[APPENDIX 200-2

METHODS FOR ATTACHING WELL IDENTIFICATION TAG

WATER SUPPLY WELLS

Tags should be placed in an accessible and visible location. Place tags at least 6 inches above ground level.

Attach tags to permanent items such as well casing or monuments, NOT to pumps, pump equipment, water delivery lines or sanitary well seals (well caps).

The following methods are recommended by the Oregon Water Resources Department:

A Strap the tag to the well casing or access port. Stainless steel bands or large hose clamps designed for exterior use are recommended. Straps may be available at electrical, auto supply or construction supply stores. Ultra violet resistant nylon straps are also acceptable. Any band used should be designed for exterior applications.

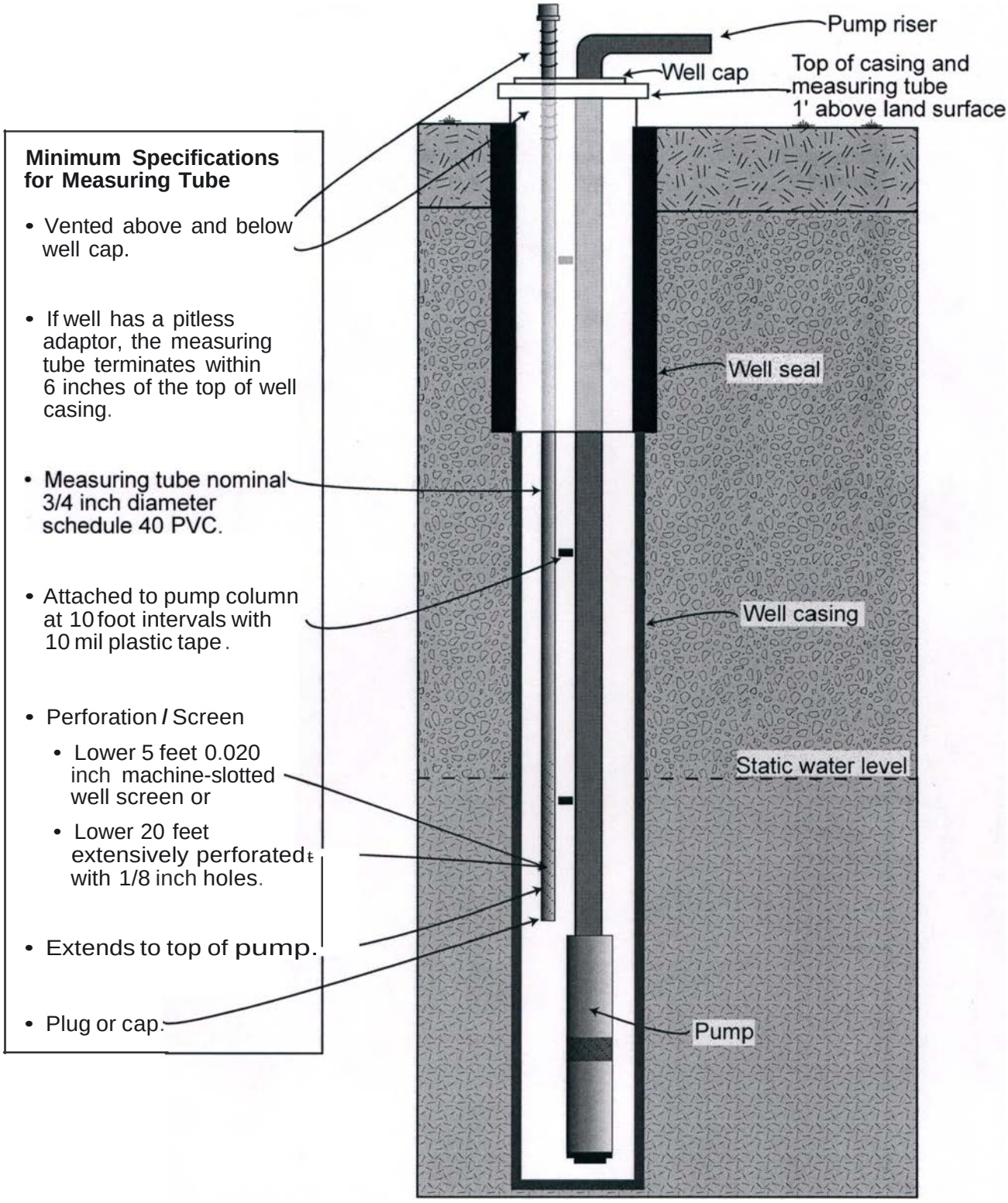
B. Rivet or bolt the tag to the well casing. Stainless steel rivets may be used.

Other options may be used provided the installation is permanent and visible. Please contact the Water Resources Department for other options.]

[Text to be deleted is bracketed]
Language to be added is bolded and underlined.

