detected with any part of the OSS;
 - 22.3.2.5 Maintenance needed;
 - 22.3.2.6 Maintenance provided at time of inspection; and
 - 22.3.2.7 Other information as required by the Department.

- 22.3.3 Immediately report failures to the Department.
- 22.4 The Henderson Watershed Protection Area is designated as a marine recovery area and an area of special concern as set forth in Appendix A. The Henderson Watershed Protection Area, and all requirements for the Area set forth in this Article, as may be hereafter amended, shall terminate on December 31, 2027 unless re-enacted by the Board of Health.
- 22.5 The Nisqually Reach Watershed Protection Area is designated as a marine recovery area and an area of special concern as set forth in Appendix A. The Nisqually Reach Watershed Protection Area, and all requirements for the Area set forth in this Article, as may be hereafter amended, shall terminate on December 31, 2023 unless re-enacted by the Board of Health.

SECTION 23 DESIGNERS, INSTALLERS, PUMPER, AND MONITORING SPECIALISTS.

- 23.1 **All OSS professionals.** OSS firms and designers are required to perform work governed by this Article in accordance with the requirements of this Article and the policies and procedures adopted by the Health Officer.
- 23.2 **Designers.** Prior to offering or performing services as a designer a person shall:
- 23.2.1 Provide documentation which indicates that the individual is licensed by the Washington State Department of Licensing as an on-site wastewater treatment system designer under RCW 18.210 or a professional engineer under chapter 18.43 RCW;
 - 23.2.2 Comply with all rules and guidelines for professional practice for on-site wastewater treatment system designers as established by the Washington State Department of Licensing;
 - 23.2.3 Pay a fee as specified in Appendix A of Article I if the designer wishes to be placed on the designer's list.
- 23.3 **Certification of OSS Professionals.** Prior to offering or performing services as an installer, pumper or monitoring specialist a person shall:
- 23.3.1 Submit an accurately and completely filled out application to the Health Officer to become a certified installer, pumper, or monitoring specialist;
 - 23.3.2 Pay an initial fee as specified in Appendix A of Article I;
 - 23.3.3 Pass the appropriate certification examination administered by the

Health Officer, except that this shall not be applicable to registered sanitarians;

23.3.4 Attend at least one installer, pumper, or monitoring specialist-related educational class acceptable to the Health Officer once every two years after becoming certified by the Health Officer for installation, pumping, or monitoring specialist work. Provide documentation of attendance to the Health Officer.

23.3.5 Be certified as an OSS firm or be employed by an OSS firm and be included on its list of employed certified professionals which is required to be submitted to the Health Officer annually upon renewal of the firm's certification.

23.3.6 No OSS professional is authorized to perform work as a pumper, installer or monitoring specialist unless he/she is also certified as an OSS firm or employed by an OSS firm.

23.4 **Certification of OSS Firms.** Prior to offering or performing services of installing, pumping or monitoring OSS a firm shall:

23.4.1 Submit an accurately and completely filled out application to the Health Officer to become a certified installation, pumping, or monitoring firm.

23.4.2 Pay an initial fee as specified in Appendix A of Article I.

23.4.3 Verify that the proposed business location is in compliance with the applicable jurisdiction's zoning and planning regulatory requirements.

23.4.4 Employ at least one person who is a certified OSS professional. Every individual employed by the firm who is responsible for overseeing installation, pumping, or monitoring specialist work in the field must be a certified professional.

23.4.5 Submit a list of all certified installers, pumpers, and monitoring specialists employed by the firm.

23.4.6 Installation firms must possess a current Washington State Department of Labor and Industries (L&I) Contractor Registration Certificate (as per RCW 18.27.020) and submit a copy of the certificate to the Health Officer. All requirements of L&I for filing a surety bond and furnishing insurance or financial responsibility must be satisfied.

23.4.7 Pumping firms must have all pumping equipment and facilities designed and/or used for the holding or transportation of septage,

inspected and approved by the Health Officer prior to initial certification, when new equipment is brought into service and every three (3) years thereafter.

23.4.7.1 Pump trucks and pumping equipment must meet the following requirements:

23.4.7.1.1 The capacity of the pumper tank shall not be less than one thousand two hundred fifty (1,250) gallons. Such tanks shall be fully enclosed, of metal construction and self-draining with openings or hatches built to seal securely. There shall be at least a two and one-half (2.5) inch intake with a safety locking device to minimize spillage when not pumping. The outlet shall be at least three (3) inches in diameter and shall be equipped with a valve and locking device. A flat plate bolted over an opening in the tank shall not constitute an emptying device except as a means of cleaning rocks and sediment from the tank periodically;

23.4.7.1.2 Pumps shall be of sturdy construction and capable of handling sewage without suction strainers. The pump design shall be self-priming, without by-passes, orifices or other devices that contribute to operational interruptions and failures;

23.4.7.1.3 Each truck shall be equipped with a section of hose, pipe or funnel made of easily cleanable, durable material to properly direct the flow of the tank contents while emptying the tank;

23.4.7.1.4 In addition to the suction hose, each truck shall carry a water hose of adequate length which shall be provided on each truck for washing spillage and equipment. A vacuum breaker shall be available and used when attaching the water hose to the potable water supply;

23.4.7.1.5 The name, license number and telephone number of the operating firm shall be conspicuously displayed on both sides of the truck in bold letters not less than five (5) inches high for firm name and not less than three (3)

inches high for other information such as address and telephone number;

23.4.7.1.6 All equipment must be properly maintained and kept clean. The customer's premises must be left in a clean and sanitary condition.

