

Last revised: 1/4/2007

Application for Water Right Transfer

Please type or print legibly in dark ink. If your application is incomplete or inaccurate, we will return it to you. If any requested information does not apply to your application, insert "N/A" to indicate "Not Applicable." As you complete this form, please refer to notes and guidance included on the application. A summary of review criteria and procedures that are generally applicable to these applications is available at www.wrd.state.or.us/OWRD/PUBS/forms.shtml.

000	<u>Pl</u>	ease check one		
	X Permanent Transfer	☐ Instream Trans		
	☐ Temporary Transfer	☐ Permanent☐ Time-Limi		
	• total number of years:	_ Drought Trans		
	(begin year:) (end year:	Other	ier	
	(cita year.	Other	<u>: </u>	
	2. APPLIC	ANT INFORMATION	_	
Name: R	ichard Hunsaker			
	First	Last		
Address: _	88001 Heather Drive			
	Springfield	OR		9747
	City	State	Zip	
Phone:	541-746-8446			
	Home	Work	Other	
Fax:		E-Mail address:	<u> </u>	
	nt listed is authorized to represent the		to this transfer applice	ation.)
_		applicant in all matters relating	to this transfer applica	ation.)
Name:]	nt listed is authorized to represent the	applicant in all matters relating Last		
Name:	EGR & Associates, Inc First 2535 "B" Prairie Roa	applicant in all matters relating Last		
Name:	ent listed is authorized to represent the EGR & Associates, Inc	applicant in all matters relating Last		
Name:] Address:	ent listed is authorized to represent the EGR & Associates, Inc First 2535 "B" Prairie Ros Eugene OR	Last 97402 State		
Name:] Address:	ent listed is authorized to represent the EGR & Associates, Inc First 2535 "B" Prairie Rod Eugene OR City	Last 97402 State		

Transfer Application/1

WATER RESOURCES DEPT SALEM, OPEN

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4. PROPOSED CHANGE(S) TO WATER RIGHT(S)

Application / Decree	Permit / Previous Transfer	Certificate	
1. 530462	S-23994	28874	
2.	_		
3.			
4.			
5.			
6.			
	ncluded in this transfer applica		
Place of Use	int of Diversion	Iditional Point of Diversion	
☐ Character of Use	oint of Appropriation \Box Ad	Iditional Point of Appropriation	ı
☐ Instream Transfer 🕱 Su	rface Water source to Ground	Water source [McKenzie	River]
eason(s) for change(s):Tra	nsferring 10-acres	of existing water	_
	perty for irrigatio		_
# XX	ATED DELIVEDY CYCHE		
5. W	ATER DELIVERY SYSTEM	<u>VI</u>	
oconiho the arranger 4 4- 1-1!	very system or the system that	was in place at some time	
sithin the last 5 years. Include sed to divert, convey and apply avolves multiple rights that has The description must be sufficient	information on the pumps, can y the water at the authorized pay we independent systems, descri- tent to demonstrate that the full quan- ted source and applied at the authorize	lace of use. If the transfer be each system separately. tity of water to be transferred can	
within the last 5 years. Include sed to divert, convey and apply avolves multiple rights that has the description must be sufficionally be conveyed from the authorized applicant is ready, willing, and	information on the pumps, can y the water at the authorized pay we independent systems, descri- tent to demonstrate that the full quan- ted source and applied at the authorize	lace of use. If the transfer libe each system separately. tity of water to be transferred can seed location and that the	-
within the last 5 years. Include sed to divert, convey and apply avolves multiple rights that has the description must be sufficionable conveyed from the authorized applicant is ready, willing, and 6T-225 20HP Berkel	information on the pumps, can y the water at the authorized pi we independent systems, descri- tent to demonstrate that the full quan- ted source and applied at the authorized able to exercise the right.	lace of use. If the transfer libe each system separately. tity of water to be transferred can seed location and that the	-
within the last 5 years. Include sed to divert, convey and apply avolves multiple rights that has the description must be sufficion be conveyed from the authorized applicant is ready, willing, and 6T-225 20HP Berkel stater from the POD, pprox. 1,150' of 6" of approx. 1,600' of ystem capacity: 0.22	information on the pumps, can be the water at the authorized power independent systems, described to demonstrate that the full quantity able to exercise the right. Lever Submersible pumpled in the McKerstrand pumpled	lace of use. If the transfer libe each system separately. It to five to be transferred can seed location and that the libe is used to convey enzie River, through the it is discharged the transfer involves multiple	-main

