

Groundwater Application Review Summary Form

Application # ~~G-18850~~ G-18850

GW Reviewer M. Prana Date Review Completed: 09-17-19

Summary of GW Availability and Injury Review:

[] Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

Summary of Potential for Substantial Interference Review:

There is the potential for substantial interference per Section C of the attached review form.

Summary of Well Construction Assessment:

[] The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

09/18/19

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 09/17/2019
 FROM: Groundwater Section M Thoma
 Reviewer's Name
 SUBJECT: Application G- 18850 Supersedes review of
 Date of Review(s)

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

OAR 690-310-130 (1) *The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525.* Department staff review groundwater applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. **This review is based upon available information and agency policies in place at the time of evaluation.**

A. GENERAL INFORMATION: Applicant's Name: ODOT County: Lane

A1. Applicant(s) seek(s) 0.13 cfs from 2 well(s) in the Willamette Basin,
Coast Fork Willamette subbasin

A2. Proposed use Commercial (93 AF/yr) Seasonality: year-round

A3. Well and aquifer data (**attach and number logs for existing wells; mark proposed wells as such under logid**):

Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	LANE 22024*	1	Bedrock	0.13	20S/03W-11 NWNW	434'S, 1139'E of NW cor S 11
2	LANE 22028 / LANE 22009(R)	2	Bedrock	0.13	20S/03W-11 NENW	992'S, 138'E of NW cor S 11
3						

* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	590		12 (4†)	12/30/64	300	0-41	0-41	-	-	5	-	-
2	590		6 (4†)	3/6/86	76	0-44	+2-48	-	-	45		

Use data from application for proposed wells.

A4. **Comments:** *The proposed POA #1 is reportedly tied to Well Log LANE 22027 by the applicant. However, LANE 22027 has been previously tied to an unused OWRD State Obs Well nearby (still located within the rest area). A well log, LANE 22024, has been found for the area with the State Highway Department as the registered owner on the log. The well logs report the wells to be different depths (300 and 380 ft) and casing depths (41 and 28 ft) but both are completed into the same geologic unit ("basalt") and are thus producing from the same aquifer. Therefore, this review assumes that POA #1 is LANE 22024 and not LANE 22027. Identifying which well log ties to which well may be established definitively by the groundwater section but will not change the findings of this review.

†Water level records for LANE 22027 vary seasonally between 7 ft to less than 1 ft with an average of approx. 4 ft.

A5. **Provisions of the** Willamette (OAR 690-502) Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water **are,** or **are not,** activated by this application. (Not all basin rules contain such provisions.)
 Comments: _____

A6. **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction. Name of administrative area: _____
 Comments: _____

B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070

B1. **Based upon available data**, I have determined that groundwater* for the proposed use:

- a. is over appropriated, is not over appropriated, or **cannot be determined to be** over appropriated during any period of the proposed use. * This finding is limited to the groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;
- b. **will not** or **will** likely be available in the amounts requested without injury to prior water rights. * This finding is limited to the groundwater portion of the injury determination as prescribed in OAR 690-310-130;
- c. **will not** or **will** likely to be available within the capacity of the groundwater resource; or
- d. **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater resource:
 - i. The permit should contain condition #(s) 7E (Reference SWL); Medium Water-Use Reporting;
 - ii. The permit should be conditioned as indicated in item 2 below.
 - iii. The permit should contain special condition(s) as indicated in item 3 below;

- B2. a. **Condition** to allow groundwater production from no deeper than _____ ft. below land surface;
- b. **Condition** to allow groundwater production from no shallower than _____ ft. below land surface;
- c. **Condition** to allow groundwater production only from the _____ groundwater reservoir between approximately _____ ft. and _____ ft. below land surface;
- d. **Well reconstruction** is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Groundwater Section.

Describe injury –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc): _____

B3. **Groundwater availability remarks:** The applicant’s proposed POAs are near a current State Obs Well that has reported water-level data going back to 1966. These data show a long-term stable trend suggesting that groundwater has not been Over-Appropriated. However, a detailed analysis of groundwater recharge vs. allocation has not been performed for this area so Over-Appropriation cannot be concluded.

There are four permitted groundwater rights within 1 mile of the proposed POAs with the nearest being approx. ½ mile from POA #2 (the nearest mapped POA is on the same well as the applicant’s POA #2 and so is not evaluated for injury). Two of the POAs are located uphill from the proposed POAs and will not likely be affected by the new use. The other two POAs are located on the floodplain with the proposed POAs but one POA is described as a “sump” or meander scar of the Coast Fk Willamette and the other is describes as 50 ft deep. These POAs would thus likely be producing from the shallow alluvial deposits overlying the bedrock targeted by POA #1 and so would not likely be injured by the new proposed use, however, standard interference conditions should be applied.

C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

C1. **690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Fractured bedrock of Eugene Fm.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Fractured bedrock of Eugene Fm.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: The applicant’s wells are producing from bedrock overlain by alluvial material that may be up to 20 ft thick. Although this material is reported as “sandy” on some well logs, it is likely producing some level of confinement on the deeper, bedrock aquifer.

C2. **690-09-040 (2) (3):** Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ 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. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Gettings Creek	586	572-582	1390	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	1	Gettings Creek	586	572-582	1260	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	Coast Fk Willamette	586	565-583	2570	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	2	Coast Fk Willamette	586	565-583	3150	<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"/>

Basis for aquifer hydraulic connection evaluation: GW elevations are similar to SW elevations implying that water is flowing between surface water and the aquifer; additionally, observed water-level data from OWRD State Obs Well LANE 22027 show strong seasonal fluctuations, further suggesting hydraulic connection to surface water.

