

CERTIFICATE AND ORDER  
FOR FILING  
**PERMANENT**  
ADMINISTRATIVE RULES WITH THE SECRETARY OF STATE

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Nov 4 2 13 PM '88

BARBARA J. ...  
SECRETARY OF STATE

I HEREBY CERTIFY that the attached copy is a true, full and correct copy of PERMANENT rule(s) adopted on October 28, 1988  
(Date)

by the Water Resources Commission  
(Department) (Division)

to become effective upon filing  
(Date)

The within matter having come before the Water Resources Commission after  
(Department) (Division)

all procedures having been in the required form and conducted in accordance with applicable statutes and rules and being fully advised in the premises:

Notice of Intended Action published in Secretary of State's Bulletin: NO  YES  Date Published: July 15, 1988

NOW THEREFORE, IT IS HEREBY ORDERED THAT the following action be taken: (List Rule Number(s) or Rule Title(s) on Appropriate Lines Below)

Adopted:  
(New Total Rules)    OAR 690-09-010 through 690-09-050   

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Amended:  
(Existing Rules)   

NOV 4 1988

...aled:  
(Total Rules Only)   

LEGISLATIVE COUNSEL'S  
OFFICE

as Administrative Rules of the Water Resources Department Resource Management Division  
(Department) (Division)

DATED this 4th day of November, 19 88

By: William N. Young  
(Authorized Signer)

Title: Director

Statutory Authority: ORS    or   

Chapter(s) 537.730 and 537.775 Oregon Laws 19 87 or

House Bill(s)    19    Legislature; or Senate Bill(s) 135 19 87 Legislature

Subject Matter:

The rules guide the Department in making determinations whether existing or proposed ground water appropriations have the potential to cause substantial interference with a surface water supply and in controlling such interference.

For further information contact Michael J. Zwart Phone: 378-8456  
(Rule Coordinator)

November 4, 1988

**OREGON ADMINISTRATIVE RULES  
WATER RESOURCES DEPARTMENT  
CHAPTER 690  
DIVISION 9  
GROUND WATER INTERFERENCE WITH SURFACE WATER**

**690-009-0010**

**Basis for Regulatory Authority and Purpose**

The right to reasonable control of the ground waters of the State of Oregon has been declared to belong to the public. Through the provisions of the Ground Water Act of 1955, ORS 537.505 to 537.795, the Water Resources Commission has been charged with administration of the rights of appropriation and use of the ground water resources of the state. These rules govern the use of ground waters, pursuant to ORS 537.730 and 537.775, where the ground water is hydraulically connected to, and the use interferes with, surface waters.

Stat. Auth.: ORS Ch. 537

Hist.: WRD 17-1988, f. & cert. ef. 11-4-88

**690-009-0020**

**Definitions**

(1) "Confined Aquifer": means an aquifer in which ground water is under sufficient hydrostatic head to rise above the bottom of the overlying confining bed, whether or not the water rises above land surface.

(2) "Commission": means the Water Resources Commission.

(3) "Confining Bed": means a layer of low permeability material immediately overlying a confined aquifer.

(4) "Department": means the Water Resources Department, and consists of the Director of the Department and all personnel employed in the Department including but not limited to all watermasters appointed under ORS 540.020 (ORS 536.039).

(5) "Director": means the Water Resources Director.

(6) "Hydraulic Connection": means that water can move between a surface water source and an adjacent aquifer.

(7) "Unconfined Aquifer": means an aquifer in which the hydrostatic head at the upper surface of the ground water is atmospheric.

Stat. Auth.: ORS Ch. 537

Hist.: WRD 17-1988, f. & cert. ef. 11-4-88

**690-009-0030**

**General Policy**

The following rules establish criteria to guide the Department in making determinations whether wells have the potential to cause substantial interference with surface water supplies and in controlling such interference. The rules apply to all wells, as defined in ORS 537.515 (7), and to all existing and proposed

*Note: These rules were filed with the Office of the Secretary of State and took effect on November 4, 1988. 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.*

appropriations of ground water except the exempt uses under ORS 537.545. The authority under these rules may be locally superseded where more specific direction is provided by the Commission after the effective date of adoption of these rules.

Stat. Auth.: ORS Ch. 537

Hist.: WRD 17-1988, f. & cert. ef. 11-4-88

#### **690-009-0040**

#### **Determination of Hydraulic Connection and Potential for Substantial Interference**

For the purposes of permitting and distributing ground water, the potential for substantial interference with surface water supplies shall be determined by the Department.

(1) The Department shall determine whether wells produce water from an unconfined or confined aquifer. Except for wells that satisfy the conditions in section (2) of this rule the Department shall further determine whether the aquifer is hydraulically connected to the surface water source. The basis of the determination shall be information provided on the Water Well Report for any well in question. If there is no Water Well Report available or if the information provided is inadequate, the Department shall make the determination on the basis of the best available information. Such information may include other Water Well Reports, topographic maps, hydrogeologic maps or reports, water level and other pertinent data collected during a field inspection, or any other available data or information that is appropriate, including any that is provided by potentially affected parties.

