

Secretary of State
Certificate and Order for Filing
PERMANENT ADMINISTRATIVE RULES

I certify that the attached copies* are true, full and correct copies of the PERMANENT Rule(s) adopted on September 24, 2001 by the
Date prior to or same as filing date.

Water Resources Commission
Agency and Division

690
Administrative Rules Chapter Number

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to become effective November 15, 2001 Rulemaking Notice was published in the March, 2001 Oregon Bulletin.**
Date upon filing or later Month and Year

RULEMAKING ACTION
List each rule number separately, 000-000-0000.

ADOPT:

Secure approval of rule numbers with the Administrative Rules Unit prior to filing.

See attachment

AMEND:

See attachment

REPEAL: N/A

Renumber: Secure approval of rule numbers with the Administrative Rules Unit prior to filing.

Amend and Renumber: Secure approval of rule numbers with the Administrative Rules Unit prior to filing.

ORS 536.027, 536.090 & 537.505-537.795
Stat. Auth.: ORS

Other Authority

ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS

RULE SUMMARY

The rules in OAR Chapter 690, Division 200 through 240 pertain to well construction activities. The rule changes approved by the Water Resources Commission address new well drilling technology that has been developed. The rules will improve readability and increase the ease of use by the public. Minor modifications occur throughout the rules in order to correct grammatical mistakes, add clarity to the existing rules and delete outdated information.

In addition to the aforementioned items, the rules address the following: (1) Well identification labeling, to clarify the level of enforcement for non-compliance and acceptable label attachment methods; (2) Abandonment of old wells within setback distances, clarifying ORS 537.775(3); (3) Drilling while under suspension, clarifying that onsite supervision must be provided by a licensed well driller; (4) Clarifying that monitor well vaults must be designed to prevent surface water from entering the vault; and (5) Clarify how bentonite may be used during the sealing of wells..


Authorized Signer

11/15/01
Date

*Copies include a photocopy of this certificate with paper copy of each rule listed in the Rulemaking Action.

**The Oregon Bulletin is published on the 1st of each month and updates the rule text found in the Oregon Administrative Rules Compilation. Notice forms must be submitted to the Administrative Rules Unit, Oregon State Archives, 800 Summer Street NE, Salem, Oregon 97310 by 5:00 p.m. on the 15th day of the preceding month unless this deadline falls on a Saturday, Sunday or legal holiday when Notice forms are accepted until 5:00 p.m. on the preceding workday.

**Oregon Administrative Rules Affected in Rule Revision
Chapter 690**

Adopted

690-200-0048
690-215-0016
690-215-0045
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690-240-0082
690-240-0139

Amended

690-200-0005
690-200-0020
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690-240-0180

Repeal

690-210-0020

Renumbered

690-210-0110 to 690-200-0047

Amend and Renumber

690-210-0015 to 690-200-0021
690-210-0040 to 690-200-0041
690-210-0050 to 690-200-0042
690-210-0080 to 690-200-0043
690-210-0090 to 690-200-0046
690-210-0120 to 690-210-0155
690-240-0140 to 690-240-0006

**OREGON ADMINISTRATIVE RULES
WATER RESOURCES DEPARTMENT
CHAPTER 690
DIVISION 200
WATER SUPPLY WELL CONSTRUCTION STANDARDS ~~{AND MAINTENANCE}~~
~~{WELL CONSTRUCTION STANDARDS:}~~
INTRODUCTION, GENERAL STANDARDS AND DEFINITIONS**

Introduction

690-200-0005

Basis for Regulatory Authority

(1) The right to reasonable control of the ground waters of the State of Oregon has been declared to belong to the public. Through the provisions of the Ground Water Act of 1955, ORS 537.505 to 537.795, the Water Resources Commission has been charged with the administration of the rights of appropriation and use of the ground water resources of the state and the prevention of waste and contamination of ground water. This is primarily accomplished by the licensing of well constructors and the promulgation of rules governing well construction, alteration, abandonment, **conversion**, maintenance, and use. Ultimately the landowner of the property where the well is constructed is responsible for the condition, ~~[and]~~ use, **maintenance of setbacks, and abandonment** of the well.

(2) The following rules apply to all wells which are constructed for the purpose of locating or obtaining water as defined in ORS 537.515(9) with the following exceptions:

~~[(a) Holes which are drilled for elevator shafts, fence posts, power poles, cathode protection, storm water disposal, pits created by removal of rock for construction, and sumps, for example, are exempt from these rules. When natural flow of water occurs in holes not regulated under these rules, the Water Resources Commission may regulate under separate rules or statutes to protect the ground water from contamination or waste];~~

~~[(b)] (a) The construction, maintenance, **conversion**, and abandonment of monitoring wells, **geotechnical holes**, and other holes are regulated under OAR 690-240. ~~[Monitoring wells and other holes are subject to the requirements of OAR 690-200 and the following definitions unless otherwise provided under OAR 690-240-010];~~~~

~~(c) (b) Holes constructed under ORS Chapters 517, 520, 522, and rules promulgated from those statutes, are the responsibility of the Oregon Department of Geologic and Mineral Industries and are not subject to these rules. These include, but are not limited to, holes constructed for the purposes of exploring for, or producing, petroleum, minerals, or geothermal resources~~[-]~~; **and**~~

~~(c) **Underground Injection Systems, which are regulated by the Oregon Department of Environmental Quality under OAR 468B.**~~

NOTE: Table 200-1 lists common subsurface borings and indicates which administrative rule governs the construction, conversion, maintenance, alteration, and abandonment of the boring.

