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OREGON ADMINISTRATIVE RULES
WATER RESOURCES DEPARTMENT
CHAPTER 690
DIVISION 215

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ALTERATION, DEEPENING, MAINTENANCE AND REPAIR [AND DEEPENING]
OF WATER SUPPLY WELLS

690-215-0005

Prevention of Groundwater Contamination, Health Hazard, and Waste

(1)The landowner of the property on which the water supply well is constructed is ultimately responsible for the maintenance and use of the water supply well. All water supply wells should be disinfected following the installation of pumping equipment. Refer to OAR 690-210-0380, Appendix 2 for recommendations on well disinfection.

(2)The landowner shall maintain all water supply wells in a condition where they are not a health threat, a health hazard, a source of contamination or a source of waste of the ground water resource by allowing loss of artesian pressure or commingling of aquifers. **A pitless adapter may be attached to the casing to transmit water from the well into the delivery pipeline. The pitless adapter shall be installed in such a manner as to prevent the contamination of the ground water resource. The landowner is responsible to assure that the space between the side of the well borehole and the well casing is sealed as required by OAR 690-215-0025.**

(3)If, in the opinion of the Director, a water supply well is a health threat, a health hazard, a source of contamination, or a source of waste of the ground water resource, the Director may order discontinuance of, or impose conditions upon, the use of the water supply well. In addition, the Director may order that the well be repaired or permanently abandoned in accordance with OAR chapter 690, divisions 215 and 220 of the Standards for Construction and Maintenance of Water Supply Wells in the State of Oregon.

[ED. NOTE: The Appendix referenced in this rule is available from the agency.]

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

Stats. Implemented:

Hist.: WRD 3, f. & ef. 2-18-77; WRD 9-1978, f. 12-12-78, ef. 1-1-79; WRD 3-1983, f. & ef. 4-28-83;

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WRD 13-1986, f. 10-7-86, ef. 11-1-86, Renumbered from 690-062-0005; WRD 7-1988, f. & cert. ef. 6-29-88; WRD 21-1990, f. & cert. ef. 12-14-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-215-0006 Well Alterations

(1) Well alterations as defined in OAR 690-200-0050(7) shall be performed by a licensed Water Supply Well Constructor, or a landowner with a Landowner’s Well Construction Permit and bond.

(2) Water Supply Well Constructors or a permitted and bonded landowner shall ~~report~~ record the following data, if available, on the Water Supply Well Report as required under OAR 690-205-0210 before completing alteration work on a well:

- a. **pre-alteration static water level and date taken**
- b. **pre-alteration casing diameter**
- c. **pre-alteration casing gauge**
- d. **pre-alteration well depth**
- e. **pre-alteration seal material**

(3) Well alteration work shall be completed in accordance with OAR 690-215. The Water Supply Well Constructor shall only be responsible for the alteration work they performed under OAR 690-215.

690-215-0010

Maintenance of an Existing Well Following Construction of Replacement Well

Any time a new water supply well is constructed to replace an existing well which is a source of contamination, or is wasting the ground water resource by allowing loss of artesian pressure or commingling of aquifers, the existing well shall be repaired in compliance with these rules or abandoned in accordance with OAR 690-220-0030 through 690-220-0140.

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

Stats. Implemented:

Hist.: WRD 7-1988, f. & cert. ef. 6-29-88; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-215-0015

Accessibility to Well for Reconditioning, Repair or Abandonment

To enable drilling equipment future access to the water supply well for reconditioning, repair, or abandonment, the property owner should maintain a minimum five-foot separation

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1 distance between the well and any permanent structure.

2
3 Stat. Auth.: ORS 183, ORS 536, ORS 537 & ORS 540

4 Stats. Implemented:

5 Hist.: WRD 7-1988, f. & cert. ef. 6-29-88; WRD 7-2001, f. & cert. ef. 11-15-01

6
7 **690-215-0016**

8 **Maintaining Well Setback Requirements**

9 Within the boundaries of their own property, property owners are responsible for
10 maintaining the applicable minimum setback distances for any well on their property. Refer to
11 OAR 690-210-0030 for current minimum setback distances.

