# Water Right Conditions Tracking Slip

Groundwater/Hydrology Section

FILE ## 15983
ROUTED TO: WATER RIGHTS
TOWNSHID!
RANGE-SECTION: 375 6W-13
CONDITIONS ATTACHED? Myes [] no REMARKS OR FURTHER INSTRUCTIONS:
Reviewer: IKG

Water Resources Department

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T	0-		$\mathbf{A}_{\mathbf{j}}$	pplicati	on G	1598	3							
FI	ROM	I	G	W:	EVAN	GAL	1			F		EIVE		
SU	JBJE	ECT	Sc	enic W	aterwa	y Interi	ference	Evalua	ition	WAT		2 3 200 OURCES OREGO		
		Yes No		e sourc	e of app	ropriati	on is wi	thin or	above a	Scenic	Water	way		
	2	Yes No		e the Sc	eenic W	aterway	conditi	on (Co	ndition '	7J).				
PR	EPO:	ND							eck box				e) nderance	
K	Ą		sur	face wa	ter flow	propos s neces	sed use	of gro	und w	ater wi	ll meas	surably	reduce of a sce	41
FI (	) W E	DEL	MICTI	ONL CT	1 011									
Exe Wat	rcise	of t	this per	rmit is c	alculate	ed to rec	luce mo	nthly f	lows in				checked) Scer	
	Ja	n	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
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FROM	<b>1</b> :	Ground	d Water	/Hydrology	Section _	II	IAN	GALL				
SUBJI	ECT.			1598		Rev	viewer's Name apersedes re	view of	11/4		e e	
OCDI	201.	пррпо	ation O	10 16	3	30	ipersedes re	view oi	10/1	Date of R	eview(s)	
OAR 6 welfare to deter	90-310-1 c, safety armine whe	30 (1) The nd health ether the	ne Depar nas descr presumpt	ribed in ORS tion is establ	presume than 537.525. I ished. OAR	at a propos Department R 690-310-	sed groundwa at staff review 140 allows t	ground wat he proposed	ensure the prester applications use be modified icies in place a	under OA	AR 690-3	10-140 .
A. <u>GE</u>	NERAL	INFO	RMATI	<u>ON</u> : A	pplicant's l	Name: M	EW HOPE	CHRIST	IAN SCHOOL	15/1	VC	
A1.	Applica	nt(s) seel	k(s) <i>O.l.</i>	56 cfs from	m 7	well	(s) in the	ROGUI	E			Basin,
							oasin Qu				-	
A2.	Propose	d use: 1	RRIGA	TION (SEA	SONAL)	Sea	sonality: <u>Y</u>	EAR ROUM	UD QUASI	MUN	1,	
A3.	Well and	d aquifer	data (att	tach and nu	mber logs	for existir	ng wells; ma	rk proposed	l wells as such	under lo	gid):	
Well	Lo	gid		oposed quifer*	Proposed Rate(cfs)		Location	Lo	ocation, metes a			ple:
1	JOSE	6328		ack?	0.004		R-S QQ-Q) 6W-13bb	362	2250' N, 1200' '5, 750'Efc			
2	JOSE 1		NI	A	0.034	1		636'	S, 362'E FT	NWC	or 513	
3 4	JOJE 1		BEDRO		0.012	+		175'5	5,512'Efr	NWC	or S13	
5	JOSE 1280		BEDRO		0.008	1		47515	7	11	11 11	
	um, CRB,		DEVICE	<i></i>	0.083	V	V	825'5	1100'Efr			
Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval	Casing Intervals	Liner Intervals	Perforations Or Screens	Well Yield	Draw Down	Test Type
1	1060		18	9.21.59	115		0-106'		_	25	75	BAILER
3	1050	_	25	9.7.62	100	18	0-82'	*******	70-79'	13		BAILER
3	1050		35	6.29.63	145	20	0-140'		50-140'	20	95	BAKER
5	1075		95	7.22.68	305	30	0-120'		115-120'	20	16	11 11
6	1075	76	10	12.20.83	120	25	0-161'		156-161	15		AIR
Use data	from appl	ication for	proposed	l wells.								AIR
A4de.cox	Commen	nts: <u>All</u>	of the	wells ap	plat to	pe prou	ducing go	oundway	kr from er	the c +	Le	
						**************************************	,			***************************************		
A5. 🗌	(INOL all	nent of g basin rul	round wa	nter hydraulien such provis	cally conne	cted to sur	face water [	are, or	o the developmed are not, active	ated by th	nis applic	ation.
A6. 🗌	Name of	administ	trative are	, , _ea:,			, taŗ	o(s) an aquif	er limited by an	administ	rative res	striction.
				H-H-H-H-H-H-H-H-H-H-H-H-H-H-H-H-H-H-H-								

