

Commonwealth of the Northern Mariana Islands
Wastewater Treatment and Disposal Rules and Regulations

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SECTION 1 AUTHORITY

These rules and regulations have been promulgated by the Division of Environmental Quality in accordance with the *Commonwealth Environmental Protection Act, (CEPA), 1982, 2 CMC §§3101 to 3134, Public Law 3-23*, and the *Commonwealth Environmental Amendments Act, (CEAA), 1999, Public Law 11-103* of the Commonwealth of the Northern Mariana Islands. These rules, regulations, technical provisions, and specifications, to be adopted by the Division of Environmental Quality, shall have the force and effect of law and shall be binding on all persons and other legal entities subject to the jurisdiction of the Commonwealth of the Northern Mariana Islands.

SECTION 2 PURPOSE

Whereas large numbers of Commonwealth residences currently rely and will continue to rely on on-site wastewater disposal systems for treatment and disposal of wastewater; and whereas proper design, construction, and operation of these systems provide personal and public benefit through protection of groundwater and surface water; whereas public health can be significantly impacted by design and continued use of substandard disposal systems, and whereas waste from livestock also impacts the quality of ground water and surface water and public health, the purpose of these regulations is:

- 2.1 To protect the health of the wastewater disposal system user and his/her neighbors.
- 2.2 To establish minimum standards that will ensure that the discharge of wastewater:
 - 2.2.1. Will not contaminate or degrade the groundwater of the CNMI;
 - 2.2.2. Will not contaminate or degrade the waters of any bathing beach, shellfish breeding ground, or stream used for public or domestic water supply purposes or for recreational purposes;
 - 2.2.3. Will not be accessible to insects, rodents, or other possible carriers of disease which may come into contact with food or drinking water;
 - 2.2.4. Will not pose a health hazard by being accessible to children;
 - 2.2.5. Will not create a public nuisance due to odor or unsightly appearance; or
 - 2.2.6. Will not violate any other local or federal laws or regulations governing water pollution or sewage disposal.
- 2.3 To provide for a reasonable service life for such systems.
- 2.4 To provide for registration and requirements for sanitary waste hauling and disposal.

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- 2.5 To establish minimum standards for the treatment of animal wastes.
- 2.6 As with all of the Division of Environmental Quality Regulations, the design standards and details described in these regulations and in the permitting processes are for minimum standards. The ultimate responsibility and success and failure of a project lies with the applicant. Although the Division sets these minimum standards that applicants must follow, it takes no responsibility for possible failures of systems it reviews. Each system must be designed for the specific location and use of the system.

SECTION 3 DEFINITIONS

- 3.1 “Abutting property” means that property which lies next to any road, street, or easement in which a public sewer is located. The boundary of the property abutting the sewer need not physically touch the sewer easement so long as that piece of land separating the sewer easement from the abutting property consists of a public right-of-way, easement, road, or street not owned or controlled by another private owner, so that the abutting property owner would not be required to obtain an easement in order to connect his/her property with the sewer.
- 3.2 “The Act” means the Commonwealth Environmental Protection Act, (CEPA), 1982, 2 CMC §§ 3101 to 3134, Public Law 3-23, as amended by the Commonwealth Environmental Amendments Act (CEAA), 1999, Public Law 11-103, of the Commonwealth of the Northern Mariana Islands.
- 3.3 “Animal Waste” means animal excreta and associated feed losses, bedding, spillage or overflow from watering systems, wash and flushing waters, sprinkling waters from livestock cooling, precipitation polluted by falling on or flowing into a confined animal facility (“runoff”), and other materials polluted by livestock or their direct products.
- 3.4 “Aquifer” means a geologic formation, group of formations, or part of a formation that is water bearing and which transmits water in sufficient quantity to supply springs and pumping wells.
- 3.5 “Available sewer” means a public sewer which has been constructed in a road-way, street or easement abutting the property on which the subject building is located provided that:
- A. For a single family dwelling and duplexes: (1) the public sewer; or (2) an existing building located on the subject property which is connected to the public sewer; is located within 200 feet of the single family dwelling or duplex, and connection to the public sewer is possible without the use of pumps.
 - B. For all other buildings and structures the public sewer is no more than 50 feet above the lowest floor level.

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- 3.6 “Beneficial use” shall include the use of water reasonably required for domestic, agriculture, commercial, industrial, recreational, and other purposes, on both public and private lands.
- 3.7 “Building” means a structure having a roof and intended to shelter people, animals, property, or business activity, or any structure used or intended to be used for supporting or sheltering any use or occupancy.
- 3.8 “Cesspool” means any buried chamber, including, but not limited to, any metal tank, perforated concrete vault or covered hollow or excavation, which receives discharges of sanitary sewage from a building sewer for the purpose of collecting solids and discharging liquids to the surrounding soil. Cesspools are not an approved method of sewage disposal under these regulations, and all existing cesspools are considered to be substandard.
- 3.9 “Class I Aquifer Recharge Area” means the area contributing surface infiltration to a geologic formation, or part of a formation, that is water bearing and which currently transmits, or is believed capable of transmitting water to supply pumping wells or springs. For the purpose of these regulations, Class I aquifer recharge areas shall be one of the following: (1) Areas so defined and mapped by the United States Geological Survey (USGS) as aquifer recharge zones; (2) Areas defined by the Director pursuant to the CNMI's Groundwater Management and Protection Act as a Class I Groundwater Management Zone; or (3) areas determined in consultation with the USGS and the Commonwealth Utilities Corporation.
- 3.10 “CNMI” means the Commonwealth of the Northern Mariana Islands.
- 3.11 “Community Sewer System” means a common sewer collection, conveyance, and treatment system serving more than one lot, directly controlled by an individual or community association duly authorized by those served (i.e., IWDS permittee) to undertake the responsibility of control and operation of the system.
- 3.12 “Confined Animal Facility” means a lot or facility (other than an aquatic animal production facility) where animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained. Confined Animal Facilities include areas used to grow or house animals, areas used for processing and storage of product, manure, runoff storage areas, and silage storage areas.
- 3.13 “Contamination” means the introduction of any physical, chemical, biological, or radiological substance into surface or groundwater which has the potential to pose a threat to human health or the environment, or to impede the most beneficial use of water.
- 3.14 “CUC” means the Commonwealth Utilities Corporation, a public authority currently providing treatment for domestic and industrial wastewater.

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- 3.15 “Director” means the Director of the Division of Environmental Quality or his duly authorized representative unless otherwise specified.
- 3.16 “Division” means the Division of Environmental Quality unless otherwise specified.
- 3.17 “DPW” means the Department of Public Works.
- 3.18 “Duplex” means a building which is designed exclusively for the occupancy of one family in each of two units which are attached to each other and which are detached from any other dwelling or commercial building.
- 3.19 “Effluent Filter” means an effluent treatment device installed on the outlet of a septic tank which is designed to prevent the passage of suspended matter larger than one-eighth inch in size.
- 3.20 “EPA” means the United States Environmental Protection Agency.
- 3.21 “Grazing Unit” is any area of public or private pasture, range, grazed woodland, or other land that is grazed as an entity.
- 3.22 “Groundwater” is that part of the subsurface water which is in the zone of saturation.
- 3.23 “House Sewer or Building Drain” means that part of the lowest piping of a drainage system which receives the discharge from soil, waste and other drainage pipes inside the walls of the building and conveys it to the building sewer pipe beginning 5 feet outside the building walls.
- 3.24 “Individual Wastewater Disposal System” (“IWDS”) means a system designed and installed to treat and dispose of sewage from a single structure or group of structures using a septic tank, together with a leaching field or seepage pit.
- 3.25 “IWDS Failure” or “System Failure” means: (1) The IWDS refuses to accept sewage effluent at the rate of design application, resulting in interference with plumbing fixture use; (2) Sewage effluent exceeds the infiltration capacity of the soil resulting in objectionable odors, ponding, seepage, or other discharge of the effluent to the surface of the ground or to surface waters; (3) Effluent discharges from the absorption system result in contamination of a potable water supply, groundwater, or surface water.
- 3.26 “Leaching Field” means a buried system of perforated pipes, bedded in washed crushed rock, through which primary or secondary treated sewage effluent may seep or leach into the surrounding porous soil.
- 3.27 “Livestock” means farm animals raised for human use.
- 3.28 “MPLA” means the Marianas Public Land Authority.

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- 3.29 “MVA” means the Marianas Visitors Authority.
- 3.30 “Monitoring Well” is a well constructed for the purpose of observing subsurface hydrologic conditions and collecting hydrologic or water quality data, and not for use in extracting water for a beneficial use.
- 3.31 “NPDES” means National Pollutant Discharge Elimination System. An NPDES permit is required for all municipal and industrial waste and waste treatment plant discharges to waters of the United States.
- 3.32 “Other Wastewater Treatment Systems” (“OWTS”) means a system designed and installed to treat and dispose of sewage from a single structure or group of structures using a means other than a septic tank together with a leaching field or seepage pit.
- 3.33 “Permit” as used in these regulations shall mean an Individual Wastewater Disposal System or an Other Wastewater Treatment System permit.
- 3.34 “Person” means any individual; firm; partnership; association; corporation; both public and private; and any entity or agency of the Commonwealth Government or the United States of America.
- 3.35 “Potable Water” means water that is of a quality that meets the requirements of the CNMI's Drinking Water Regulations latest revision.
- 3.36 “Primary Treated Wastewater” for the purpose of these regulations means wastewater which has passed through a septic tank of the size and configuration as required by these regulations.
- 3.37 “Public Sewer System” means a common sewage collection, conveyance, and treatment system serving more than one lot, directly controlled by a public authority.
- 3.38 “Runoff” means that part of precipitation or irrigation water that runs off the land into streams or other surface water.
- 3.39 “Secondary Treated Effluent” for the purpose of these regulations means domestic non-industrial wastewater which has undergone physical, chemical, and/or biological treatment in order to effect the following characteristics: (1) 5-day Biochemical oxygen demand, BOD(5), of not more than 20 mg/1; (2) Total suspended solids, TSS, of not more than 20 mg/1; (3) Total nitrogen concentration of not more than 1.0 mg/1; and (4) Fecal coliform concentration of not more than 23 colony forming units per 100 ml. All figures given are for 30-day averages, with single measurement not to exceed twice the 30-day average limit. Sampling frequency shall be dictated by the Director. BOD(5) and TSS analysis must be done by acceptable scientific practices as in the current Standard Methods for the Examination of Wastewater Analysis.

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- 3.40 “Seepage Pit” means a covered pit with open-jointed lining through which primary or secondary treated sewage effluent may seep or leach into the surrounding porous soil.
- 3.41 “Septage” means the domestic liquid and solid sewage pumped from septic tanks, cesspools, holding tanks, vault toilets, chemical toilets or other similar domestic sewage treatment components or systems and other sewage sludge not derived at sewage treatment plants.
- 3.42 “Septic Tank” means a watertight receptacle which receives the discharges of sewage and is designed and constructed so as to retain solids, digest organic matter through a period of retention and allow the treated liquids to discharge to additional treatment system components or directly into the subsoil through a leaching field or seepage pit.
- 3.43 “Sewage” or “wastewater” means untreated or insufficiently treated human excreta; food wastes disposed of through sewers; wash water; liquid wastes from residences, commercial buildings, agriculture or animal husbandry/slaughter operations, industrial establishments, or other places of assembly; and such diluting water (e.g., storm water inflow) as may have entered the waste disposal system.
- 3.44 “Significant Treatment System Modification” means any change, replacement, or reconstruction of any IWDS or OWTS because of: (1) System failure; (2) Increase in influent sewage flow rate above the design capacity of the existing system; or (3) Obsolescence.
- 3.45 “Single Family Dwelling” means a building designed exclusively for the occupancy of one family which is detached from any other dwelling or commercial building.
- 3.46 “State Waters” shall be as defined in the CNMI Water Quality Standards [19 Com. Reg. 01, January 15, 1997, page 14918] to mean all natural waters, fresh, brackish, or marine including wetlands, around and within the Commonwealth and as further delineated and defined under the Marine Sovereignty Act of 1980 (P.L. 2-7).
- 3.47 “Storm water drainage system” means any privately or publicly owned structure or system of structures designed to collect, carry, and/or divert surface runoff. This term includes, but is not limited to, lined and unlined drainage ways, swales, ditches, culverts, drainpipes, catch basins, ponding basins, and infiltration beds.
- 3.48 “Water Supply” means the water withdrawn from a water source, or that might feasibly be withdrawn from an undeveloped or partially developed water source.
- 3.49 “Waters of the United States” or “waters of the U.S.” shall be as defined in the Code of Federal Regulations, Chapter 40, Part 122.2 (40 CFR 122.2).
- 3.50 “Wetlands” shall be as defined in the CNMI Water Quality Standards [19 Com. Reg. 01, January 15, 1997, page 14918] to mean an area which is inundated or saturated by surface or groundwater at a frequency and duration that is sufficient to support, and under normal

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circumstances does support, vegetation typically adapted for life in saturated soil conditions.

