

IR CHECKLIST

Application #: G-16840 Applicant: ELSIE FRASER FRASER FAMILY REVOCABLE TRUST B

Use(s): IRRIGATION USE ON 39.0 ACRES Priority Date: APRIL 27, 2007

MU or QM NA will complete construction within 20 years
 Fujii reviewed recommendations _____

Is the application complete? No Yes

ORS 538 prohibits use No Yes If so, do not do an IR; return the application & fees to the applicant.

DIV 9 NA will likely be available... will not likely be available... will, if properly conditioned...

classify as surface water well _____ has PSI with _____

(include basin map if true) well _____ is within 1N 3E 20, 21, 28, 29 GWLA CGWA _____

GW conditions 70, 7i large totalizing

DIVISION 33 NA No above Bonneville, and not allowed 4/15 - 9/30
 below Bonneville
 statewide

SW Availability NA 80% live 50% storage _____ WID: _____

Use DWF's nonstandard W/A memo if the source is a Drews Reservoir tributary; the Snake River; the Columbia River; the North Umpqua River below Rock Creek; or within the drainages of the Lost River, Chehalem Creek, or Champoeg Creek (including Mission & Case Creeks)

POU conflict NA No No, different sources No, make up a deficiency in rate No, existing not at max. rate

Yes _____ *App not in platcard - still needed

Use is supplemental, checked for primary rights w/ diff source NA Yes limits _____

Use is allowed not allowed limited OAR Compact 690.502-160(2)

Requested Use/Rate/Season 11. / .49 / March-Oct 31

Allowed Use/Rate/Season 11 / ~~11/11/11~~ 1/80-39: .49 / ~~March-Oct 31~~ Limit - Duty 2.5

Land use approved not approved being pursued county notified NA

Storage contract NA BOR Doug Co Corp of Eng needed obtained _____

Authorized agent specified NA needed Yes _____

Conditions: Medium → Per GW Review → Large - i - totalizing

Small ≤ 0.1 CFS, ≤ 9.2 AF, Medium > 0.1 and < 1.5 CFS, > 9.2 and < 100 AF, Large ≥ 1.5 CFS, ≥ 100 AF
Use at least "Medium" when the source is Siltcoos Lake, Sandy Basin GW, or stored water with a contract.
Use "Large" for temp control (including NU), or HC above a SWW, Tenmile Lake, or if applicant is a government entity
Use "Large-7g" or "Large-7i" if GW recommends 7g or 7i
Use "Large with totalizing flow meter" for IR permits in South Salem Hills or IR over 10 Ac. in Stage Gulch CGWA

Stream is withdrawn NA No Yes, allows use/season _____

Basin Maps have been checked NA Yes limits _____

SWW NA above within _____ (If GW and interference, copy form for Stahr.)

Application #: G-16840 Applicant: ELSIE FRASER FRASER FAMILY REVOCABLE TRUST B

Use is within a **high priority area for streamflow restoration** NA No Yes

Letter format good limited bad bad w/ rate reduction opportunity bad w/ HC opportunity

POD is within **North Umpqua settlement reach** and the spreadsheet was updated NA Yes

Forms NA DIV 33 basin map HC except spring description other _____

Copy to NWR WM # 10 ODFW CRIFC
 NCR agent DEQ US Fish & Wildlife
 ER CWRE DOA NW Planning Council
 SWR State Parks CTUIR

DOA Food Safety Division (bottled water) city _____ (w/in 5-mile muni wells)

Prior to permit, applicant must submit NA storage contract easement plans/specs evidence of well repair

App and map meet **min. requirements** Yes No _____
(If not, send IR certified)

E-mailed Tim, including note if negative? No Yes

<input checked="" type="checkbox"/> Fees	<u>049</u> CFS	Base	<u>SA</u>
	_____ AF	Up to 1 CFS	<u>200</u>
		_____ Add'l CFS @ _____	_____
		Up to 20 AF	_____
		_____ Add'l AF @ _____	_____
		Add'l <input type="checkbox"/> POD/POA <input type="checkbox"/> use +	_____
		Exam Fee Required =	<u>700</u>
		Exam Fee Paid	<u>700</u>
		Still Owed	<u>/</u>



Name: Brook Geffen Date: 5/23/2008 Peer Reviewer: _____

The purpose of this checklist is to be used as a working document by Department staff to aid in the production of the related Initial Review, Proposed Final Order, or Final Order. It is not intended to be a complete record of all factors which were considered to produce the document, nor is it intended to serve any purpose other than that stated above. The related Initial Review, Proposed Final Order, or Final Order is intended to stand alone as the record of factors considered in its production.