12
13 Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

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

15 Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

16
17 **690-215-0017**

18 **Down Well Continuous Water Treatment and Back-Siphon Prevention Devices**

19 (1) If a chemical is used to treat well water, it shall not be allowed to come into contact
20 with the inside of the well casing. Down well treatment of well water will only be allowed if a
21 commercial water treatment system is used. Delivery pipes or tubes designed for use with the
22 treatment chemicals shall be used to place the chemicals into the water in the well. This rule does
23 not apply when disinfecting the well and the pumping equipment.

24 (2) In no event shall agricultural pesticides and fertilizers be allowed to enter a well.

25 (3) Back-siphon prevention equipment shall be installed on any irrigation system
26 connected to a ground water source when fertilizers or any other chemicals are applied through
27 the system. The landowner or other responsible parties shall be responsible for assuring that the
28 back-siphon prevention equipment is installed and functions properly. (See Figure 215-1.) The
29 landowner or other responsible parties shall inspect the device at least once per year, prior to the
30 first use of the year, to ensure that the device is installed and functions properly.

31 (a) The irrigation system shall contain:

32 (A) An automatic low-pressure drain which shall:

33 (i) Be installed between the irrigation pump and the irrigation line check valve at
34 the lowest point of the horizontal water supply pipeline;

35 (ii) Be designed to drain all incidental leakage from the check valve out of the
36 irrigation pipeline before that leakage enters the water supply;

37 (iii) Be at least 3/4 inch in diameter with a closing pressure of not less than 5 psi;

38 (iv) Use a corrosion-resistant tube, pipe, or similar conduit to discharge the
39 solution at least 20 feet away and down-slope from the irrigation water source and any other
40 water sources. At the discharge point there shall be an air gap between the discharge pipe and the

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1 discharged solution;

2 (v) Not have any valves located on the outlet side of the drain tube; and

3 (vi) Have a dam or collection reservoir to prevent the discharged solution from
4 pooling and draining back toward the water source.

5 (B) An inspection port which shall:

6 (i) Be located on top of the pipeline between the irrigation pump and the irrigation
7 pipeline check valve, directly overhead of the low-pressure drain;

8 (ii) Have a minimum diameter opening of four inches from which the check
9 valves and low-pressure drain shall be visible.

10 (C) An irrigation line check valve which shall:

11 (i) Consist of at least a single check valve;

12 (ii) Be located in the pipeline between the irrigation pump and the point of
13 chemical injection into the irrigation pipeline, and downstream from a vacuum relief valve and
14 automatic low-pressure drain;

15 (iii) Be of heavy-duty construction with all materials resistant to corrosion or
16 protected to resist corrosion;

17 (iv) Be spring-loaded and provide a watertight seal against reverse flow;

18 (v) Be labeled with the following information: manufacturer's name and model,
19 working pressure in pounds per square inch (psi), maximum flow rate, and direction of flow;

20 (vi) Not consist of metal-to-metal seal surfaces; and

21 (vii) Be designed and rated for pressures expected to be encountered, including
22 those caused by pumping, water hammers, back-pressure, or other sources. Installation shall be
23 according to design and manufacturer's specifications and recommendations.

24 (D) An air/vacuum relief valve which shall:

25 (i) Be located on top of the horizontal irrigation pipeline between the irrigation
26 pump and the irrigation line check valve; and

27 (ii) Have a total (individually or combined) orifice size of at least 3/4-inch
28 diameter for a 4-inch pipe, a 1-inch diameter for a 5- to 8-inch pipe, a 2-inch diameter for 9- to
29 18-inch pipe, and a 3-inch diameter for a 19-inch and greater pipe.