Measuring Tube Diagram and Specifications

Figure 200-5



Minimum Specifications for Measuring Tube

- Vented above and below well cap.
- If well has a pitless adaptor, the measuring tube terminates within 6 inches of the top of well casing.
- Measuring tube nominal 3/4 inch diameter schedule 40 PVC.
- Attached to pump column at 10 foot intervals with 10 mil plastic tape.
- Perforation / Screen
  - Lower 5 feet 0.020 inch machine-slotted well screen or
  - Lower 20 feet extensively perforated with 1/8 inch holes.
- Extends to top of pump.
- Plug or cap.

This diagram details the [recommended] minimum standards for a dedicated measuring tube. A measuring tube may be constructed in a manner that exceeds these standards without prior Department approval. The dedicated measuring tube shall not be reduced in size over the length of the pipe and shall remain free from wires or any other obstruction.

OREGON ADMINISTRATIVE RULES
WATER RESOURCES DEPARTMENT
CHAPTER 690, DIVISION 200
WATER SUPPLY WELL CONSTRUCTION STANDARDS

TABLE 200-1

WHICH [SET OF] STANDARDS APPL Y[IES]?

The Department [currently] regulates the construction of borings through which ground[ ]water [could]**may** become contaminated. The type of boring (and its purpose) will determine which set of regulations apply. Questions often arise as to how a certain boring is to be regulated. In general, if the purpose of a boring is to seek water then it is considered a well. The table below lists common types of holes and [which category they fall into]**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 [there is a question as to what standard applies or what agency may need to be contacted.]**you have any questions.**

The general standards and their Oregon Administrative Rule reference are:

Water Supply Wells	OAR 690-200 through 690-235
Monitoring Wells	OAR 690-240
Other Holes	OAR 690-240-0030
Geotechnical Holes	OAR 690-240-0035 **through 690-240-0049**

Description of Boring:	Standards that Apply
Air Sparging Well	Monitoring Well
Aquifer Storage and Recovery Well	Water Supply Well
Cathodic Protection Hole	Geotechnical Hole
Community Well	Water Supply Well
Construction Hole	Other Hole
Dewatering Well	Water Supply Well
Domestic Well	Water Supply Well
Drive Point (Core[ing] **holes**)	Geotechnical Hole
Drive Point Well (Dewatering)	Water Supply Well
Drive Point **Well** (Water Sampling)	Monitoring Well
Drive Point **Well** (Water Supply)	Water Supply Well
Dry (Disposal) Well	Other Hole
Elevator Shaft	Other Hole
Extraction Well	Monitoring Well
Gas Migration Hole	Geotechnical Hole
Geothermal Well	Water Supply Well
Gravel Pit	Other Hole
Heat Exchange Hole (Closed Loop)	Geotechnical Hole
Heat Exchange Hole (Open Loop)	Water Supply Well
Horizontal Drain (Slope Stability)	Geotechnical Hole
Horizontal Well (Monitoring)	Monitoring Well
Horizontal Well (Water Supply)	Water Supply Well
Inclinometer	Geotechnical Hole
Industrial Well	Water Supply Well

[Text to be deleted is bracketed]
Language to be added is bolded and underlined.

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

[Text to be deleted is bracketed]
Language to be added is bolded and underlined.

690-200-0028

Designated Special Area Standards

(4) Special Area Standards for New, Altered, Deepened or Converted Water Supply Wells in the "Mosier Area," Wasco County.

(i) A rough log that describes the kind and nature of the material in each **formation**[stratum] penetrated, with at least one entry for each change of formation, the thickness of aquifers and available static water level measurements; and

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WELL CONSTRUCTION AND MAINTENANCE

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[Label]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 **in an accessible and visible location in the following manner:**[as described in **Appendix 200-2**.]

(a) Labels shall be at least six inches above ground surface and shall be permanently attached to the outside of the casing using a stainless steel band, stainless steel rivets, or screws; and

(b) Labels shall be attached in such a manner as to be easily readable upon inspection.

(2) Identification labels may not be attached to pumps, pump equipment, water delivery lines, or well caps.

(3) The identification **label** number shall be recorded on the well report **at the time the report is submitted**. [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.]

(4) Identification labels shall be furnished by the Department.

([2]**5**) 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 **label** number on the well report.

([3]**6**) When a well that has a well identification label [(tag)]on it is permanently abandoned, the well identification **label**[tag] shall be destroyed. The well identification **label**[tag] shall not be reused.

[Text to be deleted is bracketed]
Language to be added is bolded and underlined.

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WELL CONSTRUCTION AND MAINTENANCE

690-200-0050

Definitions

(17) "Casing Seal" means the water tight seal established in the well bore between the well casing and the drillhole wall to prevent the inflow and movement of surface water or shallow ground water in the well annulus, or to prevent the outflow or movement of water under artesian or hydrostatic pressures. **This term is synonymous with "annular seal" or "surface seal".**

(25) "Confining **Interval**[Formation]" means **a low permeability material such as clay or solid, unfractured, consolidated rock**[the "impermeable" stratum] immediately overlying an artesian (confined) aquifer (see Figure 200-2).

