WATER RESOURCES DEPARTMENT MEMO   **October 21, 2014**

TO: **Application G-** __17939__

FROM: __Michael Thoma_____ **- Groundwater Section**

SUBJECT: **Scenic Waterway Interference Evaluation**

__X__ YES

_____ NO
        The source of appropriation is within or above a Scenic Waterway

__X__ YES

_____ NO
        Use the Scenic Waterway condition (condition 7J)

__X___ 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
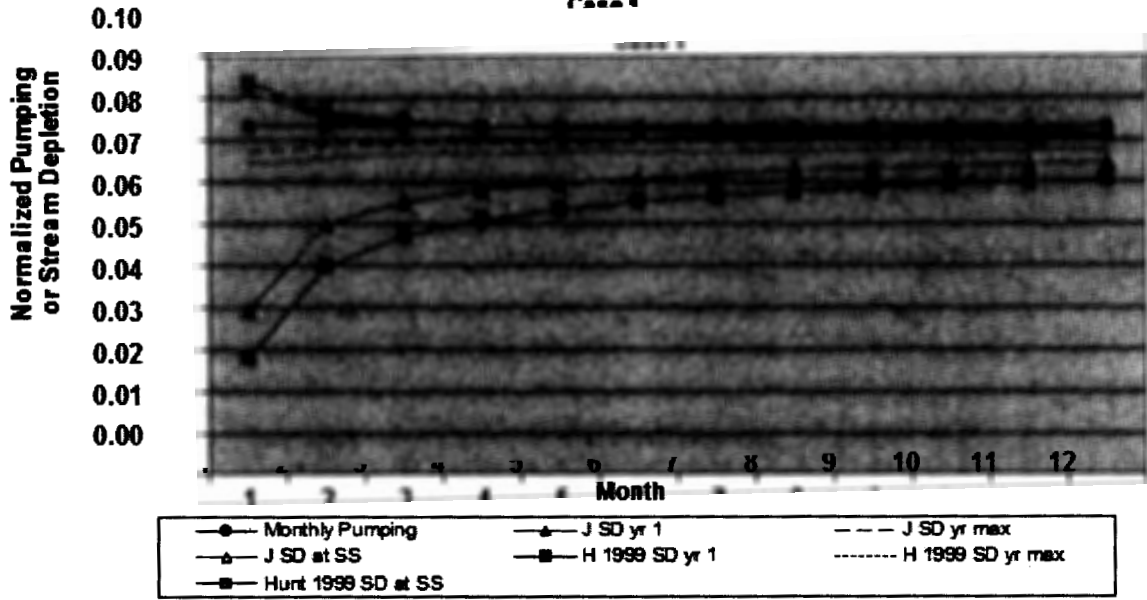character of a scenic waterway.

DISTRIBUTION OF INTERFERENCE
*Calculate interference as the percentage of annual consumptive use by month 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 _Rogue River__ Scenic
Waterway by the following amounts, expressed as a proportion of the annual consumptive use
pumped from the well.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.094	0.087	0.085	0.083	0.083	0.082	0.082	0.081	0.081	0.081	0.081	0.081

Scenic Water Way Stream Depletion
Case 1

Normalized Pumping or Stream Depletion (y-axis): 0.00, 0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10

Month (x-axis): 1 2 3 4 5 6 7 8 9 10 11 12

Legend:
- Monthly Pumping
- J SD yr 1
- J SD yr max
- J SD at SS
- H 1999 SD yr 1
- H 1999 SD yr max
- Hunt 1999 SD at SS

Region	28	Steady state stream depletion as a fraction of pumping normalized to crop water use consi											
Month	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Resid
Qw	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.083	0.00
Jenkins SD													
yr1	0.039	0.060	0.065	0.068	0.070	0.071	0.072	0.073	0.073	0.074	0.074	0.075	0.187
yrmax-1	0.077	0.078	0.079	0.079	0.079	0.079	0.079	0.079	0.080	0.080	0.080	0.080	0.051
yrmax	0.077	0.078	0.079	0.079	0.079	0.079	0.079	0.079	0.080	0.080	0.080	0.080	0.051
yrmax-yr1	0.038	0.019	0.014	0.011	0.010	0.008	0.007	0.007	0.006	0.006	0.005	0.005	0.136
J SD SS	0.091	0.085	0.084	0.083	0.083	0.082	0.082	0.082	0.082	0.082	0.082	0.082	0.000
Hunt SD 1999													
yr 1	0.028	0.050	0.057	0.061	0.063	0.065	0.067	0.068	0.069	0.069	0.070	0.071	0.264
yr max-1	0.074	0.076	0.076	0.077	0.077	0.077	0.077	0.077	0.077	0.078	0.078	0.078	0.077
yr max	0.074	0.076	0.076	0.077	0.077	0.077	0.077	0.077	0.077	0.078	0.078	0.078	0.077
yrmax-yr1	0.046	0.026	0.019	0.016	0.014	0.012	0.011	0.010	0.009	0.008	0.008	0.007	0.186
H99 SD SS	0.094	0.087	0.085	0.083	0.083	0.082	0.082	0.081	0.081	0.081	0.081	0.081	0.000

