Approved: 

MEMO

To:	Kristopher Byrd, Well Construction and Compliance Section Manager
From:	Travis Kelly, Well Construction Program Coordinator
Subject:	Review of Water Right Application LL-1834
Date:	July 7, 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 (WASC 52543): 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.

WASC 52543

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

10/12/2017

WELL I.D. LABEL# L 122792
START CARD # 214463
ORIGINAL LOG #

(1) LAND OWNER

Owner Well I.D.
First Name MARC Last Name KRAMER
Company
Address 1704 SE 54TH AVE
City PORTLAND State OR Zip 97215

(2) TYPE OF WORK

[X] New Well [ ] Deepening [ ] Conversion [ ] Alteration (complete 2a & 10) [ ] Abandonment(complete 5a)

(2a) PRE-ALTERATION

	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
Casing:									

	Material	From	To	Amt	sacks/lbs
Seal:					

(3) DRILL METHOD

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

(4) PROPOSED USE

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

(5) BORE HOLE CONSTRUCTION

Special Standard [ ] (Attach copy)
Depth of Completed Well 420.00 ft.

BORE HOLE

Dia	From	To
10	0	18
6	18	420

SEAL

Material	From	To	Amt	sacks/lbs
Bentonite	0	18	10	S
		Calculated	8.22	
		Calculated		

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E
[X] Other POUR-IN
Backfill placed from ft. to ft. Material
Filter pack from ft. to ft. Material Size
Explosives used: [ ] Yes Type Amount

(5a) ABANDONMENT USING UNHYDRATED BENTONITE

Proposed Amount Actual Amount

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
(•)	( )	6	[X]	2	18	.250	(•)	( )	[X]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]

Shoe [ ] Inside [ ] Outside [ ] Other Location of shoe(s) 18
Temp casing [X] Yes Dia 10 From + [ ] 1 To 5

(7) PERFORATIONS/SCREENS

Perforations Method
Screens Type Material

Perf/ Screen	Casing/ Screen Liner	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)
20		410	1

Temperature 62 °F Lab analysis [ ] Yes By
Water quality concerns? [ ] Yes (describe below) TDS amount 0.09 ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County WASCO Twp 1.00 N N/S Range 12.00 E E/W WM
Sec 23 24 SE 1/4 of the NW 1/4 Tax Lot 3600
Tax Map Number Lot
Lat ° ' " or DMS or DD
Long ° ' " or DMS or DD
(•) Street address of well ( ) Nearest address
5814 MILL CRK RD, THE DALLES

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Pre-Alteration			[ ]	
Completed Well	10/9/2017		[ ]	300

Flowing Artesian? [ ] Dry Hole? [ ]

WATER BEARING ZONES Depth water was first found 325.00

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
10/9/2017	325	420	30		[ ]	300
					[ ]	
					[ ]	
					[ ]	
					[ ]	

(11) WELL LOG

Ground Elevation

Material	From	To
TOP SOIL	0	2
SANDSTONE, TAN, COARSE	2	62
SANDSTONE, GRAY, COARSE	62	102
SANDSTONE, BROWN, COARSE	102	325
SANDSTONE, BROWN, CARSE	325	420

RECEIVED BY OWRD
OCT 30 2017
SALEM, OR

Date Started 10/10/2017 Completed 10/10/2017

(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 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.

License Number 1256 Date 10/12/2017

Signed KARL F MOORE JR (E-filed)

Contact Info (optional) WI;MA BENSON

ORIGINAL - WATER RESOURCES DEPARTMENT

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

Groundwater Application Review Summary Form

Application # LL- _1834_

GW Reviewer _J. Hackett_ Date Review Completed: _June 25, 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 **June 25**, 20**20**

TO: **Application** LL-**1834**

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

SUBJECT: Scenic Waterway Interference Evaluation

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

☐ **YES**
☒ **NO** Use the Scenic Waterway Condition (Condition 7J)

☐ 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 June 25, 2020
FROM: Groundwater Section J. Hackett
Reviewer's Name
SUBJECT: Application LL- 1834 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: **Marc Kramer** County: **Wasco**

A1. Applicant(s) seek(s) 0.045 cfs from 1 well(s) in the Hood Basin, subbasin

A2. Proposed use Vineyard Establishment Seasonality: April 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	WASC 52543	1	Dalles Formation	0.045	1N/12E-24 SE-NW	12' N, 936' W fr C ¼ cor S 24
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	906	325	300	10/9/2017	420	0-18	0-18			20		A

Use data from application for proposed wells.

