

WATER RESOURCES DEPARTMENT MEMO

April 01 , 2015

TO: Application G- 17981

FROM: M. Thoma - Groundwater Section

SUBJECT: Scenic Waterway Interference Evaluation

YES

The source of appropriation is within or above a Scenic Waterway

NO

YES

Use the Scenic Waterway condition (condition 7J)

X NO

Per ORS 390.835, the Groundwater Section is able to calculate groundwater interference with surface water that contributes to a Scenic Waterway. The calculated interference distribution is provided below.

Per ORS 390.835, the Groundwater Section is unable to calculate groundwater interference with surface water that contributes to a scenic waterway; therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface flows necessary to maintain the free-flowing character of a scenic waterway.

DISTRIBUTION OF INTERFERENCE

Calculate interference as the monthly fraction of the annual consumptive use and fill in the table below. If interference cannot be calculated, per criteria in 390.839, do not fill in the table but check the "unable" option above, thus informing the Water Rights Section that the Department is unable to make a Preponderance of Evidence finding.

Exercise of this permit is calculated to reduce monthly flows in the _____ Scenic Waterway by the following amounts, expressed as a proportion of the annual consumptive use pumped from the well.

Monthly Fraction of Annual Consumptive Use

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 04/01/2015
FROM: Groundwater Section Michael J. Thoma
Reviewer's Name
SUBJECT: Application G- 17981 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: Arlene L. Dietz – Rice Farms LLC County: Lane

A2. Proposed use _____ Irrigation (Primary, 27 ac.) Seasonality: _____ March 1 – October 31
A3. Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under log#):

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 11359	1	Alluvium	0.34	17S/03W-24 NW-SW	2250' N, 590' E of SW cor S24
2						
3						
4						
5						

* Alluvium, CRB, Bedrock

Use data from application for proposed wells.

A4. **Comments:** The applicant's proposed POU already exists under Certificate 23812 as Primary Irrigation with a surface water POA.

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: OAR 690-502-0240 states that "Groundwater in unconfined alluvium within $\frac{1}{4}$ mile of the banks of a stream of surface water source is presumed to be in hydraulic connection with the surface water source... This hydraulically connected groundwater shall be classified the same as the surface source." The applicant's well has been determined by the department to be producing from unconfined alluvium and is within $\frac{1}{4}$ mi of the McKenzie River and is therefore presumed to be in hydraulic connection and should be treated as surface water source.

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 Level); "Large" 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 well is completed into alluvial sediments within the McKenzie River Valley. These sediments generally consist of mixed sand and gravel deposits with some clay and were deposited by the McKenzie and Willamette Rivers and form the proximal portions of the Springfield Fan (Woodward et al., 1998). The total thickness of the alluvial sediments is > 300 ft in the vicinity of the well and likely underlain by less-permeable marine deposits of the Eugene Formation (Madin and Murray, 2006). Most other wells in the area are shallow (< 100 ft deep) and produce from the alluvial sediments with yields generally between 20 and 100 gpm but some wells (mostly deeper wells) produce several-hundred gpm.

There are only a few wells near the applicant's well that have recorded water levels (see Figure 1), and these wells show stable WLs over the past few decades (Figure 3) indicating that groundwater is not over-appropriated in the area.

The proposed POU is just north of the City of Springfield and there are only a few domestic wells in the vicinity (most houses would be serviced through a municipal water supply) so there is little concern of interference with nearby domestic wells. There are several mapped groundwater POAs to the west of the applicant's well (Cert. 45302, 45303, 45304) that are listed under Rainbow Water District for municipal use. These wells are between 80 and 235 ft deep, produce from the same alluvial aquifer as the applicant's well, and have a combined, permitted total rate of 7.09 cfs. Due to the proximity of these wells and the applicant's well to the McKenzie River, and the average flows in the McKenzie River, there is not likely to be interference between these wells and the applicant's since the impacts of pumping will not likely spread far as water will be captured from the river.