(3) When natural flow of water occurs in holes not regulated under these rules, the Water Resources Commission may regulate under separate rules or statutes to protect the

ground water from contamination or waste:

(4){(3)} In addition to regulating new well construction, alteration, abandonment, **conversion**, and maintenance actions, the Water Resources Commission may impose conditions upon the use of any existing **water supply** well as may be necessary to prevent waste, undue interference with other wells or contamination. **When** [Where] necessary, the Commission may order discontinuance of use, **repair**, [and] **temporary, or permanent** [proper] abandonment of any well to accomplish the same objectives.

(5){(4)} Except for the Commission's power to adopt rules, the Commission may delegate to the Water Resources Director the exercise or discharge in the Commission's name of any power, duty or function of whatever character, vested in or imposed by law upon the Commission. The official act of the Director acting in the Commission's name and by the Commission's authority shall be considered to be an official act of the Commission. The Commission delegates to the Director full authority to act in the Commission's name where that delegation is reflected in these rules.

(6){(5)} Under the provisions of ORS 537.780, the Commission is authorized to adopt such procedural rules and regulations as deemed necessary to carry out its function in compliance with the Ground Water **Act of 1955** [Law]. In fulfillment of these responsibilities and to ensure the preservation of the public welfare, safety, and health, the Commission has established these rules and regulations as the minimum standards for the construction, alteration, **conversion**, abandonment and maintenance of **water supply** wells in Oregon.

(7){(6)} The rules and regulations set forth herein shall become effective **upon adoption by the Commission** [January 1, 1994].

[NOTE: If a water supply well is to be constructed to supply a public or [community] water system, refer to Appendix 1 for information regarding regulations pertaining to municipal, public, community, and public utility water supply systems.]

Stat. Auth.: ORS 536.027, 536.090 & 537.505 - 537.795

Stats. Implemented: ORS 536.090, 537.505 through 537.795

690-200-0020

General Statement About the Standards

(1) The rules and regulations set forth herein provide the minimum standards for the construction, **conversion, alteration**, maintenance, and abandonment of **water supply** wells. After the effective date of adoption of these rules and regulations, no **water supply** well shall be constructed, altered, **converted**, or abandoned contrary to the provisions of these rules and regulations without prior approval from the Water Resources Department. Violation of these standards may result in enforcement under OAR Chapter 690, Division 225, including suspension or revocation of a constructor's license, imposition of civil penalties on the landowner or constructor, action on a bond, or other sanctions authorized by law.

(2) Every well shall be designed and constructed to adapt to the existing local geologic and ground water conditions at the well site and shall fully utilize every natural protection to the ground water supply. If prior to or during construction the well constructor becomes aware that specific site conditions will not allow adherence to the following minimum well standards, the constructor shall request and obtain written approval from the Director to use alternative construction methods,

materials or standards. The request shall be in writing and submitted to the Director as described in **OAR 690-200-0021** [~~OAR 0-210-0015~~]. [Written] **Special standard** approval from the Director must be obtained prior to completion of the well.

(3) Certain wells constructed under these rules may be suitable for use as public, community, municipal, or public utility supplies. Regulations administered by other agencies may apply in addition to those in this Chapter (see Appendix 1).

Stat. Auth.: ORS 536.027, 536.090 & 537.505 - 537.795

Stats. Implemented: ORS 536.090 & 537.505-537.795

690-200-0021

Special Standards

(1) Site conditions may require specific design, construction, and abandonment procedures to adapt to the existing local geologic and ground water conditions to fully utilize every natural protection to the state's ground water. Specific site conditions may require different design, construction, setback, or abandonment standards than required by the Water Supply Well construction rules. Alternative technologies or methods not addressed in these rules may also exist which could be effectively utilized in the construction or abandonment of a water supply well. Prior to the completion of the well, a bonded constructor must request and receive approval from the Department to use methods or materials that do not meet the water supply well construction standards. The Department may approve such requests either orally or in writing. If oral approval is granted, the written request must be submitted to the Department within three working days of the date of the oral approval. Failure to submit a written request as described above may void the prior oral approval. The proposed methods or materials shall provide at least the same level of resource protection as that which is provided by these rules.

