

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date 16 April 2009
 FROM: Ground Water/Hydrology Section Gerald H. Grondin
Reviewer's Name
 SUBJECT: Application G- 17194 Supersedes review of N.A.
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 ground water 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: Seclusion Estates Community Water System, LLC
 County: Josephine

- A1. Applicant(s) seek(s) 0.05 cfs (22 gpm) from 2 well(s) in the Rogue Basin,
Hellgate Canyon subbasin Quad Map: Wilderville
- A2. Proposed use: quasi-municipal Seasonality: Year Round (365 days)
 Proposed use: Irrigation (6 acres primary) Seasonality: 1 April to 31 October (214 days)
- 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	JOSE 52972	36427	Granite	0.01	T36S/R6W-sec 6 CCA	1270' N, 1069' E fr SW cor S 6
2	JOSE 53407	38961	Granite	0.04	T36S/R6W-sec 6 CAC	1588' N, 1570' E fr SW cor S 6
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	1160	280	50	10/12/99	300	0 - 18	+1 - 19	0 - 300	280 - 300	7	?	A
2	1170	64	38	7/13/00	150	0 - 18	+2 - 18	None	None	18	?	A

Use data from application for proposed wells.

A4. **Comments:** _____

The applicant well numbers appear related to the well tag for each well. However, it appears the applicant may have transposed the number for one well. Well JOSE 52972 = well tag L-36427 and well JOSE 53407 = well tag L-38691.

A5. **Provisions of the Rogue River Program** Basin rules relative to the development, classification and/or management of ground water hydraulically connected to surface water **are**, or **are not**, activated by this application. (Not all basin rules contain such provisions.)
 Comments: The proposed use is in the Middle Rogue Basin of the Rogue River Program (see 690-515-0040). Surface water is classified, ground water appears not.

A6. **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
 Name of administrative area: _____
 Comments: Not Applicable

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

B1. **Based upon available data**, I have determined that ground water* 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 ground water 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 ground water 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 ground water resource; or
- d. will, if properly conditioned, avoid injury to existing ground water rights or to the ground water resource:
 - i. The permit should contain condition #(s) 7B and 7N;
 - 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 ground water production from no deeper than _____ ft. below land surface;
- b. **Condition** to allow ground water production from no shallower than _____ ft. below land surface;
- c. **Condition** to allow ground water production only from the _____ ground water 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 Ground Water 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. **Ground water availability remarks:** _____

If a permit is issued, condition with 7B and &7N.

Geologic maps and water well reports (well logs) for the proposed and neighboring wells indicate the wells obtain water from granite. The granite is likely fractured. The literature indicates higher ground water yields (up to 50 gpm) occur where the granite is deeply weathered and lower ground water yields (less than 5 gpm) occur where the granite is unweathered. The water well reports for the proposed wells and neighboring wells indicate “decomposed” (weathered) granite overlies “tombstone” (unweathered/less weathered) granite.

The driller reported yields for the proposed wells is 7 gpm for JOSE 53972 and 18 gpm for JOSE 53407.

Two nearby wells with water level data were found. Well JOSE 9451 is located about 1.1 miles south of proposed well JOSE 52972 and is completed in granite. The ground water level data is from 1988 to 1993. The graphed data show seasonal and annual trends. The seasonal trend shows seasonal fluctuations of about 8 feet (spring high vs summer low). The annual trend appears to show a climate trend (overall lower levels during drier years and overall higher levels during wetter years). Well JOSE 55124 (state observation well 248) is located about 1.2 miles northeast of proposed well JOSE 53407 and is likely completed in granite. The ground water level data is from 1980 to 1998. The graphed data show seasonal and annual trends. The seasonal trend shows seasonal fluctuations of about 3 feet before 1990 and about 5 to 10 feet after 1990 (spring high vs summer low). The annual trend clearly shows a climate trend (overall lower levels during drier years and overall higher levels during wetter years).

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

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

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Granite	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Granite	<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"/>

Basis for aquifer confinement evaluation: _____

Water well reports indicate a static water level above the first water bearing zone. This does not imply confined ground water given the ground water occurs in fractured rock. The depth where a well encounters fractures yielding water varies. Often, the various fractures are interconnected.

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	Pass Creek (branch head)	1110	1020	3700	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Rogue River (closest reach)	1110	840	6100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	1	Pass Creek (branch head)	1132	1020	4000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Rogue River (closest reach)	1132	840	6700	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

Basis for aquifer hydraulic connection evaluation: _____

The ground water level is based upon water well reports for proposed wells JOSE 53972 and JOSE 53407. The elevations are above Pass Creek and the Rogue River. The ground water gradient likely converges toward Pass Creek and subsequently toward the Rogue River.

The surface water elevations were based upon Wilderville quadrangle map (1:24,000 scale)

The quadrangle map blue line start (head) of Pass Creek branch is more than 0.25 miles, but less than 1.00 mile south of the proposed well sites.

Water Availability Basin the well(s) are located within: ROGUE R>PACIFIC OCEAN-AB GRAVE CR

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 < 1/4 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"/>	N.A.	N.A.	<input type="checkbox"/>	N.A.	<input type="checkbox"/>	5.6%	<input type="checkbox"/>
2	1	<input type="checkbox"/>	<input type="checkbox"/>	N.A.	N.A.	<input type="checkbox"/>	N.A.	<input type="checkbox"/>	4.3%	<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"/>
		<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"/>

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?
	1		<input type="checkbox"/>	N.A.	N.A.	<input type="checkbox"/>	N.A.	<input type="checkbox"/>	4.6%	<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: _____

Pass Creek (branch) is more than 0.25 miles and less than 1.00 mile from both proposed wells.

No surface water availability calculation for Pass Creek was found.

Hunt 1999 was used to calculate interference with Pass Creek at the end of 30 days. Doing the calculation assumes there is sufficient distance to treat the fractured rock as a porous media which may or may not be valid. Regardless, the individual and total calculated interference at the end of 30 days is less than 10 percent of the pumping rate(s). The calculation used a transmissivity of 100 ft²/day based upon specific capacity data for nearby wells, and an assumed 0.001 storage coefficient.

