

RA

T-14449

DESCRIPTION OF WATER RIGHT(S)

Name of Stream A well

Trib. of West Fork Dairy Creek

Use <u>Municipal Uses</u>	County <u>Washington</u>
Quantity of water (CFS) _____	No. of Acres _____
Name of ditch _____	
App# <u>G-8476</u>	Per # <u>G-7593</u>
App# _____	Per # _____
App# _____	Per # _____
App# _____	Per # _____
App# _____	Per # _____

FEE PAID

Date	Amount	Receipt #
4-29-24	\$125.00	142817
4-29-24	\$4,300.00	142827
5-17-24	\$2,127.00	142944

FEES REFUNDED

Date	Amount	Receipt #
------	--------	-----------

Assignments: _____

Irrigation District: Tualatin Valley Irrigation District

Agent Bob Long
bob.long@cwmh2o.com

CWRE _____
CC's list City of Banks

□ - Oversized map – Location.



Oregon

Tina Kotek, Governor

Water Resources Department

North Mall Office Building

725 Summer St NE, Suite A

Salem, OR 97301

Phone 503 986-0900

Fax 503 986-0904

December 30, 2025

City of Banks
Jolynn Becker
13680 NW Main St
Banks, OR 97106

REFERENCE: Permit Amendment Application T-14449

Enclosed is a copy of the order approving your Permit Amendment application.

Also enclosed is a superseding permit that incorporates the amendments approved by the final order contained herein. Please read this document and abide by the requirements.

If you have any questions related to the approval of this permit amendment, you may contact your caseworker, Dante Luongo, by telephone at (971) 304-5006 or by e-mail at Dante.j.luongo@water.oregon.gov.

Sincerely,

David V. Jones Jr
Water Rights Services Support
Transfers and Conservation Section

cc: Jacob W. Constans, Watermaster Dist. # 18 (via email)
Bob Long, Agent
Tualatin Valley Irrigation District

Enclosure

**BEFORE THE WATER RESOURCES DEPARTMENT
OF THE
STATE OF OREGON**

In the Matter of Permit Amendment	)	FINAL ORDER
T-14449, Washington County	)	APPROVING ADDITIONAL POINTS OF
	)	APPROPRIATION

Authority

Oregon Revised Statute (ORS) 537.211 establishes the process in which a water right permit holder may submit a request to change the point of appropriation and/or place of use authorized under an existing water right permit.

Applicant

CITY OF BANKS
JOLYNN BECKER, CITY MANAGER
13680 NW MAIN ST.
BANKS, OR 97106

Findings of Fact

1. On April 29, 2024, City of Banks, Jolynn Becker, City Manager, filed an application for additional points of appropriation under Permit G-7593. The Department assigned the application number T-14449.
2. On November 11, 2008, the Department approved an extension of time under Permit G-7593 for complete application of water to October 1, 2017. The approved extension contained the following Development Limitation:

"Diversion of any water beyond 0.613 cfs under Permit G-7593 shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan (WMCP) under OAR Chapter 690, Division 86. The required WMCP shall be submitted to the Department within 3 years of an approved extension application. Use of water under Permit G-7593 must be consistent with this and subsequent WMCP's approved under OAR Chapter 690, Division 86 on file with the Department."

This is a final order in other than contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080 you may either petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.

3. On August 10, 2010, the Department approved a Water Conservation Management Plan for the City of Banks, recorded at Special Volume 81, Pages 661-662 under Permit G-7593. The approved plan contained the following condition:

"The limitation of the diversion of Permit G-7593, established by the Extension of Time approved on November 20, 2008, is removed and, subject to other limitations or conditions of the permit, the City of Banks is authorized to divert up to 0.67 cfs under Permit G-7593."

4. On January 5, 2018, the Department approved an extension of time under Permit G-7593 for complete application of water to October 1, 2027. The approved extension contained the following Development Limitation:

"A maximum appropriation of 0.613 cfs of water is currently allowed under Permit G-7593. Any appropriation of water beyond 0.613 cfs (not to exceed the maximum amount authorized under the permit, being 0.67 cfs) shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan (WMCP) under OAR Chapter 690, Division 86 that authorizes access to a greater rate of appropriation of water under the permit consistent with OAR 690-086-0130(7)."

5. On June 14, 2021, the Department approved a Water Conservation and Management Plan for the City of Banks, recorded at Special Volume 120, Pages 796-799 under Permit G-7593. The approved plan contained the following condition: Development Limitation(s):

"The limitation of the diversion of Permit G-7593 established by the Extension of Time approved on January 5, 2018, is removed and, subject to other limitations or conditions of the permit, the City of Banks is authorized to divert up to 0.67 cfs (out of total permitted 0.67 cfs) under Permit G-7593."

Failure to meet the conservation benchmarks listed below may result in the reduction of the quantity of water authorized for diversion under Permit G-7593 during review of the City's next plan update.

- *Annual Water Audit*

6. Notice of the application for the permit amendment was published in the Department's weekly notice on May 7, 2024, and in the Hillsboro News Times newspaper on November 28 and December 7, 2025, pursuant to ORS 540.520(5).

7. The Permit to be changed is as follows:

Permit:	G-7593 in the name of CITY OF BANKS
Use:	MUNICIPAL USE
Priority Date:	SEPTEMBER 29, 1977
Quantity:	0.67 CUBIC FOOT PER SECOND
Source:	A WELL

Authorized Point of Appropriation:

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
2 N	3 W	WM	31	NE NW	WELL-1 - 135 FEET SOUTH AND 560 FEET WEST FROM THE N1/4 CORNER OF SECTION 31

Authorized Place of Use:

MUNICIPAL USE				
Twp	Rng	Mer	Sec	Q-Q
2 N	3 W	WM	29	SW SW
2 N	3 W	WM	30	NW SW
2 N	3 W	WM	30	SW SW
2 N	3 W	WM	30	SE SW
2 N	3 W	WM	30	SW SE
2 N	3 W	WM	30	SE SE
2 N	3 W	WM	31	NE NE
2 N	3 W	WM	31	NW NE
2 N	3 W	WM	31	SE NE
2 N	3 W	WM	31	NE NW
2 N	3 W	WM	31	NW NW
2 N	3 W	WM	31	SW NW
2 N	3 W	WM	31	SE NW
2 N	3 W	WM	31	NW SW
2 N	3 W	WM	31	SW SW
2 N	3 W	WM	32	NW NW
2 N	3 W	WM	32	SW NW
2 N	4 W	WM	25	NE SE
2 N	4 W	WM	25	SW SE
2 N	4 W	WM	25	SE SE
2 N	4 W	WM	36	NE NE
2 N	4 W	WM	36	NW NE
2 N	4 W	WM	36	SE NE
2 N	4 W	WM	36	NE SE
2 N	4 W	WM	36	SE SE

8. Permit Amendment Application T-14449 proposes additional points of appropriation located:

Twp	Rng	Mer	Sec	Q-Q	Measured Distances	Approximate Distance from Authorized Point of Appropriation
2 N	3 W	WM	31	NE NE	AN - 275 FEET SOUTH AND 475 FEET WEST FROM THE NE 1/4 CORNER OF SECTION 31	2750 FEET EAST
2 N	3 W	WM	31	NE SW	PARK-A - 2120 FEET NORTH AND 2970 FEET WEST FROM THE SE CORNER OF SECTION 31	3180 FEET SOUTH
2 N	3 W	WM	31	NE SE	AS - 2500 FEET NORTH AND 565 FEET WEST FROM THE SE CORNER OF SECTION 31	3700 FEET SOUTHEAST

Twp	Rng	Mer	Sec	Q-Q	Measured Distances	Approximate Distance from Authorized Point of Appropriation
2 N	3 W	WM	31	NW SE	PARK-B - 2460 FEET NORTH AND 2520 FEET WEST FROM THE SE CORNER OF SECTION 31	2900 SOUTHEAST
2 N	3 W	WM	31	NW SE	PARK-C - 2630 FEET NORTH AND 2540 FEET WEST FROM THE SE CORNER OF SECTION 31	22730 FEET SOUTHEAST
2 N	3 W	WM	31	NE NW	WELL-2 - 120 FEET SOUTH AND 2070 FEET EAST FROM THE NW CORNER OF SECTION 31	50 FEET NORTHEAST
2 N	4 W	WM	36	NE NE	WTP - 175 FEET SOUTH AND 335 FEET WEST FROM THE NW CORNER OF SECTION 31 OF T2N, R3W	2230 FEET WEST

Permit Amendment Review Criteria

9. The change, as conditioned, would not result in injury to other water rights.
10. The change, as conditioned, does not enlarge the permit.
11. The change does not alter any other terms of the permit.

Conclusions of Law

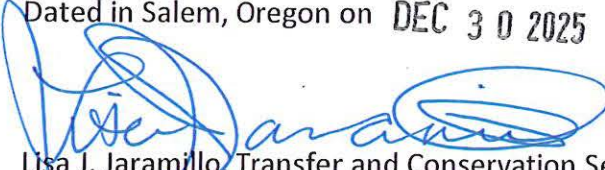
The additional points of appropriation proposed by Permit Amendment Application T-14449 are consistent with the requirements of ORS 537.211.

Now, therefore, it is ORDERED:

1. The additional points of appropriation proposed by Permit Amendment Application T-14449 are approved.
2. Approval of this permit amendment application does not constitute nor grant legal access onto or through another person's property for purposes of accessing the new points of appropriation.
3. Permit G-18925, in the name of City of Banks, is issued to replace Permit G-7593, and incorporates the amendments approved by this order, the extension of time, and the Water Management and Conservation Plan. Permit G-7593, in the name of City of Banks, is no longer of any force or effect.
4. The quantity of water diverted at the new additional points of appropriation (AN, AS, PARK-A, PARK-B, PARK-C, WELL-2, and WTP), together with that diverted at the original point of appropriation (WELL-1), shall not exceed the quantity of water lawfully available at the original point of appropriation (WELL-1).

5. Water use measurement conditions:
 - a. Before water use may begin under this order, the water user shall install a totalizing flow meter, or, with prior approval of the Director, another suitable measuring device, at each point of appropriation (new and existing).
 - b. The water user shall maintain the meters or measuring devices in good working order.
 - c. The water user shall allow the Watermaster access to the meters or measuring devices; provided however, where the meters or measuring devices are located within a private structure, the Watermaster shall request access upon reasonable notice.
6. Water shall be acquired from the same aquifer as the original point of appropriation.
7. All other terms and conditions of Permit G-18925 remain the same.

Dated in Salem, Oregon on DEC 30 2025



Lisa J. Jaramillo, Transfer and Conservation Section Manager, for
IVAN GALL, DIRECTOR
Oregon Water Resources Department

Mailing Date: DEC 31 2025

STATE OF OREGON

COUNTY OF WASHINGTON

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

CITY OF BANKS
13680 NW Main St
BANKS, OREGON 97106

This superseding permit is issued to describe an amendment for additional points of appropriation proposed under Permit Amendment Application T-14449 and approved by Special Order Vol. 135, Page 233, entered DEC 31 2025, 2025, and to describe Extensions of Time for complete application of water approved November 11, 2008, and January 5, 2018, and Water Management and Conservation Plans approved August 10, 2010, and June 15, 2021. This permit supersedes Permit G-7593.

This is to certify that I have examined the foregoing application and do hereby grant the same, SUBJECT TO EXISTING RIGHTS INCLUDING THE EXISTING MINIMUM FLOW POLICIES ESTABLISHED BY THE WATER POLICY REVIEW BOARD and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed 0.67 cubic foot per second (cfs) measured at the point of diversion from the well or source of appropriation, or its equivalent in case of rotation with other water users from a well.

The priority date of this permit is September 29, 1977.

The use to which water is to be applied is Municipal.

Authorized Points of Appropriation:

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
2 N	3 W	WM	31	NE NE	AN - 275 FEET SOUTH AND 475 FEET WEST FROM THE NE 1/4 CORNER OF SECTION 31
2 N	3 W	WM	31	NE NW	WELL-1 - 135 FEET SOUTH AND 560 FEET WEST FROM THE N1/4 CORNER OF SECTION 31
2 N	3 W	WM	31	NE SW	PARK-A - 2120 FEET NORTH AND 2970 FEET WEST FROM THE SE CORNER OF SECTION 31
2 N	3 W	WM	31	NE SE	AS - 2500 FEET NORTH AND 565 FEET WEST FROM THE SE CORNER OF SECTION 31
2 N	3 W	WM	31	NW SE	PARK-B - 2460 FEET NORTH AND 2520 FEET WEST FROM THE SE CORNER OF SECTION 31

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
2 N	3 W	WM	31	NW SE	PARK-C - 2630 FEET NORTH AND 2540 FEET WEST FROM THE SE CORNER OF SECTION 31
2 N	3 W	WM	31	NE NW	WELL-2 - 120 FEET SOUTH AND 2070 FEET EAST FROM THE NW CORNER OF SECTION 31
2 N	4 W	WM	36	NE NE	WTP - 175 FEET SOUTH AND 335 FEET WEST FROM THE NW CORNER OF SECTION 31 OF T2N, R3W

Authorized Place of Use:

MUNICIPAL USES				
Twp	Rng	Mer	Sec	Q-Q
2 N	3 W	WM	29	SW SW
2 N	3 W	WM	30	NW SW
2 N	3 W	WM	30	SW SW
2 N	3 W	WM	30	SE SW
2 N	3 W	WM	30	SW SE
2 N	3 W	WM	30	SE SE
2 N	3 W	WM	31	NE NE
2 N	3 W	WM	31	NW NE
2 N	3 W	WM	31	SE NE
2 N	3 W	WM	31	NE NW
2 N	3 W	WM	31	NW NW
2 N	3 W	WM	31	SW NW
2 N	3 W	WM	31	SE NW
2 N	3 W	WM	31	NW SW
2 N	3 W	WM	31	SW SW
2 N	3 W	WM	32	NW NW
2 N	3 W	WM	32	SW NW
2 N	4 W	WM	25	NE SE
2 N	4 W	WM	25	SW SE
2 N	4 W	WM	25	SE SE
2 N	4 W	WM	36	NE NE
2 N	4 W	WM	36	NW NE
2 N	4 W	WM	36	SE NE
2 N	4 W	WM	36	NE SE
2 N	4 W	WM	36	SE SE

Permit Amendment T-14449 Conditions:

The combined quantity of water diverted at the new additional points of appropriation (AN, AS, PARK-A, PARK-B, PARK-C, WELL-2, and WTP), together with that diverted at the original point of appropriation (WELL-1), shall not exceed the quantity of water lawfully available at the original point of appropriation (WELL-1).