- 3.51 “Used Oil” means any oil that has been refined from crude oil, or synthetic oil, that has been used and as a result of such use may be contaminated by physical or chemical impurities.
- 3.52 “USDA-NRCS” means United States Department of Agriculture, Natural Resources Conservation Service.
- 3.53 “Available,” as used in Section 26, means that based on system size, complexity, and wastewater quality, a certified operator must be on site or able to be contacted as needed to initiate the appropriate action in a timely manner.
[Commonwealth Register Vol.31, No.04, April 27, 2009]
- 3.54 “Certified Operator” means an individual who has passed an examination that tests their knowledge, skills, ability, and judgment as a wastewater operator for a particular classification level of wastewater treatment facility or wastewater collection system, and has been issued a certificate pursuant to Section 26 of these regulations.
[Commonwealth Register Vol.31, No.04, April 27, 2009]
- 3.55 “Infiltrative practice” means any impoundment, excavation, depression, or subsurface system designed or intended to be used for the subsurface dispersion of water, wastewater, stormwater, or other liquids.
[Commonwealth Register Vol.31, No.04, April 27, 2009]
- 3.56 “Operating shift” means that period of time during which operator decisions that affect human health, safety and welfare are necessary for proper operation of the system.
[Commonwealth Register Vol.31, No.04, April 27, 2009]
- 3.57 “Operator” means a person engaged in the operation of a wastewater system; “operator” does not ordinarily mean an official, such as the city engineer or public works superintendent, exercising only general administrative supervision. Operator duties are varied and include but are not limited to operating wastewater process equipment, valves, pumps, engines and generators; cleaning of various process equipment for necessary unit process functions; taking wastewater samples; operating electrical controls; monitoring gauges, meters and control panels; recognition of process upsets and critical conditions in unit processes; determining and adjusting treatment process conditions using data, meter, and gauge readings; mixing of any chemicals required in treatment; and inspecting the facility for overall process conditions.
[Commonwealth Register Vol.31, No.04, April 27, 2009]
- 3.58 “Responsible charge” – The operator(s) in responsible charge is defined as the person(s) designated by the owner to be certified operator(s) who makes decisions regarding the daily operational activities of a waste water treatment and/or collection system that will directly impact the quality and/or quantity of waste water.
[Commonwealth Register Vol.31, No.04, April 27, 2009]

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- 3.59 “Restrictive horizon” means a layer that significantly impedes movement of water through the subsurface. Layers that differ from overlying soil material enough to be considered restrictive horizons include (but are not limited to) volcanic bedrock, compacted soil, saprolite, and certain clayey soils.
[Commonwealth Register Vol.31, No.04, April 27, 2009]
- 3.60 “Wastewater collection system” or “collection system” means pipelines or conduits, pumping stations and force mains, and all other related constructions, devices, and appliances used to conduct wastewater to a wastewater treatment system.
[Commonwealth Register Vol.31, No.04, April 27, 2009]
- 3.61 “Wastewater treatment facility” means any place(s) used to treat, neutralize, stabilize, or dispose of wastewater and residuals.
[Commonwealth Register Vol.31, No.04, April 27, 2009]
- 3.62 “Wastewater treatment system” means devices, structures, and equipment used to treat, neutralize, stabilize, or dispose of wastewater of wastewater and residuals.
[Commonwealth Register Vol.31, No.04, April 27, 2009]
- 3.63 “Wastewater system” means the system of pipes, structures, and equipment used to treat, neutralize, stabilize, or dispose of wastewater and residuals;
[Commonwealth Register Vol.31, No.04, April 27, 2009]

SECTION 4 CONSTRUCTION AND OPERATION OF AN IWDS OR OWTS

- 4.1 Construction and operation of an IWDS is permissible under the following conditions:
- 4.1.1 For all new single family dwellings or duplexes provided: (1) There is no available public sewer; and (2) The siting and design parameters outlined in these regulations are met.
- 4.1.2. For all other new buildings and structures provided: (1) There is no available public sewer; (2) There is no discharge of oily, toxic, or hazardous wastes; and (3) The siting and design parameters outlined in these regulations are met.
- 4.1.3. In addition to the requirements outlined in 4.1.2. and 4.1.3. for the types of activities described in the respective sections, for all new buildings, construction and operation of the IWDS must:
- 1) be done in a manner that will not contaminate or degrade the groundwater of the CNMI;
 - 2) be done in a manner that will not contaminate or degrade the waters of any bathing beach, shellfish breeding ground, or stream used for public or domestic water supply purposes or for recreational purposes;

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- 3) be done in a manner that will not be accessible to insects, rodents, or other possible carriers of disease which may come into contact with food or drinking water;
- 4) be done in a manner that will not pose a health hazard by being accessible to children;
- 5) be done in a manner that will not create a public nuisance due to odor or unsightly appearance;
- 6) be done in a manner that will not violate any other local or federal laws or regulations governing water pollution or sewage disposal, or
- 7) not be operated when an IWDS Failure has occurred;
- 8) be done in a manner to prohibit the disposal of used oil into the system.

4.2 Construction and operation of an OWTS is permissible only under the following conditions:

- 4.2.1. For any new residential project serving 100 persons or more, provided: (1) There is no available public sewer; (2) The project owner(s) prove the technical and financial capability to meet the OWTS operational requirements specified in Section 19 of these regulations; (3) The siting and design parameters for an IWDS using a septic tank as outlined in these regulations cannot be met due to limitations of site, soil, topography, and/or lot size; and (4) The siting and design parameters for an OWTS outlined in these regulations are met. Residential projects serving less than 100 persons shall not be permitted to construct and operate an OWTS unless otherwise provided for in Paragraphs 4.2.4 and 4.3 below. The number of persons served by a project shall be determined in accordance with Section 8 of these regulations.
- 4.2.2. For any non-residential commercial or industrial project with average daily sewage flows greater than 10,000 gallons a day, provided: (1) There is no available public sewer; (2) The project owner(s) prove the technical and financial capabilities to meet the OWTS operational requirements specified in Section 19 of these regulations; and (3) The siting and design parameters for OWTS outlined in these regulations are met. Non-residential or industrial projects with average daily sewage flows less than 10,000 gallons per day shall not be permitted to construct and operate an OWTS, unless otherwise provided for in Paragraphs 4.2.4 and 4.3 below.
- 4.2.3. For any confined animal facility containing any of the following number of head: (1) 15 or more pigs; (2) 20 or more goats; (3) 10 or more cattle; (4) 100 or more chickens; or (5) any confined animal facility which has been found by the Division to have caused, by evidence of direct or indirect discharge, violations of

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the CNMI Water Quality Standards or CNMI Drinking Water Regulations. Such facilities shall be required to construct and operate an OWTS meeting the requirements of Section 20.

- 4.2.4 The Director may allow, on a case-by-case basis, construction and use of an “Alternative” OWTS as described in Section 19.19 for any residential, commercial, or industrial project with an average daily sewage flow less than 10,000 gallons per day.
- 4.3 For projects located within a Class I aquifer recharge area (see Definitions, Section 3) with an average daily flow greater than 5,000 gallons per day, the Applicant must install and operate an OWTS meeting the siting, design, operations, and financial requirements of these regulations.
- 4.4 A building or structure will be considered new when originally constructed, or when remodeled or extended such that the floor area is increased by greater than twenty percent (20%).
- 4.5 All building and structures connected to an existing IWDS or OWTS shall be connected to a public sewer if and when required to do so by the Commonwealth Utilities Corporation's Sewer Use Regulations, as amended, or as directed by the Director.
- 4.6 Prohibitions:
 - 4.6.1 Discharge of treated or untreated sewage directly or indirectly onto the ground surface or into State waters constitutes a public health hazard and is prohibited, unless otherwise authorized or permitted within these regulations.
 - 4.6.2 Discharge of wastewater from a Confined Animal Facility, and discharge of runoff that has contacted animal wastes from a Confined Animal Facility of any size into State waters is prohibited, unless otherwise authorized or permitted within these regulations.
 - 4.6.3 Discharge of cooling water, air conditioning water, water softener brine, Reverse Osmosis (“RO”) effluent and filter backwash, groundwater, oil, hazardous materials, roof drainage, or other aqueous or non-aqueous substances which are, in the judgment of the Director, detrimental to the performance of the system or to groundwater, shall not be discharged into any IWDS or OWTS.
 - 4.6.4 Increased Flows Prohibited: Except where specifically allowed within these regulations, no person shall cause the total sewage flow to an IWDS or OWTS, as calculated in Section 8 of these regulations, to be increased beyond that allowed under the original permit through the connection an additional dwelling(s) or building(s); increased occupancy; change of a facility’s use (e.g., conversion of a single-family dwelling to a barracks); renovation; or construction of an addition;

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without first obtaining a permit for a new or modified IWDS or OWTS under these regulations.

SECTION 5 APPLICABILITY OF REGULATIONS TO EXISTING AND NEW IWDS, OWTS, AND CONFINED ANIMAL FACILITIES

- 5.1 All new IWDS shall be subject to the design and siting criteria set forth in these regulations. IWDS applications submitted to the Division after the effective date of these regulations shall be subject to the requirements set forth herein.
- 5.2 The Director may require modifications and repairs on any existing Individual Sewage Disposal System if the IWDS has failed.
- 5.3 All new OWTS shall be subject to the design, siting, financial, and operational criteria set forth in these regulations. OWTS applications submitted to the Division after the effective date of these regulations shall be subject to the requirements set forth herein.
- 5.4 Owners of all existing publicly owned OWTS (i.e., CUC) are not required to obtain a permit from the Division to reconstruct, modify, or operate an OWTS provided that the publicly owned OWTS is subject to the NPDES permitting process, administered by the EPA. Provisions of these regulations may be designated as “not applicable” by the Director for future publicly owned OWTS. The rationale for any such designation shall be based on sound engineering principles, with due consideration of all potential impacts to public health and the environment. Such rationale shall be clearly explained in the permit documentation and in any public notice that may be required as part of the NPDES permitting process.
- 5.5 All existing Confined Animal Facility OWTS shall be subject to the permitting, design, siting, and operational criteria set forth in these regulations within two (2) years of the effective date of these regulations, with the following exception:
 - 5.5.1 Confined animal facilities that have been found by the Division to have caused, by evidence of direct or indirect discharge, violations of the CNMI Water Quality Standards or CNMI Drinking Water Regulations, may be required to comply with the provisions of these regulations within a shorter period of time as part of any order issued by the Director under Section 23 of these regulations.

SECTION 6 IWDS AND OWTS PERMIT APPLICATION REQUIREMENTS

No IWDS or OWTS (together referred to as “waste treatment system”) may be constructed unless the owner of the land upon which the waste treatment system is to be constructed, or the Lessee of said land (together to be known herein after as the “applicant”), has obtained a IWDS or OWTS Permit from the Director. An IWDS/OWTS permit application shall be completed and submitted to the Director for all new waste treatment and disposal systems, repairs, or

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modifications and/or expansions to same. Before construction may commence on an IWDS or OWTS, a permit for construction must be issued by the Director.

The application may be filled out by the Applicant or by the Applicant's Authorized Representative. In either case, the Applicant shall sign and date the application, and shall be responsible for all statements and information contained therein.

Information required on the IWDS/OWTS permit application shall consist of the following:

- 6.1 Name, address, and telephone number of the Applicant. If the Applicant is not the owner of the land, the lease or other title document must be provided with the application to prove the applicant's legal right to use the property.
- 6.2 Type of application (new, revision, or renewal).
 - 6.2.1 A new application is for those Applicants who seek to construct new IWDS or OWTS, or make significant modifications to existing IWDS or OWTS.
 - 6.2.2 A revised application is for those Applicants who seek to make a change to the scope of work after original submission of the application (i.e., upward or downward change in sewage flows, service population, or change in treatment system) and before start of construction. After construction begins, a new application must be submitted.
 - 6.2.3 A renewal application is for those Applicants whose proposed IWDS/OWTS construction activities has not commenced within 90 days from the date of issuing the original IWDS/OWTS construction permit.
- 6.3 IWDS/OWTS permit application fees shall be in accordance with the following fee schedule. Payment of application fee is required at the time of submitting each permit application and is non-refundable. Fees shall be paid by check, and made payable to the Division. All CNMI government agencies, and semi-autonomous agencies such as the Public School System, CUC, Mayors' Office, MPLA, and MVA shall be exempt from payment of application fees. However, no agency is exempt from the requirement of these regulations unless specifically stated in these regulations.

IWDS/OWTS NEW PERMIT APPLICATION FEE TABLE

<u>SYSTEM TYPE</u>	<u>SERVICE LEVEL</u>	<u>APPLICATION FEE</u>
IWDS	SINGLE FAMILY/DUPLEX	\$ 75.00
IWDS	ALL OTHERS	\$ 450.00
OWTS	CONFINED ANIMAL FACILITIES	\$ 300.00
OWTS	“LARGE” CONFINED ANIMAL FACILITIES ¹	\$ 550.00
OWTS	ALL OTHERS	\$ 0.25/gal. plant capacity

(1) The criteria determining what constitutes a “large” confined animal facility is contained in Section 20.3.

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There is a \$ 50.00 fee for all revised applications, regardless of system type or level of service. For changes from IWDS to OWTS, there is an additional fee equal to the difference as calculated from the above table. There is no fee for a renewal application.