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
1	2	29.0%	24.7%	21.3%	1.3%	7.8%	15.1%	21.3%	26.5%	30.9%	34.7%	37.1%	33.8%
Well Q as CFS		0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Interference CFS		0.003	0.002	0.002	0.000	0.001	0.002	0.002	0.003	0.003	0.003	0.004	0.003
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
2	2	28.1%	24.5%	21.5%	0.06%	5.3%	11.4%	17.1%	22.1%	26.4%	30.1%	33.0%	31.7%
Well Q as CFS		0.00	0.00	0.00	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.00	0.00
Interference CFS		0.011	0.010	0.009	0.000	0.002	0.005	0.007	0.009	0.011	0.012	0.013	0.013
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.		0.014	0.012	0.011	0.000	0.003	0.009	0.009	0.012	0.014	0.015	0.017	0.016
(B) = 80 % Nat. Q		3210	4740	4390	3830	3370	2010	1320	1160	1130	1240	1420	2620
(C) = 1 % Nat. Q		32.10	47.40	43.90	38.30	33.70	20.10	13.20	11.60	11.30	12.40	14.20	26.20
(D) = (A) > (C)		No	No	No	No	No	No	No	No	No	No	No	No
(E) = (A / B) x 100		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

(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: _____

The Rogue River is more than 1.00 mile from both proposed wells.

Hunt 1999 was used to calculate interference with the nearest reach of the Rogue River. However, the most direct connection with the river may not be the nearest reach. Doing the calculation assumes there is sufficient distance to treat the fractured rock as a porous media which may or may not be valid. Regardless, the individual and total calculated interference each month is much less than 1 percent of the pumping rate(s). The calculation used a transmissivity of 100 ft²/day based upon specific capacity data for nearby wells, and an assumed 0.001 storage coefficient.

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 ground water 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 _____

If a permit is issued, condition with 7B and 7N and 7J.

References Used: _____

Hunt, B., 1999, Unsteady stream depletion from ground water pumping: Ground Water, v. 37, no. 1, p. 98-102.

McFarland, W.D. 1983. A description of aquifer units in western Oregon: U.S. Geological Survey Open File Report 82-165, 35 p., 8 plates.

Oregon Water Resources Department. 1985. Rogue River Basin Study, 292 p.

Ramp., L. and Peterson, N.V. 1979. Geology and mineral resources of Josephine County, Oregon: Oregon Department of Geology and Mineral Industries Bulletin 100, 45 p.

Robison, J.H. 1973. Availability of ground water in the Grants Pass area, Josephine County, Oregon: U.S. Geological Survey Hydrologic Investigations Atlas HA-480, 2 maps.

Theis, C.V. 1935. The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using ground water storage. American Geophysical Union Transactions, 16 annual meeting, vol. 16, pg. 519-524.

Vorhis, R.C. 1979. Transmissivity from pumped well data. Well Log, National Water Well Association newsletter, vol. 10, no. 11, Dec. 1979, pg. 50-52.

Wells, F.G. and Peck, D.L. 1961. Geologic map of the 121st meridian: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-325.

Young, R.A. 1961. Hydrogeologic evaluation of streamflow records in the Rogue River basin, Oregon: U.S. Geological Survey Open File Report 61-176, 119 p., 2 plates.

Young, R.A. 1959. Ground-water resources of the Rogue River basin, Oregon: U.S. Geological Survey unpublished report, 158 p.

USGS Quadrangel Map: Wilderville (1:24,000 scale)

Well with water level data: JOSE 55124 and JOSE 9451

Water well reports for proposed wells (JOSE 52972 and JOSE 53407) and neighbor wells

D. WELL CONSTRUCTION, OAR 690-200

D1. Well #: 1 Logid: JOSE 52972

Well #: 2 Logid: JOSE 53407

D2. **THE WELL does not 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:**

- a. constitutes a health threat under Division 200 rules;
- b. commingles water from more than one ground water reservoir;
- c. permits the loss of artesian head;
- d. permits the de-watering of one or more ground water reservoirs;
- e. other: (specify) _____

D4. **THE WELL construction deficiency is described as follows:** _____

- D5. **THE WELL #1**
- a. was, or was not constructed according to the standards in effect at the time of original construction or most recent modification.
 - b. I don't know if it met standards at the time of construction.

- THE WELL #2**
- a. was, or was not constructed according to the standards in effect at the time of original construction or most recent modification.
 - b. I don't know if it met standards at the time of construction.

D6. **Route to the Enforcement Section.** I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Enforcement Section and the Ground Water Section.

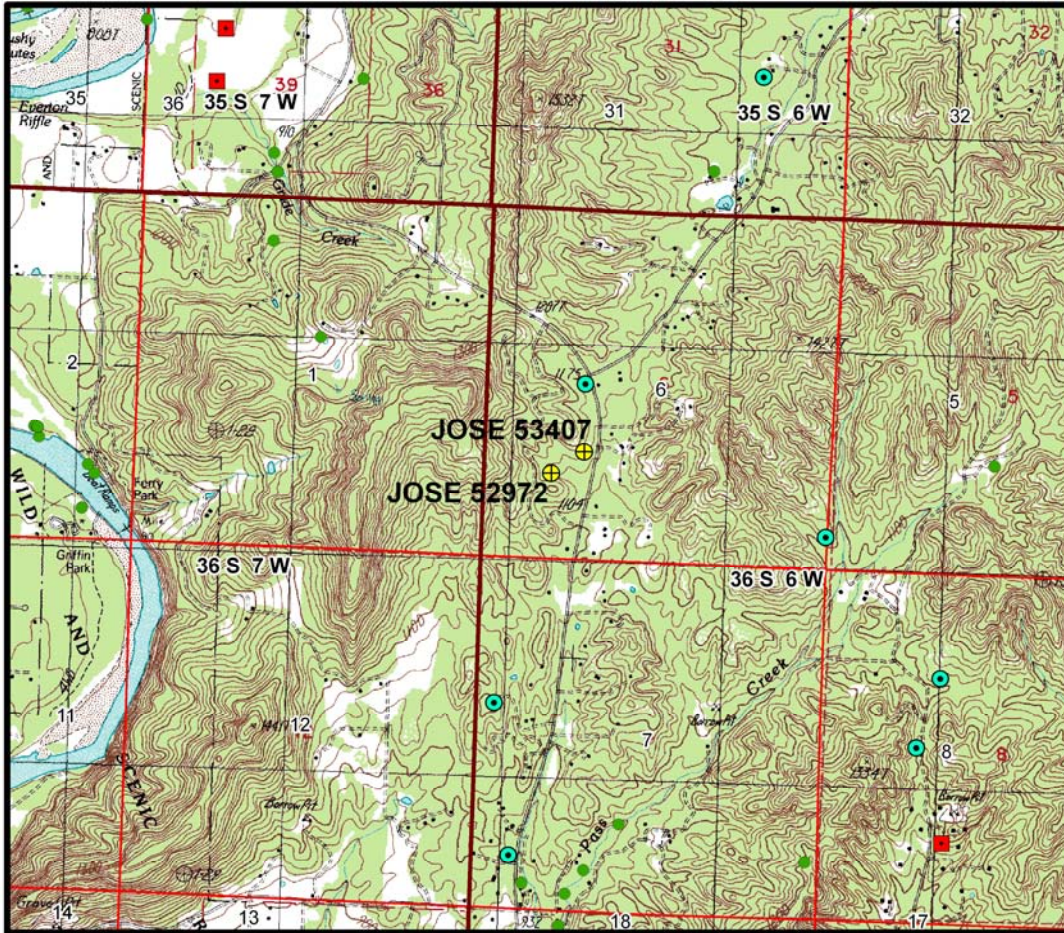
THIS SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL

D7. Well construction deficiency has been corrected by the following actions: _____

_____, 200_____
(Enforcement Section Signature)

D8. **Route to Water Rights Section (attach well reconstruction logs to this page).**

Ground Water Application G-17194 Seclusion Estates

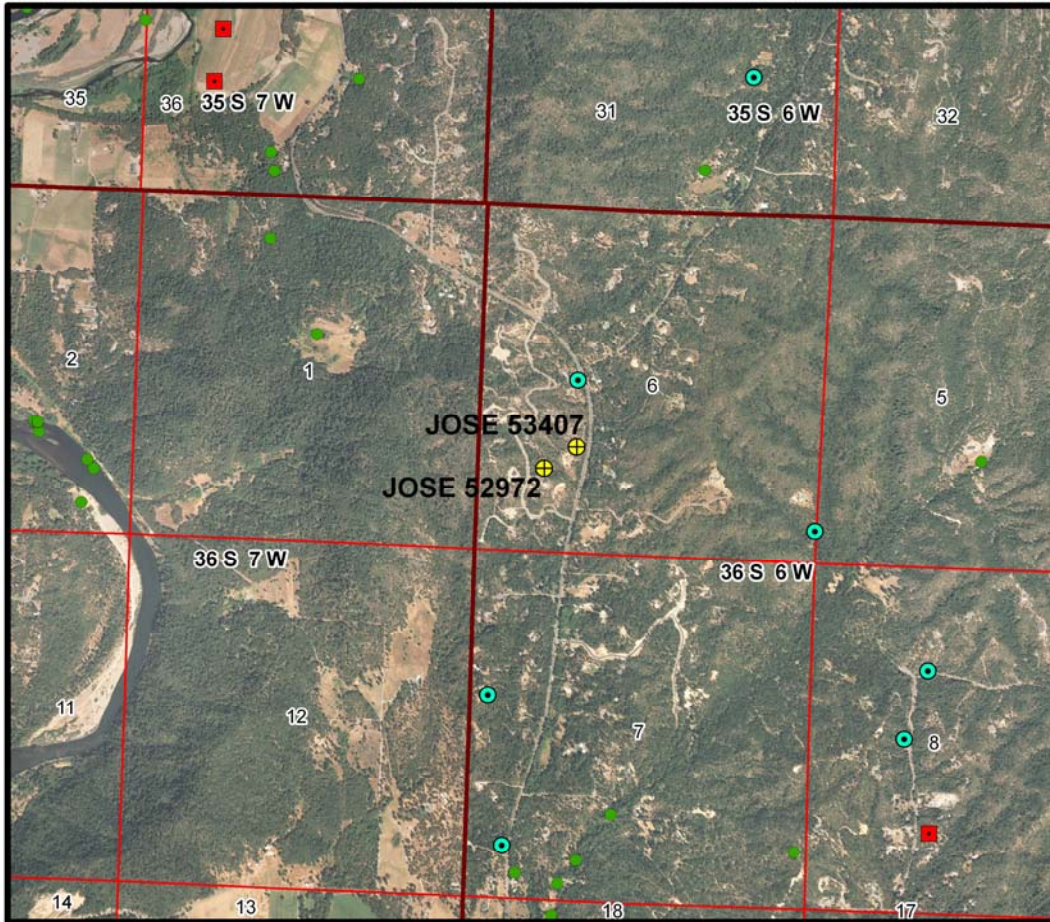


Yellow = Proposed Wells
Blue & Red = Other Wells

Green = Surface Water Rights



Ground Water Application G-17194 Seclusion Estates



Yellow = Proposed Wells
Blue & Red = Other Wells

Green = Surface Water Rights



JOSE 52972
Amended

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

Jose
52972

WELL I.D. # ~~36429~~ 36427
START CARD # 126733

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

(1) OWNER: Well Number _____
Name Kenneth Winther
Address 280 Cathedral Drive
City Grants Pass State Oregon Zip 97526

(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 300 ft.
Explosives used Yes No Type _____ Amount _____

HOLE		SEAL		Sacks or pounds	
Diameter	From To	Material	From To		
10	0 18	Bentonite	0 18	7	
6	18 300				

How was seal placed: Method A B C D E
 Other Dry Poured
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	19	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner: 4	0	300	160	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 19

(7) PERFORATIONS/SCREENS:

From	To	Slot size	Number	Diameter	Material	Casing	Liner
280	300	1/4 X 6	80	80		<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Yield gal/min	Drawdown	Drill stem at	Flowing Time
7		300	1 hr.