Water use measurement conditions:

- a. Before water use may begin under this order, the water user shall install a totalizing flow meter, or, with prior approval of the Director, another suitable measuring device, at each point of appropriation (new and existing).

- b. The water user shall maintain the meters or measuring devices in good working order.
- c. The water user shall allow the Watermaster access to the meters or measuring devices; provided however, where the meters or measuring devices are located within a private structure, the Watermaster shall request access upon reasonable notice.

Water shall be acquired from the same aquifer as the original point of appropriation.

Extension of Time (approved November 20, 2008) Conditions:

Development Limitations:

Diversion of any water beyond 0.613 cfs under Permit G-7593 shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan (WMCP) under OAR Chapter 690, Division 86. The required WMCP shall be submitted to the Department within 3 years of an approved extension application. Use of water under Permit G-7593 must be consistent with this and subsequent WMCP's approved under OAR Chapter 690, Division 86 on file with the Department.

The deadline established in this PFO for submittal of a WMCP shall not relieve a permit holder of any existing or future requirement for submittal of a WMCP at an earlier date as established through other orders of the Department. A WMCP submitted to meet the requirements of this order may also meet the WMCP submittal requirements of other Department orders.

Water Management and Conservation Plan (approved August 10, 2010) Conditions:

The limitation of the diversion of Permit G-7593, established by the Extension of Time approved on November 20, 2008, is removed and, subject to other limitations or conditions of the permit, the City of Banks is authorized to divert up to 0.67 cfs under Permit G-7593.

Extension of Time (approved January 5, 2018) Conditions:

Development Limitations:

A maximum appropriation of 0.613 cfs of water is currently allowed under Permit G 7593. Any appropriation of water beyond 0.613 cfs (not to exceed the maximum amount authorized under the permit, being 0.67 cfs) shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan (WMCP) under OAR Chapter 690, Division 86 that authorizes access to a greater rate of appropriation of water under the permit consistent with OAR 690-086-0130(7). The required WMCP shall be submitted to the Department within 3 years of this Final Order. The amount of water used under Permit G-7593 must be consistent with this and subsequent WMCP's approved under OAR Chapter 690, Division 86 on file with the Department.

The Development Limitation established in the above paragraph supersedes any prior limitation of the appropriation of water under Permit G-7593 that has been established under a prior WMCP or Extension final order issued by the Department.

The deadline established in the Extension Final Order for submittal of a WMCP shall not relieve a permit holder of any existing or future requirement for submittal of a WMCP at an earlier date as established through other orders of the Department. A WMCP submitted to meet the requirements of the final order may also meet the WMCP submittal requirements of other Department orders

Water Management and Conservation Plan (approved June 14, 2021) Conditions:

The limitation of the diversion of Permit G-7593 established by the Extension of Time approved on January 5, 2018, is removed and, subject to other limitations or conditions of the permit, the City of Banks is authorized to divert up to 0.67 cfs (out of total permitted 0.67 cfs) under Permit G-7593.

Failure to meet the conservation benchmarks listed below may result in the reduction of the quantity of water authorized for diversion under Permit G-7593 during review of the City's next plan update.

- Annual Water Audit

Original Permit Conditions

The well shall be constructed in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon.

The works constructed shall include an airline and pressure gauge or an access port for measuring line, adequate to determine water level elevation in the well at all times.

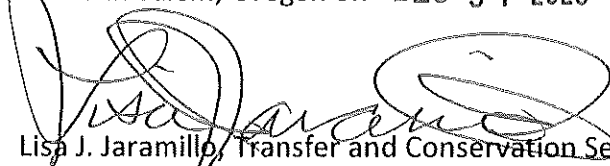
The permittee shall install and maintain a weir, meter, or other suitable measuring device, and shall keep a complete record of the amount of ground water withdrawn.

The original permit, issued December 2, 1977, specified:

- The deadline to begin construction is December 2, 1978.
- The deadline to complete construction is October 1, 1979
- The deadline for complete application of the water is October 1, 1980.

By Extension of Time Final Order dated January 5, 2018, the deadline for completing construction and for complete application of water to the use was extended to October 1, 2027.

Dated in Salem, Oregon on DEC 31 2025



Lisa J. Jaramillo, Transfer and Conservation Section Manager, for
IVAN GALL, DIRECTOR
Oregon Water Resources Department

PERMIT AMENDMENT COVER SHEET

Transfer: T-14449

Permit Amendment Specialist:

Transfer Type: Permit Amendment Transfer

Reimbursement Authority? ☒ Dave L.

Applicant: Jolynn Becker 13680 NW Main St Banks, OR 97106	Agent: Bob Long 311 B Ave, Suite P Lake Oswego, OR 97034	CWRE:
Irrigation District:	Affected Local Gov'ts:	Affected Tribal Gov't:
BOR Notified (date):		

Permit(s) Affected

File Marked	App. File # or Decree Name	Permit Number	Superseding Permit Number
☐			
☐			
☐			

Key Dates & Initial Actions (Support Staff)

Rec'd: April 29, 2024	Proposed Action(s): ADDITIONAL POINT OF APPROPRIATION	
Fees Pd: 4300.00	Acknowledgement Letter Sent ☒	Basin: 2 Willamette
Initial Public Notice: 5/7/2024	County sent cc: of Ack Letter ☒	County: WASHINGTON
WM District: 18 Jacob W. Constans	WM Review request sent:	WM Review date received:
ODFW District:	ODFW Review sent:	ODFW Review date received:
Groundwater	GW Review sent:	GW Review date received:

Caseworker Actions: Newspaper Notice and other:

Newspaper notice needed: ☐	Name of Newspaper:		
Newspaper notice sent to coordinator:	Newspaper notice quote requested (NRS1):		
Request for news \$ sent:	News \$ received:		
Affidavit of publication received:	Last day of publication:		
Extension of Time? ☐	Assignment? ☐	Previous Permit Amendments? ☐	WMCP? ☐

Peer Review:

Document	Drafted	Peer Review	Coordinator	Changes Made	Signature Bin	Signature Date
FO	Date: <u>6-26-25</u> Initials: <u>BL</u>	Date: <u>6-30-25</u> Initials: <u>AD</u>	Date: <u>7-2-25</u> Initials: <u>CC</u>	Date: <u>12-5-25</u> Initials: <u>BL</u> Data Review Date: <u>12-12-25</u>	Date: <u>12-18-25</u> WM Sheet ☒ ODFW Sheet: ☐ No. of docs for sig: <u>2</u>	Date: <u>12/30/2025</u>

Special Issues: _____

Special Order Volume: Vol. 138 Pages 233-237

STATE OF OREGON
WATER RESOURCES DEPARTMENT

725 Summer St. N.E. Ste. A

SALEM, OR 97301-4172

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

RECEIPT # 146410

INVOICE # _____

RECEIVED FROM: City of Banks
BY: _____

APPLICATION	
PERMIT	
TRANSFER	<u>T-14419</u>

CASH: ☐ CHECK:# 28393 OTHER: (IDENTIFY) ☐

TOTAL REC'D \$ 60.00

1083 TREASURY 4170 WRD MISC CASH ACCT

0407 COPIES 4618 \$ _____
0207 OTHER: (IDENTIFY) New Paper Notice \$ 60.00

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:

	EXAM FEE		RECORD FEE
0201	\$	0202	\$
0203	\$	0204	\$
0205	\$		

WELL CONSTRUCTION

	EXAM FEE		LICENSE FEE
0218	\$	0219	\$
		0220	\$

LANDOWNER'S PERMIT

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: 146410

DATED: 11-17-25 BY: m muel

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal



PO Box 310 Gresham, OR 97030
Phone: 503-684-0360 Fax: 503-620-3433
E-mail: legals@commnewspapers.com

AFFIDAVIT OF PUBLICATION

SEE EXHIBIT A

State of Oregon, County of Washington, ss
I, Deseri Cerruti, being first duly sworn, de-
pose and say that I am the Principal Clerk
of the News Times, a newspaper of general
circulation, published in Washington County,
Oregon, as defined by ORS 193.010 and
193.020, that

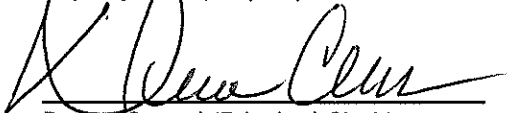
Ad#: 373613

**Owner: Oregon Water Resources Depart-
ment**

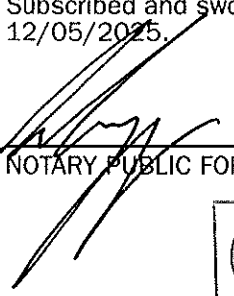
**Description: Notice of Permit Amendment
T-14449**

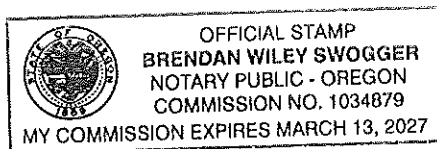
A copy of which is hereto annexed, was
published in the entire issue of said
newspaper for 2 week(s) in the
following issue:

11/28/2025, 12/05/2025


Deseri Cerruti (Principal Clerk)

Subscribed and sworn to before me this
12/05/2025.


NOTARY PUBLIC FOR OREGON



Acct #: 150076

Attn: DAVID JONES JR

OREGON WATER RESOURCES DEPARTMENT
725 SUMMER ST. NE, SUITE A
SALEM, OR 97301

EXHIBIT A

Notice of Permit Amendment T-14449

T-14449 filed by City of Banks, Jolynn Becker, City Manager, 13680 NW Main St., Banks, OR, 97106, proposes an additional points of appropriation change under Permit G-7593. The permit allows the use of 0.67 cubic foot per second from a well in Sec. 31, T2N, R3W, WM for municipal use. The applicant proposes additional points of appropriation in Sec. 31, T2N, R3W, WM and Sects. 31 and 36, T2N, R4W, WM. The Water Resources Department has concluded that the proposed permit amendment appears to be consistent with the requirements of ORS 537.211. The last date of newspaper publication is 12/05/2025.
Published November 28 & Dec. 5, 2025.

FGNT/HT373613



Oregon

Tina Kotek, Governor

Water Resources Department

North Mall Office Building

725 Summer St NE, Suite A

Salem, OR 97301

Phone 503 986-0900

Fax 503 986-0904

November 13, 2025

VIA E-MAIL

CITY OF BANKS
CITY HALL 150 NE BANKS RD
BANKS, OR 97106

Received

NOV 17 2025

OWRD

SUBJECT: Permit Amendment Application T-14449

Your Permit Amendment application requires publication of a notice for two consecutive weeks in a newspaper with general circulation in the area where the permit is located. The Department will publish the notice in the Hillsboro Tribune newspaper upon receiving your payment for the notice.

At this time you need to:

1. Submit a check for **\$60.00** (to cover cost* of publication of the notice), made out to the Oregon Water Resources Department.
2. Write **"for T-14449 NOTICE"** on the front of your check, and
3. Submit it with the tracking stub at the bottom of this letter.

***PLEASE NOTE:** As outlined in OAR 690-380-4020(3), publication costs include both the direct cost of the notice and indirect processing costs (not to exceed 20% of the direct costs) for processing.

Mail the check to 725 Summer St. NE, Suite A, Salem, OR 97301-1266, **no later than December 13, 2025.**

Upon receipt of your check, processing will continue on the permit amendment application. **If we do not receive payment for newspaper notice by December 13, 2025, a Final Order may be issued denying the application as incomplete.**

Please don't hesitate to contact me at 971 304-5006 or Dante.J.Luongo@water.oregon.gov.

✂-----

Attached is a check for **\$60.00** Newspaper Notice for Permit Amendment T- 14449

- made out to Oregon Water Resources Department (or OWRD)
- "for T-14449 NOTICE" written on front of check

Mail to: Oregon Water Resources Department
725 Summer St. NE, Suite A
Salem, OR 97301-1266

Caseworker: Dante Luongo

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14449

GW Reviewer Dennis Orlowski Date Review Completed: July 3, 2025 (re-review)

Summary of Same Source Review:

☐ The proposed change in point of appropriation is not within the same aquifer as per OAR 690-380-2110(2).

NOTE: this re-review revisits a previous finding of "not within the same aquifer" that was concluded in the original T-14449 review completed on February 4, 2025. The rationale for this revised conclusion is summarized in Section 2 of this re-review.

Summary of Water Level Decline Condition Review:

☐ Water levels at the original point(s) of appropriation have exceeded the allowed decline threshold defined by conditions in the originating water right.

Summary of Injury Review:

☐ The proposed transfer will result in another, existing water right not receiving previously available water to which it is legally entitled or result in significant interference with a surface water source as per 690-380-0100(3).

Summary of GW-SW Transfer Similarity Review:

☐ The proposed SW-GW transfer doesn't meet the definition of "similarly" as per OAR 690-380-2130.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations.



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1271
(503) 986-0900
www.wrd.state.or.us

Ground Water Review Form:

- ☐ Water Right Transfer
☒ Permit Amendment
☐ GR Modification
☐ Other

Application: T-14449

Applicant Name: City of Banks

Proposed Changes: ☐ POA ☒ APOA ☐ SW→GW ☒ RA
☐ USE ☐ POU ☐ OTHER

Reviewer(s): Dennis Orlowski

Date of Review: July 3, 2025 (re-review)

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 7/3/25

The information provided in the application is insufficient to evaluate whether the proposed transfer may be approved because:

- ☐ The water well reports provided with the application do not correspond to the water rights affected by the transfer.
- ☐ The application does not include water well reports or a description of the well construction details sufficient to establish the ground water body developed or proposed to be developed.
- ☐ Other _____
-

1. Basic description of the changes proposed in this transfer: **This re-review supersedes the original review completed on February 4, 2025.**

This proposed permit amendment relates to permit G-7593 which authorizes groundwater pumped from a single authorized POA (WASH 7651, "Well 1") for municipal uses by the City of Banks (maximum instantaneous pumping rate of 0.67 cfs, ~301 gpm).

This amendment proposes to add the following APOA to permit G-7593 (note that only one proposed APOA is an existing well (WASH 62373), whereas the others are proposed to-be-drilled (TBD) (see attached map):

- WTP (Water Treatment Plant) well – TBD
- AN (Aerts Rd North) well – TBD
- AS (Aerts Rd South) well – TBD
- Park-A (Park Primary) well – TBD
- Park-B (Park Alternative) well – TBD
- Park-C (Park Alternative) well – TBD
- Well 2 (Behrman Well 2) – WASH 62373

Proposed APOA WASH 62373 ("Well-2") is also the single authorized POA for certificate 95849, which authorizes pumping (maximum 1.0 cfs) of groundwater for municipal use by the City of Banks. WASH 62373 is located only about 60 feet away from WASH 7651 ("Well-1").

