

Approved: 

MEMO

To: Kristopher Byrd, Well Construction and Compliance Section Manager
From: Travis Kelly, Well Construction Program Coordinator
Subject: Review of Water Right Application G-18906
Date: May 26, 2020

The attached application was forwarded to the Well Construction and Compliance Section by the Groundwater Section. Josh Hackett reviewed the application. Please see Josh's Groundwater Review and the Well Report.

Applicant's Well #1 (CLAC 67736): Based on a review of the Well Report, Applicant's Well #1 seems to protect the groundwater resource.

The construction of Applicant's Well #1 may not satisfy hydraulic connection issues.

Applicant's Well #2 (Proposed) is a proposed well, therefore it cannot be reviewed for construction.

Applicant's Well #3 (Proposed) is a proposed well, therefore it cannot be reviewed for construction.

CLACK 67736
Westerberg Drilling, Inc.
36728 S. Kropf Rd.
Molalla, OR 97038

STATE OF OREGON
 WATER SUPPLY WELL REPORT
 (as required by ORS 537.765)

WELL I.D. # L 101906

START CARD # 207110

Instructions for completing this report are on the last page of this form.

(1) LAND OWNER Well Number _____
 Name **Ken Baker**
 Address **26748 S. Ellsha Rd.**
 City **Canby** State **OR** Zip **97013**

(2) TYPE OF WORK New Well
 Deepening Alteration (repair/recondition) Abandonment Conversion

(3) DRILL METHOD
 Rotary Air Rotary Mud Cable Auger Cable Mud
 Other _____

(4) PROPOSED USE
 Domestic Community Industrial Irrigation
 Thermal Injection Livestock Other _____

(5) BORE HOLE CONSTRUCTION Special Construction: Yes No
 Depth of Completed Well **150** ft.
 Explosives used: Yes No Type _____ Amount _____

BORE HOLE			SEAL			Sacks or Pounds
Diameter	From	To	Material	From	To	
10"	0	48'	Bentonite	0	7.5'	6 Sacks
6"	48'	150'	Cement	7.5'	48'	33 Sacks

How was seal placed: Method A B C D E
 Other **Bentonite Placed Dry**

Backfill placed from _____ ft. to _____ ft. Material _____
 Gravel placed from **88** ft. to **150** ft. Size of gravel **8/12 CSS**

(6) CASING/LINER

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 6"	+1	128'	.250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner: 4"	87'	128'	CL200	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4"	149'	150'	CL200	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Drive Shoe used Inside Outside None
 Final location of shoe(s) **128'**

(7) PERFORATIONS/SCREENS
 Perforations Method **V-Wire**
 Screens Type _____ Material **Stainless**

From	To	Slot Size	Number	Diameter	Tele/pipe size	Casing	Liner
128'	149'	.040		4"	PS	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour
 Pump Bailer Air Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
40	41		4 hrs

Temperature of water **56** Depth Artesian Flow Found _____
 Was a water analysis done? Yes By whom _____
 Did any strata contain water not suitable for intended use? Yes No
 Salty Muddy Odor Colored Other _____
 Depth of strata: _____

(9) LOCATION OF WELL (legal description)
 County **Clackamas**
 Tax Lot **1700** Lot _____
 Township **4** S Range **1** E WM
 Section **13** SW 1/4 SW 1/4
 Lat _____ ° ' " or _____ (degrees or decimal)
 Long _____ ° ' " or _____ (degrees or decimal)
 Street Address of Well (or nearest address) **26748 S. Ellsha Rd.**
Canby, OR 97013

(10) STATIC WATER LEVEL
62' 9" ft. below land surface. Date **03/28/11**
 _____ ft. below land surface. Date _____
 Artesian pressure _____ lb. per square inch Date _____

(11) WATER BEARING ZONES
 Depth at which water was first found _____

From	To	Estimated Flow Rate	SWL
129'	146'	40+	62' 9"

(12) WELL LOG Ground Elevation _____

Material	From	To	SWL
Topsoil	0	1	
Clay Brown	1	11	
Silt Brown	11	26	
Course Cobbles & Gravel w/ Brown Clay Binder	26	72	
Clay Brown	72	75	
Course Gravel w/Brown Clay Binder	75	92	
Gravel w/Clay Grey	92	117	
Clay Grey	117	129	
Sand Grey Black w/Layers of Clay and Wood	129	146	
Clay Grey	146	150	

Date Started **03/14/2011** Completed **03/28/2011**

(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.