A4. **Comments:**

A5. ☒ **Provisions of the** Hood 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:

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 applicant's well produces from water-bearing zones in the Dalles Formation. The formation consists primarily of volcaniclastic rocks interfingered with sedimentary deposits. Well yields in the Dalles Formation are generally low to moderate (0.5 to 55 gal/min) as much of the formation is poorly sorted, consists largely of fine-grained material, and has low permeability. However, more permeable beds or lenses of well-sorted sandstone are present in some wells (Grady, 1981). Water level trends in nearby wells show no obvious signs of declines (see attached hydrograph).

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	**Dalles Formation**	☒	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: Static water level in the applicant's well is higher than the elevation of the water-bearing zone, indicating semi-confined to confined conditions.

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**	**Mill Creek**	**600**	**610-460**	**3480**	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Groundwater levels are coincident with or above portions of the local reach of Mill Creek. This indicates a hydraulic head gradient from the aquifer to the creek and suggests hydraulic connection between the aquifer and the creek.

Water Availability Basin the well(s) are located within: #70246: Mill Cr > Columbia 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**	☐	☐	**IS88326A**	**8.43**	☐	**7.23**	☐	**<25%**	☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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: Modeling in similar circumstances indicates that due to the presence of fine-grained material in the channel of Mill Creek, pumping impacts will be < 25% of the pumping rate 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:

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: Grady, S. J, 1981, Groundwater resources in the Hood Basin, Oregon, U.S. Geological Survey Water Resources Investigations Report 81-1108, 58p.

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

MILL CR > COLUMBIA R - AT MOUTH
HOOD BASIN

Water Availability as of 6/25/2020

Watershed ID #: 70246 (Map)

Exceedance Level: 80%

Date: 6/25/2020

Time: 10:13 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	12.80	6.68	6.12	0.00	15.00	-8.88
FEB	27.40	17.50	9.88	0.00	15.00	-5.12
MAR	30.50	17.50	13.00	0.00	15.00	-1.97
APR	32.50	13.60	18.90	0.00	26.00	-7.10
MAY	19.90	9.55	10.30	0.00	25.50	-15.20
JUN	10.20	7.96	2.24	0.00	15.40	-13.20
JUL	10.10	4.15	5.95	0.00	12.60	-6.65
AUG	9.07	3.29	5.78	0.00	10.70	-4.92
SEP	8.41	3.27	5.14	0.00	9.72	-4.58
OCT	7.23	3.28	3.95	0.00	8.43	-4.48
NOV	8.39	2.55	5.84	0.00	15.00	-9.16
DEC	10.10	2.84	7.26	0.00	15.00	-7.74
ANN	18,300.00	5,520.00	12,800.00	0.00	11,100.00	4,200.00