6. EVIDENCE OF BENEFICIAL WATER USE

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m	st the name and mailing address of all affected local governments (e.g., county, city, unicipal corporation, and tribal governments within whose jurisdiction the rights are cated).
_	
	Lane County - 125 E 8th Avenue, OR 97401
_	"Yes", for any of the above, list the name and mailing address of the district, agency ad/or entity:
	water for any of the rights supplied under a water service agreement or other contract for ored water with a federal agency or other entity? Yes No
	fill any of the water rights be located within or served by an irrigation or other water districter the proposed transfer? XXXX X No
	her water district? XXXXXX No
۸,	7. AFFECTED DISTRICTS AND LOCAL GOVERNMENTS re any of the water rights proposed for transfer located within or served by an irrigation or
•	If the right has <u>not</u> been used during the past five years, documentation that the presumption of forfeiture would be rebutted under ORS 540.610(2).
•	Dated aerial photographs of the lands or other photographs containing sufficient detail to establish location and date of the photograph; <i>or</i>
•	Records such as Farm Service Agency crop reports, irrigation district records, an NRCS farm management plan, or records of other water suppliers;
E	Copies of receipts from sales of irrigated crops or for expenditures relating to use of water;
ac no	ttach one or more Evidence of Use Affidavits (Supplemental Form B) demonstrating that such of the right(s) involved in the transfer have been exercised in the last five years in accordance with the terms and conditions of the right or that a presumption of forfeiture for on-use could be rebutted. The Evidence of Use Affidavit(s) must include supporting ocumentation such as the following:

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8. LAND OWNERSHIP

	Does the applicant own the lands FROM which the right is being transferred? X Yes No							
	If "No", provide the following information. For Temporary Transfers, also include a <u>notarized statement granting consent</u> to the transfer from <u>each</u> of the landowners:							
If 'noi Na Add Do	Names of Current Landowner(s):		Last	_				
If "Anotal Nar Add	Address:			_				
	City	State	Zip	_				
•	Does the applicant own the lands TO	which the right is bei	ng transferred?					
	X Yes No	□ N/A - NOT APPL	ICABLE TO INSTREAM TRANSFERS					
	If "No", provide the following inform	nation:						
	Address: City Does the applicant own the lands T Yes No If "No", provide the following info Names of Receiving Landowner(s) Address: City Check <u>one</u> of the following:							
	Address:			_				
	City	State	Zip					
•	Check <u>one</u> of the following:							
	Names of Current Landowner(s): Address: City Does the applicant own the lands To No If "No", provide the following info Names of Receiving Landowner(s) Address: City Check one of the following: The receiving landowner will to the final order is issued. All no		etion of the proposed changes after e should be sent to this landowner					
	The applicant will remain respondence should continue		<u> </u>					
	☐ N/A. (Not applicable. Application	cation is for an Instream Water Right Transfer.)						

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9. ATTACHMENTS

Check each of the following attachments included with this application.

The application will be returned if all required attachments are not included.