(2) The written request for special standards shall include:

(a) Name, license number and signature of the bonded well constructor;

(b) Location of the well by county, township, range, section, tax-lot (if assigned) and either the 1/4, 1/4 section or Latitude and Longitude as established by a global positioning system;

(c) Name and address of landowner;

(d) Address of the project/well site;

(e) Type of work;

(f) The distance to the nearest well and septic tank or drainfield,;

(g) The reasons(s) that conformance to the rules and regulations for water supply wells cannot be met;

(h) A diagram and written description showing the proposed water supply well design, construction, or abandonment;

(i) A site map showing the relationship of the well to any existing septic systems, if the request is to place a well within the minimum setbacks described in OAR 690-210-0030;

(j) The well identification number, if assigned; and

(k) The start card number.

Stat. Auth.: ORS 536.027, 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505-537.795

690-200-0025

Special Area Standards

If at any time, the Commission finds that different or supplemental standards are required for the safe development of ground water from any aquifer or area, special area standards for the construction and maintenance of water supply wells within such areas may be adopted as rules by the Commission. In the absence of such special area standards, these rules constitute the sole administrative standards of the Water Resources Department governing construction, conversion, maintenance, alteration, and abandonment of water supply wells.

Stat. Auth.: ORS 536.027, 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505-537.795

690-200-0027

Restrictions on Water Supply Well Construction and Use in Critical Ground Water Areas or Areas Withdrawn by Commission Order

(1) The use of ground water is restricted in Critical Ground Water Areas or Withdrawal Areas established by Commission Order, under ORS 537.735 and 536.410. Before constructing a water supply well, the constructor shall determine whether the proposed well site is within a Critical Ground Water or Withdrawal Area. (Refer to [Map] Figure 200-1 [+9].)

(2) If the water supply well is within a Critical Ground Water or Withdrawal Area, the constructor shall contact the watermaster for the county where the water supply well is to be constructed for more information. (Refer to Table 200-2 [Table VI].)

(3) Construction of water supply wells in violation of a critical ground water or withdrawal order[s] are subject to enforcement action as described in OAR Chapter 690, Division 225.

Stat. Auth.: ORS 536.027, 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505-537.795

690-200-0030

Public Safety

No water supply well shall be constructed, maintained, or abandoned in such a manner as to constitute a health threat, or health hazard or a menace to public safety.

Stat. Auth.: ORS Ch. 183, 536, 537 & 540
Stats. Implemented: ORS Ch. 183, 536, 537 & 540

690-200-0040

Wells Cannot be Used for Disposal of Contaminants

No water supply well shall be used as a disposal pit for sewage, industrial waste, or other

materials that could contaminate the ground water supply.

Stat. Auth.: ORS Ch. 183, 536, 537 & 540

Stats. Implemented: ORS Ch. 183, 536, 537 & 540

690-200-0041

Water Used Must be Potable

All water used in the construction, alteration, repair or abandonment of water supply wells shall be potable.

Stat. Auth.: ORS Ch. 183, 536, 537 & 540

Stats. Implemented: ORS Ch. 183, 536, 537 & 540

690-200-0042

Organic Materials

Organic materials which foster or promote undesired organic growth or have the potential to degrade water quality shall not be employed in the construction of a water supply well. This includes, but is not limited to, brans, hulls, grains, starches, and proteins.

Stat. Auth.: ORS Ch. 183, 536, 537 & 540

Stats. Implemented: ORS Ch. 183, 536, 537 & 540

690-200-0043

Commingling of Waters

A water supply well shall not be constructed in a manner that allows commingling or leakage of ground water by gravity flow or artesian pressure from one aquifer to another. See definition of aquifer.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795

Stats. Implemented: ORS Ch. 536.090 & 537.505-537.795

690-200-0046

Perched Ground Water

Wells drawing water from perched zones must be constructed to prevent the waste of this type of ground water. (See Figure 200-2)

Stat. Auth.: ORS Ch. 183, 536, 537 & 540

Stats. Implemented: ORS Ch. 183, 536, 537 & 540

690-200-0047

Unattended Wells

All wells, when unattended during construction, shall be covered to protect public health

and safety.

Stat. Auth.: ORS Ch. 183, 536, 537 & 540

Stats. Implemented: ORS Ch. 183, 536, 537 & 540

690-200-0048

Well Identification Label

(1) Within 30 days of completion of well construction, conversion, or alteration, the constructor shall permanently affix a well identification label to the wellhead as described in Appendix 200-2. The identification number shall be recorded on the well report. The well identification label shall be attached in such a manner as to be easily readable upon inspection. Identification labels shall be furnished by the Department.

(2) If a well identification label is already affixed to an existing well that is being altered, converted, or abandoned, the constructor shall record the identification number on the well report.

(3) When a well that has a well identification label (tag) on it is permanently abandoned, the well identification tag shall be destroyed. The well identification tag shall not be reused.

