

Neighborhood Ground Water Network



Ground Water Level Measurement

Oregon State Water Resources Department
in collaboration with
Oregon State University Sea Grant Extension

Presentation Outline

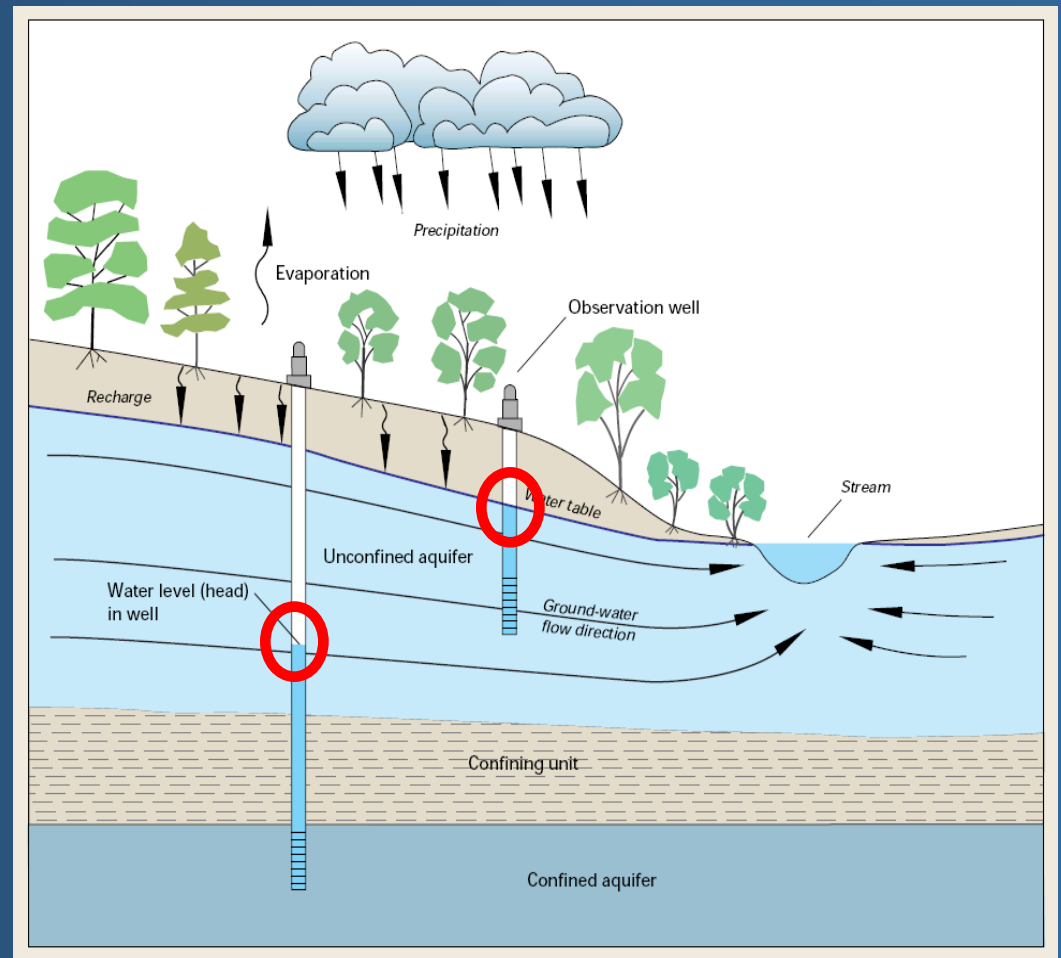
Ground Water Level Measurement

- What is a ground water level measurement?
- Why measure the water level in a well?
- Measurement Documentation
- Water Level Meters
- Water Level Measurement

Ground Water Level Measurement

What is a ground water level measurement?

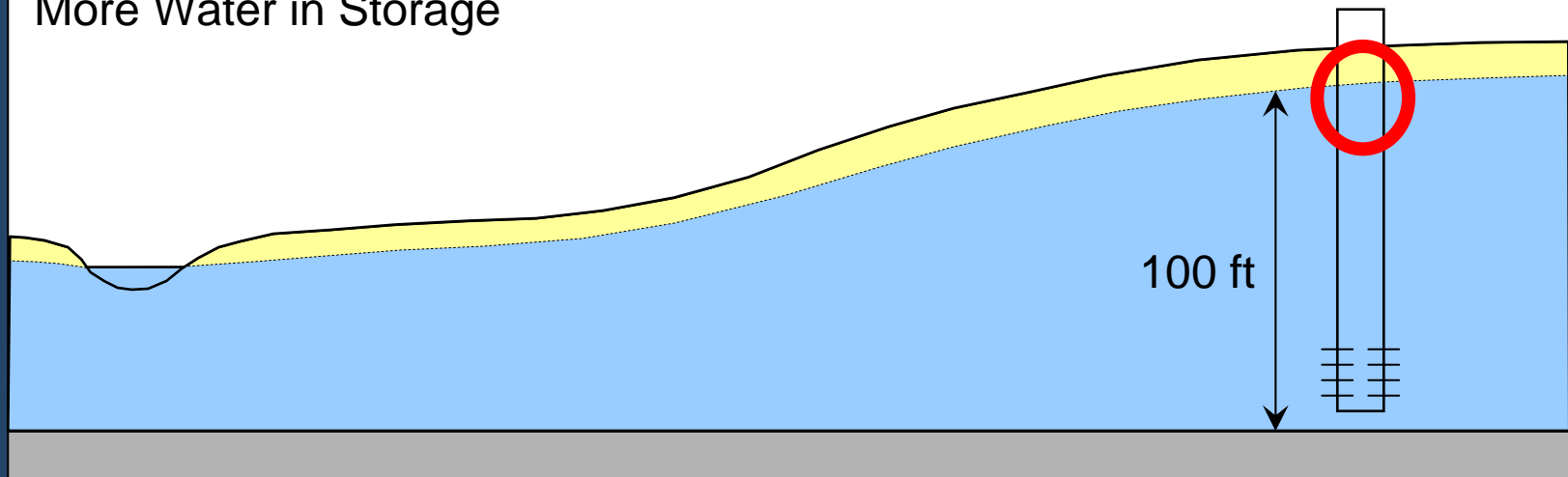
- A measurement of the water level below land surface in a well.
- Static (non-pumping) ground water level measurements represent conditions in the surrounding aquifer.
- Measurements over time give a better representation of aquifer conditions.



