

## **Chapter 1. GENERAL PROVISIONS.**

### **001. SCOPE AND AUTHORITY.**

These regulations are promulgated pursuant to Neb. Rev. Stat. § 46-602 and the Nebraska Water Well Standards and Contractors' Practice Act (Act), codified at Neb. Rev. Stat. §§ 46-1201 to 46-1241, and govern the licensure of professionals; the minimum requirements for the construction, location, and decommissioning of water wells, the installation of pumps and pumping equipment, the collection of water samples from water wells, and the inspection of installed water well equipment and chemigation devices; and fees.

### **002. DEFINITIONS.**

As used in this Title:

**ABANDONED WATER WELL** means any water well (1) the use of which has been accomplished or permanently discontinued, (2) which has been decommissioned as described in the rules and regulations of the Department, and (3) for which the notice of abandonment required by Neb. Rev. Stat. § 46-602(2) has been filed with the Department by the licensed water well contractor or licensed pump installation contractor who decommissioned the water well or by the water well owner if the owner decommissioned the water well.

**ACTIVE STATUS WATER WELL** means a water well which is in use and which is not an illegal water well.

**ANNULAR FILL** means materials placed in the annular space between the surface seal required in 134 NAC 4-001.10(d) and the primary aquifer required in 134 NAC 4-001.10(a).

**ANNULAR SPACE** means the space between the well casing and the well borehole wall and/or the space between two or more strings of well casing.

**AQUIFER** means a geological formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield adequate quantities of water to wells and springs.

**AQUIFER SEAL** means a grout seal placed in the annular space of a well.

**BACKFLOW PREVENTER** means an assembly, a device, or a construction practice that prohibits the backflow of water from the distribution piping into the water well. This includes but is not limited to check valves, curb stops, or air gaps.

**BENTONITE** means a highly plastic, colloidal sodium clay composed largely of montmorillonite.

**BENTONITE SEAL** means a bentonite-based material used as a seal or plug.

**BOARD** means the Water Well Standards and Contractors' Licensing Board.

**BORED OR DUG WELL** means a well consisting of a large diameter borehole, usually two feet or more, lined with concrete, clay tile, brick, or stone.

**CASING** means a structural retainer which is installed in the borehole to support loose formation, provide a conduit for movement of fluids, and/or house pumping equipment.

**CERTIFICATE OF COMPLETION** means evidence or documentation provided to the Department showing attendance and completion of a continuing education program.

**CESSPOOL** means an underground catch and discharge basin for household sewage or other liquid waste.

**CLASSIFICATION NOTICE** means a written notice informing the recipient landowner that the Department has classified a water well on the property of the recipient landowner as an illegal water well.

CLAY means a fine-grained inorganic material which has very low permeability. For purposes of this definition, a grain is considered fine if the grain measures less than 0.0005 of a millimeter in diameter.

CLOSED LOOP HEAT PUMP WELL means a well constructed for the purpose of installing the underground piping necessary to recirculate heat transfer fluid.

CONFINING LAYER means a geologic layer of either unconsolidated or consolidated material having permeability distinctly lower than the adjacent aquifer(s).

CONSTRUCTION OF WATER WELLS includes all acts necessary to make a water well usable for the purpose for which it is intended including, without limitation, the siting of and excavation for the water well and its construction, alteration, or repair, but excludes the installation of pumps and pumping equipment.

CONTAMINATION means the addition of unwholesome or undesirable parts that degrades the quality of the larger whole.

CONTINUING EDUCATION means the education required as a condition of licensure under the Act, for the maintenance of skills necessary for the protection of groundwater and public health, competent construction of water wells, installation of pumps and pumping equipment, and water well monitoring which has been approved by the Board in accordance with this Chapter.

CONTINUING EDUCATION PROGRAM means instruction or information provided to licensees for the purpose of maintaining skills necessary for protecting groundwater and public health, and competent practice of construction of water wells, installation of pumps and pumping equipment, water well monitoring, the inspection of chemigation systems, and inspection and servicing of flow meters.

DECOMMISSIONED, when used in relation to a water well, means the act of filling, sealing, and plugging a water well in accordance with the rules and regulations of the department.

DEPARTMENT means the Department of Water, Energy, and Environment.

DEWATERING WELL means a water well constructed for the purpose of lowering the ground water surface elevation, either temporarily or permanently.