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?

☒ Yes ☐ No Comments: Authorized POA WASH 7651 ("Well 1") is 450 feet deep, with an open interval from 210 to 450 ft below land surface (bls), and obtains groundwater from water-bearing interflow and fracture zones within the Columbia River Basalt Group aquifer system (Conlon and others, 2005; Gannett and Caldwell, 1998). The well log for WASH 7651 indicates that greater than 90 percent of inflow to the well (~325 gpm) was estimated to be from a lower water-bearing zone (WBZ) from 360-415 ft bls; shallower interflow zones between 230 and 325 ft bls were estimated to provide only about 25 gpm to WASH 7651. Consequently, in WASH 7651 the lower WBZ zone between 360-415 ft bls is considered to be the primary source of groundwater to this well.

Planned construction details for the six proposed (not-yet-drilled) APOA show total well depths ranging between approximately 650 to 750 feet, with cased and sealed intervals from 0 to about 200-250 ft bls.

The relatively deeper planned construction for the six proposed APOA is similar to the seventh proposed APOA, existing well WASH 62373 ("Well 2"). WASH 62373 is 665 feet deep, with an open interval between 300 and 665 ft bls. According to the WASH 62373 well log and additional documents provided by the applicant's agent (CwM-H2O, 2018), there are two principal basalt WBZ in this well: 378-468 ft bls and 615-660 ft bls. The uppermost WBZ generally corresponds to the primary zone in authorized POA WASH 7651 (360-415 ft bls). However, the lower WBZ in WASH 62373 is not present in the shallower authorized POA (WASH 7651).

Previous Conclusion – Source Determination

The presence of two different WBZ in WASH 62373, coupled with inconclusive, incomplete, and/or contradictory information previously provided by the applicant's agent (as summarized below and in the previous T-14449 review), led to OWRD's previous conclusion that all of the proposed APOA would obtain groundwater from a groundwater source *different* from that present in authorized POA WASH 7651 (i.e., from both the shallower WBZ present in WASH 7651 in addition to the deeper WBZ present only in WASH 62373 and the other proposed APOA wells).

Additional Information and Assessment

After completion of the first review for T-14449, OWRD (1) re-evaluated additional information provided by the applicant's agent subsequent to the first review and (2) assessed longer-term water level trends in the CRBG aquifer system throughout most of the entire Tualatin Valley in an effort to improve understanding of groundwater conditions near Banks.

The following list summarizes key factors re-evaluated by OWRD that led to the revised conclusion provided in this re-review:

- (1) Retraction of previous determination by the applicant's agent that a downhole video survey of WASH 62373 ("Well 2") did indeed show exchange of water between the two WBZ, thus indicating two discretely different aquifer sources (CwM-H2O, 2018).

- An attachment to the T-14449 and T-14450 applications claimed that their original interpretation of the video survey was incorrect, and that “there is no evidence from the video survey of water movement in either direction”, thus concluding “that the two WBZs share very similar hydraulic pressure regimes under static conditions.”
 - Since completion of the first review, OWRD was provided with and examined this same video from WASH 62373, in addition to another video of WASH 50693 (the nearby Quail Valley Golf Course well with similar construction). OWRD concludes that this particular video evidence alone was insufficient to discern any predominant vertical flow direction within WASH 62373 (or WASH 50693), primarily because camera pause times were not long enough to allow turbulence caused by the vertical movement of the camera to diminish (i.e., remnant turbulent flow resulted in movement of suspended particles in generally haphazard directions).
- (2) Recent provision of additional static water-level data from WASH 7651 and WASH 62373.
- WASH 7651 (“Well 1”), located only about 60 feet from another City of Banks well WASH 62373 (“Well 2”). WASH 7651 is much shallower at 450 feet deep, and obtains groundwater from only the uppermost of the two primary WBZ present in WASH 62373. Historically, water level (or head) differences reported for the two wells have ranged from 15+ feet to several feet. Head differences of this magnitude are typically strong evidence that the wells tap different WBZ under markedly different hydraulic conditions, and thus each WBZ would typically be considered by OWRD to be a separate aquifer/source (OAR 690-200-0050)
 - To note, even the T-14449 application listed a head difference of 2.2 feet between WASH 7651 and WASH 62373, a magnitude which strongly suggests the wells tap discretely different aquifer sources.
 - Recently provided static water-level data of improved reliability indicates much smaller head differences on the order of ~0.2 to ~1 foot. While any head difference would suggest two different sources under different hydraulic head conditions, the generally very dynamic CRBG aquifer system in and near Banks was taken into account by OWRD for this re-evaluation (i.e., the smaller head differences might reflect transient levels between drawdown and recovery phases, despite the contention they are truly “static”). Consequently, while also not entirely conclusive alone, the more recent water-level measurements show much smaller differences compared to data previously provided to OWRD, and thus better support a determination of single source.
- (3) Recent provision of static and dynamic spinner log survey results to OWRD.
- After completion of the first review, OWRD was provided with the results of static and dynamic spinner log surveys completed in both WASH 62373 (“Well 2”) and nearby WASH 50693 (Quail Valley Golf Course well). The applicant’s agent claimed the survey results suggested that (1) no vertical flow was occurring in either well, thus (2) there was no head differential between the shallow and deep WBZ, and therefore (3) the two WBZ constituted a single source aquifer.

- However, accuracy limitations of the spinner log instrumentation used for these surveys indicate that approximately 3 gpm of vertical flow could exist within the well *without* being detected by the instrumentation. The presence of *any* vertical flow in a well under static/non-pumping conditions indicates a head differential between successive WBZ, which in turn indicates that each WBZ behaves as a separate aquifer/source.
 - Thus, the spinner log results *alone* are not conclusive proof a single aquifer determination, but were useful by (1) establishing relative flow contributions from each of the two key basalt interflows, and (2) effectively quantifying much additional flow from major fracture zones *apart from the basalt interflows* (as identified in the WASH 62373 and WASH 50693 well videos).
- (4) OWRD assessment of long-term water-level trends in CRBG wells throughout much of the Tualatin Valley.
- Historic (~20-50 year) water-level data from many CRBG wells located throughout the Valley, with variable completion depths and elevations, exhibit (1) generally similar trends and (2) a generalized grouping of levels (heads) into two elevation zones: ~120-150 ft msl and ~180-200 ft msl. These aspects suggest a moderate to high degree of aquifer connectivity between many CRBG wells throughout the Valley.
 - Static water-level measurements from both WASH 7651 ("Well 1") and WASH 62373 ("Well 2") fall within the uppermost of these two head groupings. Recently reported head differences for those two wells have been relatively small when compared to the roughly 30-foot range used to define the upper grouping. OWRD's broader assessment of much more available data suggests that CRBG "aquifer" designations within the Valley might be defined more appropriately by head groupings (with relatively minor fluctuations within each grouping), as opposed to being defined as a singular basalt interflow, the presence of which is typically inferred only from well log descriptions.

(Note: additional supporting documentation provided by another consultant (Summit Water Resources, 2025) made reference to spinner log and temperature survey results that "...resulted in a single aquifer determination within the CRBG at the following locations in the Tualatin Basin:

- City of Beaverton: ASR 5, 2016
- City of Beaverton: ASR 7, 2020.
- City of Tigard: ASR 3, 2014.
- City of Cornelius, ASR well, 2017."

The open intervals for the above wells range from 384 to 998 feet, with multiple basalt interflows/WBZ present in each interval.

Despite the consultant's reference, it is not applicable to invoke downhole survey activities performed at these wells as a precedent for decision making for the Banks wells. The Beaverton and Tigard ASR wells are located within the Cooper Mountain-Bull Mountain Critical Groundwater Area (CGWA) located about 16-18 miles southeast of Banks. The order establishing that CGWA directs OWRD to manage the entire CRBG system with the CGWA as a **single groundwater source**. This directive has been a key factor when OWRD considers how to manage ASR storage and recovery wells within the CGWA.

Thus, the results of spinner, temperature and video surveys conducted in the ASR wells was not considered by OWRD as necessary to determine whether or not commingling of discretely-different WBZ exists, because OWRD treats the entire CRBG aquifer *within the CGWA* as a single source. Instead, these surveys were required to better inform and manage ASR activities, including storage accounting and where injection and recovery can occur (i.e., within specific interflows). Therefore, these same types of survey activities performed in the ASR wells located within the CGWA were done for different purposes, and thus should not be considered directly applicable to the Banks' wells in which assessing potential commingling of different WBZ was the primary objective.

The Cornelius ASR well is not within the Cooper Mountain-Bull Mountain CGWA. However, this well (WASH 73617) is relatively very deep (1589 ft), much deeper than almost all other CRBG wells in the Valley and thus highly unlikely to affect those other wells).

Revised Conclusion – Source Determination

After evaluating the additional information provided by the applicant and also conducting a broader assessment of aquifer conditions using historic regional data, the preponderance of evidence indicates the two water-bearing zones (WBZ) developed to date by the City of Banks in WASH 62373 ("Well 2") constitute a single aquifer (same source) for the purposes of meeting minimum well construction standards and managing basalt groundwater resource in the vicinity of Banks.

At this time OWRD finds that the preponderance of evidence indicates that the authorized POA WASH 7651 and proposed APOA (which includes WASH 62373) will obtain groundwater from the same groundwater source.

To ensure that each proposed APOA obtains groundwater only from the currently-authorized aquifer source, the GW Section recommends conditioning the transfer so that all of the proposed APOA wells be limited to accessing only the two primary basalt WBZ present between approximate elevations -125 to -430 ft msl (which is based on the two general WBZ identified in WASH 62373 ("Well 2") and nearby WASH 50693 (QVGC well)).

The following technical analyses were completed assuming these construction limitations will be applied to the proposed APOA wells.

3. a) Is the existing authorized POA subject to a water level decline condition?
☐ Yes ☒ No Comments: The authorized POA, WASH 7651, is not subject to water decline conditions under permit G-7593.
- b) If yes, for each POA identify the reference level, most recent spring-high water level, and whether an applicable permit decline condition has been exceeded: N/A
4. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No Comments: As discussed in Section 2 of this review, at this time OWRD concludes that the authorized POA and proposed APOA – assuming recommended well construction limitations presented in Section 8 of this review are adopted - will obtain groundwater from the same source.
- b) If yes, estimate the portion of the right supplied by each of the sources and describe any limitations that will need to be placed on the proposed change (rate, duty, etc.): N/A

5. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with another ground water right?

☒ Yes ☐ No Comments: Relative to the location of authorized POA WASH 7651, several of the proposed APOA locations are nearer to existing groundwater rights. Thus, this proposed change will likely result in an increase in interference with those rights.

b) If yes, would this proposed change, at its maximum allowed rate of use, likely result in another groundwater right not receiving the water to which it is legally entitled?

☐ Yes ☒ No If yes, explain: Each of the proposed APOA locations was evaluated for potential injury to applicable existing groundwater rights. For relevant evaluations, the Theis distance-drawdown analysis was performed to estimate the degree of additional interference at the nearest applicable existing well (Theis, 1935). The ranges of aquifer parameter values used were derived primarily from results of a 2009 aquifer test completed in proposed APOA WASH 62373 (Golder Associates, 2009) and in another separate test of WASH 50693 (QVGC well), as well as published values (Conlon et al., 2005; Gannett and Caldwell, 1998).

Potential Injury Evaluation: Proposed APOA "AN Well" and WASH 77444, WASH 79189, WASH 56924

Relative to authorized POA WASH 7651, the proposed APOA "AN Well" location is approximately 2500 feet nearer to WASH 77444 (WASH 73386 and WASH 73351 are also near WASH 77444). The "AN Well" as assessed (i.e., limited to the WBZ between elevation ~-125 to -430 ft msl) might impose additional drawdown interference in WASH 77444 and other nearby wells of similar completion.

The key WBZ in WASH 77444 (between elev. ~-20 to -105 ft msl) is above the assessed WBZ in the "AN Well" (between elev. ~-125 to -430 ft msl); nearby WASH 73386 is similarly completed (see attached cross-section 1). Because WASH 77444 and WASH 73386 are located at a higher ground surface elevation than the "AN Well" location, it is possible that the WBZ at those two wells is approximately the same as the uppermost WBZ (elev. -125 - -250 ft msl), but has potentially been vertically offset by faulting between the two locations (the fact that existing geologic maps do not show a fault at this location does not preclude the possible existence of one). Faults typically truncate basalt interflow zones/WBZ, which would reduce or eliminate hydraulic connection between wells on either side of the fault. Whether or not a fault is present at this location, it is likely that there is not an efficient hydraulic connection (or any whatsoever) between the "AN Well" and WASH 77444, WASH 73386, or other nearby wells of similar completion, and thus those wells are unlikely to be injured due to the proposed use of the "AN Well."

Farther to the east, the completion depths and open intervals of other wells (namely WASH 79189 and WASH 56924) partially overlap the approved completion interval, and are thus more likely to be adversely affected by pumping at the "AN Well" location (see attached cross-section 2).

Relative to the location of authorized POA WASH 7651, the proposed location for the "AN Well" is about 2700 feet nearer to WASH 79189. The results of the Theis interference analysis indicates that additional interference in WASH 79189 could potentially range from about 10 to 20 feet due to pumping the maximum rate (0.67 cfs) 24/7/365 from the "AN Well" (see attached Theis analysis results).

Limited water level data from other nearby wells (WASH 56924) indicates that the static water level in WASH 79189 likely ranges from about elevation 180 to 200 ft msl, which would provide roughly 200 feet or more of available drawdown in both it and existing wells of similar completion. This approximate range of available drawdown should be sufficient to support ongoing usage of these wells with the change proposed by this application (i.e., the change will not prevent those wells from receiving the groundwater to which they are legally entitled).

Potential Injury Evaluation: Proposed APOA “AN Well” and WASH 50693

Pumping of the “AN Well” could also affect WASH 50693, the Quail Valley Golf Course well which is an authorized POA for a supplemental irrigation water right (certificate 91527). Relative to authorized POA WASH 7651, the “AN Well” location is about 1750 feet nearer to WASH 50693 (see **cross-section 1**). However, during the 2009 aquifer test of WASH 62373, which is located about 60 feet from WASH 7651 and is constructed more like WASH 50693 (both access a key deeper WBZ that is not present in the shallower WASH 7651), only about 2 feet of additional drawdown was measured in WASH 50693 (Golder Associates, 2009). Therefore, it is unlikely that pumping of the “AN Well” would negatively affect the current usage of WASH 50693.