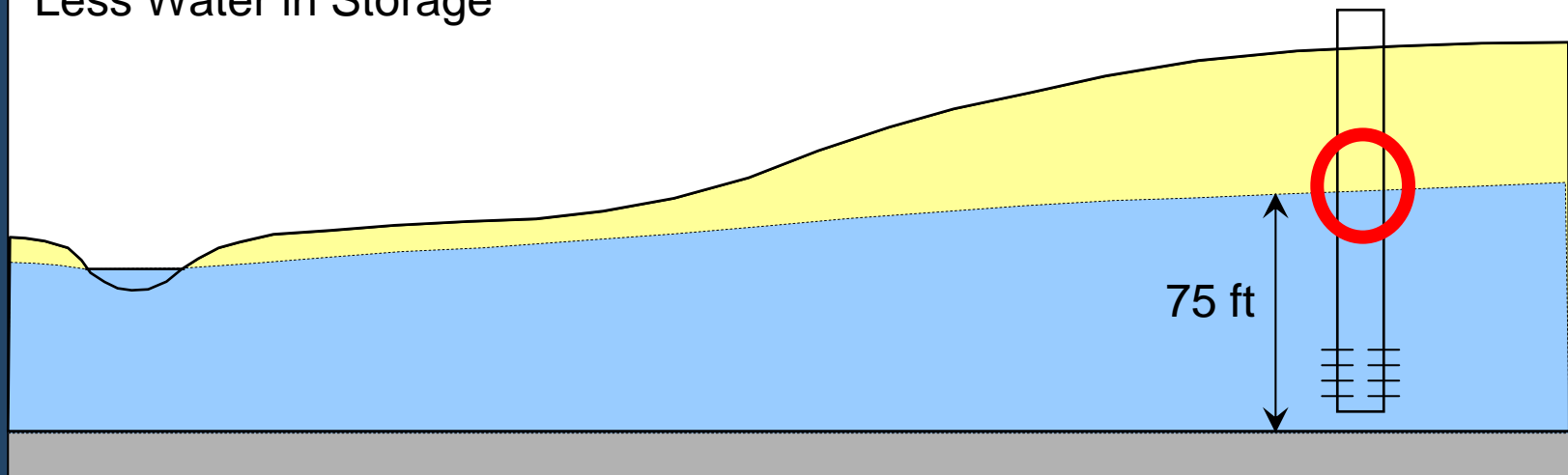
Source: USGFS Circular 1217

Ground Water Storage

More Water in Storage



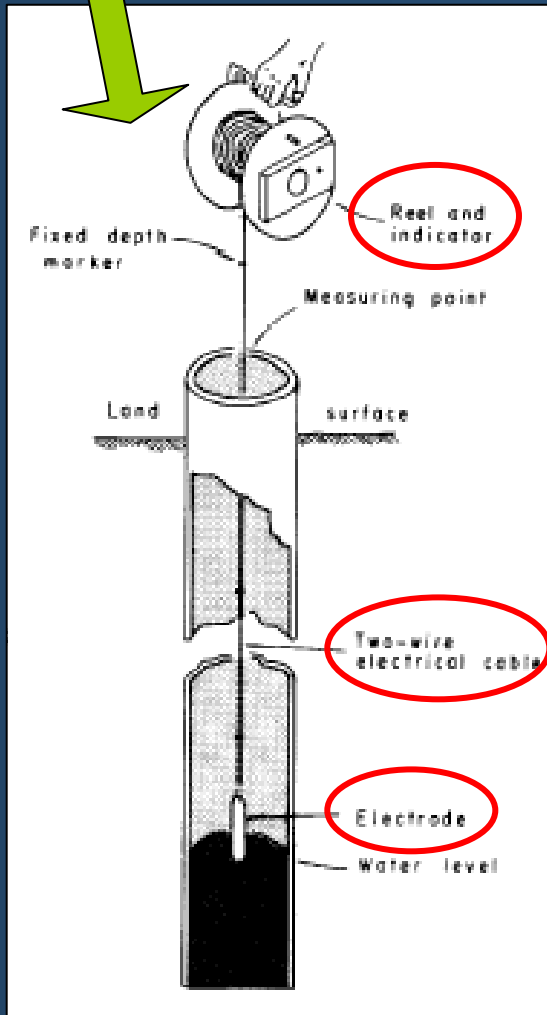
Less Water in Storage



Source: Karl Wozniak, Oregon Water Resources Department

Ground Water Level Measurement

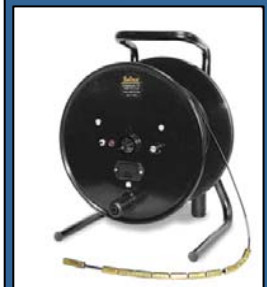
Electric Sounding Device



Source: USGFS Water Supply Paper 2220

How do you take a ground water level measurement?

- Some ways include using a graduated steel tape, existing air line, or an electric sounding device.
- This program will only include instructions for an electric sounding device (water level meter).



Water Level Meter

Reel and Battery



Coaxial Line



Probe



Copper Wire and Tubing



Ground Water Level Measurement

Why measure the ground water level in a well?

- To manage and protect the water supply.
- To spot problems with your well equipment.
- To understand relationships between wells in your community.
- To interpret the “health” of the surrounding aquifer.



A “Good” Measuring Program

The United States Geological Survey (USGS) says -

A good monitoring program consists of:

- A wide range of observation wells.
- More frequent and longer periods of measurement.
- Quality data collection.
- Accurate data reporting.

Bad data = Bad Interpretation



Ground-Water-Level Monitoring and the Importance of Long-Term Water-Level Data

Circular 1217



U.S. Department of the Interior
U.S. Geological Survey

Measurement Documentation

- Well Information Sheet
- Water Level Data Sheet
- 'How to Measure the Water Level in a Well' Information Booklet

Don't forget to fill out your
Well Information Sheet
before your measure.



How to Measure the Water Level in a Well

(using an electric sounding device)



Oregon Water Resources Department
in collaboration with
Oregon State University Sea Grant Extension February 2008

Neighborhood Ground Water Network

Well Information Sheet

Well Name: Red Shed Well Number One Well Tag No.: L-10461

Well Location:

Well Address: 4321 West Valley Road, Salem, Oregon 97304

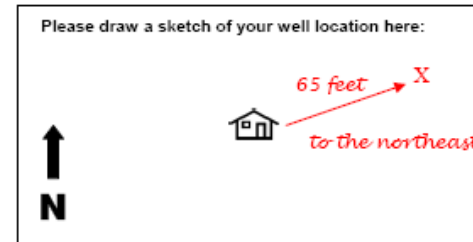
County: Polk

Tax Lot No.: 063W08 12345

Township: 6 N or S

Range: 3 E or W

Section: 8



Enter the GPS location for your well, if available.

Degrees / Minutes / Seconds

Decimal Degrees

Latitude (N)

 °

 '

 "

Longitude (W)

 °

 '

 "

Latitude (N)

4	4	.	5	7	9	2	1
---	---	---	---	---	---	---	---

Longitude (W)

-1	2	3	.	2	6	7	4	1
----	---	---	---	---	---	---	---	---

Well Use and History:

Use: ☐ Unused ☒ Domestic ☐ Irrigation ☐ Industrial ☐ Community ☐ Other _____

Pump Type: ☐ None ☒ Submersible ☐ Turbine ☐ Other _____

Pump Depth: 150 feet Well Depth: 193 feet

Enter all well logs connected to your well (include well logs for deepening, reconditionings, or other well alterations).

Well Log Number	Well Log Type	Date Well Completed	Owner Name on Well Log
<u>POLK 11111</u>	<u>New</u>	<u>December 1, 2005</u>	<u>C.H. Herring</u>
<u>POLK 11112</u>	<u>Deepening</u>	<u>December 1, 2006</u>	<u>C.H. Herring</u>

Property Owner:

Name: Jane Wellinger Phone (H): 503-123-1234

Address: Same as above. Phone (W): 503-321-4321

City / State / Zip: Same as above. Phone Cell: None available.

Email: Jane.Wellinger@emailserver.com

Neighborhood Ground Water Network

Water Level Data Sheet

Well Name Red Shed Well Number One

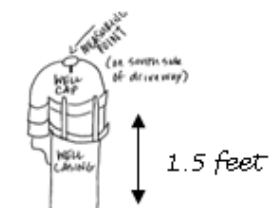
Well Tag No. L-10461

Measuring Points (MP): Please update if the measuring point changes.

Month/ Day /Year	feet +/- land surface*	Description
01/22/2009	+1.5 feet	Remove well seal cap and measure on west side of casing edge.

* feet above (+) or below (-) land surface.

Measuring Point Sketch:



Water Levels:

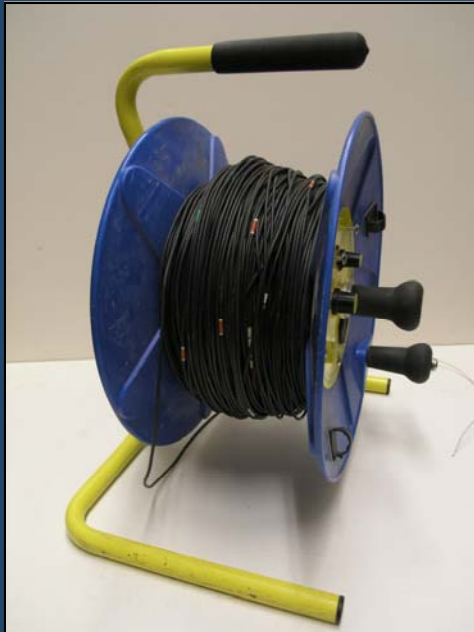
Month	Day	Year	Time	HOLD (Coaxial Tape)	CUT (Coaxial Tape)	Tape Missing (-)	Water Level Below MP (=)	MP Correction (+) or (-)	Water Level Below Land Surface (=)	Well Status ^a	Pump Idle Time	Measured By:
Jan	22	2009	1:25	222	2.34		224.34	~ 1.5	222.84	S	3 hrs	Geordi La Forge

* Status: S = Static, R = Rising, P = Pumping, F = Flowing, D = Falling

PLEASE USE THE REVERSE SIDE TO RECORD MONTHLY WATER LEVEL COMMENTS

Water Level Meters

COAXIAL WATER LEVEL METER



A coaxial water level meter has a thin line and should be used in a well with a narrow access port or with an installed pump that might restrict the use of a water level meter with a flat tape.