23.5 **Retain certification.** Installation, pumping, and monitoring firms, and individual installers, pumpers and monitoring specialists must retain their certification by submitting the following to the Health Officer prior to the 31st day of December each year:

23.5.1 An accurate and complete renewal form.

23.5.2 The certification renewal fee as specified in Appendix A of Article I.

23.5.3 Documentation that the continuing education requirements as described in section 23.3.4 were met.

23.5.4 Firms shall provide a list of certified installers, pumpers, or monitoring specialists who are employed by the firm.

23.5.5 Pumping firms shall provide all monthly pumping reports that were not submitted for the preceding year.

23.5.6 Pumping firms shall have the pumping equipment inspected by the Health Officer to verify the equipment complies with the requirements described in subsection 23.4.7.

23.6 **Failure to Renew Certification.** Installation, pumping, and monitoring firms, and individuals shall be prohibited from performing installer, pumper, or monitoring specialist work if their certification has not been renewed by the end of the 31st day of December, and until all the requirements of renewal have been met. Individuals and firms shall have until January 31st to renew their certifications by payment of an additional late fee. If the individual or firm has not renewed its certification by January 31st or has not submitted all materials to be considered eligible for renewal, they must apply for a new certification by completing a new application form and paying the initial application fee and may be required to retake the appropriate exam at the discretion of the Health Officer based on the date the individual(s) last took the exam and the performance history of the person or firm.

23.7 **Disciplinary action.** Installation, pumping, and monitoring firms, and individual installers, pumpers and monitoring specialists shall be subject to disciplinary action for failure to comply with this code and applicable state laws and regulations or for incompetence, negligence, misrepresentation, non-compliance, or intentional or willful malfeasance. If the findings of an

administrative hearing substantiate the concerns or complaints regarding compliance, by clear and convincing evidence, the administrative hearing officer has the option of placing the certification on probation or suspension or revoking the certification as follows:

- 23.7.1 Certification probation shall be a specific period of not less than six (6) months or more than one (1) year. Violations of any of the terms and/or conditions of the probation will result in suspension or revocation of the certification. Only one probationary period shall be in effect at any one time. Exceeding the maximum of one imposed probation in any three year period will result in suspension. All probations and suspensions shall carry over from one calendar year to the next.
- 23.7.2 Certification suspension shall be a specific period of not less than one (1) month or more than one (1) year. The individual or firm on suspension must apply in writing to the Health Officer, at the end of the suspension period, requesting reinstatement and pay any reinstatement fee as required in Appendix A of Article I. Prior to reinstatement the firm or individual must meet all current and previous certification responsibilities and requirements. Exceeding one suspension in any one year period or two suspensions in any three year period will result in revocation of certification. All suspensions shall carry over from one calendar year to the next. An individual or firm on suspension shall not be allowed to perform the work of an installer, pumper, or monitoring specialist during the period of suspension.
- 23.7.3 Revocation is the complete denial of the rights and privileges associated with certification of an individual or firm. An individual or firm whose certification has been revoked shall not be allowed to become certified again for a period not less than three (3) years from the date of revocation. An individual or firm seeking recertification must also successfully meet all the requirements for obtaining an initial certification prior to becoming certified, as well as any previous responsibilities or financial obligations. Upon recertification the individual or firm is required to serve a probationary period of one (1) year.23.7.4

23.8 Authority and Responsibilities of OSS professionals and firms.

- 23.8.1 **Installers and installation firms** shall have authority and be responsible for the following:
 - 23.8.1.1 Installing new OSS, repairs, minor repairs, modifications.
 - 23.8.1.2 Replacing pumps and sewage tanks.

- 23.8.1.3 Inspecting sewage tanks, pumps and controls, OSS dispersal components or other components.
- 23.8.1.4 Accurately representing information on all work submitted to Health Officer and/or the designer.
- 23.8.1.5 Assuring the appropriate permits or approvals have been obtained prior to commencing any actions an installation firm is authorized to perform.
- 23.8.1.6 Certifying that an installation performed by the firm's employees complies with approved designs or approved revisions to designs.
- 23.8.1.7 Employ at least one certified installer who will be present on each work site for the duration of authorized installation work.
- 23.8.1.8 Immediately notifying the Department of any changes in either business information (such as location, phone number, etc.) or any changes in the list of installers employed by the firm.

23.8.2 **Pumpers and pumping firms** shall have authority and be responsible for the following:

- 23.8.2.1 Inspecting levels of scum and solids in sewage tanks, pump chambers and holding tanks; inspecting sewage tank lids, baffles, walls, floors, pipe connections and seals, pump fittings, wires, valves, effluent screens, risers, and riser lids and locks, and any other inspections of OSS components.
- 23.8.2.2 Repairing or sealing cracks in sewage tanks, and repairing or replacing baffles, effluent screens, risers and riser lids and locks, installing risers and resealing pipes.
- 23.8.2.3 Replacing non-perforated pipe between a structure and a sewage tank, between sewage tanks, or between a sewage tank and a soil dispersal component.
- 23.8.2.4 Inspecting ponding levels and monitoring port condition in a soil dispersal component and other OSS components.