Potential Injury Evaluation: Proposed APOA “AS Well” and WASH 71496, WASH 73553, WASH 50693

Relative to the location of authorized POA WASH 7651, the proposed location for APOA “AS Well” is about 3600-3800 feet nearer to WASH 71496, WASH 73553 and several other domestic wells in the area. However, all of these existing wells are relatively shallow with the borehole bottoms very near, or just above, the recommended casing/seal depth elevation for all of the proposed APOA (at about -125 ft msl) (see attached **cross-section 3**). It is also notable that some of these same nearby wells only access the uppermost portions of the CRBG in this area, i.e., likely the flow top at the contact between alluvial sediments and the underlying basalt, and do not extend deeper into the same or another WBZ (such wells are considered by OWRD to be “alluvial aquifer” wells and not “CRBG aquifer” wells). Because these existing wells do not fully penetrate the upper WBZ present between approximately elevation -125 to -430 ft msl, or are considered to be “alluvial wells” despite partial penetration into the upper basalt unit, an injury determination would not be made due to the proposed use of the “AS Well.”

Relative to the location of authorized POA WASH 7651, the proposed location for APOA “AS Well” is also much nearer to WASH 50693, the QVGC well. However, as discussed previously for the “AN Well”, it is also unlikely that the proposed use of the “AS Well” will prevent WASH 50693 from receiving the groundwater to which it is legally entitled, for the same stated reasons.

Potential Injury Evaluation: Proposed APOA “Park-A Well” and WASH 52798, WASH 66773

Of the three “Park” wells proposed as APOA, the location for the “Park-A Well” is nearest to the known locations of existing wells. Relative to authorized POA WASH 7651, the “Park-A Well” location is approximately 3000 feet nearer to WASH 52798, an exempt domestic use well. WASH 52798 is reportedly 370 feet deep, but the log does not provide any other information related to well construction or local lithology (see attached **cross-section 4**).

However, nearby WASH 66773 is a comparable depth (410 feet deep), and like all other nearby wells of similar depth, obtains groundwater from the CRBG aquifer system. The WASH 66773 log shows a 2008 static water level elevation of 167 ft msl (depth 35 ft bgs); a similar current static water level assumed for WASH 52798 and other nearby wells indicates that these wells likely have about 200-300 feet of available drawdown. This approximate range of available drawdown should be sufficient to support ongoing usage of these wells with the change proposed by this application (i.e., pumping of the "Park-A Well" will not prevent those wells from receiving the groundwater to which they are legally entitled).

Potential Injury Evaluation: Proposed APOA "WTP Well" and WASH 8102/8089

There are several known wells relatively close to the proposed location for the "WTP Well"; however, current OWRD records indicate that these particular wells are owned by the City of Banks, and are associated with irrigation of school grounds (WASH 77871, WASH 7628, WASH 7621, WASH 3184). Consequently, it is assumed that the City can manage potential adverse interference to these existing wells resulting from pumping at the "WTP Well" location.

Relative to authorized POA WASH 7651, the proposed "WTP Well" location is approximately 2200 feet nearer to WASH 8102/8089, which is an authorized POA for quasi-municipal use by the Star Satellite Improvement District (permit G-7903). The open borehole portion of WASH 8102/8089 extends from about elevation -115 to -210 ft msl, which overlaps a portion of the -125 to -430 ft msl interval stipulated for the proposed APOA wells (see attached cross-section 5).

The results of the Theis interference analysis indicates that WASH 8102/8089 could potentially experience about 5 to 10 feet of additional drawdown due to pumping the maximum rate (0.67 cfs) 24/7/365 from the "WTP Well" (see attached Theis analysis results). It is unlikely that this small additional drawdown estimated for WASH 8102/8089 would prevent it or other similarly-constructed wells in the area from receiving the groundwater to which they are legally entitled.

Potential Injury Evaluation: Proposed APOA WASH 62373 and WASH 8102/8089

WASH 62373 is a current City of Banks well authorized for year-round municipal use, pumping at a maximum instantaneous rate of 1.0 cfs (~450 gpm) (certificate 95849). As a proposed APOA for this application, WASH 62373 would be authorized to pump a stacked rate of 1.67 cfs (~750 gpm).

The results of the Theis interference analysis indicates that WASH 8102/8089 could potentially experience about 30 to 90 feet of additional drawdown due to pumping the stacked maximum rate (1.67 cfs) 24/7/365 from WASH 62373 (see attached Theis analysis results). While this range of additional drawdown is relatively large compared to other evaluations, from available static water-level data it is likely that WASH 8102/8089 has approximately 350 to 380 feet of available drawdown. Thus it is unlikely that this additional drawdown estimated for WASH 8102/8089 would prevent it or other similarly-constructed wells in the area from receiving the groundwater to which they are legally entitled.

Conclusions – Potential Injury

The results of the potential injury evaluations completed for this review suggest that relatively low (~10-20 feet) to moderately-high (~30-90 feet) levels of additional drawdown might be imposed in area wells due to pumping of some of the proposed APOA. It should be noted, however, that these estimates were completed using very conservative operational parameters for the Theis analytical drawdown method: pumping a single well at the full allocated rate for 24 hours a day, 7 days a week, 365 days a year. Actual pump operation will likely not be this sustained, and/or could be rotated to different locations to distribute overall pumping stresses to the CRBG aquifer system.

Furthermore, from the 2009 aquifer test of WASH 62373 (“Well-2”) during which that well was pumped continuously for 47 hours at 465 gpm (~1 cfs), a total of 77 feet of drawdown was observed in adjacent WASH 7651 (“Well-1”), and only 2 feet in WASH 50693 (QVGC well) which is located about 3200 feet from WASH 62373. The results from the aquifer test generally confirm the conservative approach used for the Theis drawdown assessments, and that actual additional drawdown might be somewhat less than predicted, particularly for wells that penetrate the deeper of the two primary WBZ.

6. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another surface water source**?

☐ Yes ☒ No Comments: With the planned cased and sealed depth of about 200-250 feet for the proposed APOA not yet drilled, and 300 feet for proposed APOA WASH 62373, water-bearing interflow zone(s) will likely be from many tens to perhaps hundreds of feet below any nearby stream reaches. Consequently, it is unlikely that the proposed change would result in an increase in interference with local surface water sources.

b) If yes, at its maximum allowed rate of use, what is the expected change in degree of interference with any **surface water sources** resulting from the proposed change?

Stream: _____ ☐ Minimal ☐ Significant

Stream: _____ ☐ Minimal ☐ Significant

Provide context for minimal/significant impact: N/A

7. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly (as per OAR 690-380-2130) to the authorized point of diversion specified in the water use subject to transfer?

☐ Yes ☐ No Comments: N/A

8. What conditions or other changes in the application are necessary to address any potential issues identified above: To ensure that each proposed APOA obtains groundwater only from the currently-authorized aquifer source, the GW Section recommends conditioning the transfer so that all of the proposed APOA wells be limited to accessing only the two primary basalt WBZ present between approximate elevations -125 to -430 ft msl (which is based on the two general WBZ identified in WASH 62373 (“Well 2”) and nearby WASH 50693 (QVGC well)).

9. Any additional comments: None

ReferencesApplication T-14449 RA

Conlon, T.D., Wozniak, K.C., Woodcock, D., Herrera, N.B., Fisher, B.J., Morgan, D.S., Lee, K.K., and Hinkle, S.R., 2005, *Ground-water hydrology of the Willamette Basin, Oregon*, Scientific Investigations Report 2005-5168: U. S. Geological Survey, Reston, VA.

CwM-H2O, 2018. Banks-Green Mountain Aquifer Storage and Recovery Feasibility Study, prepared for City of Banks

Freeze, R.A. and Cherry, J.A., 1979, Groundwater, Prentice Hall, Englewood Cliffs, New Jersey, 604 p.

Gannett, M.W. and Caldwell, R., 1998, *Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington*, Professional Paper 1424-A, 32 p: U. S. Geological Survey, Reston, VA.

Golder Associates, 2009. Technical Memorandum: March 2009 Well #2 Aquifer Test Data Analysis.

Personal communication (also provided instrument specifications), Mike Schumacher (Pacific Surveys) to Justin Iverson (OWRD), January 24, 2025.

Theis, C.V., 1935, The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, American Geophysical Union Transactions, vol. 16, p. 519-524.

Summit Water Resources, 2025, Response to OWRD Groundwater Section Reviews, T-14449 and T-14450, memorandum dated March 28, 2025.

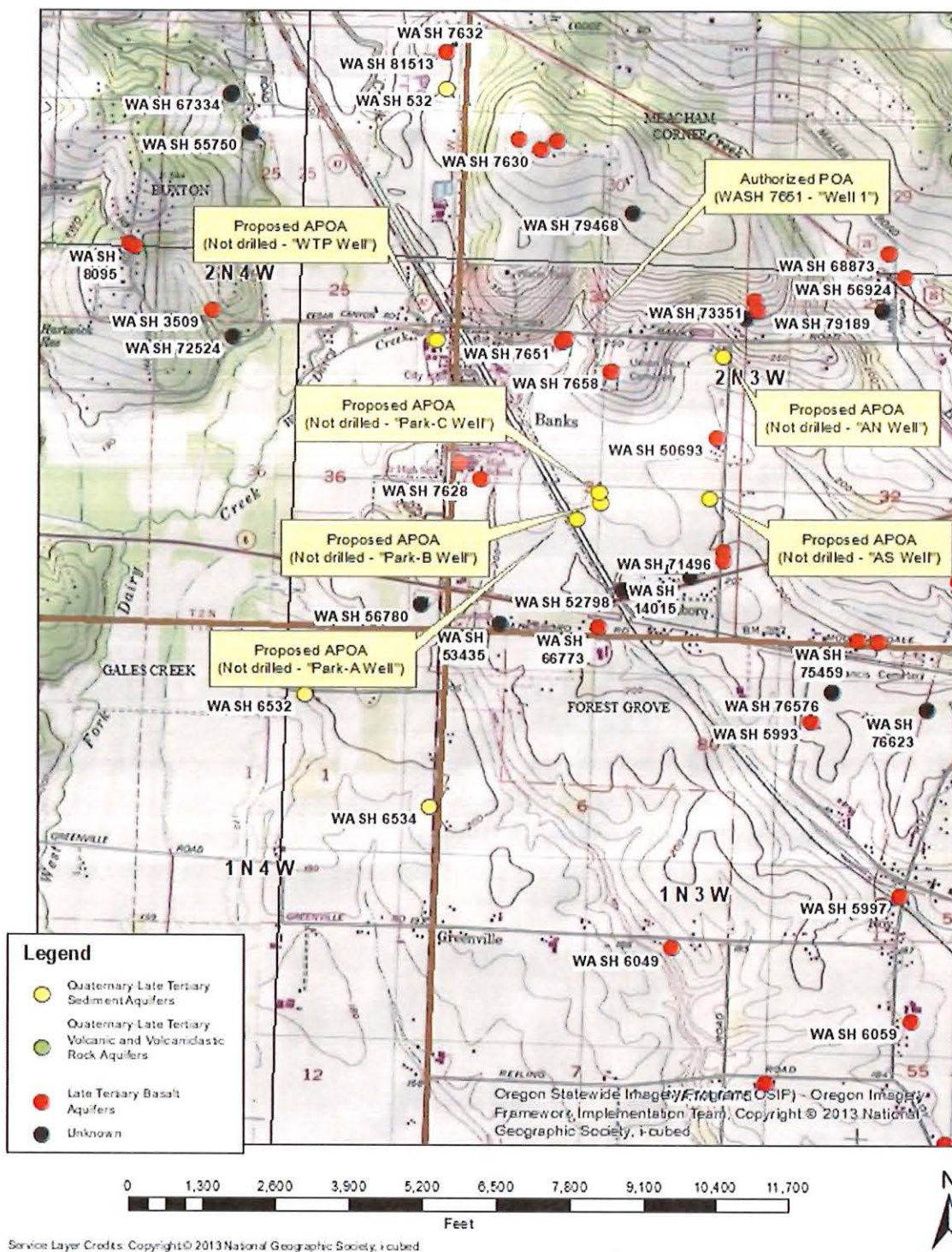
United States Geological Survey, 2013, National Elevation Dataset (NED) [DEM geospatial data]. 1/9th arc-second, updated 2013.

