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Water Resources Department — 690
Agency and Division — Administrative Rules Chapter Number

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To become effective Upon filing. Rulemaking Notice was published in the April 2015 Oregon Bulletin.

JUL 2015
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RULE CAPTION

Well Construction Rules Regarding Special Area Standards, Definitions, Rule Clarifications, Setbacks, Dug Wells and Pe[illegible]ters

Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.

RULEMAKING ACTION

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

ADOPT:
690-200-0028

AMEND:
690-200-0020, 690-200-0028, 690-200-0050, 690-205-0185, 690-210-0030, 690-210-0130, 690-210-0140, 690-210-0150, 690-210-0155, 690-210-0190, 690-210-0220, 690-210-0230, 690-210-0270, 690-210-0320, 690-210-0380, 690-210-0400, 690-210-0410, 690-210-0420, 690-215-0200, 690-220-0115, 690-240-0005, 690-240-0355, 690-240-0475, 690-240-0525

REPEAL:
690-215-0015

RENUMBER:

AMEND AND RENUMBER:

Statutory Authority:
ORS 183, ORS 536, ORS 537, ORS 540

Other Authority:

Statutes Implemented:
ORS 183, ORS 536, ORS 537, ORS 540

RULE SUMMARY

This rulemaking includes a number of changes regarding well construction. The changes include the following:

- Establishing special area standards for the Mosier area of Wasco County. The Mosier area has declining water levels due, in part, to improper well construction. These proposed rules address the construction of new wells in the Mosier area by requiring the licensed well constructor responsible to consult with the Water Resources Department prior to the permanent installation of casing and seal material. In addition, the rules require an additional notice period prior to the start of construction activities to allow the Department time to research information regarding the location of the proposed well and to have discussions about the proposed construction methods. Also, the proposed rules require the installation of a dedicated measuring tube at the time of pump installation, repair or replacement so that the water level in the well can be determined at any time.
- Clarifying responsibilities regarding certain well and geotechnical hole construction, maintenance, alteration, conversion and abandonment activities.
- Clarifying the classification of injection wells installed for remediation purposes.
- Modifying the definition of silt so the definition in Division 200 matches the definition in Division 240.
- Correcting old and incorrect rule and table references and removing dates in rule that have expired.
- Clarifying the construction standards for dug wells.

OREGON ADMINISTRATIVE RULES
WATER RESOURCES DEPARTMENT
CHAPTER 690
DIVISION 240
WELL CONSTRUCTION STANDARDS

Construction, Maintenance, Alteration, Conversion and Abandonment of Monitoring Wells, Geotechnical Holes and Other Holes in Oregon

690-240-0005
Introduction

(1) Monitoring wells and geotechnical holes drilled to allow ground water and geologic determinations are constructed in a variety of environments and under a variety of conditions. Improper construction, maintenance, operation, and abandonment can allow deterioration of ground water quality and supply. Although enforcement actions may be exercised against other parties, the landowner of the property where the monitoring well or geotechnical hole is constructed is ultimately responsible for the condition, use, maintenance, conversion, and abandonment of the monitoring well, or geotechnical hole.

(2) Holes other than monitoring wells, water supply wells, or geotechnical holes which are drilled, excavated, or otherwise constructed in the earth's surface can also provide an avenue for deterioration of ground water quality. Improper construction, maintenance, use, and abandonment of other holes can pose a significant risk to ground water. **Table 240-1** lists common subsurface borings and indicates which administrative rule governs the construction, conversion, maintenance, alteration, and abandonment of the boring.

(3) Ground water problems are difficult, expensive, and time consuming to correct. The Water Resources Commission (Commission) has been authorized to develop standards for wells drilled for the purpose of monitoring ground water in order to protect the state's ground waters. The Commission has also been authorized to develop standards for other holes through which ground water may become contaminated. The rules set forth herein are adopted to provide that protection. Their purpose is to prevent and eliminate ground water contamination, waste, and loss of artesian pressure.

(4) The Commission may develop additional rules as needed prescribing standards for the construction, operation, maintenance, and abandonment of other specific types of wells and holes to protect ground water.

(5) 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

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Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

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) 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. 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, abandonment, conversion, and maintenance of monitoring wells in Oregon.

(7) Monitoring wells are wells as defined in ORS 537.515(9). A license and licensing fee, bond, examination, well report, and start card are required for construction, conversion, alteration, or abandonment of a monitoring well. In addition, a start card fee is required for new construction, deepening a well, and conversion.

(8) To protect the ground water resource, the Commission has the authority to regulate geotechnical holes under ORS 537.780(1)(c)(A). Construction of geotechnical holes requires either a Water Supply Well Constructor or Monitoring Well Constructor's License or Oregon registration as a geologist or civil engineer. If any one of the criteria in OAR 690-240-0035(2)(a)-(d) is met, a geotechnical hole report must be submitted.

(9) To protect the ground water resource, the Commission has the authority, under ORS 537.780(1)(c)(A), to regulate any hole through which ground water may be contaminated. Construction of holes other than water supply wells and monitoring wells does not require a license and licensing fee, bond, examination, well report, start card, and start card fee.

(10) Holes constructed under ORS chapters 517, 520, and 522, and rules promulgated from those statutes, are the responsibility of the Oregon Department of Geology 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.

(11) The rules and regulations set forth herein shall become effective upon adoption by the Water Resources Commission.

(12) Under no circumstances shall a monitoring well, piezometer, geotechnical hole, or other hole 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.)

(13) The rules and regulations set forth herein provide the minimum standards for the construction, conversion, alteration, maintenance, and abandonment of monitoring wells, geotechnical holes, and other holes. After the effective date of adoption of these rules and regulations, no monitoring well, geotechnical hole, or other hole 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 240, 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.
[ED. NOTE: Tables referenced are available from the agency.]

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Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 4-2004, f. & cert. ef. 6-15-04; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0006
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 Monitor Well or Geotechnical Hole 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 monitoring well or geotechnical hole. 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 monitoring well or geotechnical hole 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 reasons(s) that conformance to the rules and regulations for monitoring wells or geotechnical holes cannot be met;

(g) A diagram and written description showing the proposed monitoring well or geotechnical hole's design, construction, or abandonment;

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

(i) The start card number.

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

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Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; Renumbered from 690-240-0140 by WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0007
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 monitoring wells, geotechnical holes, or other holes 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 monitoring wells, geotechnical holes and other holes. Stat. Auth.: ORS 537.780

Stats. Implemented:
Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0010
Definitions

The following definitions apply to terms as used in monitoring well, geotechnical hole and other hole rules, OAR 690-240-0005 to 690-240-0640. No other definitions of these same words apply:

(1) "Abandonment, Permanent" means to remove all or any portion of a monitoring well from service by 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. 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) "Altering a Well" means the deepening, re-casing, perforating, re-perforating, installation of packers or seals, and other material changes in the design or construction of a well. Material changes include but are not limited to the installation or modification of well casing including casing extensions, or installation or modification of liner pipe, or under reaming of the borehole.

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

(5) "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. (Figure 240-1)

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(6) "Area of Known or Reasonably Suspected Contamination" means a site that is currently under investigation by the Oregon Department of Environmental Quality, U.S. Environmental Protection Agency, or other state or federal agency for the presence of contaminants, or a site where a prudent person would suspect contamination after conducting an appropriate inquiry consistent with good commercial or customary practice as to the nature of the property.

(7) "Artesian Aquifer" means a 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. (Figure 240-1).

(8) "Artesian Monitoring Well" means a monitoring 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 monitoring well.

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

(10) "Casing" means the outer tubing, pipe, or conduit, welded or thread 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.

(11) "Casing Seal" means the water tight seal established in the well bore between the well casing and the drillhole wall, above the filter pack seal, 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.

(12) "Civil Engineer" means an individual registered by the State of Oregon to practice civil engineering.

(13) "Clay" means a fine-grained, inorganic material having plastic properties and with a predominant grain size of less than 0.002 mm.

(14) "Closed Loop Ground Source Heat Pump Boring" means a geotechnical hole, cased or uncased, constructed for the purpose of installing a closed loop heat exchange system for a ground source heat pump.

(15) "Commission" means the Oregon Water Resources Commission.

(16) "Committee" means the Oregon Ground Water Advisory Committee created by ORS 536.090.

(17) "Confining Formation" means the "impermeable" stratum immediately overlying an artesian (confined) aquifer. (Figure 240-1)

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

(19) "Contamination" means any chemical, ion, radionuclide, synthetic organic compound, microorganism, waste or other substance that does not occur naturally in ground water or that occurs naturally but at a lower concentration.

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(20) "Continuing Education" means that education required as a condition of licensure under ORS 537.747, to maintain the skills necessary for the protection of ground water, the health and general welfare of the citizens of Oregon and the competent practice of the construction, alteration, abandonment, conversion, and maintenance of water supply wells, monitoring wells, and geotechnical holes.

(21) "Continuing Education Committee" means the Well Constructor Continuing Education Committee authorized under Chapter 496, Oregon Laws 2001 (ORS 537.765).

(22) "Continuing Education Course" means a formal offering of instruction or information to licensees that provides continuing education credits.

(23) "Continuing Education Credit" (CEC) means a minimum of 50 minutes of instruction or information approved by the Continuing Education Committee.

(24) "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.

(25) "Deepening a well" means extending the well bore of an existing well through previously undisturbed native material. Deepening is a type of alteration.

(26) "Department" means the Oregon Water Resources Department.

(27) "Director" means the Director of the Department or the Director's authorized representatives.

(28) "Documentation of Completion" means written evidence or documentation demonstrating attendance and completion of a continuing education course, including but not limited to: a certificate of completion, diploma, transcript, certified class roster, or other documentation as approved by the Continuing Education Committee.

(29) "Dug Well" means a well in which the excavation is made by the use of digging equipment such as backhoes, clam shell buckets, or sand buckets. (See Hand dug well)

(30) "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.

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

(32) "Filter Pack" means the granular material placed in the annular space between the well screen and the borehole.

(33) "Filter Pack Seal" means the fine grained sand or dry bentonite which is placed in the annulus above the filter pack and prevents grout infiltration into the filter pack.

(34) "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) "Geologist" means an individual registered by the State of Oregon to practice geology.

(36) "Geotechnical hole" means a hole constructed to collect or evaluate subsurface data or information, monitor movement of landslide features, or to stabilize or

dewater landslide features. . "Geotechnical hole" includes closed loop ground source heat pump borings. Geotechnical holes are not monitoring wells or water supply wells as defined below. Various classes and examples of geotechnical holes are listed in OAR 690-240-0035(6)–(9).

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

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

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

(40) "Hazardous Materials Training" means training as defined by OAR 437-002-0100 Adoption by Reference Subdivision H Hazardous Materials 1910.120 Hazardous Waste Operations and Emergency Response.

(41) "Hazardous Waste" means a substance as defined by ORS 466.005.

(42) "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.

(43) "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 construction is not verified by a monitoring 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 or a well for which no surface seal was required. A well in which the casing seal, filter pack seal, or watertight cap has failed, or was inadequately installed may be considered a conduit for contamination.

(44) "Horizontal Well" means a well that intentionally deviates more than 20 degrees from true vertical at any point.

(45) "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.