Water Availability Basin the well(s) are located within:
COAST FK WILLAMETTE R > WILLAMETTE R – AT MOUTH (ID# 532)

C3a. **690-09-040 (4):** Evaluation of stream impacts for each well that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% natural flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
1	1	<input type="checkbox"/>	<input type="checkbox"/>	NA	-	<input type="checkbox"/>	65.60	<input type="checkbox"/>	< 10%	<input type="checkbox"/>
2	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA	-	<input type="checkbox"/>	65.60	<input type="checkbox"/>	< 10%	<input checked="" type="checkbox"/>
1	2	<input type="checkbox"/>	<input type="checkbox"/>	MF532A	40.00	<input type="checkbox"/>	65.60	<input type="checkbox"/>	< 10%	<input type="checkbox"/>
2	2	<input type="checkbox"/>	<input type="checkbox"/>	MF532A	40.00	<input type="checkbox"/>	65.60	<input type="checkbox"/>	< 10%	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: stream-depletion was estimated using the Hunt-2003 model with parameter values assigned from a range that represents likely values for the given aquifers.

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. **Complete only if Q is distributed among wells.** Otherwise same evaluation and limitations apply as in C3a above.

SW #	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: _____

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

Basis for impact evaluation: no surface water sources were evaluated beyond 1 mile

C4b. **690-09-040 (5) (b)** The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.

- C5. **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:
- i. The permit should contain condition #(s) _____;
 - ii. The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** The applicant's proposed POAs would be producing from an aquifer that has been found to be hydraulically connected to surface water – specifically Gettings Creek and the Coast Fk Willamette River – at a distance of less than 1 mile. POA #1 is within ¼ mile of Gettings Creek and found to be hydraulically-connected so, per OAR 690-009 rules, POA #1 is assumed to have the Potential for Substantial Interference. POA #2 is also found to be hydraulically-connected to Gettings Creek but is at a distance of greater than ¼ mile. Both POAs are also found to be hydraulically-connected to the Coast Fk Willamette River at distances greater than ¼ mile. For both POAs, the proposed maximum rate of appropriation is less than 1% of the pertinent adopted perennial streamflow and also less than 1% of the adopted instream water rights for either surface water source and stream-depletion is estimated to be less than 25% at 30 days.

References Used:

Gannett, M. W. and R. R. Caldwell. 1998. *Geologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington*. USGS Professional Paper 1424-A.

Herrera, N. B., Burns, E. R., and T. D. Conlon. 2014. *Simulation of Groundwater Flow and the Interaction of Groundwater and Surface Water in the Willamette Basin and Central Willamette Subbasin, Oregon*. USGS Scientific Investigations Report 2014-5136.

Hunt, B. 2003. *Unsteady Stream Depletion when Pumping from a Semiconfined Aquifer*. *Journal of Hydrologic Engineering*. Vol 8(1), pp 12-19

McCloughry, J. D., T. J. Wiley, M. L. Ferns, and I. P. Madin. 2010. *Digital Geologic Map of the Southern Willamette Valley, Benton, Lane, Linn, Marion, and Polk Counties, Oregon*. Oregon Dept. of Geology and Mineral Industries. Open File Report O-10-13.

O’Conner, J. E., A. Sarna-Wojcicki, K. C. Wozniak, D. J. Polette, and R. J. Fleck. *Origin, Extent, and Thickness of Quaternary Geologic Units in the Willamette Valley, Oregon*. USGS Professional Paper 1620

Oregon Department of Geology and Mineral Industries, *Geologic Map of Oregon*. <http://www.oregongeology.org/geologicmap/>

OWRD Well Log Database – Accessed 09/17/2019

Woodward, D. G., M. W. Gannett, and J. J. Vaccaro. 1998. *Hydrogeologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington*. USGS Professional Paper 1424-B.

D. WELL CONSTRUCTION, OAR 690-200

D1. **Well #:** _____ **Logid:** _____

D2. **THE WELL does not appear to meet current well construction standards based upon:**

- a. review of the well log; _____;
- b. field inspection by _____;
- c. report of CWRE _____;
- d. other: (specify) _____

D3. **THE WELL construction deficiency or other comment is described as follows:** _____

D4. **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Water Availability Tables

Water Availability Analysis Detailed Reports

COAST FK WILLAMETTE R > WILLAMETTE R - AT MOUTH
WILLAMETTE BASIN

Water Availability as of 9/3/2019

Watershed ID #: 532 (Map) Exceedance Level: 80% ▾
 Date: 9/3/2019 Time: 8:40 AM

Water Availability Calculation
Consumptive Uses and Storages
Instream Flow Requirements
Reservations