OR

FLAT-TAPE WATER LEVEL METER



Danger: If you get this type of meter stuck in your well, you might have to pay to pull the well pump!

A flat-tape water level meter has a flat tape, usually around 3/4-inch wide, and should only be used in well with a dedicated measuring tube.

Water Level Meters

Participants in the Eola Hills may either:

Purchase
(or rent)

OR

Check-Out



Form a neighborhood group to purchase a water level meter together. OWRD will provide you with a water level meter vendor list.



The 4-H Conference and Education Center
5390 4-H Rd. NW
Salem OR 97304
503-371-7920

Step-by-Step Measurement

Background Information

1) Well ID Number OWRD Website

If there is no well tag on your well, please contact Oregon Water Resources Department to fill out a well tag application.

2) Water Well Report OWRD Website

Check the well report for important information about the static water level (non-pumping) when your well was drilled, the depth of the well, the depth of the pump, information about the well casing, or the presence of any inner liner.

3) Pump Information Well Report or Pump Receipts

The amount of water above the depth of the pump can inform you about the reliability of your water supply. Check for pump information on any pump receipts.

Water Resources Department

About Us
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News and Events
Adjudications
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Jobs at WRD
Links
Maps
Publications

Oregon Water Code Turns 100



"What we need in Oregon, briefly, is a complete record of water rights ... on the subject of waters. I recommend that a complete code of water law be enacted providing a definite system for establishing and acquiring titles to the use of water, for conveniently proving such title or claim of title in some central office where an abstract of titles or water rights can be readily ascertained, and for the protection by the State of all rights to the use of water."

John H. Lewis, State Engineer, Biennial Reports of the State Engineer of Oregon to the Governor of Oregon (1905)

[More on the history of the Oregon Water Code](#)

Agency Resources

Resources For:

[Well Constructors](#)

[Water Conservation and Supply \(including grant programs\)](#)

Lookup Information:

[Lookup Water Rights](#)

[Find a Well Log](#)

[Find a Permit \(A/C/L\)](#)

Agency Spotlight

Klamath Basin Restoration Agreement

Reasons why the Department supports the proposed Klamath Basin Restoration Agreement and a statement regarding the relationship between the proposed Agreement and the Klamath Basin Adjudication.

[Klamath Basin restoration agreement](#)

[Deschutes Mitigation Program 5 Year Evaluation](#)

▼ Ground Water

▼ Water Law

▼ Water Rights

▼ Rulemaking

Featured Links

[E-File Start Cards](#)

[Fee Schedule](#)

[Water Rights in Oregon](#)

[Water Rights Public Notice](#)

[Water Use Reporting](#)

[Agency Performance Measures](#)

[Coastal Coho Conservation Plan](#)

[Locate My Local Watermaster](#)

<http://www.wrd.state.or.us>

STATE OF OREGON
WATER SUPPLY WELL REPORT

(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

(WELL I.D.)# 1. 72472

(START CARD) # 168794

(1) OWNER: Well Number 2

(2) TYPE OF WORK

☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger

☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation

☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval ☐ Yes ☒ No Depth of Completed Well 301 ft.

Explosives used ☐ Yes ☐ No Type Amount

HOLE				SEAL				Sacks or pounds	
Diameter	From	To	Material	From	To				
10	0	18	bentonite	0	18			16	sk
6	18	301							

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E

☒ Other poured & probed

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing 6	+1.5	18.5	.25	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner 4	4	301	cl200	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

☒ Perforations Method skilsaw

☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
141	201	.1x6	108			<input type="checkbox"/>	<input checked="" type="checkbox"/>
261	281	.1x6	36			<input type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

<input type="checkbox"/> Pump	<input type="checkbox"/> Bailer	<input checked="" type="checkbox"/> Air	<input type="checkbox"/> Flowing
Yield gal/min	Drawdown	Drill stem at	Time
6		300	1 hr.

Temperature of water ~55F Depth Artesian Flow Found

Was a water analysis done? ☐ Yes ☐ By whom

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

RECEIVED

JUN 26 2006

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

WATER RESOURCES DEPT
SALEM, OREGON

(9) LOCATION OF WELL by legal description:

County Polk Latitude Longitude

Township 6 S Range 4 W WM.

Section 23 SW 1/4 SW 1/4

Tax Lot 70 Lot Block Subdivision

Street Address of Well (or nearest address)

(10) STATIC WATER LEVEL:

43 ft. below land surface. Date 6/15/06

Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 153

From	To	Estimated Flow Rate	SWL
153	198	see (8)	43

(12) WELL LOG:

Ground Elevation

Material	From	To	SWL
Top soil, brown	0	5	
Claystone, brown, medium	5	10	
Claystone, dark grey, hard	10	56	
Sandstone, dark grey, hard-medium	56	110	
Clay, dark grey, soft w/claystone, grey, hard & sandstone, grey, medium	110	136	
Rock (looks like basalt), brown, soft	136	137	
Sandstone, grey, med w/clay, grey, sandy	137	153	
Sandstone, green & grey, med-hard	153	166	
Clay, dark grey, sandy, soft w/sandstone, dark grey, medium	166	189	
Sandstone, dark grey, very hard, fractured	189	198	
Clay, dark grey, silty w/some sandstone, dark grey, medium	198	280	
Clay, dark grey, soft w/claystone layers, dark grey, hard	280	301	

Date started 6/13/06 Completed 6/15/06

(unbounded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number 1797
Signed Date 6/23/06

(bounded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 649
Signed Date 6/19/06

Casing/
Liner

Is there an
inner liner in
your well?

Well
Yield

This section
shows the
estimated
well yield at
the time of
drilling.

Water Bearing
Zones

The static water level
when the well was
drilled.

Well Log

The geology of the well
borehole and the well
depth.

Step-by-Step Measurement

Well and Pump Houses

- Be aware of animals, snakes, or bees when near to the well or the pump house.
- Do not use regular insulation to cover your well casing or water lines.
- Keep your well and pump house clean.
- Do not store fertilizers, pesticides, or chemicals in or near your pump house.



Step-by-Step Measurement

Good



Step-by-Step Measurement

Bad



Step-by-Step Measurement

Turn Off Well Pump and Record Time

- Turn off the pump for at least two hours to ensure that conditions are static (non-pumping) in your well.
- Or, take the water level measurement early in the morning before the pump has been used.
- Static water level measurements are needed to understand water storage in the surrounding aquifer.



Step-by-Step Measurement

Sanitize the Equipment

- Sanitize the water level meter using a weak bleach solution.
- Use only household chlorine bleach, like Clorox. Bleaches with additives could contaminate your well!
- Allow the bleach solution to sit for ten to fifteen minutes.
- Use a tarp for easy clean-up.