(46) "Impermeable Sealing Material" means cement or bentonite which is used to fill the open annulus.

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

(48) "Leakage" means movement of surface and/ or subsurface water around the well casing or seal.

(49) "Monitoring Well" means a well designed and constructed to determine the physical (including water level), chemical, biological, or radiological properties of ground water.

(50) "Monitoring Well Constructor" means any person who has a current water well constructor's license with a monitoring well endorsement issued in accordance with ORS 537.747(3).

(51) "Monitoring Well Constructor's License" means a Water Well Constructor's License with a monitoring well endorsement issued in accordance with ORS 537.747(3).

(52) "Monitoring Well Drilling Machine" means any driving, jetting, percussion, rotary, boring, auguring, or other equipment used in the construction, alteration, or abandonment of monitoring wells.

(53) "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.

(54) "Other Hole" means a hole other than a water supply well, 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. Examples of other holes are listed in OAR 690-240-0030.

(55) "Perched Ground Water" means ground water held above the regional or main water table by a less permeable underlying earth or rock material. (Figure 240-1)

(56) "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.

(57) "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.

(58) "Petcock Valve" is a valve used to contain pressure which when opened will drain the line or pipe.

(59) "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.

(60) "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.

(61) "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.

(62) "Potentiometric Surface" means the level to which water will rise in tightly cased wells. (Figure 240-1).

(63) "Pressure Grouting" means a process by which 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.

(64) "Professional" means a person licensed or registered by the State of Oregon to construct monitoring wells, water supply wells, or practice geology or civil engineering. All licenses and registrations must be valid at the time of monitoring well, water supply well or geotechnical hole construction, alteration or abandonment as required by these rules.

(65) "Public-at-Large" means a person not actively engaged in the well industry.

(66) "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.

(67) "Remediation Well" means a well used for extracting contaminated ground water from an aquifer. This term is synonymous with "extraction well" and "recovery well".

(68) "Respondent" means the person against whom an enforcement action is taken.

(69) "Responsible Party" means the person or agency that is in charge of construction or maintenance, or the landowner of record and is either in violation as specified in a notice of violation or who may benefit from that violation.

(70) "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.

(71) "Revoke" means termination of a well constructor's license.

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

(73) "Silt" means an unconsolidated sediment composed predominantly of particles between 0.06 mm and 0.002 mm in diameter.

(74) "Slope Stability Geotechnical Hole" means a geotechnical hole excavated, drilled or bored for studying and/or monitoring movement of landslide features, including water levels, or other mass-wasting features to detect zones of movement and establish whether movement is constant, accelerating, or responding to remedial measures. Hole(s) excavated, drilled or bored for the purpose of slope remediation or stabilization shall be considered a slope stability geotechnical hole. Slope stability geotechnical holes are not monitoring wells, piezometers, or water supply wells.

(75) "Sponsor" means an institution, professional organization, individual, or business that offers continuing education courses to licensees. This term is synonymous with provider.

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

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

(78) "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.

(79) "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.

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

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

(82) "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.

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

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

(85) "Water Supply Well" means a well, other than a monitoring well, that is used to beneficially withdraw or beneficially inject ground water. Water supply wells include, but are not limited to, community, dewatering, domestic, irrigation, industrial, municipal, and aquifer storage and recovery wells.

(86) "Water Supply Well Constructor" means any person who has a current water well constructor's license with a water supply well endorsement issued in accordance with ORS 537.747(3).

(87) "Water Supply Well Constructor's License" means a Water Well Constructor's License with a water supply well endorsement issued in accordance with ORS 537.747(3).

(88) "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 240-1)

(89) "Water Well Constructor's License" means a license to construct, alter, deepen, abandon or convert wells issued in accordance with ORS 537.747(3). Endorsements are issued to the license and are specific to the type of well a constructor is qualified to construct, alter, deepen, abandon or convert.

(90) "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.

[ED. NOTE: Figures referenced are available from the agency.]

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-

1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03; WRD 4-2004, f. & cert. ef. 6-15-04; WRD 2-2006, f. & cert. ef. 6-20-06; WRD 3-2008, f. 12-22-08, cert. ef. 1-2-09; WRD 1-2012, f. & cert. ef. 2-2-2012

690-240-0011
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 well. This includes, but is not limited to, brans, hulls, grains, starches, and proteins.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0012
Public Safety

No monitoring well, geotechnical hole, or other hole 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 737.780
Stats. Implemented:
Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0013
Wells Cannot Be Used for Disposal of Contaminants

No monitoring well, geotechnical hole, or other hole shall be used as a disposal pit for sewage, industrial waste, or other materials that could contaminate the ground water supply.

Stat. Auth.: ORS 537.780
Stats. Implemented.:
Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0014
Water Used Must be Potable

All water used in the construction, alteration, repair or abandonment of monitoring wells and geotechnical holes shall be potable.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0015
Delegation of Responsibility for Monitoring Wells, Geotechnical Holes and Other Holes

(1) The Director may, by memorandum of understanding, delegate to another state agency direct control and management of monitoring wells, geotechnical holes and other holes when the other state agency implements these standards, as a minimum, for the construction, operation, maintenance, and abandonment of monitoring wells, geotechnical holes and other holes.

(2) Such delegation shall be revoked at such time as the agency intentionally or repeatedly fails to enforce the standards.

(3) The Water Resources Department shall provide notice to all Oregon licensed Monitoring and Water Supply Well Constructors and professional geologists and civil engineers registered in Oregon whenever authority is delegated to or revoked from another state agency.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0016
Unattended Wells

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

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0020
Delegation Conditions

In order for the Director to delegate responsibility for monitoring wells, geotechnical holes and other holes to another agency, construction, operation or use, maintenance, and abandonment standards developed by that agency pursuant to OAR 690-240-0015 shall include, but not be limited to, provisions to address the following factors:

(1) Reporting well or hole location.

(2) Reporting intended use of the well or hole.

(3) Reporting well or hole design or construction.

(4) Assigning responsibility for compliance.

(5) Protecting ground water through minimum standards for the construction, operation or use, maintenance, and abandonment of the monitoring well, geotechnical hole or other hole that provide ground water protection equivalent to that provided by OAR 690-240-0005 to 690-240-0540.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03

690-240-0024
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 240-1**. 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.

[ED. NOTE: Appendix referenced are available from the agency.]

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0026
Well Identification Label Maintenance

The well identification label shall not be removed from the wellhead and shall be maintained by the land owner in an accessible location and in a readable condition. See **Appendix 240-1** for well identification label placement instructions.
[ED. NOTE: Appendix referenced are available from the agency.]

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0030
Other Holes: General Performance and Responsibility Requirements

(1)(a) Other holes are constructed for a variety of purposes which may or may not encounter ground water. Other holes are constructed using a wide variety of equipment and are not typically designed to access water in order to collect subsurface information. Other holes include but are not limited to: temporary (abandoned within 72 hours) wetland delineation holes, gravel pits, pits for removal of underground storage tanks (UST), pilings, tunnels, post holes, excavation and construction holes, elevator shafts, and trenches.

(b) Although enforcement actions may be exercised against other parties, the landowner of the property where the other hole is constructed is ultimately responsible for the condition and use of the other hole.

(2)(a) In order to protect ground water, all other holes shall be constructed, operated or used, maintained, and abandoned in such a manner as to prevent contamination or waste of ground water;

(b) In order to protect ground water, all other holes, when abandoned, shall be abandoned in such a manner that water cannot move vertically in them with any greater facility than in the undisturbed condition prior to construction of the other hole;

(c) Conversion of other holes to a water supply well, monitoring well, or geotechnical hole shall be considered by the Water Resources Department on a case-by-case basis;

(d) If the other hole is an excavation for removal of an underground storage tank, water samples may be taken without adhering to the licensing, start card/fee, monitoring well report and monitor well conversion requirements.

Stat. Auth.: ORS 537.780
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

690-240-0035

Geotechnical Holes: General Performance and Responsibility Requirements

(1) A geotechnical hole is defined in OAR 690-240-0010(36). Geotechnical holes, cased or uncased, are generally constructed to evaluate subsurface data or information (geologic, hydrogeologic, chemical, or other physical characteristics). Geotechnical holes are divided into the following classifications:

(a) Temporary (abandoned within 72 hours) geotechnical holes;

(b) Cased permanent geotechnical holes;

(c) Uncased permanent geotechnical holes; or

(d) Slope stability geotechnical holes.

(2) A geotechnical hole report shall be signed by a professional and must be submitted to the department if the geotechnical hole is:

(a) Greater than 18 feet deep;

(b) Within 50 feet of a water supply or monitoring well;

(c) Used to make a determination of water quality; or

(d) Constructed in an area of known or reasonably suspected contamination.

(3) Geotechnical holes between ten and eighteen feet in depth that do not meet any of the criteria spelled out in OAR 690-240-0035(2) do not require a geotechnical hole report to be filed with the Department, but shall be required to have a professional as described in OAR 690-240-0035(4)(c) be responsible for the construction and abandonment of the geotechnical hole.

(4)(a) Although enforcement actions may be exercised against other parties, the landowner of the property where the geotechnical hole is constructed is ultimately responsible for the condition, use, maintenance, and abandonment of the geotechnical hole;

(b) Conversion of a geotechnical hole to a water supply or monitoring well shall be considered by the Department on a case by case basis;

(c) When a geotechnical hole report is required, or if it is between 10' and 18' in depth, the professional responsible for the construction, alteration or abandonment of a geotechnical hole shall have one of the following certifications or licenses at the time the professional signs the geotechnical hole report:

(A) A valid Oregon Monitoring Well Constructor's License;

(B) A valid Oregon Water Supply Well Constructor's License;

(C) Valid certification by the State of Oregon as a Registered Geologist; or

(D) Valid certification by the State of Oregon as a Professional Engineer.

(d) The professional shall provide proof of license, certification or registration and photo identification to Department employees upon request.

(e) In order to protect the ground water resource, all geotechnical holes shall be constructed, operated, used, maintained, and abandoned in such a manner as to prevent contamination or waste of ground water, or loss of artesian pressure.

(f) If the geotechnical hole is completed above ground, it shall have a minimum casing height of one foot above finished grade and a lockable cap with lock shall be attached to the top of the casing. If a geotechnical hole, except a slope stability

hole, is completed flush with the land surface, a lockable watertight cap with lock, shall be attached to the top of the casing. A vault or monument designed to be watertight, level with the ground surface, shall be installed to prevent the inflow of surface water. The cover must be designed to withstand the maximum expected loadings.

(5)(a) A 'Geotechnical Hole Report' shall be prepared for each geotechnical hole, including unsuccessful geotechnical holes, constructed, altered, converted, or abandoned if the hole meets any of the requirements of OAR 690-240-0035(2) above.