Water Right Conditions Tracking Slip

Groundwater/Hydrology Section

FILE # # G-16840

ROUTED TO: W.R.

TOWNSHIP/
RANGE-SECTION: 1N/4W-1/BB

CONDITIONS ATTACHED?: yes no

REMARKS OR FURTHER INSTRUCTIONS:

Reviewer: Marc A. Norton

PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS

TO: Water Rights Section Date May 12, 2008

FROM: Ground Water/Hydrology Section Marc Norton
Reviewer's Name

SUBJECT: Application G- 16840 Supersedes review of November 6, 2007
Date of Review(s)

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

OAD 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: Fraser Family Trust County: Washington

- A1. Applicant(s) seek(s) 0.488 cfs from 1 well(s) in the Willamette River Basin,
Tualatin River – Dairy Creek subbasin Quad Map: Gales Creek
- A2. Proposed use: Irrigation Seasonality: March 1 – 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		1	CRB	0.488	01N/04W-11 NW NW	220' S, 770' E fr NW cor S 11
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	195		?		550+	400+/-	400+/-					

Use data from application for proposed wells.

A4. **Comments: See conceptual model discussion for more details on geology and ground water. PROPOSED WELL 219 gpm = 0.488 cfs. Applicant listed well logs WASH 6640 & 6644 as examples of construction – artesian pressure.**

A5. **Provisions of the Willamette River** 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: Based on proposed well construction and aquifer, the well will probably tap a confined aquifer, therefore this portion of the rule does not apply.

A6. Well(s) # _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
 Name of administrative area: NA
 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) 7B – Interference, 7I – Basalt decline condition, & large measuring, recording and reporting - totalizing;
 - ii. The permit should be conditioned as indicated in item 2 below.
 - iii. The permit should contain special condition(s) as indicated in item 3 below;

- B2. a. Condition to allow ground water production from no deeper than _____ ft. below land surface;
- b. Condition to allow ground water production from no shallower than _____ ft. below land surface;
- c. Condition to allow ground water production only from the _____ ground water reservoir between approximately _____ ft. and _____ ft. below land surface;
- d. Well reconstruction is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Ground Water Section.

Describe injury –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc): _____

B3. **Ground water availability remarks:** There are five wells with water level data near the applicant’s proposed site (See attached map). The water levels have declined about five to twenty feet since the mid 1990s. Some of the decline is related to reduced precipitation – less water available for recharge. One well was found that had been deepened. The basalts are at least 700 feet thick in a nearby well (WASH 6536). Ground water levels reported on the well logs indicate flowing artesian conditions to over 200 feet deep. There were also wells not completed in CRB (marine sediments or alluvial). Well yields range from about 10GPM to 500GPM; most less than 100 GPM. Given the variability of the data, water level elevations from the nearby wells are similar, about 195 feet above sea level.

In my opinion, permitting a new use of about 220 GPM will increase the rate of decline in CRBG wells in the area. There is likely to be interference with neighboring wells. The amount of interference between wells is difficult to predict. Interference can extend out several thousand feet from the pumping well. There are several wells within a 1/4 to 1/2 mile from the pumping well; the closer the well, the greater the amount of interference.

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	CRBG	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Proposed aquifer and well construction should have the well tapping a confined aquifer.

C2. **690-09-040 (2) (3):** Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
1	1	Lousignont Creek	195	165	1410	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	2	West Fork Dairy Creek		175	3060	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Proposed well construction is +/- 400 feet of casing and seal; this should greatly minimize impact to the local streams.