- 23.8.2.5 Pumping septage from a sewage tank and/or other OSS components and transporting and disposing of the septage at sites that have been approved by the Health Officer.
- 23.8.2.6 Assuring that all facilities designed and/or used for the holding or transporting of septage are approved by the Health Officer and operated in a manner that protects public health.
- 23.8.2.7 Maintaining records of pumper work for a period of at least three (3) years. Pumper records on file at the pumpers place of business shall be made available to the Health Officer for inspection during regular business hours. Reports shall include the following information:
 - 23.8.2.7.1 The address and customer for each load of septage;
 - 23.8.2.7.2 The number of gallons pumped;
 - 23.8.2.7.3 The disposal site of the septage; and
 - 23.8.2.7.4 The pumper who performed the pumping.
- 23.8.2.8 Reporting of work performed for each customer, using the county on-line reporting system or on a form and/or format acceptable to the Health Officer. A filing fee shall be submitted with all paper reports to the Health Officer. A copy of the report shall be provided to the customer. These individual reports must be submitted to the Health Officer by the 10th of the month following the date pumped. The report must be filled out thoroughly and completely, including notations of any observed defects and repairs or adjustments of any component of the OSS.
- 23.8.2.9 Accurately representing information on all work submitted to Health Officer and the firm's clients.
- 23.8.2.10 Employing at least one certified pumper who will be present on each work site for the duration of authorized pumper work.
- 23.8.2.11 Certifying that any authorized work performed by the firm's employees complies with applicable standards and practices.

23.8.2.12 Immediately notifying the Department of any changes in business information (such as location, phone number, etc.), equipment or pumpers employed by the firm.

23.8.3 **Monitoring specialists and monitoring specialist firms** shall have authority and be responsible for the following:

23.8.3.1 Operating, maintaining, inspecting, sampling, and/or monitoring the performance of any OSS.

23.8.3.2 Performing the inspections, maintenance, monitoring, and sampling in accordance with the OSS operational certificate issued by the Health Officer, the manufacturer's manual, state rules and regulations, and this Article.

23.8.3.3 Submitting to the Health Officer and to the OSS owner a report of all inspections, maintenance, monitoring, and sampling performed on each OSS. The report shall include any OSS deficiencies and repairs or corrections needed or completed and shall be submitted on a form(s) and/or in a format acceptable to the Health Officer.

23.8.3.4 Accurately and completely representing the work performed and the condition of the OSS to Health Officer and to the OSS owner.

23.8.3.5 Employing at least one certified monitoring specialist who will be present on each work site for the duration of authorized monitoring work.

23.8.3.6 Notifying the Department immediately of any changes in business information (such as location, phone number, etc.), or any changes in the list of monitoring specialists employed by the firm.

23.8.3.7 Notifying the Department and OSS owner within 30 days, in writing, when a contract for service of an OSS is terminated.

23.9 **Authority and responsibilities of the Health Officer.** The Health Officer shall:

23.9.1 Provide information listing the required technical knowledge needed for certification available for any individual or firm wishing to

become certified as an installer, pumper, or monitoring specialist.

- 23.9.2 Test individuals applying to become an installer, a pumper, or a monitoring specialist on the applicable subject matter, rules and regulations, and standards. Certify only those applicants who obtain a passing score. The Department may establish criteria to accept testing from another service or agency.
- 23.9.3 Issue a certificate to those individuals who satisfactorily pass their respective test. The certificate shall contain the individual's name, business address, telephone number, and the date of certificate issuance.
- 23.9.4 Issue certification to any firm that applies to become an installation, pumping, or monitoring firm and meets the requirements of section 23.4.
- 23.9.5 Issue certification for installation, pumping, and monitoring firms only for the unexpired portion of the calendar year in which the application is made.
- 23.9.6 Send out certification renewal notices to all individuals and firms certified by the Health Officer on or before November 15th of each calendar year. The notices shall include reminders of the requirements of renewal.
- 23.9.7 Renew certificates for those who have paid the renewal fee and meet the requirements of this Article.
- 23.9.8 Maintain, and make available to the public, written criteria for letters of reprimand, probation, or revocation or suspension of a certification for those certified under subsections 23.2 and 23.3. Such actions shall be due to valid complaints or concerns regarding failure on the part of an installation firm, pumping firm, or monitoring firm to comply with regulations, guidelines, policies and procedures, principles, or professional practices of the specific area of expertise and certification. This may include incompetence, negligence, misrepresentation, non-compliance, or intentional and/or willful malfeasance.
- 23.9.9 Recommend action to the hearing officer to issue a letter of reprimand, place a certified individual or firm on probation, or revoke or suspend a certification if the criteria referenced in subsection 23.8.8 are met. If a certification is recommended by the Health Officer to be placed on probation or suspension or revoked, an administrative hearing shall be conducted.

- 23.9.10 Submit evidence, in a manner required, to the Washington State Board of Professional Engineers and the Washington State Department of Licensing when an engineer has not performed his/her responsibilities in a manner consistent with the requirements of this Article and related policies, procedures, and guidelines, and the requirements of chapter 18.43 RCW.
- 23.9.11 Submit evidence, in a manner required, to the Washington State Department of Licensing when an on-site wastewater treatment system designer has not performed his/her responsibilities in a manner consistent with the requirements of this Article and related policies, procedures, and guidelines.
- 23.9.12 Submit evidence, in a manner required, to the Washington State Board of Registered Sanitarians when a registered sanitarian has not performed his/her responsibilities in a manner consistent with the requirements of this Article and related policies, procedures, and guidelines.

SECTION 24 WAIVER REQUESTS.

- 24.1 Any person desiring a waiver of any provision of this article, or a provision of state law, rule, or regulation governing OSS under 3500 gallons per day, shall submit a waiver request on a form provided by the Health Officer along with the applicable administrative waiver fee set forth in Article I, Appendix A.
- 24.2 **Approval Standards.** The Health Officer shall evaluate each waiver request on an individual site-by-site basis, and may only approve a waiver if the request satisfies the standards established in this subsection.
 - 24.2.1 **Class A Waivers from State On-Site Sewage System Regulations.** A Class A waiver is a request to waive a state regulation, or provision of this article required by state regulation, for which the Washington State Department of Health has established specific review criteria and mitigation measures. A Class A waiver may only be approved if all of the following are established:
 - 24.2.1.1 The waiver is consistent with the standards in, and intent of, the state rules and regulations;
 - 24.2.1.2 The proposal satisfies the review criteria; and
 - 24.2.1.3 The proposal will adequately provide approved mitigation measures.