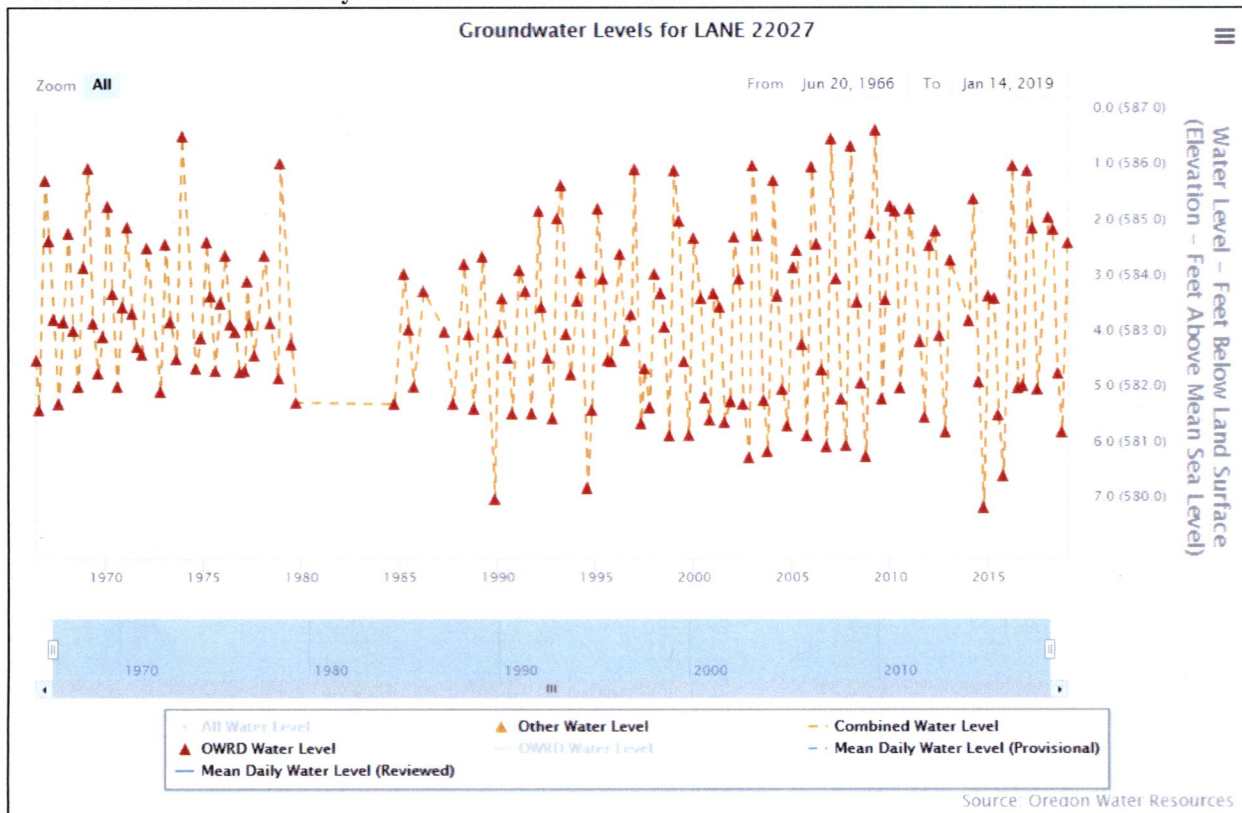
Water Rights
Watershed Characteristics

Water Availability Calculation

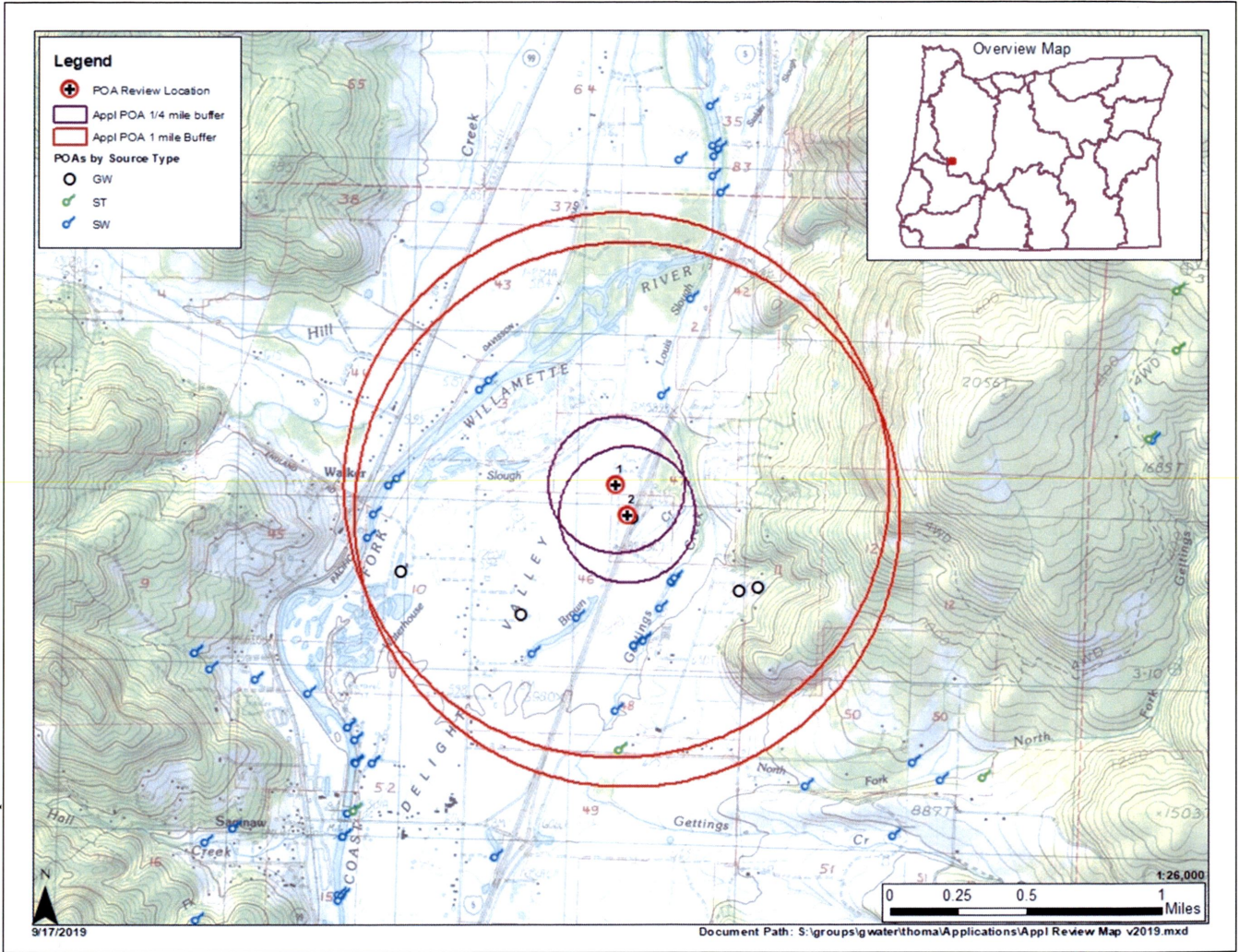
Monthly Streamflow in Cubic Feet per Second
Annual Volume at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	955.00	123.00	832.00	0.00	200.00	632.00
FEB	1,080.00	297.00	783.00	0.00	200.00	583.00
MAR	1,080.00	467.00	613.00	0.00	200.00	413.00
APR	928.00	369.00	559.00	0.00	40.00	519.00
MAY	531.00	236.00	295.00	0.00	40.00	255.00
JUN	216.00	28.60	187.00	0.00	40.00	147.00
JUL	108.00	37.30	70.70	0.00	40.00	30.70
AUG	70.50	33.10	37.40	0.00	40.00	-2.57
SEP	65.60	24.70	40.90	0.00	40.00	0.86
OCT	86.40	8.13	78.30	0.00	40.00	38.30
NOV	268.00	93.70	174.00	0.00	200.00	-25.70
DEC	761.00	9.03	752.00	0.00	200.00	552.00
ANN	754,000.00	104,000.00	651,000.00	0.00	77,000.00	574,000.00