Water Rights Section

JUNE 18 , 200 3

TO:		Water	Rights	Section					J	UNE 1	8	, 2	200 3
FROM	<b>1</b> :	Groun	d Water	/Hydrology	Section Section		VAN	GA					
SUBJ	ÉCT:	Applic	ation G	-1598	3		viewer's Name upersedes re	eview	of	NA		(4)	
PUBL OAR of welfare to determine the pre-	Applica	EREST 130 (1) The stand health either the criteria. INFORMATION SEED AT	PRESU he Depart n as desc presump This rev RMATI k(s) O.	UMPTION retinent shall pribed in OR. stion is establiew is based ON: A  Solo cfs fro  JER	presume to S 537.525. dished. OA I upon avanapplicant's m	NDWAT hat a proportion in the	ER ssed groundw nt staff review 1-140 allows to rmation and EW HOPE  l(s) in the basin Qu	water uw grouthe prod agen  CHA	use will and wat opposed acy poli CISTI OGUL ap: M	ensure the present applications use be modified icies in place and the second s	under OAd or cond t the tim	of the pu AR 690-3 itioned to e of eval	10-140 .
A2.	Propose	ed use: 1	RRIGA	TION (SEA	ASONAL)	) Sea	asonality: $\frac{\zeta}{I}$	EAR	ROUA	D QUASI	-MUN	7,	-
A3. Well6	1	gid	Pı	roposed .quifer*	Propose Rate(cfs	d s) (T	Location YR-S QQ-Q)		Lo	wells as such cation, metes a 2250' N, 1200' E	and bound E fr NW	is, exam	ple:
7	JOSE 1	2352	BEDR	oc¥	0.003	375/0	6W-13bb	) (	47515	1100'Efr	VWC	r S13	
* Alluvi	um, CRB,	Bedrock								,			
Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval	Casing Intervals	1 1000	ner	Perforations Or Screens	Well Yield	Draw Down	Test Type
7	1070	81	10	4.29.86	160	0-301	+1-79'		_		17		AIR
Use data	from appl			d wells.									
A5.	manager (Not all	nent of gr basin rule	round wa	n such provi	cally conn sions.)	ected to sur	rface water [	are	, or	the developme are not, active	ated by th	is applica	ation.
A6. 🗌	Name of	administ	rative ar	ea:						r limited by an		rative res	triction.
					-								-

Application G-	15983	continued
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# B. GROUND WATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130 (b) (c)

B1.	Base	ed 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;
	b.	will not or will likely be available in the amounts requested without injury to prior ground water rights;
	c.	will not or will likely to be available within the capacity of the ground water resource; or
u v	d.	will, if properly conditioned, avoid injury to existing ground water rights or to the ground water resource:  i. X The permit should contain condition #(s) 7B 7C 7F 7J X  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):
33.	the his	and water availability remarks: There are over 1,800 well logs within one wile of applicant's wells of these 226, or 15%, are listed as deepenings. That is a get density of wells and appears to be a lage number of deepenings, suggesting at the gw resource may be spessed.  The gw resource may be spessed.  The obs. well #1137 (Espey Road) water level data suggest that some water level cline has occurred in the Allen CR basin v 2 miles from the applicant's wells. The seology for both areas is smiler (Grant's Pars pluton).  Require permittee to install and maintain properly functioning fotaliting flow meters on each well.