Parameters:		Values	Units	
Maximum number of years pumped	yrmax	15	years	
Days pumped each month	tpoff	30.4375	days/month	
Perpendicular from well to stream	a	740	ft	
Well depth	d	90	ft	
Aquifer hydraulic conductivity	K	50	ft/day	
Aquifer saturated thickness	b	140	ft	
Aquifer transmissivity	T_ft	7,000	ft*ft/day	= K*b
Aquifer transmissivity	T_gal	52,360	gpd/ft	= K*b
Aquifer storativity or specific yield	S	0.15		
Streambed conductivity (Hunt 1999)	Ks	1	ft/day	
Streambed thickness, Hunt 1999	bs	5	ft	
Stream width (Hunt 1999)	ws	200	ft	
Streambed conductance (lambda)	sbc	40.0000	ft/day	= Ks*ws/bs
Stream depletion factor	sdf	11.7343	days	$= (a^2 \cdot S)/(T)$
Streambed factor	sbf	4.2286		= sbc*a/T

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section   Date____10/20/2014_____

FROM: Groundwater Section _____ Michael Thoma_____
                                             Reviewer's Name

SUBJECT: Application G-__17939_____   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: Nicholas Smith – Green Leaf Ind.   County: Josephine

A1.   Applicant(s) seek(s) _0.05__ cfs from __1_____ well(s) in the ___Rogue_____ Basin,

                                        subbasin   Quad Map:__Grants Pass_____

A2.   Proposed use_____Nursery_____   Seasonality: ___January-December_____

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 17714**	1	Alluvium	**0.05**	36S/06W-14 SESE	1646' S, 766' W fr E cor S 14
2						
3						
4						
5						

* 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	900	45	10	05/31/1995	100	0-30	+2-98		60-70 90-96	25		A

Use data from application for proposed wells.

A4.   **Comments:** Well log is very general and lists "gravel, granite, bwn clay" from 12-100 ft. Based on nearby logs the well likely penetrates Quaternary alluvial deposits composed of gravel, sand, and some decomposed granite

A5. ☐   **Provisions of the** Rogue River (OAR 690-515)_____ 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: _____

Version: 08/15/2003

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

B1.   **Based upon available data**, I have determined that <u>groundwater</u>* 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, 7P**   ;
      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 POA (JOSE 17714) is completed within alluvium deposits along the Rogue River. These medium- to coarse-grained sand, gravel, clay deposits are as much as 150 ft thick in the area of the POA, may be partially confined locally, and are strongly connected with the Rogue River (see Section C). Water level measurements in nearby wells in the same alluvial material as the POA show relatively stable water levels – likely related to the hydraulic connection to the Rogue River. Well yields are generally < 50 gpm in these sediments.

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	**Alluvium**	☐	☒
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: Although the well log for JOSE 17714 shows SWL 35 ft higher than the water bearing zone, other well logs for the area indicate shallower water-bearing zones. This, along with the nature of the alluvium (medium- to coarse-grained sediments with no clear confining layer) and fact that the water level in JOSE 17714 as well as other nearby wells is at the approx. elevation of the Rogue River, implies that the aquifer is more unconfined overall.

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? YES	NO	ASSUMED	Potential for Subst. Interfer. Assumed? YES	NO
1	1	**Rogue River**	890	890	740	☒	☐	☒	☒	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: The aquifer material is medium- to coarse-grained river deposits and SWL in the POA and nearby wells are approx. equal to the river elevation.

Water Availability Basin the well(s) are located within: Rogue R > Pacific Ocean- AB Applegate R.