Supplemental Form A –	Land Use Information Form:
Description of Proposed Change(s) to a	ĭ Enclosed; or
Water Right ☐ A separate Supplemental Form A is enclosed for each water right to be affected by this transfer.	 Not Required if <u>all</u> of the following are met: In EFU zone or irrigation district, Change in place of use only, No structural changes needed, including
Supplemental Form B –	diversion works, delivery facilities, other
Evidence of Use Affidavit(s) At least one Evidence of Use Affidavit	structures, <i>and</i> 3 Irrigation only.
documenting that the right has been used during the last five years or that the right is not subject to forfeiture under ORS 540.610 is attached. The affidavit provided must be the original (not a copy), and	Fees: Amount enclosed: \$ See the Department's Fee Schedule at www.wrd.state.or.us or call (503) 986-0900.
▼ The Evidence of Use Affidavit must be	
accompanied by supporting documentation.	Instream Water Right Transfers, also include:
Map	
☐ Water Right Transfer The map must be prepared by a Certified Water Right Examiner and meet the requirements of OAR 690-380-3100 unless a waiver has been granted. The map provided must be the original, not a copy.	Supplemental Form C − Instream Water Right Transfer Complete this form to describe the desired nature and attributes for the proposed instream water right.
☐ Temporary Transfer or Historical POD Change	Temporary Transfers, also include:
A map meeting the requirements of OAR 690-380-3100 must be included but need <u>not</u> be prepared by a Certified Water Right Examiner.	Recorded Deed: The applicant must submit a copy of the current deed of record for the land from which the
Water Well Report(s)/Well Log(s):	authorized place of use or point of
☐ The application is for a change in point of	diversion/appropriation is being moved. Affidavit of Consent:
appropriation or change from surface water to ground water and copies of all water well reports are attached.	☐ If the applicant is NOT the owner of record for the land from which the authorized place of
Water well reports are not available and a description of construction details including well depth, static water level, and information necessary to establish the ground water body developed or proposed to be developed is attached.	use or point of diversion/appropriation is being moved, a notarized statement from the actual owner of record consenting to the proposed transfer must be submitted.
N/A. The application does not involve a change in point of appropriation or a change from surface water to ground water, so water well reports are not required.)	
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Before submitting your application to the Department, be sure you have:

- Answered each question completely.
- Included all the required attachments.
- Provided original signatures for <u>all</u> named deed holders, or other parties, with an interest in the water right.
- Included a check payable to the Oregon Water Resources Department for the appropriate amount.

			10. SIGNATURES	
Che	eck <u>on</u>	<u>e</u> of the following, as appropri	ate, and sign the application in the sign	ature box below:
X	appro for th the fo	oval of a permanent transfer and the proposed transfer, I (we) wil	00(13)(a), I (we) understand that prior and upon my receipt of a draft Prelimin be required <i>[pursuant to OAR 690-38]</i> ation and evidence demonstrating that	ary Determination 0-4010(5)] to provide
	(a)	A report of ownership and lies the last three months;	n information that has been prepared by	a title company within
	(b)	holders on the subject lands unli- water right conveyance agreement conveyance agreement has been	of the proposed transfer provided by the less the report of ownership and lien inform that been recorded for the subject lands a recorded for the subject lands, a copy of the lands at the time the agreement was re-	rmation shows that a ls. If a water right f the agreement and
	(c)	a notarized statement consent identified in the report or an aut water right has been conveyed a	e report of ownership and lien information ing to the transfer (attached) signed by horized representative of the entity to what identified in a water right conveyance that the applicant is authorized to pursue the indowner.	the landowner nom the interest in the agreement or other
	right 30000	is in the name of the municipa	municipality, as defined in ORS 540.51 lity or a predecessor. Therefore, pursua juired to provide the above described rep	ant to OAR 690-380-
	acqui condo There above	ring the property to which the emnation. Documentation is profore, pursuant to OAR 690-380-e described report of ownership a	n entity with the authority to condemn water right proposed for transfer is a povided with this application supporting the 3000(13)(c), the applicant is NOT required lien information. (NOTE: Such an entire state of the supplication action to acquire the supplication action to acquire the supplication action to acquired the supplication action action to acquired the supplication action to acquired the supplication action	ppurtenant by his statement. hed to provide the httity may only apply for
I (v	ve) afi	firm that the information conta	nined in this application is true and acc	urate.
-	applicar	at signature	Richard Hunsaker	7-2-07 date
_	applicar	nt signature	name (print)	date