Stat. Auth.: ORS Ch. 183, 536, 537 & 540

Stats. Implemented: ORS Ch. 183, 536, 537 & 540

690-200-0050

Definitions

The Water Resources Commission uses the definitions of the words listed below in the administration and enforcement of Oregon's Ground Water Law and the Rules and Regulations for the Construction and Alteration of Wells. No other definitions of these same words apply:

(1) "Abandonment, Permanent" means to remove a well from service by completely filling it in such a manner that vertical movement of water within the well bore and within the annular space surrounding the well casing, is effectively and permanently prevented. If a portion of a well is to be abandoned in order to prevent commingling, waste, or loss of artesian pressure, the abandonment shall conform with the requirements of OAR Chapter 690, Division 220 **for water supply wells. This term is synonymous with "decommission."**

(2) "Abandonment, Temporary" means to remove a drilling machine from a well site after completing or altering a well provided the well is not immediately put into service, or to remove a well from service with the intent of using it in the future.

(3) "Access Port" means a minimum ½-inch tapped hole and plug or a ½-inch capped pipe welded onto the casing in the upper portion of a water supply well, **or a minimum ½ inch dedicated probe/transducer pipe [casing]** to permit entry of water-level measuring devices into the water supply well **in order to determine the water level.**

(4) "Air Gap" means a complete physical break between the outlet end of the discharge pipe or other conduit and the discharged substance. The break shall be at least twice the inside diameter of the pipe or conduit. (Back-siphon prevention)

(5) "Airline" means a water level measuring device consisting of a pressure gauge attached

to an airtight line or pipe of known length, within the water supply well bore, extending from land surface to below the pumping level. **The device will** [to] allow the water level to be computed by measuring the stable air pressure remaining in the line after completely purging water from within the line.

(6) "Air/Vacuum Relief Valve" means a device to automatically relieve or break vacuum. (Back-siphon prevention)

(7) "Altering a Well" means the deepening, reaming, hydrofracturing, casing, re-casing, perforating, re-perforating, installation of liner pipe, packers, seals, and any other material change in the design or construction of a well.

(8) "Annular Space" means the space between the drillhole wall and the outer well casing.

(9) "Aquifer" means a geologic formation, group of formations, or part of a formation that contains saturated and permeable material capable of transmitting water in sufficient quantity to supply wells or springs and that contains water that is similar throughout in characteristics such as potentiometric head, chemistry, and temperature (see Figure **200-2** [2]).

(10) "Artesian Aquifer" means a [n] **confined** aquifer in which ground water is under sufficient head to rise above the level at which it was first encountered, whether or not the water flows at land surface. If the water level stands above land surface, the well is a flowing artesian well (see Figure **200-2** [2]).

(11) "Artesian Water Supply Well" means a water supply well in which ground water is under sufficient pressure to rise above the level at which it was first encountered, whether or not the water flows at land surface. If the water level stands above land surface the well is a flowing artesian water supply well.

(12) [(11)] "Automatic Low-Pressure Drain" means a self-activating device designed and constructed to intercept incidental leakage and drain that portion of an irrigation pipeline or any other method of conveyance whose contents could potentially enter the water supply when operation of the irrigation system pumping plant fails or is shut down. (Back-siphon prevention)

(13) [(12)] "Back-Siphon Prevention Device" means a safety device used to prevent water pollution or contamination by preventing flow of a mixture of water and/or chemicals in the opposite direction of that intended. (Back-siphon prevention)

(14) [(13)] "Bored Well" means a well constructed with the use of earth augers turned either by hand or by power equipment.

(15) [(14)] "Buried Slab Type Well" means a dug well in which well casing is used to case the upper hole. A slab, sealed with cement grout, is placed between the upper hole and lower drillhole, and the remainder of the annulus is filled with concrete.

(16) [(15)] "Casing" means the outer tubing, pipe, or conduit, welded or **thread** [screw] coupled, and installed in the borehole during or after drilling to support the sides of the well and prevent caving. Casing can be used, in conjunction with proper seal placement, to shut off water, gas, or contaminated fluids from entering the hole, and to prevent waste of ground water.

(17)[(16)] "Casing Seal" means the water tight seal established in the well bore between the well casing and the drillhole wall to prevent the inflow and movement of surface water or shallow ground water in the well annulus, or to prevent the outflow or movement of water under artesian or hydrostatic pressures.

(18) [(17)] "Check Valve" means a certified device designed and constructed to close a water

supply pipeline, chemical injection line, or other conduit in a chemigation system to prevent reverse flow in that line. (Back-siphon prevention)

(19) "Chemigation" means the method of applying agricultural chemicals and fertilizer through an irrigation system.

(20) [(18)] "Clay" means a fine-grained, inorganic material having plastic properties and with a predominant grain size of less than **0.002** [0.005] mm.

(21) [(19)] "Commission" means the **Oregon** Water Resources Commission.

(22) [(20)] "Committee" means the **Oregon** Ground Water Advisory Committee created by ORS 536.090.