Temperature of water 58 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: _____

(9) LOCATION OF WELL by legal description:
County Josephine Latitude _____ Longitude _____
Township 36 N or S Range 6 E or W. WM.
Section 6 NW 1/4 SW 1/4
Tax Lot 916 Lot 2917 Block _____ Subdivision _____
Street Address of Well (or nearest address) 521 Seclusion Loop

(10) STATIC WATER LEVEL:
50 ft. below land surface. Date 10/12/99
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found 280

From	To	Estimated Flow Rate	SWL
280	285	7	50

(12) WELL LOG:

Ground Elevation _____

Material	From	To	SWL
Decomposed Granite- Brown	0	12	
Tombstone Granite- Black White	12	300	

Amended Tax Lot & ED #
By: Michael Peise SP
RECEIVED
OCT 18 1999
WATER RESOURCES DEPT
SALEM, OREGON

Date started 10/11/99 Completed 10/12/99
(unbonded) 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.
Signed Michael Peise WWC Number 1251
Date 10/14/99

(bonded) 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.
Signed Michael Peise WWC Number 1251
Date 10/14/99

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

FEB 23 2009

WATER RESOURCES DEPT
SALEM, OREGON

JOSE 52972

RECEIVED

FEB 20 2009

Amended

WATER RESOURCES DEPT
SALEM, OREGON REPORT

Jose
52972

WELL I.D. # 1. ~~36429~~ 36427
START CARD # 126733

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

(1) OWNER: Well Number _____
Name Kenneth Winther
Address 280 Cathedral Drive
City Grants Pass State Oregon Zip 97526

(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 300 ft.
Explosives used Yes No Type _____ Amount _____

HOLE SEAL

Diameter	From	To	Material	From	To	Sacks or pounds
10	0	18	Bentonite	0	18	7
6	18	300				

How was seal placed: Method A B C D E
 Other Dry Poured

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	19	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner: 4	0	300	160	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 19

(7) PERFORATIONS/SCREENS:
 Perforations Method Saw
 Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tube/pipe size	Casing	Liner
280	300	1/2x6	80			<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Pump	Bailer	Air	Flowing Artesian
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Yield gal/min	Drawdown	Drill stem at	Time
7		300	1 hr.

Temperature of water 58 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: _____

(9) LOCATION OF WELL by legal description:
County Josephine Latitude _____ Longitude _____
Township 36 N or S Range 6 E or W. WM.
Section 6 NW 1/4 SW 1/4
Tax Lot 916 Lot 917 Block _____ Subdivision _____
Street Address of Well (or nearest address) 521 Seclusion Loop

(10) STATIC WATER LEVEL:
50 ft. below land surface. Date 10/12/99
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 280

From	To	Estimated Flow Rate	SWL
280	285	7	50

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
Decomposed Granite- Brown	0	12	
Tombstone Granite- Black White	12	300	

Amended Taxlot & ID #
By: Michael Peice SP
RECEIVED
OCT 18 1999
WATER RESOURCES DEPT
SALEM, OREGON

Date started 10/11/99 Completed 10/12/99

(unbonded) 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.

Signed Michael Peice WWC Number 1251 Date 10/14/99

(bonded) 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.

Signed Michael Peice WWC Number 1251 Date 10/14/99

JOSE 52972

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

Jose
 52972

WELL I.D. # L 36429
 START CARD # 126733

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

(1) OWNER: Well Number _____
 Name Kenneth Winther
 Address 280 Cathedral Drive
 City Grants Pass State Oregon Zip 97526

(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 30 ft.
 Explosives used Yes No Type _____ Amount _____

HOLE		SEAL		Sacks or pounds	
Diameter	From To	Material	From To		
10	0 18	Bentonite	0 18	7	
6	18 300				

How was seal placed: Method A B C D E
 Other Dry Poured
 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	19	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:	4	0	300	160	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 19

(7) PERFORATIONS/SCREENS:

From	To	Slot size	Number	Diameter	Material	Casing	Liner
280	300	1/2 X 6	80			<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

	Pump	Bailer	Air	Flowing
Yield gal/min	Drawdown	Drill stem at	Time	
7		300	1 hr.	

Temperature of water 58 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: _____

(9) LOCATION OF WELL by legal description:
 County Josephine Latitude _____ Longitude _____
 Township 36 N or S Range 6 E or W. WM.
 Section 6 NW 1/4 SW 1/4
 Tax Lot 916 Lot _____ Block _____ Subdivision _____
 Street Address of Well (or nearest address) 521 Seclusion Loop

(10) STATIC WATER LEVEL:
50 ft. below land surface. Date 10/12/99
 Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
 Depth at which water was first found 280

From	To	Estimated Flow Rate	SWL
280	285	7	50

(12) WELL LOG:
 Ground Elevation _____

Material	From	To	SWL
Decomposed Granite-Brown	0	12	
Tombstone Granite-Black White	12	300	

RECEIVED
 OCT 18 1999

WATER RESOURCES DEPT
 SALEM, OREGON

Date started 10/11/99 Completed 10/12/99

(unbonded) 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.
 Signed Michael Pierce WWC Number 1251
 Date 10/14/99

(bonded) 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.
 Signed Michael Pierce WWC Number 1251
 Date 10/14/99

JOSE 53407

Jose 53407

FEB. 26. 2009 8:41AM

QUINN'S 541-862-7195

NO. 689 P. 1

17194 228 DWPLS 17194L REPORT (required by ORS 517.64)

Amended

WELL I.D. # L 38691

START CARD # 131732

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

(1) OWNER: Well Number Name John Jones Address 858 NW 8th St City Grants Pass State OR Zip 97526

(2) TYPE OF WORK: [X] New Well [] Deepening [] Alteration (repair/recondition) [] Abandonment

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

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

(5) BORE HOLE CONSTRUCTION: Special Construction approval [] Yes [X] No Depth of Completed Well 150 ft. Explosives used [] Yes [X] No Type Amount

Table with columns: HOLE, SEAL, Diameter, From, To, Material, From, To, Backfill pounds. Row 1: 10, 0, 18, Bent, 0, 18, 8 sacks. Row 2: 6, 18, 150

How was seal placed: Method [] A [] B [] C [] D [] E [X] Other

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, 1/2, 18, 250, XX, XX, []

Final location of shoe(s)

(7) PERFORATIONS/SCREENS: Table with columns: From, To, Slot Size, Number, Diameter, Material, Type, Casing, Liner

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

[] Pump [] Baller [X] Air [] Flowing Artesian. Yield in Min. Drawdown. Drill Stem Seal. Time.

Temperature of water 54 Depth Artesian Flow Found

Was a water analysis done? [] Yes By who [] No

Did any strata contain water not suitable for intended use? [] Too little [] Salty [] Muddy [] Odor [] Colored [] Other

Depth of the []

(9) LOCATION OF WELL: by legal description: County JOSEPH Latitude Longitude Township 38 S N or S Range 06 W D or W. WM. Section 06 NE 1/4 SW 1/4 The lot 2202 Block Subdivision Street Address of Well (or nearest address) Lower River Rd TL 2203

(10) STATIC WATER LEVEL: 38 ft. below land surface. Date 7/13/00 Artesian pressure lb. per square inch. DWS

(11) WATER BEARING ZONES: Depth at which water was first found 64'

Table with columns: From, To, Estimated Flow Rate, SWL. Row 1: 64, 137, 10, 38

(12) WELL LOG: Ground Elevation

Table with columns: Material, From, To, SWL. Decomposed granite, uncons. 0, 7. Decomposed granite, cons. 7, 87. Bombstone granite, cons. 87, 150, 38.