WWC Number _____ Date _____
 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.

WWC Number **698** Date **04/11/2011**
 Signed *Steve N. Stubb*

RECEIVED
APR 13 2011

Groundwater Application Review Summary Form

Application # G- 18906

GW Reviewer J. Hackett Date Review Completed: May 19, 2020

Summary of GW Availability and Injury Review:

Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

Summary of Potential for Substantial Interference Review:

There is the potential for substantial interference per Section C of the attached review form.

Summary of Well Construction Assessment:

The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).

WATER RESOURCES DEPARTMENT

MEMO

May 19, 2020

TO: Application G- 18906

FROM: **GW:** J. Hackett
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

YES The source of appropriation is hydraulically connected to a State Scenic Waterway or its tributaries
 NO

YES Use the Scenic Waterway Condition (Condition 7J)
 NO

Per ORS 390.835, the Groundwater 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 Groundwater 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 GROUNDWATER APPLICATIONS

TO: Water Rights Section Date May 19, 2020
 FROM: Groundwater Section J. Hackett
Reviewer's Name
 SUBJECT: Application G- 18906 Supersedes review of _____
Date of Review(s)

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

OAR 690-310-130 (1) *The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525. Department staff review groundwater applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. This review is based upon available information and agency policies in place at the time of evaluation.*

A. GENERAL INFORMATION: Applicant's Name: Kenneth A. Baker County: Clackamas

A1. Applicant(s) seek(s) 0.98 cfs from 3 well(s) in the Willamette Basin,
Molalla River subbasin

A2. Proposed use Agricultural 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	CLAC 67736	1	Alluvium	0.089	4S/1E – 13 SW-SW	1310' N, 550' E fr SW cor S 13
2	Proposed	2	Alluvium	0.446	4S/1E – 13 NW-SW	2320' N, 40' E fr SW cor S 13
3	Proposed	3	Alluvium	0.446	4S/1E – 13 NW-SW	2320' N, 645' E fr SW cor S 13
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	250	129	68.25	03/19/2019	150	0-48	+1-128	87-128; 149-150	128-149	40	41	Pump
2	196				150 est.	Unk.	Unk.	Unk.	Unk.			
3	180				150 est.	Unk.	Unk.	Unk.	Unk.			

Use data from application for proposed wells.

A4. **Comments:** _____

A5. **Provisions of the** Willamette Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water **are, or** **are not**, activated by this application. (Not all basin rules contain such provisions.)

Comments: The applicant's wells are not located within 1/4 mile of the nearest surface water source, so the pertinent basin rules do not apply.

A6. **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.

Name of administrative area: _____

Comments: _____

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

B1. **Based upon available data**, I have determined that groundwater* for the proposed use:

- a. is over appropriated, is not over appropriated, or **cannot be determined to be** over appropriated during any period of the proposed use. * This finding is limited to the groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;
- b. **will not** or **will** likely be available in the amounts requested without injury to prior water rights. * This finding is limited to the groundwater portion of the injury determination as prescribed in OAR 690-310-130;
- c. **will not** or **will** likely to be available within the capacity of the groundwater resource; or
- d. **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater resource:
 - i. The permit should contain condition #(s) 7N;
 - ii. The permit should be conditioned as indicated in item 2 below.
 - iii. The permit should contain special condition(s) as indicated in item 3 below;

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

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

B3. **Groundwater availability remarks:** The productive aquifer in the area surrounding the applicant’s wells consists of thin sand and gravel beds encased in a thick sequence of silt and clay. The sand and gravel beds appear to decrease in frequency with depth and typically have a cumulative thickness of less than 50 feet in the area. The water table occurs at about 50-75 feet below land surface on the terraces between streams but at stream levels on local stream valley floors. Hydraulic head decreases moderately with depth.