(b) The 'Geotechnical Hole Report' shall be filed with the Department within 30 days of the completion of the geotechnical hole;

(c) The report shall be prepared in triplicate on forms furnished or previously approved in writing by the Water Resources Department. The original shall be furnished to the Director, the first copy shall be retained by the professional, and the second copy shall be given to the landowner or customer who contracted for the construction of the geotechnical hole;

(d) In the event any drilling equipment or other tools are left in a geotechnical hole the professional shall enter this fact on the Geotechnical Hole Report;

(e) A copy of any special authorizations or special standards issued by the Director shall be attached to the Geotechnical Hole Report. See OAR 690-240-0006 for information concerning special standards;

(f) The report of geotechnical hole construction shall include, as a minimum, the following:

(A) Landowner name and address;

(B) Started/Completed date;

(C) Location of the geotechnical hole by County, Township, Range, Section, tax lot number, if assigned, street address, or nearest address, and either the 1/4, 1/4 section or Latitude and Longitude as established by a global positioning system (GPS);

(D) Use of geotechnical hole;

(E) Type of geotechnical hole;

(F) Depth;

(G) Map showing location of geotechnical hole on site must be attached and shall include an approximate scale and a north arrow;

(H) General hydrologic and geologic information as indicated on the Geotechnical Hole Report; and

(I) Such additional information as required by the Department.

(6) Temporary geotechnical holes:

(a) Temporary geotechnical holes include but are not limited to: drive points, soil and rock borings, temporary sample holes, permeability test holes, and soil vapor holes;

(b) Temporary geotechnical holes shall be abandoned within 72 hours of initial construction;

(c) Any temporary casing that has been installed shall be removed as part of the abandonment.

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

(7) Cased permanent geotechnical holes:

(a) Cased permanent geotechnical holes include but are not limited to: gas migration holes, cathodic protection holes, and vapor extraction holes.

(b) If permanent casing is installed in a geotechnical hole, it shall meet the casing requirements in OAR 690-240-0430, 690-210-0210, or 690-210-0190 and the sealing requirements in 690-240-0475.

(8) Uncased permanent geotechnical holes:

(a) Uncased permanent geotechnical holes include but are not limited to: pneumatic and electrical piezometers;

(b) Temporary casing can be used during the construction of the uncased permanent geotechnical hole but must be removed prior to completion. Surface casing (5 feet maximum) may be installed for placement of logging or recording equipment.

(9) Slope stability geotechnical holes.

(a) Slope stability geotechnical holes include but are not limited to: slope instrumentation holes such as slope inclinometers, and slope remedial holes.

(b) Slope stability geotechnical holes are defined in OAR 690-240-0010(74). Such holes shall be constructed, operated, used, maintained, and abandoned in such a manner as to prevent contamination or waste of ground water.

(c) When a Geotechnical Hole Report is required under OAR 690-240-0035(2) for a slope stability geotechnical hole that is constructed to facilitate water level measurements, an affidavit from an engineer or geologist qualified to perform geotechnical investigations shall be attached to the Geotechnical Hole Report. The affidavit shall have the qualified engineer or geologist's stamp on it and shall certify that the slope stability geotechnical hole is on a landslide or a mass-wasting feature.

(10) Geotechnical Holes abandonment:

(a) Geotechnical holes shall be abandoned so that they do not:

(A) Connect water bearing zones or aquifers;

(B) Allow water to move vertically with any greater facility than in the undisturbed condition prior to construction of the geotechnical hole; or

(C) Allow surface water to enter the hole.

(b) Temporary geotechnical holes constructed to collect a water quality sample shall be abandoned in accordance with OAR 690-240-0510.

Stat. Auth.: ORS 537.780
Stats. Implemented:
Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03; WRD 4-2004, f. & cert. ef. 6-15-04; WRD 2-2006, f. & cert. ef. 6-20-06; WRD 3-2008, f. 12-22-08, cert. ef. 1-2-09; WRD 1-2012, f. & cert. ef. 2-2-2012

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

690-240-0040
Closed Loop Ground Source Heat Pump Boring – General Requirements

(1) In addition to the requirements for cased permanent and uncased permanent geotechnical holes contained in 690-240-0035, a closed loop ground source heat pump boring greater than 18 feet deep shall meet the following requirements:

(a) Prior to installation, the professional responsible for the construction of the ground source heat pump boring is encouraged to notify the Department's regional office.

(b) Ground source heat pump borings shall not be used for any purpose other than heat exchange.

(c) After completion, ground source heat pump borings shall not be converted to a monitoring well or a water supply well without written approval by the Department.

(d) The professional shall ensure that the ground source heat pump boring is constructed in accordance with 690-240-0040 through 690-240-0049.

(2) A minimum setback of 50 feet is required from any potential source of groundwater contamination, including but not limited to, temporarily abandoned water supply wells, water wells, septic tanks, drain fields, fuel oil or other petroleum tanks, cesspools, chemical storage or preparation areas. Municipal sewer and storm water systems are excluded from the 50 feet setback.

(3) All fluids used in the construction of a closed loop ground source heat pump boring and associated ground source heat pump system shall meet International Groundwater Source Heat Pump Association standards in place at the time of construction and shall be handled, utilized, and installed in a manner that does not contaminate the groundwater resource.

Stat. Auth.:
Stats. Implemented:
Hist. WRD 1-2012, f. & cert. ef. 2-2-2012

690-240-0043
Construction Standards

(1) If permanent casing is needed in a ground source heat pump boring, it shall meet the standards set out in OAR 690-210-0190 through 690-210-0220 for steel and plastic.

(2) Site specific conditions shall be assessed to determine the best method and materials to be used for sealing the boring annulus to protect the groundwater resource and that method shall meet the standards set out in OAR 690-210-0300 through 690-210-0360 for sealing wells.

(3) The diameter of the borehole for cased and uncased ground source heat pump borings shall allow placement of the heat exchange loop and grout pipe to the bottom of the boring as follows:

(a) For installation of a ¾ inch loop, the diameter of the borehole shall be a minimum of 4 inches;

(b) For installation of a 1 inch loop, the diameter of the borehole shall be a minimum of 4 ½ inches; and

(c) For installation of a 1 ¼ inch loop, the diameter of the borehole shall be a minimum of 5 inches.

Stat. Auth.:
Stats. Implemented:
Hist. WRD 1-2012, f. & cert. ef. 2-2-2012

690-240-0046
Grouting of Uncased Boring

(1) Grouting of an uncased boring shall be completed after the heat exchange loop is installed. The boring shall be completed in a manner to allow ease in locating including but not limited to the use of marking or locating magnetic tape if maintenance or abandonment is necessary The area near land surface where the ground source heat pump boring will be connected to a manifold or to the closed loop system may be filled with earth materials.

(2) Sealing shall be completed using active solids content bentonite grout slurry (minimum 20% active solids by weight) or high solids fluid mixture of cement. Controlled density fill (CDF), fly ash, drill cuttings or drilling fluids shall not be used in grouting the uncased boring.

(3) Mixes of bentonite or cement slurry shall be installed by pumping through a grout pipe in a continuous operation from the bottom of the boring upward. The grout pipe shall extend the full depth of the borehole before pumping begins. Minimum slurry volume used shall be equal to or exceed the calculated annulus volume in the borehole. Grouting material shall surround all pipes remaining in the borehole.

(4) The quality of the water in the boring shall not interfere with the proper hydration of bentonite.

Stat. Auth.:
Stats. Implemented:
Hist. WRD 1-2012, f. & cert. ef. 2-2-2012

690-240-0049
Reporting Requirements

(1) The professional responsible for construction of the ground source heat pump boring(s) shall prepare a complete and certified boring log for each ground source heat pump boring.

(2) Boring logs shall be prepared in triplicate; an original and two copies. The original shall be submitted to the Department and contain a site map showing the location of each ground source heat pump boring. One copy shall be retained by the professional responsible for construction of the ground source heat pump boring and the second copy

shall be provided to the customer/landowner who contracted for the construction of the ground source heat pump boring.

(3) The Professional shall file the boring log with the Department within 30 days after the completion of the ground source heat pump boring.

(4) The boring log required in section (2) of this rule shall be recorded on a form provided or previously approved in writing by the Department. The form shall include, as a minimum, the following:

(a) Name and Address of Landowner;

(b) Start/Completion date;

(c) Location of the boring by county, Township, Range, Section, tax lot number, if assigned, street address, or nearest address, and either the 1/4, 1/4 section or Latitude and Longitude as established by a global positioning system (GPS);

(d) A description and depth of each change of formation;

(e) Total depth and diameter of the completed closed loop heat pump boring

(f) Depth of the surface seal, if any;

(g) The nominal diameter and depth of the casing, if any;

(h) The type and amount of grout material used;

(i) The type of grout additives used;

(j) The depth the borehole is grouted to; and

(k) Such additional information as required by the Department.

Stat. Auth.:
Stats. Implemented:
Hist. WRD 1-2012, f. & cert. ef. 2-2-2012

690-240-0055
License Required to Construct Monitoring Wells

(1) Unless otherwise provided in these rules, any person who constructs, alters or abandons monitoring wells for another person shall have a Monitoring Well Constructor's License or work under the supervision of a licensed Monitoring Well Constructor.

(2) If a person advertises services or enters into contracts for the construction, alteration or abandonment of monitoring wells for another person, that person shall furnish a $10,000 Water Well Constructor's Bond or Irrevocable Letter of Credit to the Water Resources Commission and must be a licensed Monitoring Well Constructor.

(3) A property owner who constructs, alters, or abandons a monitoring well on their own property shall have a Landowner Well Permit as described in OAR 690-240-0340 for each monitoring well on which work is done.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03; WRD 4-2004, f. & cert. ef. 6-15-04; WRD 2-2006, f. & cert. ef. 6-20-06

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

690-240-0060
Monitoring Well Constructor License Examination

(1) The Water Resources Department administers the written examination required under ORS 537.747. Separate examinations are administered for each license endorsement. The Department schedules the examination on the second Monday during the months of January, April, July and October. Examinees must pay a $20 exam fee. Special accommodations may be given to those individuals who cannot attend the regularly scheduled examination dates. Requests shall be considered on a case-by-case basis. The examination tests the applicant's knowledge of:

(a) Oregon laws and administrative rules on the use of ground water, monitoring well constructor licensing requirements, the construction of monitoring wells and/or geotechnical holes, and the preparing and filing of Start Cards and Monitoring Well Reports;

(b) Hydrogeology, the occurrence and movement of ground water and contaminants, and the design, construction and development of monitoring wells; and

(c) Types, uses, and maintenance of drilling tools and equipment, drilling problems and corrective procedures, repair of faulty monitoring wells, sealing of monitoring wells, and safety rules and practices.

(2) An applicant who fails to pass an endorsement examination may retake an examination for the same endorsement after three months and the payment of another examination fee.

(3) Passing examination scores are valid for three years from the date of the examination.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0065
Monitoring Well Constructor License, Experience Requirements and Trainee Card

(1) License. To qualify for a Monitoring Well Constructor's License, a person shall:

(a) Be at least 18 years old;

(b) Pass a written examination;

(c) Have a minimum of one year experience, during the previous 36 month period, in monitoring well construction, alteration, or abandonment. This experience shall include the operation of well drilling machinery for monitoring well construction, alteration, conversion, or abandonment on a minimum of fifteen monitoring wells or a demonstration of equivalent experience in the operation of well drilling machinery. The following are acceptable as evidence of experience:

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

(A) Monitoring well reports or rough well logs with applicant's name entered for each of the 15 wells. The name, address and telephone number of the person responsible for the construction of each monitoring well shall be included on each report or log;

(B) Income tax returns showing source of drilling income for a period of time, or worker's compensation account information or the equivalent may be established to satisfy the one year of active construction requirement;

(C) Any other evidence the Director may deem suitable;

(D) A license held in another state shall not substitute for required evidence of experience.