- 6.4 Percolation test and soil log report for all IWDS and OWTS systems proposing subsurface disposal of treated effluent, except as provided for in Section 10.10.
- 6.5 Calculations defining average loading to the wastewater treatment system (refer to Section 8).
- 6.6 Proposed construction start and completion dates.
- 6.7 Detailed plans and specifications of the proposed treatment system, with complete and concise design calculations, design references employed, and assumptions made.
- 6.8 Site Plan. The site plan must contain at a minimum all of the following:
 - 6.8.1 Delineation of property boundaries and lot number.
 - 6.8.2 Delineation of public right of way, easements and access roads, if applicable.
 - 6.8.3 Indication of all existing and proposed structures on the lot including their location with respect to the lot boundaries.
 - 6.8.4 Location of proposed disposal system in relation to property boundaries, water wells, public right of way, easements and access roads, existing structures and utilities, and the proposed building(s).
 - 6.8.5 Topography of the project site, showing contour lines drawn at 1-foot intervals, or other intervals approved by the Director, and floor elevation of the existing or proposed building(s) to be served by the proposed wastewater treatment system. Indicate reference elevation point (benchmark). THIS PROVISION IS NOT APPLICABLE TO SINGLE FAMILY/ DUPLEX IWDS APPLICATIONS.
 - 6.8.6 Vicinity Map showing adjacent streets with names and other landmarks that will allow DEQ personnel to locate the project site.
- 6.9 The proposed wastewater treatment system site shall be inspected by the Director or Division Staff member prior to issuance of a IWDS/OWTS permit. The Applicant or his/her authorized representative may be called upon to accompany DEQ on the initial site visit.
- 6.10 A fully completed permit application for an IWDS shall be submitted to the Director for review at least thirty (30) calendar days prior to the planned start of construction.

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- 6.11 A fully completed permit application for an OWTS shall be submitted to the Director for review at least ninety (90) calendar days prior to the planned start of construction.
- 6.12 An IWDS/OWTS permit shall be void if the work authorized by said permit is not commenced within three (3) months after its issuance; or is suspended or abandoned for a period of three (3) months at any time the work has commenced. Such a voided permit shall require submission of a new IWDS/OWTS permit application (under “renewal”).
- 6.13 Permit application certification requirements:
- 6.13.1 IWDS permit applications shall be certified (“stamped”) by a professional Civil Engineer licensed by the Board of Professional Licensing to practice in the CNMI who has proven a complete understanding of the requirements of IWDS design. IWDS systems that serve a single family home or duplex are exempt from the certification requirement unless otherwise required by the Board of Professional Licensing. Architects, unlicensed engineers, and unqualified licensed engineers shall not certify any IWDS or OWTS permit applications.
- 6.13.2 All proposed septic tanks and seepage pits subject to traffic loads (i.e., those located in parking areas, driveways) MUST submit complete structural design drawings and calculations, certified by a licensed professional engineer. The plans must be in compliance with the Department of Public Works, Building Code requirements.
- 6.13.3 All OWTS permit applications must contain complete structural, hydraulic, and kinetic design calculations certified by a CNMI licensed professional engineer. The Director may allow exceptions from the certification requirement for Confined Animal Facility OWTS applications, depending on size, complexity, and potential impacts, and as consistent with the Board of Professional Licensing requirements. The rationale for any such exception shall be clearly explained in the permit documentation.
- 6.14 If an Applicant wishes to dispose of primary or secondary treated wastewater on another lot, duly recorded with the CNMI Registrar of Deeds, then that Applicant must request and obtain a written easement recorded on the deed of the lot designated for disposal of wastewater. The easement shall reflect the location of the septic tank and leaching field(s) or seepage pit(s), and further reflect the setbacks listed in Section 13 of these regulations (i.e., the easement must state that no building may be built within 10 feet of the septic tank, etc.). This requirement to record an IWDS easement shall apply even if the owner or lessee of the other lot is the Applicant for the IWDS.

SECTION 7 IWDS GENERAL DESIGN PARAMETERS

- 7.1 The following general design provisions shall apply to all new IWDS:

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- 7.1.1 Where permitted by Section 4 of these regulations, a building may be connected to an individual sewage disposal system which complies with other provisions set forth in these regulations. The type of system shall be determined on the basis of location, soil porosity, and groundwater level and shall be designed to receive all sanitary sewage from the property. The system, except as otherwise provided, shall consist of a septic tank with effluent discharge into a sub-surface leaching field or seepage pit.
- 7.1.2 All individual sewage disposal systems shall be so designed that additional subsurface drain fields, equivalent to at least 100% of the required original system, may be installed if the original system cannot absorb all the sewage.
- 7.1.3 No property shall be improved in excess of its capacity to properly absorb sewage effluent in the quantities and by the means provide in these regulations.
- 7.1.4 When there is insufficient lot area or improper soil conditions for adequate sewage disposal from a proposed building or proposed use of land as determined by application of the requirements of these regulations, the building or proposed use shall not be permitted.
- 7.1.5 Where public sewers may be installed at a future date, provision should be made in the household plumbing system for connection to such sewer, in the time frame specified by the Director.
- 7.1.6 Nothing contained in these regulations shall be construed to prevent the Director from requiring compliance with higher requirements than those contained herein where such higher requirements are essential to maintain a safe and sanitary condition.

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SECTION 8 IDENTIFY AVERAGE DAILY WASTEWATER FLOW RATE

8.1 For the purpose of these regulations, the unit flow rates are found on TABLE 8.1 below:

TABLE 8.1
QUANTITIES OF SEWAGE FLOWS

TYPE OF DEVELOPMENT	GALLONS PER UNIT PER DAY	NUMBER OF PERSONS
Airports – per passenger	5 per passenger	
Airports – per employee	15 per employee	
Apartments, without laundry	120 per bedroom	2 per bedroom
Apartments with laundry; Condominiums	150 per bedroom	2 per bedroom
Barracks/worker's housing	60 per bed	1 per bed
Bars/lounges – per employee	15 per employee	
Bars/lounges – per seat	10 per seat	
Boarding Houses	50 per guest	
Bowling alleys	75 per lane	
Campgrounds – per tent or trailer site, central bathhouse	50	
Camps - construction	50	
Camps - luxury	100	
Camps – resort – night and day, with limited plumbing	50	
Car Wash	40 per vehicle served	
Clubs – country	100 per resident member	
Clubs – country	25 per non-res. member	
Dwellings – single family	150 PER BEDROOM	2 PER BEDROOM
Factories – (exclusive of industrial wastes, no showers)	25 per person, per shift	
Factories - add for showers	10 per person, per shift	
Hospitals	250+ per bed	
Hotels - Business	150 per room	2 per room
Hotels - Resort	225 per room	2 per room
Institutions – other than hospitals (nursing homes)	125 per resident/patient	
Laundromats	250 per washer	
Office Space	15 per 100 square feet	
Parks – picnic (toilet wastes only) – gallons per picnicker	5 per user	
Parks – picnic (with bathhouses, showers, and flush toilets)	10 per user	
Restaurants – (total)	40 per seat	
Restaurants – (kitchen wastes) per meal served	7 per meal served	(for grease traps)
Retail/commercial space/warehouse	10 per 100 square feet	
Schools - boarding	100 per student or faculty	
Schools – day (without cafeterias, gyms, or showers)	15 per student or faculty	
Schools – day (with cafeterias, but no gyms or showers)	20 per student or faculty	
Schools – day (with cafeterias, gyms, and showers)	25 per student or faculty	
Shopping Centers – (no food)	10 per 100 square feet	
Sports Stadiums	5 per seat	
Stores – per toilet room	400	
Swimming Pools and Bathhouses	10 per person	
Theaters – movie	5 per auditorium seat	
Trailer Parks	150 per trailer	

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- 8.2 Please specify flow rates for all other uses. Unit flow rates employed for “other uses” are subject to modification by the Director if, in his/her judgment, such unit flow rates are unreasonable. The rationale for any such modification shall be clearly explained in writing to the applicant.

SECTION 9 SEPTIC TANK DESIGN AND CONSTRUCTION

All IWDS require a septic tank unless the system is an approved OWTS.

- 9.1 The net volume of a septic tank is measured from below the effluent pipe. The following shall apply for sizing septic tanks:

9.1.1. For average daily sewage flows 0 to 500 gallons per day (gpd), the septic tank net volume must be 750 gallons (100 cubic feet).

9.1.2. For average daily sewage flows between 501 to 1500 (gpd), the septic tank net volume must be 1.5 times the average daily sewage flow (1.5 days' storage capacity).

$VOL = Q \times 1.5$, where Q is the average daily sewage flow.

9.1.3. For average daily sewage flows greater than 1500 gpd, the septic tank net volume must be 1,125 + 0.75 times the average daily sewage flow.

$VOL = 1,125 + [0.75 \times Q]$

- 9.2 Septic tank design shall be such as to provide access for cleaning, adequate volume for settling, and for sludge and scum storage. The structural design shall provide for a sound durable tank which will sustain all loads and pressures and will resist corrosion.
- 9.3 The siting criteria specified in Section 13 of these regulations shall be met for all new septic tanks.
- 9.4 The liquid depth (as measured from the bottom of the tank outlet pipe to tank bottom) shall be at least five (5) feet and not more than six (6) feet deep. A liquid depth greater than six (6) feet shall not be considered in determining tank capacity.
- 9.5 No tank or compartment thereof shall have an inside horizontal dimension of less than four (4) feet for the initial compartment. A second compartment may be less if approved by the Director.

For all single compartment tanks the minimum dimensions of septic tank shall not be less than six (6) feet depth including the air space by four (4) feet width by six (6) feet length. Scum storage shall equal 15% of the total liquid depth and shall be measured from the

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liquid level to the vertical top of the inlet tee and outlet tee excluding the one (1) inch air space at the top of the tank.

The Director may approve other designs provided sufficient information is submitted demonstrating that the design will perform at least as effectively as the above referenced design. Information must include sufficient studies to demonstrate the treatment levels of the alternative design are equal to or greater than that of the above referenced standards. Such studies may be based either on settling capabilities or biochemical oxygen demand removal. Studies must be conducted using recognized practices and methods. The applicant for such alternate designs has the burden to prove to the Director's satisfaction that such a system will adequately treat the waste. A system may not be approved without such sufficient studies as described above.

- 9.5.1 i.e., for 5-foot liquid depth tanks, the distance from the bottom of the inlet pipe to the inside surface of the top of the septic tank shall be 10 inches.
- 9.5.2 i.e., for 6-foot liquid depth tanks, the distance from the bottom of the inlet pipe to the inside surface of the top of the septic tank shall be 12 inches.
- 9.6 The bottom of the septic tank inlet pipe shall be at least two (2) inches above the bottom of the septic tank outlet pipe(s). The septic tank outlet pipe(s) shall be at least the size of the septic tank inlet pipe (see figure 9.1).
- 9.7 The vertical leg of the outlet tee shall extend upward to within one (1) inch of the underside of the cover and downward to a point which is not less than 25% nor greater than 40% of the liquid depth below the liquid surface (see FIGURE 9.1).
- 9.8 When multi-compartment tanks are used, the volume of the first compartment shall be equal to or greater than that of the second compartment (see FIGURE 9.2).
- 9.9 Access to each compartment of the tank shall be provided by a 18" x 18" inch minimum manhole or removable cover. The inlet and outlet tee connections shall also be accessible through properly placed manholes, or easily removed covers.
- 9.10 Where the top of the septic tank is below ground grade level, manholes shall be built up to ground grade level.
- 9.11 The wall of the septic tank shall not be less than 6 inches thick reinforced concrete poured in place; or not less than 6 inches thick load bearing concrete hollow block reinforced at every 16 inches on center, and laid on a solid foundation with mortar joints well filled, and plastered with 1/2 inch concrete mortar in the inside of the tank or other impermeable lining material if approved in writing by DEQ prior to application. The tank covers and floor slabs shall be not less than 4 inch thick reinforced concrete. Septic tank covers may either be poured-in-place or pre-cast. The minimum compressive strength of any concrete septic tank wall, top and covers, or floor shall not be less than 2,500 psi (pound per square inch). Other materials may be approved by the Director on a case by case

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basis, provided the materials are is of comparable strength. The applicant must provide sufficient proof as the Director deems necessary to prove that a material is of comparable strength.