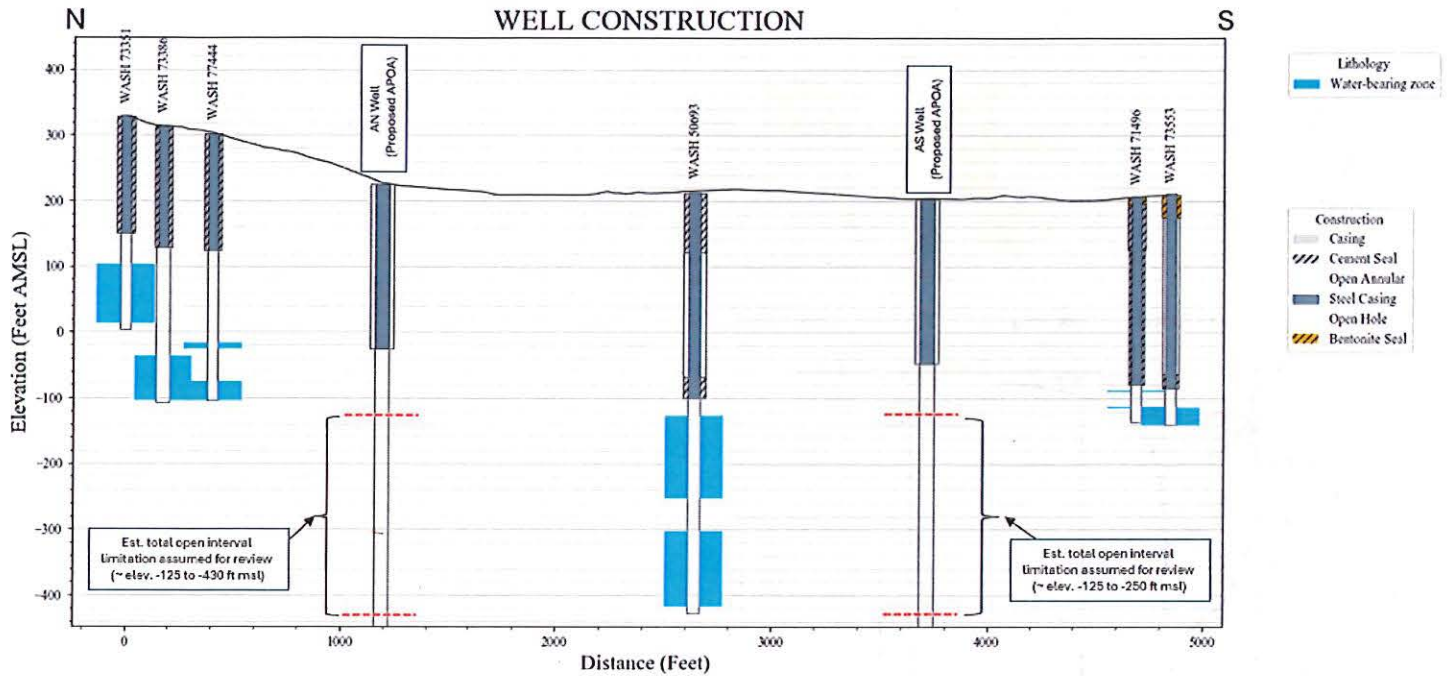
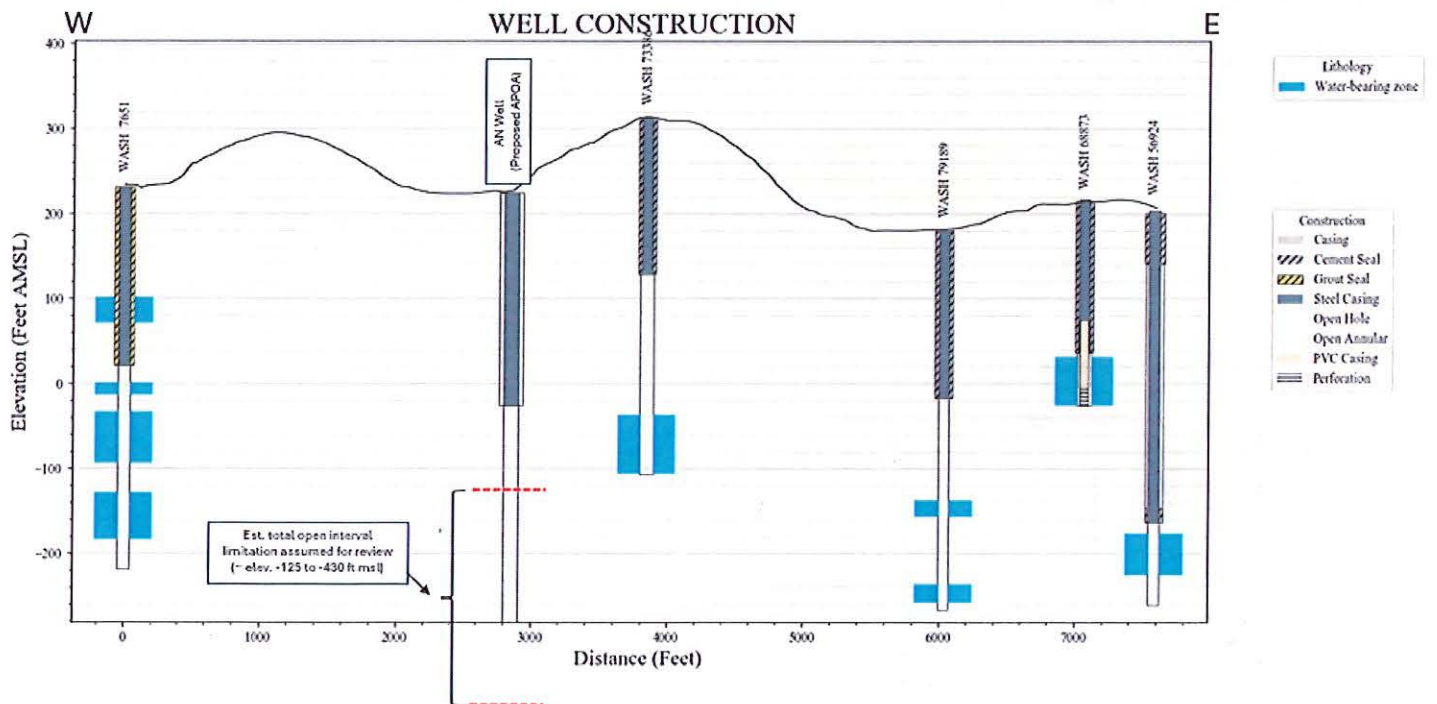
United States Geological Survey, 2017, Forest Grove *quadrangle*, Oregon [map], 1:24,000, 7.5 minute topographic series, U.S. Department of the Interior, Reston, VA.

Watershed Sciences, 2009, *LIDAR remote sensing data collection, Department of Geology and Mineral Industries, Willamette Valley Phase I, Oregon*: Portland, OR, December 21.

Woodward, D.G., Gannett, M.W., and Vaccaro, J.J., 1998, Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B, 82 p.

Application T-14449, City of Banks T2N, R3W



Cross-section 1: N-S, proposed APOA "AN Well" and "AS Well" and WASH 77444, WASH 50693**Cross-section 2: W-E, proposed APOA "AN Well" and WASH 79189, WASH 56924**

Theis Drawdown Analysis, Authorized POA WASH 7651 to WASH 79189

Theis Time-Drawdown Worksheet v.5.00

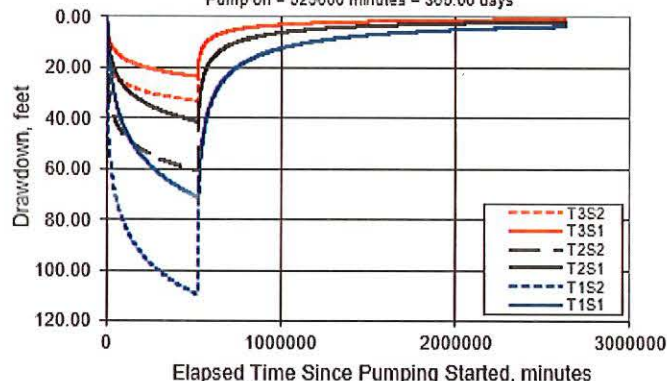
Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T radial distance, r , from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well:	r		5700		ft	Q conversions
Pumping rate	Q		0.67		cfs	300.70 gpm
Hydraulic conductivity	K	5	10	20	ft/day	0.67 cfs
Aquifer thickness	b		55		ft	40.20 cfm
Storativity	S_1		0.0001			57,888.00 cfd
	S_2		0.00001			1.33 a/d
Transmissivity Conversions	T_ft2pd	275	550	1100	ft2/day	
	T_ft2pm	0.190972	0.381944	0.763889	ft2/min	
	T_gpd/ft	2057	4114	8228	gpd/ft	Recalculate

Use the Recalculate button if recalculation is set to manual

Theis Drawdown and Recovery at $r = 5700$ ft From Pumping Well

Pump on = 525600 minutes = 365.00 days

**Theis Drawdown Analysis, Proposed APOA "AN Well" to WASH 79189**

Theis Time-Drawdown Worksheet v.5.00

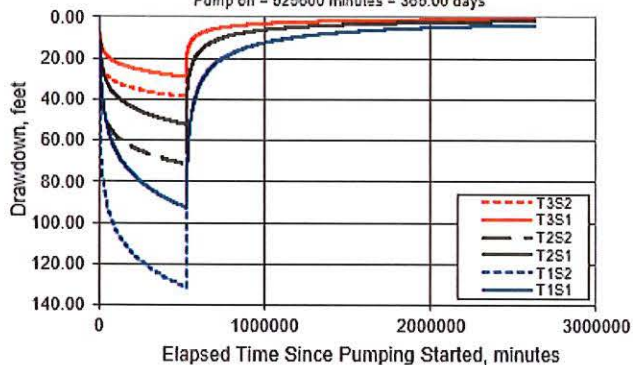
Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T radial distance, r , from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well:	r		3000		ft	Q conversions
Pumping rate	Q		0.67		cfs	300.70 gpm
Hydraulic conductivity	K	5	10	20	ft/day	0.67 cfs
Aquifer thickness	b		55		ft	40.20 cfm
Storativity	S_1		0.0001			57,888.00 cfd
	S_2		0.00001			1.33 a/d
Transmissivity Conversions	T_ft2pd	275	550	1100	ft2/day	
	T_ft2pm	0.190972	0.381944	0.763889	ft2/min	
	T_gpd/ft	2057	4114	8228	gpd/ft	Recalculate

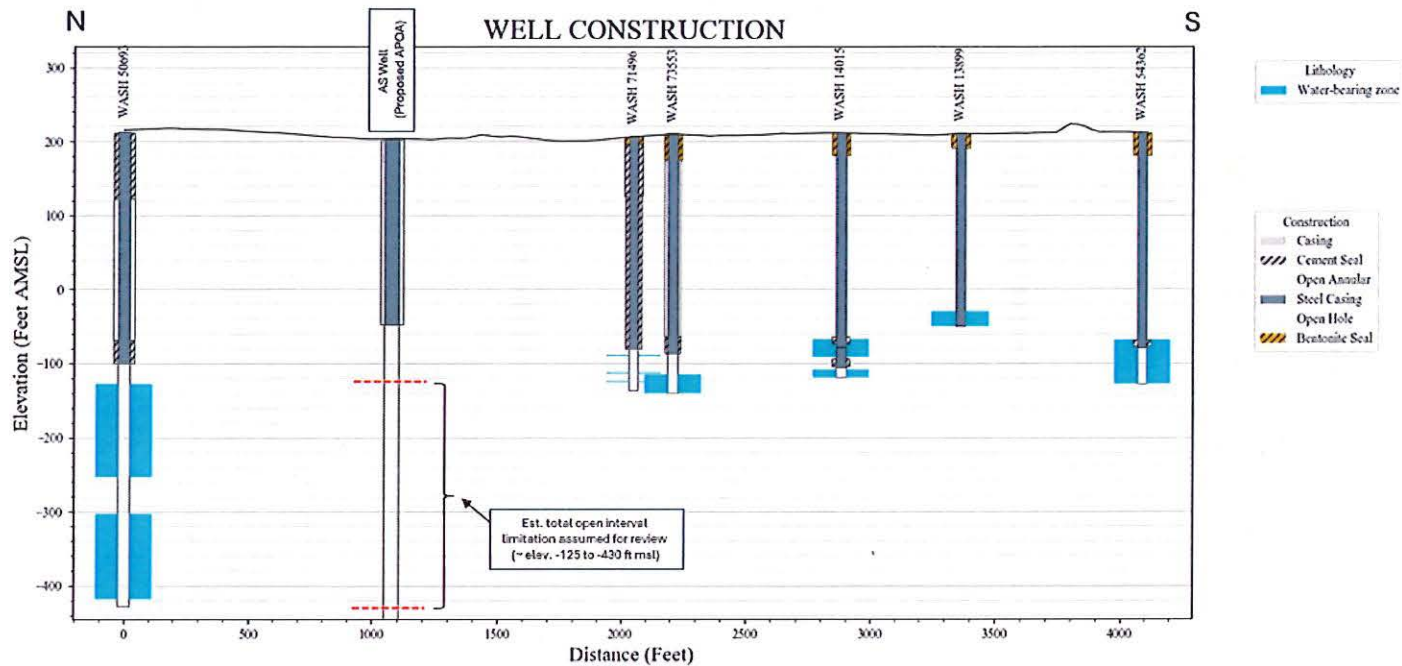
Use the Recalculate button if recalculation is set to manual