(2) All wells located a horizontal distance less than one-fourth mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source, unless the applicant or appropriator provides satisfactory information or demonstration to the contrary. Department staff may provide reasonable assistance to the applicant or appropriator in acquiring the satisfactory information.

(3) The Department shall determine the horizontal distance between any well in question and the nearest surface water source on the basis of the edge of the surface water source as also determined by the Department.

(4) All wells that produce water from an aquifer that is determined to be hydraulically connected to a surface water source shall be assumed to have the potential to cause substantial interference with the surface water source if the existing or proposed ground water appropriation is within one of the following categories:

(a) The point of appropriation is a horizontal distance less than one-fourth mile from the surface water source; or

(b) The rate of appropriation is greater than five cubic feet per second, if the point of appropriation is a horizontal distance less than one mile from the surface water source; or

(c) The rate of appropriation is greater than one percent of the pertinent adopted minimum perennial streamflow or instream water right with a senior priority date, if one is applicable, or of the discharge that is equaled or exceeded 80 percent of time, as determined or estimated by the Department, and if the point of appropriation is a horizontal distance less than one mile from the surface water source; or

(d) The ground water appropriation, if continued for a period of 30 days, would result in stream depletion greater than 25 percent of the rate of appropriation, if the point of appropriation is a horizontal distance less than one mile from the surface water source. Using the best available information, stream depletion shall be determined or estimated by the Department, employing at least one of the following methods:

(A) Suitable equations and graphical techniques that are described in pertinent publications (such as "Computation of Rate and Volume of Stream Depletion by Wells", by C.T. Jenkins, in: "**Techniques**

of Water-Resources Investigations of the United States Geological Survey: Book 4, Chapter D1");

(B) A computer program or ground water model that is based on such or similar equations or techniques.

(5) Any wells, other than those covered in section (4) of this rule, that produce water from an aquifer that is determined to be hydraulically connected to the surface water source may be determined by the Department to have the potential to cause substantial interference with the surface water source. In making this determination, the Department shall consider at least the following factors:

(a) The potential for a reduction in streamflow or surface water supply; or

(b) The potential to impair or detrimentally affect the public interest as expressed by an applicable closure on surface water appropriation, minimum perennial streamflow, or instream water right with a senior priority date; or

(c) The percentage of the ground water appropriation that was, or would have become, surface water; or

(d) Whether the potential interference would be immediate or delayed; or

(e) The potential for a cumulative adverse impact on streamflow or surface water supply.

(6) All wells that produce water from an aquifer that is not hydraulically connected to a surface water source shall be assumed not to interfere with the surface water source.

**[Publications:** The publication(s) referred to or incorporated by reference in this rule are available from the Water Resources Department.]

Stat. Auth.: ORS Ch. 537

Hist.: WRD 17-1988, f. & cert. ef. 11-4-88

#### **690-009-0050**

##### **Ground Water Controls**

(1) The Department shall review existing ground water appropriations to determine the potential to cause substantial interference with a surface water source on a case-by-case basis, in accordance with OAR 690-009-0040, whenever substantial interference with a surface water source is suspected to exist by the Department.

(2) Whenever the Department determines that substantial interference with a surface water supply exists, the Department shall control those groundwater appropriations that have been determined under section (1) of this rule to have the potential to cause substantial interference. The controls shall be similar to or compatible with, but not more restrictive than controls on the affected surface water source, in accordance with the relative dates of priorities of the ground water and surface water appropriations:

(a) Prior to controlling the use of any well greater than 500 feet from a surface water source, the Department shall determine whether any control would provide relief to the surface water supply in an effective and timely manner. The Department shall make the determination on the basis of the best available information, employing at least one of the methods set forth in OAR 690-009-0040(4)(d);

(b) The Department shall control the use of wells greater than one mile from a surface water source only through a critical ground water area determination in accordance with ORS 537.730 through 537.740.

Stat. Auth.: ORS Ch. 537

Hist.: WRD 17-1988, f. & cert. ef. 11-4-88

WATER RESOURCES DEPARTMENT  
ADMINISTRATIVE RULES  
CHAPTER 690  
DIVISION 9  
GROUND WATER INTERFERENCE WITH SURFACE WATER

Basis for regulatory authority and purpose

690-09-010 The right to reasonable control of the ground waters of the State of Oregon has been declared to belong to the public. Through the provisions of the Ground Water Act of 1955, ORS 537.505 to 537.795, the Water Resources Commission has been charged with administration of the rights of appropriation and use of the ground water resources of the state. These rules govern the use of ground waters, pursuant to ORS 537.730 and 537.775, where the ground water is hydraulically connected to, and the use interferes with, surface waters.

Definitions

690-09-020 (1) Confined aquifer: means an aquifer in which ground water is under sufficient hydrostatic head to rise above the bottom of the overlying confining bed, whether or not the water rises above land surface.

(2) Commission: means the Water Resources Commission.

(3) Confining bed: means a layer of low permeability material immediately overlying a confined aquifer.

(4) Department: means the Water Resources Department, and consists of the Director of the Department and all personnel employed in the Department including but not limited to all watermasters appointed under ORS 540.020 (ORS 536.039).