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	Alluvial river deposits	<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"/>

Basis for aquifer confinement evaluation: The well log for the applicant's well shows first water at 18 ft bbls and SWL in that zone of 15 ft bbls (i.e., similar depths) and there is no evidence of any confining units on the well log. Other wells in the area show similar SWL depths of 10-20 ft bbls.

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 $\frac{1}{4}$ 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.

Basis for aquifer hydraulic connection evaluation: The applicant's well is within ¼ mile of the McKenzie River and producing from an unconfined aquifer so OAR 690-09-040 requires the department to assume hydraulic connection. Additionally, the SWL in the applicant's well is coincident with river stage, which supports the finding of hydraulic connection.

Water Availability Basin the well(s) are located within: McKenzie R > Willamette R – AB Mouth (ID# 528)

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.

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"/>
		<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"/>

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													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
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: _____

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 well is ~800 ft from the McKenzie River and producing from a shallow, unconfined aquifer composed of mixed coarse- and fine-grained alluvial deposits. The approximate land surface elevation of the proposed POU is only <10 feet above the McKenzie River channel and occupies a meander scar of the former river channel (based on interpretation of lidar data topographic maps – see Figure 2). "Division 9" rules (OAR 690-009-0040) along with basin rules of the Willamette River Basin (OAR 690-502-0240) require the department to presume hydraulic connection with the McKenzie River and PSI for the applicant's well and proposed use.

Willamette Basin Rules (OAR 690-502) further require that the proposed POA be classified as surface water source. Therefore surface water from the McKenzie River must be appropriated to mitigate the effects of pumping for this application to be approved. **Without appropriation of surface water, the proposed use should not be allowed as it will cause interference with the McKenzie River**

References Used:

Woodward, Dennis J., Gannett, Marshall W., and Vaccaro, John J., 1998, Hydrogeologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington: U. S. Geological Survey Professional Paper 1424-B, 82p.

Madin, I. P. and R. B. Murray. 2006. Preliminary Geologic Map of the Eugene East and Eugene West 7.5' Quadrangles, Lane County, Oregon. DOGMI Open-File-Report O-06-17.

D. WELL CONSTRUCTION, OAR 690-200

- D1. Well #: _____ Logid: _____
- D2. **THE WELL does not appear to meet current well construction standards based upon:**
- review of the well log;
 - field inspection by _____;
 - report of CWRE _____;
 - 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 Table

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION						
Watershed ID #: 528		MCKENZIE R > WILLAMETTE R - AB MOUTH			Exceedance Level: 80	
Time: 4:03 PM		Basin: WILLAMETTE			Date: 03/25/2015	
Month	Natural Stream Flow	Consumptive Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Requirements	Net Water Available
Monthly values are in cfs. Storage is the annual amount at 50% exceedance in ac-ft.						
JAN	5,040.00	553.00	4,490.00	0.00	1,025.00	3,460.00
FEB	5,850.00	1,250.00	4,600.00	0.00	1,025.00	3,580.00
MAR	5,630.00	1,250.00	4,380.00	0.00	1,025.00	3,350.00
APR	5,020.00	1,300.00	3,720.00	0.00	1,025.00	2,690.00
MAY	4,000.00	808.00	3,190.00	0.00	1,025.00	2,170.00
JUN	2,990.00	408.00	2,580.00	0.00	1,025.00	1,560.00
JUL	2,160.00	389.00	1,770.00	0.00	1,025.00	746.00
AUG	1,790.00	377.00	1,410.00	0.00	1,025.00	388.00
SEP	1,730.00	358.00	1,370.00	0.00	1,025.00	347.00
OCT	1,830.00	328.00	1,500.00	0.00	1,025.00	477.00
NOV	2,850.00	327.00	2,520.00	0.00	1,025.00	1,500.00
DEC	4,450.00	327.00	4,120.00	0.00	1,025.00	3,100.00
ANN	3,560,000	461,000	3,100,000	0	743,000	2,350,000

Figure 1: Application overview maps showing proximity to wells with recorded water levels.