Theis Drawdown and Recovery at $r = 3000$ ft From Pumping Well

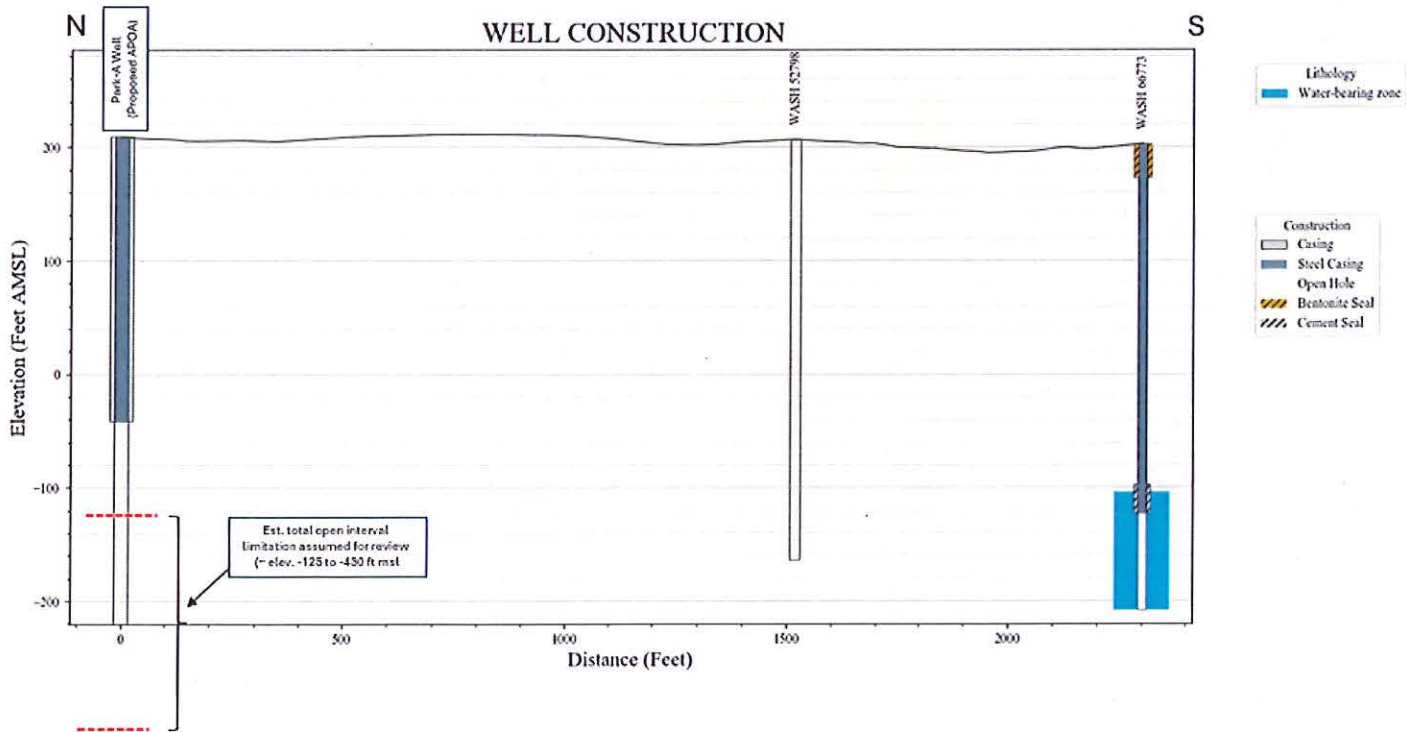
Pump on = 525600 minutes = 365.00 days

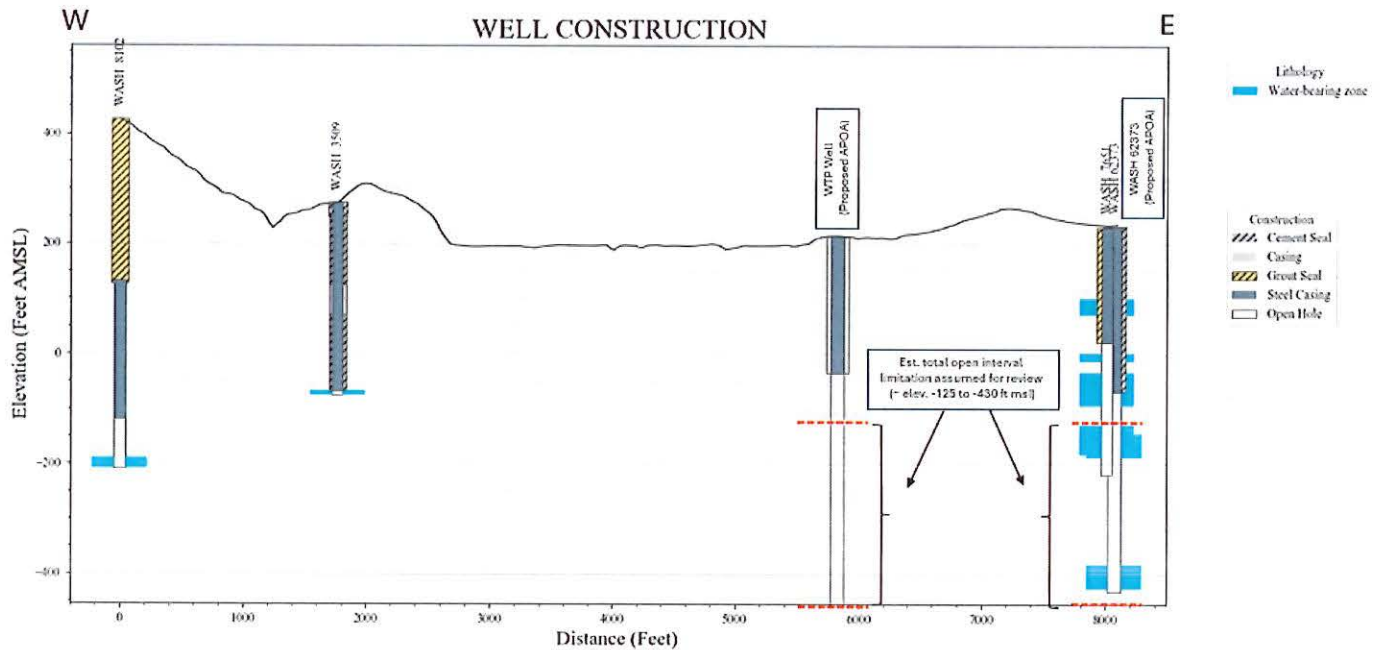


Cross-section 3: N-S, proposed APOA “AS Well” and WASH 50693, others



Cross-section 4: N-S, proposed APOA “Park-A Well” and WASH 52798



Cross-section 5: W-E, proposed APOA "WTP Well", WASH 62373 and WASH 8102/8909**Theis Drawdown Analysis, Authorized POA WASH 7651 to WASH 8102/8909****Theis Time-Drawdown Worksheet** v.5.00

Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T values and radial distance, r , from a pumping well for 3 different T values and 2 different S values.

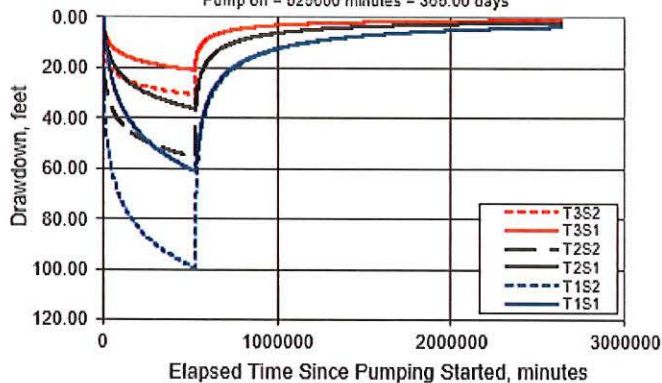
Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well:	r		7780		ft	Q conversions
Pumping rate	Q		0.67		cfs	300.70 gpm
Hydraulic conductivity	K	5	10	20	ft/day	0.67 cfs
Aquifer thickness	b		55		ft	40.20 cfm
Storativity	S_1		0.0001			57,888.00 cfd
	S_2		0.00001			1.33 a/d
Transmissivity Conversions	T ft ² /d	275	550	1100	ft ² /day	
	T ft ² /pm	0.190972	0.381944	0.763889	ft ² /min	
	T gpd/ft	2057	4114	8228	gpd/ft	
						Recalculate

Use the Recalculate button if recalculation is set to manual

Theis Drawdown and Recovery at $r = 7780$ ft From Pumping Well

Pump on = 625600 minutes = 365.00 days

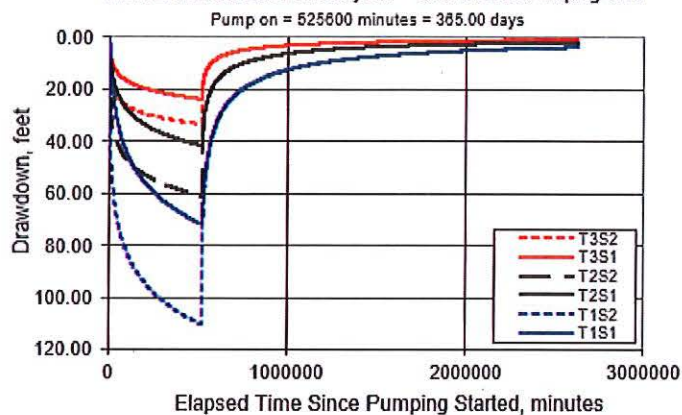


Theis Drawdown Analysis, Proposed APOA "WTP Well" to WASH 8102/8909

Theis Time-Drawdown Worksheet v.5.00
 Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T values and radial distance, r , from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well	r		5600		ft	Q conversions
Pumping rate	Q		0.67		cfs	300.70 gpm
Hydraulic conductivity	K	5	10	20	ft/day	0.67 cfs
Aquifer thickness	b		55		ft	40.20 cfm
Storativity	S_1		0.0001			57.888.00 cfd
	S_2		0.00001			1.33 a/d
Transmissivity Conversions	T ft ² /d	275	550	1100	ft ² /day	
	T ft ² /m	0.190972	0.381944	0.763889	ft ² /min	Recalculate
	T gpd/ft	2057	4114	8228	gpd/ft	

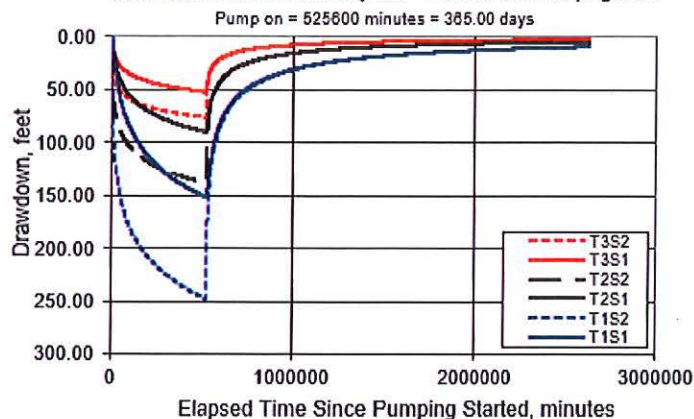
Use the Recalculate button if recalculation is set to manual

Theis Drawdown and Recovery at $r = 5600$ ft From Pumping Well**Theis Drawdown Analysis, Proposed APOA WASH 62373 to WASH 8102/8909**

Theis Time-Drawdown Worksheet v.5.00
 Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T values and radial distance, r , from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well	r		7780		ft	Q conversions
Pumping rate	Q		1.67		cfs	749.50 gpm
Hydraulic conductivity	K	5	10	20	ft/day	1.67 cfs
Aquifer thickness	b		55		ft	100.20 cfm
Storativity	S_1		0.0001			144.288.00 cfd
	S_2		0.00001			3.31 a/d
Transmissivity Conversions	T ft ² /d	275	550	1100	ft ² /day	
	T ft ² /m	0.190972	0.381944	0.763889	ft ² /min	Recalculate
	T gpd/ft	2057	4114	8228	gpd/ft	

Use the Recalculate button if recalculation is set to manual

Theis Drawdown and Recovery at $r = 7780$ ft From Pumping Well

Groundwater Transfer Review Summary Form

Transfer/PA # T- 14449

GW Reviewer Dennis Orłowski Date Review Completed: February 4, 2025

Summary of Same Source Review:

☒ The proposed change in point of appropriation is not within the same aquifer as per OAR 690-380-2110(2).

NOTE: currently-proposed construction details for six to-be-drilled APOA wells, in addition to an existing well also proposed as an APOA (WASH 62373), would lead to all of the proposed APOA wells obtaining groundwater from a primary deeper basalt water-bearing zone ("aquifer") that is not present in the authorized POA, WASH 7651. Resolving this discrepancy – i.e., ensuring the same source for all wells, in compliance with existing well construction regulations (OAR 690-200) - would require (1) revising planned construction details for the six TBD wells accordingly, and (2) completing retroactive well alterations (i.e., sealing off a deeper water-bearing zone) in existing well WASH 62373. This issue is discussed in detail throughout this review.

Summary of Water Level Decline Condition Review:

☐ Water levels at the original point(s) of appropriation have exceeded the allowed decline threshold defined by conditions in the originating water right.

Summary of Injury Review:

☐ The proposed transfer will result in another, existing water right not receiving previously available water to which it is legally entitled or result in significant interference with a surface water source as per 690-380-0100(3).

Summary of GW-SW Transfer Similarity Review:

☐ The proposed SW-GW transfer doesn't meet the definition of "similarly" as per OAR 690-380-2130.

This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations.



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1271
(503) 986-0900
www.wrd.state.or.us

Ground Water Review Form:

- ☐ Water Right Transfer
☒ Permit Amendment
☐ GR Modification
☐ Other

Application: T-14449

Applicant Name: City of Banks

Proposed Changes: ☐ POA ☒ APOA ☐ SW→GW ☒ RA
☐ USE ☐ POU ☐ OTHER

Reviewer(s): Dennis Orlowski

Date of Review: February 4, 2025

Date Reviewed by GW Mgr. and Returned to WRSD: JTI 2/7/25

The information provided in the application is insufficient to evaluate whether the proposed transfer may be approved because:

- ☐ The water well reports provided with the application do not correspond to the water rights affected by the transfer.
- ☐ The application does not include water well reports or a description of the well construction details sufficient to establish the ground water body developed or proposed to be developed.
- ☐ Other _____

1. Basic description of the changes proposed in this transfer: This proposed permit amendment relates to permit G-7593 which authorizes groundwater pumped from a single authorized POA (WASH 7651, "Well-1") for municipal uses by the City of Banks (maximum instantaneous pumping rate of 0.67 cfs, ~301 gpm).

This amendment proposes to add the following APOA to permit G-7593 (note that only one proposed APOA is an existing well (WASH 62373), whereas the others are proposed to-be-drilled (TBD)):

- WTP (Water Treatment Plant) well – TBD
- AN (Aerts Rd North) well – TBD
- AS (Aerts Rd South) well – TBD
- Park-A (Park Primary) well – TBD
- Park-B (Park Alternative) well – TBD
- Park-C (Park Alternative) well – TBD
- Well-2 (Behrman Well 2) – WASH 62373

Proposed APOA WASH 62373 ("Well-2") is also the single authorized POA for certificate 95849, which authorizes pumping (maximum 1.0 cfs) of groundwater for municipal use by the City of Banks. WASH 62373 is located only about 60 feet away from WASH 7651 ("Well-1").

2. Will the proposed POA develop the same aquifer (source) as the existing authorized POA?

☐ Yes ☒ No Comments: Authorized POA WASH 7651 is 450 feet deep, with an open interval from 210 to 450 ft below land surface (bls), and obtains groundwater from water-bearing interflow zones within the Columbia River Basalt Group aquifer system (Conlon and others, 2005; Gannett and Caldwell, 1998). The well log for WASH 7651 indicates that greater than 90 percent of inflow to the well (~325 gpm) was estimated to be from a lower water-bearing zone (WBZ) from 360-415 ft bls; shallower interflow zones between 230 and 325 ft bls were estimated to provide only about 25 gpm to WASH 7651. Consequently, in WASH 7651 the lower interflow zone between 360-415 ft bls is considered to be the primary source of groundwater to this well.

As currently proposed, all of the APOA for this application would obtain groundwater from an even deeper discrete WBZ that is not present in the authorized POA WASH 7651 (i.e., a different source). Resolving this discrepancy would require modifications to existing and planned construction for the APOA, as discussed in the following sections.

Source Evaluation: Proposed APOA – WASH 62373 ("Well-2")

Proposed APOA WASH 62373 ("Well-2") is 665 feet deep, with an open interval between 300 and 665 ft bls within the CRGB aquifer system. According to the WASH 62373 well log and additional documents provided by the applicant's agent (CwM-H2O, 2018), there are two principal water-bearing interflow zones in this well: 378-468 ft bls (est. 350 gpm) and 615-660 ft bls (est. 300 gpm). The uppermost interflow, or water-bearing zone (WBZ), generally corresponds to the primary zone in authorized POA WASH 7651 (360-415 ft bls). However, the lower WBZ in WASH 62373 is not present in the shallower authorized POA (WASH 7651).

Transfer application T-14449 provided attached documentation ("Interpretation of Basalt Water-Bearing Zones in the Area of Banks, Oregon") that provides additional information intended to support "...the development of all basalt WBZs encountered to a depth of 665 feet below ground surface (bgs) as one aquifer unit" (emphasis added). The information provided consists of (1) recent geophysical evidence (video survey, caliper log, spinner logs, temperature log); (2) evidence from area water well reports of equivalent static water levels; and (3) evidence from recent water level elevations: wells 1 and 2.