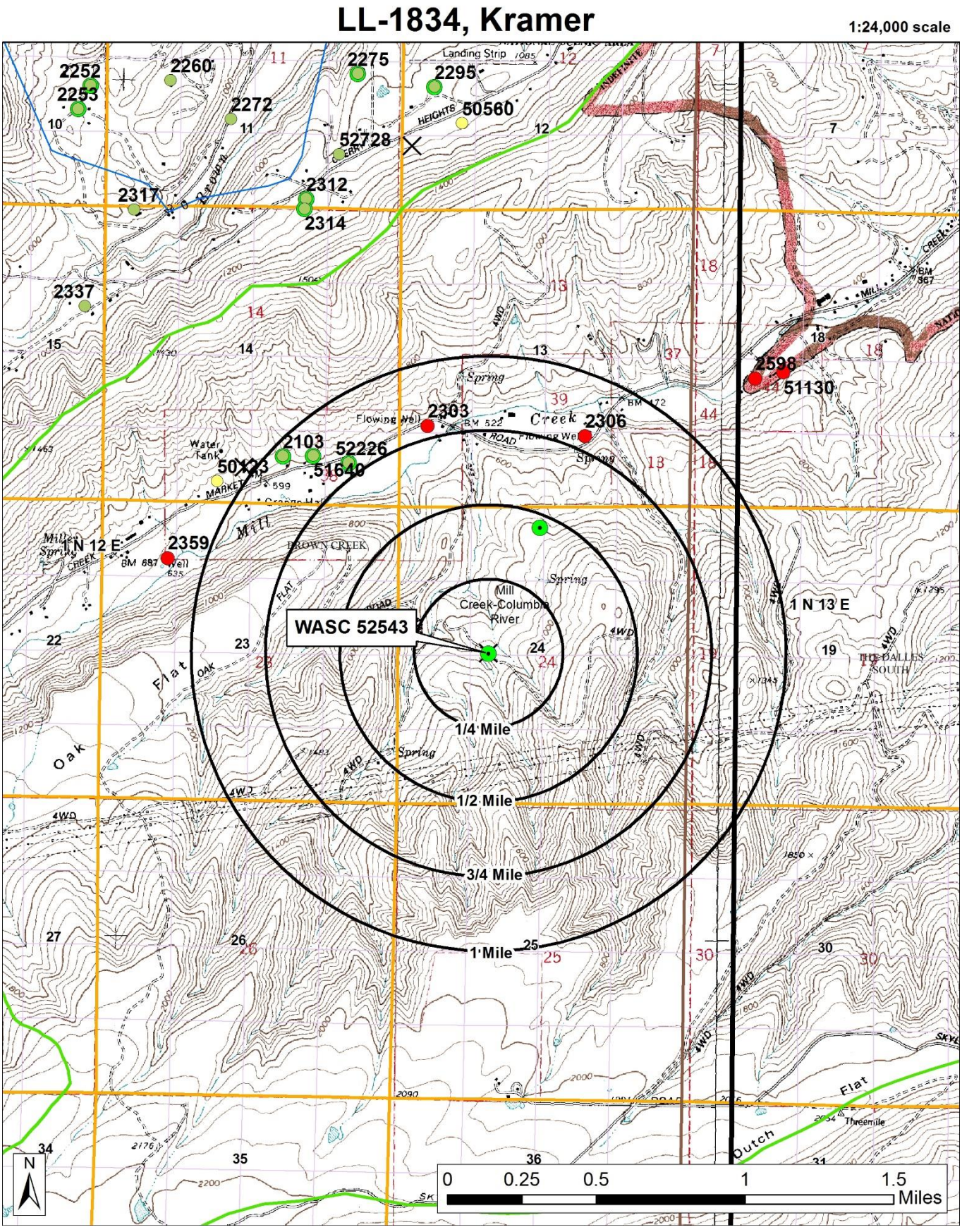
Download Data (Text - Formatted , Text - Tab Delimited , Excel)

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
MF194A	CERTIFICATE	15.00	15.00	15.00	15.00	15.00	15.00	10.00	10.00	4.00	4.00	15.00	15.00
IS70246A	CERTIFICATE	4.00	4.00	10.00	15.00	15.00	15.00	10.00	10.00	4.00	4.00	4.00	4.00
IS88326A	APPLICATION	10.00	10.00	15.00	26.00	25.50	15.40	12.60	10.70	9.72	8.43	10.00	10.00
Maximum		**15.00**	**15.00**	**15.00**	**26.00**	**25.50**	**15.40**	**12.60**	**10.70**	**9.72**	**8.43**	**15.00**	**15.00**

Well Location Map



Water-Level Trends in Nearby Wells