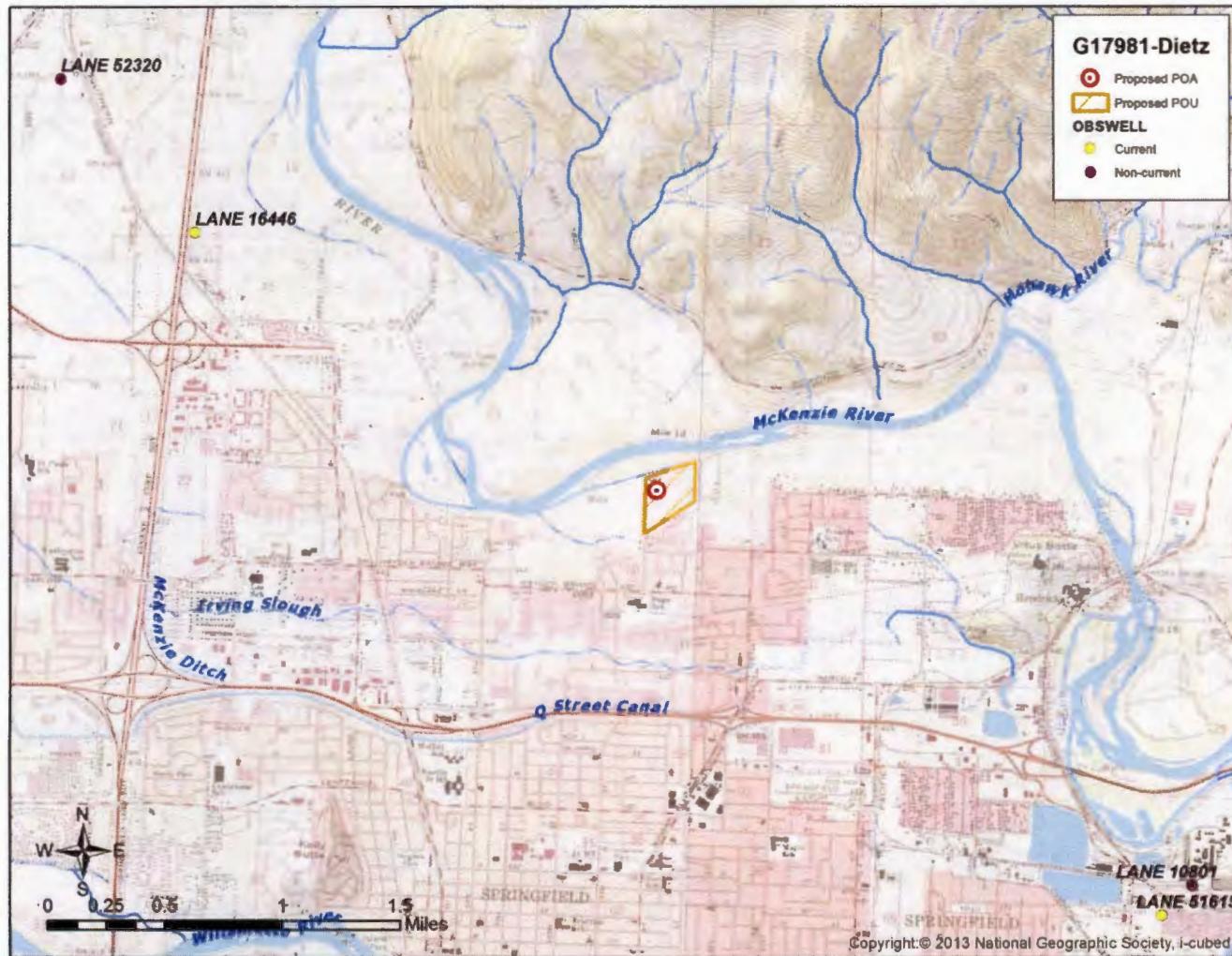


Figure 2: Application overview map showing Lidar elevation data and PODs by type.