24.2.2 Other Waivers from State on-Site Sewage System Regulations.

When the Health Officer receives a request for a waiver from a state regulation, or provision of this article required by state regulation, that is not a Class A waiver, the Health Officer may request review of the proposal by the Washington State Department of Health. The waiver may only be approved if all of the following are established:

24.2.2.1 The Washington State Department of Health agrees with the approval of the waiver, where such review has been requested; and

24.2.2.2 The approval standards in subsection 24.2.3 are satisfied.

24.2.3 All Other Waivers. A waiver other than a Class A waiver may only be approved if all of the following are established:

24.2.3.1 The requested waiver is consistent with the standards in, and the intent of, this article, all applicable state laws, rules and regulations, and any applicable policies and RS&Gs;

24.2.3.2 The requested waiver is consistent with the purpose and objectives of this article this article to protect public health;

24.2.3.3 The request includes adequate mitigation of any risk to public health or the environment;

24.2.3.4 No alternative to the waiver is available that meets all requirements of this Code, or, any available alternative that meets all requirements of this Code provides less protection of public health and the environment than will be achieved by approving the waiver; and

24.2.3.5 The requested waiver is the minimum necessary.

24.3 Information Required for the Submission of a Request for Waiver A waiver request shall include the following information:

24.3.1 Requestor's name, telephone number and mailing address;

24.3.2 Permit applicant's name and mailing address;

24.3.3 Property owner's name and mailing address;

- 24.3.4 Permit type, permit number, parcel number and address or legal description of property;
 - 24.3.5 Specific provision of this article, rule, regulation or law requested to be waived;
 - 24.3.6 A detailed explanation of the request, including whether the request is for a Class A or other category of waiver;
 - 24.3.7 Reasons the provision of this article, rule, regulation or law cannot be met;
 - 24.3.8 Explanation and details of any design alternatives that exist for the issue;
 - 24.3.9 A detailed explanation as to how the waiver satisfies the applicable approval standards in section 24.2; and
 - 24.3.10 A list of all persons required to be notified of the waiver request and their addresses as set forth in Section 24.4, if applicable.
- 24.4 **Notification.** Notification of a waiver request must be given as set forth in this subsection when the request involves either (a) a set-back to a neighbor's water source or a neighboring property; or (b) a community OSS where the waiver may affect owners of connections or multiple residences.
- 24.4.1 **Contents of Notification.** The notification of a waiver request shall contain the following information:
 - 24.4.1.1 Name and address of person requesting a waiver;
 - 24.4.1.2 Permit type, permit number, parcel number and address of the property;
 - 24.4.1.3 A brief description of the waiver request;
 - 24.4.1.4 A statement that comments may be submitted within 15 calendar days of the date of the notice, unless a longer time period is specified in the notice; and
 - 24.4.1.5 The address and contact information where comments are to be submitted.
 - 24.4.2 Notification shall be deemed complete when a written notice to the person's last known address has been deposited in the U.S. Mail or has been served on the person according to Section 7.2 of Article I.

- 24.4.3 Any person required to be notified by this section may submit comments on the waiver request by presenting such comments, in writing, to the Health Officer. Comments must be submitted within 15 calendar days of the date of the notice, unless a longer time period is specified in the notice.
- 24.5 **Decision.** The Health Officer may approve or deny a waiver request, or a portion of the request, for an OSS under 3500 gallons per day. The Health Officer may set conditions, restrictions, and time limits as part of any waiver decision. The Health Officer may only approve a waiver if the approval standards in Section 24.2 are satisfied. The Health Officer shall issue a written decision on the waiver request within fifteen calendar days after the latest of (1) receipt of a complete request, (2) where applicable, receipt of the Washington State Department of Health's review of the waiver proposal, or (c) the deadline for notified persons to submit comments. The deadline to issue a decision may be extended if the requester agrees to a longer time.
- 24.6 **Notice of Decision.** A copy of the Health Officer's decision shall be transmitted, within five calendar days of issuance, to the person who requested the waiver, to each person required to be notified who has submitted comment, and to each person who has requested a copy of the decision.
- 24.7 **Appeal.** Any person aggrieved by a decision of the Health Officer approving or denying a waiver may appeal the Health Officer's decision to the hearing officer pursuant to Article I, Section 8.
- 24.8 On a quarterly basis, the Health Officer will forward to the Washington State Department of Health any approved or denied waivers for their records.
- 24.9 The Washington State Department of Health may approve a waiver from specific requirements in this article for a LOSS if a person submits a completed Washington State Department of Health waiver application and required fee to the Washington State Department of Health, including justification showing the requested waiver is consistent with the LOSS standards in chapter 246-272B WAC, and is consistent with the purpose and objectives of chapter 246-272B WAC to assure public health protection.
- 24.10 If an applicant desires to modify and resubmit a previously denied waiver request, a new request must be submitted along with the applicable fee.

SECTION 25 ENFORCEMENT.