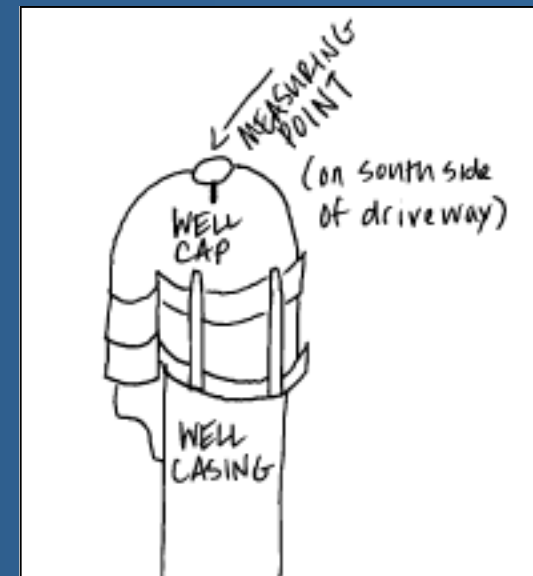


Step-by-Step Measurement

Well Access Port and Measuring Point

- The measuring point is a reference point on the well casing, cap, or measuring tube from which all measurements are made.
- Draw a sketch of the measuring point on your water level data sheet.
- Always use the same measuring point.

An example sketch of a measuring point location.



Step-by-Step Measurement

Well Caps

- Three common types of well caps.
- Always measure from the same access point.
- A dedicated measuring tube makes things easier.
- You will need to have the right tools (and, do not forget the WD-40).

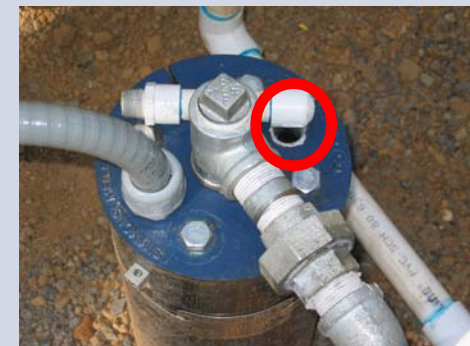
"Turtle Back" well cap with access plug.



"Turtle Back" well cap without access plug.



Sanitary well cap.



Step-by-Step Measurement

Measuring Tube

- A ¾-inch measuring tube is now required in the Eola Hills GWLA.

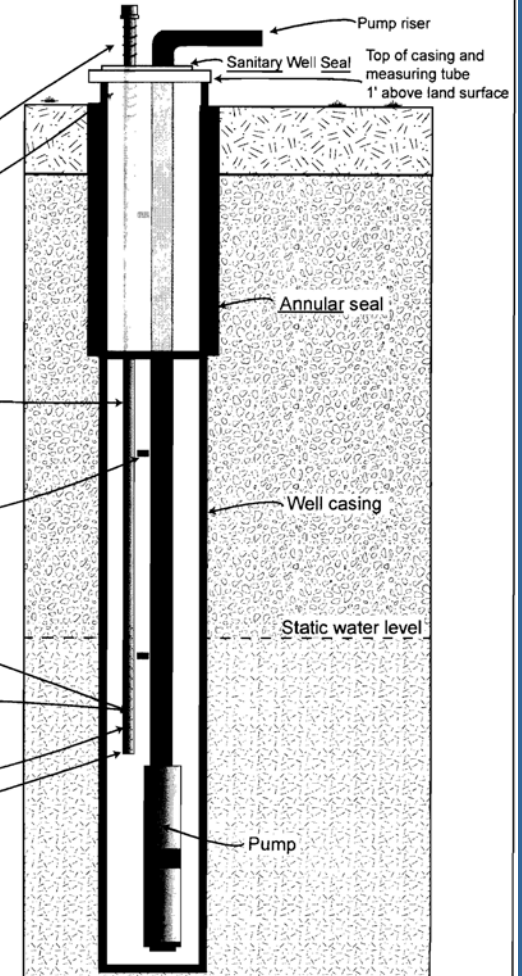


Measuring Tube Diagram and Specifications

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 ¾ 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.

Step-by-Step Measurement

Handy Tool List

- Box Wrench
- Flashlight
- Hammer
- Pipe Wrench
- Small Mirror
- Socket Wrench
- WD-40



Don't forget that you will need to provide your own tools.

Step-by-Step Measurement

Possible Problems

1. Liners
2. Hang-Ups
3. Cascading Water



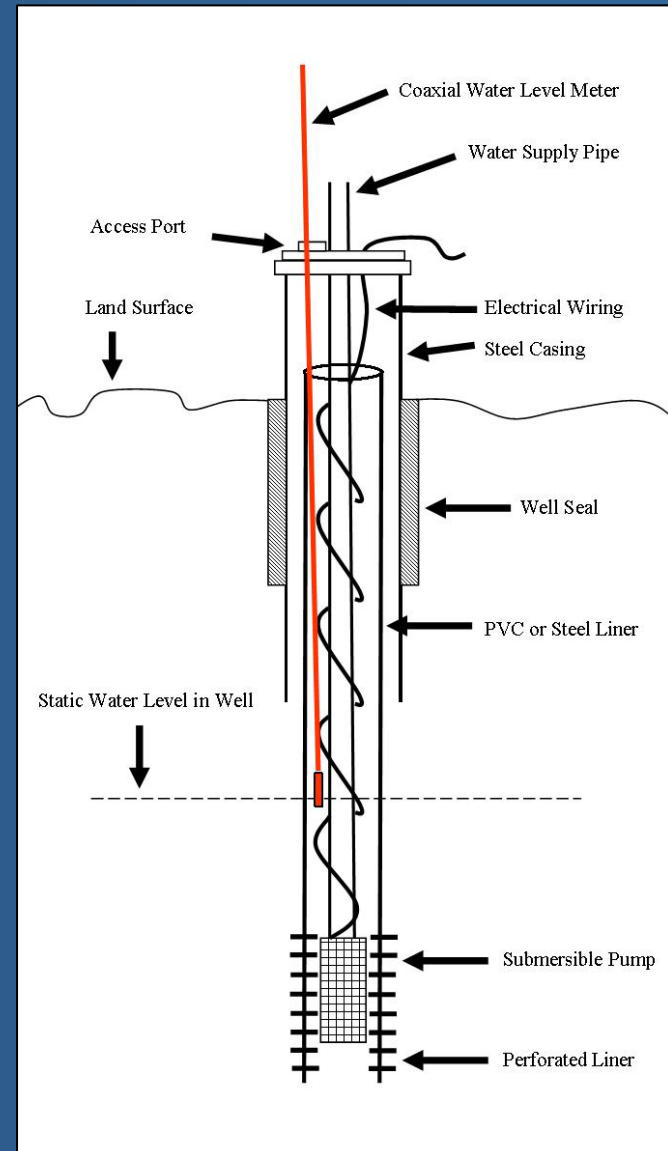
Danger

These problems could lead to an inaccurate water level measurement!

Step-by-Step Measurement

Liners

- Used after well construction to maintain the well borehole.
- Made of PVC or, rarely, metal.
- Liners are not always centered in the well and difficult to see.
- Water on the side of the liner may cause the water level meter to “drag”.

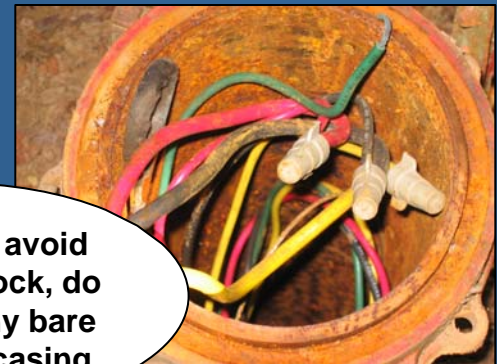


Step-by-Step Measurement

Hang-Ups

- Do not yank the line.
- Gently shake the line to free.
- If unable to free the line, pull the line slowly to release the probe weights.
- Note the “hold-point” if unable to free the line and a strong pull is needed to free the line.
- Recalibrate the line after any hang-ups.

Where is that inner liner?