(d) Pay a license fee.

(2) Trainee. If an applicant passes the written Monitoring Well Constructor's License examination, but cannot meet the experience requirement the Commission may issue a trainee card. To qualify for a Monitoring Well Constructor Trainee Card, a person must:

(a) Be at least 18 years old;

(b) Pass a written examination; and

(c) Be supervised by a person who holds a valid Monitoring Well Constructor's License.

(3) Trainee Card. A Trainee Card is valid for three (3) years from the date the examination was passed.

(4) Supervision. Supervision as it relates to any person who holds a Monitoring Well Constructor Trainee Card:

(a) A Trainee may operate a cable tool monitoring well drilling machine without a licensed Monitoring Well Constructor physically present at the well site only if:

(A) The licensed constructor can reach the well site within two hours if so requested by an authorized representative of the Department; and

(B) The licensed constructor has signed the rough drilling log within eight working hours prior to the representative's visit.

(b) A licensed Monitoring Well Constructor must physically be on the site at all times when a cable tool drilling machine is:

(A) Drilling within a flowing artesian well;

(B) Setting or advancing casing;

(C) Setting liner;

(D) Perforating casing;

(E) Setting well screens;

(F) Placing packers;

(G) Drilling into, through, or below ground water suspected or known to be contaminated; and

(H) Placing casing seals.

(c) A Monitoring Well Constructor trainee may operate a non-cable tool

monitoring well drilling machine without a licensed Monitoring Well Constructor physically present at the well site only during removal of the drill stem from the monitoring well.

(d) Activities under subsection (3)(c) of this rule shall proceed only if:

(A) The licensed Monitoring Well Constructor can reach the site within one hour if so requested by an authorized representative of the Department; and

(B) The licensed Monitoring Well Constructor has signed the rough drilling log within eight working hours prior to the representative's visit.

(e) An authorized representative of the Department in whose jurisdiction the monitoring well is being constructed has the authority to:

(A) Grant an extension to the time limits stated above when a request, showing good cause, is received from the bonded constructor in advance for each particular well; and

(B) Place additional restrictions on the trainee, including requiring the constructor to be on the site at all times while the drilling machine is operating, when the Department representative determines that either the drilling environment or the knowledge and/or experience of the trainee warrant closer supervision.

(f) For a Monitoring Well Constructor trainee to operate a monitoring well drilling machine without a licensed Monitoring Well Constructor present, the trainee's card must be endorsed with the name of the bonded Monitoring Well Constructor responsible for the construction of the monitoring well.

(5) Other supervision requirements for persons not licensed or permitted to construct monitoring wells, or who do not hold a Monitoring Well Constructor trainee card:

(a) Persons who are in the act of constructing, altering, converting or abandoning monitoring wells must be supervised by a licensed Monitoring Well Constructor who is physically present at the well site at all times during construction, alteration, conversion, or abandonment activity.

(b) The supervising Monitoring Well Constructor is responsible for all applicable statutes and rules in construction, alteration, conversion, or abandonment of the monitoring well.

(6) Persons who satisfy all requirements of ORS 537.747(3) shall be issued a Monitoring Well Constructor's License. The responsibilities for issuing and securing a Monitoring Well Constructor's License or trainee card are listed in subsections (a) and (b) of this section.

(a) The Monitoring Well Constructor's License applicant is responsible for:

(A) Completing an application or renewal form for a new or renewed license or trainee card;

(B) Submitting the application or renewal form to the Water Resources Department along with the required fees;

(C) Carrying the license or trainee card whenever constructing, altering, converting, or abandoning any monitoring well; and

(D) Providing the Water Resources Department, within 30 days, notification of any change of mailing address.

(E) Providing the Water Resources Department documentation satisfying the continuing education requirements set forth in OAR 690-240-0200 through 690-240-0280.

(b) The Water Resources Department is responsible for:

(A) Designing and providing Monitoring Well Constructor license(s) and trainee cards;

(B) Designing and providing application forms and renewal forms for licenses and application forms for trainee cards;

(C) Processing applications and renewals for licenses and applications for trainee cards; and

(D) Returning incomplete application and renewal forms to applicants for completion.

(E) Sending new and renewed licenses to applicants who have completed the application or renewal form and submitted the required fee. This does not preclude refusal to renew as outlined in OAR 690-240-0070(4).

(7) Bonded Monitoring Well Constructor. For a person to possess a bonded Monitoring Well Constructor's License, the person shall provide to the Department a properly executed Water Well Constructor's Bond or Irrevocable Letter of Credit. The Water Resources Department shall indicate on the constructor's license a bonded classification.

(8) Representatives of the Water Resources Department may ask anyone constructing, altering, or abandoning a monitoring well to present their license or trainee card as proof of eligibility to construct, alter, convert, or abandon monitoring wells in the State of Oregon. Licensed individuals shall display their license or trainee card and photo identification when they are requested to do so by Water Resources Department personnel or other agency personnel to whom monitoring well regulation has been delegated.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0070
Terms of Monitoring Well Constructor License and License Fees

(1) The Department issues all Monitoring Well Constructor licenses. License fees are established by ORS 537.747. A penalty applies to late renewals.

(2) Fees for new licenses and renewal licenses are the same. The fee for a two year license is $150. All licenses expire on June 30 of the second year.

(3) A $100 penalty applies when a licensee renews a license within 12 months of the expiration date. There is no charge for a Trainee Card.

(4) Monitoring Well Constructors who have not made arrangements with the Water Resources Department to pay civil penalties which are assessed against them shall not be issued a license renewal or a new license until after arrangements for payment have been agreed to by the Department. Monitoring Well Constructors who have made arrangements for payment of civil penalties and have failed to meet the terms of the agreement, except in certain cases of bankruptcy, may not have their license renewed or a new license issued until all outstanding civil penalties owed to the Department have been paid.

Stat. Auth.: ORS 537 & 742
Stats. Implemented: ORS 537 & 742
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0090 [Renumbered to 690-240-0375]

690-240-0095 [Renumbered to 690-240-0395]

690-240-0100 [Renumbered to 690-240-0410]

690-240-0118 [Renumbered to 690-240-0440]

690-240-0126 [Renumbered to 690-240-0460]

690-240-0132 [Renumbered to 690-240-0500]

690-240-0135 [Renumbered to 690-240-0510]

690-240-0137 [Renumbered to 690-240-0525]

690-240-0155 [Renumbered to 690-240-0580]

690-240-0175 [Renumbered to 690-240-0630]

690-240-0180 [Renumbered to 690-240-0640]

690-240-0200
Continuing Education Committee

A Continuing Education Program and Continuing Education Committee are established under chapter 496, Oregon Laws 2001 (ORS 537.765). The duties of the Well Constructors Continuing Education Committee are to review and approve continuing education courses and assign continuing education credits.

Stat. Auth.: ORS 537 & ORS 742
Stats. Implemented: ORS 537 & ORS 742
Hist.: WRD 1-2003, f. & cert. ef. 3-14-03

690-240-0210
Continuing Education Requirement

(1) As of June 30, 2005, each individual licensed under ORS 537.747 is required to obtain a minimum of 14 continuing education credits (CECs) during each licensing period regardless of the number of licenses or endorsements held. Continuing education credits may be obtained through clinics, schools, professional organizations, seminars, lectures or other continuing education courses that relate to the practice of well construction and are approved by the Continuing Education Committee.

(2) A minimum of two (2) CECs shall pertain to ground water and well construction statutes under ORS 537.505 to 537.795 and 537.992, and administrative rules under OAR 690-200 through 690-240 during each licensing period.

(3) A maximum of eight (8) CECs may be obtained through approved safety/first aid/CPR/Hazardous Materials courses during each licensing period. Of the eight (8) CECs, a maximum of four (4) CECs may be obtained through Hazardous Materials training courses and a maximum of four (4) CECs may be obtained through safety/first aid/CPR courses.

(4) Exhibitions shall count as one (1) CEC per approved exhibition attended and shall not exceed two (2) CECs per licensing period.

(5) Licensees may count approved CECs accumulated after January 1, 2002, for their first license renewal that requires CECs.

Stat. Auth.: ORS 537 & ORS 742
Stats. Implemented: ORS 537 & ORS 742
Hist.: WRD 1-2003, f. & cert. ef. 3-14-03

690-240-0220
Documentation

(1) Each licensee is responsible for maintaining their continuing education records. Except as provided in OAR 690-240-0270(2), each licensee shall provide the Department with evidence of compliance with the continuing education requirement on a form approved by the Continuing Education Committee prior to or at the time of license renewal.

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

(2) Licensees who do not provide documentation of completion of the continuing education requirement or receive a waiver shall not have their license(s), or appropriate endorsement(s), renewed until this requirement is satisfied.

(3) Licensees who provide documentation of completion of the continuing education requirement within the 12 months after their license expires may either pay the $100 late penalty fee or requalify for a new Monitoring Well Constructor's License or endorsement in accordance with ORS 537.747(3). If a licensee fails to provide documentation of completion of the continuing education requirement within 12 months after expiration of their license or endorsement the person must comply with the requirements of ORS 537.747(3) for a new Monitoring Well Constructor's License or endorsement.

(4) CECs acquired during a renewal period in excess of the minimum CECs required may not be applied to future licensing periods.

(5) When an individual obtains a new Monitoring Well Constructor's License that expires within 14 months or less, the continuing education requirement shall be prorated such that only seven (7) CECs are required at the first renewal. Of the seven (7) required CECs:

(a) A maximum of two (2) CECs may be in Hazardous Materials training;

(b) A maximum of two (2) CECs may be in safety/first aid/CPR; and

(c) A minimum of one (1) CEC shall pertain to ground water and well construction statutes under ORS 537.505 to 537.795 and 537.992, and administrative rules under OAR 690-200 through 690-240.

Stat. Auth.: ORS 537 & 742
Stats. Implemented: ORS 537 & 742
Hist.: WRD 1-2003, f. & cert. ef. 3-14-03; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0240
Approved Course List/Course Approval and Assignment of CECs

(1) The Department shall maintain a Continuing Education Committee-approved list of courses. The list shall include, but not be limited to, the course title, class location and date, cost, (if applicable), and CECs assigned.

(2) The Continuing Education Committee shall evaluate all courses related to continuing education for well constructors and may assign CECs. The Continuing Education Committee shall notify the course sponsor in writing of the results of their evaluation of the course material. The following criteria may be utilized to evaluate and assign CECs:

(a) Course agenda and how well the subject relates to monitoring well construction and other borings regulated by the Department;

(b) Instructor qualifications;

(c) Subject difficulty;

(d) Student course evaluations, if applicable; and

(e) Other information as appropriate.

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

(3) A licensee who is also the instructor of an approved continuing education course shall be entitled to double CECs for that course. A licensee who is also the instructor of an approved course, may only receive CECs for the course once during a single renewal period, regardless of the number of times a course is presented.