(23) [(21)] "Community Well" means a water supply well, whether publicly or privately owned, which serves or is intended to serve more than three connections for residences or other connections for the purpose of supplying water for drinking, culinary, or household uses.

(24) [(22)] "Confined Animal Feeding or Holding Area" means the concentrated confined feeding or holding of animals or poultry, including but not limited to horse, cattle, sheep, swine [feeding], **and** dairy confinement areas, slaughterhouse or shipping terminal holding pens where the animal waste is allowed to build up on the ground [and where the concentration of animals has destroyed the vegetative cover]. **Pastures and [A] areas adjacent to buildings** where animals and animal waste is confined **by a physical barrier such as concrete [in buildings]** are exempt.

(25) [(23)] "Confining Formation" means the "impermeable" stratum immediately overlying an artesian (confined) aquifer (see Figure **200-2** [21]).

(26) [(24)] "Consolidated Formation" means materials that have become firm through natural rock-forming processes. It includes, but is not limited to, such materials as basalt, sandstone, shale, hard claystone, and granite.

(27) [(25)] "Contamination" means an impairment of water quality by chemicals, radionuclides, biologic organisms or other extraneous matter whether or not it affects the potential or intended beneficial use of water.

(28) [(26)] "Converting" a well means changing the use of an existing well or hole not previously used to either withdraw or monitor water such that the well or hole can be used to either withdraw or monitor water.

[(26)] **(29)** "Department" means the **Oregon** Water Resources Department.

[(27)] **(30)** "Director" means the Director of the Department or the Director's authorized representatives.

[(28)] **(31)** "Domestic Well" means a water supply well used to serve no more than three residences for the purpose of supplying water for drinking, culinary, or household uses, and which is not used as a public water supply.

[(29)] **(32)** "Drawdown" means the difference in vertical distance between the pumping level and the static water level in a well.

[(30)] **(33)** "Drive Point Well" means a well constructed by driving into the ground a well-point fitted to the end of a pipe section or series of pipe sections.

[(31)] **(34)** "Dug Well" means a well in which the excavation is made by the use of [picks, shovels, spades or] digging equipment such as backhoes, clam shell buckets, or sand buckets. **(See Hand dug well)**

(35) "Excavation" means a free-standing cavity with greater width than depth

constructed in the earth's surface which has a primary purpose other than seeking water or water quality monitoring.

[(32)] **(36)** "Figure", when used herein, refers to an illustration and is made a part of the primary article and section by reference.

[(33)] **(37)** "Filter Pack Well" means a well in which the area immediately surrounding the well screen or perforated pipe within the water-producing zone is filled with graded [~~coarser~~] **granular** material.

[(34)] **(38)** "Geologic Formation" means an igneous, sedimentary, or metamorphic material that is relatively homogeneous and is sufficiently recognized as to be distinguished from the adjacent material. The term is synonymous with "formation."

[(35)] **(39)** "Geologist" means an individual registered by the State **of Oregon** to practice geology.

[(36)] **(40)** "Geotechnical hole" means a [~~cased or uncased~~] hole constructed to collect or evaluate subsurface data or information, **monitor movement of landslide features, or to stabilize or dewater landslide features.** Geotechnical holes are not monitoring wells as defined [in (54)] below. Various classes and examples of geotechnical holes are listed in 690-240-035**(6) - (9)** [(5)-(8)].

[(37)] **(41)** "Grout" means [~~either~~] approved cement, **concrete**, or bentonite sealing material used to fill an annular space of a well **or to abandon a well.**

[(38)] **(42)** "Grout Pipe" means a pipe which is used to place grout at the bottom of the sealing interval of a well.

(43) [(40)] "Hand dug well" means a well in which the borehole [excavation] is only made by the use of picks, shovels, spades, or other similar hand operated implements. (See Dug Well)

(44) [(39)] "Hazardous Waste" means a substance as defined by ORS 466.005.

(45) [(40)] "Hazardous Waste Disposal Site" means a geographical site in which or upon which hazardous waste is disposed.

(46) [(41)] "Hazardous Waste Storage Site" means the geographical site upon which hazardous waste is stored.

(47) [(42)] "Hazardous Waste Treatment Site" means the geographical site upon which or a facility in which hazardous waste is treated.

(48) [(43)] "Health Hazard" means a condition where there are sufficient concentrations of biological, chemical, or physical, including radiological, contaminants in the water that are likely to cause human illness, disorders, or disability. These include but are not limited to, naturally occurring substances, pathogenic viruses, bacteria, parasites, toxic chemicals, and radioactive isotopes. Sufficient concentrations of a contaminant include but are not limited to contaminant levels set by the **Oregon** Department of Environmental Quality and Oregon Health Division.