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

(6[1]**0**) "Inspection Port" means an orifice or other viewing device from which the low-pressure drain and check valve may be observed.

(6[2]**1**) "Jetted Well" means a well in which the drillhole excavation is made by the use of a high velocity jet of water.

(6[3]**2**) "Leakage" means movement of surface and/ or subsurface water around the well casing or seal.

(6[4]**3**) "Liner Pipe" means the inner tubing, pipe, or conduit installed inside the well casing or lower well bore. The liner pipe is used to protect against caving formations and is not permanently affixed to the drillhole wall or casing.

(6[5]**4**) "Lower Drillhole" means that part of the well bore extending below the **casing**[surface] seal interval in a well.

(6[6]**5**) "Mineralized Water" means any naturally occurring ground[ ]water containing an amount of dissolved chemical constituents limiting the beneficial uses to which the water may be applied.

(6[7]**6**) "Monitoring Well" means a well designed and constructed to determine the physical (including water level), chemical, biological, or radiological properties of ground[ ]water.

[Text to be deleted is bracketed]
Language to be added is bolded and underlined.

(6[8]**7**) "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).

(6[9]**8**) "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).

([70]**69**) "Municipal or Quasi-Municipal Well" means a water supply well owned by a municipality or nonprofit corporation that may be used as a community or public water supply.

(7[1]**0**) "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.

(7[2]**1**) "Other Hole" means a hole other than a water supply well, a monitoring well, or geotechnical hole, however constructed, in naturally occurring or artificially emplaced earth materials, through which ground[ ]water can become contaminated. Holes constructed under ORS Chapters 517, 520, and 522 are not subject to these rules. Other holes are regulated under OAR 690-240. Examples of other holes are listed in 690-240-0030.

(7[3]**2**) "Perched Ground[W]**w**ater" means ground[ ]water held above the regional or main water table by a less permeable underlying earth or rock material (see Figure 200-2).

(7[4]**3**) "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.

(7[5]**4**) "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.

(7[6]**5**) "Petcock Valve" is a valve used to contain pressure which when opened will drain the line or pipe.

(76) "Petroleum" means gasoline, crude oil, fuel oil, diesel oil, lubricating oil, oil sludge, oil refuse, and crude oil fractions and refined petroleum fractions, including gasoline, kerosene, heating oils, diesel fuels, and any other petroleum-related product or waste or fraction thereof that is liquid at a temperature of 60 degrees Fahrenheit and a pressure of 14.7 pounds per square inch absolute. "Petroleum" does not include any substance identified as a hazardous waste under 40 CFR Part 261.

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

(10[4]**3**) "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.

(10[5]**4**) "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.

(10[6]**5**) "System Interlock" means an interlocking mechanism used to link irrigation pumps and chemical injection units, other pumps, or supply tanks so designed that in the event of irrigation pump malfunction or failure, shutdown of the chemical injection units will occur. (Back-siphon prevention)

(10[7]**6**) "Unconsolidated Formation" means naturally occurring, loosely cemented, or poorly indurated materials including clay, sand, silt, and gravel.

(10[8]**7**) "Underground Injection" means the emplacement or discharge of fluids to the subsurface.

(10[9]**8**) "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.

(1[10]**09**) "Upper Oversize Drillhole" means that part of the well bore extending from land surface to the bottom of the surface seal interval.

(11[1]**0**) "Violation" means an infraction of any statute, rule, standard, order, license, compliance schedule, or any part thereof and includes both acts and omissions.

(11[2]1) "Water Supply Well" means a well, other than a monitoring well, that is used to beneficially withdraw or beneficially inject ground or surface water. Water supply wells include, but are not limited to, community, dewatering, domestic, irrigation, industrial, municipal, and aquifer storage and recovery wells.

(11[3]2) "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).

(11[4]3) "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).

(11[5]4) "Water Supply Well Drilling Machine" means any power-driven driving, jetting, percussion, rotary, boring, digging, augering machine, or other equipment used in the construction or alteration of water supply wells.

(11[6]5) "Water Table" means the upper surface of an unconfined water body, the surface of which is at atmospheric pressure and fluctuates seasonally. The water table is defined by the levels at which water stands in wells that penetrate the water body (see Figure 200-2).

(11[7]6) "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.

(11[8]7) "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 522.055 is regulated by the Department of Geology and Mineral Industries.

(118) "Wet Soil Monitoring Hole" means a shallow geotechnical hole set vertically in the ground and constructed to a depth of three and one-half feet or less for studying and/or monitoring the upper portion of the shallowest water-bearing unit within and immediately below the surface soil horizon.