(4) The following courses do not require pre-approval by the Continuing Education Committee:

(a) First Aid and CPR, provided the instructor is certified by the American Red Cross, or has certification accepted by the American Red Cross;

(b) Occupational Safety and Health Administration (OSHA) approved Hazardous Materials Training; and

(c) OSHA approved courses pertaining to the well construction industry.

Stat. Auth.: ORS 537 & ORS 742
Stats. Implemented: ORS 537 & ORS 742
Hist.: WRD 1-2003, f. & cert. ef. 3-14-03

690-240-0250
Course Sponsor Requirements

(1) Course sponsors shall submit a completed application for approval to the Continuing Education Committee on a form(s) provided by the Department at least 45 days prior to the date the course is to be presented. Approved sponsors shall:

(a) Advertise the course to the satisfaction of the Continuing Education Committee;

(b) Provide the Department with a certified class roster within 30 days after completion of the course;

(c) Provide documentation of completion to each qualifying attendee that shall include at a minimum: course title, course date(s), number of approved credits, and instructor and/or sponsor signature; and

(d) Maintain the certified class roster for two years.

(2) All clinics, courses, classes, workshops, and seminars shall be open to anyone who wants to attend. This does not preclude a sponsor from imposing reasonable requirements for attendance such as fees, maximum occupancy limits, and requiring attendees to provide their own safety equipment.

(3) Course approval and assigned CECs shall be effective for two years as long as the course remains the same. The Continuing Education Committee shall be notified in writing by the course sponsor, 45 days in advance of each time an approved continuing education course is presented. Such notification shall include the course title, date, class location, cost (if applicable), number of credits assigned, and a statement that the program has not changed from the course previously approved by the Continuing Education Committee.

Stat. Auth.: ORS 537 & ORS 742
Stats. Implemented: ORS 537 & ORS 742
Hist.: WRD 1-2003, f. & cert. ef. 3-14-03

690-240-0260
Loss of Approval
The Continuing Education Committee may withdraw or suspend approval of a course if it is determined that any of the following has occurred:

(1) The course content has changed without notice to the Continuing Education Committee;

(2) The course was not advertised to the satisfaction of the Continuing Education Committee;

(3) Documentation of completion has been issued to an individual who did not attend or complete the course in accordance with the provisions under which the course was approved;

(4) Documentation of completion was not given to all individuals who satisfactorily completed the course in accordance with the provisions under which the course was approved;

(5) A certified class roster was not maintained by the sponsor for two years;

(6) Fraud or misrepresentation has occurred with the application for course approval, maintenance of records, teaching method, course content, or issuance of certificates for a course; or

(7) Any other factor the Continuing Education Committee deems appropriate.

Stat. Auth.: ORS 537 & ORS 742
Stats. Implemented: ORS 537 & ORS 742
Hist.: WRD 1-2003, f. & cert. ef. 3-14-03

690-240-0270
Courses Taken Without Prior Approval

(1) Except as provided in OAR 690-240-0210(5), a licensee may request that the Continuing Education Committee assign CECs for courses taken without prior approval within the current licensing period.

(2) The licensee shall supply verification of attendance, a course outline, and a written explanation as to why prior approval was not obtained. This information must be received in the Salem office of the Department no later than May 15 of the year that their license or appropriate endorsement expires.

(3) Courses taken without prior approval shall be evaluated by the Continuing Education Committee on a case-by-case basis using the criteria outlined in OAR 690-240-0240(2). This shall not apply to courses that do not require pre-approval under OAR 690-240-0240(4).

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

Stat. Auth.: ORS 537 & ORS 742
Stats. Implemented: ORS 537 & ORS 742
Hist.: WRD 1-2003, f. & cert. ef. 3-14-03

690-240-0280
Waivers

(1) The Director may waive the continuing education requirements for a licensed Monitoring Well Constructor upon written request demonstrating inability to attend continuing education courses because of health, military duty or other circumstances beyond the control of the constructor.

(2) Licensees who are denied a waiver may appeal to the Commission by filing a written exception with the Department within 60 days of service of the Director's order.

Stat. Auth.: ORS 537 & 742
Stats. Implemented: ORS 537 & 742
Hist.: WRD 1-2003, f. & cert. ef. 3-14-03; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0320
Contracting for Services

Only Oregon licensed and bonded Monitoring Well Constructors may advertise services or enter into a contract, either written or oral, to construct, alter, convert, or abandon a monitoring well. Any written bid for a project which includes the construction, alteration, conversion, or abandonment of a monitoring well must provide:

(1) A bid or estimate for the work associated with monitoring well construction signed by a Monitoring Well Constructor, who is licensed and bonded in the State of Oregon.

(2) A statement by the licensed and bonded Monitoring Well Constructor that the work will be completed in accordance with Oregon Ground Water Law (ORS chapter 537) and the Rules for the Construction, Maintenance, Alteration, Conversion, and Abandonment of Monitoring Wells, Geotechnical Holes, and Other Holes in Oregon (OAR chapter 690, division 240).

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0075; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0330

Monitoring Well Constructor and Landowner Well Bonds or Letters of Credit

(1) The Water Resources Department shall accept bonds only from corporations licensed by the Oregon Department of Insurance and Finance to issue fidelity and surety insurance. The Water Resources Department shall accept irrevocable letters of credit only from a bank as described in ORS 706.008.

(2) If the issuing corporation cancels a bond, the corporation shall provide notice of cancellation to the Water Resources Department by registered or certified mail. If the issuing bank cancels a letter of credit, the bank shall provide notice of cancellation to the Water Resources Department by registered or certified mail. The cancellation shall not take effect earlier than the 30th day after the date of mailing in accordance with ORS 742.366(2).

(3) When issuing a final enforcement order that may place a bond or irrevocable letter of credit in jeopardy, the Director may mail a copy of the order to the address of record of the surety company issuing the bond, or the bank issuing the irrevocable letter of credit.

(4) All wells shall be constructed under a bond or irrevocable letter of credit. The bond or letter of credit shall cover construction, alteration, conversion, or abandonment for each well under that bond or letter of credit for a period of three years after the date the well report is filed with the commission, whether or not the bond or letter of credit has been subsequently canceled.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0080; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0340

Landowner Well Construction Permit, Fee and Bond

(1) The Water Resources Commission requires a permit, permit fee, and bond or irrevocable letter of credit, for each monitoring well constructed, altered, converted, or abandoned by a landowner, unless the landowner is a licensed and bonded Monitoring Well Constructor. The landowner permit and bond shall be obtained prior to beginning work on a well.

(2) To receive a Landowner Well permit, a person must submit the following to the Director:

(a) A completed application form provided by the Commission, containing, as a minimum:

(A) The property owner's name, address and telephone number;

(B) The surety company's name, address and telephone number;

(C) The proposed location of the well by township, range, section, tax-lot number if assigned, and street address;

(D) The proposed use of the monitor well; and

(E) The type of proposed work; and

(F) Well design plan on form approved by the Department.

(b) A properly executed Landowner's Water Well Bond or Irrevocable Letter of Credit for $5,000 to the State of Oregon; and

(c) A $25 permit fee.

(3) Only the owner of record, a member of the immediate family of the owner of record, or a full time employee of the owner of record, (whose main duties are other than the construction of wells), may operate a well drilling machine under a landowner's permit.

(4) A landowner permit issued pursuant to these rules shall expire six months from the date of issuance.

(a) A monitor well report shall be submitted within 30 days of expiration of the landowner permit, or within 30 days of completion of the well, whichever occurs first.

(5) If the landowner permit expires, a landowner may reapply for a new landowner permit by complying with the requirements described in sections (1), (2) and (3) of this rule.

(6) The Department may deny a landowner permit if it is determined that the construction, alteration, abandonment, or conversion of the proposed well is a health threat, a health hazard, a source of contamination, or a source of waste of the ground water resource.

Stat. Auth.: ORS 183, 536, 537 & 540
Stats. Implemented:
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01; WRD 2-2002, f. & cert. ef. 9-6-02; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0082; WRD 4-2004, f. & cert. ef. 6-15-04; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0355
Monitoring Well Drilling Machines

(1) All monitoring well drilling machines being operated, other than under a landowner's permit, shall be plainly marked either with the bonded Monitoring Well Constructor's license number, the name of the bonded Monitoring Well Constructor, or the name of the well drilling business. The markings shall be permanently affixed on each side of the machine. Good quality paint or commercial decal numbers shall be used in placing the identification information on the drilling machine. In no case shall the constructor's license number, name, or business name, be inscribed with crayon, chalk, marking keel, pencil, or other temporary markings.

(2) In all cases, the license number, name, or business name, of the bonded Monitoring Well Constructor shall be removed from the drilling machine immediately upon change of ownership or change of control of the drilling machine.

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0085; WRD 2-2006, f. & cert. ef. 6-20-06; WRD 6-2015, f. & cert. ef. 7-1-2015

690-240-0375
Monitoring Well Construction Notice Required (Start Card)

(1) Each bonded Monitoring Well Constructor licensed to operate in the State of Oregon and each landowner holding a landowner's permit shall provide notice as required in ORS 537.762 before commencing the construction, alteration, or abandonment of any monitoring well or conversion of any other hole, geotechnical hole, or water supply well to a monitoring well. The start card shall contain the following information:

(a) Name and mailing address of the landowner;

(b) Street address of the well;

(c) The approximate location of the monitoring well; and

(d) The proposed depth, diameter, and purpose or use if the well is new, altered, or converted.

(2) In addition to the information required pursuant to OAR 690-240-0375(1)(a)-(d), a start card may also contain information regarding the type of proposed alteration.

(3) Forms for making these reports and submitting fees shall be furnished by the Department.

(4) OAR 690-240-0340 shall apply to landowners who construct, alter, convert, or abandon a monitoring well.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 2-2002, f. & cert. ef. 9-6-02; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0090; WRD 4-2004, f. & cert. ef. 6-15-04; WRD 2-2006, f. & cert. ef. 6-20-06; WRD 11-2008, f. & cert. ef. 1-2-09

690-240-0385
Start Card Reporting Requirements

(1) The start card notification required in ORS 537.762 shall be submitted to the Department's region office within which the monitor well is being constructed, altered converted or abandoned using one of the following methods:

(a) Start cards submitted electronically shall be transmitted by a Department-approved method and shall be submitted before beginning construction, alteration, conversion or abandonment work of any monitor well.

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

(b) By regular mail no later than three (3) calendar days (72 hours) prior to commencement of work; or

(c) By hand delivery, during regular office hours, before beginning the construction, alteration, conversion or abandonment work on any monitoring well; or

(d) By facsimile transmission (FAX) before beginning the construction, alteration, conversion or abandonment work on any monitoring well. If this method is used, a legible copy of the start card shall also be mailed or delivered to the appropriate OWRD region office no later than the day work is commenced.

(2) The fee required under ORS 537.762(5) for the construction of a new well, deepening of an existing well, conversion of a water supply well, geotechnical hole or other hole shall be submitted to the Department's Salem office with a duplicate copy of the start card. A duplicate start card is not required if the start card fee is included with a start card submitted electronically under Section (1)(a) of this rule.

(3) If a start card has been filed under section (1) and (2) of this rule and additional wells are required on the same or contiguous tax lot and for the same landowner, then start cards for the additional wells shall be filed no later than the day work begins.