Water Availability Basin the well(s) are located within: W FK DAIRY CR > DAIRY CR - 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?
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be hydraulically connected and less than 1 mile from a surface water source. Complete only if Q is distributed among wells. Otherwise same evaluation and limitations apply as in C3a above.

SW #	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: Proposed well construction is +/- 400 feet of casing and seal; this should greatly minimize impact to the local streams.

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													
(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** At this time, where the ground water in the Columbia River Basalts discharges to the surface water bodies. Because the streams are not deeply incised, there is little potential for impact to surface water.

References Used: See conceptual model discussion for more details.

Gannett and Caldwell, 1998, Geologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington, USGS Professional Paper 1424-A

Woodward, Gannett and Vaccaro, 1998, Hydrogeologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington, USGS Professional Paper 1424-B

Walton, William, 1962, Selected Analytical Methods for Well and Aquifer Evaluation, Bulletin 49, Illinois State Water Resources.

Freeze and Cherry, 1979, Groundwater, Prentice-Hall, Inc.

Conlon and Others, 2005, Ground-Water Hydrology of the Willamette Basin, Oregon, Scientific Report 2005-5168, USGS.

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).**

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

Water Availability as of 11/ 6/2007 for

W FK DAIRY CR > DAIRY CR - AT MOUTH

Watershed ID #: 178 Basin: WILLAMETTE Exceedance Level: 80
Time: 16:08 Date: 11/06/2007

Month	Natural Stream Flow	Consumptiv Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Require- ments	Net Water Available
1	136.00	14.50	121.00	0.00	30.00	91.50
2	183.00	15.40	168.00	0.00	30.00	138.00
3	153.00	14.20	139.00	0.00	30.00	109.00
4	88.90	13.60	75.30	0.00	30.00	45.30
5	35.90	19.30	16.60	0.00	30.00	-13.40
6	17.20	21.50	-4.24	0.00	10.00	-14.20
7	5.34	25.50	-20.10	0.00	3.00	-23.10
8	4.03	23.40	-19.40	0.00	2.00	-21.40
9	4.21	17.70	-13.50	0.00	2.00	-15.50
10	5.68	11.90	-6.21	0.00	10.00	-16.20
11	5.26	11.90	-6.67	0.00	30.00	-36.70
12	78.60	14.60	64.10	0.00	30.00	34.10
Stor-50%	104000	12280	94400	0	14300	83200

Conceptual Model -- Generalized Ground Water Flow Systems.

Marc Norton

January 8, 2004

Based on:

*OWRD GRID - Ground water Resource Information Distribution**OWRD Ground Water Database**Memo on Recommended Vertical Hydraulic Conductivity Values for the Willamette Silt Hydrogeologic Unit When Using the Hunt Analytical Model, Karl Wozniak, January 6, 2004.**Ground-Water Resources of the Willamette Valley, Oregon, 1942, Water-Supply Paper 890, Piper.**Hydrogeologic Framework of the Willamette Lowland Aquifer System, Oregon and Washington, 1998, US Geological Survey Professional Paper 1424 B, Woodward, Gannett, and Vaccaro.***GENERALIZED GEOLOGY**

The Willamette Lowland in Oregon and Washington encompasses 3,700 square mile and includes the low-lying parts of the Willamette Valley in Oregon and most of Clark county in Washington. About 70% of the population of Oregon and Clark County reside in the lowlands. The lowland is 145 miles long and averages 10 to 15 miles in width. Water is recharged to the Willamette Lowland aquifer system primarily through the direct infiltration of precipitation on the lowland. The regional water-table map shows an overall pattern of ground-water flow to the major streams, indicating that the base flow of these streams is sustained by ground water

discharge. This ground-water discharge fully supports the base flow of streams that head in the lowland and partially support the base flow of the other streams.

HYDROGEOLOGIC UNITS

The aquifer system is composed of five hydrogeologic units, from oldest to youngest:

- 1) the basement confining unit,
- 2) the Columbia River basalt aquifer,
- 3) the Willamette confining unit,
- 4) the Willamette aquifer, and
- 5) the Willamette silt unit.