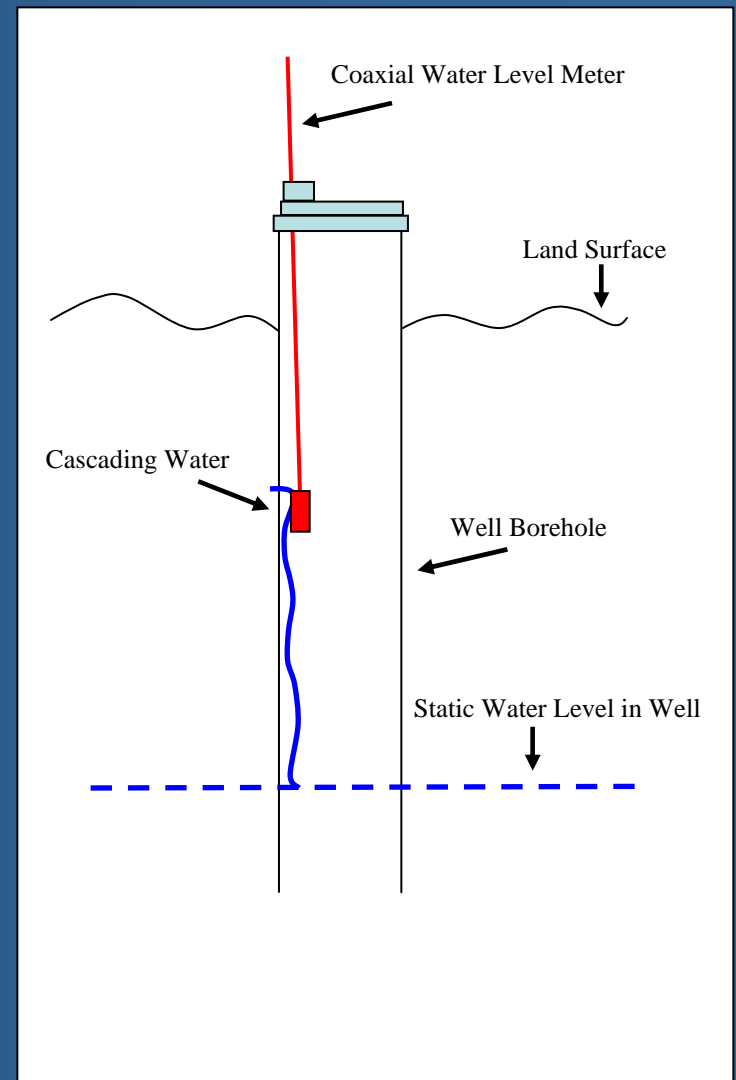


Caution: To avoid electrical shock, do not touch any bare wires in the casing.

Step-by-Step Measurement

Cascading Water

- Cascading water may enter the borehole at any point.
- Cascading water may cause a false reading.
- An unsteady signal (chatter) on the water level meter may indicate cascading water.
- If you suspect cascading water, listen down the borehole for flowing water.



Step-by-Step Measurement

Water Level Meter Scales

COAXIAL WATER LEVEL METER



The coaxial water level meter has a thin line (like a speaker wire) marked in five-foot increments. Determining how much line you have in the well requires counting the color-coded markers using a pattern similar to adding with Roman numerals.

DEPTH
(Feet)

COLOR-CODES FOR MARKERS

5	Pale Green/Orange/Pale Green
10	Pale Green
5	Orange
100	Green
500	Blue

FLAT-TAPE WATER LEVEL METER



The flat-tape water level meter usually has a 3/4-inch wide tape marked in engineering, standard, or metric scale. Determining how much tape you have in the well requires reading the tape (similar to reading a ruler).

Step-by-Step Measurement

Measure the Water Level

1. Test the water level meter.
2. Turn the water level meter to the buzz position.
3. Turn the sensitivity switch all the way to the right.
4. Slowly release some line down the well casing. Do not let the line free fall.
5. Check the "feel" of the line and probe. As the probe goes deeper, the weight should increase.
6. Lower the water level meter until it indicates the probe is in water or if the probe becomes stuck or hung-up. Remember to check the "feel" of the line and probe about every 20 feet.



Step-by-Step Measurement

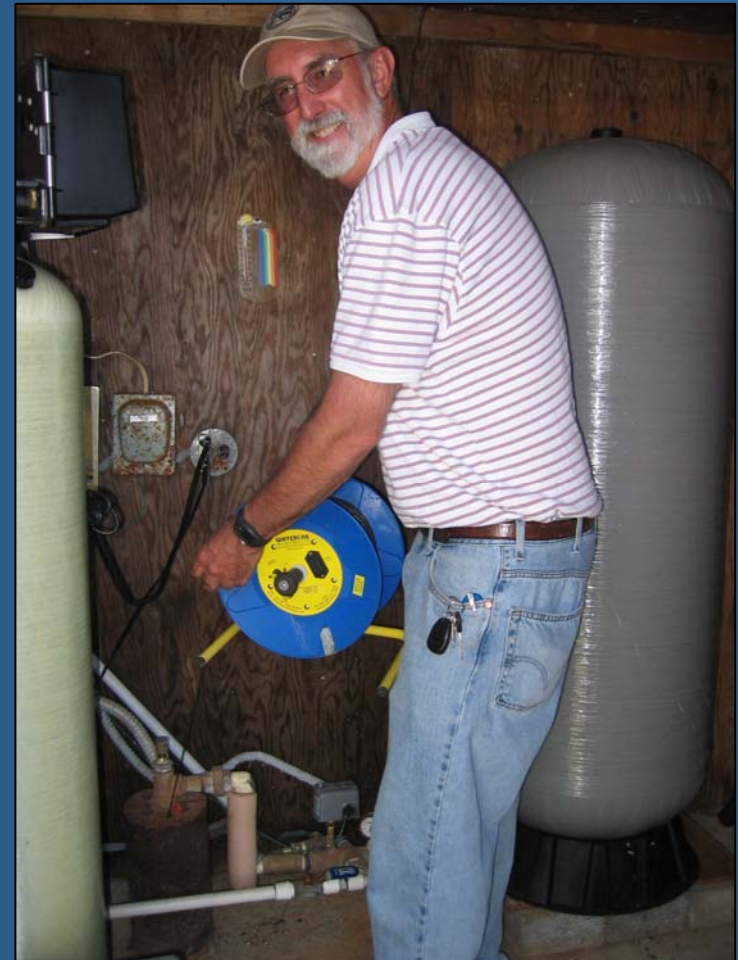
7. If you do not feel the weight of the probe, raise the probe. Gently bounce the probe about two feet.
8. When water level meter indicates water, make sure that it is not cascading water.
9. If you have not already, set down the reel.
10. Raise the line to check for a static (non-pumping) water level. Hold for 3 minutes.
11. Grab the measuring point.
12. Record the water level measurement at the measuring point on your data sheet (Different methods for coaxial and flat-tape water level meters).
13. Repeat the steps to determine a consistent measurement.



Step-by-Step Measurement

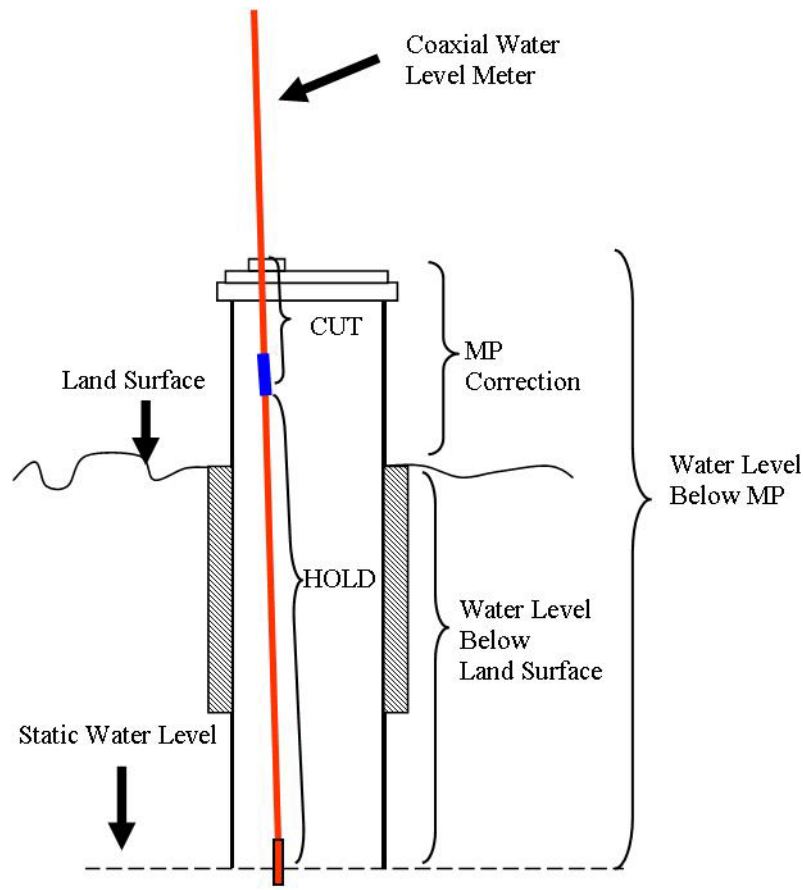
14. Slowly rewind the line and probe onto the reel.
15. Turn off the water level meter, sanitize it, and replace the well cap.
16. Use a pocket tape to measure the height of the measuring point (MP). Record the MP height on your data sheet.
17. Calculate the depth of water below land surface on your data sheet. (Different methods for coaxial and flat-tape water level meters).