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

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

Well	Aquifer or Proposed		Confined	Unconfined
1,2,3 DELONFOS	ED GRANITE AND FR	ALTURED BEDROCK		X
45,6	1			X
7 V	V V	V		₩.
Basis for aquifer conf	inement evaluation:	hic water levels fairly	y shallow first wat	er only Hofeet
tor well le a	nd 8) feet for We	2117. Annual rechie	rge for this system	n basted on
hydrographs in	area (50W#137).			

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.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected? YES NO ASSUMED	Potentia Subst. Int Assume YES	erfer.
1		APPLEGATE RIVER	1042	960	3.700			
2			1025		3,100			
3	1		1015		3,500			V
4			1070		4,100	$\nabla$		V
5			975		3,700			2
6		1/	1065		4,400			X
7	1	V	1060	V	4,100			X
		-			,			

Basis for aquifer hydraulic connec	ction evaluation: Static water	er levels substantially	higher than river stace.
Applegate River incides	local geology ; river a	local discharge area	for ground water,

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. If Q is not distributed by well, use full rate for each well. If modeled, include description and model parameters in Comments (C3b). Any checked box indicates the well is assumed to have the potential to cause substantial interference with surface water.

		I		T	Т ,	T	000/	T 0 101		
Well	SW #	Well < ½ 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			66612	120		45.8		5%	П
2	1			1	1		1	· [	1	$\overline{n}$
3	1					П		Ī		F
4	1					T T				H
5	i				1.			Ħ		H
6	1			1	4/			Ħ		H .
7				V	120		1/	T T	\/	H