The basement-confining unit forms the lateral and basal boundary to the Willamette aquifer system. The basement-confining unit includes all the stratigraphic units that underlie either the Columbia River Basalt Group in the northern part of the basin or the basin-fill deposits in the southern part. The unit is composed of marine sedimentary rocks and volcanic rocks of the Coast and Cascade ranges. The basement-confining unit is generally a low yielding aquifer where wells develop water primarily from fractures in the rock. Ground water can be found under unconfined conditions in the highlands and under confined conditions with greater depth and lower elevations. Yields are generally less than 10 gpm and usually decrease over time. The deeper the well, the greater the chance of brackish water being encountered.

The Columbia River basalt aquifer overlies the basement-confining unit and consists of layers of basalt flows of the Columbia River Basalt Group. The thickness of the aquifer generally is several hundred feet but locally is as much as 1000 feet. Ground water in the basalts is generally under confined conditions except in the foot-hills where they may be unconfined. Well yields vary from tens to hundreds of gallons per minutes. Brackish water has been encountered in several areas, particularly with depth.

The Willamette confining unit consists primarily of fine-grained, distal alluvial fan and low-gradient stream deposits. The fine-grained deposits are considered a regional confining unit because of their wide spread occurrence and low permeability. Ground water in the Willamette confining unit is generally under confined conditions and well yields are very low to "dry".

The Willamette aquifer consists primarily of coarse-grained proximal alluvial-fan and braided-stream deposits. The greatest thickness, and coarsest materials of the Willamette aquifer outside of the Portland Basin occur in six major alluvial fans that were deposited where major streams from the Cascade Range enter the Willamette Lowland. Ground water in the Willamette aquifer unit varies from unconfined to confined conditions, depending on location and depth. Vertical gradients are usually downward except near major streams. Deposits of lower permeable material can act as a confining layer but are generally of limited aerial extent.

The Willamette silt unit is deposited throughout much of the Willamette Lowland by glacial-outburst floods. The deposits range in thickness from 0 to 130 feet. They consist primarily of silt and fine sand of relatively uniform lithology. Ground water in the Willamette silt unit is generally under unconfined conditions and well yields are low, less than 5 to 10 gpm.

STRUCTURAL BASINS

Outcrops of folded and faulted basalt within the Willamette Valley divide the lowland into four separate areas or structural basins -- from north to south, **the Portland Basin, the Tualatin Basin, the central Willamette Valley, and the southern Willamette valley**. Each of these areas has decidedly different hydrologic and

hydrogeologic properties. The aquifer system in each basin, although hydraulically connected through a series of restrictive water gaps, is distinctive.

Tualatin Basin. The Columbia River basalt aquifer and the Willamette confining unit are the only regional hydrogeologic units above the basement-confining unit in the Tualatin Basin. The Columbia River basalt aquifer underlies the entire basin, and its upper surface forms a sediment-filled bowl-like depression.

The Central Willamette Valley All five of the hydrogeologic units occur in the central Willamette Valley. The Columbia River basalt aquifer underlies the entire central Willamette Valley, except for small areas along the far eastern margin. A number of faults have been mapped in the central Willamette Valley, some of which offset the aquifer, and numerous other faults have been mapped in the uplands surrounding the basin where the aquifer crops out. The Willamette aquifer in the central Willamette Valley contains three major alluvial fans -- the Salem fan, the Molalla fan, and the Canby fan. The Willamette Silt unit overlies most of the central valley with a maximum thickness of about 130 feet near the center and thins towards the south and near the margins of the basin.

The Southern Willamette Valley In the southern Willamette Valley, all of the regional hydrogeologic units are present; however, the Columbia River basalt aquifer occurs only in the Stayton area. The Willamette confining unit is thinner in the southern Willamette Valley than elsewhere in the Willamette Lowland. The Willamette aquifer contains the Lebanon fan and the Stayton fan. The Willamette aquifer is much thinner (averaging only about 20 to 40 feet thick) between the alluvial fans of the southern Willamette Valley. The Willamette Silt unit covers most of the southern Willamette Valley and generally thins towards the south.