- 25.1 The Health Officer:

- 25.1.1 May make inspections to determine whether a project is constructed and operated within the law and stated conditions;
- 25.1.2 Shall enforce the provisions of this Article in accordance with Article I of the Sanitary Code for Thurston County.
- 25.2 When a person violates the provisions under this Article, the Health Officer may initiate enforcement or disciplinary actions, or any other legal proceeding authorized by law, including but not limited to any one or a combination of the following:
 - 25.2.1 Informal administrative conferences, convened at the request of the Health Officer or owner/applicant, to explore facts and resolve problems;
 - 25.2.2 Orders directed to the owner and/or operator of the OSS and/or person causing or responsible for the violation of this Article;
 - 25.2.3 Denial, suspension, modification, or revocation of permits, approvals, or certification; and
 - 25.2.4 Civil or criminal action.
- 25.3 Orders authorized under this section include the following:
 - 25.3.1 Orders requiring corrective measures necessary to effect compliance with this Article. Such orders may include a compliance schedule; and
 - 25.3.2 Orders to stop work and/or refrain from using any OSS or portion of the OSS or improvements to the OSS until all permits, certifications, and approvals required by this Article are obtained.
- 25.4 Enforcement orders issued under this section shall follow the requirements described in Article I.
- 25.5 The Health Officer shall have cause to deny an OSSA, an OSSP, or an Operational Certificate, or to revoke, suspend, or modify a required OSSP, or Operational Certificate of any person who has:
 - 25.5.1 Failed or refused to comply with the provisions of this Article, or any other statutory provision or rule regulating the operation of an OSS; or
 - 25.5.2 Obtained or attempted to obtain a permit or any other required certificate or approval by misrepresentation.

SECTION 26 CIVIL INFRACTIONS AND PENALTIES.

- 26.1 The violation of any provision of this Article is designated as a civil infraction pursuant to chapter 7.80 RCW as follows:
 - 26.1.1 Any violation causing unsanitary conditions or any threat to public health is a Class 1 civil infraction. Each day of any such violation is a separate civil infraction. A notice of infraction shall be issued in accordance with Article I.
 - 26.1.2 Any other violation is a Class 3 civil infraction. Each day of any such violation is a separate civil infraction. A notice of infraction shall be issued in accordance with Article I.
- 26.2 The Health Officer may impose civil penalties for violations of this Article or for refusal to comply with lawful orders written pursuant to this Article. Such penalties shall be issued and be in accordance with the provisions contained in Article I of the Thurston County Sanitary Code. Civil penalties for violations of this Article shall be assessed pursuant to the following schedule:
 - A. First day of each violation. \$100.00
 - B. Second day of each violation \$200.00
 - C. Third day of each violation. \$300.00
 - D. Fourth day of each violation \$400.00
 - E. Each additional day of each \$500.00 per day violation beyond four days

SECTION 27 APPEALS.

- 27.1 Any person aggrieved by a decision, an inspection or notice made by the Health Officer shall have the right to appeal the matter as specified in Article I, except for (1) appeals of disciplinary actions taken pursuant to section 23 of Article IV, which shall be governed by section 27.2 and (2) determinations of the applicability of Henderson Watershed Protection Area and Nisqually Reach Watershed Protection Area requirements which shall be governed by Appendix A of this article.
- 27.2 Disciplinary actions taken pursuant to section 23 against a firm's or individual's certification to perform work as a installer, pumper, or monitoring specialist, shall be appealable to a board of appeals established pursuant to this Article.
- 27.3 **Board of appeals established.** The On-Site Sewage Disciplinary Board of Appeals is hereby established. This Board shall serve as the Board of

Appeals for Thurston County for disciplinary actions taken under Article IV of the Thurston County Sanitary Code.

27.3.1 **Membership and quorum.** The Board of Appeals shall consist of five members and five alternates. Each member shall be appointed by the Board of Health and shall hold office at the pleasure of such Board. A quorum shall exist when at least three of the five members, or their respective alternates, are present. A quorum is required for the Board to conduct appeal hearings and make decisions.

27.3.2 The Board of Appeals shall consist of:

- A. One member and one alternate with experience and training as; and
- B. One member and one alternate with experience and training as an OSS installer; and
- C. One member and one alternate with experience and training as a pumper; and
- D. One member and one alternate who is a monitoring specialist; and
- E. One member and one alternate to represent the interests of the public who live in unincorporated Thurston County with a residence on an OSS.

27.3.3 All members shall be appointed for terms of three years beginning on April 1 of the year of appointment and expiring at the end of the third year of appointment on March 31. No person may serve more than two consecutive terms.

27.3.4 A Department representative shall serve as an ex officio, nonvoting member of the Board of Appeals and shall serve as clerk to the Board of Appeals and shall schedule meetings, maintain records, prepare and publish required notices, disseminate findings and decisions, and assure that accurate minutes of meetings are kept. However, as ex-officio member the Department representative shall not ask questions or take part in any deliberations, which are part of a hearing or decision on an appeal.

27.3.5 At the first meeting of the Board of Appeals, and at its first meeting in each succeeding calendar year, the members of the Board shall elect a chair and vice chair. The chair shall preside at all meetings of the Board of Appeals and conduct all appeals according to

governing rules. The vice chair shall perform all duties of the chair if the chair is absent.