Amended Tax ID number Bob Quinn

Date started 7/13/00 Completed 7/13/00

(Unbonded) 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.

Signed Steve Carter WWC Number 1659 Date 7/13/00

(Bonded) 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.

Signed Bob Quinn WWC Number 675 Date 7/13/00

ORIGINAL - WATER RESOURCES DEPT SALEM, OREGON WATER RESOURCES DEPT SALEM, OREGON - CONSTRUCTOR SECOND COPY - CUSTOMER

RECEIVED WATER RESOURCES DEPT SALEM, OREGON RECEIVED

JOSE 53407

FEB. 19. 2009 11:22AM

QUINN'S 541-862-7105

JOSE 53407

NO. 669 P. 1

Amended

STATE OF OREGON WATER SUPPLY WELL REPORT

WELL I.D. # L 38691 START CARD # 131732

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

(1) OWNER: John Jones, Address 858 NW 6th St, City Grants Pass, State OR, ZIP 97526

(9) LOCATION OF WELL by legal description: County Joseph, Township 36 S, Range 06 W, Section 06 NE 1/4 SW 1/4, Lower River Rd

(2) TYPE OF WORK: [X] New Well, [] Deepening, [] Alteration, [] Abandonment

(10) STATIC WATER LEVEL: 38 ft. below land surface, Date 7/13/00

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

(11) WATER BEARING ZONES: Depth at which water was first found 64'

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

(12) WELL LOG: Table with columns From, To, Estimated Flow Rate, SWL

(5) BORE HOLE CONSTRUCTION: Special Construction approval [] Yes [X] No, Depth of Completed Well 150 ft.

HOLE SEAL: Diameter 6, From 0, To 18, Material Bent, Backs or pounds 8 sacks

Table with 4 columns: From, To, Estimated Flow Rate, SWL. Row 1: 64, 137, 18, 38

How was seal placed: Method [] A [] B [] C [] D [] E [X] Other

Backfill placed from 0 to 18 ft. Material Gravel placed from 0 to 18 ft. Size of gravel

(12) WELL LOG: Material Decomposed granite, From 0, To 7, SWL

(6) CASING/LINER: Casing 6, From 0, To 18, Gauge 2.50, Steel XX, Plastic [], Welded XX, Threaded []

Table with 4 columns: Material, From, To, SWL. Rows for Decomposed granite, Tombstone granite

(7) PERFORATIONS/SCREENS: [] Perforations, [] Screens

Amended Tax ID number Bob Quinn

Table with columns: From, To, Slot size, Number, Diameter, Tube/pipe size, Casing, Liner

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

Date started 7/13/00, Completed 7/13/00

Table with columns: Pump, Baller, Air, Flowing, Yield gal/min, Drawdown, Drill stem at, Time

(unbonded) 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.

Temperature of water 54, Depth Artesian Flow Point, Was a water analysis done? [] Yes [X] No

Signed Steve Carter, WWC Number 1659, Date 7/13/00

Depth of strata: [] Salty, [] Muddy, [] Odor, [] Colored, [] Other

(bonded) Water Well Constructor Certification: I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above.

ORIGINAL - WATER RESOURCES DEPARTMENT SALEM, OREGON COPY - CONSTRUCTOR SECOND COPY - CUSTOMER

RECEIVED

FEB 20 2009

WATER RESOURCES DEPT SALEM, OREGON

JOSE 53407
JOSE 53407

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

WELL I.D. # L. 38691
START CARD # 131732

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

(1) OWNER: Well Number _____
Name John Jones
Address 858 NW 6th St
City grants Pass State OR Zip 7526

(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 150 ft.
Explosives used Yes No Type _____ Amount _____

HOLE		SEAL		Sacks or pounds	
Diameter	From To	Material	From To		
10	0 18	Bent	0 18	8	sacks
6	18 150				

How was seal placed: Method A B C D E

Other _____
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	+2	18	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

From	To	Slot size	Number	Diameter	Material	Tele/pipe size	Casing	Liner
							<input type="checkbox"/>	<input type="checkbox"/>

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

Yield gal/min	Drawdown	Drill stem at	Time
18		140	1 hr.

Temperature of water 54 Depth Artesian Flow Found _____
Was a water analysis done? Yes By who _____
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 Joseph Latitude _____ Longitude _____
Township 36 S N or S Range 06 W E or W. WM.
Section 06 NE 1/4 SW 1/4
Tax Lot 2202 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____
Lower River Rd

(10) STATIC WATER LEVEL:
38 ft. below land surface. Date 7/13/00
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 64'

From	To	Estimated Flow Rate	SWL
64	137	18	38

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
Decomposed granite, uncons	0	7	
Decomposed granite, cons.	7	87	
Tombstone granite, cons	87	150	38

Date started 7/13/00 Completed 7/13/00

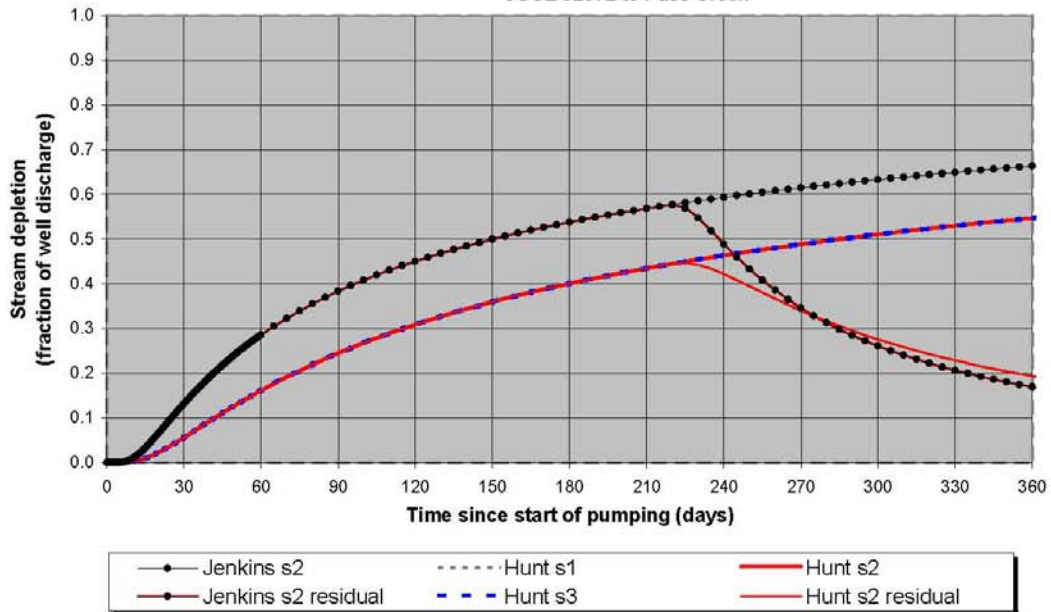
(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
Signed Stacy Carter WWC Number 1659 Date 7/13/00