Because the productive water-bearing zones are thin and confined, pumping impacts will spread out over a broad area resulting in large seasonal fluctuations and widespread well interference. Water levels in nearby wells (see attached hydrograph) show declines of about 2 feet per year over the last 10-15 years at about 1 mile to the west. These appear to be part of a broad decline centered in the Marks Prairie area. However, water levels at about 1 mile to the north are stable or show declines of less than 1 foot per year over the last 10 years. Maps published by the U.S. Geological Survey (Prof Paper 1424 A, B) indicate that the thickness of productive sands increases immediately to the south of the applicant’s wells. This suggests a larger water supply in the vicinity of the wells than in areas to the north and west.

The applicant's Well #1 (CLAC 67736) has been measured under permit condition on a previous limited license, and shows relatively stable groundwater levels (see attached hydrograph).

Uncertainty about the continued stability of the ground water resource in the immediate vicinity of the well indicates the need for a water-level monitoring condition.

C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040**C1. 690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Alluvium	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Alluvium	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Alluvium	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Basis for aquifer confinement evaluation: Confined conditions are indicated by the presence of abundant clay and silt layers that encase the productive sand beds. This is confirmed by reports on well logs of static water levels that rise above the level of the producing sand beds.

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	Molalla River	180	150-180	2650	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Molalla River	180	150-180	1500	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	1	Molalla River	180	150-180	1420	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	2	Dove Creek	180	190-205	4200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	Dove Creek	180	190-205	5100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	2	Dove Creek	180	190-205	5400	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	3	Milk Creek	180	160	6120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	3	Milk Creek	180	160	4970	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	3	Milk Creek	180	160	4900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Basis for aquifer hydraulic connection evaluation: Water level elevations in the alluvial aquifer are essentially equivalent to the elevations of nearby creeks. Also, tributaries of Gribble Creek are perennial in adjacent reaches but ephemeral in nearby upstream reaches which indicates that groundwater discharges from the alluvial aquifer to these streams in adjacent reaches. These facts indicate that the alluvial aquifer system is hydraulically connected to local streams. The presence of multiple confining beds indicates that the connection is likely to be inefficient.

Water Availability Basin the well(s) are located within: 70747 Molalla R > Willamette R - above Milk Cr; 131 Milk Cr > Molalla R – at mouth; 69796 Molalla R > Willamette 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 (SW) source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that SW source, not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% *natural* flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
1	1	<input type="checkbox"/>	<input type="checkbox"/>	IS70747A	78.7	<input type="checkbox"/>	54.5	<input type="checkbox"/>	<25%	<input type="checkbox"/>
2	1	<input type="checkbox"/>	<input type="checkbox"/>	IS70747A	78.7	<input type="checkbox"/>	54.5	<input type="checkbox"/>	<25%	<input type="checkbox"/>
3	1	<input type="checkbox"/>	<input type="checkbox"/>	IS70747A	78.7	<input type="checkbox"/>	54.5	<input type="checkbox"/>	<25%	<input type="checkbox"/>
1	2	<input type="checkbox"/>	<input type="checkbox"/>	N/A		<input type="checkbox"/>	134.0	<input type="checkbox"/>	<25%	<input type="checkbox"/>
2	2	<input type="checkbox"/>	<input type="checkbox"/>	N/A		<input type="checkbox"/>	134.0	<input type="checkbox"/>	<25%	<input type="checkbox"/>
2	3	<input type="checkbox"/>	<input type="checkbox"/>	MF131A	20.0	<input checked="" type="checkbox"/>	8.92	<input checked="" type="checkbox"/>	<25%	<input checked="" type="checkbox"/>
3	3	<input type="checkbox"/>	<input type="checkbox"/>	MF131A	20.0	<input checked="" type="checkbox"/>	8.92	<input checked="" type="checkbox"/>	<25%	<input checked="" 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.