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Supplemental Information from Page 5 of the Transfer Application for Certificate 28874

Water Well Report(s)/ Well Log(s)

A water well report is currently not available as a well has not been developed. The well is planned to be developed following the approval of this Transfer Application which proposes to add a point of diversion and transfer 10 acres of permitted use to another property. Following approval, the well will be constructed in the sands and gravels of the McKenzie River alluvial plain. Due to the proximity of the well to the McKenzie River, the well is considered to be connected to the surface water source. The well is planned to be constructed 20 to 100 feet deep and be able to supply approximately 30 gpm. Additional estimated well details are listed in the Supplemental Form A, page 5.

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Water Right Transfer Supplemental Form A <u>DESCRIPTION OF PROPOSED CHANGE(S) TO A WATER RIGHT</u>

List only <u>one</u> water right per page. A <u>separate Supplemental Form A</u> must be completed for <u>each</u> certificate, permit, decree, or other right involved in the proposed transfer.

Attach additional copies of Supplemental Form A as needed to describe other certificates, permits, decrees or other rights involved in this transfer.

11.			马俊 医静脉 的复数				
# 1	Certificate	Number or c	ther identifying	number: 288	374	Market et alas t	
				· 1808.000	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		

1. TYPE OF CHANGE(S) PROPOSED

(Check all that apply.)

Point of Diversion or	Place of Use	Character of Use
Appropriation The Change (The old point of	All of the right will be	Proposed new use:
diversion or appropriation will not be used for the	exercised at a different location than currently	☑ Irrigation
portion of the water right affected by the transfer.)	authorized (Use of water at the current location will be	☐ Municipal
Additional (Both the old	discontinued.)	☐ Quasi-municipal
and new points of diversion or appropriation will be used	Only a portion of the right will be exercised at	☐ Commercial
for the portion of the water right affected by the transfer.)	a different location than currently authorized	☐ Industrial
☐ Historic Point of Diversion or	(Use of water at the current location will be	☐ Instream (complete and attach Supplemental Form C)
Appropriation Change (Unauthorized point of diversion or appropriation	discontinued.)	Domestic (indicate number of households)
used for more than 10 years.)		☐ Other
Surface Water to Ground Water (A new point of appropriation will be used instead of the old point of diversion. The old point of diversion will not be used.)		Substitution (A supplemental ground water right will be substituted for a primary surface water right.)
☐ Point of Diversion		☐ Supplemental Use to
Change due to Government Action (The old point of diversion or appropriation can no longer be used due to government		Primary Use (Primary water right shall be cancelled and the supplemental water right will change to primary use.)
action.)		RECEIVED
■ Exchange (Water from another source will be used in exchange for supplying an		AUG 0 3 2007
equal amount of replacement water to that source.)		WATER RESOURCES DEP SALEM, OPEC

2. CURRENT WATER RIGHT INFORMATION

Water Right Subject to Transfer (check and complete one of the following):