(bonded) 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.
Signed Bob Quinn WWC Number 675 Date 7/13/00

ORIGINAL - WATER RESOURCES DEPARTMENT SALEM, OREGON COPY - CONSTRUCTOR SECOND COPY - CUSTOMER

RECEIVED
AUG 10 2000
WATER RESOURCES DEPT
SALEM, OREGON

Transient Stream Depletion (Jenkins, 1970; Hunt, 1999)
JOSE 52972 to Pass Creek



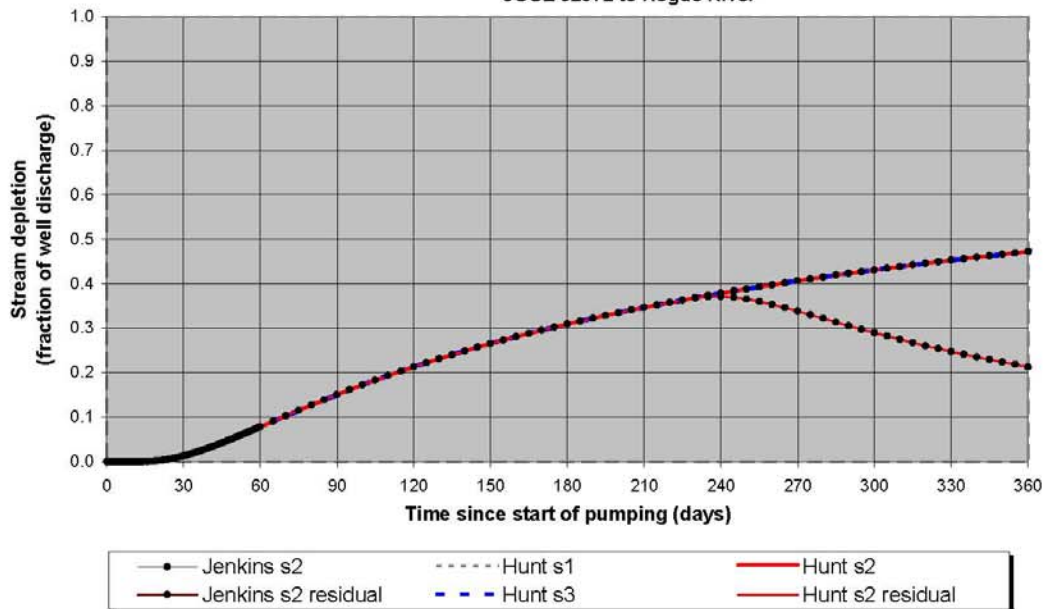
Output for Hunt Stream Depletion, Scenerio 2 (s2): Time pump on = 214 days

Days	30	60	90	120	150	180	210	240	270	300	330	360
Hunt SD s2	0.0563	0.1614	0.2447	0.3088	0.3594	0.4005	0.4346	0.4216	0.3400	0.2755	0.2284	0.1934
Qw, cfs	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
H SD s2, cfs	0.001	0.002	0.002	0.003	0.004	0.004	0.004	0.004	0.003	0.003	0.002	0.002

Parameters:		Scenario 1	Scenario 2	Scenario 3	Units
Net steady pumping rate	Qw	0.01	0.01	0.01	cfs
Distance to stream	a	3700	3700	3700	ft
Aquifer hydraulic conductivity	K	2	2	2	ft/day
Aquifer thickness	b	50	50	50	ft
Aquifer transmissivity	T	100	100	100	ft*ft/day
Aquifer storage coefficient	S	0.001	0.001	0.001	
Stream width	ws	10	10	10	ft
Streambed hydraulic conductivity	Ks	0.2	0.2	0.2	ft/day
Streambed thickness	bs	15	15	15	ft
Streambed conductance	sbc	0.133333333	0.133333333	0.133333333	ft/day
Stream depletion factor (Jenkins)	sdf	136.9	136.9	136.9	days
Streambed factor (Hunt)	sbf	4.933333333	4.933333333	4.933333333	

G_17194_Seclusion_Estates_Grants_Pass_Hunt_1999_depletion.xls

Transient Stream Depletion (Jenkins, 1970; Hunt, 1999)
JOSE 52972 to Rogue River



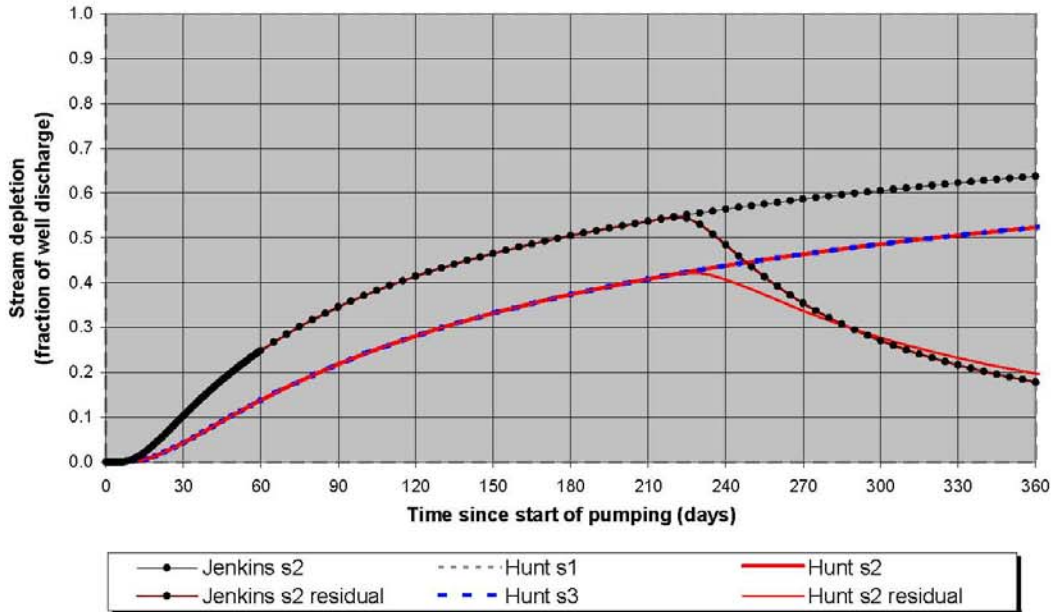
Output for Hunt Stream Depletion, Scenerio 2 (s2): Time pump on = 214 days

