

567—81.1(455B) Definitions.

81.1(1) In addition to the definitions, references, and abbreviations in 567—Chapter 40, the following definitions shall apply to this chapter:

“Activated sludge system” means a biological wastewater treatment process in which a mixture of wastewater and sludge floc, produced in a raw or settled wastewater by the growth of microorganisms, is agitated and aerated in the presence of a sufficient concentration of dissolved oxygen, followed by sedimentation. Examples include but are not limited to conventional activated sludge systems, extended aeration activated sludge systems, oxidation ditches, and sequencing batch reactors.

“Advanced aerated lagoon system” means an aerated lagoon system that has been augmented by adding other treatment processes. Examples include but are not limited to covered lagoon systems with enhanced aeration and mixing, the addition of fixed film processes to the lagoon process, or the utilization of algal-based treatment processes.

“Aerated lagoon system” means a lagoon system that utilizes aeration to enhance oxygen transfer and mixing in the cell.

“Aeration” means the process of initiating contact between air and water. Examples include but are not limited to spraying the water in the air, bubbling air through the water, or forcing the air into the water by pressure.

“Average daily pumpage” means the total quantity of water pumped during the most recent one-year period of record divided by 365 days.

“Chlorination” means the addition of a chlorine compound or chlorine gas to water to inactivate pathogenic organisms.

“Classification” means the type of plant or distribution system: wastewater treatment plants, water treatment plants, or water distribution systems.

“Continuing education unit” or *“CEU”* means ten contact hours of participation in an organized education experience approved by an accredited college, university, technical institute, or the department, and must be directly related to the subject matter of the particular certificate to which the credit is being applied.

“Directly related post-high school education” means post-high school education in chemistry, microbiology, biology, math, engineering, water, wastewater, or other curriculum pertaining to plant or distribution system operation.

“Direct responsible charge” or *“DRC”* means, where shift operation is not required, accountability for and performance of active, daily on-site operation of a plant or distribution system, or of a major segment of a plant or distribution system. Where shift operation is required, DRC means accountability for and performance of active, daily on-site operation of an operating shift, or a major segment of a plant or distribution system. A city manager, superintendent of public works, city clerk, council member, business manager, or other administrative official shall not be deemed to have DRC of a plant or distribution system unless that person’s duties include the active, daily on-site operation of a plant or distribution system. On-site operation may not necessarily mean full-time attendance at a plant or distribution system.

“Direct surface water filtration” means a water treatment system that applies surface water and influenced groundwater (as defined in rule 567—40.2(455B)) directly to the filters after chemical treatment consisting of both coagulation and flocculation or chemical treatment consisting of coagulation. This type of system eliminates the sedimentation unit process.

“Electrodialysis” means the demineralization of water by the removal of ions through special membranes under the influence of a direct-current electric field.

“Fixed film biological treatment” means a treatment process in which wastewater is passed over a media onto which are attached biological organisms capable of oxidizing the organic matter, normally followed by sedimentation. Examples include but are not limited to trickling filters, rotating biological contactors, packed towers and activated filters.

“Fluoridation” means the addition of fluoride to produce the optimum fluoride concentration in water.

“Grade” means one of seven operator certification levels, designated as A, W, I, IL, II, III, or IV.

“*Ion exchange*” means the process of using ion exchange materials such as resin or zeolites to remove undesirable ions from water and substituting acceptable ions (e.g., ion exchange for nitrate removal or ion exchange for softening).

“*Military service*” means honorably serving on federal active duty, state active duty, or national guard duty as defined in Iowa Code section 29A.1 or in the military services of other states or the organized reserves of the United States as provided in 10 U.S.C. Section 101(c) in effect as of April 1, 2025, and 10 U.S.C. Section 10101 in effect as of April 1, 2025, respectively.

“*Military service applicant*” means an individual requesting credit toward certification for military education, training, or service obtained or completed in military service.

“*Operating shift*” means a specified period of time when an operator is present to conduct testing or evaluation to control operations of a plant or distribution system, to make process control changes, and to be responsible for the repair or maintenance of a plant or distribution system. An operating shift may include on-call shifts.

“*Operator-in-charge*” or “*OIC*” means a person or persons on site in direct responsible charge of a plant or distribution system. A city manager, superintendent of public works, city clerk, council member, business manager, or other administrative official shall not be deemed to be the OIC of a plant or distribution system unless that person’s duties include the active, daily on-site operation of the plant or distribution system. On-site operation may not necessarily mean full-time attendance at the plant or distribution system.

“*Plant*” means those facilities identified as either a water treatment plant or a wastewater treatment plant.

“*Post-high school education*” means credit received for completion of courses given or co-sponsored by an accredited college, university, or technical institute. Courses offered by regulatory agencies may also be recognized as post-high school education. One year of post-high school education is 30 semester hours, 45 quarter hours, or 45 CEUs of credit.

“*Primary treatment*” means a treatment process designed to remove organic and inorganic settleable solids from wastewater by the physical process of sedimentation.

“*Public water supply system certificate*” or “*PWS certificate*” means a certificate issued by the department certifying that an operator has successfully completed the certification requirements of this chapter for a water treatment plant or water distribution system. A PWS certificate specifies the grades and classifications for which the certificate is valid.

“*Reverse osmosis*” means the process in which external pressure is applied to mineralized water against a semipermeable membrane to effectively reduce total dissolved solids and radionuclides content as the water is forced through the membrane.

“*Rural water district*” means a water supply incorporated and organized as such pursuant to Iowa Code chapter 357, 357A or 358.

“*Shift operator*” means the operator on site who has responsibility for making process control changes and adjustments to the operation, repair, and maintenance of a plant or distribution system during any operating shift. Duties include testing or evaluation to control operations of the plant or distribution system.

“*Stabilization*” means the addition of chemical compounds to water to maintain an ionic equilibrium whereby the water is not in a depository or corrosive state.

“*Veteran*” means an individual who meets the definition of “veteran” in Iowa Code section 35.1(2).

“*Waste stabilization lagoon*” means an excavation designed and constructed to receive raw or pretreated wastewater in which stabilization is accomplished by several natural self-purification processes. This definition includes both anaerobic and aerobic lagoons.

“*Water distribution system*” or “*distribution system*” is defined in Iowa Code section 455B.211. For the purposes of this chapter, a water distribution system includes storage facilities and pumping stations and does not include individual service lines to the premises of the consumer that are not under the control of the system.

81.1(2) The following terms applicable to this chapter are defined in the referenced locations:

- a. Iowa Code section 455B.101: “commission,” “department,” and “director.”

b. Iowa Code section 455B.211: “certificate,” “operator,” “wastewater treatment plant,” “water supply system,” and “water treatment plant.”

c. Rule 567—40.2(455B): “coagulation,” “community water system” or “CWS,” “disinfection,” “nontransient noncommunity water system” or “NTNC,” and “transient noncommunity water system” or “TNC.”

d. 567—subrule 60.2(1): “PE” or “population equivalent.”

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