

Sec. 25-128-36. Definitions

(a) Unless expressly stated otherwise, the following terms shall, for the purpose of the Connecticut Well Drilling Code and any permit or completion report filed pursuant to said code, have the meanings indicated in this section.

(b) Words used in the present tense include the future; words used in the masculine gender include the feminine and neuter; the singular number includes the plural and the singular.

(c) Where the terms are not defined in this section or in section 25-126 of the Connecticut General Statutes, they shall have their ordinarily accepted meanings or such as the context may imply.

(1) Access port: A suitable opening into a well to allow measurement of the water level.

(2) Annular space: The space between two objects, one of which is surrounded by the other. This includes the space between the wall of an excavation and the wall of a pit; between the wall of an excavation and the casing or piping of a well or geothermal bore hole; or between two casings.

(3) Aquifer: A water bearing strata that can transmit water in significant quantity. It can be either consolidated rock, such as bedrock, or unconsolidated material, such as sand, gravel, or soil with boulders.

(4) Artesian well: A well in which static water level rises above the top of the aquifer. The aquifer is confined by an impermeable geologic formation overlying the aquifer.

(5) Board: The State Plumbing and Piping Work Examining Board.

(6) Casing: A pipe placed in a well or geothermal bore hole to prevent the walls from caving, or to seal off surface drainage and other contaminants, so that they cannot enter the well or bore hole.

(7) Closed-loop geothermal fluid: The heat transfer fluid circulating within the piping and associated components of a closed-loop geothermal system. Such fluid serves to transfer energy between the Earth or water surrounding the piping and the heat exchange components of the geothermal system. Fluids that have been approved for use by the department are set forth in section 25-128-39b of the Regulations of Connecticut State Agencies.

(8) Closed-loop geothermal surface water body: A surface water body, such as a pond, stream or lake, that is utilized as a heat source or heat sink for a closed-loop geothermal system. No public drinking water reservoir, lake, pond or stream tributary to a public drinking water reservoir, or water body that has direct influence to a public well, shall be utilized as a heat source or heat sink for a closed-loop geothermal system.

(9) Closed-loop geothermal surface water system: A closed-loop geothermal system that utilizes a closed-loop geothermal surface water body as a heat source or heat sink.

(10) Closed-loop geothermal system: A heat exchange system consisting of piping buried or placed in a geothermal bore hole, trench, or closed-loop geothermal surface water body. These self-contained systems are intended to transfer energy between the Earth or water surrounding the piping and the geothermal fluid circulating within the piping.

(11) Contamination: The act of introducing into water, foreign materials of such nature, quality, and quantity as to cause degradation of the quality of the groundwater, such as in a bore hole or aquifer, or a surface water body.

- (12) Department: The Department of Consumer Protection.
- (13) Direct exchange geothermal system: A heat exchange system that employs a refrigerant geothermal fluid that changes its physical state between liquid, vapor and gas as the fluid circulates through closed-loop geothermal piping (also known as direct expansion).
- (14) Disinfection: The inactivation of harmful organisms present in water, through use of an accepted chlorine solution or other disinfection material or procedure accepted by the Commissioner of Consumer Protection.
- (15) Drawdown: The extent of lowering of the water table or piezometric surface within or adjacent to the well, resulting from the discharge of water from the well. Drawdown is measured between the static water level and the pumping water level. The quantity of water available in the well from the static water level to the pump intake is known as the drawdown available storage.
- (16) Dug well: Has the same meaning as provided in section 19-13-B51b of the Regulations of Connecticut State Agencies.
- (17) Established grade: The permanent elevation of the surface of the ground at the site of the well after completion of grading, excavation, or other land movements.
- (18) Geothermal bore hole: A bore hole that is used solely for the purpose of heat transfer and is fitted with closed-loop or open-loop heat exchange piping in accordance with section 25-128-39a of the Regulations of Connecticut State Agencies.
- (19) Geothermal system: A closed-loop or open-loop heat system used for the purpose of exchanging heating or cooling by utilizing the relatively constant temperature of the Earth as a heat source or heat sink.
- (20) Global Positioning System (GPS): A location-finding method whereby a user-operated receiver determines such receiver's position by communicating with satellites. The United States Department of Defense developed this system, which is officially known as the "Navigation Satellite Timing and Ranging Global Positioning System."
- (21) Groundwater: Water encountered below the ground surface of the Earth within the zone of saturation that can supply wells and springs.
- (22) Grout or grouting material: A low permeability material placed in the annular space between the casing and the formation or within a geothermal bore hole which is at least as impermeable as the soil formation. The purpose of the grout is to resist the migration of pollutants into the annular space.
- (23) Flowing artesian well: A well in which the static water level is higher than the top of the casing and water flows from the well.
- (24) Gravel well: Has the same meaning as provided in section 19-13-B51b of the Regulations of Connecticut State Agencies.
- (25) Hazardous Substance: Has the same meaning as provided in 42 USC 13101, et seq., and 49 USC 101, et seq., and the regulations promulgated thereunder.
- (26) High water mark: The upper limit of any land area that water may cover, either standing or flowing, at any time during the year.
- (27) Hydrofracturing: A method of well development used to improve the specific capacity of a new or existing drilled well whereby certain zones within the well are pressurized in an effort to force open fractures in the bedrock.
- (28) Installation of pumps and pumping equipment: The procedure employed in the