- 27.4 **Scope of authority.** The Board of Appeals has authority to hear and decide appeals of disciplinary actions taken pursuant to section 23 against a firm's or individual's certification to perform work as an installer, pumper, or monitoring specialist. The Board shall have authority to review decisions of the Department and shall enter findings of fact and conclusions of law. The Board shall have the authority to affirm, deny or revise any disciplinary action taken pursuant to section 23 and impose such conditions as are necessary to effectuate the purposes of this section.
- 27.5 **Who may appeal?** Any person aggrieved by a disciplinary action taken pursuant to Section 23 may appeal to the Board of Appeals.
- 27.5.1 **Filing and service.** Persons who wish to appeal a decision shall complete the application form prescribed by the Board of Appeals. This form shall require, at a minimum, a concise statement of facts relevant to the appeal, a concise explanation of the reasons why the appeal should be granted, and a description of the precise result or relief, which the appellant is requesting.
- 27.5.2 Appeals shall be filed with the Department at the Thurston County Courthouse. The Board of Appeals will only hear those items specifically appealed and shall only hear the particular appeal once. All items of appeal must appear on the same appeal form.
- 27.5.3 All appeal application forms shall be accompanied by an application fee as set forth in Appendix A to Article I of this Code.
- 27.5.4 Appeals must be filed and served no later than ten (10) days after the date the order, decision or determination to be appealed was served on the Appellant. Such appeal shall operate as a stay of the order, decision or determination except where the appellant has caused the presence of an emergent health hazard as described in Section 7.3 of Article I of this Code.
- 27.6. **Scheduling of hearings.**
- 27.6.1 All hearings shall be scheduled within fifteen (15) days of the date the appeal application form is filed, unless a later hearing date is necessary to obtain a quorum of Board of Appeals members.
- 27.6.2 All Board of Appeals members and alternates shall indicate if they are unable to sit on an appeal in advance, so that the secretary to the Board can seek the services of an alternate prior to the appeal date.

27.6.3 The clerk to the Board shall provide the parties five working days written or telephonic notice of a scheduled hearing unless such notice is waived by the Appellant or party served.

27.7 Procedure at hearings.

27.7.1 All meetings and hearings of appeals are open to the public in conformance with the Open Public Meeting Act, chapter 42.30 RCW.

27.7.2 The parties to hearings on appeal are the Department and the Appellant(s).

27.7.3 At hearings of appeals, evidence, including hearsay evidence, is admissible if it is the type on which reasonably prudent persons are accustomed to rely in the conduct of their affairs. Evidence is not admissible if it is irrelevant, unduly repetitious or excludable on the grounds of evidentiary privilege recognized in the courts of this State.

27.7.4 Testimony shall be taken at hearings only on oath or affirmation.

27.7.5 At hearings, the order of presentation of evidence shall be as follows:

- A. The Department will present its case, including all witnesses and documentary and physical evidence.
- B. The Appellant will present his/her case, including all witnesses and documentary and physical evidence.
- C. The Department may present rebuttal evidence in response to the Appellant's case.
- D. At the conclusion of each witness's testimony, the witness is subject to cross-examination by the opposing party.
- E. Closing argument or summation by the Department.
- F. Closing argument or summation by the Appellant.
- G. The Board of Appeals may, at any time, ask questions, request additional information, or present the testimony of additional witnesses.

27.7.6 Each party shall have the following rights at a hearing of an appeal:

- A. To present and examine witnesses.
- B. To introduce documentary and physical evidence.
- C. To cross-examine opposing witnesses on any matter proper for cross-examination.
- D. To rebut the evidence against him/her.
- E. To represent himself/herself or to be represented by an attorney.

27.7.7 The Board of Appeals may continue hearings at its own discretion or on request of a party.

27.8 **Board inspection of premises.** At any time before conclusion of the hearing on an appeal, the Board of Appeals may view or inspect any building or premises involved in the appeal. The Board shall give each party reasonable notice of any such visit and afford each party the opportunity to be present. No party shall make any remark concerning the appeal to any Board of Appeals member during any such visit.

27.9 **Record of proceedings.** A record of each hearing on appeal shall be made by tape recording. A transcript or tape recording of the proceedings shall be made available to all parties upon request and upon advance payment of a fee equal to the cost to be incurred in preparing a transcript or tape.

27.10 **Board decision.**

27.10.1 The burden of proof is on the Department to establish the facts supporting the discipline by clear and convincing evidence.

27.10.2 Decisions of the Board of Appeals shall be by majority vote of the members present. Only those Board members who heard the evidence presented at the hearing or listened to the entire record of the hearing may vote on a decision on an appeal. A tie vote results in denial of the appeal.

27.10.3 The decision on an appeal shall be in writing, signed by the Board of Appeals member who served as chair at the hearing and shall contain findings of fact and an order. A copy of the decision shall be issued by being delivered to the Appellant personally or sent to him/her by being deposited in the U.S. Mail, postage prepaid, within seven (7) days of the hearing. The findings and order shall be filed with the Department for appropriate action.

27.10.4 The decision of the Board of Appeals shall be the final decision of Thurston County and shall not be appealable to the Board of Health.

27.11 **Judicial Review.** An appeal of any final decision by the Board of Appeals must be taken by any aggrieved party to Superior Court within twenty (20) days from the date the decision is delivered to the Appellant or was deposited in the U.S. Mail by the Board of Appeals under Section 27.10.3.

27.12 **Appearance of fairness.**

27.12.1 In order to assure the appearance of fairness in matters under consideration by the Board of Appeals, no person shall have an ex parte contact with Board of Appeals members regarding such matter, and no person, including government officials and employees, shall attempt to interfere with or influence the Board of Appeals outside a public hearing.

27.12.2 No Board of Appeals member shall conduct or participate in any hearing or discussion in which he or she may have a direct or indirect financial or personal interest or in which such conduct or participation would violate any rule of law applicable thereto.

27.13 **Computation of time.** In computing any period of time, the day of the act from which the designated period of time begins to run shall not be included. The last day of the period so computed shall be included, unless it is a Saturday, Sunday, or a County legal holiday, in which event the period runs until the end of the next day which is neither a Saturday, Sunday or a County legal holiday.

27.14 **Supplementary rules.** The Board of Appeals may adopt supplemental rules of procedure consistent with this Resolution and other governing law. A copy of such rules shall be filed with the Department and shall be available for public inspection and copying.