Water-Level Trends in Nearby Wells



Well Location Map



Stream-Depletion Model Results

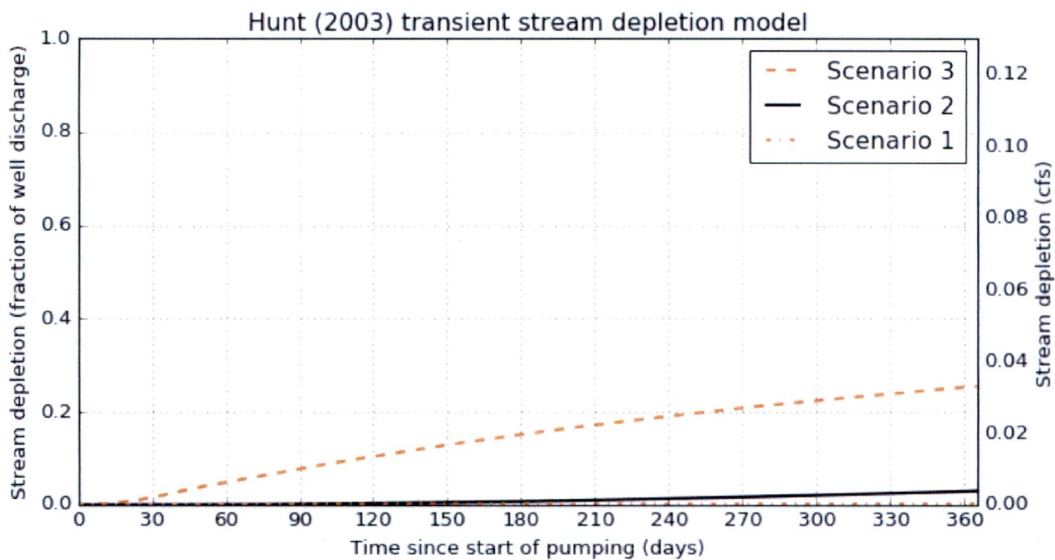
76 PyHunt stream depletion analysis tool

Application type: G
 Application number: 18850
 Well number: 1
 Stream Number: 2
 Pumping rate (cfs): 0.13
 Pumping duration (days): 365
 Pumping start month number (3=March): 1

Parameter	Symbol	Scenario 1	Scenario 2	Scenario 3	Units
Distance from well to stream	a	1240	1240	1240	ft
Aquifer transmissivity	T	50	100	500	ft ² /day
Aquifer storativity	S	0.001	0.0005	0.0001	-
Aquitard vertical hydraulic conductivity	Kva	0.01	0.05	0.1	ft/day
Aquitard saturated thickness	ba	15	10	5	ft
Aquitard thickness below stream	babs	10	5	3	ft
Aquitard specific yield	Sya	0.15	0.10	0.05	-
Stream width	ws	10	10	10	ft

Stream depletion for Scenario 2:

Days	10	30	60	90	120	150	180	210	240	270	300	330	360
Depletion (%)	0	0	0	0	0	0	1	1	1	2	2	2	3
Depletion (cfs)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Joel Jeffery, Well Construction Program Coordinator
Subject: Review of Water Right Application G-18850
Date: September 23, 2019

The attached application was forwarded to the Well Construction and Compliance Section by Water Rights. Mike Thoma reviewed the application. Please see Mike's Groundwater Review and the Well Logs.

Applicant's Well #1 (LANE 22024): Based on a review of the Well Report, Applicant's Well #1 does not appear to comply with current minimum well construction standards (See OAR 690 Division 210). The water well report indicates that "Puddled clay & cement" was used as the surface seal. Puddled clay & cement is not an approved sealing material. In addition, the well log indicates that the top terminal height of the well casing is at land surface (0 ft.). By rule the top terminal height of the well casing shall be a minimum of 12 inches above land surface, pump house floor or the local surface runoff level. In order to meet minimum well construction standards, the well must be re-sealed and the top terminal height of the well extended to a minimum of 12 inches above land surface, pump house floor or the local surface runoff level by a licensed well constructor.

My recommendation is that the Department **not issue** a permit for Applicant's Well #1 (LANE 22024) unless it is brought into compliance with current minimum well construction standards or information is provided showing that it is in compliance with current minimum well construction standards.

The repair of Applicant's Well #1 may not satisfy hydraulic connection issues.

Applicant's Well #2 (LANE 22028 and LANE 22009, the repair of Lane 22028): Based on a review of the Well Reports, Applicant's Well #2 seems to protect the groundwater resource.

The construction of Applicant's Well #2 may not satisfy hydraulic connection issues.

LANE

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

RECEIVED JUN 10 1965 STATE ENGINEER SALEM OREGON

WATER WELL REPORT 022024

State Well No. 20/3w-11 State Permit No.

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

STATE OF OREGON (Please type or print)

(1) OWNER: Name Oregon State Hwy Dept Address Box 1269 Eugene, Oregon

(2) LOCATION OF WELL: County Lane Driller's well number 1/4 Section 14 T 20S R. 36 W.M. Bearing and distance from section or subdivision corner

(3) TYPE OF WORK (check): New Well [X] Deepening [] Reconditioning [] Abandon []

(4) PROPOSED USE (check): Domestic [X] Industrial [] Municipal [] Irrigation [] Test Well [] Other [] (5) TYPE OF WELL: Rotary [X] Driven [] Cable [] Jetted [] Dug [] Bored []

(6) CASING INSTALLED: Threaded [] Welded [X] 6" Diam. from 0 ft. to 41 ft. Gage .250

(7) PERFORATIONS: Perforated? [] Yes [X] No Type of perforator used Size of perforations in. by in.