C3a. **690-09-040** (4): Evaluation of stream impacts for <u>each well</u> 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	☒	☐			☐	1140	☐	52	☒
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

C3b. **690-09-040 (4):** Evaluation of stream impacts <u>by total appropriation</u> 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?
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐

Comments: The stream depletion model of Hunt (1999) was used to estimate interference. Hydraulic parameters for alluvial aquifer material used in the model were taken from an aquifer test report for Redwood Sanitary Sewer Services District (Almy, 1979) , which produced reasonable values. This site is 3 mi west of the POA with wells completed in similar alluvial material (same geologic unit) as the POA.

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													
		%	%	%	%	%	%	%	%	%	%	%	%
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 application includes a copy of a contract with the Bureau of Reclamation for 5 af annually of water from Lost Creek Reservoir on the Rogue River to be used for irrigation. It is the understanding of the reviewer, based on communication with the local watermaster Kathy Smith, that this use is for mitigation of surface water that will be withdrawn from the Rogue River due to the hydraulic connection of the POA with the river._____

_____
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_____
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_____
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_____
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_____

References Used: Schlicker, H. G. and R. J. Deacon. 1970. Sand and Gravel Bear Creek and Rogue River Valleys, Jackson County, OR. Dept. of Geology and Mineral Industries.

Ramp, L. and N. V. Peterson. 1979. Geology and Mineral Resources of Josephine County, Oregon. Oregon Dept. of Geology and Mineral Industries. Bulletin 100.

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

Almy, R. 1979. Aquifer test of the Redwood Sanitary Sewer Service District waste water treatment plant supply well. Unpublished report, Water Resources Dept. Salem, OR, December 28, 1979.

D. WELL CONSTRUCTION, OAR 690-200

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

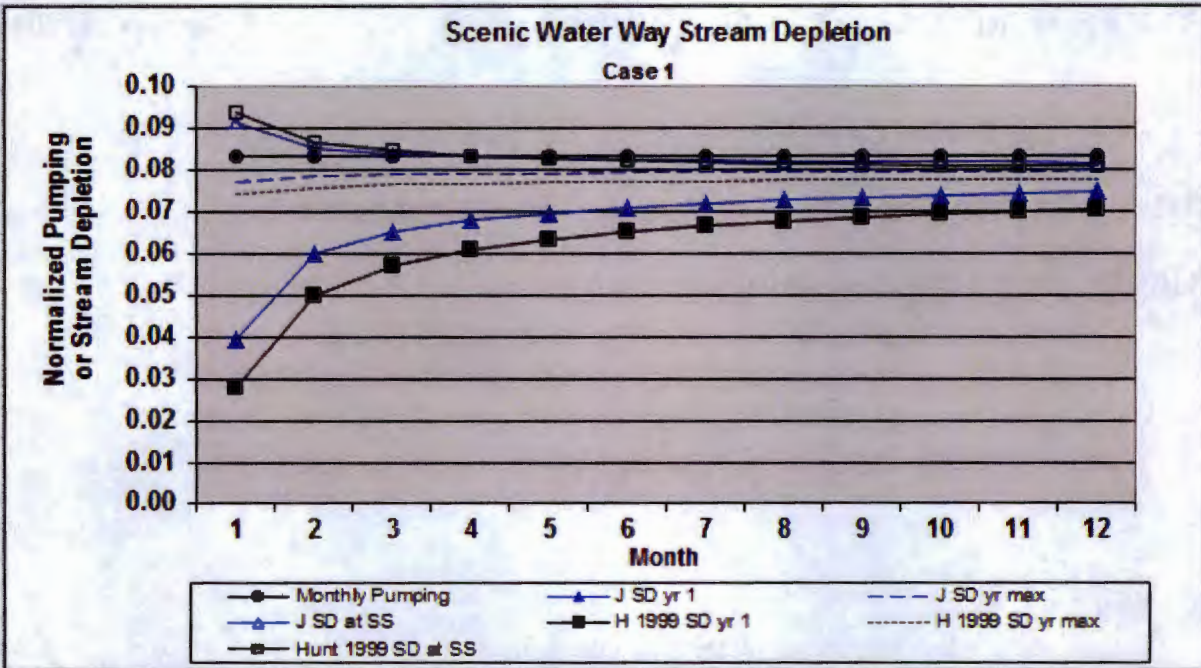D2.　　**THE WELL does not appear to meet current well construction standards based upon:**
　　　　a.　☐　review of the well log;
　　　　b.　☐　field inspection by _____;
　　　　c.　☐　report of CWRE _____;
　　　　d.　☐　other: (specify) _____
　　　　　　　_____