X	Certificated Right	28874	S-23994	
_		Certificate Number	Permit Number or Decree Name	
П	Adjudicated,			
	Non-certificated Right	Name of Decree	Page Number	
_	Permit for which Proof has			
<u></u>	been Approved	Permit Number	Date Claim of Beneficial Use Submitted	
	Transferred Right for which			
<u></u>	Proof has been Filed	Previous Transfer Number	Date Claim of Beneficial Use Submitted	
	Nome on Dormit Contificate	m Doomoo Tohm E	IV a m a m	
_	Name on Permit, Certificate, o	Decree: John E.	Hamer	-
•	County: <u>Lane</u>			-
•	Authorized Use(s) to be Affec	ted by Transfer: <u>Irri</u>	gation	_
	Priority Date(s): <u>Decembe</u>	er 6, 1955		_
	If there are multiple Priority I	Dates identified on the w	vater right, any information	
	provided on pages 3 through (
	associated with each of the au			
	appropriation and places of us	se.		
	Course(s) of Water to be Affect	oted by Transfer M. W.	innain Dinna	
•	Source(s) of Water to be Affect	tied by Transfer: MCK	enzie_River	-
	Tributary to: Willamett	e River		
				-
	If there are multiple Sources l			
-	pages 3 through 6 of this form the authorized and proposed p	55	urce is associated with each of	
	ine authorizea ana proposea p	oinis of aiversion or app	propriation and places of use.	
	For applications proposing a	Change in Place of Use	or Character of Use:	
	Are there Other Water Right	s. Permits or Ground W	ater Registrations associated	
	with this land?	s, I climis of Ground W	ator registrations associated	
		I/A N. Cl Dl		
	☐ Yes 🔀 No 🗆 N	IA – No Change in Place	of Use or Character of Use	
	If "Yes", what are the Permit,	Registration or Certific	ate Numbers? N/A	
	Pursuant to ORS 540.510, anv	"layered" water use or	a right that is supplemental to	
	a primary right proposed for t	-	1 · .1 ·	CEIVE
	cancelled, except as provided			had Been I. W. Be
				00.38

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WATER RESOURCES DEPT

Supplemental Form A

- 2 -

SALEM. Open Description of Proposed Change(s) to a Water Right

•	Certificate Number or other identifying number:	28874	

The following information must be provided only for those points of diversion or appropriation that are involved in the transfer (i.e., <u>list only the portion of the water right you propose to transfer.</u>) Attach additional pages as necessary.

Government lot and donation land claim numbers must be included in the tables below **only** if the information is reflected on the existing water right.

Location of Existing Authorized Point(s) of Diversion or Appropriation to be Changed:

(i.e., the allowed point(s) of diversion or appropriation listed on the water right that will be affected by the proposed transfer, the "FROM" point(s) of diversion or appropriation)

If Ground Water, OWRD Well Log ID No. (or Well ID Tag No. L)	Source and Priority Date	Township	Range	Mer	Sec	Y4.V4	Tax Let, DLC or Gov't Lot	Survey Coordinates (coordinates from a recognized survey corner)
NA	McKenzie River 12/6/1955	178	2W	Wil	1 26	SE,NW	NA	Not available

 Does the water right being transferred involve a ground water source 	•	Does the water right	being transferred	involve a groun	d water source	(s)
--	---	----------------------	-------------------	-----------------	----------------	-----

☐ Yes ☐ No (Surface water source only.)

If "Yes", for each authorized point of appropriation (well) involved, you must either:

A. Supply a copy of the well log(s) for <u>each</u> point of appropriation that is **clearly** labeled and associated with the corresponding well in the table above and on the accompanying application map. (<u>NOTE:</u> You may search for well logs on the Department's web page at: http://www.wrd.state.or.us)

<u>or</u>

B. If a well log is <u>not</u> available, you must describe the construction of the authorized point of appropriation by completing the table below. Attach additional copies as necessary.

Construction of Existing Authorized Point(s) of Appropriation – (Only needed if <u>no</u> well log is available.)

Wells in this listing must be clearly tied to corresponding well location(s) described in the table above and shown on the accompanying application map.

i e	Total well- depth :	Type of access port or measuring device	Est. depth to water bearing stratum	Est, depth to water	Seal depth	Intervals casing is perforated (in feet)	No. of feet of casing	Type and size of casing	Diameter	OWRD Well No. as identified in table above
EIVED	RECEI									
2007	MIG 03			_						
	MATER RESOU SALEM. OF	Ü								

Supplemental Form A

- 3 -

Description of Proposed Change(s) to a Water Right

• Certificate Number or other identifying number: 28874

The following information must be provided <u>only</u> for those places of use that are involved in the transfer (i.e., <u>list only the portion of the water right you propose to transfer</u>.) Attach additional pages as necessary.