(8) SCREENS: Well screen installed? [] Yes [X] No Manufacturer's Name Type Model No.

(9) CONSTRUCTION: Well seal-Material used in seal Puddled clay & cement Depth of seal 41 ft. Was a packer used? Diameter of well bore to bottom of seal 10 in.

(10) WATER LEVELS: Static level 12 ft. below land surface Date 5/5/65 Artesian pressure lbs. per square inch Date

(11) WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? [] Yes [] No If yes, by whom? Yield: gal./min. with ft. drawdown after hrs.

(12) WELL LOG: Diameter of well below casing 6" Depth drilled 300 ft. Depth of completed well 300 ft. Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

Table with columns MATERIAL, FROM, TO. Rows include Topsoil, Sand & boulders, Red shale, Black basalt, Black & green conglomeration.

Work started 4/29/65 19 Completed 5/5/65 19 Date well drilling machine moved off of well 5/5/65 19

(13) PUMP: Manufacturer's Name Type: H.P.

Water Well Contractor's Certification: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Casey Jones Well Drilling Company (Person, firm or corporation) (Type or print) Address Rt. 2 Box 695 Creswell, Oregon Drilling Machine Operator's License No. 160 [Signed] Delbert S Jones (Water Well Contractor) Contractor's License No. 103 Date 5/11/65, 19

LANE

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

RECEIVED

WATER WELL REPORT 022028

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

SEP 29 1965 STATE OF OREGON (Please type or print)

State Well No. 20/3w-117C/2

State Permit No.

STATE ENGINEER

(1) OWNER: Oregon SALEM OREGON
Name State Highway Dept.
Address State Highway Building Salem, Oregon

(2) LOCATION OF WELL:

County Lane Driller's well number Well # 3
1/4 Section 11/4 T. 205R. 3W.W.M.
Bearing and distance from section or subdivision corner

Highway Station 549+15
Le post 140 900 ft. South of
Gettings Creek on Pacific Highway.

(3) TYPE OF WORK (check):

Well [X] Deepening [] Reconditioning [] Abandon []
ondment, describe material and procedure in Item 12.

(4) PROPOSED USE (check): (5) TYPE OF WELL:

Domestic [] Industrial [] Municipal [] Rotary [] Driven []
Irrigation [X] Test Well [] Other [] Cable [X] Jetted []
Dug [] Bored []

(6) CASING INSTALLED: Threaded [] Welded [X]
6" Diam. from 0 ft. to 20 ft. Gage 250
5" Diam. from 15 ft. to 75 ft. Gage 250

(7) PERFORATIONS: Perforated? [X] Yes [] No

Type of perforator used torch
Size of perforations 1/4 in. by 6 in.
220 perforations from 0 ft. to 20 ft.
20 perforations from 20 ft. to 75 ft.

(8) SCREENS: Well screen installed? [] Yes [X] No

Manufacturer's Name
Model No.
Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(9) CONSTRUCTION:

Well seal—Material used in seal cement
Depth of seal 18 ft. Was a packer used? no
Diameter of well bore to bottom of seal 8 in.
Were any loose strata cemented off? [] Yes [X] No Depth
Was a drive shoe used? [X] Yes [] No
Was well gravel packed? [] Yes [X] No Size of gravel:
Gravel placed from ft. to ft.
Did any strata contain unusable water? [] Yes [X] No
Type of water? depth of strata
Method of sealing strata off

(10) WATER LEVELS:

Static level 5 ft. below land surface Date 9/8/65
Artesian pressure lbs. per square inch Date

(11) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [X] Yes [] No If yes, by whom?

Yield: 45 gal./min. with 23 ft. drawdown after 6 hrs.

Bailer test gal./min. with ft. drawdown after hrs.

Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? [] Yes [X] No

(12) WELL LOG: Diameter of well below casing 6

Depth drilled 75 ft. Depth of completed well 75 ft.
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

Table with columns MATERIAL, FROM, TO. Rows: Dirt and gravel (0-10), Red shale rock (10-39), Black rock (39-52), Basalt (52-57), Grey rock (57-75)

Work started 9/3/65 19 Completed 9/8/65 19
Date well drilling machine moved off of well 9/8/65 19

(13) PUMP:

Manufacturer's Name
Type: H.P.

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME W. W. Drilling and Pump Service
Address 4157 Main St. Springfield, Ore.

Drilling Machine Operator's License No. 336
[Signed] Walt Wilson (Water Well Contractor)
Contractor's License No. 268 Date 9/14/65 19

OREGON STATE HIGHWAY DEPARTMENT

INTER-DEPARTMENT CORRESPONDENCE

Salem, Oregon

September 9, 1965

RECEIVED
 SEP 10 1965
 STATE ENGINEER
 SALEM, OREGON

To:

F. W. Yarbrough
 Staff Assistant
 S H O P S

SUBJECT: Water Well #3
 Gettings Creek Rest Area
 Goshen - Cottage Grove Section
 Pacific Highway I-5
 Lane County
 11' East of P.O.T. Ref. Pin.
 Sta. 549+15 located in West
 R. W. Fence

This well was located in an essentially water poor area by the combination of extensive surface geologic reconnaissance and detailed sub-surface geophysical investigations. (See report July, 1965). The well seems capable of a sustained yield of better than 44 gal./min. This is based on the Bailor and Pump tests conducted to date.

It is believed that the bulk of the water is entering the well between the second seismic top and the top of the gray basalt or andesite layer.

It was recommended that the method of completion be modified from specifications to that illustrated on the accompanying sheet of drawings because of the nature of the red volcanic ash. If the 6" casing were driven into the basalt layer, there would be a great risk of sealing off the water with clay and not being able to recover it upon perforation of the casing. Other reasons for this type of completion in this situation are:

- 1) The liner can be removed and the perforations cleaned.
- 2) With the liner out, the well can be cleaned, deepened, or reamed.
- 3) This all can be done without disturbing the seal which prevents the surface water from entering the well.
- 4) This method was discussed with Jack Sceva and William Bartholomew of the State Engineer's office. They express their approval.