OWRD has reviewed this additional documentation and concludes that it does not support the applicant's request to consider "all basalt WBZs encountered to a depth of 665 feet bgs as one aquifer unit." Instead, OWRD finds the preponderance of the evidence supports a finding that the two WBZs in WASH 62373 are discretely different aquifer sources.

OWRD comments on the supplemental application documents, and our rationale for considering the presence of two discrete aquifers in WASH 62373, are as follows:

- (1) The spinner log instrumentation used for the 2017 geophysical survey conducted in WASH 62373 has a low-flow measurement threshold of <1.0 ft/minute (pers. comm., Pacific Surveys, 1/24/2025). In WASH 62373 this threshold would equate to a potential vertical flow in the borehole of approximately 6 gpm; this flow rate is that which could exist within the borehole without being detectable by the spinner log instrumentation used for the survey of WASH 62373. The presence of *any* vertical flow in a borehole under otherwise static conditions (i.e., non-pumping) indicates a head differential between successive WBZ, which in turn indicates that each WBZ behaves as a separate “aquifer” (source).

Because vertical flow might exist in WASH 62373 that is below the threshold detection limit of the spinner log device, the interpreted results of this survey do **not** prove conclusively that the two primary WBZ in this well (378-468 ft bls and 615-660 ft bls) behave as “one aquifer unit.”

- (2) The application attachment asserts that the well logs for WASH 62373, nearby WASH 50693 (Quail Valley Golf Course well), and other nearby basalt wells did not indicate changes in static water levels as the wells were being drilled through multiple water-bearing zones. If present, such head changes would indicate a vertical gradient and resultant vertical flow between WBZs, which in turn would imply that each WBZ was a discretely different aquifer. Conversely, no head changes between WBZ would suggest a single aquifer unit.

However, while observed head changes during drilling *can* be an indication of different aquifers/discrete WBZs, particularly if the change is relatively large (e.g., at least several feet), the absence of such observed changes is *not* conclusive proof of a single “aquifer unit” comprised of multiple WBZs, for the following reasons: (1) in cases where the actual head differences between WBZ are relatively small (e.g., 1-2 feet), such differences might not be discernible during typically disruptive drilling activities; (2) when drilling through multiple WBZ, the head in the well becomes a composite of various heads under dynamic conditions (with interflow occurring through the borehole); thus it can be impossible to quantify, or even discern, any head changes attributable to a single WBZ; (3) pumping of other nearby CRBG wells could affect water levels measured in the well being drilled (both WASH 62373 and WASH 50693 were drilled primarily in April and May of 2005 and 1996, respectively, which is within the irrigation pumping period for this basin).

- (3) After recently completing an elevation survey of the wellheads of both WASH 7651 (“Well-1”) and WASH 62373 (“Well-2”), the application states that static water level elevations between the wells “differed by 0.62 – 1.12 feet.” This range is comprised of three rounds of contemporaneous measurements made in both wells on March 15th, April 7th, and October 13th, 2023 (T-14449 application attachment).

A similar range of head differences between WASH 7651 and WASH 62373 was measured more recently in February and March of 2024, at 0.7 ft and 1.0 ft, respectively. As reported to OWRD, these measurements were made when the WASH 62373 pump had been idle for at least 24 hours for the February reading, and at least 7 days for the March measurement (for the March 2024 measurement in WASH 7651 it was reported that the pump had been pulled for replacement, and had not been pumped for at least one year) (T-14449 application attachment).

The range of reported static water level differences between WASH 7651 and WASH 62373, though relatively small, indicates the presence of a vertical gradient between the two major WBZ intersected by the wells. This vertical gradient in turn indicates that the two WBZ in WASH 62373 behave as discrete aquifers as defined by different head conditions.

Source Evaluation: Proposed APOA – TBD (six well locations)

The other six proposed APOA that are not yet drilled are planned to be approximately 650 to 750 feet deep, and cased and sealed to about 200-250 ft bls; consequently, the open intervals in these proposed TBD APOA wells could range from approximately 400 to 550 feet.

Because authorized POA WASH 7651 obtains groundwater primarily from the WBZ at 360-415 ft bls, all other proposed APOA are to be limited to obtaining groundwater from only that same source. However, the currently-proposed construction for the six TBD APOA wells (i.e., both the large potential range of open intervals and total depths) would also include discrete deeper WBZ that are not present in WASH 7651.

The primary WBZ present in WASH 7651 is also present in WASH 62723 and WASH 50693 (QVGC well). From information available from these three well logs, this primary WBZ exists from approximately elevation -125 to -250 ft msl in the vicinity of these and the other proposed APOA locations.

To ensure that each proposed APOA obtains groundwater only from the currently-authorized aquifer source, all of the proposed APOA wells will be limited to accessing only the basalt interflow/WBZ present between approximate elevations -125 to -250 ft msl. For the six proposed APOA not yet drilled, this will require corresponding reductions in planned total well depths, as well as revisions to the cased and sealed intervals. For proposed APOA WASH 62373, compliance would require sealing the lower WBZ in that well, with a total resultant well depth at/near elevation -250 ft msl (equal to about 485 feet bls at that location).

The following technical analyses was completed assuming these revisions to the proposed APOA wells (i.e., each accessing *only* the WBZ present from approximately elevation -125 to -250 ft msl).

3. a) Is the existing authorized POA subject to a water level decline condition?

☐ Yes ☒ No

Comments: The authorized POA, WASH 7651, is not subject to water decline conditions under permit G-7593.

- b) If yes, for each POA identify the reference level, most recent spring-high water level, and whether an applicable permit decline condition has been exceeded: N/A

4. a) Is there more than one source developed under the right (e.g., basalt and alluvium)?
☐ Yes ☒ No Comments: The potential for commingling sources (i.e., multiple discrete WBZ/aquifers within the local CRBG aquifer system) can be avoided by implementing the changes to planned and existing well construction (for WASH 62373) discussed in Section 2 of this review.
- b) If yes, estimate the portion of the right supplied by each of the sources and describe any limitations that will need to be placed on the proposed change (rate, duty, etc.): N/A
5. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with another ground water right?
☒ Yes ☐ No Comments: Relative to the location of authorized POA WASH 7651, several of the proposed APOA locations are nearer to existing groundwater rights. Thus, this proposed change will likely result in an increase in interference with those rights.
- b) If yes, would this proposed change, at its maximum allowed rate of use, likely result in another groundwater right not receiving the water to which it is legally entitled?
☐ Yes ☒ No If yes, explain: Each of the proposed APOA locations was evaluated for potential injury to applicable existing groundwater rights. For relevant evaluations, the Theis distance-drawdown analysis was performed to estimate the degree of additional interference at the nearest applicable existing well (Theis, 1935). The ranges of aquifer parameter values used were derived primarily from results of a 2009 aquifer test completed in proposed APOA WASH 62373 (Golder Associates, 2009) and in another separate test of WASH 50693 (QVGC well), as well as published values (Conlon et al., 2005; Gannett and Caldwell, 1998).

Potential Injury Evaluation: Proposed APOA "AN Well" and WASH 77444, WASH 79189, WASH 56924

Relative to authorized POA WASH 7651, the proposed APOA "AN Well" location is approximately 2500 feet nearer to WASH 77444 (WASH 73386 and WASH 73351 are also near WASH 77444). The "AN Well" as assessed (i.e., limited to the WBZ between elevation ~-125 to -250 ft msl) might impose additional drawdown interference in WASH 77444 and other nearby wells of similar completion.

The key WBZ in WASH 77444 (between elev. ~-20 to -105 ft msl) is above the assessed WBZ in the "AN Well" (between elev. ~-125 to -250 ft msl); nearby WASH 73386 is similarly completed (see attached cross-section 1). However, because WASH 77444 and WASH 73386 are located at a higher ground surface elevation than the "AN Well" location, it is possible that the WBZ in the two locations is approximately the same basalt interflow grouping, but has been vertically offset by faulting between the two locations (the fact that existing geologic maps do not show a fault at this location does not preclude the possible existence of one). Faults typically truncate basalt interflow zones/WBZ, which would reduce or eliminate hydraulic connection between wells on either side of the fault. Whether or not a fault is present at this location, it is likely that there is **not** an efficient hydraulic connection (or any whatsoever) between the "AN Well" and WASH 77444, WASH 73386, or other nearby wells of similar completion, and thus those wells are unlikely to be injured due to the proposed use of the "AN Well."

Farther to the east, the completion depths and open intervals of other wells are similar to authorized POA WASH 7651, in particular WASH 79189 and WASH 56924. These wells obtain groundwater from approximately the same primary WBZ present in WASH 7651 and are thus more likely to be adversely affected by pumping at the "AN Well" location (see attached cross-section 2).

Relative to the location of authorized POA WASH 7651, the proposed location for the "AN Well" is about 2700 feet nearer to WASH 79189. The results of the Theis interference analysis indicates that additional interference in WASH 79189 could potentially range from about 10 to 20 feet due to pumping the maximum rate (0.67 cfs) 24/7/365 from the "AN Well" (see attached Theis analysis results). Limited water level data from other nearby wells (WASH 56924) indicates that the static water level in WASH 79189 likely ranges from about elevation 180 to 200 ft msl, which would provide roughly 200 feet or more of available drawdown in both it and existing wells of similar completion (i.e., those wells that fully penetrate the upper WBZ present in WASH 7651). This approximate range of available drawdown should be sufficient to support ongoing usage of these wells with the change proposed by this application (i.e., the change will not prevent those wells from receiving the groundwater to which they are legally entitled).

Potential Injury Evaluation: Proposed APOA "AN Well" and WASH 50693

Pumping of the "AN Well" could also affect WASH 50693, the Quail Valley Golf Course well which is an authorized POA for a supplemental irrigation water right (certificate 91527). Relative to authorized POA WASH 7651, the "AN Well" location is about 1750 nearer to WASH 50693. However, during the 2009 aquifer test of WASH 62373, which is located adjacent to WASH 7651 and is constructed more like WASH 50693 (both access a key deeper WBZ that is not present in the shallower WASH 7651), only about 2 feet of additional drawdown was measured in WASH 50693 (Golder Associates, 2009). Because the assessed construction for the "AN Well" would be shallower than WASH 62373, even less drawdown would be expected in WASH 50693; thus it is unlikely that pumping of the "AN Well" would negatively affect the current usage of WASH 50693.

Potential Injury Evaluation: Proposed APOA "AS Well" and WASH 71496, WASH 73553, WASH 50693

Relative to the location of authorized POA WASH 7651, the proposed location for APOA "AS Well" is about 3600-3800 feet nearer to WASH 71496, WASH 73553 and several other domestic wells in the area. However, all of these existing wells are relatively shallow with the borehole bottoms very near, or just above, the recommended casing/seal depth elevation for all of the proposed APOA (at about -125 ft msl) (see attached cross-section 3). It is also notable that some of these same nearby wells only access the uppermost portions of the CRBG in this area, i.e., likely the flow top at the contact between alluvial sediments and the underlying basalt, and do not extend deeper into the same or another WBZ (such wells are considered by OWRD to be "alluvial aquifer" wells and not "CRBG aquifer" wells). Because these existing wells do not fully penetrate the upper WBZ present between approximately elevation -125 to -250 ft msl, or are considered to be "alluvial wells" despite partial penetration into the upper basalt unit, an injury determination would not be made due to the proposed use of the "AS Well."

Relative to the location of authorized POA WASH 7651, the proposed location for APOA "AS Well" is also much nearer to WASH 50693, the QVGC well. However, as discussed previously for the "AN Well", it is also unlikely that the proposed use of the "AS Well" will prevent WASH 50693 from receiving the groundwater to which it is legally entitled, for the same stated reasons.

Potential Injury Evaluation: Proposed APOA "Park-A Well" and WASH 52798, WASH 66773

Of the three "Park" wells proposed as APOA, the location for the "Park-A Well" is nearest to the known locations of existing wells. Relative to authorized POA WASH 7651, the "Park-A Well" location is approximately 3000 feet nearer to WASH 52798, an exempt domestic use well. WASH 52798 is reportedly 370 feet deep, but the log does not provide any other information related to well construction or local lithology (see attached cross-section 4).

However, nearby WASH 66773 is a comparable depth (410 feet deep), and like all other nearby wells of similar depth, obtains groundwater from the CRBG aquifer system. The WASH 66773 log shows a 2008 static water level elevation of 167 ft msl (depth 35 ft bgs); a similar current static water level assumed for WASH 52798 and other nearby wells indicates that these wells likely have about 200-300 feet of available drawdown. This approximate range of available drawdown should be sufficient to support ongoing usage of these wells with the change proposed by this application (i.e., pumping of the "Park-A Well" will not prevent those wells from receiving the groundwater to which they are legally entitled).

Potential Injury Evaluation: Proposed APOA "WTP Well" and WASH 8102/8089

There are several known wells relatively close to the proposed location for the "WTP Well"; however, current OWRD records indicate that these particular wells are owned by the City of Banks, and are associated with irrigation of school grounds (WASH 77871, WASH 7628, WASH 7621, WASH 3184). Consequently, it is assumed that the City can manage potential adverse interference to these existing wells resulting from pumping at the "WTP Well" location.

Relative to authorized POA WASH 7651, the proposed "WTP Well" location is approximately 2200 feet nearer to WASH 8102/8089, which is an authorized POA for quasi-municipal use by the Star Satellite Improvement District (permit G-7903). The open borehole portion of WASH 8102/8089 extends from about elevation -115 to -210 ft msl, which generally corresponds to the -125 to -250 ft msl interval stipulated for the proposed APOA wells (see attached cross-section 5).

The results of the Theis interference analysis indicates that WASH 8102/8089 could potentially experience about 5 to 10 feet of additional drawdown due to pumping the maximum rate (0.67 cfs) 24/7/365 from the "WTP Well" (see attached Theis analysis results). It is unlikely that this small additional drawdown estimated for WASH 8102/8089 would prevent it or other similarly-constructed wells in the area from receiving the groundwater to which they are legally entitled.

Potential Injury Evaluation: Proposed APOA WASH 62373 and WASH 8102/8089

WASH 62373 is a current City of Banks well authorized for year-round municipal use, pumping at a maximum instantaneous rate of 1.0 cfs (~450 gpm) (certificate 95849). As a proposed APOA for this application, WASH 62373 would be authorized to pump a stacked rate of 1.67 cfs (~750 gpm). However, for this particular transfer application, WASH 62373 would require major modifications (i.e., additional well sealing) to ensure that it would obtain groundwater only from the shallower WBZ in the authorized POA WASH 7651, or that WBZ from approximately elevation -125 to -250 ft msl (see attached cross-section 5).