- 9.12 All septic tank covers shall be capable of supporting an earth load of not less than 300 pounds per square foot where the maximum coverage does not exceed three (3) feet. Where septic tanks may be subject to traffic and/or live loads of any nature (e.g., parking lot, driveway), the entire structure shall be designed to withstand H-20 loading (AASHTO standard). Placing of any part of an IWDS under a parking lot or driveway must meet all Department of Public Works, Building Code requirements.
- 9.13 After the completion of the septic tank and before it is put into use, the inside shall be cleaned and all forms removed.
- 9.14 Grease traps shall be installed for all buildings containing food processing facilities, including restaurants, schools, hospitals, factories, barracks, or other installations from which large quantities of grease related to food processing can be expected to be discharged. Grease traps shall be subject to the following minimum requirements:
- 9.14.1 Location - Grease traps should be installed on a separate building sewer serving that part of the plumbing system into which the grease shall be discharged. Toilet waste shall not be discharged to a grease trap. The discharge from the grease trap must flow to a septic tank meeting the requirements of these regulations.
- 9.14.2 Capacities - Grease traps shall have a minimum depth of 4 feet and a minimum capacity of 1,000 gallons, and shall have sufficient capacity to provide at least a 24 hour detention period for the kitchen flow.
- 9.14.3 Construction - Grease traps shall be water-tight and constructed of sound and durable materials not subject to excessive corrosion, decay, or to cracking or buckling due to settlement or backfilling. Tanks and covers shall be designed and constructed so as to withstand normal structural loading. A tank installed in groundwater shall be weighted to prevent the tank from floating when it is emptied.
- 9.14.4 Depth of Tees - The inlet tee shall extend to the mid depth of the tank. The outlet tee shall extend to within 12 inches of the bottom of the tank. Tees shall be cast iron or Schedule 40 PVC and properly supported by a hanger, strap or other device.
- 9.14.5 Baffles - Baffles may be provided as necessary to maximize the separation of grease from the sewage.
- 9.14.6 Base - Grease traps shall be installed on a level stable base that will not settle.
- 9.14.7 Materials - Grease traps may be constructed of poured reinforced concrete, precast

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reinforced concrete, or prefabricated material acceptable to the Director.

- 9.14.8 Access Manholes - Grease traps shall be provided with a minimum 24 inch diameter manhole frame and a cover to grade over the inlet and outlet.
- 9.14.9 Accessibility - Grease traps shall be located on the lot so as to be accessible for servicing and cleaning.
- 9.14.10 Invert Elevation - The invert elevation of the inlet of a grease trap shall be at least 2 inches above the invert elevation of the outlet. Inlet and outlet shall be located at opposite ends of the tank to maximize separation, and at least 12 inches above the maximum groundwater elevation.
- 9.14.11 Backfill - Backfill around the grease trap shall be placed in such a manner as to prevent damage to the tank.
- 9.15 The outlet of all septic tanks serving IWDS and OWTS with total design flows greater than 1,000 gallons per day shall be equipped with an effluent filter. The effluent filter shall be an Orenco Systems "Biotube" Effluent Filter, or other similar manufacture, subject to approval by the Director. The filter size shall be selected and installed according to manufacturer's recommendations to maximize the time between cleanings.

SECTION 10 PERCOLATION TESTING PROCEDURES

- 10.1 Percolation tests shall be required in support of all multi-residential, commercial, and industrial IWDS applications.
[as amended by Commonwealth Register Vol.31, No.04, April 27, 2009]
- 10.2 Percolation tests shall be required in support of all multi-residential, commercial, and industrial OWTS applications where the Applicant proposes subsurface disposal of the treated wastewater effluent.
[as amended by Commonwealth Register Vol.31, No.04, April 27, 2009]
- 10.3 Percolation tests shall be required in support of all single family and duplex IWDS application EXCEPT where data from IWDS percolation tests conducted in accordance with these regulations and conducted within 250 feet of the proposed IWDS site, and in similar soils and geological conditions are submitted by the Applicant and can be verified by the Division.
[as amended by Commonwealth Register Vol.31, No.04, April 27, 2009]
- 10.4 Percolation Testing Manual: The August, 2007 DEQ Precolation Testing Manual (or its most recent version) shall be made available by the Division to provide detailed guidance as to procedures, safety, and certification requirements for percolation testers. The manual shall be available for free downloading on internet or as a hard copy, for a reasonable fee which covers the costs of publication.
[Commonwealth Register Vol.31, No.04, April 27, 2009]

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10.4 Number and Location of Tests:

10.4.1 Deep observation pit: The purpose of the deep observation pit is to expose the soil column to allow for detailed soil description and to check for potentially adverse conditions including high groundwater and restrictive horizons.

- a. At least one (1) deep observation pit shall be required for most sites. Additional pits may be required for large facilities (over 1 acre), facilities that include multiple leaching fields or stormwater practices, or where varying soil conditions warrant additional pits.
- b. Deep observation pits are to be excavated to a minimum depth of 4 feet below the bottom of the proposed infiltrative practice. Excavation may stop if groundwater or another restrictive horizon is found within 3 feet of the bottom of the proposed infiltrative practice. Pits with a total depth greater than 5 feet are required to meet U.S. Occupational Safety and Health Administration (OSHA) excavation safety requirements. See percolation testing manual for safety guidance and “safety pit” designs.
- c. Pits in limestone may not be required if ALL of the following can be shown to apply: The bottom of the infiltrative practice (e.g. leaching field or stormwater infiltrative practice) will be wholly in limestone; ground level is greater than 10 feet above mean sea level; and the proposed location of the infiltrative practice is not within 100 feet of a wetland, stream, or any area identified as volcanic rock or volcanic saprolite based on observation and/or USGS geological maps.
- d. The deep observation pit shall not be located within the potential footprint of the proposed infiltrative practice, or any other structure.

10.4.2 Percolation test holes: The purpose of the percolation test hole(s) is only to measure percolation rate. The percolation test hole shall not be the same excavation as the deep observation pit, except as noted below.

- a. For a single-family residence, duplexes, and small facilities (with less than half an acre of proposed development) only one percolation test hole is required. However, three (3) percolation test holes are recommended for all applications to avoid instances of anomalously low or high measured percolation rates.
- b. Facilities which develop areas larger than one (1) acre will require at least three test holes. The total number of test holes needed depends on the size, location, and number of infiltrative practices (e.g. leaching fields, ponding basins) proposed.
- c. The percolation test holes shall be located within the potential footprint of the proposed infiltrative practice. If three or more percolation test are conducted, one test may be conducted within the deep observation pit.

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[Commonwealth Register Vol.31, No.04, April 27, 2009]

10.5 Percolation test procedures:

SECTION 11 LEACHING FIELD DESIGN AND CONSTRUCTION

An applicant for an IWDS, or an OWTS proposing subsurface disposal of treated wastewater effluent, may employ a leaching field (also known as a “absorption field”, “absorption bed”, or “leaching bed”) to dispose of primary or secondary treated effluent. This section of the regulations describes the design and construction requirements associated with uses of a leaching field.

- 11.1 Where percolation rates and soil characteristics and site conditions meet the requirements of these regulations, a leaching field may be installed.
- 11.2 The area of a leaching bed shall depend on: (1) The tested or assumed percolation rate (see Section 10 for Percolation Testing Procedures), and (2) The average daily sewage flow rate (see Section 8 for Quantifying Average Daily Sewage Flow Rate).
- 11.3 A leaching field may be constructed if ALL of the following criteria are met:
 - 11.3.1 The leaching field is to be located in an area which is well drained (no storm water flooding), and to which no storm water is diverted for percolation or sedimentation.
 - 11.3.2 The leaching field is to be located in an area which has a ground slope no greater than 15 percent.
 - 11.3.3 The leaching field is to be located in an area which has safe access, and is not subject to severe erosion.
 - 11.3.4 The leaching field can be constructed in the required size while maintaining the set back requirements specified in Section 13 of these regulations.
 - 11.3.5 The leaching field does not exceed the dimensional limitations specified in this section.
 - 11.3.6 The percolation test indicates a percolation rate between 0.67 inches per hour and 30 inches per hour.
 - 11.3.7 The soil test pit did not reveal groundwater within six (6) feet of the existing ground surface.
 - 11.3.8 The soil test pit did not reveal groundwater within three (3) feet of the bottom of the proposed leaching bed.

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- 11.4 The total needed absorption area of a leaching field shall be determined by Table 11.1 (Section 19 gives leaching field sizing criteria when used in connection with an OWTS). The Applicant shall determine the required soil absorption factor from the results of the percolation test, and multiply the required soil absorption factor by the average daily sewage flow rate determined through the use of TABLE 8.1.

TABLE 11.1
LEACHING FIELD DESIGN

<u>FINAL SOIL PERCOLATION RATE</u>	<u>REQUIRED SOIL ABSORPTION FACTOR</u>
18 inches to 30 inches per hour.	2.5 gallons/sq. ft./ day
12 inches to 17.99 inches per hour.	2.2 gallons/sq. ft./day
6 inches to 11.99 inches per hour.	1.6 gallons/sq. ft./day
4 inches to 5.99 inches per hour.	1.3 gallons/sq. ft./day
2 inches to 3.99 inches per hour.	0.9 gallons/sq. ft./day
1.33 inches to 1.99 inches per hour.	0.8 gallons/sq. ft./day
1 to 1.32 inches per hour.	0.6 gallons/sq. ft./day
0.67 to 0.99 inches per hour.	0.5 gallons/sq. ft./day

- 11.5 All leaching field construction shall conform to the dimensional limitations and requirements shown on Table 11.2. (See FIGURE 11.1)

TABLE 11.2
LEACHING FIELD CONSTRUCTION

<u>DESIGN PARAMETER</u>	<u>MAX VALUE</u>	<u>MIN VALUE</u>
Number of drain lines	7 lines	2 lines
Diameter of drain lines	4 inches	4 inches
Length of drain lines	54 feet	18 feet
Width of drain lines	36 feet	6 feet
Length of leaching field	60 feet	24 feet
Width of leaching field	42 feet	12 feet
Spacing of drain lines center to center	6 feet	6 feet
Distance from drain line to edge of field	3 feet	3 feet
Depth of final cover (total) over drain lines	48 inches	24 inches
Depth of gravel fill material under drain lines	no maximum	12 inches
Depth of gravel fill material over drain lines	12 inches	6 inches
Size of gravel fill	2 1/2 inch	3/4 inch
Depth from bottom of gravel fill to water table	no maximum	3 feet

- 11.6 Construction of leaching field in filled ground is permitted only if the bottom of the leaching bed (bottom of gravel fill material below drain lines) extends continuously beneath the drain lines to a depth of at least 24 inches below the original ground surface.
- 11.7 Distribution drain lines shall be:

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- 11.7.1 Constructed of perforated PVC pipes. Perforations shall be 1/2-inch diameter, spaced at 6-inches on center on both sides of the pipe, drilled 30 degrees below the horizontal center axis (transverse) of the pipe. (See FIGURE 11.1)
- 11.7.2 Laid with a slope ranging from flat to 0.001 foot/foot, as measured along the length of the drain line. The ends of the drain lines shall be capped or looped to other drain lines.
- 11.7.3 Schedule 80 if the leaching field is placed in an area subject to heavy loads, such as from cars and other vehicles.
- 11.8 A distribution box containing a separate outlet for each distribution line shall be installed for all leaching field disposal systems whenever there are more than two (2) drain lines. Outlet pipes from the distribution box shall have exactly the same bottom of pipe elevation. (SEE FIGURE 11.2)
- 11.9 If two or more separate leaching fields are proposed, each field shall have applied a proportionate daily volume of sewage. Leaching fields must be separated by at least a 10-foot clear buffer between the outside edges of each field. Separate leaching fields constructed at different elevations (drain pipe, bottom of bed) shall be separated by the following formula:
- Distance = 10 feet + [4 x difference in elevation (ft)]**
- 11.10 Before placing gravel filter material or drain lines in a prepared excavation, all smeared or compacted surfaces shall be removed from the leaching bed area by raking to a depth of 1-inch and the loose material removed. Clean stone, gravel, free from fines, soils, dust or debris varying in sizes from 3/4 inch to 2-1/2 inches shall be placed in the trench above and below the drain lines to a depth required in TABLE 11.2.
- 11.11 After placement of all gravel fill material, but before backfilling with earth over the leaching field, the entire leaching field area shall be covered with a geotextile or other material acceptable to the Division. The geotextile shall be Geomat 100, Mirafi 140, Terra Tex GS, or other similar manufacture. After placement of the geotextile, but before earthen backfilling, Division staff shall be afforded the opportunity to inspect the leaching field construction to assure compliance with these regulations.

SECTION 12 SEEPAGE PIT DESIGN AND CONSTRUCTION

An applicant for an IWDS, or an OWTS proposing subsurface disposal of treated wastewater effluent, may employ a seepage pit to dispose of primary or secondary treated effluent. This section of the regulations describes the design and construction requirements associated with use of a seepage pit(s).

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- 12.1 Where percolation rates and soil characteristics and site conditions meet the requirements of these regulations, a seepage pit may be installed.
- 12.2 The absorption area of a seepage pit is the wall area below the bottom of the inlet pipe. The outside dimensions of the gravel backfill around the seepage pit shall not be used in calculation of absorption area.
- 12.3 The required absorption area of a seepage pit shall depend on: (1) The tested or assumed percolation rate (see Section 10 for Percolation Testing Procedures), and (2) The average daily sewage flow rate (see Section 8 for Quantifying Average Daily Sewage Flow Rates).
- 12.4 A seepage pit may be constructed if ALL of the following criteria are met:
- 12.4.1 The seepage pit is to be located in an area which is well drained (no storm water flooding), and to which no storm water is diverted for percolation or sedimentation.
- 12.4.2 The seepage pit is to be located in an area which has a ground slope no greater than 15% percent.
- 12.4.3 The seepage pit is to be located in an area which has safe access, and is not subject to severe erosion.
- 12.4.4 The seepage pit can be constructed in the required size and configuration specified in this section, while maintaining the setback requirements specified in Section 13 of these regulations.
- 12.4.5 The percolation test indicates a percolation rate in the range of 0.67 inches per hour to 30 inches per hour.
- 12.4.6 The soil test pit did not reveal groundwater within twelve (12) feet of the existing ground surface.
- 12.4.7 The soil test pit did not reveal groundwater within five (5) feet from the bottom of the seepage pit.