During the discussion with Mr. Sceva and Mr. Bartholomew the following additional points were covered:

- 1) If this water is part of the general perched water table, it would be necessary to have a treatment unit on the line at this time to take care of possible contamination during the recharge season.

cc: R. D. Morgan
 Mark Astrop
 Jack Soeva
 R. L. Chandler
 D. J. Sege
 H. J. Van Cleave

WPM:ks

William F. Milne
 Assistant Geologist

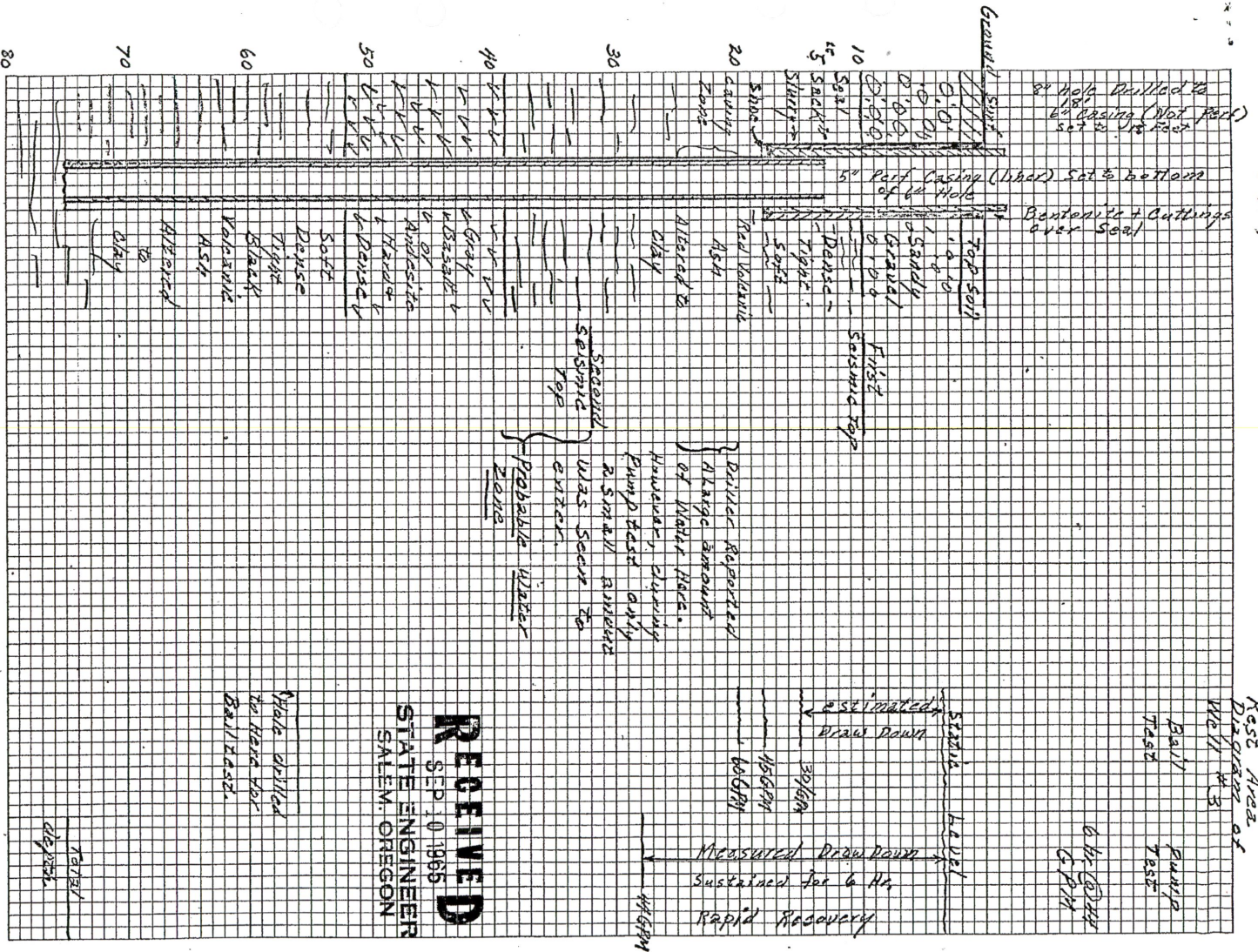
Summary: This is an extremely good well.

- tion.
- 6) The water is cold, tastes good, and feels soft. The chemical and bacteriological tests will indicate the suitability for human consumption.
- 5) Finding another well in the immediate vicinity of the test area with a potential of more than 10 gal./min would be extremely difficult to impossible.
- 4) a) static elevations of the three wells
 b) the temperature of the water in the three wells
 c) the comparative mineral content of the water from the wells (the above information could be obtained by the local personnel)
- 3) The top of the casing should be above the highest recorded flood level.
- 2) If this water is separate from the general perched water table, then there is a good possibility that the water will rise over the top of the casing and become an artesian flow during the recharge season.
- 7) To obtain an indication of the probable recharge source it would be helpful to know:

September 9, 1965

-2-

R. W. Tarborough



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 STATE ENGINEER
 SALEM, OREGON

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 SEP 14 1965
 STATE ENGINEER
 SALEM OREGON

REQUEST FOR WATER BACTERIOLOGICAL EXAMINATION

NAME OF WATER SUPPLY OR SWIMMING POOL: 75' WELL GETTINGS CO REST AREA

ADDRESS OR LOCATION: MP 140 I-5 Highway

DATE COLLECTED: 9/7/65 HOURS: A.M. P.M.