JUNE 19
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# 5 cfs? Right Right Q ISWR? (cfs) Flow Natural (30 days (%) IDWR: (cfs) Flow? (show) Right Q ISWR? (cfs) Flow? (c	# 5 cfs? Right Right Q ISWR? Flow Natural Of 80% Na	# Scis? Right Right Q ISWR? Flow Natural (%) days for Interpretation of the interpretat	evaluati	on and lir	nitations	apply as	om a surface in C3a about Instream	ove.	stream	Qw >		80%	Qw > 1	0/0		D,	oteni
So again for K and S were adjusted to and example of particular to an ex	mments: Msed analytical mode for street depletion (reis) feeting.    ID   (cfs)   ISWR?   (cfs)   Flow?   Assum	Comments: Med analytical model for street dependent field for the intervention of proposed pumping and street from the period of the intervention of proposed pumping and the content of the period of		SW			Water	1			11		of 80%	6		to	r Sul
Comments: Used analytical model for streem depletion/Theis/tenkins), not all assumptions of so again ter K and S were adjusted to conservatively estimated impact on the above the street of proposed pumping.  Well SW# Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Julius 1836, 1676, 276, 876, 1576, 2076, 2576, 3176, 3176, 2776, 2576, 2076, 2576, 3176, 3176, 2776, 2576, 3176, 3176, 2776, 2776, 3786, 1576, 2076, 2576, 3176, 3176, 2776, 2576, 3176, 3176, 2776, 2776, 3786, 1576, 2076, 2576, 3176, 3176, 2776, 2776, 3786, 1576, 2076, 2576, 3176, 3176, 2776, 2776, 3786, 1576, 2076, 2576, 3176, 3176, 2776, 2776, 3786, 1576, 2076, 2576, 3176, 3176, 2776,	mments: Used analytical mode for street depletion/Theis/feckins), not all assumptions met to again for mode for street depletion/Theis/feckins), not all assumptions met to again for mode for street we havely estimate impact on stream.  Valves from Domenico Islamost 20 7 galday/ft2, assume 5 a 0,005. See affaction of proposed pumping rate. mit evaluation to one year of pumping.  Well SW# Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 1 12/16 189 10/2 27/8 89/8 15/9 20/9 25/8 31/8 31/8 27/8 25/8 2 1 22 1 18 15 4 14 23 30% 35 40 40 31 26/3 1 12 1 12 1 1 1 1 1 2 2 2 2 2 2 2 2 2	Comments: Ideal and Interpreted for Street de plethon (The is/Her Kird) is not all assumptions one so against K and Street adjusted to conserve the kirdly estimated impacts on surface water sources as percent or qualitative fraction* of proposed pumping.  Well SW# Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec II Jan Jul Jul Jul Aug Sep Oct Nov Dec II Jan Jul Jul Jul Aug Sep Oct Nov Dec II Jan Jul Jul Jul Aug Sep Oct Nov Dec II Jan Jul Jul Jul Aug Sep Oct Nov Dec II Jul Jul Jul Jul Jul Aug Sep Oct Nov Dec II Jul		#		5 cfs?					/		1	1		11	
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There are and antase to sive and for each well. He attacked she	per rege und wintand to fired on for each well, see attacked shirts.	90-09-040 (5): Evaluation of paragraphs under subsection 5. A determination of \( \subseteq \text{Low} \) denotes no connection or a value of connection between surface water and ground water; \( \subseteq \text{High} \) denotes hydraulic connection that would likely red surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  (a) The potential to reduce surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  [Solution of the potential to reduce surface water availability in the potential to reduce surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  [Solution of the potential to reduce surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  [Solution of the potential to reduce surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  [Solution of the potential to reduce surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  [Solution of the potential to reduce surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  [Solution of the potential to reduce surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  [Solution of the potential to reduce surface water availability in the first year of pumping. Do not equ	CAR (	6 C	Valuatio	n. used	Lame	a 19	YTICA	mod	erae	Jenber	1 about	17	CSD	, wil	10
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		ndirect connection between surface water and ground water;  High denotes hydraulic connection that would likely red surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  (a) The potential to reduce surface water availability in					,										-
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90-09-040 (5): Evaluation of paragraphs under subsection 5. A determination of \( \subseteq \text{Low} \) denotes no connection or	-09-040 (5): Evaluation of paragraphs under subsection 5. A determination of ∑ Low denotes no connection or a ver	is Low or Low or The potential to reduce surface water availability in is Low or En	ndirect	connectio	n betwee	en surface	e water and	l groun	d water;	⊠ High	ı denote	s hydrau	lic connec	ction the	at would	ikely re	du
ndirect connection between surface water and ground water; 🔀 High denotes hydraulic connection that would likely	irect connection between surface water and ground water; 🔀 High denotes hydraulic connection that would likely reduc	The potential to reduce surface water availability in	surface v	water avai	ilability i	in the firs	t year of pu	amping	g. Do not	equate '	'Low" a	nd "High	i" betwee	n C4a a	nd C4b.		
ndirect connection between surface water and ground water; 🔀 High denotes hydraulic connection that would likely	irect connection between surface water and ground water; 🔀 High denotes hydraulic connection that would likely reduc	The potential to reduce surface water availability in	a) The	notantial	to module			1-1-11	. 1	00/0-	lo 1:	100				-	
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ndirect connection between surface water and ground water; High denotes hydraulic connection that would likely surface water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  a) The potential to reduce surface water availability in Applicate River is Low or 15.	irect connection between surface water and ground water; High denotes hydraulic connection that would likely reduce face water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  The potential to reduce surface water availability in Applicate River is Low or High	The potential to reduce surface water availability in is Low or E	The	potential	to reduce	se surface	water avai	llability	y in	-	· · · · · · · · · · · · · · · · · · ·					or 📋	-
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The potential to reduce surface water availability in The potential to reduce surface water availabili	The potential to reduce surface water availability in The potential to reduce surface water availabili	The state of the s	Bas	is: Stah	conte	- lovels	ا اامیا م	( (.)	hstant.	alle h	der	H	Aprila	60	ine ~ (1	6-0	
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The potential to reduce surface water availability in The potential to reduce surface water availabili	irect connection between surface water and ground water;  High denotes hydraulic connection that would likely reduce face water availability in the first year of pumping. Do not equate "Low" and "High" between C4a and C4b.  The potential to reduce surface water availability in																

(b) The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.