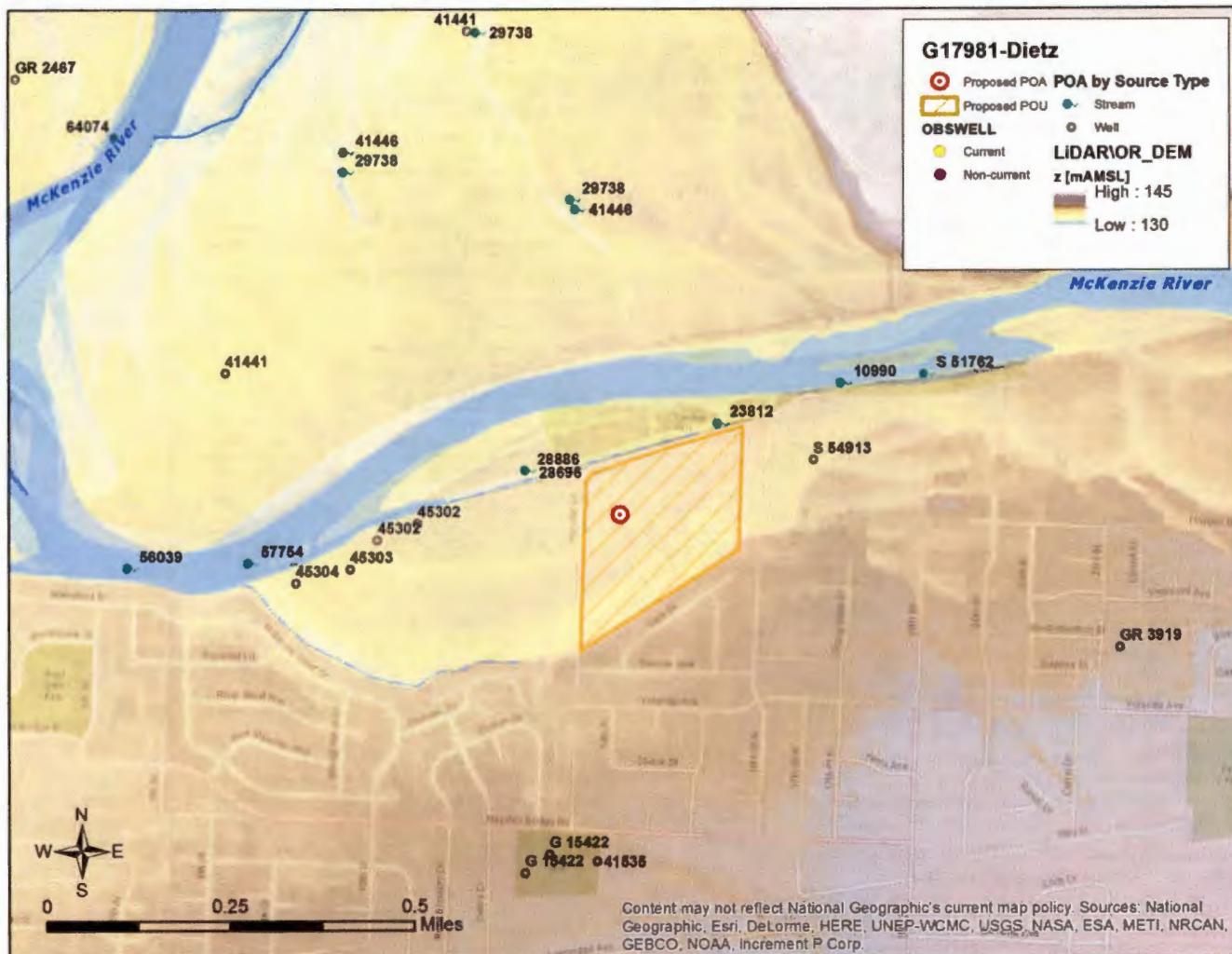