Government lot and donation land claim numbers must be included in the tables below **only** if the information is reflected on the existing water right.

Location of Existing Authorized Place of Use to be Affected:

(i.e., the allowed lands listed on the water right that will be affected by the proposed transfer, the "FROM" lands)

Source and Priority Date	Township	Range	Mer	Sec	'/4 Sec	1/4 ction	Tax Lot, DLC of Gov't Lot	Acres (if applicable)	
McKenzie Rvr 12/6/1955	175	2W	Will	26	NE	NW	NA	7.0	
	175	2W	Will	26	NW	NW	NA	3.0	
		_							
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		2	
•,	Certificate Number or other identifying number:	28874	

3. PROPOSED CHANGES TO THE WATER RIGHT

Describe proposed changes to the water right involving point(s) of diversion and/or appropriation. Survey coordinates described below should accurately correspond to the points shown on the accompanying application map. Attach additional pages as necessary.

Location of Proposed Point(s) of Diversion or Appropriation:

(i.e., the "TO" point(s) of diversion or appropriation) \[\sum N/A - Instream Water Right Transfer \]
(NOTE: Complete this table **only** if a Change in Point of Diversion or Appropriation is being proposed.)

Source	Township	Range	Mer	Sec	Section:	Tax Lot, DLC or Gov't Lot	Survey Coordinates (4.4.) (coordinates from a recognized survey comer)
McKenzie River/GW	17S	01W	Will	29	SE SE	800	1,201'E, 1,190 N of

If there are proposed point(s) of appropriation (wells) listed in the table above, are the well(s) already constructed? ☐ Yes No ☐ N/A - No proposed well(s) listed above.

If "Yes", attach and clearly label the corresponding well log(s) for <u>each</u> proposed well, or if well log(s) are <u>not</u> available, describe the construction of the well(s) using the table below. (NOTE: You may search for well logs on the Department's web page at: http://www.wrd.state.or.us)

If "No", describe the anticipated construction for the proposed well(s) in the following table:

Construction of Proposed Point(s) of Appropriation or Well(s)

Well numbers in this listing must be clearly tied to corresponding well location(s) described in the table above and shown on the accompanying application map.

Well already built? (Yes/No)	If an existing well, OWRD Well Log ID No. (or Well ID Tag No. L-	Diameter	Type and size of casing	No. of feet of casing	Intervals' casing is' perforated (in feet)	Seal :	Est. depth to water	bearing	Total well depth	
No	N/A	6"	250 guage steel	2 8ō∙	: 1010	25'	5-15'	5'	2 8ō∙	
									RECE	VEC
									M 5 () 5	200

	Certificate Number or other identifying number:	28874	
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Describe proposed changes to the water right involving place of use. Information described below should accurately correspond to the proposed place of use shown on the accompanying application map. Attach additional pages as necessary.

Location of Proposed Place of Use: (i.e., the "TO" lands) \square N/A – Instream Water Right Transfer (NOTE: Complete this table **only** if a <u>Change in Place of Use</u> is being proposed.)

Source v	Township,	Range	Mer	Sec	ار Se	i ¼ ction	Tax Lot, DLC or Gov't Lot	Acres (if applicable)
McKenzie River (well)	17S	1 W	Will	29	NW	SW		6.4
					SW	SW		3.6
						_		
	_							
		_						
					_			
					_			

Remarks: Although the immediate source of water is from a well,

the well is close enough to the McKenzie River that the McKenzie

River will be the actual source of water (they are hydraulically connected).

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Supplemental Form A

Description of Proposed Change(s) to a Water Right

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EGR & Associates, Inc.

