

Secretary of State
Certificate and Order for Filing
PERMANENT ADMINISTRATIVE RULES

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

Water Resources Commission
Agency and Division

690
Administrative Rules Chapter Number

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

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

ADOPT:

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

See attachment

AMEND:

See attachment

REPEAL: N/A

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

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

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

Other Authority

ORS 536.090 & 537.505 - 537.795
Stats. Implemented: ORS

RULE SUMMARY

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occur throughout the rules in order to correct grammatical mistakes, add clarity to the existing rules and delete outdated information.

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


Authorized Signer

11/15/01
Date

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

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

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

Adopted

690-200-0048
690-215-0016
690-215-0045
690-215-0055
690-220-0035
690-240-0011
690-240-0014
690-240-0016
690-240-0024
690-240-0026
690-240-0082
690-240-0139

Amended

690-200-0005
690-200-0020
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690-240-0170
690-240-0180

Repeal

690-210-0020

Renumbered

690-210-0110 to 690-200-0047

Amend and Renumber

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

**OREGON ADMINISTRATIVE RULES
WATER RESOURCES DEPARTMENT
CHAPTER 690
DIVISION 220**

WELL CONSTRUCTION STANDARDS

Abandonment of Water Supply Wells

690-220-0005

Temporary Abandonment

Any **water supply** well to be temporarily removed from service, temporarily abandoned due to a recess in construction, or temporarily abandoned before commencing service, shall be capped with a watertight seal, watertight welded steel cap, or threaded cap. In the event that temporary abandonment is to be of 90 days or less, the temporary steel cap may be welded to the well casing with a minimum of four separate welds, evenly spaced, each at least ½ of an inch in length. Steel or cast iron caps shall be at least 3/16 of an inch in thickness. **Access ports and airlines, as described in OAR 690-210-0280, shall be maintained during the temporary abandonment.** During the temporary abandonment, the well must be maintained to the standards prescribed in OAR 690-215.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795

690-220-0030

Permanent Abandonment

(1) Any water supply well that is to be permanently abandoned shall be completely filled in such a manner that vertical movement of water within the well bore, including vertical movement of water within the annular space surrounding the well casing, is effectively and permanently prevented [stopped]. If a dry or non-producing water supply well is to be permanently abandoned, it shall be abandoned in accordance with these standards. Unless otherwise stated in these rules, all permanent water supply well abandonments shall be performed by a licensed water supply well constructor.

(2) 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 690-205-0080(7), plus:

(a) Method of abandonment;

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

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

Stat. Auth.: ORS 536.090 & 537.505 - 537.795

690-220-0035

Abandonment of an Existing Water Well After Replacement

A landowner who replaces an old well by drilling a new well shall permanently abandon the old well if the old well is within a setback as defined in OAR 690-210-0030. Permanent abandonment of a well located within a setback shall occur within one year after the function of the well is replaced or within one year after the water right, if applicable, is transferred to the new well, whichever is later.

Stat. Auth.: ORS 536.090 & 537.505 - 537.795

690-220-0040

Abandonment of Uncased Wells in Unconsolidated Formations

Uncased **water supply** wells to be abandoned that extend only into unconsolidated materials shall be completely filled with cement grout or concrete. This class of **water supply** wells may be abandoned using unhydrated bentonite with special standard approval. (See **Figure 220-1** [†3].)

[ED. NOTE: The Figure referenced in this rule is not printed in the OAR Compilation. Copies are available from the Water Resources Department.]

Stat. Auth.: ORS 536.090 & 537.505 - 537.795

690-220-0050

Abandonment of Uncased Wells in Consolidated Formations

Uncased **water supply** wells to be abandoned that penetrate a water-bearing rock formation shall be filled with concrete or cement grout, or **with** alternating layers of cement grout or concrete and clean gravel throughout the water-producing horizon. A concrete or cement grout plug shall be constructed from the top of the rock formation to a depth of at least 20 feet below the top of the rock formation. The remainder of the well above the rock formation shall be filled to land surface with cement grout or concrete. Plugs of cement grout or concrete, at least three feet in length, shall be placed in non-producing zones between all water-bearing zones. In all cases, a cement grout or concrete plug, at least three feet in length, shall be constructed in a non-producing stratum immediately above the uppermost water-bearing zone. This class of **water supply** wells may be abandoned using unhydrated bentonite with special standard approval. (See **Figure 220-2** [†4].)