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 Table

```
                    DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

                         ROGUE R > PACIFIC OCEAN - AB APPLEGATE R
Watershed ID #: 31530801              Basin: ROGUE                    Exceedance Level: 80
Time: 11:57 AM                                                        Date: 10/21/2014
```

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	2,590.00	1,090.00	1,500.00	0.00	0.00	1,500.00
FEB	3,220.00	2,010.00	1,210.00	0.00	0.00	1,210.00
MAR	3,220.00	1,780.00	1,440.00	0.00	0.00	1,440.00
APR	3,150.00	1,030.00	2,120.00	0.00	0.00	2,120.00
MAY	2,920.00	376.00	2,540.00	0.00	0.00	2,540.00
JUN	1,810.00	424.00	1,390.00	0.00	0.00	1,390.00
JUL	1,350.00	461.00	889.00	0.00	0.00	889.00
AUG	1,170.00	415.00	755.00	0.00	0.00	755.00
SEP	1,110.00	315.00	795.00	0.00	0.00	795.00
OCT	1,170.00	226.00	944.00	0.00	0.00	944.00
NOV	1,460.00	316.00	1,140.00	0.00	0.00	1,140.00
DEC	2,080.00	534.00	1,550.00	0.00	0.00	1,550.00
ANN	2,140,000	539,000	1,600,000	0	0	1,600,000

Scenic Water Way Stream Depletion
Case 1

Chart: Normalized Pumping or Stream Depletion (y-axis, 0.00 to 0.10) vs Month (x-axis, 1 to 12)

Legend:
- Monthly Pumping
- J SD yr 1
- J SD yr max
- J SD at SS
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Region	28	Steady state stream depletion as a fraction of pumping normalized to crop water use consu											
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Aquifer transmissivity	T_gal	52,360	gpd/ft	= K*b
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Streambed conductivity (Hunt 1999)	Ks	1	ft/day	
Streambed thickness, Hunt 1999	bs	5	ft	
Stream width (Hunt 1999)	ws	200	ft	
Streambed conductance (lambda)	sbc	40.0000	ft/day	= Ks*ws/bs
Stream depletion factor	sdf	11.7343	days	= (a^2*S)/(T)
Streambed factor	sbf	4.2286		= sbc*a/T

WATER RESOURCES DEPARTMENT MEMO   **October 21, 2014**

TO: **Application G-** __17939__

FROM: ___Michael Thoma_____ **- Groundwater Section**

SUBJECT: **Scenic Waterway Interference Evaluation**

__X__ YES

                          The source of appropriation is within or above a Scenic Waterway

_____ NO

__X__ YES

                          Use the Scenic Waterway condition (condition 7J)