DIVISION 502

WILLAMETTE BASIN PROGRAM

690-502-0160

1. Groundwater Classifications and Conditions

(1) Use of groundwater from the basalt aquifer within the Cooper-Bull Mountain Critical Groundwater Area shall be as described in the State Engineer's order designating the Cooper-Bull Mountain Critical Groundwater Area dated May 17, 1974.

(2) Groundwater Classification: The groundwater resources of the Willamette Basin are classified for domestic, livestock, ~~irrigation~~, municipal, industrial, agricultural, commercial, power, mining, recreation, fish life, wildlife, pollution abatement, wetland enhancement and statutorily exempt groundwater uses except as described in OAR 690-502-0170 to 690-502-0210.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 536 & ORS 537

Stats. Implemented:

Hist.: Upper Willamette River Basin Program: WRB 8, f. 4-21-59?; WRB 19, f. 6-5-62; WRB 27, f. 5-11-64; WRB 30, f. 7-3-64; WRD 9-1980, f. & cert. ef. 11-26-80; WRD 2-1981, f. & cert. ef. 4-30-81; WRD 5-1985, f. & cert. ef. 6-14-85; Middle Willamette River Basin Program: WRB 29, f. 7-1-64; WRB 32, f. 7-27-65; WRB 11-1985, f. & cert. ef. 9-5-85; Lower Willamette River Basin Program: WRB 35, f. 6-10-66; WRB 40, f. 9-6-68; WRB 42, f. 5-1-70; WRB 47, f. 4-30-71; WRB 63, f. 6-5-75; WRD 2, f. 11-5-76; WRD 7-1980, f. & cert. ef. 8-12-20; WRD 1-1980, f. & cert. ef. 12-19-80; WRD 11-1985, f. & cert. ef. 9-5-85, WRD 3-1986(Temp), f. & cert. ef. 3-11-86) WRD 4-1992, f. & cert. ef. 3-13-92, Renumbered from 690-080-0021 - 690-080-0023; WRD 12-1993, f. & cert. ef. 9-9-92; WRD 3-1994, f. & cert. ef. 3-10-94; WRD 13-1994, f. & cert. ef. 11-7-94; WRD 3-2003, f. & cert. ef. 12-4-03

Water Rights Platcard Report

Meridian: WILLAMETTE Township: 1 North Range: 4 West Section: 11 Records per Page: 200

Water Right	Changing State	Priority	Use	Use Status	OLX	Acct. Lt.	Q0(40): Q(160):	NE NE	NW NW	SW SW	SE SE	NE NE	NW NW	SW SW	SE SE	NE NE	NW NW	SW SW	SE SE	Unknown	
Select App: 589623 *		5/24/1988	IRRIGATION																		
Additional Info: TUALATIN VALLEY IRRIGATION DISTRICT App: 589623																					
Select Claim: GR 769 *		8/20/1952	IRRIGATION										1								
Additional Info: VERNON E LYDA Claim: GR769																					
Select Claim: GR 3064 *		12/31/1950	IRRIGATION										20								
Additional Info: J A PEAZLE Claim: GR3064																					
Select Cert: 14207 OR CN		12/19/1938	IRRIGATION	CN	52										3.3			40	37.7	44	45
Additional Info: L J HEESACKER App: S17702 Permit: S13388 Cert: 14207																					
Select Cert: 20001 OR *		7/10/1939	IRRIGATION		52															1	19.8
Additional Info: HENRY LANDALIER App: S18264 Permit: S13858 Cert: 20001																					
Select Cert: 20127 OR CN		6/12/1950	IRRIGATION	CN	52															5.2	4.6
Additional Info: L J HEESACKER App: S24864 Permit: S19564 Cert: 20127																					
Select Cert: 38757 OR *		3/10/1966	IRRIGATION		52									2.2	16.4	18.7	6.9		1	2.7	5.4
Additional Info: VERNON E LYDA App: S41973 Permit: S31398 Cert: 38757																					
Select Cert: 38758 OR *		4/26/1967	IRRIGATION		52										2.8			13.6			0.2
Additional Info: VERNON E LYDA App: S43524 Permit: S32562 Cert: 38758																					
Select Cert: 38788 OR *		2/23/1968	IRRIGATION		52										10.7	4	0.3	1			
Additional Info: VERNON E LYDA App: S44508 Permit: S33308 Cert: 38788																					
Select Cert: 39604 RR CN		12/19/1938	IRRIGATION	CN	52										3.3			26	37.7	44	44
Additional Info: L HEESACKER App: S17702 Permit: S13388 Cert: 39604																					
Select Cert: 49748 CP CN		12/19/1938	IRRIGATION	CN	52															44	4
Additional Info: EUGENE VANDPHELY App: S17702 Permit: S13388 Cert: 49748																					
Select Cert: 53836 OR *		5/2/1977	IRRIGATION		52									37.8	8						
Additional Info: EUGENE M VANDEHEY App: S55799 Permit: S41777 Cert: 53836																					
Select Cert: 61142 OR *		7/18/1978	IRRIGATION		52			13.2	28.9	25.3	36.4		15.7								
Additional Info: VERNON E LYDA App: S57668 Permit: S43390 Cert: 61142																					
Select Cert: 81270 CP *		12/19/1938	IRRIGATION		52										1.5					1.4	
Additional Info: VANDEHAY FARMS INC.																					