Well	SW #	Total Q (cfs)	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?
1,2,3	1	0.980	<input type="checkbox"/>	IS70747A	78.7	<input checked="" type="checkbox"/>	54.5	<input checked="" type="checkbox"/>	<25%	<input checked="" type="checkbox"/>
1,2	2	0.535	<input type="checkbox"/>	N/A		<input type="checkbox"/>	134.0	<input type="checkbox"/>	<25%	<input type="checkbox"/>
2,3	3	0.892	<input type="checkbox"/>	MF131A	20.0	<input checked="" type="checkbox"/>	8.92	<input checked="" type="checkbox"/>	<25%	<input checked="" type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Comments: Modeling in similar circumstances suggests that due to the presence of a thick sequence of low-permeability silts and clays, impacts to Dove Creek, Mill Creek, and the Molalla River will be much less than 25% after 30 days of pumping.

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: Well #3 will impact Dove Creek. However, impacts on Dove Creek per table C4a were not calculated as the maximum proposed rate is 0.446 cfs which is less than 1% of the natural flow at the 80% exceedance level during all months of the year (1.34 – 20.10 cfs). Therefore, impacts on Dove Creek will not result in the Potential for Substantial Interference.

Well #1 will impact Milk Creek. However, impacts on Milk Creek per table C4a were not calculated as the maximum proposed rate is 0.089 cfs which is less than 1% of the natural flow at the 80% exceedance level during all months of the year (0.0892 – 1.24 cfs). Therefore, impacts on Milk Creek will not result in the Potential for Substantial Interference.

C4b. **690-09-040 (5) (b) The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.**

- C5. **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:
- i. The permit should contain condition #(s) _____;
 - ii. The permit should contain special condition(s) as indicated in “Remarks” below;

C6. **SW / GW Remarks and Conditions:** _____

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

Gannett and Caldwell, 1998, Geologic framework of the Willamette lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-A,

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 appear to meet current well construction standards based upon:**

- a. review of the well log;
- b. field inspection by _____;
- c. report of CWRE _____;
- d. other: (specify) _____

D3. **THE WELL construction deficiency or other comment is described as follows:** _____

D4. **Route to the Well Construction and Compliance Section for a review of existing well construction.**

Water Availability Tables

**Water Availability Analysis
Detailed Reports**

**MOLALLA R > WILLAMETTE R - AB MILK CR
WILLAMETTE BASIN**

Water Availability as of 5/4/2020

Watershed ID #: 70747 ([Map](#))

Exceedance Level: ▼

Date: 5/4/2020

Time: 3:02 PM

Water Availability Calculation

Monthly Streamflow in Cubic Feet per Second
Annual Volume at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	531.00	1.45	530.00	0.00	300.00	230.00
FEB	541.00	1.43	540.00	0.00	300.00	240.00
MAR	569.00	1.46	568.00	0.00	300.00	268.00
APR	591.00	1.74	589.00	0.00	300.00	289.00
MAY	466.00	5.03	461.00	0.00	300.00	161.00
JUN	207.00	7.02	200.00	0.00	200.00	-0.02
JUL	85.90	12.20	73.70	0.00	100.00	-26.30
AUG	55.70	9.98	45.70	0.00	78.70	-33.00
SEP	54.50	4.16	50.30	0.00	88.90	-38.60
OCT	90.40	1.54	88.90	0.00	166.00	-77.10
NOV	273.00	1.42	272.00	0.00	300.00	-28.40
DEC	560.00	1.46	559.00	0.00	300.00	259.00
ANN	454,000.00	2,970.00	451,000.00	0.00	165,000.00	287,000.00