The total required absorption area of a seepage pit shall be determined by TABLE 12.1 (Section 19 gives seepage pit sizing criteria when used in connection with an OWTS). The required soil absorption area equals the required soil absorption factor (from Table 12.1) multiplied by the average daily sewage flow rate (from Table 8.1).

TABLE 12.1
SEEPAGE PIT DESIGN

FINAL SOIL PERCOLATION RATE
18 inches to 30 inches per hour.

REQUIRED SOIL ABSORPTION FACTOR
2.5 gallons/sq. ft./day

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12 inches to 17.99 inches per hour.	2.2 gallons/sq. ft./day
6 inches to 11.99 inches per hour.	1.6 gallons/sq. ft./day
4 inches to 5.99 inches per hour.	1.3 gallons/sq. ft./day
2 inches to 3.99 inches per hour.	0.9 gallons/sq. ft./day
1.33 to 1.99 inches per hour.	0.8 gallons/sq. ft./day
1 to 1.32 inches per hour.	0.6 gallons/sq. ft./day
0.67 to 0.99 inches per hour.	0.5 gallons/sq. ft./day

12.5 All seepage pit construction shall conform to the dimensional limitations and requirements shown on Table 12.2.

TABLE 12.2
SEEPAGE PIT CONSTRUCTION

<u>DESIGN PARAMETER</u>	<u>MAX VALUE</u>	<u>MIN VALUE</u>
Length/width ratio	4 : 1	1 : 1
Total inside depth	20 feet	6 feet
Percentage openings in wall	4 %	2 %
Depth of gravel fill below pit floor	no maximum	24 inches
Thickness of gravel fill around pit	no maximum	12 inches
Depth below gravel fill to water table	no maximum	3 feet
Size of gravel fill	2-1/2 inches	3/4 inch
Earthen cover over top of pit	24 inches	no minimum

12.6 When more than one seepage pit is used, the following criteria must be met:

12.6.1 Installation shall be made in parallel.

12.6.2 Each seepage pit shall be the same size.

12.6.3 A distribution box shall be used to assure that each seepage pit is given an equal daily sewage flow.

12.6.4 The pits shall be separated by at least two (2) times the inside pit diameter (if pits are circular), or at least two (2) times the average of the length and width of the pits (if the pits are rectangular).

12.7 PVC pipes with tight joints shall be used in connecting the septic tank to the seepage pit.

12.8 Access to the seepage pit shall be provided by a 18" x 18" inch manhole or removable cover. The inlet connection(s) shall also be accessible through properly placed manholes, lifting rings or by easily removed covers.

12.9 Where the top of the seepage pit is below grade level, manholes shall be built up to finished grade level.

12.10 For a rectangular seepage pit:

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- 12.10.1 The walls shall not be less than 6 inches thick reinforced concrete poured in place, laid on a solid foundation, provided that a minimum of 2% percent of the wall area evenly distributed below the bottom of the inlet pipe is open to the surrounding soil, OR
- 12.10.2 The walls shall not be less than 6" inches thick load bearing concrete hollow block reinforced at every 16" inches on center, and laid on a solid foundation and placed with horizontal mortared joints. The vertical joints shall not be mortared, and shall have a clear opening of 3/8" to 5/8" inches between each block. (See FIGURE 12.1)
- 12.11 Circular seepage pits are acceptable, provided that the wall area has the required minimum two (2%) percent openings to the surrounding soil.
- 12.12 All seepage pit covers shall be capable of supporting earth load of not less than 300 pounds per square foot where the maximum coverage does not exceed three (3) feet. Where seepage pits may be subject to traffic loads (e.g., parking lot, driveway), the entire structure shall be designed to withstand H-20 loading (AASHTO Standard).
- 12.13 After the completion of the seepage pit and before it is put into use, the inside shall be cleaned and all forms removed.
- 12.14 The space between the seepage pit lining and the earth shall be filled with clean 3/4" to 2-1/2" crushed rock or gravel, free from fines, soils, dust and debris from a depth of at least three (3) feet below the bottom of the pit up to the bottom of the inlet pipe.
- 12.15 After placement of all gravel fill material, but before backfilling with earth over the gravel fill material around the seepage pit, the gravel area shall be covered with a geotextile. The geotextile shall be Geomat 100, Mirafi 140, Terra Tex GS, or other similar manufacture. After placement of the geotextile, but before earthen backfilling, Division staff shall be afforded the opportunity to inspect the seepage pit construction to assure compliance with these regulations.

SECTION 13 IWDS AND OWTS SITING CRITERIA

- 13.1 All IWDS components are subject to the set back distances specified in Table 13.1. If an OWTS proposes disposal of the treated wastewater effluent through either a leaching field or seepage pit system, then the set back requirements for these shall be as listed below.

TABLE 13.1
IWDS AND OWTS SITING CRITERIA

<u>IWDS COMPONENT</u>	<u>FEATURES</u>	<u>MINIMUM REQUIRED SET BACK DISTANCE</u>
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Septic tank -	State waters	100 feet
	Buildings	10 feet
	Leaching fields	5 feet
	Seepage pit	0 feet
	Property lines	10 feet
	Water wells	50 feet
	Underground water tanks	50 feet
	Water lines	10 feet
	Storm water drainage systems ⁴	50 feet ⁵
Leaching fields & Confined Animal Facilities -		
	State waters	150 feet
	Buildings ¹	15 feet
	Septic tank	5 feet
	Property lines	5 feet
	Water wells ²	see Table 13.2
	Underground water tanks	50 feet
	Water lines	25 feet
	Cliff/Steep embankments ³	25 feet
	Storm water drainage systems ⁴	50 feet ⁵
Seepage pits		
	State waters	150 feet
	Buildings ¹	15 feet
	Septic tank	0 feet
	Property lines	10 feet
	Water wells ²	see Table 13.3
	Underground water tanks	50 feet
	Water lines	25 feet
	Cliff/steep embankments ³	25 feet
	Storm water drainage systems ⁴	50 feet ⁵

- NOTES:
- (1) Minimum distance. The Building Safety Code may require greater distances. Includes above ground water tank.
 - (2) Includes springs.
 - (3) Greater than 10 foot vertical drops having 50% slope.
 - (4) This applies only to storm water drainage systems that the Director determines to be reasonably susceptible to contamination from an IWDS or OWTS. In considering whether a storm water drainage system is reasonably susceptible to contamination, the Director shall consider the following factors:
 - a. The size of the proposed IWDS or OWTS;
 - b. The location and depth of the IWDS or OWTS relative to the storm water drainage system;
 - c. The design, construction, and discharge location of the storm water drainage system;
 - d. The soils, slopes, depth, and other factors affecting the likelihood or frequency of discharge to the storm water drainage system;

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- e. Other relevant factors.
- (5) . This setback distance may be increased to 100 feet for septic tanks and 150 feet for leaching fields, seepage pits, and confined animal facilities for storm water drainage systems that discharge to a “State water”, if determined to be reasonably susceptible to contamination as outlined above.

TABLE 13.2
LEACHING FIELD AND WATER WELL MINIMUM SETBACK DISTANCES

<u>NUMBER OF PERSONS SERVED BY WELL</u>	<u>LEACHING FIELD OR UPGRADIENT FROM WELL</u>	<u>LEACHING FIELD IS DOWNGRADIENT FROM WELL</u>
Less than 25	150 feet	75 feet
25 or more	300 feet	150 feet

TABLE 13.3
SEEPAGE PIT AND WATER WELL MINIMUM SET BACK DISTANCES

<u>NUMBER OF PERSONS SERVED BY WELL</u>	<u>SEEPAGE PIT IS UPGRADIENT FROM WELL</u>	<u>SEEPAGE PIT IS DOWNGRADIENT FROM WELL</u>
Less than 25	150 feet	75 feet
25 or more	300 feet	150 feet

TABLE 13.4
**CONFINED ANIMAL FACILITY AND WATER WELL MINIMUM SETBACK
DISTANCES**

<u>NUMBER OF PERSONS SERVED BY WELL</u>	<u>CONFINED ANIMAL FACILITY IS UPGRADIENT FROM WELL</u>	<u>CONFINED ANIMAL FACILITY IS DOWNGRADIENT FROM WELL</u>
Less than 25	150 feet	75 feet
25 or more	300 feet	150 feet

- 13.2 The Director has the authority to make final determination of upgradient and downgradient directions for the purpose of applying set back standards.
- 13.3 The Director may increase the set back distances specified above if, in his/her judgment, the volume of sewage discharge, the hydrogeologic conditions, and/or the size of the water well service population warrants further protective measures. The rationale for any decision to increase setback distances shall be clearly explained in the permit documentation.
- 13.4 The minimum set back distance from the existing water well to a proposed leaching field or seepage pit may be decreased by up to 2/3, but in no case to less than 50' feet, provided ALL of the following conditions are met:

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- 13.4.1 If water produced from the water well(s) in question undergoes reverse osmosis (RO) treatment with membranes having a molecular weight cut-off of 300 or less.
- 13.4.2 The RO treatment process provides post-treatment disinfection, capable of maintaining a residual chlorine concentration of at least 0.2 mg/l 30 minutes after treatment.
- 13.4.3 The depth to the groundwater is at least 250 feet.
- 13.4.4 The existing water well(s) located within the set back distances specified above have been constructed in accordance with the CNMI's Well Drilling and Well Operations regulations.
- 13.4.5 The Applicant submits evidence that existing water well(s) located within the set back distances specified above currently undergo RO treatment.
- 13.4.6 The existing water well(s) is owned by the Applicant. If the water well(s) is owned by another person, that persons consent must be submitted with the permit application. All of the other requirements listed above must still be met if the well is owned by another person.

SECTION 14 HOLDING TANKS

Where site limitations of lot size and/or soil type are such that methods of on-site wastewater disposal described herein cannot be utilized, the possibility of storing a dwelling's or small commercial operation's wastewater in water-tight tanks (holding tanks), with periodic pumping by licensed Hauler (see Section 18) may be permitted in very limited circumstances. The purpose of permitting holding tanks is to provide land owners with some economic beneficial use of the land without compromising environmental quality or public health.

Holding tanks are not seen as viable long-term solutions to on-site treatment and disposal of wastewater, because of: (1) Continuing costs; (2) Potential for illicit connections to drains, ditches, or surface water; and (3) Lack of regulatory management resources to assure proper system maintenance and operation.

HOLDING TANK SYSTEMS MUST BE APPROVED BY DEQ PRIOR TO CONSTRUCTION OF THE DWELLING OF COMMERCIAL ESTABLISHMENT INTENDED TO BE SERVED BY SUCH SYSTEM.

- 14.1 New holding tanks, designed for the purpose of containing wastewater without the release to the surrounding soil, shall be permitted ONLY if ALL of the following conditions are met:
 - 14.1.1 There is no available sewer.

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- 14.1.2 The holding tank system serves residential or commercial uses with average daily wastewater flows less than 1,000 gpd, as determined by Table 8.1 of these regulations.
- 14.1.3 The holding tank is designed and constructed with a storage capacity equal to at least five (5) days of average day wastewater flow.
- 14.1.4 The holding tank system is provided with a septic tank sized in accordance with Section 9 of these regulations.
- 14.1.5 The holding tank meets the setback requirements for septic tanks, as listed in Section 13 of these regulations.
- 14.1.6 The owner of the holding tank system submits a copy of a written contract for wastewater pumping service. The contract must be made with a licensed Hauler, and must include a commitment to pump the holding tank daily, in an amount equal to at least the average daily sewage flow for the project. The term of the agreement must be for at least 90 days. Copies of all subsequent Hauler's contract(s) must be submitted to the Division prior to expiration of current contract. All holding tank owners must have contracts with a licensed Hauler.
- 14.1.7 Submission of a five (5) year economic analysis, comparing the total costs associated with the holding tank/hauling system verses the following alternatives: (1) Connection to the public sewer; (2) Purchase/lease of additional land necessary to construct an IWDS in accordance with these regulations; and (3) Change of use of the building to a non-water consuming ("dry") use, such as warehousing. In addition, the source(s) of revenue necessary to cover costs of the holding tank/hauling system must be identified.
- 14.1.8 All holding tanks shall be monitored with a water level device suitably designed for wastewater service. The water level device shall be connected to an audible alarm. The alarm setting shall be made between 66% and 75% of the holding tank's liquid capacity. The alarm shall not be disarmed by the holding tank owner, Hauler, or any other individual, without first obtaining approval from the Director.
- 14.2 Holding tanks may be permitted for dwellings and commercial establishments occupied and in use at the time these regulations become effective ONLY if ALL of the following conditions are met:
 - 14.2.1 The need for a holding tank is brought about by the failure of the existing septic system. A holding tank shall not be permitted for existing buildings or uses seeking expansion.
 - 14.2.2 There is no available sewer.