DIRECTOR means the Director of the Department of Water, Energy, and Environment.

DISCHARGE PIPE means any and all piping beginning at the discharge head, or pitless unit tapping, extending to the first backflow prevention device.

DISTRIBUTION PIPING means all piping extending beyond the discharge pipe.

DRIVEN SANDPOINT WELL means a well that is driven, washed, or jetted into an aquifer with the sandpoint attached directly to the pump suction line.

GPM means gallons per minute.

GRAVEL PACK means filter material placed in the annular space around the well screen.

GROUND WATER means that water which occurs in or moves, seeps, filters, or percolates, through ground under the surface of the land.

GROUNDWATER HEAT PUMP WELL means a well constructed for the purpose of utilizing the geothermal properties of the ground.

GROUT means materials composed of bentonite clays and/or portland cements, and, if needed, other additives that, when combined, form a low permeability seal not greater than one times ten to the negative seven centimeters per second ( $1 \times 10^{-7}$  cm/sec). Grout material is designed to seal the

annular space when used for well construction and the well cavity when used for decommissioning.

**HORIZONTAL CLOSED LOOP SYSTEM** means a boring, trench, or pit, essentially parallel to the horizon and into which a closed loop pipe is placed for the purpose of utilizing the geothermal properties of the ground.

**ILLEGAL WATER WELL** means any water well which has not been properly decommissioned and which meets any of the following conditions: the water well is in such a condition that it cannot be placed in active or inactive status; any necessary operating equipment has been removed and the well has not been placed in inactive status; the water well is in such a state of disrepair that continued use for the purpose for which it was constructed is impractical; the water well was constructed after October 1, 1986, but not constructed by a licensed water well contractor or by an individual on land owned by him or her and used by him or her for farming, ranching, or agricultural purposes or as his or her place of abode; the water well poses a health or safety hazard; the water well is an illegal water well in accordance with Neb. Rev. Stat. § 46-706; or the water well has been constructed after October 1, 1986, and such well is not in compliance with the standards developed under the Water Well Standards and Contractors' Practice Act.

**INACTIVE STATUS WATER WELL** means a water well that is in a good state of repair and for which the owner has provided evidence of intent for future use by maintaining the water well in a manner which meets the following requirements: the water well does not allow impairment of the water quality in the water well or of the ground water encountered by the water well; the top of the water well or water well casing has a water-tight welded or threaded cover or some other water-tight means to prevent its removal without the use of equipment or tools to prevent unauthorized access, to prevent a safety hazard to humans and animals, and to prevent illegal disposal of wastes or contaminants into the water well; all entrances and discharge piping to the water well are effectively sealed to prevent the entrance of contaminants; and the water well is marked so as to be easily visible and located and is labeled or otherwise marked so as to be easily identified as a water well and the area surrounding the water well is kept clear of brush, debris, and waste material.

**INSTALLATION OF PUMPS AND PUMPING EQUIPMENT** means the procedure employed in the placement and preparation for operation of pumps and pumping equipment at the water well location, including connecting all wiring to the first control and all construction or repair involved in making entrance to the water well, which involves the breaking of the well seal.

**LANDOWNER** means a person who owns land on which a water well is or will be located.

**LICENSED NATURAL RESOURCES GROUND WATER TECHNICIAN** means a natural resources ground water technician who has taken a training course, passed an examination based on the training course, and received a license from the department indicating that he or she is a licensed natural resources ground water technician.

**LICENSED PUMP INSTALLATION CONTRACTOR** means an individual who has obtained a license from the department and who is a principal officer, director, manager, or owner-operator of any business engaged in the installation of pumps and pumping equipment or the decommissioning of water wells.

**LICENSED PUMP INSTALLATION SUPERVISOR** means any individual who has obtained a license from the department and who is engaged in the installation of pumps and pumping equipment or the decommissioning of water wells. Such supervisor may have discretionary and supervisory authority over other employees of a pump installation contractor.

**LICENSED WATER WELL CONTRACTOR** means an individual who has obtained a license from the department and who is a principal officer, director, manager, or owner-operator, of any business engaged in the construction or decommissioning of water wells.

**LICENSED WATER WELL DRILLING SUPERVISOR** means any individual who has obtained a license from the department and who is engaged in the

construction or decommissioning of water wells. Such supervisor may have discretionary and supervisory authority over other employees of a water well contractor.