placement and preparation for operation of pumps and pumping equipment, including all construction involved in making entrances to the well and to the building, establishing seals, installing pump piping, valves, wiring, electrical controls and tanks.

(29) Liner pipe: Pipe that is installed inside a completed and cased well for the purpose of sealing off undesirable water or for repairing ruptured or punctured casing or screens. The liner pipe and screens may be constructed of PVC schedule forty (40) plastic that meets or exceeds American Society for Testing and Materials standard D-1785.

(30) Non-hazardous substance: Has the same meaning as provided in 42 USC 13101, et seq., and 49 USC 101, et seq., and the regulations promulgated thereunder.

(31) Non-water-supply well: Has the same meaning as provided in section 25-126 of the Connecticut General Statutes.

(32) Open-loop geothermal well: A well within which a supply of groundwater from an aquifer is directly withdrawn and employed as the heat transfer fluid in a geothermal system. Geothermal systems employing open-loop geothermal wells include pump and discharge geothermal systems, pump and recharge geothermal systems and standing column wells depending upon the discharge or return point of the water.

(33) Owner: Any person or such person's agent who holds the title or other rights of property where a well or geothermal system is constructed, repaired, or abandoned.

(34) Potable water: Water free from impurities in amounts sufficient to cause disease or other harmful physiological effects, with the minimum or maximum bacteriological, physical, and chemical composition as required in section 19-13-B102 of the Regulations of Connecticut State Agencies for public wells or section 19a-37 of the Connecticut General Statutes for private wells and semipublic wells .

(35) Private well: Has the same meaning as provided in section 19a-37 of the Connecticut General Statutes.

(36) Public water system: Has the same meaning as provided in section 19-13-B102 of the Regulations of Connecticut State Agencies.

(37) Public well: Has the same meaning as provided in section 19a-37 of the Connecticut General Statutes.

(38) Pump and discharge geothermal system: A type of open-loop geothermal system where groundwater from an aquifer is pumped directly from a water supply well to a building, where it transfers its heat energy to a heat pump. After leaving the building, the water is discharged to a permitted discharge point.

(39) Pump and recharge geothermal system: A type of open-loop geothermal system where groundwater from an aquifer is piped directly from a water supply well to a building, where it transfers its heat energy to a heat pump. The water is then pumped back into the same aquifer via a second discharge or diffusion well with an immediate hydraulic connection to the source water supply.

(40) Repair: Any work involved in the reaming, sealing, installing, changing of casing depth or height, perforating, screening, cleaning, acid washing, surging, hydrofracturing or other redevelopment of a well.

(41) Semipublic well: Has the same meaning as provided in section 19a-37 of the Connecticut General Statutes.

(42) Specific capacity: The yield of a well expressed in gallons per minute per foot of

drawdown, as abbreviated “gpm/ft.”

(43) Standing column wells: A type of open-loop geothermal system where temperate water is withdrawn from a water supply well, circulated through a heat pump exchanger and returned to the water column in the same well.

(44) Static water level: The depth to the surface of the water in a well measured from the land surface or other convenient, permanent, and specified datum, when no water is being discharged from the well and the water level has reached equilibrium.

(45) Surface water body: Water located on the surface of the Earth in bodies such as lakes, rivers, streams, ponds, and reservoirs.

(46) Water supply well: Has the same meaning as provided in section 19a-37 of the Connecticut General Statutes.

(47) Well: Any water supply well or non-water-supply well.

(48) Well abandonment: Actions taken to ensure that a well that is no longer in use shall not be a source or conduit for contamination of groundwater resources.

(49) Well contractor: A person regularly offering to the general public the personal services of such contractor or the services of such contractor’s employees in the industry of obtaining water from a well for any purpose or use.

(50) Well vent: An outlet at the upper terminal of a well casing to allow equalization of air pressure in a well, but at the same time so constructed as to avoid entry of water and foreign material into the well.

(51) Yield: Has the same meaning as provided in section 19-13-B51b of the Regulations of Connecticut State Agencies.

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