_____ NO

__X___ 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
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           use will measurably reduce the surface flows necessary to maintain the free-flowing
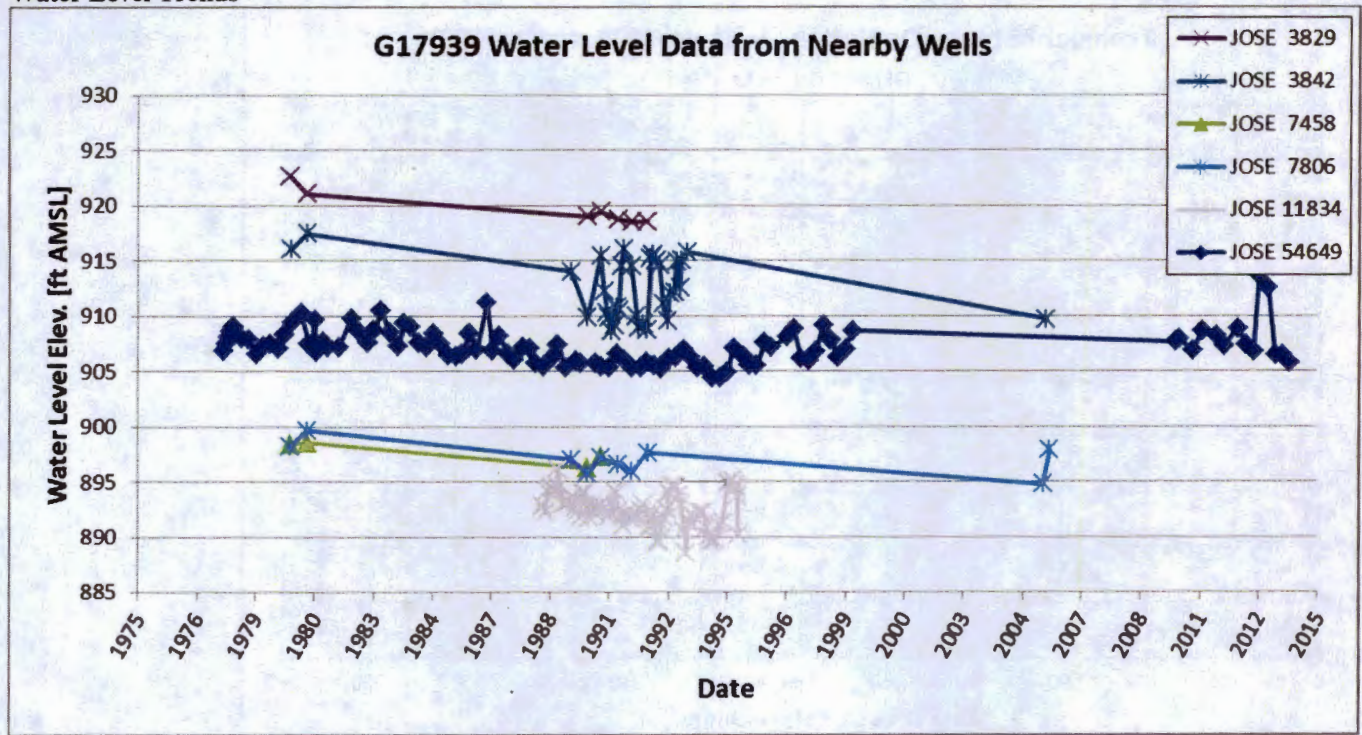   character of a scenic waterway.

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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 _Rogue River_ Scenic
Waterway by the following amounts, expressed as a proportion of the annual consumptive use
pumped from the well.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.094	0.087	0.085	0.083	0.083	0.082	0.082	0.081	0.081	0.081	0.081	0.081

Water Level Trends

G17939 Water Level Data from Nearby Wells

Stream Depletion Model Results

Transient Stream Depletion (Jenkins, 1970; Hunt, 1999)
G17939 Green Leaf Ind

Legend: —•— Jenkins s2 —— Hunt s2 —•— Jenkins s2 residual —— Hunt s2 residual
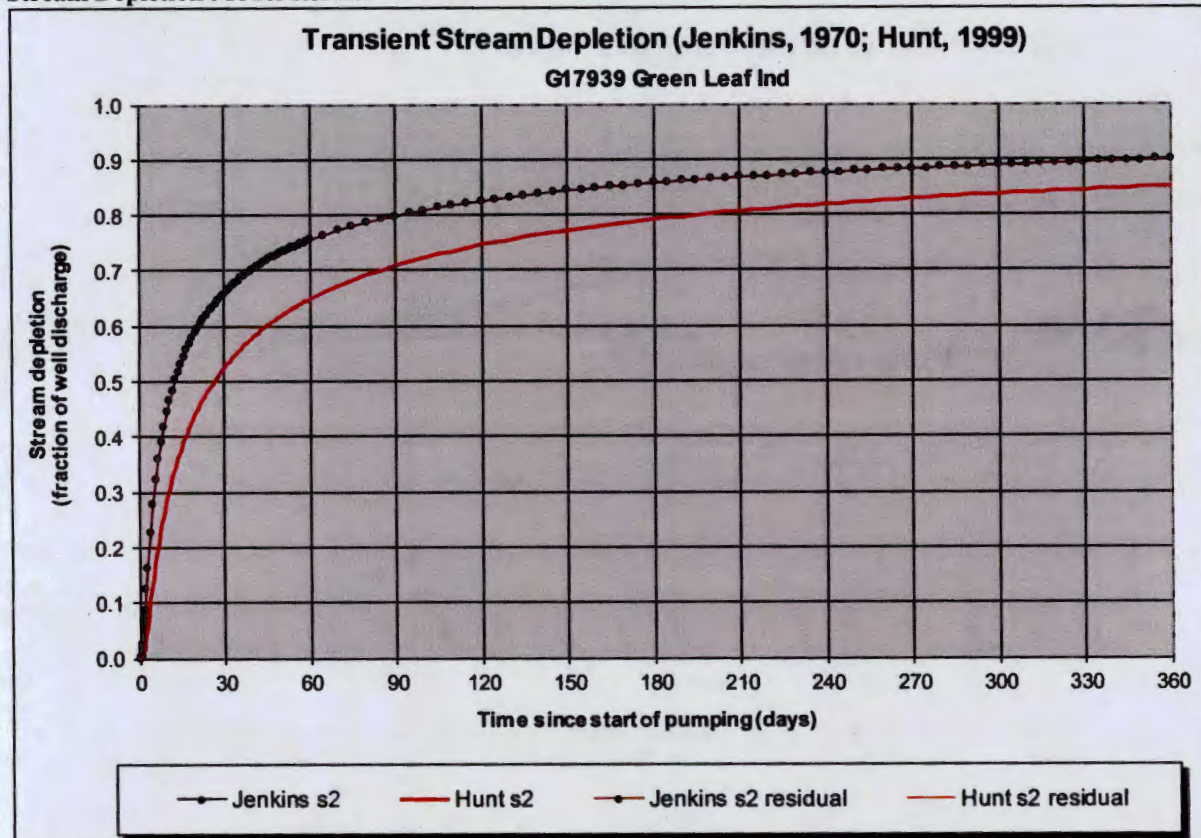
Output for Hunt Stream Depletion, Scenerio 2 (s2):   Time pump on = 365 days