Days	30	60	90	120	150	180	210	240	270	300	330	360
Hunt SD s2	0.0128	0.0783	0.1505	0.2131	0.2654	0.3093	0.3466	0.3711	0.3381	0.2897	0.2474	0.2132
Qw, cfs	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
H SD s2, cfs	0.000	0.001	0.002	0.002	0.003	0.003	0.003	0.004	0.003	0.003	0.002	0.002

Parameters:		Scenario 1	Scenario 2	Scenario 3	Units
Net steady pumping rate	Qw	0.01	0.01	0.01	cfs
Distance to stream	a	6100	6100	6100	ft
Aquifer hydraulic conductivity	K	2	2	2	ft/day
Aquifer thickness	b	50	50	50	ft
Aquifer transmissivity	T	100	100	100	ft*ft/day
Aquifer storage coefficient	S	0.001	0.001	0.001	
Stream width	ws	250	250	250	ft
Streambed hydraulic conductivity	Ks	0.2	0.2	0.2	ft/day
Streambed thickness	bs	60	60	60	ft
Streambed conductance	sbc	0.833333333	0.833333333	0.833333333	ft/day
Stream depletion factor (Jenkins)	sdf	372.1	372.1	372.1	days
Streambed factor (Hunt)	sbf	50.83333333	50.83333333	50.83333333	

G_17194_Seclusion_Estates_Grants_Pass_Hunt_1999_depletion.xls

Transient Stream Depletion (Jenkins, 1970; Hunt, 1999)
JOSE 53407 to Pass Creek



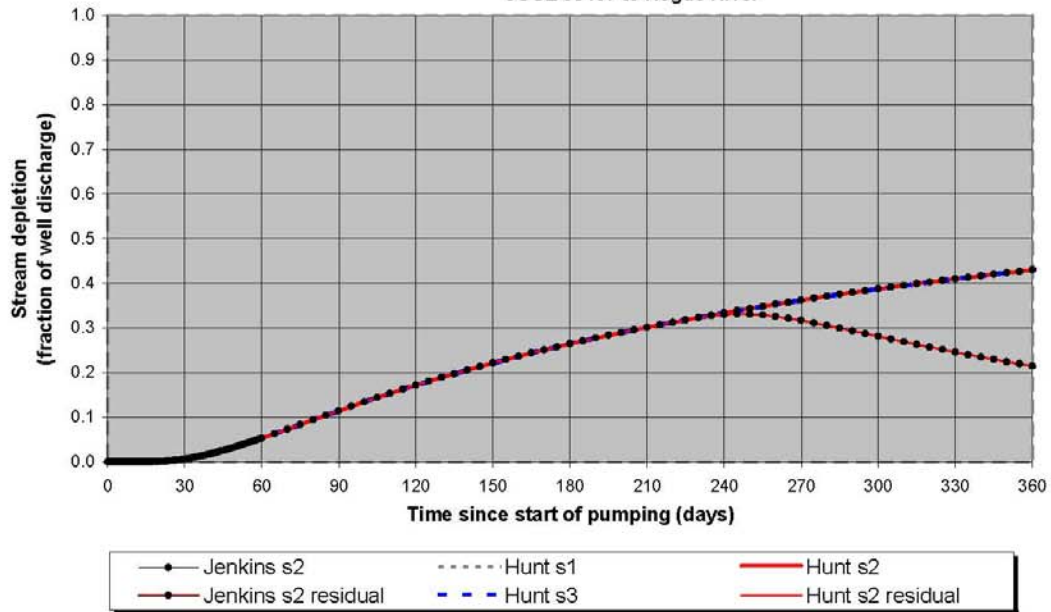
Output for Hunt Stream Depletion, Scenerio 2 (s2): Time pump on = 214 days

Days	30	60	90	120	150	180	210	240	270	300	330	360
Hunt SD s2	0.0429	0.1380	0.2181	0.2814	0.3321	0.3737	0.4084	0.4071	0.3378	0.2776	0.2322	0.1978
Qw, cfs	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
H SD s2, cfs	0.002	0.006	0.009	0.011	0.013	0.015	0.016	0.016	0.014	0.011	0.009	0.008

Parameters:		Scenario 1	Scenario 2	Scenario 3	Units
Net steady pumping rate	Qw	0.04	0.04	0.04	cfs
Distance to stream	a	4000	4000	4000	ft
Aquifer hydraulic conductivity	K	2	2	2	ft/day
Aquifer thickness	b	50	50	50	ft
Aquifer transmissivity	T	100	100	100	ft*ft/day
Aquifer storage coefficient	S	0.001	0.001	0.001	
Stream width	ws	10	10	10	ft
Streambed hydraulic conductivity	Ks	0.2	0.2	0.2	ft/day
Streambed thickness	bs	15	15	15	ft
Streambed conductance	sbc	0.133333333	0.133333333	0.133333333	ft/day
Stream depletion factor (Jenkins)	sdf	160	160	160	days
Streambed factor (Hunt)	sbf	5.333333333	5.333333333	5.333333333	