(49) [(44)] "Health Threat" means a condition where there is an impending health hazard. The threat may be posed by, but not limited to: a conduit for contamination, or a well affecting migration of a contaminant plume, or the use of contaminated water. A well in which the [~~well~~] construction is not verified by a water **supply** well report or geophysical techniques may be considered a conduit for contamination in certain circumstances. Those circumstances include, but are not limited to: an unused and neglected well[, a well that is permanently out of service,] or a well for which no surface

seal was required. A well in which the casing seal, sanitary seal, or watertight cap has failed, or was inadequately installed may be considered a conduit for contamination.

(50)[(45)] "Horizontal Well" means a well that intentionally deviates more than 20 degrees from true vertical **at any point**.

(51) [(46)] "Hydrofracturing" means the use of high pressure liquid, sand, packers or other material to open or widen fractures in consolidated formations for the purpose of increasing well yield.

(52) [(49)] **"Hydrologic Cycle" is the general pattern of water movement by evaporation from sea to atmosphere, by precipitation onto land, and by return to sea under influence of gravity.**

(53) [(47)] "Impermeable Sealing Material" means ~~neat~~ cement, concrete, or bentonite which is used to fill the open annulus between the lower and upper sealing intervals.

(54) [(48)] "Inspection Port" means an orifice or other viewing device from which the low-pressure drain and check valve may be observed.

(55) [(49)] "Jetted Well" means a well in which the drillhole excavation is made by the use of a high velocity jet of water.

(56) [(50)] "Leakage" means movement of surface and/ or subsurface water around the well casing or seal.

(57) [(51)] "Liner Pipe" means the inner tubing, pipe, or conduit installed inside the well casing or lower well bore. **The liner pipe is** ~~and~~ used to protect against caving formations and is not permanently affixed to the drillhole wall or casing.

(58) [(52)] "Lower Drillhole" means that part of the well bore extending below the surface seal interval in a well.

(59) [(53)] "Mineralized Water" means any naturally occurring ground water containing an amount of dissolved chemical constituents limiting the beneficial uses to which the water may be applied.

(60) [(54)] "Monitoring Well" means **a well designed and constructed to** ~~[any cased excavation or cased opening in the ground for determining]~~ **determine** the physical (including water level), chemical, biological, or radiological properties of ground water. ~~[Monitoring wells are regulated under OAR 690-240:]~~

(61) [(55)] "Municipal or Quasi-Municipal Well" means a water supply well owned by a municipality or nonprofit corporation that may be used as a community or public water supply.

(62) [(56)] "Order" means any action satisfying the definition given in ORS Chapter 183 or any other action so designated in ORS 537.505 to 537.795.

(63) [(57)] "Other Hole" means a hole other than a water supply well, a monitoring well, or geotechnical hole, however constructed, in naturally occurring or artificially emplaced earth materials, through which ground water can **become** contaminated. Holes constructed under ORS Chapters 517, 520, and 522 are not subject to these rules. Other holes are regulated under OAR 690-240. Examples of other holes are listed in 690-240-0030.

(64) [(58)] "Perched Ground Water" means ground water held above the regional or main water table by a less permeable underlying earth or rock material (see Figure **200-2** [21]).

(65) [(59)] "Permeability" means the ability of material to transmit fluid, usually described in units of gallons per day per square foot of cross-section area. It is related to the effectiveness with

which pore spaces transmit fluids.

(66)~~[(60)]~~ "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof, and the Federal Government and any agencies thereof.

(67) ~~[(61)]~~ "Petcock Valve" is a valve used to contain pressure **which** ~~[and]~~ when opened **will** ~~[to]~~ drain the line or pipe.

(68) "**Piezometer**" means a type of monitoring well designed solely to obtain ground water levels. **Piezometers are prohibited in areas of known or reasonably suspected contamination. This term is synonymous with "observation well."**(See OAR 690-240)

(69) ~~[(62)]~~ "Pitless Adaptor" means a commercially manufactured unit or device designed for attachment to one or more openings through a well casing, which will permit water service pipes to pass through the wall of a well casing or extension thereof and prevent entrance of contaminants into the well or **ground water** ~~[water supply]~~.

(70)~~[(63)]~~ "Pitless Unit" means a commercially manufactured unit extending the upper terminal of the well casing to above land surface, constructed and installed so as to prevent the entrance of contaminants into the well and to protect the ground water supply, conduct water from the well, and provide full access to the well and water system parts therein.

(71) ~~[(64)]~~ "Porosity" means the ratio of the volume of voids in the geologic formation being drilled to the overall volume of the material without regard to size, shape, interconnection, or arrangement of openings.

(72) ~~[(65)]~~ "Potable Water" means water which is sufficiently free from biological, chemical, physical, or radiological impurities so that users thereof will not be exposed to or threatened with exposure to disease or harmful physiological effects, ~~[and which has no taste or odor properties that would make it unpalatable to humans for drinking purposes.]~~

(73)~~[(66)]~~ "Potentiometric Surface" means the level to which water will rise in tightly cased **artesian** wells (see Figure **200-2** ~~[21]~~).