(4) The Director or region office may provide an alternate means of notification. If an alternative means of notification is used, the start card shall be mailed or delivered to the region office within one week of beginning work on the monitoring well. A Monitoring Well Constructor whose license has been restricted by order shall provide notice as stipulated in the order.

(5) Once received by the Department, the start card shall be confidential for a period of one year after it is received or until the monitoring well report required by OAR 690-240-0395 is received, whichever is shorter.

(6) The start card may be used in an administrative enforcement action at any time, including the period of confidentiality. Once the start card is used for enforcement reasons, it is no longer confidential.

NOTE: Region office fax and telephone numbers are listed in Table 240-2. Water Resources Department Regional boundaries are shown in Figure 240-2.

ED. NOTE: Tables and Figures referenced are available from the agency.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795

Stats. Implemented

Hist.: WRD 11-2008, f. & cert. ef. 1-2-09

690-240-0395

Monitoring Well Report Required (Monitoring Well Log)

(1) A monitoring well report shall be prepared for each monitoring well constructed, altered, converted, or abandoned including unsuccessful monitoring wells. The log shall be certified as correct by signature of the Monitoring Well Constructor constructing the monitoring well. The completed log shall also be certified by the bonded Monitoring Well Constructor responsible for construction of the monitoring well. A

monitoring well report must be submitted by each bonded constructor (if drilling responsibility is shifted to a different bonded constructor), showing the work performed by each bonded constructor.

(2) The log shall be prepared in triplicate on forms furnished or previously approved in writing by the Water Resources Department. The original shall be furnished to the Director, the first copy shall be retained by the Monitoring Well Constructor, and the second copy shall be given to the customer who contracted for the construction of the monitoring well.

(3) The bonded Monitoring Well Constructor shall file the monitoring well log with the Director within 30 days after the completion of the construction, alteration, conversion, or abandonment of the monitoring well.

(4) The trainee or Monitoring Well Constructor operating the monitoring well drilling machine shall maintain a rough log of all geologic strata encountered and all materials used in the construction of the monitoring well. This log shall be available for inspection by the Watermaster or other authorized agent of the Water Resources Department or other delegated agency representative at any time before the monitoring well report is received by the Department. The rough drilling log shall be in handwritten or electronic form, or a voice recording.

(5) In the event a constructor leaves any drilling equipment or other tools in a monitoring well this fact shall be entered on the monitoring well report.

(6) A copy of any special authorizations or special standards issued by the Director shall be attached to the monitoring well report.

(7) The report of monitoring well construction required in section (1) of this rule shall be recorded on a form provided or previously approved in writing by the Department. The form shall include, as a minimum, the following:

(a) Name and Address of Landowner;

(b) Started/Completed date;

(c) Location of the well by county, Township, Range, Section, tax lot number, if assigned, street address, or nearest address, and either the 1/4, 1/4 section or Latitude and Longitude as established by a global positioning system (GPS);

(d) Start card number;

(e) Well identification label number (well tag number);

(f) Use of well;

(g) Type of work;

(h) Type and amount of sealant used and measured weight of the grout slurry as required in OAR 690-240-0475(2)(g);

(i) Temperature of water;

(j) Map showing location of monitoring well on site, must be attached and shall include an approximate scale and a north arrow;

(k) Such additional information as required by the Department.

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

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0095; WRD 4-2004, f. & cert. ef. 6-15-04; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0410
Monitoring Well Construction: General

(1) Monitoring well components, including well screens, casings and annular sealant should be selected based on known site characteristics to ensure the well will last for the duration of the monitoring program.

(2) No monitoring well shall be used for domestic, public water supply, industrial, commercial, or agricultural purposes unless it meets the minimum construction standards for water supply wells, OAR 690-200 to 690-230.

(3) No completed monitoring well shall interconnect aquifers, including low yielding aquifers.

(4) The start card number shall be permanently attached, stamped or engraved on the outer well casing or permanent protective well cover, not on a removable cap.

(5) No monitoring well shall be constructed as a multiple completion well without prior special standard approval as specified in OAR 690-240-0006.

(6) Horizontal wells shall only be constructed with prior special standard approval only as specified in OAR 690-240-0006.

(7) The borehole diameter shall be at least four inches larger than the nominal casing diameter except as noted in OAR 690-240-0525 concerning piezometers. If the monitoring well is constructed using a hollow stem auger drilling machine, the inside diameter of the auger must be at least four inches larger than the nominal diameter of the casing to be installed, except as noted in OAR 690-240-0525 concerning piezometers.

(8) Materials which foster or promote undesirable organic growth or have the potential to degrade water quality shall not be employed in the construction of the monitoring well.

(9) After completion, the landowner is responsible for maintaining the well in an approved condition. If the well is damaged, the well protection system and casing shall be restored as prescribed by these rules. If the well is damaged beyond repair, the well shall be properly abandoned in accordance with OAR 690-240-0510.

(10) A well identification label shall be attached to every new well and to every altered or repaired well that does not already have a label. The label must be easily visible on the outside of the casing on an above grade completion and inside the vault of a flush grade monument. (See Appendix 1) In cases where a geotechnical hole or other hole is converted into a monitor well, a well identification label must be attached to the completed well in the same fashion as required for a new or altered well.

(11) Any deviation from these rules requires special standard approval as specified under OAR 690-240-0006.

[ED. NOTE: Appendices referenced are available from the agency.]

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0100

690-240-0420
Well Protection

(1) Every monitoring well shall be capped and protected using one of the following methods:

(a) If the well is cased with metal and completed above the ground surface, a lockable cap with lock shall be attached to the top of the casing;

(b) If the well is completed above the ground surface, and is not cased with metal, a metal protective casing shall be installed around the well. The protective casing shall extend at least six inches above the top of the well casing and at least two feet into the ground. A cap shall be attached to the top of the well casing and a lockable lid with lock shall be attached to the top of the protective casing; and

(c) If the well is completed below ground surface, a lockable, watertight cap with lock shall be attached to the top of the casing. A vault or monument, designed to be watertight, level with the ground surface, shall be installed to prevent the inflow of surface water. The cover must be designed to withstand the maximum expected loadings.

(2) All wells completed above ground shall have a minimum casing height of one foot above finished grade and shall be protected from damage by three metal posts at least three inches in diameter, set in and filled with concrete. The protective posts shall be installed in a triangular array around the casing and at least two feet from it. Each post shall extend at least three feet above and three feet below the ground surface.

(3) If the well is to be protected by other surface protection methods, the bonded constructor shall obtain special standards from the Department as specified in OAR 690-240-0006.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0110

690-240-0430
Casing

(1) The constructor shall consider the following factors when selecting monitoring well casing:

(a) The casing installed shall not be readily reactive with the subsurface environment according to best available knowledge;

(b) The casing installed shall not adversely affect or interfere with the

chemical, physical, radiological, or biological constituents of interest according to best available knowledge;

(c) The collapse strength of all casing used in monitoring well construction must be great enough to withstand the pressure exerted by the annular seal during seal placement, including heat of hydration.

(2) All monitoring well casing shall conform to at least 304 or 316 stainless steel, polytetrafluoroethylene PTFE, Schedule 40 PVC casing, or other casing materials rated and approved by ASTM for monitoring well construction.

(3) All casing installed shall be in new or like new condition, being free of pits or breaks, and shall be cleaned of foreign materials and contaminants prior to installation, unless removed from the manufacturer's packaging on site.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0115

690-240-0440
Additional Standards for Artesian Monitoring Wells

(1) Monitoring wells penetrating into an artesian aquifer shall have an upper oversize drillhole at least four inches greater in diameter than the nominal diameter of the permanent well casing except as noted in OAR 690-240-0525 concerning piezometers. Watertight unperforated casing shall extend and be sealed, according to OAR 690-240-0475, at least five feet into the confining formation immediately overlying the artesian water-bearing zone.

(2) If an artesian monitoring well flows at land surface, the well shall be equipped with a control valve and a watertight mechanical cap, threaded or welded, so that all flow of water from the well can be completely stopped.

(3) All flowing artesian monitoring wells shall be equipped with a pressure gauge placed on a dead-end line. A petcock valve shall be placed between the gauge and well casing.

(4) All flowing artesian monitoring wells shall be tested for artesian shut-in pressure in pounds per square inch and rate of flow in cubic feet per second, or gallons per minute, under free discharge conditions. This data shall be reported on the well report.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0118

690-240-0450
Cleaning

(1) All drill cuttings and fluids from drilling, cleaning and development shall be properly managed during construction, alteration or abandonment to protect ground water from contamination.

(2) The landowner or the landowner's agent is responsible for management of drill cuttings and fluids left on site after well construction, alteration or abandonment is completed.

(3) To prevent cross-contamination between wells, the drill rig and all drilling equipment shall be cleaned before and after well construction by one of the following methods:

(a) Detergent washing and rinsing with potable water;
(b) High pressure hot water cleaning;
(c) Steam cleaning; or
(d) Other methods as approved by the Water Resources Department.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0120

690-240-0460
Monitoring Well Screen, Filter Pack, and Filter Pack Seal

(1) The screen and filter pack, when properly designed and installed, allows a water quality sample to be collected that is representative of water in the formation.

(2) The well screen shall:

(a) Be commercially fabricated and constructed of material that is not knowingly readily reactive with the subsurface environment;

(b) Have a collapse strength great enough to withstand the pressures exerted during construction and development of the monitoring well;

(c) Be in new or like new condition, being free of pits or breaks;
(d) Be cleaned using methods outlined in OAR 690-240-0450(3); and
(e) Be centered in the borehole.

(3) The use of lead packers with the screen sections is prohibited.

(4) A bottom cap or end plug shall be attached to each well casing.

(5) The filter pack shall:

(a) Consist of clean, chemically inert, well rounded material;

(b) Not extend more than three feet above the top or one foot below the bottom of the well screen; and

(c) Be placed in such a manner as to ensure placement opposite the well screen without bridging or size segregation.

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

(6) The filter pack seal shall consist of:

(a) A two foot thick layer of fine grained sand above the filter pack if a grout or grout slurry is used; and/or

(b) A minimum of a three foot thick layer of dry bentonite. If a grout slurry is to be used as the annular seal, the bentonite shall be adequately hydrated prior to placement of the annular seal to prevent grout infiltration into the filter pack.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0126

690-240-0475
Well Seals

(1) Proper seal placement is essential to minimize the potential for movement of water and contaminants from the surface, or other waterbearing zones, into the monitoring well. Appropriate sealing materials may vary depending on the site characteristics and the substances being monitored. Well seals shall consist of a physically and chemically stable hydrated grout slurry composed of:

(a) Neat cement; or

(b) Sodium bentonite; or

(c) A cement-bentonite grout mixture containing no more than five percent bentonite by dry weight; or

(d) Sodium bentonite granules, pellets or chips placed in an unhydrated state, and subsequently hydrated downhole.