G_17194_Seclusion_Estates_Grants_Pass_Hunt_1999_depletion.xls

Transient Stream Depletion (Jenkins, 1970; Hunt, 1999)
JOSE 53407 to Rogue River



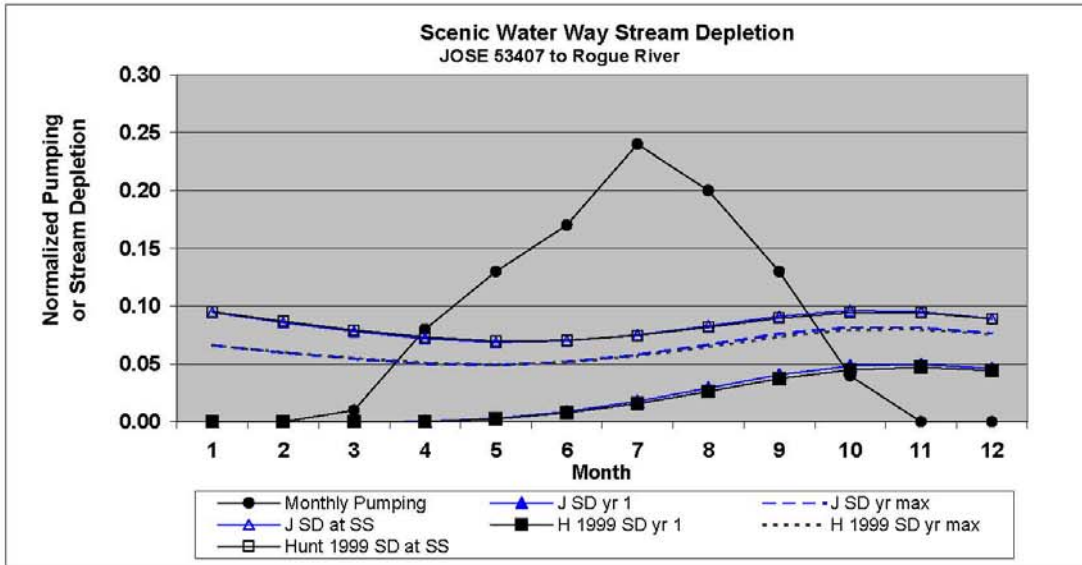
Output for Hunt Stream Depletion, Scenerio 2 (s2): Time pump on = 214 days

Days	30	60	90	120	150	180	210	240	270	300	330	360
Hunt SD s2	0.0062	0.0531	0.1143	0.1714	0.2212	0.2641	0.3012	0.3302	0.3166	0.2809	0.2453	0.2147
Qw, cfs	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
H SD s2, cfs	0.000	0.002	0.005	0.007	0.009	0.011	0.012	0.013	0.013	0.011	0.010	0.009

Parameters:		Scenario 1	Scenario 2	Scenario 3	Units
Net steady pumping rate	Qw	0.04	0.04	0.04	cfs
Distance to stream	a	6700	6700	6700	ft
Aquifer hydraulic conductivity	K	2	2	2	ft/day
Aquifer thickness	b	50	50	50	ft
Aquifer transmissivity	T	100	100	100	ft*ft/day
Aquifer storage coefficient	S	0.001	0.001	0.001	
Stream width	ws	250	250	250	ft
Streambed hydraulic conductivity	Ks	0.2	0.2	0.2	ft/day
Streambed thickness	bs	60	60	60	ft
Streambed conductance	sbc	0.833333333	0.833333333	0.833333333	ft/day
Stream depletion factor (Jenkins)	sdf	448.9	448.9	448.9	days
Streambed factor (Hunt)	sbf	55.83333333	55.83333333	55.83333333	

G_17194_Seclusion_Estates_Grants_Pass_Hunt_1999_depletion.xls

Oregon Water Resources Department



Region	7 Steady state stream depletion as a fraction of pumping normalized to crop water use consumption.												
Month	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Resid
Qw	0.00	0.00	0.01	0.08	0.13	0.17	0.24	0.20	0.13	0.04	0.00	0.00	0.00
Jenkins SD													
yr1	0.000	0.000	0.000	0.000	0.003	0.009	0.018	0.029	0.041	0.048	0.050	0.046	0.756
yrmax-1	0.066	0.060	0.055	0.050	0.049	0.052	0.058	0.067	0.076	0.082	0.082	0.076	0.227
yrmax	0.066	0.060	0.055	0.050	0.049	0.052	0.058	0.067	0.076	0.082	0.082	0.076	0.227
yrmax-yr1	0.066	0.060	0.055	0.050	0.046	0.043	0.040	0.038	0.035	0.034	0.032	0.030	0.529
J SD SS	0.095	0.086	0.078	0.072	0.069	0.070	0.075	0.083	0.091	0.096	0.095	0.089	0.000
Hunt SD 1999													
yr 1	0.000	0.000	0.000	0.000	0.002	0.008	0.016	0.026	0.037	0.045	0.047	0.044	0.773
yr max-1	0.066	0.060	0.055	0.051	0.049	0.052	0.057	0.065	0.074	0.079	0.080	0.076	0.236
yr max	0.066	0.060	0.055	0.051	0.049	0.052	0.057	0.065	0.074	0.079	0.080	0.076	0.236
yrmax-yr1	0.066	0.060	0.055	0.051	0.047	0.044	0.041	0.038	0.036	0.034	0.033	0.031	0.537
H99 SD SS	0.095	0.087	0.079	0.073	0.070	0.071	0.075	0.082	0.090	0.095	0.094	0.089	0.000

Parameters:		Values	Units	
Maximum number of years pumped	yrmax	25	years	
Days pumped each month	tpoff	30.4375	days/month	
Perpendicular from well to stream	a	6700	ft	
Well depth	d	150	ft	
Aquifer hydraulic conductivity	K	2	ft/day	
Aquifer saturated thickness	b	50	ft	
Aquifer transmissivity	T_ft	100	ft*ft/day	= K*b
Aquifer transmissivity	T_gal	748	gpd/ft	= K*b
Aquifer storativity or specific yield	S	0.001		
Streambed conductivity (Hunt 1999)	Ks	0.2	ft/day	
Streambed thickness, Hunt 1999	bs	60	ft	
Stream width (Hunt 1999)	ws	250	ft	
Streambed conductance (lambda)	sbc	0.8333	ft/day	= Ks*ws/bs
Stream depletion factor	sdf	448.9000	days	= (a^2*S)/(T)
Streambed factor	sbf	55.8333		= sbc*a/T

S:\groups\gwater\grandin\areas\jackson_josephine\water_rights\G_17194_Seclosure_Estates_Grants_Pass_scenic_stream_depletion_sd_1033_3_30.xls