pplication G-15983 continued	· ·	JUNE 19	, 200_3
4b. <b>690-09-040 (5):</b> . Evaluation of paragraphs un	nder subsection 5 continued.		
(c) The percentage of appropriation in the find Basis: Analytical modeling the use will be at the ex	rst year of use that will be at the expense described above suggests  Alexander of surface water	se of surface water 25 Mgt ~25-30%	7-30% 6 of
(d) The timing of interference will be Kimm Basis: Analytical modeling	nediate (within one year), or dela	yed;	
(e) The potential for cumulative adverse impa	A graphical distribution of PC		
Impacted stream	Impacted basin or sub-basin	Existing Ground Wa	ater Rights (cfs)
Comments:			
If properly conditioned, the surface water sunder this permit can be regulated if it is four i. The permit should contain conditions.	nd to substantially interfere with surfac	rom interference, and/or ge water:	ground water use
ii. The permit should contain speci iii. The permit should be conditioned	al condition(s) as indicated in "Remark	cs" below;	
If the well is not reconstructed, it will intersurface water from interference. If the ground interference with surface water, I recommend with the Department and approved by the Gr	d water use under this permit is found to d withholding issuance of the permit un	to have the potential for si	ubstantial
The well should be reconstructed as follow	vs:		
		***************************************	
SW/GW Remarks Given the hydrogen wells and the Apple denial of the per is low for the first	ranlic connection bestief Re the only way to paint. However the patents	ween the application for substantial	icant's exteris Interes
* Require permittee to	nstall and maintain a tota	alizing flow me	teron
each well	poperly	functioning,	
	1 4 1	<i>)</i>	

Applie	cation G continued	JUNE 18	, 200_3
D. <u>W</u>	ELL CONSTRUCTION, OAR 690-200		
D1.	Well #: Logid:		
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.		
D4.	THE WELL construction deficiency is described as follows: Based on a there does not affect to be a well feel on this well	review of th	e well log,
D5.	THE WELL  a. was, or was not constructed according to the stand original construction or most recent modification.  b. I don't know if it met standards at the time of construction.		time of
D6.	Route to the Enforcement Section. I recommend withholding issuance of the pe is filed with the Department and approved by the Enforcement Section and the Gro	ermit until evidence of	of well reconstruction withdraw his we
THIS	SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL	+n	on application
D7.	Well construction deficiency has been corrected by the following actions:		`
	(Enforcement Section Signature)		, 200
D8.	Route to Water Rights Section (attach well reconstruction logs to this page).		

#### STATE OF OREGON

#### COUNTY OF JOSEPHINE

#### CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

STATE OF OREGON WATER RESOURCES DEPARTMENT SALEM, OREGON 97310

confirms the right to use the waters of APPLEGATE RIVER, a tributary of the ROGUE RIVER, in the ROGUE RIVER BASIN to maintain an instream flow for the purpose of SUPPORTING AQUATIC LIFE.

The right is for flows to be maintained IN THE APPLEGATE RIVER AT USGS GAGE NO. 14369500, (SECTION 31, T 36 S, R 6 W, W.M.), NEAR WILDERVILLE AND MAINTAINED TO THE CONFLUENCE WITH THE ROGUE RIVER.

The right is established under Oregon Revised Statutes 537.346.

The date of priority is SEPTEMBER 17, 1982.

The right is limited to not more than the amounts during the time periods listed below:

Period	Flows (cubic feet per second)
OCT 1 - NOV 30 DEC 1 - FEB 29 MAR 1 - APR 30 MAY 1 - JUN 30 JUL 1 - JUL 31	360 300 340 360
	A STATE OF THE PARTY OF THE PAR

The storage of water for irrigation and downstream enhancement of fish life as authorized by HD 566 (87th Congress, 2nd Session) and Public Law (PL) 87-874 shall not be affected by regulation for this instream water right.

This instream water right shall not have priority over domestic and livestock uses or irrigation of non-commercial gardens not to exceed one-half acre in area or waters legally released from storage.

Witness the signature of the Water Resources Director affixed AUGUST 12, 1991.

William No Young Water Resources Director

Recorded in State Record of Water Right Certificates number 66612.