NAME OF COLLECTOR: Dale Allen - Asst. DMS

SAMPLING POINT: Pump Disch. SOURCE: Well COUNTY: Lane

CHLORINATED UNCHLORINATED MUNICIPAL OR COMMUNITY SEMI-PUBLIC PRIVATE

SWIMMING POOL AND BATHING PLACES: ARTIFICIAL POOL NATURAL BATHING PLACE

SEND REPORT TO: ORE STATE HWY Box 1269, Eugene % D.J. Sage ORE

REMARKS: 1st sample of 75' well on Interstate Hwy I-5

HL-10 REV. 10-59 SEE REVERSE SIDE

LAB. NO. 22276

THIS WATER DOES DOES NOT

CONFORM WITH ACCEPTED STANDARDS OF PURITY.

DATE RECEIVED: 9-8-65 DATE REPORTED: 9-11-65

SEE BACK OF 1ST COPY FOR ADDL. INFO.

VOL.-ML	1	10	10	10	10	10	MPN
24 HOURS							
48 HOURS				+			+
CON-FIRMATION				+			+

VOL.-ML	10.	10.	1.	1.	.1	.1	.01	.01	MPN
24 HOURS									
48 HOURS									
CON-FIRMATION									

CHECKED BY: JP

PUBLIC HEALTH LABORATORY
 OREGON STATE BOARD OF HEALTH
 P. O. BOX 231, PORTLAND, OREGON 97207

REQUEST FOR WATER BACTERIOLOGICAL EXAMINATION

NAME OF WATER SUPPLY OR SWIMMING POOL: 75' Well GETTINGS CO REST AREA

ADDRESS OR LOCATION: MP 140 - I-5 Hwy

DATE COLLECTED: 9/7/65 HOURS: A.M. P.M.

NAME OF COLLECTOR: Dale D. Allen Asst. DMS

SAMPLING POINT: Pump Disch. SOURCE: Well COUNTY: Lane

CHLORINATED UNCHLORINATED MUNICIPAL OR COMMUNITY SEMI-PUBLIC PRIVATE

SWIMMING POOL AND BATHING PLACES: ARTIFICIAL POOL NATURAL BATHING PLACE

SEND REPORT TO: ORE STATE HWY Box 1269; Eugene % D.J. Sage ORE

REMARKS: 2nd Sample of 75' well on Gettings Co Rest Area

HL-10 REV. 10-59 SEE REVERSE SIDE

LAB. NO. 22275

THIS WATER DOES DOES NOT

CONFORM WITH ACCEPTED STANDARDS OF PURITY.

DATE RECEIVED: 9-8-65 DATE REPORTED: 9-11-65

SEE BACK OF 1ST COPY FOR ADDL. INFO.

VOL.-ML	1	10	10	10	10	10	MPN
24 HOURS							
48 HOURS			+	+			+
CON-FIRMATION			+	+			+

VOL.-ML	10.	10.	1.	1.	.1	.1	.01	.01	MPN
24 HOURS									
48 HOURS									
CON-FIRMATION									

CHECKED BY: JP

PUBLIC HEALTH LABORATORY
 OREGON STATE BOARD OF HEALTH
 P. O. BOX 231, PORTLAND, OREGON 97207

L. R. Chandler

- 2 -

September 8, 1965

minimum of 20 GPM required. Walt Wilson of W. W. Drilling estimated capacity between 55 and 60 GPM. Well recovered to 7.5 feet below surface in 20 minutes.

Samples of water were taken on 9-7-65 for a bacteriological examination. The water is clear with no undesirable taste.

D. J. Sage
Dist. Maint. Supt.

By *Dale D. Allen*

Dale D. Allen
Asst. Dist. Maint. Supt.