30 (E) A chemical injection line check valve which shall:

31 (i) Be located between the chemical injection pump and the point of chemical
32 injection into the irrigation line;

33 (ii) Be made of chemical-resistant material;

34 (iii) Prevent irrigation water under operating pressure from entering the chemical
35 injection line; and

36 (iv) Prevent leakage from the chemical supply tank on system shutdown.

37 (F) A system interlock which shall: mechanically or electrically connect the water supply
38 pump and the chemical injection unit for the purpose of automatically shutting down the
39 chemical injection unit in the event of water supply pump shutdown or failure.

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(b) If modifications or changes in design, technology, irrigation practices, or other reasons warrant the use or placement of equipment in lieu of that specified herein, the Director may allow for such changes. Requests for modifications shall be in writing, detailing the existing system and uses, and shall include specifications on the proposed changes. The modification shall provide protection to the ground water resource that is equal to or greater than that provided by the equipment required in this regulation;

(c) These regulations are in addition to equipment requirements for pesticide application under the Federal Insecticide, Fungicide and Rodenticide Act, and are not intended to replace those regulations;

(d) Irrigation systems that are subject to OAR 690-215-0017(3) and are connected to a public water system, shall meet the cross-connection control requirements in OAR chapter 333;

(e) Whenever the Director deems it appropriate, the Department may investigate alleged violation of statutes, standards or rules governing back-siphon prevention devices to determine whether a violation has occurred. Violations of OAR 690-215-0017 may be administered under ORS 536.900(1)(c), 537.990(3), or OAR chapter 690, division 260, as appropriate to gain compliance.

[ED. NOTE: Figure referenced in this rule are available from the agency.]

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

Stats. Implemented:

Hist.: WRD 7-1988, f. & cert. ef. 6-29-88; WRD 1-1991, f. & cert. ef. 2-8-91; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-215-0020

Valves and Casing on Artesian Wells

Valves and casing on all artesian wells shall be maintained in a condition so that the flow of water can be completely stopped when the water is not being put to beneficial use. All casing, liner pipe, and casing seals shall be maintained in a condition that will prevent surface or subsurface leakage of ground water. Valves shall be closed when water is not being put to beneficial use. During periods of subfreezing temperatures, a valve may be partially opened to prevent damage due to freezing.

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

Stats. Implemented:

Hist.: WRD 3, f. & ef. 2-18-77; WRD 9-1978, f. 12-12-78, ef. 1-1-79; WRD 13-1986, f. 10-7-86, ef. 11-1-86, Renumbered from 690-062-0010 by WRD

690-215-0025 Sealing Pitless Adapter and Pitless Units

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The sealing area around pitless adapter or pitless unit installations shall be replaced with unhydrated bentonite as required by OAR 690-210-0330 and shall be at least one and one-half inches thick around the casing and pitless device.

690-215-0030

Casing [and Liner Pipe] and Casing Extensions

- (1) All well casing [and/or liner pipe] used **to extend a well head above land surface or used** in the **alteration**, repair or deepening of water supply wells shall meet the minimum standards in OAR 690-210, [-0190 through 690-210-290.]
- (2) **The annular space surrounding the well casing used to extend the well head shall be sealed as required by OAR 690-210 and shall be at least four inches greater than the nominal inside diameter of the permanent well casing.**

NOTE: **Prior to extending the casing on public, community, municipal, or public utility water supply wells, contact the Department of Human Services. Additional requirements may apply.**

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

Stats. Implemented:

Hist.: WRD 9-1978, f. 12-12-78, ef. 1-1-79; WRD 13-1986, f. 10-7-86, ef. 11-1-86, Renumbered from 690-061-0221; WRD 7-2001, f. & cert. ef. 11-15-01

690-215-0035

Liner Pipe

All liner pipe used in the alteration, repair or deepening of water supply wells shall meet the minimum standards in OAR ~~690-210-0190 through~~ 690-210-0290.