MF249 15.APPLEGATE R. VOLUME 6

DISTRICT 14

## G15983SD.xls

npu	t D	at	a:
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Variable	Name	Minimum	"Best"	Maximum	Unit
Well Owner or Well Number	Well		G-15983		
X Coord. for X-Section (Head Distribution)	Х		0		[ft]
Perpendicular Distance From Well to Stream	а		4,400		[ft]
Net Steady Pumping Rate	Q		10		[gpm]
Hydraulic Conductivity	K	7	7	7	[gpd/ft*ft]
Aquifer Thickness	b	100	200	300	[ft]
Well Depth	d		100		[ft]
Storativity	S		0.00500		
Effective porosity	n		0.00500		
Hydr. Grad. Perpend. to Stream (must be > 0)	i	0.03000	0.03000	0.03000	
Time Since Pumping Started	time		30.00		[days]

well#6 from river

Out	put	Data:

Output Data.						
General Output:						
Transmissivity	Т	700	1,400	2,100	[gpd/ft]	= K*b
Hydraulic Conductivity	K	7	7	7	[gpd/ft*ft]	
		1	1	1	[ft/day]	
		3.28E-06	3.28E-06	3.28E-06	[m/s]	
Average linear velocity	ALV	5.61	5.61	5.61	[ft/day]	= K*i/n
		2,050.87	2,050.87	2,050.87	[ft/yr]	
Ambient Flux at River per Foot	Qb	0.0146	0.0292	0.0438	[apm/ft]	= K*b*i

Transient Stream Depletion Output:					
k	SDTr_k	8.6198	4.3099	2.8733	= ((a^2*S)/(4Tt))*7.48
Transient Stream Depletion (Theis/Jenkins)	SDTr	0%	0%	2%	= erfc SQRT(a*a*S)/4Tt)
Transient Induced Infiltration (Theis/Jenkins)	IITr				

Steady-State Stream Depletion:

Dimensionless Pumping Rate	Beta, ß	0.05	0.02	0.02		= Q/(K*b*i**a)
(ß >= 1 ==> velocity divide has reached stream)						
SQRT(Beta-1)		0.00	0.00	0.00		
Critical pumping rate	Qc	202	403	605	[gpm]	= K*b*i**a
Dist. fr Well to Velocity Divide at Steady State	rvd	111	55	37	[ft]	= a-(a*SQRT(1-ß))
Steady-State Stream Depletion (Wilson & Linderfelt)		100%	100%	100%		
Steady-State Induced Infiltration (Wilson & Linderfelt)		0%	0%	0%		= (2/)*{-SQRT(ß-1)/ß+ATAN[(

### G15983SD.xls

n	рι	JΙ	D	at	a:

Variable	Name	Minimum	"Best"	Maximum	Unit
Well Owner or Well Number	Well		G-15983		
X Coord. for X-Section (Head Distribution)	х		0		[ft]
Perpendicular Distance From Well to Stream	а		3,100		[ft]
Net Steady Pumping Rate	Q		10		[gpm]
Hydraulic Conductivity	К	7	7	7	[gpd/ft*ft]
Aquifer Thickness	b	100	200	300	[ft]
Well Depth	d		100		[ft]
Storativity	S		0.00500		
Effective porosity	n		0.00500		
Hydr. Grad. Perpend. to Stream (must be > 0)	i	0.03000	0.03000	0.03000	
Time Since Pumping Started	time		30.00		[days]

Well the river closest to river

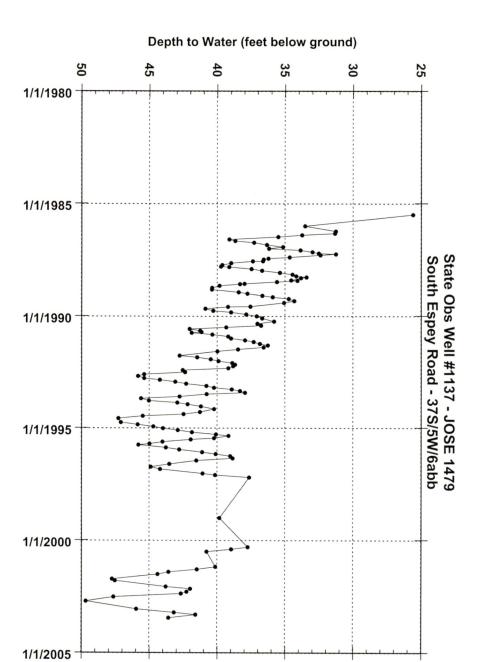
Output	Data
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Output Data.						
General Output:						7
Transmissivity	Т	700	1,400	2,100	[gpd/ft]	= K*b
Hydraulic Conductivity	K	7	7	7	[gpd/ft*ft]	
		1	1	1	[ft/day]	
		3.28E-06	3.28E-06	3.28E-06	[m/s]	
Average linear velocity	ALV	5.61	5.61	5.61	[ft/day]	= K*i/n
		2,050.87	2,050.87	2,050.87	[ft/yr]	
Ambient Flux at River per Foot	dQ	0.0146	0.0292	0.0438	[apm/ft]	= K*b*i