Remember to go very slow to avoid getting your water level meter stuck in the well.



Step-by-Step Measurement

Measuring Point Above Land Surface



Coaxial Meter

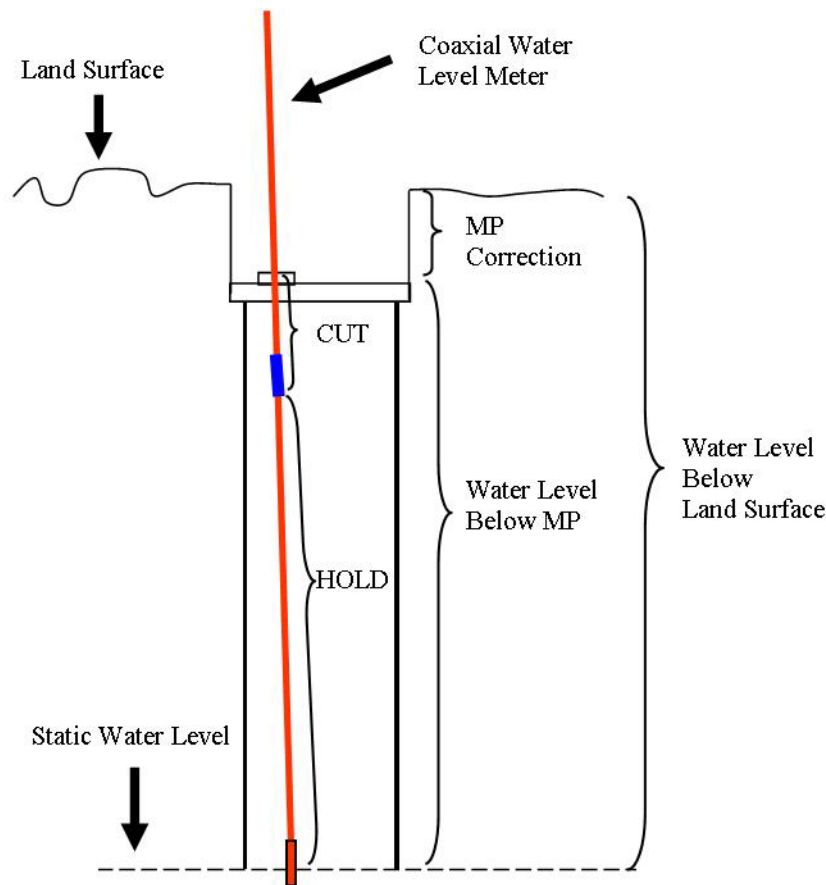
HOLD	270.00
CUT	<u>+ 2.31</u>
Water Level Below MP:	272.31
MP Correction:	<u>- 1.00</u>
Water Level BLS:	271.31

Flat-Tape Meter

Water Level Below MP:	272.31
MP Correction:	<u>- 1.00</u>
Water Level BLS:	271.31

Step-by-Step Measurement

Measuring Point Below Land Surface



Coaxial Meter

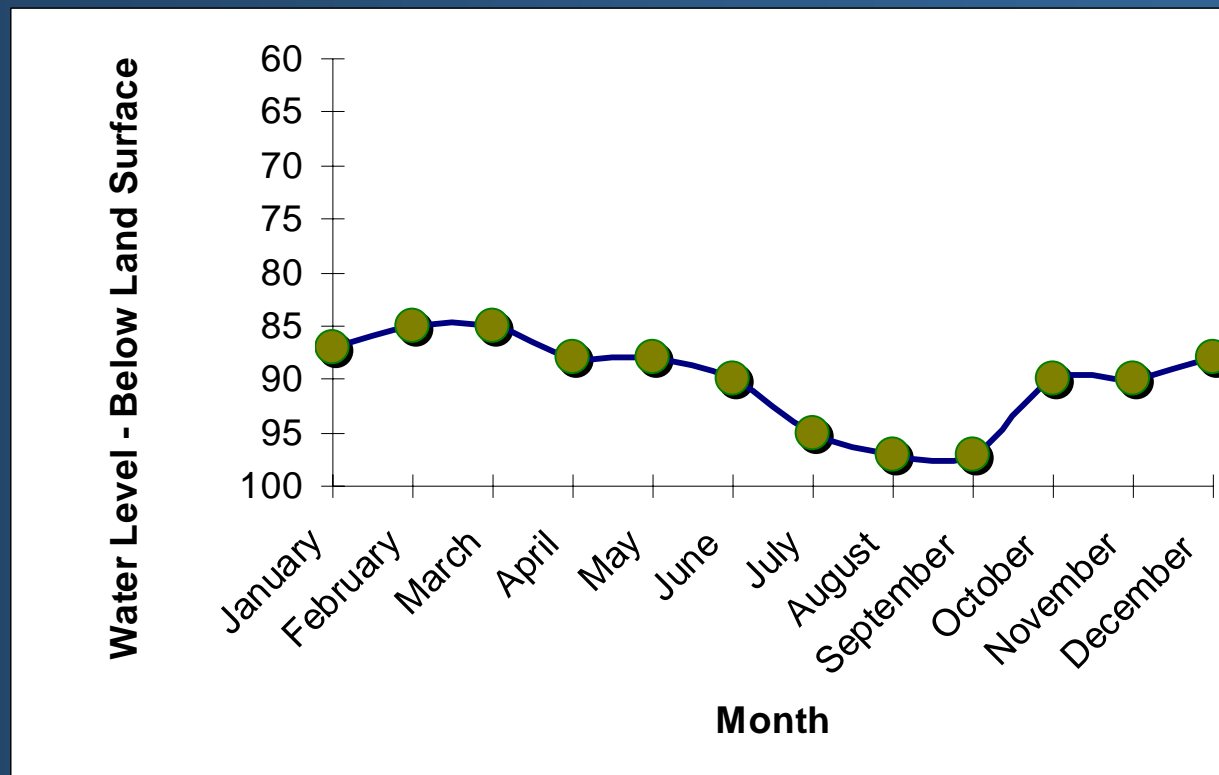
HOLD	150.00
CUT	<u>+ 1.15</u>
Water Level Below MP:	151.15
MP Correction:	<u>+ 1.25</u>
Water Level BLS:	152.40

Flat-Tape Meter

Water Level Below MP:	151.15
MP Correction:	<u>+ 1.25</u>
Water Level BLS:	152.40

Interpret Your Water Level Measurements

- The easiest way to interpret ground water levels in your well is to plot the data versus time.
- This type of figure is known as a **hydrograph**.
- Compare ground water levels to precipitation records.