Point of Diversion Characteristics

Right: App:G 16840 *

Name: FRASER FAMILY REVOCABLE TRUST B
ELSIE FRASER

TRSQQ: 01.00N-04.00W-11-NWNW

POD(s): POD 01 - A WELL > LOUSIGNONT CR

County: Washington

Basin: Willamette

WM District: 18

WM Region: NW

Withdrawn Area:

WAB: W FK DAIRY CR > DAIRY CR - AT MOUTH (178)

Priority WAB: W FK DAIRY CR @ mouth (178)

Rule 4D: Rules apply

Groundwater Restricted Area:

Scenic Water Way:

Division 33: LOWER COLUMBIA

Water Quality Limited:

Marc Norton

From: Linda Yeoh-Elder [Linda_Yeoh-Elder@co.washington.or.us]
Sent: Wednesday, November 07, 2007 3:02 PM
To: NORTON Marc A
Subject: WASH 6719 and WASH 6550

Hi Marc,

Sorry I couldn't find any records on WASH 1273, 6542 and 6556.

	Date	Water Level
WASH 6719	1/10/2005	60.85
	3/31/2005	56.22
	6/23/2005	57.26
	10/10/2005	78.89
	12/28/2005	65.48
	3/13/2006	58.92
	6/29/2006	76.23
	9/12/2006	99.25
	12/19/2006	72.54
	6/5/2007	74.30

	Date	Water Level
WASH 6550	1/4/2005	23.84
	3/17/2005	18.96
	6/23/2005	19.20
	10/10/2005	38.58
	12/28/2005	15.83
	3/13/2006	17.26
	6/29/2006	34.50
	9/12/2006	40.25
	12/19/2006	19.12
	6/5/2007	22.52

I will check with Cole tomorrow when he comes in and I will let you know what I find out.

Linda Yeoh-Elder

Watermaster District 18
 1400 SW Walnut St, Ste 240, MS 49
 Hillsboro, OR 97123
 Office: 503.846.7780, Fax: 503.846.7785
 email: Linda_Yeoh-Elder@co.washington.or.us
www.or.washington.or.us/watermaster

11/7/2007

Marc Norton

From: Linda Yeoh-Elder [Linda_Yeoh-Elder@co.washington.or.us]
Sent: Thursday, November 08, 2007 10:01 AM
To: Marc Norton
Subject: WASH 1273 and WASH 6542

Hi Marc,

We do not have a file on WASH 6556. However, just an FYI, WASH 1273 and WASH 6542 has been dropped so the data that we have only goes back to early 2005 for both those wells.