Transient Stream Depletion Output:					]
k	SDTr_k	4.2787	2 1394	1.4262	= ((a^2*S)/(4Tt))*7.48
Transient Stream Depletion (Theis/Jenkins)	SDTr	0%	4%	9%	= erfc SQRT(a*a*S)/4Tt)
Transient Induced Infiltration (Theis/Jenkins)	IITr				

Steady-State Stream Depletion:

	otoddy otate off carri Depiction.						
	Dimensionless Pumping Rate	Beta, ß	0.07	0.04	0.02		= Q/(K*b*i**a)
l	(ß >= 1 ==> velocity divide has reached stream)						
	SQRT(Beta-1)		0.00	0.00	0.00		
l	Critical pumping rate	Qc	142	284	426	[gpm]	= K*b*i**a
	Dist. fr Well to Velocity Divide at Steady State	rvd	111	55	37	[ft]	= a-(a*SQRT(1-ß))
	Steady-State Stream Depletion (Wilson & Linderfelt)		100%	100%	100%		1
	Steady-State Induced Infiltration (Wilson & Linderfelt)		0%	0%	0%		= (2/)*{-SQRT(ß-1)/ß+ATAN[(



SPEC. CAPAC.

Material	Hydraulic conductivity (m/sec)	
SEDIMENTARY		
Gravel Coarse sand Medium sand Fine sand Silt, loess Till Clay Unweathered marine clay SEDIMENTARY ROCKS	$3 \times 10^{-4} - 3 \times 10^{-2}$ $9 \times 10^{-7} - 6 \times 10^{-3}$ $9 \times 10^{-7} - 5 \times 10^{-4}$ $2 \times 10^{-7} - 2 \times 10^{-4}$ $1 \times 10^{-9} - 2 \times 10^{-5}$ $1 \times 10^{-12} - 2 \times 10^{-6}$ $1 \times 10^{-11} - 4.7 \times 10^{-9}$ $8 \times 10^{-13} - 2 \times 10^{-9}$	
Karst and reef limestone Limestone, dolomite Sandstone Siltstone Salt Anhydrite Shale	$ 1 \times 10^{-6} - 2 \times 10^{-2}  1 \times 10^{-9} - 6 \times 10^{-6}  3 \times 10^{-10} - 6 \times 10^{-6}  1 \times 10^{-11} - 1.4 \times 10^{-8}  1 \times 10^{-12} - 1 \times 10^{-10}  4 \times 10^{-13} - 2 \times 10^{-8}  1 \times 10^{-13} - 2 \times 10^{-9} $	06/19/2003 /14/0 G-15983 New Hope School
Permeable basalt Fractured igneous and metamorphic rock Weathered granite Weathered gabbro Basalt Unfractured igneous and metamorphic rocks	(33 × 10-6-5 2 × 10-5)	Assume 3.3×10-6 Errs on the low side r weathered somite,
To convert meters per	3 × 10 -2 × 10 ×	
second to	Multiply by	
cm/sec (gal/day)/ft² ft/sec ft/yr darcy ft² cm²  To convert any of the above to meters per second	$   \begin{array}{c}       10^{2} \\       2.12 \times 10^{6} \\       3.28 \\       1 \times 10^{8} \\       1.04 \times 10^{5} \\       1.1 \times 10^{-6} \\       1 \times 10^{-3}   \end{array} $ Divide by the appropriate	Assume Storahisty = 0.005 inservatively high for Fractured bedrock, good Postmate for weathered wante

(3.3×10-6)(2.12×106) = 6,996 ~ 7 gal/day/f42