2535 L Fraine Road Eugene, Oregon 97402 (541) 688-8322 Fax (541) 688-8087

July 30, 2007

Water Rights Examiner
Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301

RE: Hunsaker Water Right Transfer Application

Dear Water Rights Examiner:

The proposed well site associated with the Hunsaker Transfer Application is estimated to be approximately 500 feet from the McKenzie River, near Walterville, Oregon (Section 29 of T17S, R1W). The location is within the central portion of the McKenzie River valley which is filled with sands and gravels deposited from floods and torrents since at least the end of the last ice age. These sands and gravels constitute an aquifer within the McKenzie River valley of relatively high permeability. This high permeability, coupled with the well's proximity to the river, leads to the obvious conclusion that this well will be hydraulically connected to the river.

If this were a groundwater right application, this well would be PRESUMED by the OWRD to be connected to the McKenzie River, since the proposed well site is located less than 1/4 mile (1,320 feet) from the river, and it is located in an alluvial, unconfined aquifer. To verify the nature of the aquifer, well logs located in the general vicinity of the subject property were examined.

Twenty one well logs from Sections 29 and 30 of Township 17 South, Range 1 West were examined. The logs were selected based on the reported geology and estimated yields of wells located in the general vicinity of the subject property. The well logs selected consisted of those reporting yields of 50 gpm or more and describing sand and gravels as the water producing materials. Well logs reporting of estimated yields less than 50 gpm and depicting bedrock as the water producing material were not considered as these well logs are not representative of the geology where the proposed extraction well is located. Gravel thicknesses reported from three of the twenty one well logs were 45.5, 48, and 50 feet above bedrock. The other 18 wells, ranging from 16 to 108 feet deep, and were completed in sand and gravel and did not intercept bedrock.

Transmissivity can be estimated from specific capacity estimates (taken from the well logs) using the formula $SC = T/(264 * Log((0.3 * T * t) / (r^2 * S)))$. Where SC=Specific Capacity, T=Transmissivity, t=time in minutes, r=radius to observation well, and S=Storage coefficient.

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When transmissivity is estimated from the 21 wells referenced above, a median specific capacity of 2.7 gpm/ft drawdown is obtained. This translates to a transmissivity of 12,465 gpd/ft. This in turn can be applied to a simple formula [S=(0.3*T*t)/r_o² where S=Storage coefficient, T=Transmissivity, t=time in days, and r_o²=the square of the distance from the pumping well] to calculate the time it takes for a cone of depression to reach out 500 feet (the approximate distance of the river to the proposed well). If we assume a reasonable storage coefficient of 0.15 for the sand and gravel aquifer, and apply a value of 500 feet as the distance factor, it will take approximately 10 days of pumping the well before a cone of depression reaches the river. Thus, it is clear that the drawdown cone from the well will interact with the river in approximately 10 days or so, well short of the 90 to 120 days that irrigation can be expected to be applied. At 10 days we can reasonable assume that at least some reduction of groundwater flow into the river will begin to occur.

Therefore, we can conclude given the geologic materials, the hydrogeologic and aquifer characteristics, and the geographic proximity of the proposed well to the McKenzie River, the proposed well will be "drawing" water from the McKenzie River or diminishing flows to the McKenzie River. Thus, it is appropriate to transfer this surface water right from the McKenzie River directly to this "groundwater" source. As a benefit to the river, the direct impact on the river will be somewhat ameliorated relative to direct river withdrawal and screening and other physical intrusions into the river, associated with a point of diversion in the river, can be avoided. The groundwater component of the water right will lessen the immediate impact of the well withdrawal, even though over the course of the irrigation season the final impact to river in overall water flow may be nearly the same.

Feel free to contact us if there are any further questions, or a need for clarification.

Sincerely,

Ralph Christensen, Senior Geologist,

EGR & Associates, Inc.

ohl Christene

OREGON

RALPH W. CHRISTENSEN

GEOLOGIST

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