Detailed Report of Instream Flow Requirements

Instream Flow Requirements in Cubic Feet per Second

Application #	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
IS70747A	CERTIFICATE	300.00	300.00	300.00	300.00	300.00	200.00	100.00	78.70	88.90	166.00	300.00	300.00
Maximum		300.00	300.00	300.00	300.00	300.00	200.00	100.00	78.70	88.90	166.00	300.00	300.00

**Water Availability Analysis
Detailed Reports**

**MILK CR > MOLALLA R - AT MOUTH
WILLAMETTE BASIN**

Water Availability as of 5/5/2020

Watershed ID #: 131 ([Map](#))

Exceedance Level: ▼

Date: 5/5/2020

Time: 10:46 AM

Water Availability Calculation

Monthly Streamflow in Cubic Feet per Second
Annual Volume at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	124.00	2.48	122.00	0.00	85.00	36.50
FEB	117.00	2.36	115.00	0.00	85.00	29.60
MAR	121.00	2.07	119.00	0.00	85.00	33.90
APR	91.50	2.31	89.20	0.00	85.00	4.19
MAY	59.20	5.04	54.20	0.00	85.00	-30.80
JUN	26.50	7.50	19.00	0.00	60.00	-41.00
JUL	10.80	12.70	-1.93	0.00	40.00	-41.90
AUG	8.92	10.50	-1.55	0.00	20.00	-21.60
SEP	8.95	4.65	4.30	0.00	20.00	-15.70
OCT	15.20	1.69	13.50	0.00	40.00	-26.50
NOV	32.20	1.55	30.70	0.00	85.00	-54.30
DEC	92.00	2.59	89.40	0.00	85.00	4.41
ANN	93,600.00	3,360.00	90,200.00	0.00	46,700.00	48,600.00

Detailed Report of Instream Flow Requirements

Instream Flow Requirements in Cubic Feet per Second

Application #	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
MF131A	CERTIFICATE	85.00	85.00	85.00	85.00	85.00	60.00	40.00	20.00	20.00	40.00	85.00	85.00
Maximum		85.00	85.00	85.00	85.00	85.00	60.00	40.00	20.00	20.00	40.00	85.00	85.00

**Water Availability Analysis
Detailed Reports**

MOLALLA R > WILLAMETTE R - AT MOUTH
WILLAMETTE BASIN

Water Availability as of 5/7/2020

Watershed ID #: 69796 [\(Map\)](#)

Exceedance Level: ▼

Date: 5/7/2020

Time: 10:07 AM

Water Availability Calculation

Monthly Streamflow in Cubic Feet per Second
Annual Volume at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	1,870.00	155.00	1,710.00	0.00	500.00	1,210.00
FEB	2,010.00	145.00	1,870.00	0.00	500.00	1,370.00
MAR	1,830.00	113.00	1,720.00	0.00	500.00	1,220.00
APR	1,530.00	86.60	1,440.00	0.00	500.00	943.00
MAY	927.00	97.30	830.00	0.00	500.00	330.00
JUN	431.00	119.00	312.00	0.00	500.00	-188.00
JUL	204.00	184.00	20.30	0.00	200.00	-180.00
AUG	139.00	154.00	-15.40	0.00	100.00	-115.00
SEP	134.00	82.10	51.90	0.00	150.00	-98.10
OCT	188.00	39.50	148.00	0.00	450.00	-302.00
NOV	637.00	80.00	557.00	0.00	500.00	57.00
DEC	1,700.00	150.00	1,550.00	0.00	500.00	1,050.00
ANN	1,320,000.00	84,900.00	1,240,000.00	0.00	295,000.00	966,000.00