Well Location

7.0053.00W18BAD

Oregon Water Resources Department Well Log ID

POLK 1781

Oregon Water Resources Department State Observation Well Number

Well depth, in feet below land surface

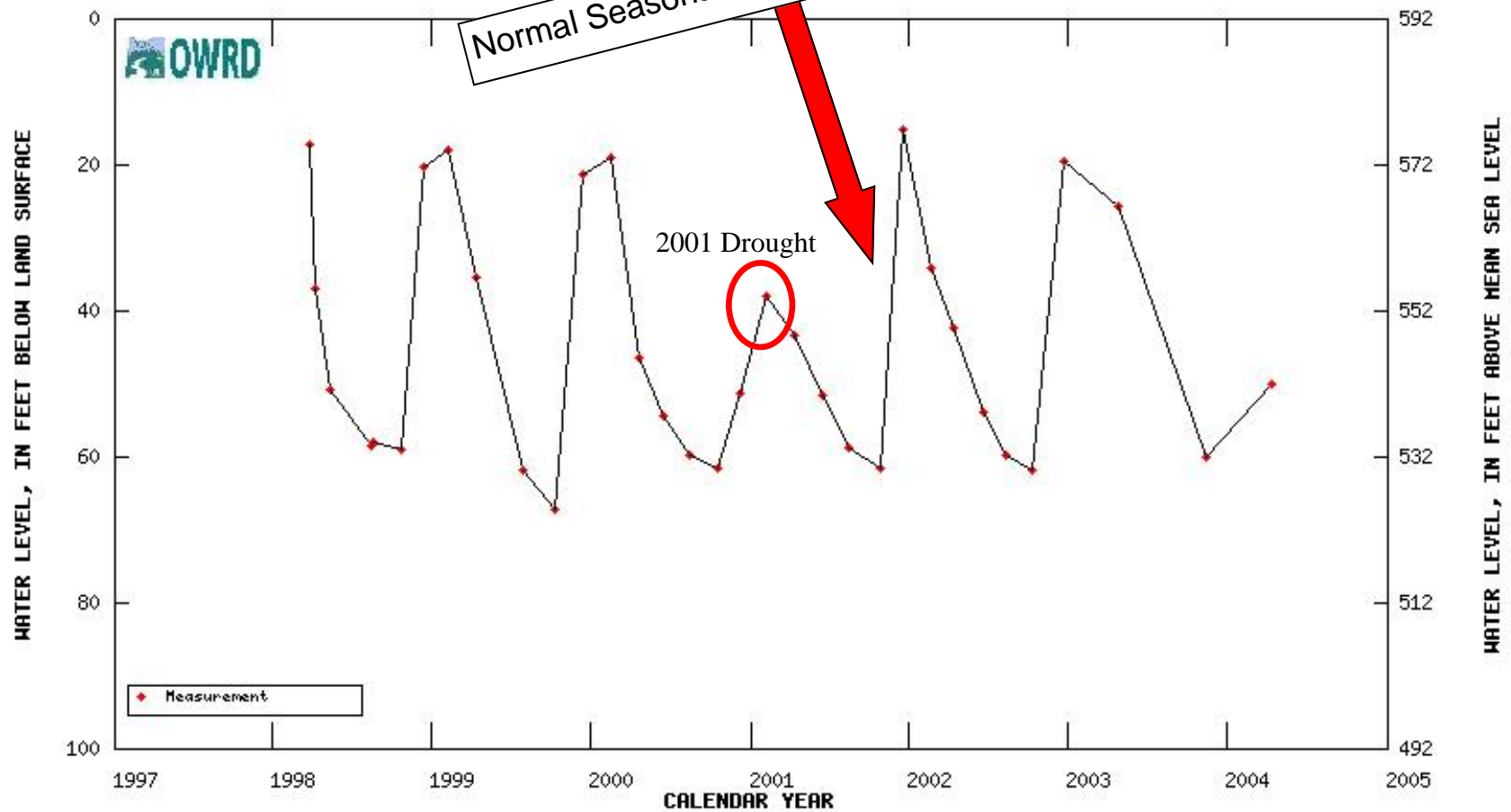
323

Land surface elevation, in feet above mean sea level

592

Primary use of well

UNUSED



Well Location

Oregon Water Resources Department Well Log ID

Oregon Water Resources Department State Observation Well Number

Well depth, in feet below land surface

Land surface elevation, in feet above mean sea level

Primary use of well

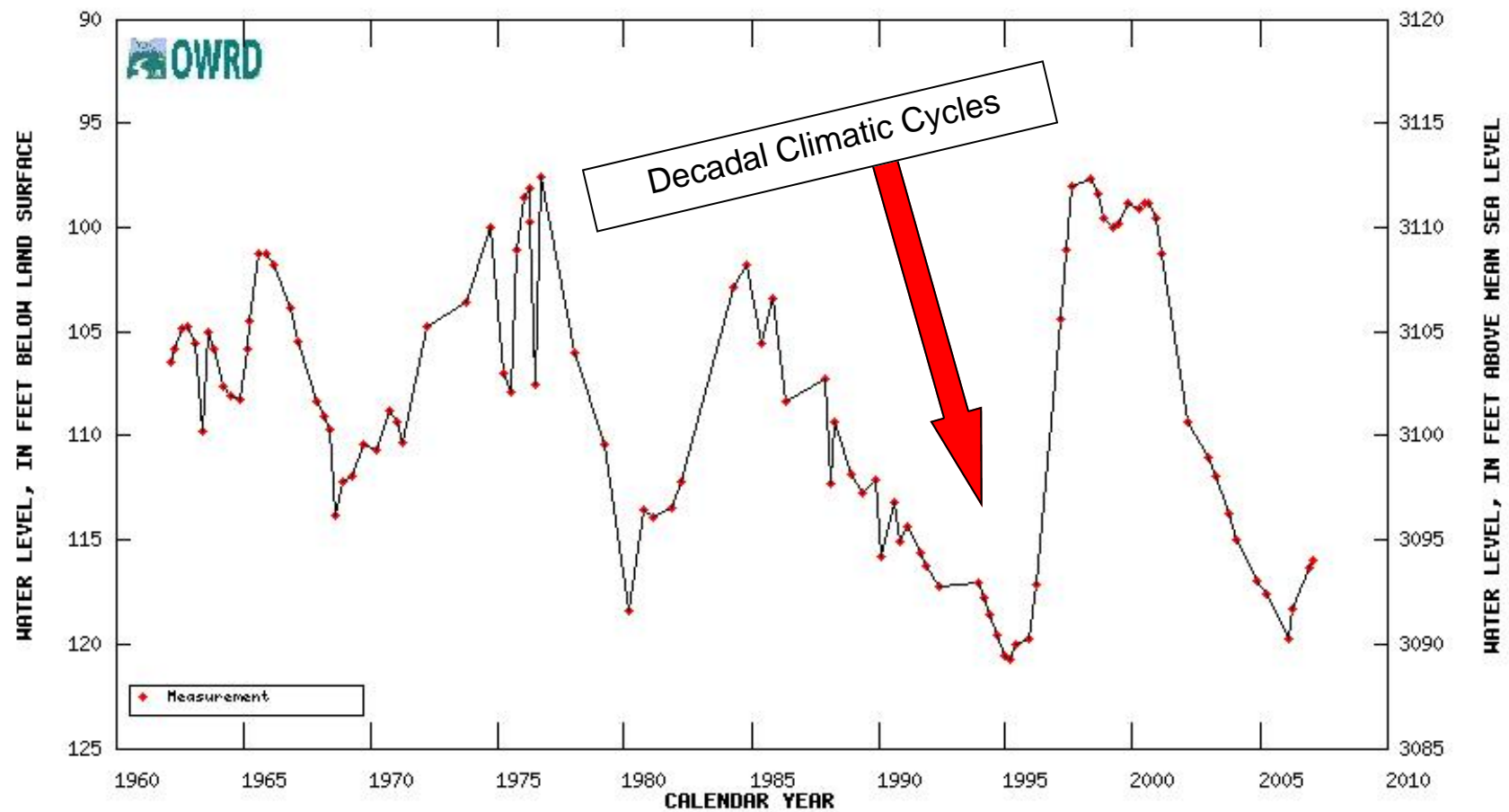
15.00S10.00E8ACD

DESC 3016

116

3210

not determined



Well Location

25.00S14.00E15BCC

Oregon Water Resources Department Well Log ID

LAKE 113

Oregon Water Resources Department State Observation Well Number

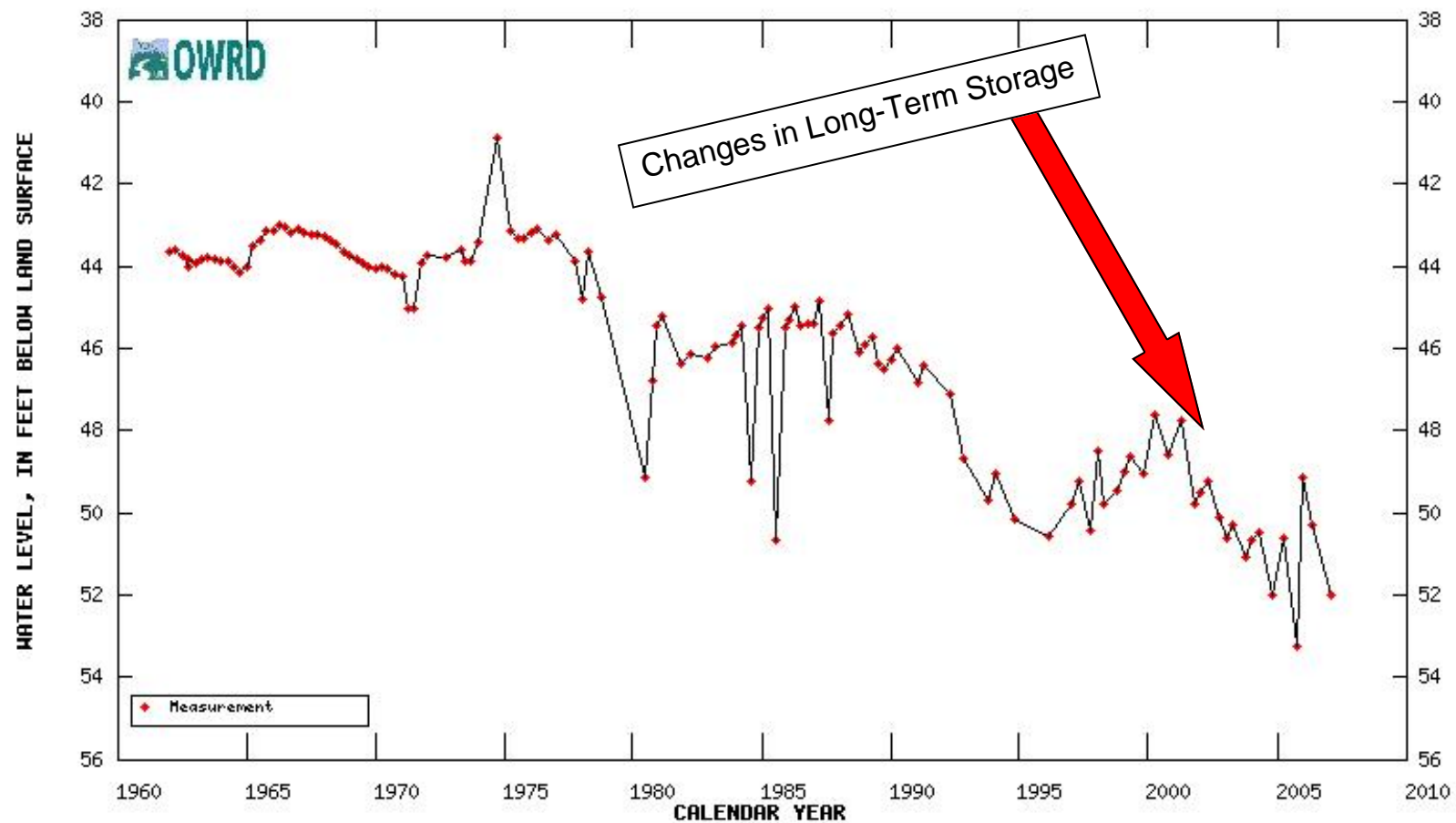
340

Well depth, in feet below land surface

Land surface elevation, in feet above mean sea level

Primary use of well

not determined



Submit Your Water Level Measurements

- If you choose, you may submit your information on the OWRD website at <http://www.wrd.state.or.us/>.
- Look for the *Ground Water* link on the left-hand side of the page. Navigate to the *Neighborhood Ground Water Network* webpage at http://www.wrd.state.or.us/OWRD/GW/NGWN_homepage.shtml.

Entry of your ground water level data on the *Neighborhood Ground Water Network* webpage will allow you to retrieve an automatic plot (hydrograph) of your water levels.



OREGON.gov

Enter search term(s) Find

Text Size: A+ A- A Text Only Site Accessibility

Water Resources Department

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Water Conservation, Reuse and Storage Grant Program



The Water Conservation, Reuse and Storage Grant Program, established by SB 1069, is accepting grant applications from July 15 - September 2, 2008. The program is designed to fund the qualifying costs of planning studies that evaluate the feasibility of developing water conservation, reuse or storage projects. There is \$1.6 million available for grants, with a maximum award of up to \$500,000 for each feasibility study.

[More information about the program](#)

Agency Resources

Resources For:

[Well Constructors](#)

Interactive Mapping

A web mapping program allowing access to water rights and other water resource related information. The new mapping tool (currently in beta release) provides a newer and more full featured interface, as well as providing more up-to-date maps.

[Access mapping tool](#)

[Access NEW mapping tool \(beta\)](#)



Water Rights Database

Look up information about individual water rights using the Water Right Information System.

[Lookup Water Rights](#)

Access Data

[Find a Well Log](#)

[Find a Document \(Vault\)](#)

[All Tools and Data](#)

Agency Spotlight

Oregon Water Supply and Conservation Initiative