**LICENSED WATER WELL MONITORING TECHNICIAN** means any individual who has obtained a license from the department and who is engaged solely in the measuring of ground water levels, the collection of ground water samples from existing water wells, or the inspection of installed water well equipment or pumping systems. A licensed water well monitoring technician shall not supervise the work of others.

**LICENSEE/LICENSE HOLDER** means a person who holds an unexpired license to practice under the Act, regardless whether such license is suspended or of any limitation, term, or condition, placed on the license.

**MG/L** means milligrams per liter.

**MILITARY SERVICE** means full-time active military service of the United States, a National Guard call to active service for more than 30 consecutive days, or active service as a commissioned officer of the Public Health Service or the National Oceanic and Atmospheric Administration. Military service may also include any period during which a servicemember is absent from duty on account of sickness, wounds, leave, or other lawful cause.

**MONITORING WELL** means a well constructed for purposes of monitoring water quality and/or quantity.

**NATURAL RESOURCES GROUND WATER TECHNICIAN** means any individual employed by a natural resources district and engaged in the inspection of chemigation systems, measuring and recording static water levels, inspection and servicing of flow meters, and water sampling practices and techniques. Natural resources ground water technician does not include: (1) An individual who constructs a water well or installs or repairs pumps or pumping equipment or a water well; (2) a water well monitoring technician; or (3) an individual who carries out the measurement, sampling, or inspection of a water well which is on land owned by him or her and used by him or her for farming, ranching, or agricultural purposes or as his or her place of abode.

**NON-POTABLE WELL** means a water well constructed to produce water not intended for human consumption.

**OBSERVATION WELL** means a non-potable water well constructed for the purpose of measuring water levels and/or collecting water quality samples that is not located in a zone of contamination.

**OPEN HOLE WELL** means a water well that results from the drilling of a hole into certain rock formations and often finished with no casing or screen adjacent to the water-yielding portion of the rock.

**OPEN LOOP HEAT PUMP WELL** means a well that transfers heat via pumped ground water which is discharged above and/or below ground. For below ground discharge refer to Title 122 of the Nebraska Administrative Code.

**PERCHED GROUNDWATER** means an isolated zone of saturation above the regional water table. It occurs when an impervious layer within the unsaturated zone impedes the downward movement of water.

**PERSON** means any individual; partnership; limited liability company; association; public or private corporation; trustee; receiver; assignee; agent; municipality or other governmental subdivision; public agency; other legal entity; or any officer or governing or managing body of any public or private corporation, municipality, governmental subdivision, public agency, or other legal entity.

**PETITION FOR RECLASSIFICATION** means a written petition submitted to the Department requesting the Department reclassify an illegal water well as an active status water well, an inactive status water well, or an abandoned water well.

**PITLESS UNIT** means an underground discharge assembly for a water well which attaches directly to the casing and provides watertight subsurface connections for suction lines or pump discharge without the use of a well pit and includes the underground distributor and the steel extension to the ground surface.

**PLUG** means a watertight seal installed in an open borehole or well casing to prevent movement of fluids.

**POLLUTION** means an impairment of water quality to a degree that restricts the intended use of ground water.

**POTABLE WELL** means a water well constructed to produce water for human consumption.

**PPM** means parts per million.

**PRACTICE** means work performed under the Act that requires a license.

**PRIMARY AQUIFER SEAL** means a non-slurry bentonite or high solids bentonite slurry grout interval placed in the annular space on top of the gravel pack just above the screened openings, and/or beginning at the base of the first layer of silt/clay above the production zone, and/or at or immediately below the static water level, whichever provides the most aquifer protection.

**PROVIDER** means an institution, organization, or individual that presents continuing education programs to licensees and requests approval from the Board for such programs.

**PSI** means pounds per square inch.

**PUBLIC WATER SYSTEM** means a system for providing the public with water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least sixty days per year. Public water system includes (i) any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system and (ii) any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Public water system does not include a special irrigation district. A public water system is either a community water system or a noncommunity water system.

**PUMPS AND PUMPING EQUIPMENT** means any equipment or materials utilized or intended for use in withdrawing or obtaining ground water including, but not limited to, seals, tanks, fittings, and controls.

**RECOVERY WELL** means a water well constructed for the purpose of, or in conjunction with, the removal of contamination from an aquifer or aquifers.