Detailed Report of Instream Flow Requirements

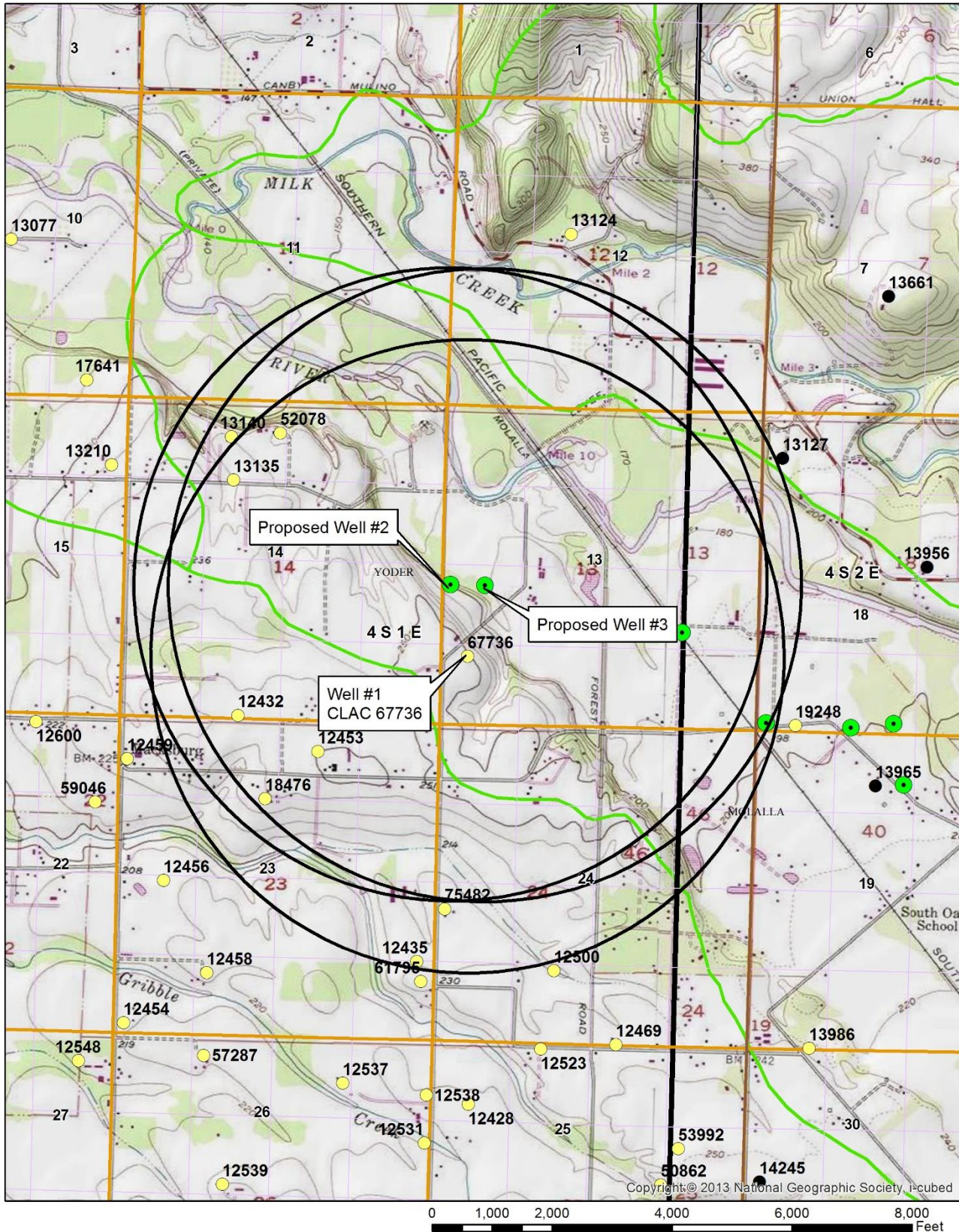
Instream Flow Requirements in Cubic Feet per Second

Application #	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
IS69796A	CERTIFICATE	500.00	500.00	500.00	500.00	500.00	500.00	200.00	100.00	150.00	450.00	500.00	500.00
Maximum		500.00	500.00	500.00	500.00	500.00	500.00	200.00	100.00	150.00	450.00	500.00	500.00