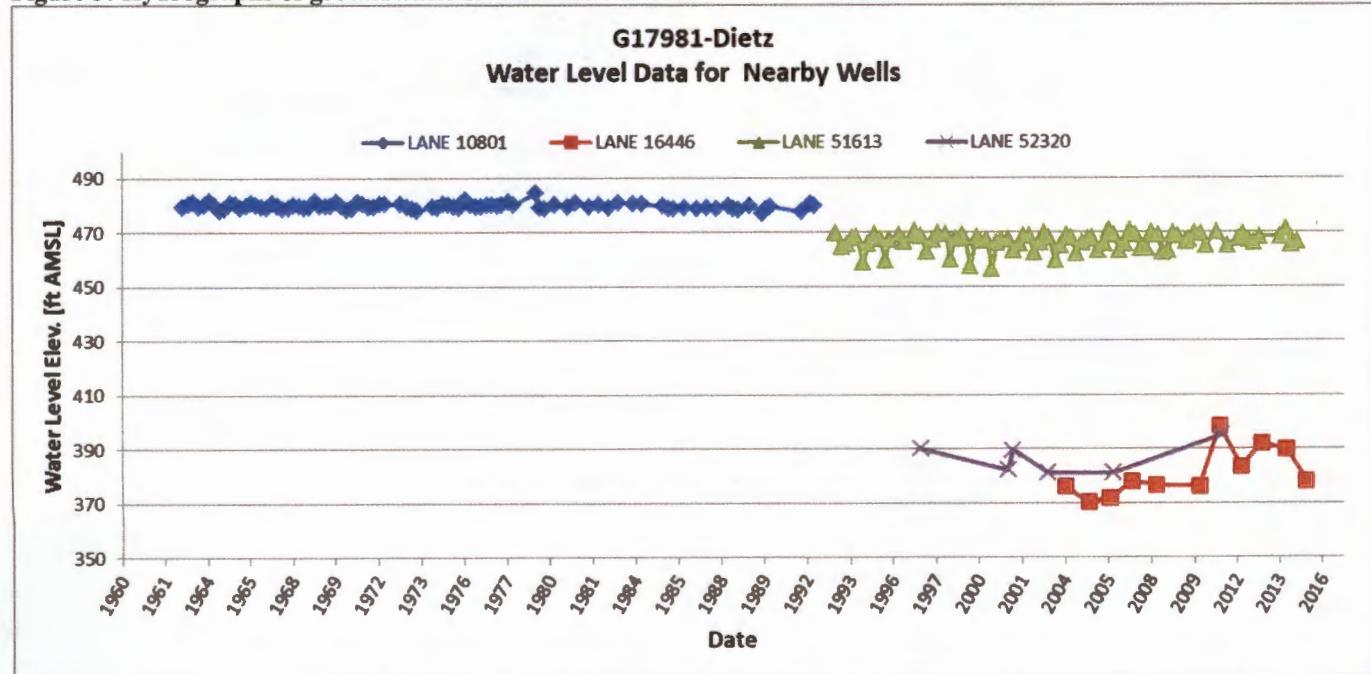