WASH 1273:

1/4/05: 68.86
3/17/05: 67.17
6/23/05: 66.04

WASH 6542:

1/4/05: 74.58

Hope this helps,
Linda

Mailing List for IR Copies

Application #G-16840

IR Date: May 23, 2008

Original mailed to applicant:

✓ ELSIE FRASER, FRASER FAMILY REVOCABLE TRUST B, 22307 MACFARLANE DR,
WOODLAND HILLS, CA 91364

Copies sent to:

- ✓ 1. WRD - File # G-16840
- ✓ 2. WRD - Water Availability: Ken Stahr

Copies Mailed By: <u>ICB</u> (SUPPORT STAFF) on: <u>5/23/08</u> (DATE)
--

IR, Map, and Fact Sheet Copies sent to:

- ✓ 3. WRD - Watermaster # 18
- ✓ 4. Department of Agriculture

Copies sent to Other Interested Persons (CWRE, Agent, Well Driller, Commenter, etc.)

- ✓ 4. Dick Verboort, CWRE #135

Caseworker: Brook Geffen

COPYSH.T.IR

REMINDER: Copy all IR's for uses in the Klamath Basin to DEQ and ODFW contacts, regardless of whether they are subject to Division 33. (If they are not subject to Division 33, do not include Division 33 forms.)

WATER RESOURCES DEPARTMENT

725 Summer St. N.E. Ste. A
SALEM, OR 97301-4172

(503) 986-0900 / (503) 986-0904 (fax)

INVOICE # _____

RECEIPT # **87311**

RECEIVED FROM: Elsie D Fraser, Trustee

BY: _____

APPLICATION	6716840
PERMIT	
TRANSFER	

CASH: CHECK.# 7781 OTHER: (IDENTIFY)

TOTAL REC'D \$500.00

1083 TREASURY 4170 WRD MISC CASH ACCT

0407 COPIES \$
 OTHER: (IDENTIFY) \$
 0243 I/S Lease _____ 0244 Muni Water Mgmt. Plan _____ 0245 Cons. Water _____

4270 WRD OPERATING ACCT

MISCELLANEOUS

0407 COPY & TAPE FEES \$
 0410 RESEARCH FEES \$
 0408 MISC REVENUE: (IDENTIFY) \$
 TC162 DEPOSIT LIAB. (IDENTIFY) \$
 0240 EXTENSION OF TIME \$

WATER RIGHTS:

0201 SURFACE WATER	\$	0202	\$
0203 GROUND WATER	\$ 500.00	0204	\$
0205 TRANSFER	\$		

WELL CONSTRUCTION

0218 WELL DRILL CONSTRUCTOR	\$	0219	\$
LANDOWNER'S PERMIT		0220	\$
OTHER (IDENTIFY) _____			

0536 TREASURY 0437 WELL CONST. START FEE

0211 WELL CONST START FEE \$ CARD # _____
 0210 MONITORING WELLS \$ CARD # _____
 OTHER (IDENTIFY) _____

0607 TREASURY 0467 HYDRO ACTIVITY LIC NUMBER

0233 POWER LICENSE FEE (FW/WRD) \$
 0231 HYDRO LICENSE FEE (FW/WRD) \$
 HYDRO APPLICATION \$

TREASURY OTHER / RDX

FUND _____ TITLE _____
 OBJ. CODE _____ VENDOR # _____
 DESCRIPTION _____ \$

RECEIPT: **87311** DATED: 4/27/07 BY: Ken W. D. [Signature]

616840

NEW APPLICATIONS (GROUND WATER, RESERVOIR, & SURFACE) ROUTE SLIP

RECEIPTING *KD*
POST CARD SENT
DATA CENTER

GROUND WATER YES NO
ENFORCEMENT YES NO

WATER RIGHTS SUPPORT *ms*

<u>Caseworker:</u>		
Alyssa Mucken	503-986-0853	<input type="checkbox"/>
Anita Huffman	503-986-0815	<input type="checkbox"/>
Brook Geffen	503-986-0808	<input checked="" type="checkbox"/>
Jeana Eastman	503-986-0859	<input type="checkbox"/>
Kerry Kavanagh	503-986-0816	<input type="checkbox"/>

A "Standard Reservoir" storing 9.2 acre-feet or more of Water & has a dam height of 10.0 feet or greater needs to have a copy of the application & supplemental forms routed to "JOHN FALK"



ATTN: WATER RIGHTS SUPPORT....>>>> Mark contents of file with application number; Update the WRIS Database with caseworkers name. Route file to Caseworker.