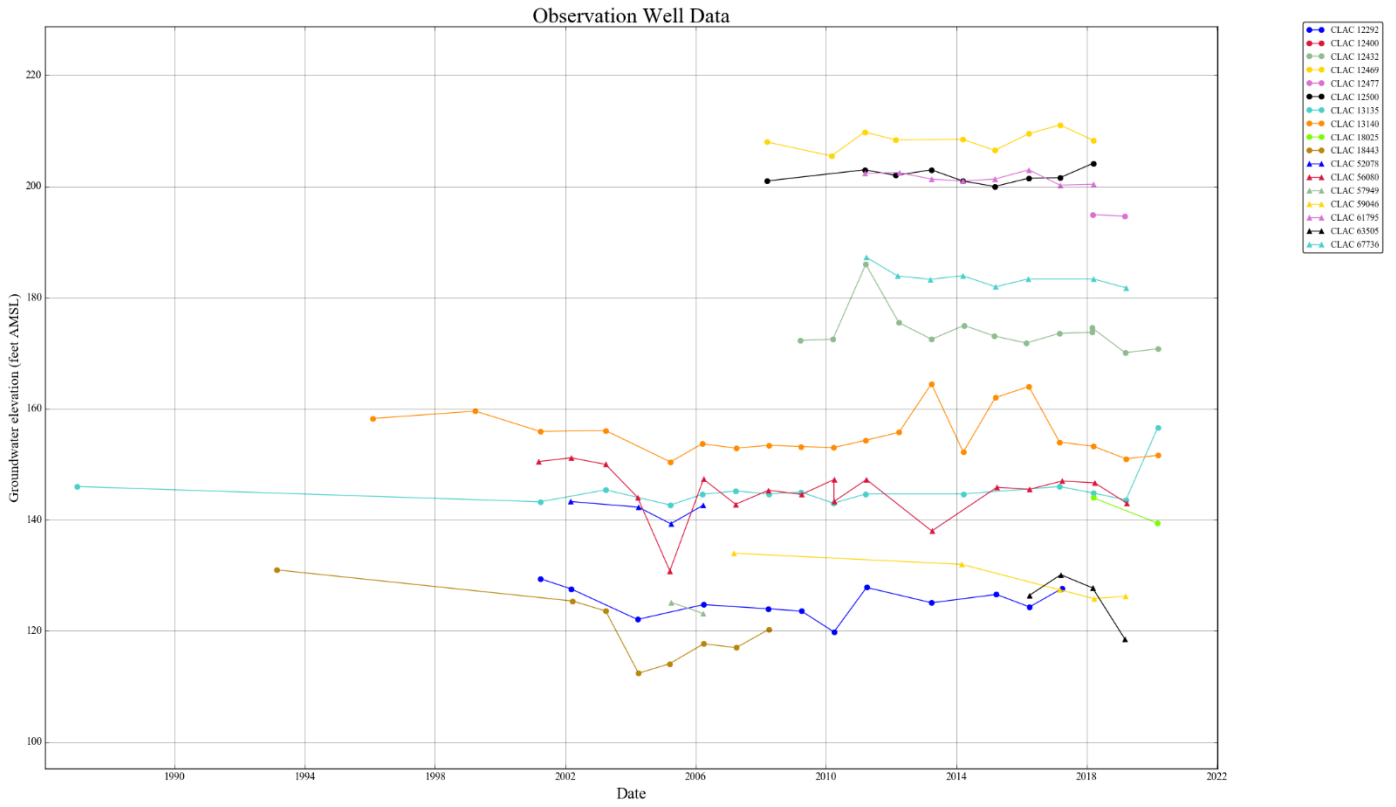
Well Location Map

G-18906, Baker

1:24,000 scale



Water-Level Trends in Nearby Wells



Water Levels in CLAC 67736