Figure 3: Hydrographs of groundwater levels for select wells



Attachment 1: Well Log for LANE 11359

NOTICE TO WATER WELL CONTRACTOR The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON within 30 days from the date of well completion.		RECEIVED LANE 11359 WATER WELL REPORT AUG 19 1968 STATE OF OREGON (Please type if possible) State Well No. <u>17/3W-24</u> (Do not write above) STATE ENGINEER SALEM, OREGON State Permit No. <u>LANE 11359</u>																																																																																					
STATE ENGINEER GALLIA CIVILIAN (1) OWNER: Name <u>Homer Chase</u> Address <u>2725 Harbor St Lane</u> <u>SPRINGDALE ID - 83060</u> (2) TYPE OF WORK (check): New Well <input checked="" type="checkbox"/> Deepening <input type="checkbox"/> Reconditioning <input type="checkbox"/> Abandon <input type="checkbox"/> If abandonment, describe material and procedure in Item 12. (3) TYPE OF WELL: (4) PROPOSED USE (check): Rotary <input checked="" type="checkbox"/> Driven <input type="checkbox"/> Domestic <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/> Cable <input checked="" type="checkbox"/> Jetted <input type="checkbox"/> Dug <input type="checkbox"/> Bored <input type="checkbox"/> Irrigation <input checked="" type="checkbox"/> Test Well <input type="checkbox"/> Other <input type="checkbox"/>																																																																																							
CASING INSTALLED: 10" Diam. from <u>6'</u> ft. to <u>86'</u> ft. Gage <u>50</u> " Diam. from _____ ft. to _____ ft. Gage _____ " Diam. from _____ ft. to _____ ft. Gage _____																																																																																							
PERFORATIONS: Type of perforator used <u>Mills Knife</u> Size of perforations <u>1/4</u> in. by <u>2</u> in. 300 perforations from <u>14</u> ft. to <u>96</u> ft. perforations from _____ ft. to _____ ft.																																																																																							
(7) SCREENS: Well screen installed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Manufacturer's Name _____ Type _____ Model No. _____ Diam. _____ Slot size _____ Set from _____ ft. to _____ ft. Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.																																																																																							
(8) WATER LEVEL: Completed well. Static level <u>10</u> ft. below land surface Date <u>4/19/68</u> Pressure _____ lbs. per square inch Date _____																																																																																							
(9) WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, by whom? <u>Driller</u> Yield: <u>350</u> gal/min. with <u>8</u> ft. drawdown after <u>2</u> hrs. <u>400</u> : <u>12</u> : <u>4</u> : <u>500</u> : Pulled Down To <u>18</u> ft. Bailer test gal/min. with ft. drawdown after hrs. Artesian flow g.p.m. Date _____ Temperature of water _____ Was a chemical analysis made? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																																																																																							
(10) CONSTRUCTION: Well seal—Material used <u>Cement</u> Depth of seal <u>18'</u> ft. Diameter of well bore to bottom of seal <u>12</u> in. Were any loose strata cemented off? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth _____ Was a drive shoe used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Did any strata contain unusable water? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Type of water? depth of strata _____ Method of sealing strata off _____ Was well gravel packed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Size of gravel: _____ Gravel placed from _____ ft. to _____ ft.																																																																																							
(11) LOCATION OF WELL: County <u>Lane</u> Driller's well number _____ <u>14</u> <u>1/4</u> Section <u>24</u> T. <u>115</u> R. <u>3W</u> W.M. Bearing and distance from section or subdivision corner _____ (12) WELL LOG: Diameter of well below casing <u>10</u> ft. Depth drilled <u>100</u> ft. Depth of completed well <u>96</u> ft. Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level as drilling proceeds. Note drilling rates. <table border="1"> <thead> <tr> <th>MATERIAL</th> <th>From</th> <th>To</th> <th>SWL</th> </tr> </thead> <tbody> <tr> <td><u>Loam</u></td> <td><u>0</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td><u>Sand & Gravel</u></td> <td><u>4</u></td> <td><u>18</u></td> <td></td> </tr> <tr> <td><u>Clay</u></td> <td><u>18</u></td> <td><u>35</u></td> <td><u>15</u></td> </tr> <tr> <td><u>Cemented streaks</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>Sand & Gravel</u></td> <td><u>35</u></td> <td><u>40</u></td> <td><u>13</u></td> </tr> <tr> <td><u>Yellow brown clay sand</u></td> <td><u>40</u></td> <td></td> <td></td> </tr> <tr> <td><u>water streaks at 40'</u></td> <td><u>40</u></td> <td><u>85</u></td> <td><u>10</u></td> </tr> <tr> <td><u>Hard cement strip</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>RT</u></td> <td><u>88</u></td> <td></td> <td></td> </tr> <tr> <td><u>Sand gravel clay</u></td> <td><u>85</u></td> <td><u>95</u></td> <td></td> </tr> <tr> <td><u>red gravel clay</u></td> <td><u>95</u></td> <td><u>100</u></td> <td></td> </tr> <tr> <td><u>Cemented</u></td> <td><u>100</u></td> <td></td> <td></td> </tr> <tr> <td><u>limestone</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>Work started</u></td> <td><u>4/10</u></td> <td><u>19</u></td> <td><u>Completed 6/18 1968</u></td> </tr> <tr> <td><u>Date well drilling machine moved off of well</u></td> <td><u>6/19</u></td> <td><u>19</u></td> <td><u>6/8</u></td> </tr> <tr> <td colspan="4">Drilling Machine Operator's Certification:</td> </tr> <tr> <td colspan="4">This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.</td> </tr> <tr> <td colspan="4"> [Signed] <u>O. D. Johnson</u> Date <u>6/19, 1968</u> (Drilling Machine Operator) </td> </tr> <tr> <td colspan="4"> Drilling Machine Operator's License No. <u>341</u> </td> </tr> <tr> <td colspan="4"> 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 <u>W.W. DRILLING & PUMP</u> (Person, firm or corporation) <u>(Type or print)</u> Address <u>2320 MAIN - Spfld Ore</u> [Signed] <u>Walt Walzer</u> (Water Well Contractor) Contractor's License No. <u>268</u> Date <u>JUNE 20 1968</u> </td> </tr> </tbody></table>				MATERIAL	From	To	SWL	<u>Loam</u>	<u>0</u>	<u>4</u>		<u>Sand & Gravel</u>	<u>4</u>	<u>18</u>		<u>Clay</u>	<u>18</u>	<u>35</u>	<u>15</u>	<u>Cemented streaks</u>				<u>Sand & Gravel</u>	<u>35</u>	<u>40</u>	<u>13</u>	<u>Yellow brown clay sand</u>	<u>40</u>			<u>water streaks at 40'</u>	<u>40</u>	<u>85</u>	<u>10</u>	<u>Hard cement strip</u>				<u>RT</u>	<u>88</u>			<u>Sand gravel clay</u>	<u>85</u>	<u>95</u>		<u>red gravel clay</u>	<u>95</u>	<u>100</u>		<u>Cemented</u>	<u>100</u>			<u>limestone</u>				<u>Work started</u>	<u>4/10</u>	<u>19</u>	<u>Completed 6/18 1968</u>	<u>Date well drilling machine moved off of well</u>	<u>6/19</u>	<u>19</u>	<u>6/8</u>	Drilling Machine Operator's Certification:				This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.				[Signed] <u>O. D. Johnson</u> Date <u>6/19, 1968</u> (Drilling Machine Operator)				Drilling Machine Operator's License No. <u>341</u>				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 <u>W.W. DRILLING & PUMP</u> (Person, firm or corporation) <u>(Type or print)</u> Address <u>2320 MAIN - Spfld Ore</u> [Signed] <u>Walt Walzer</u> (Water Well Contractor) Contractor's License No. <u>268</u> Date <u>JUNE 20 1968</u>			
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<u>red gravel clay</u>	<u>95</u>	<u>100</u>																																																																																					
<u>Cemented</u>	<u>100</u>																																																																																						
<u>limestone</u>																																																																																							
<u>Work started</u>	<u>4/10</u>	<u>19</u>	<u>Completed 6/18 1968</u>																																																																																				
<u>Date well drilling machine moved off of well</u>	<u>6/19</u>	<u>19</u>	<u>6/8</u>																																																																																				
Drilling Machine Operator's Certification:																																																																																							
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.																																																																																							
[Signed] <u>O. D. Johnson</u> Date <u>6/19, 1968</u> (Drilling Machine Operator)																																																																																							
Drilling Machine Operator's License No. <u>341</u>																																																																																							
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 <u>W.W. DRILLING & PUMP</u> (Person, firm or corporation) <u>(Type or print)</u> Address <u>2320 MAIN - Spfld Ore</u> [Signed] <u>Walt Walzer</u> (Water Well Contractor) Contractor's License No. <u>268</u> Date <u>JUNE 20 1968</u>																																																																																							
(USE ADDITIONAL SHEETS IF NECESSARY)																																																																																							