**SANITARY WELL SEAL** means a device used to cap a water well or to establish and maintain a junction between the casing or curbing of a water well and the piping or equipment installed therein, the purpose or function of which is to prevent pollutants from entering the water well.

**SCREEN APERTURES** means a series of openings in a water well casing, made either before or after installation of the casing, to permit the entrance of water into the well.

**SCREENED VENT** means an inverted, U-shaped tube, or the equivalent, the open end of which is covered with a wire mesh, that is inserted into the top of a well to equalize the air pressure inside the well with that of the atmosphere.

**SECURE COVER OR CAP** means an object placed over a borehole or water well, the purpose of which is to prevent the degradation of ground water quality and/or personal injury. If the secure cover or cap is left open for more than 10 days, then the secure cover or cap must be watertight.

**STATIC WATER LEVEL** means the distance from a fixed reference point to the water level in a well when the well is not being pumped.

**SUBSTANTIALLY EQUIVALENT** means any procedure or material to be used for water well construction, pump installation, or water well decommissioning which provides equal protection to ground water resources from potential pollution and protects public health equivalent to the procedures or materials prescribed in 134 NAC 4.

**SUBSURFACE DISPOSAL SYSTEM** means any system that utilizes the soil for subsequent absorption of treated sewage; such as a lateral field, absorption trench, seepage bed, or seepage pit.

**SURFACE SEAL** means a grout interval placed in the annular space within the first 15 feet below the surface.

**SUPERVISION** means the ready availability of the person licensed pursuant to the Water Well Standards and Contractors' Practice Act for consultation and direction of the activities of any person not licensed who assists in the construction of a water well, the installation of pumps and pumping equipment, or decommissioning of a water well. Contact with the licensed contractor or supervisor by telecommunication shall be sufficient to show ready availability.

**TEST HOLE** means a hole or excavation designed to obtain information on hydrogeologic conditions and includes any geotechnical boring.

**TREMIE PIPE** means a pipe or hose that carries grout or gravel pack to the placement depth.

**VERTICAL CLOSED LOOP SYSTEM** means a borehole essentially perpendicular to the horizon into which a closed loop pipe is placed and includes the horizontal closed loop header piping for the purpose of utilizing the geothermal properties of the ground.

**WATER BEARING ZONE** means an area in the subsurface with the same characteristic of an aquifer. However, there may be multiple water bearing zones within an aquifer or a single water bearing zone may be described as one aquifer.

**WATER SAMPLING PRACTICES** means acts by which groundwater samples are obtained from a water well or pumping system in which the water well seal is broken.

**WATER WELL** means any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed for the purpose of exploring for ground water, monitoring ground water, utilizing the geothermal properties of the ground, obtaining hydrogeologic information, or extracting water from or injecting fluid, as defined in Neb. Rev. Stat. § 81-1502, into the underground

water reservoir. Water well does not include any excavation described in Neb. Rev. Stat. §§ 46-601.01(1)(b) and (1)(c).

**WATERTIGHT CASING** means a watertight pipe that is of sufficient wall thickness to permit threading, gluing, or welding; is capable of withstanding the pressures exerted during installation and forces imposed by the surrounding materials; and will resist corrosion by soil and water environments.

**WATERTIGHT SECURE COVER** means a welded, solvent welded, threaded, or bolted watertight cover for a water well that is secured in such a way so as to prevent its removal without the use of tools.

**WELL DEVELOPMENT** means the act of repairing alterations to the formation during construction of the well and enhancing the porosity and permeability of materials surrounding the intake portion of the well. The development process is the application of mechanical devices and/or the use of chemicals to remove drilling fluids and debris left in the filter pack and formation as a result of the drilling process.

**WELL PIT** means a structure that is set at or below grade and houses a pump and/or pumping equipment and is large enough to allow an individual to fully enter the structure to work on such equipment and is not watertight.

**WELL REPAIRS** means any change, replacement, or other alteration of any water well, pump, or pumping equipment or any other activity which requires a breaking or opening of the well seal.

**WELL SCREEN** means the section of the well with openings that allows water to pass from an aquifer into the well or from the well into an aquifer.

**WELL SEAL** means an arrangement or device used to cap a water well or to establish and maintain a junction between the casing or curbing of a water well and the piping or equipment installed therein, the purpose or function of which is to prevent pollutants from entering the water well.

Enabling Legislation: Neb. Rev. Stat. §§ 46-1225, 46-1227, 46-1229(2); 46-1230.