27.15 Civil infractions shall be heard and determined according to chapter 7.80 RCW, as amended, and any applicable court rules.

SECTION 28 SEVERABILITY.

If any provision of this Article or its application to any person or circumstances is held invalid, the remainder of this Article, or the application of the provision to other persons or circumstances shall not be affected.

Adopted: October 20, 2009

Article IV, Appendix A

1. **Creation of Areas.** Pursuant to Article IV, section 22, the Henderson Watershed Protection Area and Nisqually Reach Watershed Protection Area are established as areas of special concern and marine recovery areas.

2. **Watershed Protection Area Maps.** The Henderson Watershed Protection Area includes all property where drainage flows toward Henderson Inlet within the area generally depicted on the map attached hereto as Appendix A-1. The official Henderson Watershed Protection Area Map is a parcel-specific map adopted as a part of this Article that shall be maintained by the Health Officer.

The Nisqually Reach Watershed Protection Area includes all property where drainage flows toward Nisqually Reach within the area generally depicted on the map attached hereto as Appendix A-2. The official Nisqually Reach Watershed Protection Area Map is a parcel-specific map adopted as a part of this article that shall be maintained by the Health Officer.

If any portion of a parcel is within the area, the entire parcel will be considered to be within the area.

The Health Officer shall review the maps annually to update the boundary based on any new information obtained regarding drainage flow and location of OSS and other improvements.

3. **On-site Sewage System Regulations.** Any property served by an OSS where any portion of the OSS (including a building and any collection, transport, treatment, and soil dispersal components) is within watershed protection area will be required to comply with operation and maintenance requirements established for the Area. If any portion of an OSS lies within more than one watershed protection area, the OSS will be subject to the operation and maintenance requirements of only one watershed protection area as determined in accordance with policies and procedures adopted by the Health Officer.

4. **Operation and Maintenance Requirements.** The following operation and maintenance requirements shall apply to all OSS within the Henderson Watershed Protection Area and Nisqually Reach Watershed Protection Area:

(a) **Operational Certificates**

All OSS within the Area are required to have renewable Operational Certificates in accordance with Section 16 of this article. The Operational Certificates must be kept current and renewed on prescribed schedules. The Operational Certificate requirements shall include routine inspections and maintenance and submission of inspection reports to the Health Officer.

An Operational Certificate shall not be issued or renewed for a OSS that is failing.

The Health Officer shall establish a schedule to phase in implementation of the Operational Certificate requirements within the Area.

(b) High and Low Risk OSS Designation

The Health Officer shall establish policies and procedures adopting criteria for ranking OSS as low or high risk and setting minimum inspection and evaluation requirements for OSS within the watershed protection area. The criteria to rank OSS shall be based on soil type, proximity to surface water and other appropriate criteria.

(i) A High Risk OSS is an OSS that, if failing, would pose a high risk to public health by contributing to water quality degradation.

(ii) A Low Risk OSS is an OSS that, if failing, would pose a lower risk to public health and would be less likely to contribute to water quality degradation.

(c) Dye Test Evaluations

For High Risk OSS, a dye test evaluation shall be required as a condition of the Operational Certificate to determine whether or not the OSS is failing. Dye test evaluations shall be required to be performed as follows:

Beginning December 1, 2017, after the initial dye test evaluation, the frequency of subsequent evaluations will transition from six years to nine years. The health officer will establish a schedule that phases in the decreased testing frequency over the course of six years, with some OSS tested six years from the last test, and some OSS deferred for up to nine years from the last dye test evaluation.

Dye test evaluations shall be conducted in accordance with policies and procedures adopted by the Health Officer.

Dye test evaluations may be performed only by authorized Department staff or other persons approved by the Health Officer as having the necessary training and expertise. The Health Officer shall establish minimum qualifications for individuals to be approved to perform dye test evaluations. Before starting a dye test evaluation, private evaluators shall submit a dye test plan to the Health Officer for approval. Failure to follow adopted procedures will result in withdrawal of approval to perform these evaluations.

5. Conversion of OSS to public sewer. The Board of Health may require the abandonment of OSS and connection to public sewer systems where the following conditions exist:

(a) The area is within the City of Lacey or Olympia or their urban growth areas; and

(b) The public sewer system has the capacity and the connection is permitted by the sewer utility; and

(c) A groundwater or surface water pollution problem has been confirmed in excess of state or federal water quality limits or adopted county action levels; the pollutant of concern is associated with OSS; and the area is (1) within the aquifer recharge area or

the surface water drainage basin where the water quality problem exists.

(d) The Health Officer determines the OSS are, more likely than not, significant contributors to the pollutant level based on the density, design or condition of the OSS and/or the geology where the OSS are located.

Where the above criteria are met and the Board of Health determines that connection to sewer is necessary to protect surface water, ground water, or otherwise protect public health based on aquifer vulnerability, water quality correction and water contamination prevention information, the Health Officer shall issue an order to the owners of properties served by OSS in the affected area to connect to sewer or abandon the existing OSS. The Health Officer shall establish a reasonable schedule for compliance. The Health Officer shall make a request to the Board of Health to impose a moratorium on all new OSS within the affected area, in conjunction with the order to abandon the OSS and connect to public sewer. The Health Officer shall notify property owners of the order where OSS permits have been approved but the systems have not yet been constructed.

6. **Owner Request for Review.** Once a year there will be a review period for property owners to request review of the watershed protection area requirements apply to their properties.

(a) Property owners may request review of the following:

- (i) Whether their property is served by an OSS;
- (ii) Whether their property drains toward Henderson Inlet or Nisqually Reach;
- (iii) Whether the location of any portion of their OSS is within the watershed protection area;
- (iv) Whether their OSS is a high-risk OSS or a low-risk OSS.