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- 14.2.3 The holding tank system serve residential or commercial uses with average daily wastewater flows less than 2,500 gpd.
- 14.2.4 The holding tank is designed and constructed with storage capacity equal to at least five (5) days of average day wastewater flow.
- 14.2.5 The holding tank system is provided with a septic tank sized in accordance with Section 9 of these regulations.
- 14.2.6 The holding tank meets the setback requirements for septic tanks, as listed in Section 13 of these regulations.
- 14.2.7 The owner of the holding tank system submits a copy of a written contract for wastewater pumping service. The contract must be made with a licensed Hauler, and must include a commitment to pump the holding tank daily, in an amount equal to at least the average daily sewage flow for the project. The term of the agreement must be for at least 90 days. Copies of all subsequent Hauler's contract(s) must be submitted to the Division prior to expiration of current contract. All holding tank owners must have contracts with a licensed Hauler.
- 14.2.8 Submission of a five (5) year economic analysis, comparing the total costs associated with the holding tank/hauling system versus the following alternatives; (1) Connection to the public sewer; (2) Purchase/lease of additional land necessary to construct an IWDS in accordance with these regulations; (3) Change of use of the building to a non-water consuming ("dry") use, such as warehousing. In addition, the source(s) of revenue necessary to cover costs of the holding tank/hauling system must be identified.
- 14.2.9 All holding tanks shall be monitored with a water level device suitably designed for wastewater service. The water level device shall be connected to an audible alarm. The alarm setting shall be made between 66% and 75% of the holding tank's liquid capacity. The alarm shall not be disarmed by the holding tank owner, Hauler, or any other individual, without first obtaining approval from the Director.
- 14.3 As of the effective date of these regulations, holding tanks shall not be permitted for projects that have not first obtained permission to operate a holding tank/hauling system.

SECTION 15 INSPECTION OF WORK IN PROGRESS

- 15.1 The project shall be inspected on a regular basis by Division staff to assure that construction of IWDS or OWTS components (i.e., septic tanks, seepage pits, leaching fields, packaged treatment plants, etc.) are in compliance with approved plans and specifications, and in accordance with these and other CMNI and federal regulations.

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- 15.2 Notification of concrete pouring must be made twenty-four (24) hours (one working day) in advance to Division staff.
- 15.3 All construction work shall be inspected by Division staff prior to covering or concealment. Notification shall be made at least twenty-four (24) hours (one working day) in advance of scheduled covering.
- 15.4.1 Failure to comply with the above requirement may result in unnecessary delays to the project, a suspension of work, denial of a Certification for Use, and/or an order to remove portions or all of the offending structures.
- 15.5 After completion of the project, final inspection by Division staff shall be conducted on IWDS or OWTS components to assure that the work has been accomplished in accordance with the approved plans and specifications and that CNMI requirements are met.

SECTION 16 IWDS CERTIFICATION FOR USE

- 16.1 After final inspection of an IWDS indicates that the work performed was done in accordance with approved plans and specifications, and that the system is in compliance with the requirements of these regulations and any permit conditions issued under these regulations, the Director or his authorized representative shall issue an IWDS Certification for Use. A Certification for Use must be granted to the Applicant prior to the disposal of wastes into an IWDS.
- 16.2 For OWTS in addition to the Certification for Use:
 - 16.2.1 The applicant must have an operation and maintenance (O&M) manual approved by the Director. The O&M manual must be revised on a bi-annual basis for the Director's review and approval. In addition the OWTS will be issued a permit with specific requirements of operation and monitoring. The permit will be valid for a period not to exceed three (3) years. The permittee must apply for a renewal three (3) months prior to the permit expiration. Provided that the permittee applies for the renewal permit in the time period specified, the existing permit shall be considered valid until revised or revoked in writing by the Director. Other requirements as specified in Section 19 will also apply.

SECTION 17 IWDS MAINTENANCE

- 17.1 Maintenance of septic tanks, seepage pits, and leaching fields shall be the responsibility of the owner.
- 17.2 Owners of septic tanks or seepage pits shall have them emptied and cleaned as necessary by a licensed IWDS Cleaning and Hauling Contractor (referred to herein after as "hauler"), and the contents disposed of in accordance with local and federal laws. For

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Saipan, disposal shall be through the public sewer system, and the disposal points shall be designated by CUC (Commonwealth Utilities Corporation). For other islands, disposal shall be at a septage disposal site approved by the Division.

- 17.3 Septic tanks should be inspected by the owner at intervals of not more than three (3) years, to determine the rates of scum and sludge accumulation. The inlet and outlet structures and key joints should be inspected for damage after each pump-out.
- 17.4 A septic tank should be cleaned whenever:
 - 17.4.1 The bottom of the scum layer is within three (3) inches of the bottom of the outlet device.
 - 17.4.2 The sludge levels is within eight (8) inches of the bottom of the outlet device.
- 17.5 Septic tank and temporary toilet sludge shall be disposed of only by licensed Haulers and only at pre-approved points as described above in Section 17.2..
- 17.6 Septic system cleaning agents (i.e. degreasers) shall be approved by the EPA for such use.

SECTION 18 CLEANING WASTEWATER SYSTEMS, DISPOSAL OF WASTEWATER REQUIREMENTS AND PROCEDURES

- 18.1 All persons engaged in the business of cleaning individual sewage disposal systems or disposing of the wastes there from (“Hauler”) shall comply with appropriate business licensing under CNMI law and, in addition, shall apply for sanitary waste handling registration from the Director. Such businesses shall be conducted in conformity with the following requirements and in accordance with these regulations.
 - 18.1.1 The name of the company using a vehicle for cleaning purposes, and the word **“WASTEWATER”** shall be legibly lettered on both sides of each such vehicle.
 - 18.1.2 Every vehicle used for cleaning purposes shall be equipped with a watertight tank or body and maintained in a clean and sanitary condition. Sewage waste shall not be transported in an open body vehicle.
 - 18.1.3 All portable receptacles used for transporting liquid or solid waste shall be factory-built for the purpose of hauling wastewater, shall be watertight, equipped with tight-fitting lids, and shall be cleaned daily.
 - 18.1.4 All pumps and hose lines shall be properly maintained so as to prevent leakage.
 - 18.1.5 The hose or any similar device used for discharging waste must be inserted into the earmarked manhole to a depth of approximately two (2) feet to prevent any spray or spillage into the surrounding area.

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- 18.1.6 Every precaution must be taken to prevent any public nuisance or health hazard which may be caused by their service.
- 18.2 Registration shall be issued to any person properly making application therefore, who is not less than twenty-one (21) years of age, has successfully demonstrated the ability to handle the equipment and the knowledge of where the liquid wastes may be legally disposed of. Registration forms are available from the Division. The registration fee is \$150.00 per registered vehicle, non-refundable, and must be paid at the time of applying for registration, or renewal thereof.
- 18.3 Registration issued pursuant to these Regulations is not transferable and shall expire on December 30th of each year. A registration may be renewed for ensuing year by making application for renewal of the registration, which shall be issued upon determination of the applicant's observance of sanitary laws, ordinance, and directions. Such applications shall have the effect of extending the validity of the current registration until a new registration is received or the Applicant is notified by the Director that the renewal of the registration has been refused.
- 18.4 All haulers shall keep a daily log of service, identifying name, address, date, and volume of sewage removed. Upon request by the Director, all haulers shall file with the Director a statement giving the name and the address of the owner of each and every one of the premises cleaned by said hauler. In addition, upon request by the Director, all haulers shall make the daily logs available for review and reproduction by the Director or persons designated by the Director.
- 18.5 Non-compliance of the requirements of these regulations may result in the revocation or suspension of a Hauler's registration.
- 18.5.1 The Director shall issue a notice of intent to suspend registration to the Hauler informing him/her of the facts warranting suspension, and providing the Hauler with the opportunity to avoid suspension by showing compliance with all requirements for the retention of registration within seven (7) calendar days of receipt of the notice.
- 18.5.2 If the Hauler fails to show compliance within the specified time period, the suspension shall become effective, and Director shall notify the Hauler of the reasons for the suspension and that he/she must correct all discrepancies noted in the suspension within thirty (30) calendar days, otherwise his or her registration may be revoked. The Director shall also notify the Hauler of the opportunity to request a hearing as provided in Section 23.3 and 23.4. The Hauler must request a hearing within seven (7) calendar days of receipt of the notice of suspension.
- 18.5.3 If the Hauler fails to correct all discrepancies within the thirty (30) calendar day time period, the revocation shall become effective and the Director shall notify the Hauler of the reasons for the revocation and the opportunity to request a hearing

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as provided in Section 23.3 and 23.4. The Hauler must request a hearing within seven (7) calendar days of receipt of the notice of suspension

- 18.6 Registration under these regulations shall not be construed as impairing in any manner, the powers and duties established by law or regulation of any other authorized government entity in the CNMI.
- 18.7 Disposal of sewage to any location other than the location(s) specified by CUC and/or approved by the Division is illegal, and shall be subject to administrative, civil and/or criminal penalty.

SECTION 19 OWTS DESIGN AND CONSTRUCTION, AND TREATED WASTEWATER EFFLUENT RE-USE

- 19.1 Except as provided for below in Section 19.9 for “Alternative” treatment systems, and in Section 20 for Animal Waste Management, the design and construction of all OWTS shall follow the criteria and recommended practices outlined in the “Recommended Standards for Wastewater Facilities”, a report by the Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers, latest edition. Copies of the “Recommended Standards for Wastewater Facilities” may be obtained for \$8.00 per copy (plus shipping) through the Health Research Inc. Health Education Services Division, Publisher, at P.O. Box 7126, Albany, NY 12224, telephone number (518) 439-7286, fax number (518) 439-7022, or on the world wide web at <http://www.hes.org/HES/ten.html>. In addition, OWTS design, construction, operation practices and financial requirements shall meet with any specified criteria as may be set forth by the Director for any particular project.
- 19.2 OWTS, except as specifically provided for in Sections 19.19 and 20, shall be designed and operated to produce, at a minimum, a secondary treated effluent. A secondary treated effluent may be disposed of in the following ways, subject to the approval of the Director and other local and federal government agencies:
 - 19.2.1 Through a subsurface disposal system, such as a seepage pit or a leaching field system, subject to the requirements of these regulations. The Director may permit up to 50% reduction in soil absorption area for secondary treated effluent. No subsurface disposal systems for OWTS secondary treated effluent shall be permitted in a Class I aquifer recharge area, except in very limited circumstances to allow public projects providing essential public services in isolated areas not served by public sewer. In such cases the burden of proof will be upon the applicant to show that no other reasonable alternative to the proposed project site is available. The design of such systems shall assure that total effluent loading does not exceed 2,250 gallons per acre (the equivalent of five three-bedroom homes) across the entire project site.
 - 19.2.2 Through an underground injection well, subject to CNMI's Underground Injection Well regulations and CNMI's Well Drilling and Well Operations regulation. No

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underground injection disposal systems for OWTS secondary treated effluent shall be permitted in a Class I aquifer recharge area.

19.2.3 Through direct discharge to State waters or waters of the U.S., subject to the CNMI's Water Quality Standards, EPA NPDES permitting requirements, and Section 404 Department of the Army permitting requirements.

19.2.4 Through land application, subject to the requirements of this section of the regulations.

19.3 Treated wastewater may be land applied only if it meets the secondary treated effluent standards stated in Section 3 of these regulations, and only if the treated effluent is first discharged directly to a ponding basin which has the equivalent of 30-days' storage of treated effluent. The ponding basin must be lined with a high density polyethylene (60 mil minimum) membrane which inhibits downward percolation of effluent into the groundwater. The membrane shall be installed with at least 6-inches of sand below and 12-inches of sand above the membrane. From this ponding basin, secondary treated effluent may be land applied provided ALL of the following criteria are met:

19.3.1 The treated effluent is not used for the irrigation of food crops.

19.3.2 The treated effluent is not used for the irrigation of parks, playgrounds, school yards, residential/commercial garden landscaping, or for use in fountains.

19.3.3 The treated effluent is applied at a rate not to exceed 2.0 inches per week (10,000 gallons per hectare per day), and never applied at such a rate that the effluent has the opportunity to pond or puddle before being absorbed into the upper soil horizon.

19.3.4 The area undergoing irrigation with treated effluent is marked with signs in such number and location that members of the public subject to exposure could be reasonably expected to encounter such a sign. The signs shall be written in Chamorro, Carolinian, and English (Japanese, Chinese, and Korean at the discretion of the Director), stating: "CAUTION: This area is irrigated with treated domestic wastewater and may contain harmful human pathogens."

19.4 OWTS design for treated effluent land application must be designed by an experienced licensed professional engineer in the field of wastewater treatment. At a minimum, the OWTS design shall provide for the following:

19.4.1 A contingency plan which assures that no untreated or partially treated wastewater will be delivered to the final use area.