(2) Grout slurries shall be mixed in the proper proportions and placed in the bore hole in such a manner as to prevent excessive shrinkage, water loss, chemical breakdown, bridging or invasion into the filter pack. The following procedures shall be utilized if a grout slurry is to be the sealing material:

(a) Neat cement used for grouting shall be American Petroleum Institute Class A or B, or ASTM C-150 Type I or II neat cement with no additives, mixed in the proportion of 5.2 gallons of water per standard 94 pound sack and having a mud weight of approximately 15.6 pounds per gallon;

(b) Bentonite used as a slurry for grouting shall be a high solids granular sodium bentonite mixed according to the manufacturer's directions, having a minimum mud weight of at least 9.5 pounds per gallon, and containing at least 20 percent solids. Mixing methods should be used which prevent the slurry from being excessively lumpy;

(c) When a mixture of cement and bentonite is used as a slurry for grouting, the cement shall be American Petroleum Institute Class A or B, or ASTM C-150 Type I or II neat cement. The slurry shall be no more than five percent, by dry weight, of sodium bentonite gel powder (3.75 pounds of bentonite per sack of cement). For each pound of bentonite added, up to an additional 0.7 gallons of water shall be added to the original neat cement mix. The water and bentonite shall

be mixed first, and then the cement added to the bentonite slurry. The cement-bentonite mixture shall have a mud weight of approximately 14.1 pounds per gallon;

(d) Prior to placing grout in the annular space, the grout slurry weight shall be measured by ASTM Test Method D-4380-84. Grout slurry shall not be placed in the annular space until the grout slurry weight is within ten percent of the weight specified in subsection (2)(a), (b) or (c) of this rule;

(e) Grout slurries shall be placed from the bottom of the annular space upward in such a manner as to completely fill the sealing interval. Grout slurries shall begin at the top of the filter pack seal overlying the filter pack and extend to the bottom of the surface seal. If the grout slurry is intended to serve as the surface seal, it shall extend to land surface;

(f) Grout slurries shall be placed through a side discharge grout pipe by gravity flow or by pumping to ensure positive placement without bridging or wash-out of previously placed annular materials. The discharge end of the grout pipe shall remain submerged in the grout throughout the sealing operation;

(g) Prior to discontinuing placement of grout in the annular space, grout slurry returns from the annular space shall be measured by ASTM Test Method D-4380-84. Placement of grout slurry in the annular space shall continue until the returns are within ten percent of the weight specified in subsection (2)(a), (b) or (c) of this rule.

(3) Bentonite used in an unhydrated form shall be sodium bentonite granules, pellets or chips. Unhydrated bentonite shall be specifically designed for sealing wells and be within industry tolerances for dry western sodium bentonite. Bentonite shall be free of polymers that promote bacterial growth. The following procedures shall be adhered to if dry bentonite is used for sealing:

(a) Dry, poured bentonite seals shall only be used if the depth to the bottom of the seal is less than fifty feet and the standing water column in the bore hole or annular space is less than twenty-five feet deep at the time of seal placement. Only sodium bentonite chips manufactured to be greater than 1/4 inch or tablets shall be used below the water level in the sealing interval;

(b) Pour rate shall be three minutes or slower per 50 pound sack in the water-filled portion of the annulus;

(c) A sounding or tamping tool shall be used in the bore hole or annular space during pouring to measure fill rate and to break up possible bridges or cake formation;

(d) Care shall be taken to minimize the introduction of bentonite dust into the sealing interval;

(e) In a dry sealing interval, bentonite shall be hydrated with potable water in two foot lifts to ensure activation.

(4) The estimated and actual volume of sealing material used shall be calculated and reported to the Department.

[Publications referenced are available from the agency.]

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 183, ORS 536, ORS 537 & ORS 540
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0130; WRD 6-2015, f. & cert. ef. 7-1-2015

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

690-240-0485
Monitoring Well Development

(1) The monitoring well development shall not affect the integrity of the casing or seal. Monitoring well development shall not occur prior to 24 hours after annular seal placement if cement grout or a bentonite grout slurry is used, or 12 hours after annular seal placement if dry bentonite is used. The well may be developed prior to placement of the annular sealing material.

(2) The monitoring well development should:

(a) Remove any water or drilling fluid introduced into the well during drilling;

(b) Stabilize the filter pack and formation materials opposite the well screen;

(c) Minimize the amount of fine-grained sediment entering the well; and

(d) Maximize well efficiency.

(3) As long as the well is not altered, the monitoring well development may be performed by other than a licensed and bonded Monitoring Well Constructor.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0131; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0500
Completion of Monitoring Wells

(1) A Monitoring Well Constructor or permitted landowner constructing their own well shall not remove the drilling machine from a monitoring well site, unless it is immediately replaced by another monitoring well drilling machine in operating condition, prior to completion or abandonment of the monitoring well in compliance with OAR 690-240-0005 through 690-240-0540.

(2) Installation of the protective metal posts does not require a Monitoring Well Constructor's License, providing the surface seal is not disturbed.

(3) Installation of the protective posts described in OAR 690-240-0420 shall be completed within one week of placement of the seal.

(4) If installation of the protective measures as described in OAR 690-240-0420 are not completed within 24 hours of seal placement, the monitoring well shall be marked using one of the following methods:

(a) Placement of three stakes around the well connected with fluorescent survey tape;

(b) Placement of construction barricades around the well; or

(c) Use of other protective measures as approved by the Water Resources Department.

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0132; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0510
Abandonment of Monitoring Wells

Proper abandonment of monitoring wells will prevent both vertical movement of water within the well bore and infiltration of surface water into the well:

(1) In areas where ground water contamination has been identified, except as described in number (4) below, abandonment shall require the borehole to be completely redrilled to a minimum of the original diameter. All casing, screen, annular sealing material, drill cuttings, debris, and filter pack material shall be removed prior to sealing.

(2) In areas where ground water contamination has not been identified, if it can be verified that the monitoring well was constructed in accordance with these rules, it shall be abandoned by filling the well from the bottom up with an approved sealant as described in OAR 690-240-0475. The casing shall then be removed below grade, as compatible with local site conditions and land practices. The following are acceptable methods of original well construction verification:

(a) A well report in accordance with OAR 690-240-0395;

(b) Well construction information submitted to the Oregon Department of Environmental Quality;

(c) Information obtained through down-hole geophysical logging; or

(d) Other information as approved by the Water Resources Department.

(3) In areas where ground water contamination is not present, and if the monitoring well construction cannot be verified by means listed in section (2) of this rule, the well shall be abandoned according to section (1) of this rule.

(4) In contaminated areas where remediation has occurred, an approved special standard is required to abandon a well unless it is abandoned according to section (1) of this rule. Abandonment procedures will be considered on a case by case basis. The Department will consult with the state or federal agency that supervised the remediation in determining the appropriate abandonment method. In cases where there was no agency oversight, the Department will consider any information supplied by the licensed and bonded Monitoring Well Constructor in determining the appropriate abandonment procedure.

(5) Grout slurries shall be placed from the bottom up by a grout pipe to avoid segregation or dilution of the sealant. The discharge end of the grout pipe shall be submerged in the grout to avoid breaking the seal while filling the annular space. Grout slurries used to abandon monitoring wells shall conform to the requirements of OAR 690-240-0475.

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

(6) The abandonment procedure shall be recorded on a form provided by or previously approved in writing by the Department. The form shall include, as a minimum, all the requirements as listed in OAR 690-240-0395, plus:

(a) Method of abandonment;

(b) If assigned, the well identification number, original start card number, and owner's well number of the abandoned well.

(7) When abandoning artesian monitoring wells, in addition to sections (1)-(6) of this rule, the flow shall be confined or restricted by cement grout applied under pressure, or by the use of a suitable well packer, or a wooden plug placed at the bottom of the confining formation immediately above the artesian water bearing zone. An approved sealant shall be used to fill the well to land surface as specified in OAR 690-240-0475.

(8) Monitoring wells that were constructed under special standards will require the abandonment method to be approved by the Department.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0135; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0525
Piezometers

It is prohibited to construct a piezometer in an area of known or reasonably suspected contamination. **NOTE:** The Water Resources Department and the Department of Environmental Quality have information sources to use in determining if contaminants are present. Customary drilling practice as conducted by licensed professional must be included as part of the appropriate inquiry to determine if contaminants are present or reasonably suspected.

(1) A piezometer is defined in OAR 690-240-0010(59). Piezometers are a type of monitoring well and shall meet current monitoring well rules except for the following:

(a) Borehole size with depth requirements:

(A) For piezometers with a sealing depth less than 50 feet deep, the borehole diameter shall be at least two and one half inches (2.5") larger than the nominal casing diameter. If the piezometer is constructed using a hollow stem auger drilling machine, the inside diameter of the auger must be at least 2.5 inches larger than the nominal diameter of the casing to be installed;

(B) For piezometers with a sealing depth greater than 50 feet deep, the borehole diameter shall be at least three inches larger than the nominal casing diameter. If the piezometer is constructed using a hollow stem auger drilling machine, the inside diameter of the auger must be at least 3 inches larger than the nominal diameter of the casing to be installed.

(b) Surface Completion:

(A) Piezometers shall be protected as described in OAR 690-240-0420 concerning monitoring wells.

(c) If an artesian piezometer flows at land surface, it shall be equipped with a control valve or a watertight mechanical cap, so that all flow of water from the well can be completely

stopped. Flowing artesian piezometers are not required to be equipped with a pressure gauge placed on a dead-end line or a petcock valve;

(d) The special cleaning and drill cutting storage requirements in OAR 690-240-0450 shall not apply to piezometers because they may not be constructed in areas of known or reasonably suspected contamination. However, all equipment and materials used in the construction of a piezometer shall be free of foreign materials and contaminants prior to entry into the well;

(e) Use of commercially fabricated screens are not required for piezometers. The screens installed shall be in new or like new condition, being free of pits or breaks, and shall be free of foreign materials and contaminants prior to installation;

(f) The filter pack requirements of OAR 690-240-0460(5) shall not apply to piezometers because they are not constructed in areas of known or reasonably suspected contamination;

(g) A minimum three foot annular seal is required. If a grout slurry is used, the filter pack seal requirements of 690-240-0460(6) apply. If a piezometer is completed with a flush monument, the annular seal shall extend a minimum of three feet below the monument seal.

Stat. Auth.: ORS 537.780
Stats. Implemented: ORS 183, 536, 537 & 540
Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0137; WRD 4-2004, f. & cert. ef. 6-15-04; WRD 6-2015, f. & cert. ef. 7-1-2015

690-240-0540
Direct Push Monitoring Wells and Piezometers

(1) Monitoring wells and piezometers that are installed using direct push technology shall comply with the applicable standards in these rules for reporting, casing, screening, filter pack, filter pack placement, filter pack seal, development, surface seal, cleaning, protection, marking, and completion.

(2) Monitoring wells and piezometers that are installed using direct push technology shall also comply with the following standards:

(a) Only prepacked screens shall be used; and

(b) The outside diameter of the borehole shall be a minimum of one inch greater than the outside diameter of the well casing; and

(c) Granular bentonite shall not be used in the sealed interval below the static water level; and,

(d) Wells and piezometers shall not be constructed through more than one water bearing formation and shall not be greater than 50 feet in depth unless a special standard is obtained.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0139

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

690-240-0550
Evidence of Failure

Evidence of failure to comply with the requirements of OAR 690-240, special standards as described in 690-240-0006, or those standards of a state agency to which the Director has delegated direct responsibility under 690-240-0016 shall include, but not be limited to, the following:

(1) A specific standard to which the Director has agreed is violated.