Stat. Auth.: ORS 536.090 & 537.505 - 537.795

690-220-0060

Abandonment of Cased Wells

If the **water supply** well casing or the liner pipe is not removed during the abandonment of a well, the casing or liner shall be thoroughly ripped or perforated. **The number and size of**

perforations may vary. However, the perforations must be sufficient enough to allow grout to migrate outside the casing and effectively prevent the vertical movement of water.

Perforations are not required in the sealed interval provided proof of the original seal can be verified with the original well report. The annular space between the casing or liner and the drillhole wall shall be effectively and completely filled with cement grout applied under pressure. The remainder of the well shall be filled with cement grout or concrete. Uncased horizons in a cased well to be abandoned shall be filled in accordance with OAR 690-220-0030 through 690-220-0050. The **well** casing [~~of wells~~] to be abandoned may be severed below land surface and removed. (See **Figure 220-3** [~~15~~].)

Stat. Auth.: ORS 536.090 & 537.505 - 537.795

690-220-0070

Abandonment of Artesian Wells

In addition to OAR 690-220-0060, [The] the flow of artesian water supply wells to be abandoned 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. Cement grout or concrete shall be used to effectively fill the well to land surface. (See Figure 220-4 [16], 1986.)

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

690-220-0080

Abandonment of Driven and Jetted Wells

Provided a annular seal meeting the requirements of OAR 690-210-0180 can be confirmed, a cement grout [or concrete] plug shall be placed by grout pipe opposite all perforations or openings in the water supply well casing. The remainder of the well shall be filled with cement grout [or concrete]. If no [casing] annular seal can be confirmed, the well shall be abandoned by removing the casing and filling the borehole with an approved sealant (see OAR 690-220-0120 [0110]).

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

690-220-0090

Abandonment of Filter or Gravel Pack Wells

Filter or gravel pack **water supply** wells may **only** be abandoned **under a special standard.** [~~only with prior written approval from [of] the Director of the method proposed for abandonment of the particular well.~~] Any method of abandonment proposed must ensure that all perforated sections of the casing will be pressure grouted throughout, and that the remainder of the well is filled with cement grout [~~or concrete~~]. (**See definition of pressure grout in OAR 690-200**)

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

690-220-0095

Abandonment of Dug Wells

(1) Abandonment of a dug **water supply** well shall be approved by the Department before work is started. The Department shall be notified of the proposed abandonment. The notification shall include:

- (a) Location;
- (b) Name of the owner;
- (c) Well diameter;
- (d) Well depth;
- (e) Depth to water;
- (f) Type of well casing or liner material if any; and
- (g) The proposed method of abandonment.

(2) A method to be used in the abandonment will be approved by the Department if the method will adequately protect the ground water resource. Dug wells penetrating more than one water bearing zone shall be abandoned in a manner to eliminate the possibility of leakage from one water bearing zone to another.

(3) The well shall be abandoned by a licensed **water supply** well constructor, a landowner with a landowner well construction permit and bond, or **by a landowner** in the presence of the watermaster or other Department representative.

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

690-220-0100

Obstructions and Possible Contaminants

All obstructions or debris which may interfere with effective sealing operations shall be removed from the **water supply** well to be abandoned. Any foreign matter capable of causing ground water contamination shall be removed prior to placing any sealing material.

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

690-220-0110

Removal of Well Casing During Abandonment

If the casing of a **water supply** well is removed during abandonment, the well shall be plugged and sealed in accordance with OAR 690-220-0030 through 690-220-0050 and shall be filled with sealing materials as the casing is removed.

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

690-220-0120

Cement Grout

Cement grout for use in abandonment operations shall conform to the requirements of OAR 690-210-0310.

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

690-220-0130

Concrete

Concrete for use in abandonment operations shall conform to the requirements of OAR 690-210-0315 [430].

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

690-220-0140

Method of Placement of Concrete or Cement Grout

Concrete or cement grout used as a sealing material in abandonment operations shall be introduced at the bottom of the well or required sealing interval and placed progressively upward to the top of the well. All such sealing materials shall be placed by the use of a grout pipe [~~trémie,~~] or by dump bailer in order to avoid segregation or dilution of the sealing materials.

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