690-215-0040

Casing and Sealing Wells [of Casing] after Disturbance

- (1) If during the **installation of casing, liner pipe, seals, packers, or during** repair or deepening of a water supply well, the pre-existing [*old*] casing is withdrawn, [*or advanced,*] **or moved as to compromise the annular seal,** the well shall be cased and sealed in accordance with the rules set forth in OAR 690-210.

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1 **(2) If the annular seal is not compromised when cleaning out a water supply well or**
2 **installing liner pipe, the water supply well shall not require re-casing or re-sealing.**

3
4 Stat. Auth.: ORS 183, ORS 536, ORS 537 & ORS 540

5 Stats. Implemented:

6 Hist.: WRD 9-1978, f. 12-12-78, ef. 1-1-79; WRD 13-1986, f. 10-7-86, ef. 11-1-86, Renumbered from
7 690-061-0226; WRD 7-1988, f. & cert. ef. 6-29-88; WRD 7-2001, f. & cert. ef. 11-15-01

8
9 **690-215-0045**

10 **Deepening of Wells**

11 (1) The static water level shall be recorded prior to and after deepening a well. Both
12 readings shall be recorded on the well log.

13 (2) The deepening of a water supply well shall not result in the commingling of aquifers.

14
15 Stat. Auth.: ORS 183, ORS 536, ORS 537 & ORS 540

16 Stats. Implemented:

17 Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

18
19 **690-215-0050**

20 **Well Cover**

21 All water supply wells shall be securely covered to prevent any foreign substance from
22 entering the well, including any material which might contaminate the ground water. The well
23 cover shall meet the requirements of OAR 690-220-0005.

24
25 Stat. Auth.: ORS 183, ORS 536, ORS 537 & ORS 540

26 Stats. Implemented:

27 Hist.: WRD 13-1986, f. 10-7-86, ef. 11-1-86; WRD 7-2001, f. & cert. ef. 11-15-01

28
29 **690-215-0055**

30 **Well Identification Label Maintenance**

31 The well label shall not be removed from the wellhead and shall be maintained by the
32 landowner in an accessible location and in a readable condition. See OAR 690-200, Appendix
33 200-2 for well identification label placement instructions.

34 [ED. NOTE: Appendix referenced in this rule is available from the agency.]

35
36 Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

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

38 Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

39
40 **690-215-0060**

41 **Access Ports, Dedicated Measuring Tubes or Airlines**

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1 All water supply wells shall be equipped with an unobstructed access port with a
2 minimum diameter of 1/2 inch for the purpose of determining the water level in the well at any
3 time. Dedicated measuring tubes are recommended to be installed on all wells at the time of
4 pump installation. Where required, dedicated measuring tubes shall be a minimum of 3/4-inch
5 diameter schedule 40 PVC and shall extend to the top of the pump. The dedicated measuring
6 tube shall be vented above and below the well cap and shall be attached to the pump column at
7 10 foot intervals with 10 mil plastic tape. The lower five feet of the dedicated measuring tube
8 shall be either 0.020 inch machine slotted well screen or the lower 20 feet of the dedicated
9 measuring tube shall be extensively perforated with 1/8 inch holes. The dedicated measuring
10 tube shall be plugged or capped at the bottom (Figure 200-5). The dedicated measuring tube
11 shall not be reduced in size over the length of the pipe and shall remain free from wire or other
12 obstruction. An airline is not a substitute for a required dedicated measuring tube and, if
13 installed, must enter the well in a location other than the access port. Access ports, dedicated
14 measuring tubes or airlines shall be capped and a minimum of twelve inches above finished
15 ground surface or pumphouse floor. If the well has a pitless adaptor then the dedicated
16 measuring tube shall terminate within six inches of the top of the well casing. The access port,
17 airline and dedicated measuring tube on all water supply wells required by OAR 690-210-0280
18 shall be maintained in a condition that will prevent contamination of the ground water, and shall
19 remain unobstructed and be maintained by the landowner so that the water level can be
20 determined at any time.

