Water Right Conditions Tracking Slip

Groundwater/Hydrology Section

FILE # # G-17574

ROUTED TO: Water Rights - Jeana

TOWNSHIP/
RANGE-SECTION: 45/1W-10 bc

CONDITIONS ATTACHED?: [✓] yes [ ] no

REMARKS OR FURTHER INSTRUCTIONS:

Reviewer: Mike Zwart

WATER RESOURCES DEPARTMENT

MEMO January 31, 2003

TO: **Application G-** 17574

FROM: **GW:** Mike Zwart
(Reviewer's Name)

SUBJECT: **Scenic Waterway Interference Evaluation**

_____YES
✓ NO — The source of appropriation is within or above a Scenic Waterway

_____YES
✓ NO — Use the Scenic Waterway condition (Condition 7J)

_____Per ORS 390.835, the Ground Water Section is **able** to calculate ground water interference with surface water that contributes to a Scenic Waterway. The calculated interference is distributed below.

_____Per ORS 390.835, the Ground Water Section is **unable** to calculate ground water 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 water flows necessary to maintain the free-flowing character of a scenic waterway.**

DISTRIBUTION OF INTERFERENCE

Calculate the percentage of consumptive use by month and fill in the table below. If interference cannot be calculated, per criteria in 390.835, do not fill in the table but check the "unable" option above, thus informing Water Rights that the Department is unable to make a Preponderance of Evidence finding.

Exercise of this permit is calculated to reduce monthly flows in _____Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date **January 31, 2013**

FROM: Ground Water/Hydrology Section **Michael Zwart**
Reviewer's Name

SUBJECT: Application G- **17574** 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 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: **Aurora East LP** County: **Marion**

A1. Applicant(s) seek(s) **0.2785** cfs from **one** well(s) in the **Willamette** Basin, **Mill Creek/Pudding River** subbasin Quad Map: **Woodburn**

A2. Proposed use: **Irrigation, 78 acres** Seasonality: **March 1 to October 31**

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	**Proposed**	**1**	**CRB**	**0.2785**	**4S/1W-10 SW-NW**	**395' S, 4010' W fr SE cor DLC 45**
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	**193**				**250±**	**0-170**	**1-170**		**170-250±**			

Use data from application for proposed wells.

A4. **Comments: The proposed well construction is based on MARI 63260, located nearby. I note that the casing depth and screened/perforated intervals given (150±) do not jibe with the proposed seal depth, so I changed them as above.**

A5. ☒ **Provisions of the Willamette** 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: _____

A6. ☐ **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
Name of administrative area: _____
Comments: _____

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) **7I, 7T**;
   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 **basalt** ground water reservoir;

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:** **The applicant's proposed well is located in an area that has been experiencing rising water levels in the basalt aquifer system since April of 2002 when the City of Wilsonville switched from groundwater to surface water as their primary drinking water source (Conlon and others, 2005). Prior to the changeover, groundwater levels in the basalts were declining over a broad area. Since the changeover, water levels have been rising throughout the same area. Levels have risen at least 10 feet in one nearby well, MARI 50403.This suggests that basalt groundwater supplies should be adequate for the new use as long as the City of Wilsonville does not fully exercise its basalt water rights in the future. Our understanding is the city plans to maintain its current basalt water rights as an emergency backup supply and as an alternative supply to meet peak summer demands. If the city begins using their basalt wells regularly in the future, groundwater levels are likely to decline in the vicinity of the applicants proposed well.**

SPECIAL CONDITION:
Groundwater production in the well shall be limited to a single aquifer in the Columbia River Basalt Group lavas. The well shall be cased and sealed at least 20 feet into hard, dense basalt. The open interval in the well shall be no greater than 100 feet except as noted below. Open interval means the total length of borehole that is not behind sealed casing. The borehole above the open interval shall be continuously cased and continuously sealed to land surface. A larger open interval may be approved by the Department if the applicant can demonstrate, using packer tests or other acceptable methods, that the hydraulic heads of water-bearing zones in the proposed open interval are equivalent or if the applicant can demonstrate that the open interval is part of a continuous zone of interconnected porous materials such as a sequence of pillow lavas or an hyaloclastite complex.

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	**Basalt of the Columbia River Basalt Group**	☒	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: Deeper basalt aquifers are typically confined.

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	**Deer Creek**	105±	125	3600	☐	☒	☐	☐	☒
1	2	**Senecal Creek**	105±	128	4500	☐	☒	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation:

Water Availability Basin the well(s) are located within: 30200901: MILL CR > PUDDING R – AT MOUTH.