No other review or appeal will be allowed.

(b) Applications for review shall be submitted to the Environmental Health Division Director, or Director's designee, on a form provided by the Department. The applicant may submit any information (maps, photographs, details) to support the adjustment requested.

The burden of proof shall be on the applicant to show that the adjustment sought should be granted.

The Director will consider all information submitted by the applicant and any information on file with the Department regarding the property. The Director may request a meeting with the applicant and Department staff to consider available information regarding the review.

(c) Applications for review must be received by April 30th of each year.

For applications received by April 30th, the Director will issue a letter of determination by June 30th. If the Director determines that an adjustment is warranted, the adjustment shall be made effective for the next year after the date of the determination.

The determination is final and there shall be no further right of administrative appeal.

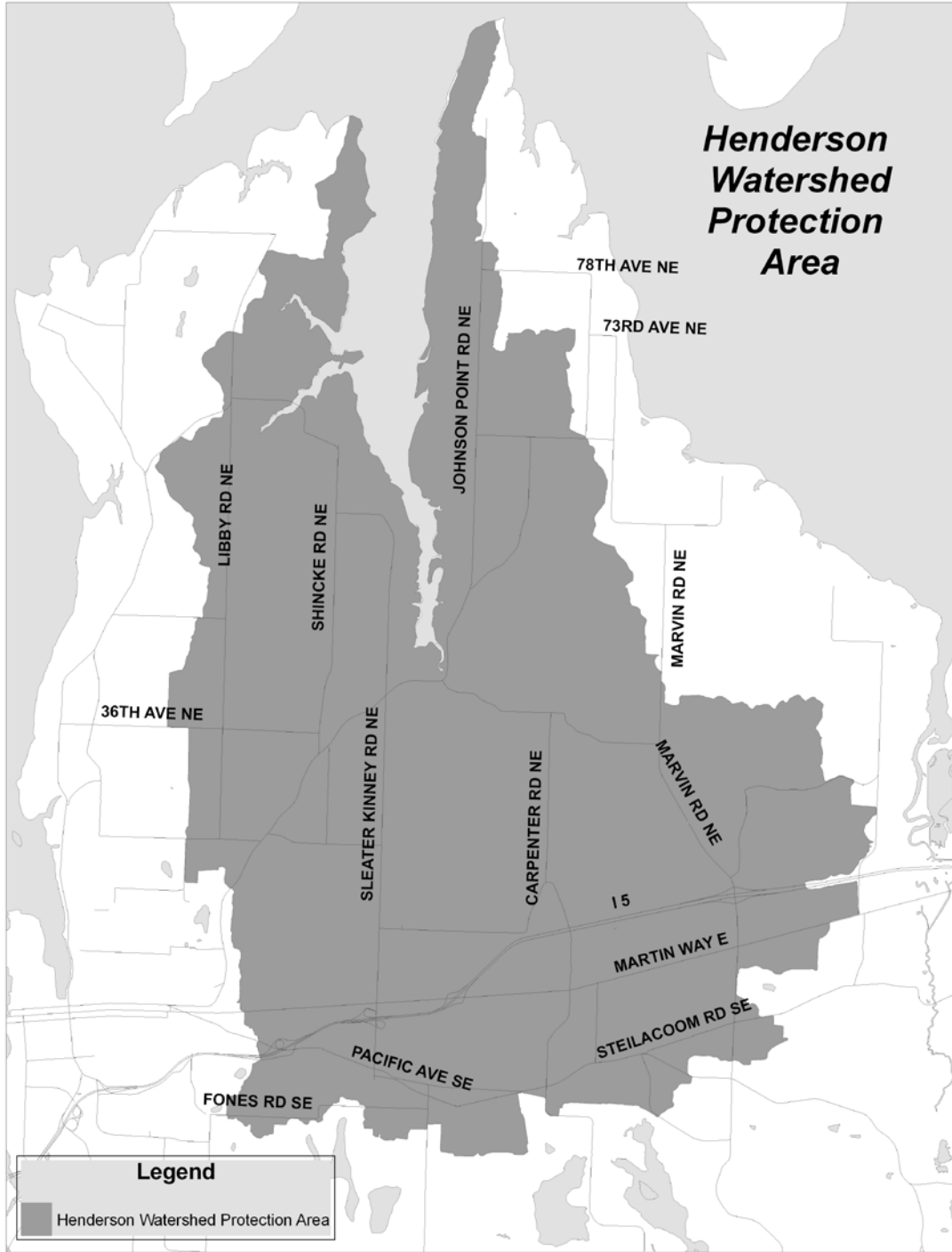
7. **Corrections and Adjustments.** As new information is obtained, based on the adopted policies, procedures, and program criteria, the Health Officer may make appropriate adjustments and corrections to properties included in the Area, OSS risk rankings, conditions in Operational Certificates, and other appropriate adjustments; except for expansion of the watershed protection area boundary which would require legislative action by the Board of Health. Property owners affected by any corrections and adjustments shall be notified of such corrections and adjustments at least 30 days prior to the effective date of those changes.

8. **Fees.** The Operational Certificate renewal fee and Areas of Special Concern Annual Regulatory Fees set forth in Article I, Appendix A of this code shall not apply within the watershed protection areas that are subject to shellfish protection district rates and charges for an on-site sewage system operation and maintenance program.

9. **Program Evaluation.** Five years after creation of each watershed protection area, the Health Officer will conduct an evaluation of the program and activities and submit a report to the Board of Health.

Article IV, Appendix A-1

Henderson Watershed Protection Area Map



Article IV, Appendix A-2

Nisqually Reach Watershed Protection Area Map