19.4.2 Back-up power facilities, activated by an automatic transfer switch.

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- 19.4.3 Laboratory, or access to laboratory services, which are capable of measuring BOD(S), TSS, pH, and fecal coliform.
- 19.4.4 Standby replacement equipment for vital mechanical and electrical components of the plant.
- 19.4.5 The capacity to treat to secondary effluent standards at least 1.5 times the estimated average daily sewage flow calculated for the project.
- 19.4.6 Disinfection, with the ability to maintain a monthly average of not more than 23 colony forming units (cfu)/100 ml of fecal coliform in the treated effluent stream, and to maintain and monitor a chlorine residual of 0.1 mg/l before discharge to the ponding basin.
- 19.4.7 Continuous measurement of influent and effluent flow rates, with flow totalizing.
- 19.4.8 Critical components of the treatment process shall be monitored by alarms, indicating a condition which threatens the finished effluent quality.
- 19.4.9 A complete operations and maintenance manual for all aspects of the plant.
- 19.4.10 Application of corrosion resistant materials and typhoon resistant construction practices wherever possible.
- 19.4.11 Irrigation plan, defining means of irrigation, locations to be irrigated, times of day for irrigation, etc..
- 19.4.12 Establishment and maintenance of an adequate supply of spare parts.
- 19.4.13 A complete sludge handling and disposal plan.
- 19.4.14 An odor control plan.
- 19.5 Removed and Reserved (Replaced by Section 26 Certification of Wastewater Operators)

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- 19.6 The Director shall specify the reporting requirements for each specific OWTS permitted under these regulations. At a minimum, reporting shall be made monthly, and include influent and effluent total and average daily flow, influent and effluent water quality data, and a description of plant maintenance performed.
- 19.7 The Applicant for an OWTS must submit the following data:

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- 19.7.1 Estimated construction cost for the OWTS (provide information in support of the estimate).
- 19.7.2 Estimated annual operations and maintenance (O&M) cost (provide firm cost basis).
- 19.7.3 The source of revenue to cover the annual (O&M) cost identified above, plus a minimum allocation to a contingency fund of at least 15 percent of the estimated annual O&M costs.
- 19.8 Failure to comply with the requirements of this and other sections of these regulations pertaining to OWTS may result in suspension or revocation of the OWTS permit. No OWTS may operate without a valid OWTS permit issued by the Director.
- 19.9 “Alternative” OWTS – The Director may approve wastewater treatment system designs or individual components not covered under Section 19.1 on a case-by-case basis. Alternative designs will only be considered for approval if proof of acceptance for general use by another state permitting agency or the EPA is submitted. For the purposes of these regulations, proof of acceptance, at a minimum, shall consist of the existence of an EPA design manual, or the inclusion of the system or component on another state’s list of approved products or technologies. The burden of proof for demonstrating new processes, treatment systems, and technologies that the Division is unfamiliar with, lies with the applicant.
- 19.9.1 “Alternative” OWTS may be excluded from the supervision, monitoring, reporting, and financial requirements of sections 19.5, 19.6, and 19.7 by the Director on a case-by-case basis for small systems (less than 5,000 gallons per day) and designs which do not rely on mechanical or electrical components. The Director shall ensure that exclusion from any of the requirements of this section does not create an unreasonable threat to public health and the environment. “Alternative” OWTS are not excluded from the provisions of sections 19.2 (except as noted), 19.3, and 19.4, nor are “Alternative” OWTS excluded from the setback criteria specified in these regulations.

SECTION 20 ANIMAL WASTE MANAGEMENT

- 20.1 Confined Animal Facilities – Facilities containing any of the following number of head: (1) 15 or more pigs; (2) 20 or more goats; (3) 10 or more cattle; (4) 100 or more chickens; or (5) any confined animal facility which has been found by the Division to have caused, by evidence of direct or indirect discharge, violations of the CNMI Water Quality Standards or CNMI Drinking Water Regulations, are required to construct and operate an OWTS.
- 20.2 Confined Animal Facility OWTS, except for systems meeting the specifications for “large” confined animal facilities under Section 20.3, are excluded from the OWTS land application, design, supervision, monitoring, reporting, and financial requirements of

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sections 19.3, 19.4, 19.5, 19.6, and 19.7. Confined Animal Facility OWTS shall be designed to prevent direct and indirect discharge of untreated animal waste to State waters and groundwater, through the utilization, as appropriate, of components and practices such as septic tanks and leach fields, waste storage ponds, waste storage structures, application of manure or runoff water to agricultural land, waste utilization, composting, burial, or any other method determined to provide adequate protection of public health and the environment by the Director. Systems designed and certified by the USDA-NRCS under an EQUIP cost-share grant shall be considered to meet the requirements of this section.

- 20.3 OWTS for “large” confined animal facilities, which for the purpose of these regulations are facilities containing more than 100 head of pigs, 1000 chickens, or 50 cattle, may be required to meet more stringent requirements, determined by the Director on a case-by-case basis.
- 20.4 Confined Animal Facility OWTS are required to meet the siting criteria specified in Section 13 of these regulations. Facilities that are required to obtain an OWTS permit because of violations of the CNMI Water Quality Standards or the CNMI Drinking Water Standards, and which violate the siting criteria, will be required to re-locate to meet the siting criteria, unless the facility can be re-designed to reasonably prevent discharge and further violations, and such re-design is certified by a professional engineer and approved by the Director as part of the OWTS permit. Facilities that cannot re-locate to meet the siting criteria, and from which discharge cannot be reasonably prevented by facility re-design, shall not be permitted.
- 20.5 Owners of Confined Animal Facility OWTS are required to continuously operate and maintain their systems in accordance with the instructions given by the system designer. Failure to do so may result in suspension or revocation of the OWTS permit.
- 20.6 Grazing units are not considered Confined Animal Facilities for the purposes of these regulations, and are not required to construct or operate an OWTS. However, all owners and operators of grazing units shall employ the following practices, at a minimum, to prevent the direct or indirect discharge of animal waste to State waters:
 - 20.6.1 Owners and operators of grazing units shall confine livestock within the grazing unit through properly constructed and maintained fences.
 - 20.6.2 Owners and operators of grazing units shall exclude livestock from within 20 feet of any State water through the use of properly constructed and maintained fences. Stream crossings are allowed where necessary.
 - 20.6.3 If the Director has evidence that suggests runoff from a grazing unit has caused or contributed to violations of the CNMI Water Quality Standards or CNMI Safe Drinking Water Regulations, the Director may require the owner or operator of the grazing unit to implement the range and pastureland components of a

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Resource Management System (RMS) as defined in the Field Office Technical Guide of the USDA-NRCS.

SECTION 21 TEMPORARY TOILETS FACILITIES (TTF)

21.1 Temporary Toilet Facilities (TTF) shall be provided for:

21.1.1 Any construction job-site where working toilets connected to a sanitary sewer system are not readily available for the needs of the employees. The minimum number of TTF required for a construction site shall be consistent with TABLE 20.1.

21.1.2 Any carnival, fair, sporting event, outdoor concert or large public gathering requiring any CNMI Government permit (e.g., a Coastal Resources Management Office “Minor Development Permit”), hereafter, collectively referred to as a “special event”, where adequate working toilet facilities connected to a sanitary sewer do not exist. The number of TTF required shall be calculated as follows:

$$\text{TTF} = 1 + [\text{No. of persons expected} \times \text{hours of event}] / 2,000$$

EXAMPLE: $\text{TTF} = 1 + [3,000 \text{ people} \times 4 \text{ hours}] / 2,000 = 7 \text{ TTF}$

21.2 Temporary Toilet Facilities may be portable toilet type, chemical, recirculating or combustion providing they comply with existing CNMI Codes.

21.3 Any construction site or special event requiring DEQ approval for permitting will provide proof that the minimum required number of toilet facilities are available or will be available for the period of time that the permits are valid.

21.4 Any construction site not complying with the minimum number of TTF will be given a written warning and given 48 hours to comply. Failure to comply within the given period will result in a Cease and Desist Order issued by the Director and the revocation of the Division's approval required for any permit(s) associated with the project, and/or civil fines as provided for in Section 23.

TABLE 21.1
NUMBER OF TTF REQUIRED FOR CONSTRUCTION SITES

<u>NUMBER OF EMPLOYEES</u>	<u>MINIMUM OF TTF REQUIRED</u>
1 to 15	1
16 to 30	2
31 to 50	3
over 50	Additional 1 unit per 20 persons of fraction thereof.

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SECTION 22 ACTION ON APPLICATIONS

- 22.1 The Director may require the applicant to furnish additional information, plans, or specifications before acting on an application for any registration or permit.
- 22.2 Each application for Hauler's registration, OWTS or IWDS permit shall be reviewed for completeness. The Division shall review and act on any application for registration or OWTS or IWDS permit within twenty one (21) calendar days of the date the application is deemed complete.
- 22.3 For all applications found to be incomplete, the Division will notify the Applicant via a short written statement, describing the deficiencies found within fourteen (14) calendar days of the date the application is received. Corrective and/or follow-up action, design, field test, etc., is the responsibility of the Applicant. The Division is not responsible, nor will Division personnel undertake, completion or correction of an incomplete or incorrect permit or license application.
- 22.4 The Director shall notify the Applicant in writing of his or her decision regarding any application for registration or permit. The Director shall inform the Applicant of sufficient facts and reasons upon which a disapproval or conditional approval of a complete application was based. The Applicant shall be afforded the opportunity to file a written request for reconsideration of the Director's decision and shall include justification for the request. The request for reconsideration shall be served upon the Division within seven (7) calendar days from receipt of the disapproval or conditional approval. Failure to file this request within seven (7) calendar days shall constitute a waiver of the Applicant's rights to any future reconsideration by the Director. In the event no request for reconsideration is filed within the time specified, the Director's decision shall be considered final agency action for purposes of judicial review under the Administrative Procedures Act, 1 CMC § 9101, et seq.
- 22.5 A permit or registration issued pursuant to these regulations shall not be transferred from one location to another, or from one person to another, without the written approval from the Director.

SECTION 23 PENALTIES, FINES, SUSPENSION, REVOCATION, AND OTHER ORDERS

- 23.1 In accordance with 2 CMC § 3131(a), if the Director has reason to believe a violation of the provisions of the Act, these regulations, and/or the terms of any permit issued pursuant to the Act and these regulations has occurred or is occurring, the Director may issue any necessary order to enforce the aforementioned provisions and permit conditions. Such order shall be in the form of a written warning, Notice of Violation, Cease and Desist Order, or Administrative Order signed by the Director or his authorized representative and shall provide notice of the facts constituting the violation, penalties that may be imposed, and, where appropriate, provide a reasonable timeframe in which to

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take corrective action.

- 23.2 If any person subject to an order issued pursuant to 23.1 fails to comply with the order, the Director may issue an Administrative Order or other such Order imposing penalties as provided by 2 CMC § 3131(c). The Order shall state the facts constituting the violation, the particular sections of the Act, regulations or permit involved, the proposed penalty including any proposed permit suspension, revocation, or modification, and monetary penalties including any penalty for cost of corrective action taken by the Division, and the opportunity to request a hearing. Such Order shall be personally served or served by certified mail, return receipt, on persons subject to the penalties in the Order.
- 23.3 Any person subject to an Order imposing penalties pursuant to 23.2, may request, in writing, a hearing before the Director or his/her designee. Request for a hearing shall be served upon the Division within seven (7) calendar days from receipt of the Order. Failure to request a hearing within seven (7) calendar days shall constitute a waiver of the right to a hearing and the Division may take the necessary action to enforce the Order.
- 23.4 Procedures for hearings shall be conducted in accordance with the Administrative Procedures Act (APA), 1 CMC § 9101, et seq., and as follows:
- 23.4.1 The Director shall serve notice of the hearing in accordance with APA § 9109(a) at least ten (10) calendar days before the scheduled hearing date.
- 23.4.2 The alleged violator or "respondent" shall submit a written response to the Order at least five (5) calendar days before the hearing. The written request for a hearing may serve as the response to the Order. The request for hearing or "response" shall clearly and directly admit, deny, or explain all the factual allegations contained in the Order with regard to which the respondent has knowledge. Where respondent has no knowledge of a particular factual allegation and so states, the allegation is deemed denied. The response shall also state (1) the circumstances or arguments which are alleged to constitute the grounds of defense, and (2) the facts which respondent intends to place at issue. Failure to admit, deny, or explain any material factual allegation contained in the Order may be deemed an admission of the allegation.
- 23.4.3 The respondent may also request an informal Settlement Conference. An Informal Settlement Conference shall not affect the respondent's obligation to file a timely request for hearing. If a settlement is reached the parties shall forward a proposed consent order for the approval of the Director.
- 23.4.4 The Director or designee will preside over the hearing. The Presiding Officer shall control the taking of testimony and evidence and shall cause to be made an audio, audio-video, or stenographic record of the hearing. The type of record made shall be at the discretion of the Presiding Officer. Evidence presented at the hearing need not conform with the prescribed rules of evidence, but may be limited by the Presiding Officer in any manner she/he reasonably determines to be

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just and efficient and promote the ends of justice. The Presiding Officer shall issue a written decision within twenty one (21) calendar days of the close of the enforcement hearing. The decision shall include written findings of fact and conclusions of law. The standard of proof for such a hearing and decisions shall be the preponderance of the evidence.