(5) Director: means the Water Resources Director.

(6) Hydraulic connection: means that water can move between a surface water source and an adjacent aquifer.

(7) Unconfined aquifer: means an aquifer in which the hydrostatic head at the upper surface of the ground water is atmospheric.

General Policy

690-09-030 The following rules establish criteria to guide the Department in making determinations whether wells have the potential to cause substantial interference with surface water supplies and in controlling such interference. The rules apply to all wells, as defined in ORS 537.515(7), and to all existing and proposed appropriations of ground water except the exempt uses under ORS 537.545. The authority under these rules may be locally superseded where more specific direction is provided by the Commission after the effective date of adoption of these rules.

Determination of hydraulic connection and potential for substantial interference

690-09-040 For the purposes of permitting and distributing ground water, the potential for substantial interference with surface water supplies shall be determined by the Department.

(1) The Department shall determine whether wells produce water from an unconfined or confined aquifer. Except for wells that satisfy the conditions in section (2), the Department shall further determine whether the aquifer is hydraulically connected to the surface water source. The basis of the determination shall be information provided on the Water Well Report for any well in question. If there is no Water Well Report available or if the information provided is inadequate, the Department shall make the determination on the basis of the best available information. Such information may include other Water Well Reports, topographic maps, hydrogeologic maps or reports, water level and other pertinent data collected during a field inspection, or any other available data or information that is appropriate, including any that is provided by potentially affected parties.

(2) All wells located a horizontal distance less than one-fourth mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source, unless the applicant or appropriator provides satisfactory information or demonstration to the contrary. Department staff may provide reasonable assistance to the applicant or appropriator in acquiring the satisfactory information.

(3) The Department shall determine the horizontal distance between any well in question and the nearest surface water source on the basis of the edge of the surface water source as also determined by the Department.

(4) All wells that produce water from an aquifer that is determined to be hydraulically connected to a surface water source shall be assumed to have the potential to cause substantial interference with the surface water source if the existing or proposed ground water appropriation is within one of the following categories.

(a) The point of appropriation is a horizontal distance less than one-fourth mile from the surface water source; or

(b) The rate of appropriation is greater than five cubic feet per second, if the point of appropriation is a horizontal distance less than one mile from the surface water source; or

(c) The rate of appropriation is greater than one percent of the pertinent adopted minimum perennial streamflow or instream water right with a senior priority date, if one is applicable, or of the discharge that is equaled or exceeded 80 percent of time, as determined or estimated by the Department, and if the point of appropriation is a horizontal distance less than one mile from the surface water source; or

(d) The ground water appropriation, if continued for a period of 30 days, would result in stream depletion greater than 25 percent of the rate of appropriation, if the point of appropriation is a horizontal distance less than one mile from the surface water source. Using the best available information, stream depletion shall be determined or estimated by the Department, employing at least one of the following methods:

(A) Suitable equations and graphical techniques that are described in pertinent publications (such as "Computation of Rate and Volume of Stream Depletion by Wells", by C.T. Jenkins, in: "Techniques of Water-Resources Investigations of the United States Geological Survey", Book 4, Chapter D1),

(B) A computer program or ground water model that is based on such or similar equations or techniques.

(5) Any wells, other than those covered in section (4) of this rule, that produce water from an aquifer that is determined to be hydraulically connected to the surface water source may be determined by the Department to have the potential to cause substantial interference with the surface water source. In making this determination, the Department shall consider at least the following factors:

(a) The potential for a reduction in streamflow or surface water supply, or

(b) The potential to impair or detrimentally affect the public interest as expressed by an applicable closure on surface water appropriation, minimum perennial streamflow, or instream water right with a senior priority date, or

(c) The percentage of the ground water appropriation that was, or would have become, surface water, or

(d) Whether the potential interference would be immediate or delayed, or

(e) The potential for a cumulative adverse impact on streamflow or surface water supply.

(6) All wells that produce water from an aquifer that is not hydraulically connected to a surface water source shall be assumed not to interfere with the surface water source.

#### Ground water controls

690-09-050 (1) The Department shall review existing ground water appropriations to determine the potential to cause substantial interference with a surface water source on a case by case basis, in accordance with OAR 690-09-040, whenever substantial interference with a surface water source is suspected to exist by the Department.

(2) Whenever the Department determines that substantial interference with a surface water supply exists, the Department shall control those groundwater appropriations that have been determined under Section (1) to have the potential to cause substantial interference. The controls shall be similar to or compatible with, but not more restrictive than controls on the affected surface water source, in accordance with the relative dates of priorities of the ground water and surface water appropriations.

(a) Prior to controlling the use of any well greater than 500 feet from a surface water source, the Department shall determine whether any control would provide relief to the surface water supply in an effective and timely manner. The Department shall make the determination on the basis of the best available information, employing at least one of the methods set forth in OAR 690-09-040 (4) (d).

(b) The Department shall control the use of wells greater than one mile from a surface water source only through a critical ground water area determination in accordance with ORS 537.730 through 537.740.