(74) ~~[(67)]~~ "Pressure Grouting" means a process by which ~~[a]~~ grout is confined within the drillhole or casing by the use of retaining plugs or packers and by which sufficient pressure is applied to drive the grout slurry into the annular space or zone to be grouted.

(75)~~[(68)]~~ "Professional" means any person licensed or registered by the State of Oregon to construct monitoring wells, water supply wells, or practice geology or civil engineering.

(76)~~[(69)]~~ "Public-at-Large" means a person not actively engaged in the well industry.

(77)~~[(70)]~~ "Public Water System" means a system for the provision to the public of piped water for human consumption, if such a system has more than three service connections or supplies water to a public or commercial establishment which operates a total of **at least** 60 days per year, and which is used by ten or more individuals per day or is a facility licensed by the Oregon Health Division.

(78) ~~[(71)]~~ "Public Well" means a water supply well, whether publicly or privately owned, other than a municipal well, where water is provided for or is available through the single user for public consumption. **This includes** ~~[including]~~, but **is** not limited to, a school, a farm labor camp, an industrial establishment, a recreational facility, a restaurant, a motel, or a group care home.

(79) ~~[(72)]~~ "Pumping Level" means the level of the water surface in a well while it is being pumped or bailed.

(80)~~(73)~~ "Pump Test" means the procedure involving pumping water for a specified period of time to determine the yield characteristics of an aquifer.

(81) ~~(74)~~ "Refusal to Renew" means a provision in an order, or as allowed by ORS 537.747, that prohibits renewal of a well constructor's license, for a specified term not to exceed one year from the expiration date of the current license.

(82)~~(75)~~ "Remediation Well" means a well used for extracting **contaminates and/or contaminated ground water from an aquifer.** [contaminants:] This term is synonymous with "extraction well" **and "recovery well."**

(83) ~~(76)~~ "Respondent" means the person against whom an enforcement action is taken.

(84) ~~(77)~~ "Responsible Party" means the person or agency that is in charge of construction **or maintenance** and is either in violation as specified in a notice of violation or who may benefit from that violation.

(85) ~~(78)~~ "Rough Drilling Log" means a record kept on the well site of the information needed to complete the well report for the well being constructed.

(86) ~~(79)~~ "Revoke" means termination of a well constructor's license.

(87) ~~(80)~~ "Sand" means a material having a prevalent grain size ranging from 2 millimeters to 0.06 millimeters.

(88) ~~(85)~~ **"Sanitary Seal" means a tight fitting properly sized threaded, welded, or gasketed cap placed on the top of the permanent well casing to prevent entry of water and foreign material.**

(89) ~~(86)~~ **"Scalant": See Grout**

(90)~~(81)~~ "Silt" means an unconsolidated sediment composed predominantly of particles between 0.06 **mm** and 0.005 mm in diameter.

(91) ~~(82)~~ "Static Water Level" means the stabilized level or elevation of water surface in a well not being pumped.

(92) ~~(83)~~ "Stratum" means a bed or layer of a formation that consists throughout of approximately the same type of consolidated or unconsolidated material.

(93) ~~(84)~~ "Sump" means a hole dug to a depth of ten feet or less with a diameter greater than ten feet in which **ground** water is sought or encountered.

(94) ~~(85)~~ "Suspension" means the temporary removal of the privilege to construct wells under an existing license for a period of time not to exceed one year.

(95)~~(86)~~ "System Interlock" means an interlocking mechanism used to link irrigation pumps and chemical injection units, other pumps, or supply tanks so designed that in the event of irrigation pump malfunction or failure, shutdown of the chemical injection units will occur. (Back-siphon prevention)

~~(87)~~ "Tremie Pipe": See Grout Pipe:]

(96)~~(88)~~ "Unconsolidated Formation" means naturally occurring, loosely cemented, or poorly indurated materials including clay, sand, silt, and gravel.

(97)**"Underground Injection" means the emplacement or discharge of fluids to the subsurface.**

(98) **"Underground Injection System" means a well, improved sump, sewage drain hole, subsurface fluid distribution system, or other system or ground water point source used for the emplacement or discharge of fluids.**

~~(99)~~~~(89)~~ "Upper **Oversize** Drillhole" means that part of the well bore extending from land surface to the bottom of the surface seal interval.

~~(100)~~ ~~(90)~~ "Violation" means an infraction of any statute, rule, standard, order, license, compliance schedule, or any part thereof and includes both acts and omissions.

~~(91)~~ "Water Level": See ~~Static Water Level.~~

~~(101)~~ ~~(92)~~ "Water Supply Well" means a well, **other than a monitoring well, that is used to beneficially withdraw or beneficially inject ground or surface water. Water supply wells include, but are not limited to, community, dewatering, domestic, irrigation, industrial, municipal, and aquifer storage and recovery wells.** [as defined in OAR 690-200-0050 ~~(96)~~ with the exception of Monitoring Wells as regulated in OAR 690-240. (See Well)]

~~(102)~~ ~~(93)~~ "Water **Supply** Well Constructor" means any person who has a current, effective water **supply** well constructor license issued in accordance with ORS 537.747(3).