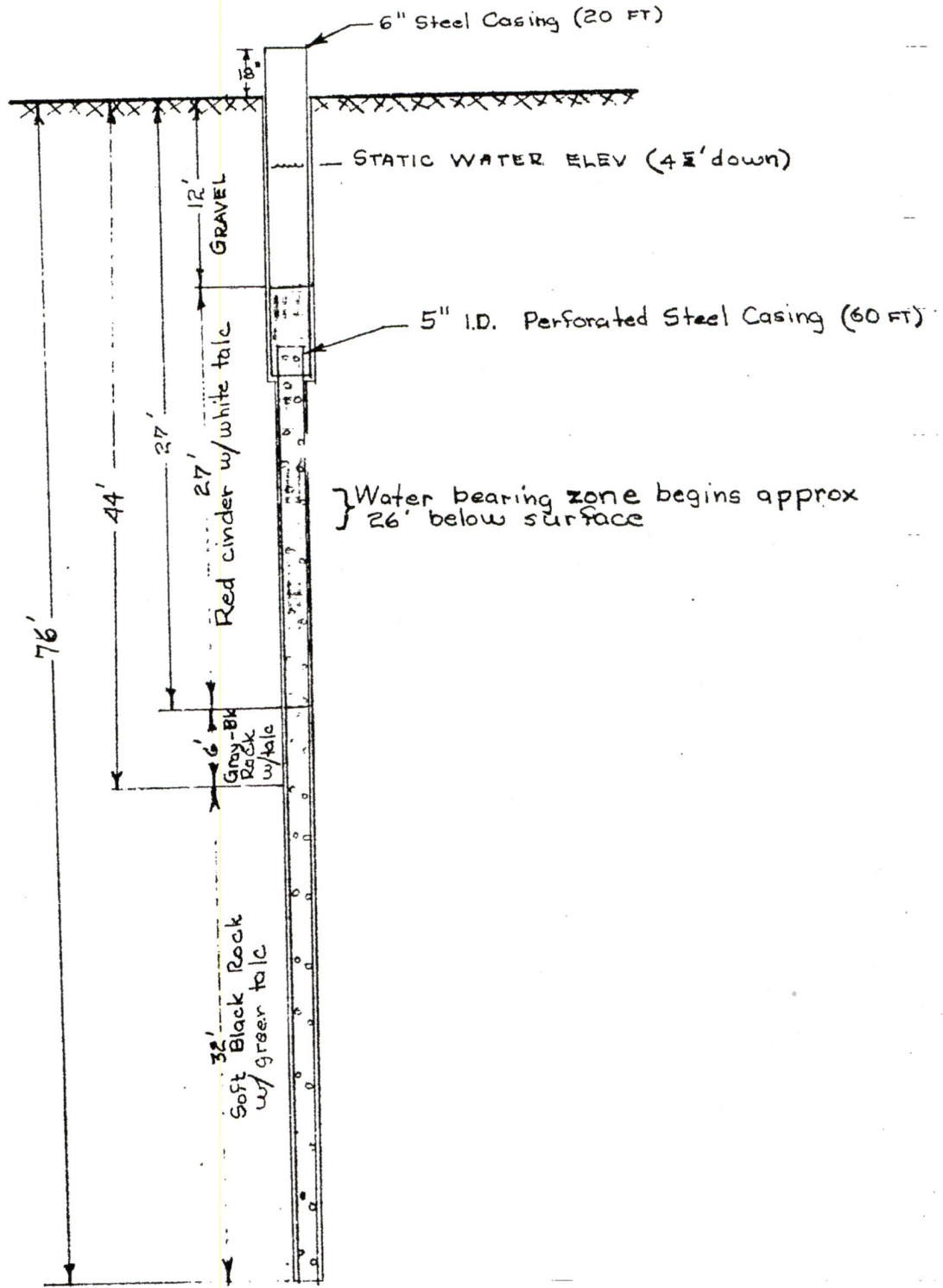
DDA:em

cc: Mark Astrup
Jack Scova
W. P. Milne

OREGON STATE HIGHWAY DEPARTMENT

Calculations for X-SECTION OF 75 FT WELL

Made by JDA 9/8 1965 Checked by _____, 19____ Backchecked by _____, 19____



Vert Scale 1" = 10'

20/3w-11
RECEIVED
 SEP 10 1965
 STATE ENGINEER
 SALEM OREGON

OREGON STATE HIGHWAY DEPARTMENT
 INTER-DEPARTMENT CORRESPONDENCE

Eugene, Oregon

September 8, 1965

To: L. R. Chandler
 Division Engineer

Attention: Carl Williams

SUBJECT: Well Drilling Report
 Gettings Creek Rest Area

This report covers the drilling and pump testing done on the third well drilled at the Gettings Creek Rest Area.

Well Location - MP 140.4 - Interstate I-5
 West of Sta. 549+15 and 10' E. of W.
 R/W Fence.

Depth - - - - 75 feet

Casing - - - - 18 feet of 6" casing
 60 feet of 5" perforated casing

Driller - - - - W. W. Drilling, 4157 Main St., Springfield.

August 30, 1965 - W. W. Drilling moved in and set up.
 August 31, 1965 - Began drilling. Drilled 20 feet.
 September 1, 1965 - Drilled to 52 feet and stopped.
 September 3, 1965 - Ran bailer test at 52 feet.

Results of Bailer Test

In 30 min. 1800 gals. was bailed.
 Approx. drawdown at end of test was 18 feet.
 Estimated capacity of well - Over 45 Gal/Min.

September 3, 1965 (Con't) - Drilled to 75 feet depth and sealed well.

September 7, 1965 - Ran pump test with suction pump.

Results of Pump Test

After first 15 min. of pumping, the pump discharged it's max. capacity of 44 GPM for 5 hrs., 45 min. with a stable drawdown of 21.9 feet below static level. This test, therefore, does not indicate the max. capacity the well can produce but indicates it is over 44 GPM and over the

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LANE

20S/3W-11

MAR 28 1986

022009

STATE OF OREGON WATER WELL REPORT (as required by ORS 537.765)

WATER RESOURCES DEPT

(1) OWNER: SALEM, OREGON State of Oregon Hwy. Dept. Address State Hwy. Building City Salem State Or. Zip

(2) TYPE OF WORK: [] New Well [] Deepen [X] Recondition [] Abandon

(3) DRILL METHOD: [] Rotary Air [] Rotary Mud [X] Cable [] Other

(4) PROPOSED USE: [] Domestic [X] Community [] Industrial [] Irrigation [] Other

BORE HOLE CONSTRUCTION: Depth of Completed Well 76' ft. Special Standards date of approval

Table with columns: HOLE diameter, SEAL Material, Amount sacks or pounds. Row 1: 6" to 44" Cement -3 to 44 39 Sacks

How was seal placed? Method [] A [] B [X] C [] D [] E Backfill placed from ft. to ft. Material Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER: Table with columns: Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded. Casing: 6" +2 48 .250 [X] [] [X] []

location of shoe(s) 48'

PERFORATIONS/SCREENS: Table with columns: m, To, Slot size, Number, Diameter, Tele/pipe size, Casing, Liner

(8) WELL TESTS: Minimum testing time is 1 hour [X] Pump [] Bailer [] Air [] Artesian Yield gal/min Pumping level Drill stem at Time 1/4 hr 1 hr 25 43' 3 1/2 hrs.

Temperature of water Depth Artesian Flow Found Was a water analysis done? [] Yes [] No By whom Did any strata contain water not suitable for intended use? [] Too little [] Salty [] Muddy [] Odor [] Colored [] Other Depth of strata:

(9) LOCATION OF WELL by legal description: County Lane Latitude Longitude Township 20S N or S, Range 3W E or W, WM. Section 11 Tax Lot Lot Block Subdivision Street Address of Well (or nearest address) Gettings Crk. Rest Area #549-15 Mile post 140 off I-5 So.

(10) STATIC WATER LEVEL: 6 ft. below land surface. Date 3-6-86 Artesian pressure lb. per square inch. Date

(11) WELL LOG: Ground elevation

Table with columns: Material, From, To, WB?, SWL. Rows: Topsoil & Gravel (0-10), Red Claystone (10-39), Black Rock (39-44). Note: Pulled out 20' of 6" casing Replaced casing and seal to 44'.

Date started 2-7-86 Completed 3-6-86

(unbonded) Water Well Constructor Certification: I constructed this well in compliance with Oregon well construction standards. Signed Casey L Jones Date 3-6-86

(bonded) Water Well Constructor Certification: I accept responsibility for construction of this well and its compliance with all Oregon water well standards. Signed Casey L Jones Date 3-6-86