- 23.4.5 The decision of the Director or Presiding Officer shall be final. An appeal from the final enforcement decision shall be to the Commonwealth Superior Court within thirty (30) calendar days following issuance of the final agency decision.
- 23.5 Emergency Suspension of Permits. If the Director determines that a violation of a permit issued pursuant to the Act and these regulations has resulted in an imminent threat to public health, safety or welfare, the Director may summarily suspend a permit. A hearing for revocation or other action shall be promptly instituted and determined pursuant to the procedures in 23.4.
- 23.6 Revocation of Hauler's Registration. In addition to the provisions in Section 18.5, the Director may revoke a Hauler's registration for any material misstatement or misrepresentation made by the licensee made for the purposes of obtaining or retaining such registration. The Director shall notify the Hauler in writing of the facts warranting revocation. The Hauler shall have seven (7) calendar days from the date of receipt of the revocation notice to provide a written response addressing the facts in the notice and showing compliance with all lawful requirements for retention of the registration. Failure to timely request a hearing or to provide reasonable explanation for the alleged misstatements or misrepresentations shall result in revocation of the registration. The Director shall notify the Hauler of the revocation and the opportunity to request a hearing within seven (7) calendar days of receipt of the notice. Any hearing will be conducted pursuant to 23.4.
- 23.6.1 No application for a Hauler's license may be made within one (1) year after revocation of such registration by the Director for the reasons identified above.
- 23.7 Criminal Penalties. Any person who knowingly and willfully commits any act in violation of the Act, regulations, or permit, may be subject to criminal penalties as set forth in 2 CMC § 3131(d).

SECTION 24 RIGHT OF ENTRY

- 24.1 In accordance with 2 CMC § 3132, the Director or his authorized representative may inspect any facility or records subject to the provisions of the Act and these regulations. The inspection may be conducted with or without advance notice, as authorized by § 3132.

SECTION 25 SEVERABILITY

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- 25.1 If any rule, section, sentence, clause, or phrase of these regulations or its application to any person or circumstances or property is held to be unconstitutional or invalid, the remaining portions of these regulations or the application of these regulations to other persons or circumstances or property shall not be affected.

SECTION 26 CERTIFICATION OF WASTEWATER SYSTEM OPERATORS

26.1 General Provisions

- 26.1.1 The purpose of this subpart is to assure that wastewater treatment and collection system operators are trained and certified, and that they have knowledge and understanding of the public health reasons for wastewater treatment and disposal standards.
- 26.1.2 No later than March 1, 2010, owners of all OWTS must place the direct supervision of their OWTS system, including each treatment facility and/or collection system, under the responsible charge of an operator holding a valid certification equal to or greater than the classification of the treatment facility and/or collection system. "Alternative" OWTS may be excluded from the requirements in this section on a case-by-case basis as described in paragraph 19.9.1.
- 26.1.3 All operating personnel making process control/system integrity decisions about wastewater quality or quantity must be certified.
- 26.1.4 A designated certified operator must be available for each operating shift.
- 26.1.5 The Division may charge reasonable fees to cover the expenses of the certification program. These fees may include an initial application fee for new applicants, an exam fee if an exam is to be administered, and a renewal fee for an operator that is already certified.

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26.2 Certification Requirements

- 26.2.1 A person seeking certification under this regulation shall submit an application to the Division on a form approved by the Division.
- 26.2.2 The Division will certify an applicant who has met the examination requirements of § 26.2.3 of these regulations and the experience and education requirements of § 26.2.4 of these regulations; or the comity requirements of § 26.2.5 of these regulations; and has submitted the appropriate fees.
- 26.2.3 Examination requirements

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26.2.3.1 To be certified to operate a OWTS classified as Class 1 – Class 4 under § 26.3, an applicant must pass a validated examination that demonstrates the applicant's skills, knowledge, ability, and judgment to operate a system of that classification in compliance with the requirements of these regulations.

26.2.3.2 The applicant must obtain a minimum score of 70% on the exam in order to pass the examination.

26.2.3.3 An applicant may not take the same wastewater treatment or wastewater collection exam more than once within a span of 90 days.

26.2.3.4 The applicant must submit the exam fee for each exam before taking the exam.

26.2.4 Education and experience requirements

26.2.4.1 To be certified as a Class 1 – Class 4 wastewater treatment plant operator or wastewater collection operator, an applicant must have at least a high school diploma or the equivalent thereof.

26.2.4.2 To be certified as an Operator-in-Training wastewater treatment plant operator or wastewater collection operator, an applicant must be enrolled in a high school degree program, or have at least a high school diploma or the equivalent thereof.

26.2.4.3 Experience requirements for each classification level of operator are outlined in the following Table 1 – Years of Experience for Certification at each Classification Level.

Table 1 - Years of Experience Required for Certification at each Classification Level					
Classification Level	OIT*	Class 1	Class 2	Class 3	Class 4
Wastewater Treatment	0	1	3	4	4
Wastewater Collection	0	1	3	4	4
*OIT means Operator-In-Training. An operator certified at the OIT level is a certified operator, but can not be the supervising operator having responsible charge over an OWTS because the certification level is not at the classification level of the OWTS.					

26.2.5 Comity requirements

26.2.5.1 The Division will recognize the certification of operators who have current wastewater operator certifications in good standing from any U.S. State, territory, or possession, or from the Association of Boards of Certification. Such recognition is termed comity certification.

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26.2.5.2 The Division will determine the classification level that the operator qualifies to be recognized at based on the operator's experience and education.

26.2.5.3 In order to be certified by comity in the Commonwealth, a certified operator must provide the Division with the following.

- (a) A current and valid certificate documenting that the individual is a certified operator in any jurisdiction described in § 26.2.5.1 of these regulations.
- (b) All support documents required by the original certifying authority to authenticate the qualifications of the operator.
- (c) The appropriate fees.

26.2.6 Certificate term and renewal

26.2.6.1 A certificate and issued under the conditions of §§ 26.2.3 – 26.2.4 of these regulations, examination, experience and education requirements, is valid for a three-year period beginning January 1 of the year of issuance.

26.2.6.2 A certificate issued under the conditions of § 26.2.5 of these regulations, comity certification, is valid for the term of the original certificate or three years, whichever is less.

26.2.6.3 The Division will renew a certificate only if an operator has

- (a) completed 10 contact hours of Division approved continuing education for every year that the certificate was valid (30 hours for a three year certificate);
- (b) has paid the required fee;
- (c) and is otherwise in compliance with these regulations.

A renewed certificate is valid for a three-year period beginning January 1 of the year of issuance.

26.2.7 Lapsed certificates

26.2.7.1 An operator who seeks renewal of a lapsed certificate shall submit a request for renewal within 180 days after the certificate lapses. Upon receipt of a valid request for renewal, including proof of compliance with §26.2.6.3 of these regulations and payment of the appropriate fee, the Division shall renew a certificate.

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26.2.7.2 The Division will require reexamination of an operator whose renewal application is received more than 180 days after the certificate lapses.

26.2.8 Revocation of operator certification

26.2.8.1 After an investigation and review of the facts, and in accordance with all applicable Commonwealth laws and regulations, the Director may revoke the certification of an operator for any of the following reasons:

- (a) The operator has practiced fraud or deception, has tampered with wastewater samples, falsified analytical data, or falsified other operating records. A person committing such actions is liable for civil or criminal penalties in accordance with 2 CMC §3131(d) or other applicable law;
- (b) The operator does not use, in the judgement of the Director, reasonable care, judgment, or the application of knowledge was not used in the performance of the operator's duties. The Director's reasons for such a determination shall be stated in detail and in writing at the time of revocation;
- (c) The operator does not perform duties in a manner that meets wastewater treatment and disposal compliance requirements of Commonwealth laws and regulations. The Director's reasons for such a determination shall be stated in detail and in writing at the time of revocation; or
- (d) The certification of the operator has expired or is no longer valid in the original jurisdiction from which their certification was issued.

26.2.8.2 An operator whose certificate is revoked may not apply for certification for 365 days after revocation. An application received under this subsection will be treated as an initial application.

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26.3 Classification of OWTS. The treatment facility(ies) and the collection system(s) of an OWTS are classified separately as follows.

26.3.1 A wastewater treatment facility is classified as a Class 1, Class 2, Class 3, or Class 4 treatment facility in accordance with Table 1 (Classification of Treatment Facilities).

Table 1 – Classification of Treatment Facilities	
Type of Treatment*	Class of Treatment Facility
30 points and less	Class 1

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Table 1 – Classification of Treatment Facilities	
Type of Treatment*	Class of Treatment Facility
31-55 points	Class 2
56-75 points	Class 3
76 points and greater	Class 4
* See Appendix A to Section 26 for the Wastewater Treatment Plant Point Rating System	

26.3.2 A wastewater collection system is classified as a Class 1, Class 2, Class 3, or Class 4 collection system in accordance with Table 2 (Classification of Collection Systems).

Table 2 - Classification of Collection Systems	
Population Served by Water System	Class of Collection System
1,500 and less	Class 1
1,501 to 15,000	Class 2
15,001 to 50,000	Class 3
50,001 and greater	Class 4

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Appendix A to Section 26: Wastewater Treatment Plant Point Rating System

Item	Points
Size (2 point minimum to 20 point maximum)	
Maximum population equivalent (PE) or part served, peak day (1 point minimum to 10 point maximum)	1 pt per 10,0000 or part
Design flow average day or peak month's part flow average day, whichever is larger (1 point minimum to 10 point maximum)	1 pt per MGD or part
Variation in raw waste (0 point minimum to 6 point maximum)¹	
Variations do not exceed those normally or typically expected	0
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2
Recurring deviations or excessive variations of more than 200% in strength and/or flow	4
Raw wastes subject to toxic waste discharges	6
Impact of septage or truck-hauled waste (0 point minimum to 4 point maximum)	
Preliminary Treatment	
Plant pumping of main flow	3
Screening, comminution	3
Grit removal	3
Equalization	1
Primary Treatment	
Clarifiers	5
Imhoff tanks or similar	5

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Secondary Treatment	
Fixed-film reactor	10
Activated sludge	15
Stabilization ponds without aeration	5
Stabilization ponds with aeration	8
Tertiary Treatment	
Polishing ponds for advanced waste treatment	2
Chemical/physical advanced waste treatment w/o secondary	15
Chemical/physical advanced waste treatment following secondary	10
Biological or chemical/biological advanced waste treatment	12
Nitrification by designed extended aeration only	2
Ion exchange for advanced waste treatment	10
Reverse osmosis, electrodialysis and other membrane filtration techniques	15
Advanced waste treatment chemical recovery, carbon regeneration	4
Media filtration	5
Additional Treatment Processes	
Chemical additions (2 points each for a maximum of 6 points)	6
Dissolved air flotation (for other than sludge thickening)	8
Intermittent sand filter	2
Recirculating intermittent sand filter	3
Microscreens	5
Generation of oxygen	5
Solids Handling	
Solids stabilization	5
Gravity thickening	2
Mechanical dewatering	8
Anaerobic digestion of solids	10
Utilization of digester gas for heating or cogeneration	5
Aerobic digestion of solids	6
Evaporative sludge drying	2
Solids reduction (including incineration, wet oxidation)	12
On-site landfill for solids	2
Solids composting	10
Land application of biosolids by contractor	2
Land application of biosolids under direction of facility operator in direct responsible charge	10
Disinfection (0 point minimum to 10 point maximum)	
Chlorination or ultraviolet irradiation	5
Ozonation	10
Effluent Discharge (0 point minimum to 10 point maximum)	
Mechanical post aeration	2
• Direct recycle and reuse	6
• Land treatment and disposal (surface or subsurface)	4

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Instrumentation (0 point minimum to 6 point maximum)	
The use of SCADA or similar instrumentation systems to provide data with no process operation	0
The use of SCADA or similar instrumentation systems to provide data with limited process operation	2
The use of SCADA or similar instrumentation systems to provide data with moderate process operation	4
The use of SCADA or similar instrumentation systems to provide data with extensive or total process operation	6
Laboratory Control (0 point minimum to 15 point maximum)²	
Bacteriological/biological (0 point minimum to 5 point maximum)	
• Lab work done outside the plant	0
• Membrane filter procedures	3
• Use of fermentation tubes or any dilution method; fecal coliform determination	5
Chemical/physical (0 point minimum to 10 point maximum)	
• Lab work done outside the plant	0
• Push-button or visual methods for simple tests such as pH, settleable solids	3
• Additional procedures such as DO, COD, BOD, gas analysis, titrations, solids, volatile content	5
• More advanced determination such as specific constituents; nutrients, total oils, phenols	7
• Highly sophisticated instrumentation such as atomic absorption, gas chromatography	10

¹ The key concept is frequency and/or intensity of deviation or excessive variation from normal or typical fluctuations; such deviation can be in terms of strength, toxicity, shock loads, l/l, with points from 1 to 6.

² The key concept is to credit laboratory analyses done on-site by plant personnel under the direction of the operator in direct responsible charge with points from 0 to 15.

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