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

22 Stats. Implemented:

23 Hist.: WRD 3, f. & ef. 2-18-77; WRD 9-1978, f. 12-12-78, ef. 1-1-79; WRD 13-1986, f. 10-7-86, ef. 11-1-
24 86, Renumbered from 690-062-0015; WRD 7-2001, f. & cert. ef. 11-15-01; WRD May-2008, f & cert. ef.
25 7-1-08
26

27 28 **690-215-0070**

29 **Pressure Gauge**

30 The pressure gauge and petcock valve required by OAR 690-210-0155 shall be
31 maintained so that the artesian pressure can be accurately determined at any time (See Figure
32 210-7).

33 [ED. NOTE: Figures referenced in this rule are available from the agency.]

34
35 Stat. Auth.: ORS 183, ORS 536, ORS 537 & ORS 540

36 Stats. Implemented:

37 Hist.: WRD 3, f. & ef. 2-18-77; WRD 9-1978, f. 12-12-78, ef. 1-1-79; WRD 13-1986, f. 10-7-86, ef. 11-1-
38 86, Renumbered from 690-062-0020; WRD 7-2001, f. & cert. ef. 11-15-01
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40 **690-215-0080**

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1 **Flowmeters and Dedicated Measuring Tubes**

2 The Director may require the landowner to install totalizing flowmeters or dedicated
3 measuring tubes on any water supply well, either as a condition of a water right permit or at a
4 later date as circumstances may warrant. The landowner may be required to install totalizing
5 flowmeters or dedicated measuring tubes on existing permitted wells and on wells which are
6 exempted by ORS 537.545.

7
8 Stat. Auth.: ORS 183, ORS 536, ORS 537 & ORS 540

9 Stats. Implemented:

10 Hist.: WRD 13-1986, f. 10-7-86, ef. 11-1-86; WRD 7-2001, f. & cert. ef. 11-15-01; WRD May -2008 f &
11 cert. ef. 7-1-08

12
13 **690-215-0090**

14 **Conversion to an Artesian Well**

15 If a water supply well becomes artesian upon deepening, the well shall be cased, sealed
16 and completed in accordance with OAR 690-210-0155.

17
18 Stat. Auth.: ORS 183, ORS 536, ORS 537 & ORS 540

19 Stats. Implemented:

20 Hist.: WRD 9-1978, f. 12-12-78, ef. 1-1-79; WRD 13-1986, f. 10-7-86, ef. 11-1-86, Renumbered from
21 690-061-0236; WRD 7-2001, f. & cert. ef. 11-15-01

22
23 **690-215-0100**

24 **Drilling in a Dug Well**

25 In no case shall a dug well be deepened by drilling methods.

26
27 Stat. Auth.: ORS 183, ORS 536, ORS 537 & ORS 540

28 Stats. Implemented:

29 Hist.: WRD 9-1978, f. 12-12-78, ef. 1-1-79; WRD 13-1986, f. 10-7-86, ef. 11-1-86, Renumbered from
30 690-061-0241

31
32 **690-215-0200**

33 **Dedicated Measuring Tube**

34 A dedicated measuring tube as described in 690-215-0060 shall be installed in any water
35 supply well at the time of pump installation, pump repair or pump replacement in the following
36 areas (See Figures 200-4, 200-5 and 200-7):

37 1. Petes Mountain Area of Clackamas County (See OAR 690-200-0028(2));

38 2. Eola Hills Ground Water Limited Area of Polk and Yamhill Counties (See OAR 690-
39 200-0028(3)).

40
41 Stat. Auth.: ORS 183, ORS 536, ORS 537 & ORS 540

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- 1 Stats. Implemented:
- 2 Hist.: WRD May-2008 cert. & f. ef. 7-1-08

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