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 < 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?
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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?
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐

Comments: **This section does not apply.**

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 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**

References Used: Gannett, Marshall W., and Caldwell, Rodney R., 1998, Geologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington: U. S. Geological Survey Professional Paper 1424-A, 32p, 8 plates.

Conlon and others, 2005, Ground-water hydrology of the Willamette Basin, Oregon: U.S Geological Survey Scientific Investigations Report 2005-5168.

Woodward and others, 1998, Hydrogeologic framework of the Willamette lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B,

D. WELL 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. ☐ 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**
- 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).**

MAR 82260

RECEIVED

SEP 24 2010

WATER RESOURCES DEPT
SALEM, OREGON

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765 & OAR 690-205-0210)

WELL LABEL # L 102925

START CARD # 205285

(1) LAND OWNER

Owner Well I.D. _____

First Name _____ Last Name _____

Company TA OPERATING LLC

Address 24601 CENTER RIDGE RD

City WESTLAKE State OH Zip 97493

(2) TYPE OF WORK

[X] New Well [ ] Deepening [ ] Conversion
[ ] Alteration (repair/recondition) [ ] Abandonment

(3) DRILL METHOD

[X] Rotary Air [ ] Rotary Mud [ ] Cable [ ] Auger [ ] Cable Mud
[ ] Reverse Rotary [ ] Other _____

(4) PROPOSED USE

[ ] Domestic [ ] Irrigation [ ] Community
[X] Industrial/ Commericial [ ] Livestock [ ] Dewatering
[ ] Thermal [ ] Injection [ ] Other _____

(5) BORE HOLE CONSTRUCTION

Special Standard [ ] (Attach copy)

Depth of Completed Well 221 ft.

BORE HOLE

Dia	From	To
14	0	20
12	20	70
10	70	170
6	170	221

SEAL

Material	From	To	Amt	sacks/ lbs
Bentonite	0	5	6	S
Cement	5	70	40	S
Cement	70	170	28	S

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

[ ] Other _____

Backfill placed from _____ ft. to _____ ft. Material _____

Filter pack from _____ ft. to _____ ft. Material _____ Size _____

Explosives used: [ ] Yes Type _____ Amount _____

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
◉	○	6	X	1	170	.250	◉	○	X	
○	○						○	○		
○	○						○	○		
○	○						○	○		
○	○						○	○		

Shoe [ ] Inside [ ] Outside [ ] Other Location of shoe(s) _____

Temp casing [X] Yes Dia _____ From _____ To _____

(7) PERFORATIONS/SCREENS

Perforations Method _____

Screens Type _____ Material _____

Perf/Screen	Casing/ Liner	Screen Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/ pipe size

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

○ Pump ○ Bailer ◉ Air ○ Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)
125		220	3

Temperature 53 °F Lab analysis [ ] Yes By _____

Water quality concerns? [ ] Yes (describe below)

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County MARION Twp 4 S N/S Range 1 W E/W WM

Sec 9 1/4 of the 1/4 Tax Lot 1100

Tax Map Number _____ Lot _____

Lat ° ' " or 45.23666667 DMS or DD

Long ° ' " or 122.80694444 DMS or DD

(○) Street address of well (○) Nearest address

21856 BENTS RD NE AURORA, OR

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening				
Completed Well	09-01-2010			88

Flowing Artesian? [ ] Dry Hole? [ ]

WATER BEARING ZONES Depth water was first found 28

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
08-18-2010	28	28	5			15
08-23-2010	72	150	30			70
09-01-2010	170	221	125			88

(11) WELL LOG

Ground Elevation _____

Material	From	To
Black top over crushed rock	0	1
Silty brown clay with trace of sand	1	28
Firm gray-blue clay	28	36
Blue-gray sticky and gritty clay	36	54
Tan clay	54	56
Brown clay	56	72
Brown sand with brown binder	72	85
Red very fine sand and gravel	85	96
Brown very sandy soft clay w/fine sandy seams	96	126
Fine brown sand with some gravels	126	144
Broken basalt dark w/brown dark sandy gravel	144	150
Hard dark gray basalt	150	170
Semi-fractured gray basalt	170	176
Porous semi-broken gray basalt	176	185
Weathered brown basalt	185	188
Semi-fractured gray basalt	188	190
Hard dark gray basalt with some fractured seams	190	221

Date Started 08-17-2010 Completed 09-02-2010

(unbonded) Water Well Constructor Certification

I certify that the work I performed on the construction, deepening, 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.

License Number 1629 Date 09-07-2010

Password : (if filing electronically)

Signed _____

(bonded) Water Well Constructor Certification

I accept responsibility for the construction, deepening, 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.

License Number 1273 Date 09-07-2010

Password : (if filing electronically) ****

Signed _____

Contact Info (optional)

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version: 0.95

Application G-17574, Aurora East LP