(2) Evidence that contamination is occurring as a result of a monitoring well, geotechnical hole, or other hole construction.

(3) Evidence that a monitoring well, geotechnical hole, or other hole, due to its construction, is causing or contributing to the loss of artesian pressure within an aquifer.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0145

690-240-0560
Investigation of Alleged Violations

(1) The Water Resources Director, upon the Director's own initiative, or upon complaint alleging violation of statutes, standards or rules governing licensing of Monitoring Well Constructors and/or, construction, alteration, conversion, maintenance, or abandonment of monitoring wells, geotechnical holes or other holes may cause an investigation to determine whether a violation has occurred. If the investigation indicates that a violation has occurred, the Director shall notify the persons believed responsible for the violation including but not limited to:

(a) Any Monitoring Well Constructor involved;

(b) The landowner, if the violation involves construction, alteration, conversion, maintenance, operation or abandonment of a well, geotechnical hole, or other hole;

(c) The agency that has been delegated authority over a particular class of wells, geotechnical holes, or other holes and/or

(d) Any registered geologist or civil engineer in construction, alteration, or abandonment of a geotechnical hole.

(2) Enforcement and civil penalty assessment for "other than well constructors" is described in OAR 690-260.

Stat. Auth.: ORS 536.090 & 537.505 - 537.7952
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-

01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0150; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0580
Enforcement Actions

(1) If, after notice and opportunity for hearing under ORS 183.310 to 183.550 the Director determines that one or more violations have occurred, the Director may impose one or more of the following:

(a) Provide a specified time for remedy;

(b) Assess a civil penalty in accordance with the schedule of civil penalties in OAR 690-240-0640;

(c) Suspend, revoke, or refuse to renew the license(s) when one or more persons responsible for the violation hold a Monitoring Well Constructor's License;

(d) Require that a person whose license has been refused renewal pass the Monitoring Well Constructor's License examination before a new license is issued or the current license is renewed;

(e) Impose any reasonable conditions on the Monitoring Well Constructor's License to ensure correction of the violation and future compliance with the law. These conditions may include but are not limited to:

(A) Fulfilling any outstanding obligations which are the result of administrative action before the constructor can offer any services or construct, alter, convert, or abandon any monitoring well;

(B) Requiring additional advance notice to be given to the Department of construction, alteration or abandonment of any monitoring well;

(C) Requiring a seal placement notice be given to the Department up to 72 hours in advance of placing the seal; or

(D) Any other conditions the Director deems appropriate.

(f) Order the landowner to repair or meet other conditions on use of the well, or order discontinuance of the use and order proper abandonment pursuant to ORS 537.775;

(g) Make demand on the Water Well Constructor's bond or the Landowner's Water Well Bond. This may occur only if the Director has given the notice required in OAR 690-240-0560 to the persons responsible for the violation within three years after the date the monitoring well report is filed with the Department. If no monitoring well report has been filed, the three year limitation shall not apply until such time as a well report is filed; or

(h) Take any other action authorized by law.

(2) An order may specify a schedule of escalating or cumulative sanctions to be assessed on specified dates until the violation has been satisfactorily corrected.

(3) Any Monitoring Well Constructor whose license is suspended or revoked shall not contract for well construction services or operate well drilling machines in the State of Oregon during the suspension or revocation period.

Note: These rules were filed with the Office of the Secretary of State and took effect on July 1, 2015. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360 (2) (a) when published by the Secretary of State.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0155; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0590
Multiple Violations and Consolidation of Proceedings

In cases of multiple or continuing violations, each occurrence of substantially the same activity and each days continuance of a violation after the responsible party has been notified is a separate and distinct violation. Administrative enforcement proceedings for multiple violations may be consolidated into a single proceeding.

Stat. Auth.: ORS 537 & 742
Stats. Implemented: ORS 537 & 742
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0160

690-240-0600
Factors Affecting Selection of Type and Degree of Enforcement

In selecting the appropriate type and degree of enforcement, the Director may consider the following factors:

(1) Whether the constructor's file demonstrates a pattern of prior similar violations;

(2) Whether the respondent has cooperated in attempting correction of any violation in a timely fashion;

(3) The gravity and magnitude of the violation, including whether there is an immediate or long-term threat to human health or the ground water resource;

(4) Whether the damage to the ground water resource is reversible;

(5) Whether the violation in the instances cited was repeated or continuous;

(6) Whether a cause of the violation was an unavoidable accident;

(7) The opportunity and degree of difficulty to correct the violation;

(8) The cost to the Department, except for travel costs and the initial field investigation, in attempting to gain voluntary compliance of the cited violation. The costs may be considered until the Department receives respondent's answer to the written notice and opportunity for hearing; and

(9) Any other relevant factor.

Stat. Auth.: ORS 537 & 742
Stats. Implemented: ORS 537 & 742
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0165

690-240-0610
Change in Enforcement Status

(1) In the interest of achieving compliance, the Director at any time may reevaluate the status of the violation(s) and take appropriate action, including reduction of the enforcement level or remission of all or part of any civil penalties assessed.

(2) The Director may terminate proceedings against a Monitoring Well Constructor if the constructor provides acceptable evidence that:

(a) The landowner does not permit the constructor to be present at any inspection made by the Director; or

(b) That the constructor is capable of complying with recommendations made by the Director, but the landowner does not permit the constructor to comply. In such cases, the landowner is responsible for bringing the well into compliance pursuant to ORS 537.535, and if the landowner was not a party to the original enforcement proceeding the Director may initiate a proceeding to ensure that the landowner does so.

Stat. Auth.: ORS 537 & 742
Stats. Implemented: ORS 537 & 742
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0170; WRD 2-2006, f. & cert. ef. 6-20-06

690-240-0630
Assessment of Civil Penalties

Under OAR 690-240-0580(1) the Director may at any time select the most appropriate enforcement tool, including assessment of civil penalties, to gain compliance. However, the Director shall not impose a civil penalty if compliance has been achieved in another manner prior to final decision in the proceeding.

Stat. Auth.: ORS 537 & 742
Stats. Implemented: ORS 537 & 742
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0175

690-240-0640
Schedule of Civil Penalties

(1) The amount of civil penalty shall be determined consistent with the following schedule:

(a) Not less than $25 nor more than $250 for each occurrence defined in these rules as a minor violation;

(b) Not less than $50 nor more than $1,000 for each occurrence defined in these rules as a major violation;

(c) First occurrence, in a calendar year, of a missing or late start card fee shall be $150;

(d) Second occurrence, in a calendar year, of a missing or late start card fee shall be $250; and

(e) Third, and each subsequent, occurrence, in a calendar year, of a missing or late start card fee shall be $250 and may include suspension of the Monitoring Well Constructor's License, and any other action authorized by law.

(2) For purposes of assessing a civil penalty, the start card fee referred to in subsections (1)(c), (d), and (e) of this rule shall not be considered late if it is received in the Salem office of the Water Resources Department within five days of the receipt of the start card, provided the start card was submitted in a timely manner as defined in OAR 690-240-0375.

(3) Table 240-3 lists minor violations related to monitoring well construction and geotechnical holes. All other violations are declared to be major.

[ED. NOTE: Tables referenced are available from the agency.]

Stat. Auth.: ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01; WRD 1-2003, f. & cert. ef. 3-14-03, Renumbered from 690-240-0180; WRD 2-2006, f. & cert. ef. 6-20-06

OREGON ADMINISTRATIVE RULES
WATER RESOURCES DEPARTMENT
CHAPTER 690 DIVISION 240
MONITORING WELL, GEOTECHNICAL HOLE AND OTHER HOLE CONSTRUCTION STANDARDS

TABLE 240-1

CONSTRUCTIONS STANDARDS THAT APPLY

The Department regulates the construction of borings through which ground water may become contaminated. The type of boring (and its purpose) will determine the construction standards that apply. The table below lists common types of holes and the standards that apply. This is not a complete list of borings and there are other types of borings regulated by other agencies. Contact the Water Resources Department if you have any questions.

The construction standards and the Oregon Administrative Rule that apply are as follows:

Water Supply Wells	OAR 690-200 through 690-235
Monitoring Wells, Geotechnical Holes and other Holes	OAR 690-240 through 690-240-0640
Other Holes	OAR 690-240-0030
Geotechnical Holes	OAR 690-240-0035 through 690-240-0049

Type of Boring	Construction Standards that Apply
Air Sparging Well	Monitoring Wells
Aquifer Storage and Recovery Well	Water Supply Wells
Cathodic Protection Hole	Geotechnical Holes
Community Well	Water Supply Wells
Construction Hole	Other Holes
Dewatering Well	Water Supply Wells
Domestic Well	Water Supply Wells
Drive Point (Core holes)	Geotechnical Holes
Drive Point Well (Dewatering)	Water Supply Wells
Drive Point (Water Sampling)	Monitoring Wells
Drive Point (Water Supply)	Water Supply Wells
Dry (Disposal) Well	Other Holes
Elevator Shaft	Other Holes
Extraction Well	Monitoring Wells
Gas Migration Hole	Geotechnical Holes
Geothermal Well	Water Supply Wells
Gravel Pit	Other Holes
Ground Source Heat Pump Borings (Closed Loop)	Geotechnical Holes
Ground Source Heat Pump Borings (Open Loop)	Water Supply Wells
Horizontal Drain (Slope Stability)	Geotechnical Holes
Horizontal Well (Monitoring)	Monitoring Wells
Horizontal Well (Water Supply)	Water Supply Wells

Inclinometer	Geotechnical Holes
Industrial Well	Water Supply Wells
Injection Well (Water)	Water Supply Wells
Injection Well (Remediation) (>72 Hours)	Monitoring Wells
Injection Well (Remediation) (<72 Hours)	Geotechnical Holes
Irrigation Well	Water Supply Wells
Monitoring Well	Monitoring Wells
Municipal Well	Water Supply Wells
Observation Hole	Monitoring Wells
Permeability Test Hole	Geotechnical Holes
Piezometer (Electric)	Geotechnical Holes
Piezometer (Pneumatic)	Geotechnical Holes
Piezometer Well	Monitoring Wells
Piling Hole	Other Holes
Post Hole	Other Holes
Power Pole Hole	Other Holes
Public Supply Well	Water Supply Wells
Remediation Or Recovery Well	Monitoring Well/Water Supply Wells
Rock Boring (<10 Feet)	Other Holes
Rock Boring (>10 Feet)	Geotechnical Holes
Seismic Shot Hole	Geotechnical Holes
Slope Stability Hole	Geotechnical Holes
Soil Boring (<10 Feet)(geophysical borings)	Other Holes
Soil Boring (>10 Feet)(geophysical borings)	Geotechnical Holes
Soil Vapor Hole	Geotechnical Holes
Sparging Well	Monitoring Wells
Storm Water Disposal	Other Holes
Sump	Other Holes (if < 10 ft. deep and > 10 ft. dia.)
Temporary Monitoring Well (<72 Hours)	Geotechnical Holes
Temporary Monitoring Well (>72 Hours)	Monitoring Wells
Trench	Other Holes
Underground Storage Tank (UST) Pit	Other Holes
Vapor Extraction Hole	Geotechnical Holes
Wetland Delineation Hole	Other Holes