Days	30	60	90	120	150	180	210	240	270	300	330	360
Qw, cfs	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051
Jenk SD %	0.658	0.755	0.798	0.825	0.843	0.857	0.867	0.876	0.883	0.889	0.894	0.898
Jen SD cfs	0.034	0.039	0.041	0.042	0.043	0.044	0.044	0.045	0.045	0.046	0.046	0.046
Hunt SD %	52.4%	64.9%	70.9%	74.6%	77.2%	79.1%	80.6%	81.8%	82.9%	83.7%	84.5%	85.1%
Hunt SD cfs	0.0269	0.0333	0.0363	0.0382	0.0396	0.0405	0.0413	0.0419	0.0425	0.0429	0.0433	0.0436

Parameters:			Scenario 2		Units
Net steady pumping rate	Qw		23		gpm
Distance to stream	a		740		ft
Aquifer hydraulic conductivity	K		50		ft/day
Aquifer thickness	b		140		ft
Aquifer transmissivity	T		7000		ft*ft/day
Aquifer storage coefficient	S		0.15		
Stream width	ws		200		ft
Streambed hydraulic conductivity	Ks		1		ft/day
Streambed thickness	bs		5		ft
Streambed conductance	sbc		40		ft/day
Stream depletion factor (Jenkins)	sdf		11.73		days
Streambed factor (Hunt)	sbf		4.23		

Application Review Map

Legend

- ◎ G17939 POA
- ▭ G17939 POU
- ● Wells with WL data
- ● Located Wells

FORMATION

- Alluvial deposits
- Alluvial fan deposits
- Grants Pass Plutons
- Terrace deposits
- City limits

Qaf: Alluvial fan deposits

Qaf: Alluvial fan deposits

Klg: Granitic Plutonic Rocks

De Slide

BM 1090

BM 999

BM 928

12 JOSE 3842

Substation

Cemetery

Cemetery

Communication Tower

JOSE 3829 *14*

Lathrop Boat Landing

JOSE 19394

Klg: Granitic Plutonic Rocks

Qat: Alluvium

JOSE 17714

Mile 98

JOSE 11413

Boat Ramp

JOSE 13288

14 JOSE 7458

Schroeder Park

Schroeder Park

JOSE 3810

26 JOSE 7806

JOSE 13989

JOSE 11605

20 JOSE 11834

Qt: Terrace gravels

Mobile Home Park

ROGUE

Mile 99

Mobile Home Park

23 *23*

JOSE 13634
JOSE 13813

Mobile Home Park

JOSE 11697
JOSE 11698

24

JOSE 54649

N

| 0 | 0.2 | 0.4 | 0.6 | 0.8 | 1 |

Miles

BM 928

Values in purple are SWL in ft BLS

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