The Oregon Water Supply and Conservation Initiative (OWSCI), a \$750,000 initiative approved by the Oregon Legislature in 2007, provides the foundation for much of the long term water resource planning work the Department will undertake during the next several years.

[More information about OWSCI](#)

Klamath Basin Restoration Agreement

Reasons why the Department supports the proposed Klamath Basin Restoration Agreement and a statement regarding the relationship between the proposed Agreement and the Klamath Basin Adjudication.

[Klamath Basin restoration agreement](#)

Deschutes Mitigation Program 5 Year Evaluation

The Department has released the final report to evaluating the effectiveness of the Deschutes Basin mitigation program.

[Access the Deschutes mitigation evaluation report](#)

Stay Informed

Sign up for our free announcements via email.

[Read more](#)



Happy Birthday, Oregon!

Oregon celebrates its 150th birthday in 2009. Planning for this big event has already begun. Learn more and get involved!

[Oregon 150: "Sustain the Spirit"](#)



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Neighborhood Ground Water Network



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Program Purpose

The Neighborhood Ground Water Network is a one-year pilot program for the Eola Hills, northwest of Salem, to teach community members how to measure the water level in their wells while informing them about the importance of ground water systems. Ground water education and collection of water levels in wells will help community members better protect their wells and ground water supplies into the future.

It's easy to participate. First, you need to live in the Eola Hills Ground Water Limited Area. Next, you should attend a NGWN Workshop. Then, you should take one water level measurement in your well each month. Finally, one of the goals of the program is to compile additional ground water level information which you can submit using the Department's online database.

[Submit Your Ground Water Level Measurements Here](#)

The Eola Hills Ground Water Limited Area

Do you live in the Eola Hills Ground Water Limited Area?

The Eola Hills Ground Water Limited Area (EHGWLA) is one of ten areas adopted in 1992 that restricts water use from the Columbia River Basalt group of aquifers in the Willamette River Basin. This area was designated a Ground Water Limited Area because of the potential for water level declines.

The EHGWLA is an eighty square-mile area located just northwest of Salem, Oregon. The Willamette River makes up the eastern boundary, Highway 22 makes up the southern boundary, Highway 99W makes up the western boundary, and the northern boundary is just above the Yamhill County line.

Neighborhood Ground Water Network

Questions?

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