~~(103)~~~~(96)~~ "Water Supply Well Drilling Machine" means any power-driven driving, jetting, percussion, rotary, boring, digging, augering machine, or other equipment used in the construction or alteration of water supply wells.

~~(104)~~ ~~(94)~~ "Water Table" means the upper surface of an unconfined water body, the surface of which is at atmospheric pressure and fluctuates seasonally. The water table is defined by the levels at which water stands in wells that penetrate the water body (see Figure **200-2** ~~[21]~~).

~~(105)~~~~(95)~~ "Well" means any artificial opening or artificially altered natural opening, however made, by which ground water is sought or through which ground water flows under natural pressure, or is artificially withdrawn or injected. This definition shall not include a natural spring, or wells drilled for the purpose of exploration or production of oil or gas. Prospecting or exploration for geothermal resources as defined in ORS 522.005 or production of geothermal resources derived from a depth greater than 2,000 feet as defined in ORS 522.055 is regulated by the Department of Geology and Mineral Industries.

Stat. Auth.: ORS 536.027, 536.090 & 537.505 - 537.795

Stats. Implemented: ORS Ch. 536.090 & 537.505-537.795

APPENDIX 1

Additional Requirements by Other State Agencies of Oregon

In the administration of ORS 537.505 to 537.795, the Director of the Water Resources Department has statutory authority under the provisions of ORS 537.780 "to prescribe and enforce general standards for the construction and maintenance of wells and their casings, fittings, valves, and pumps ..." Other agencies of the state have statutory responsibilities that relate either directly or indirectly to the construction and operation of public water supply systems and their source of water supply. These agencies and their responsibilities are listed as follows:

OREGON HEALTH DIVISION 800 NE Oregon Street Portland, OR 97232 (serving more than three single residents) www.ohd.hr.state.or.us	ORS Chapter 448	Municipal Water Supply Systems Public Water Supply Systems Community Water Supply Systems <u>Source Water Protection</u>
BUILDING CODES AGENCY 1535 Edgewater NW Salem, OR 97304-4635 www.cbs.state.or.us/external/bcd	ORS Chapter 446	Electrical and Plumbing for all Commercial Enterprises Mobile Home Park Water Supply Systems.
OREGON PUBLIC UTILITY COMMISSIONER 550 Capitol St NE Salem, OR 97301-2551 www.puc.state.or.us	ORS Chapter 757	Private Owners (water supply systems, 200 homes or more)
DEPARTMENT OF ENVIRONMENTAL QUALITY 811 SW 6 th Portland, OR 97204-1390 www.deq.state.or.us	ORS Chapter 468	Water Quality Monitoring <u>Underground Injection Systems</u> <u>Source Water Protection</u>
SECRETARY OF STATE CORPORATION DIVISION Business Services Division Public Service Bldg., Suite 180 Salem, OR 97310 www.sos.state.or.us		Business Registry for Water Districts

APPENDIX 1- CONTINUED

All wells constructed in Oregon, including those to serve as a source of ground water to municipal, community, public, or public utility water supply systems, must be constructed in accordance with the rules and regulations prescribing general standards for the construction and maintenance of wells in Oregon (OAR 690 Divisions 205, 210, 215, 220 and 240). Additional construction standards for water supply systems **may be** ~~[are]~~ required by the above listed agencies. Such rules and regulations generally include the source of water supply to the systems and may affect well construction requirements. Copies of the various agency rules may be obtained by contacting the responsible agency. Well constructors planning to construct a well as a source of water supply for any of the above systems are **advised** ~~[requested]~~ to contact the responsible agency prior to the beginning of well construction.

**TABLE 200-2 [VI]
(OAR 690-200)**

Watermaster Office Phone Numbers

District	Watermaster Office	Phone Number
01	<u>Tillamook</u> [St. Helens]	(503) 842-2413
02	<u>Springfield</u> [Eugene]	(541) 746-1856 -687-3620
03	The Dalles	(541) 298-4110
04	Canyon City	(541) 575-0119
05	Pendleton	(541) 278-5456
06	La Grande	(541) 963-1031
08	Baker City	(541) 523-8224
09	Vale	(541) 473-5130
10	Burns	(541) 573-2591
11	Bend	(541) 388-6669
12	Lakeview	(541) 947-6038
13	<u>Medford</u>	(541) 776-7056
14	Grants Pass	(541) 471-2886
15	Roseburg	(541) 440-4255
16	Salem	(503) 378-8455
17	Klamath Falls	(541) 883-4182
18	Hillsboro	(503) 846 [693]-4881
19	Coquille	(541) 396-3121
20	<u>Oregon City</u>	(503) [657-681]722-1410
21	<u>Condon</u>	(541) 384-4207

Notes:

1. Watermaster phone numbers are subject to change.
2. A current version of this table is available from the Water Resources Department's Salem office.