The results of the Theis interference analysis indicates that WASH 8102/8089 could potentially experience about 30 to 90 feet of additional drawdown due to pumping the stacked maximum rate (1.67 cfs) 24/7/365 from WASH 62373 (see attached Theis analysis results). While this range of additional drawdown is relatively large compared to other evaluations, from available static water-level data it is likely that WASH 8102/8909 has approximately 350 to 380 feet of available drawdown. Thus it is unlikely that this additional drawdown estimated for WASH 8102/8089 would prevent it or other similarly-constructed wells in the area from receiving the groundwater to which they are legally entitled.

Conclusions: the results of the potential injury evaluations completed for this review suggest that relatively low (~10-20 feet) to moderately-high (~30-90 feet) levels of additional drawdown might be imposed in area wells due to pumping of some of the proposed APOA. It should be noted, however, that these estimates were completed using very conservative operational parameters for the Theis analytical drawdown method: pumping a single well at the full allocated rate for 24 hours a day, 7 days a week, 365 days a year. Actual pump operation will likely not be this sustained, and/or could be rotated to different locations to distribute overall pumping stresses to the CRBG aquifer system.

Furthermore, from the 2009 aquifer test of WASH 62373 ("Well-2") during which that well was pumped continuously for 47 hours at 465 gpm (~1 cfs), a total of 77 feet of drawdown was observed in adjacent WASH 7651 ("Well-1"), and only 2 feet in WASH 50693 (QVGC well) which is located about 3200 feet from WASH 62373. The results from the aquifer test generally confirm the conservative approach used for the Theis drawdown assessments, and that actual additional drawdown might be somewhat less than predicted, particularly for wells that penetrate the deeper of the two primary WBZ (at ~615 to 660 ft bls).

6. a) Will this proposed change, at its maximum allowed rate of use, likely result in an increase in interference with **another surface water source**?

☐ Yes ☒ No Comments: With the planned cased and sealed depth of about 200-250 feet for the proposed APOA not yet drilled, and 300 feet for WASH 62373, water-bearing interflow zone(s) will likely be from many tens to perhaps hundreds of feet below any nearby stream reaches. Consequently, it is unlikely that the proposed change would result in an increase in interference with local surface water sources.

b) If yes, at its maximum allowed rate of use, what is the expected change in degree of interference with any **surface water sources** resulting from the proposed change?

Stream: _____

☐ Minimal ☐ Significant

Stream: _____

☐ Minimal ☐ Significant

Provide context for minimal/significant impact: N/A

7. For SW-GW transfers, will the proposed change in point of diversion affect the surface water source similarly (as per OAR 690-380-2130) to the authorized point of diversion specified in the water use subject to transfer?
☐ Yes ☐ No Comments: N/A
8. What conditions or other changes in the application are necessary to address any potential issues identified above: To ensure that each proposed APOA obtains groundwater only from the currently-authorized aquifer source, all of the proposed APOA wells will be limited to accessing only the WBZ present in WASH 7561 between approximate elevations -125 to -250 ft msl. For the six proposed APOA not yet drilled, this will require corresponding reductions in planned total well depths, as well as possible revisions to the cased and sealed intervals. For existing proposed APOA WASH 62373, compliance would require sealing the lower WBZ in that well, with a total resultant well depth at/near elevation -250 ft msl (about 485 feet bls at that location).
9. Any additional comments: None

References

Application T-14449 RA

Conlon, T.D., Wozniak, K.C., Woodcock, D., Herrera, N.B., Fisher, B.J., Morgan, D.S., Lee, K.K., and Hinkle, S.R., 2005, *Ground-water hydrology of the Willamette Basin, Oregon*, Scientific Investigations Report 2005-5168: U. S. Geological Survey, Reston, VA.

CwM-H2O, 2018. Banks-Green Mountain Aquifer Storage and Recovery Feasibility Study, prepared for City of Banks

Freeze, R.A. and Cherry, J.A., 1979, *Groundwater*, Prentice Hall, Englewood Cliffs, New Jersey, 604 p.

Gannett, M.W. and Caldwell, R., 1998, *Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington*, Professional Paper 1424-A, 32 p: U. S. Geological Survey, Reston, VA.

Golder Associates, 2009. Technical Memorandum: March 2009 Well #2 Aquifer Test Data Analysis.

Personal communication (also provided instrument specifications), Mike Schumacher (Pacific Surveys) to Justin Iverson (OWRD), January 24, 2025.

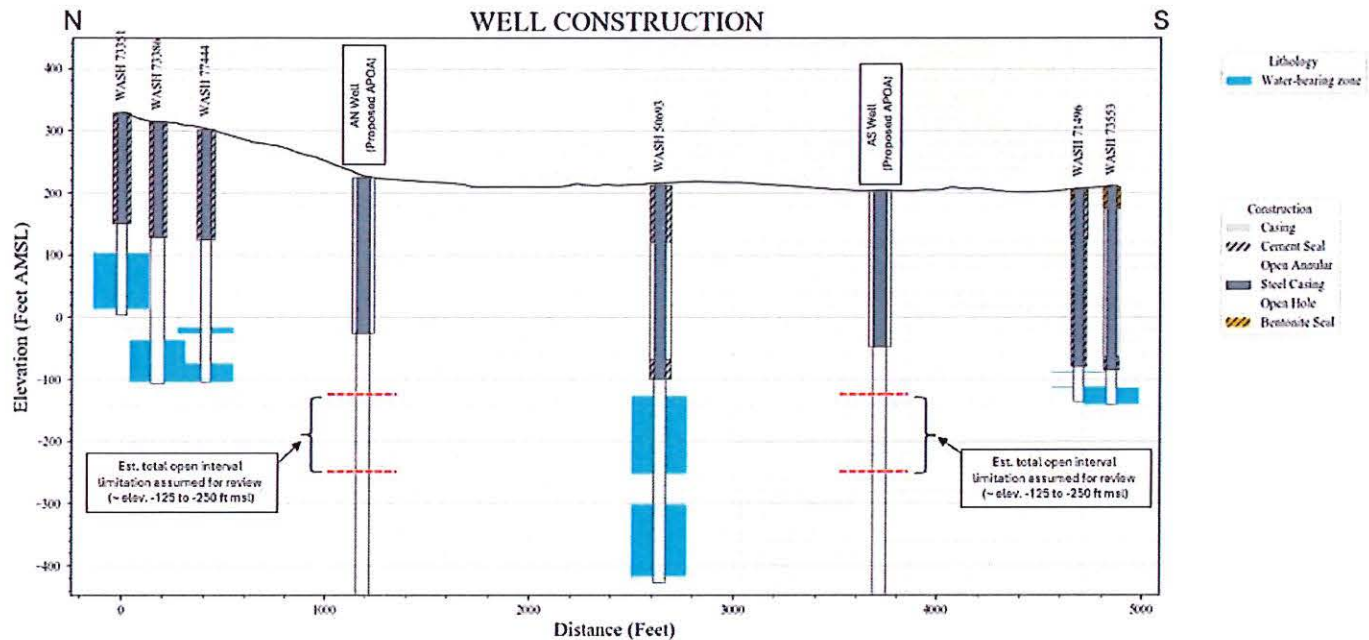
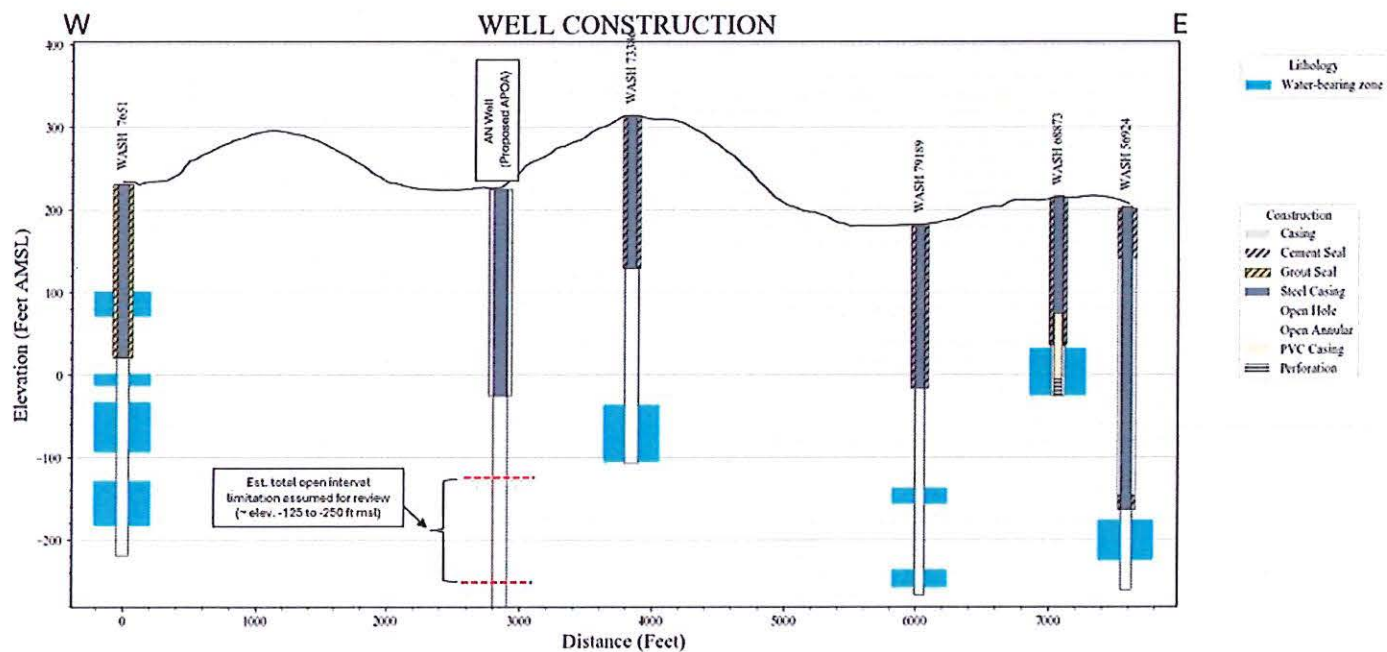
Theis, C.V., 1935, The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, *American Geophysical Union Transactions*, vol. 16, p. 519-524.

United States Geological Survey, 2013, National Elevation Dataset (NED) [DEM geospatial data]. 1/9th arc-second, updated 2013.

United States Geological Survey, 2017, Forest Grove *quadrangle*, Oregon [map], 1:24,000, 7.5 minute topographic series, U.S. Department of the Interior, Reston, VA.

Watershed Sciences, 2009, *LIDAR remote sensing data collection, Department of Geology and Mineral Industries, Willamette Valley Phase I, Oregon*: Portland, OR, December 21.

Woodward, D.G., Gannett, M.W., and Vaccaro, J.J., 1998, Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington: U.S. Geological Survey Professional Paper 1424-B, 82 p.

Cross-section 1: N-S, proposed APOA "AN Well" and "AS Well" and WASH 77444, WASH 50693**Cross-section 2: W-E, proposed APOA "AN Well" and WASH 79189, WASH 56924**

Theis Drawdown Analysis, Authorized POA WASH 7651 to WASH 79189

Theis Time-Drawdown Worksheet v.5.00

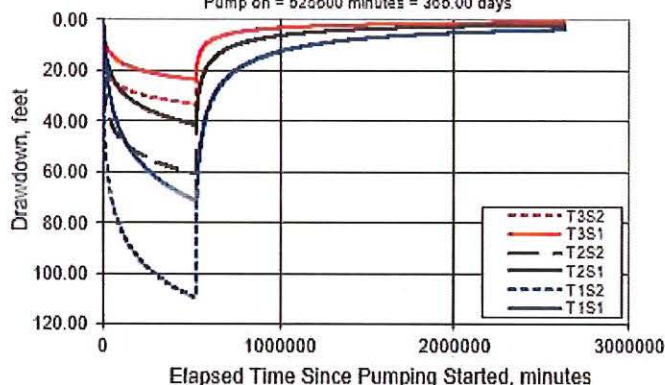
Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T radial distance, r , from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well	r		5700		ft	Q conversions
Pumping rate	Q		0.67		cfs	300.70 gpm
Hydraulic conductivity	K	5	10	20	ft/day	0.67 cfs
Aquifer thickness	b		55		ft	40.20 cfm
Storativity	S_1		0.0001			57,888.00 cfd
	S_2		0.00001			1.33 af/d
Transmissivity Conversions	T_{f2pd}	275	550	1100	ft ² /day	
	T_{f2pm}	0.190972	0.381944	0.763889	ft ² /min	
	T_{gdpft}	2057	4114	8228	gpd/ft	Recalculate

Use the Recalculate button if recalculation is set to manual

Theis Drawdown and Recovery at $r = 5700$ ft From Pumping Well

Pump on = 525600 minutes = 365.00 days

**Theis Drawdown Analysis, Proposed APOA "AN Well" to WASH 79189**

Theis Time-Drawdown Worksheet v.5.00

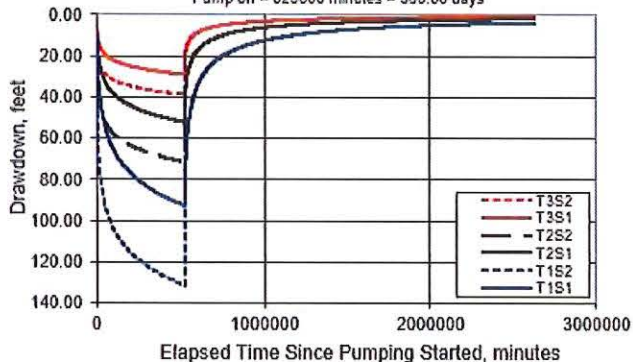
Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T radial distance, r , from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well	r		3000		ft	Q conversions
Pumping rate	Q		0.67		cfs	300.70 gpm
Hydraulic conductivity	K	5	10	20	ft/day	0.67 cfs
Aquifer thickness	b		55		ft	40.20 cfm
Storativity	S_1		0.0001			57,888.00 cfd
	S_2		0.00001			1.33 af/d
Transmissivity Conversions	T_{f2pd}	275	550	1100	ft ² /day	
	T_{f2pm}	0.190972	0.381944	0.763889	ft ² /min	
	T_{gdpft}	2057	4114	8228	gpd/ft	Recalculate

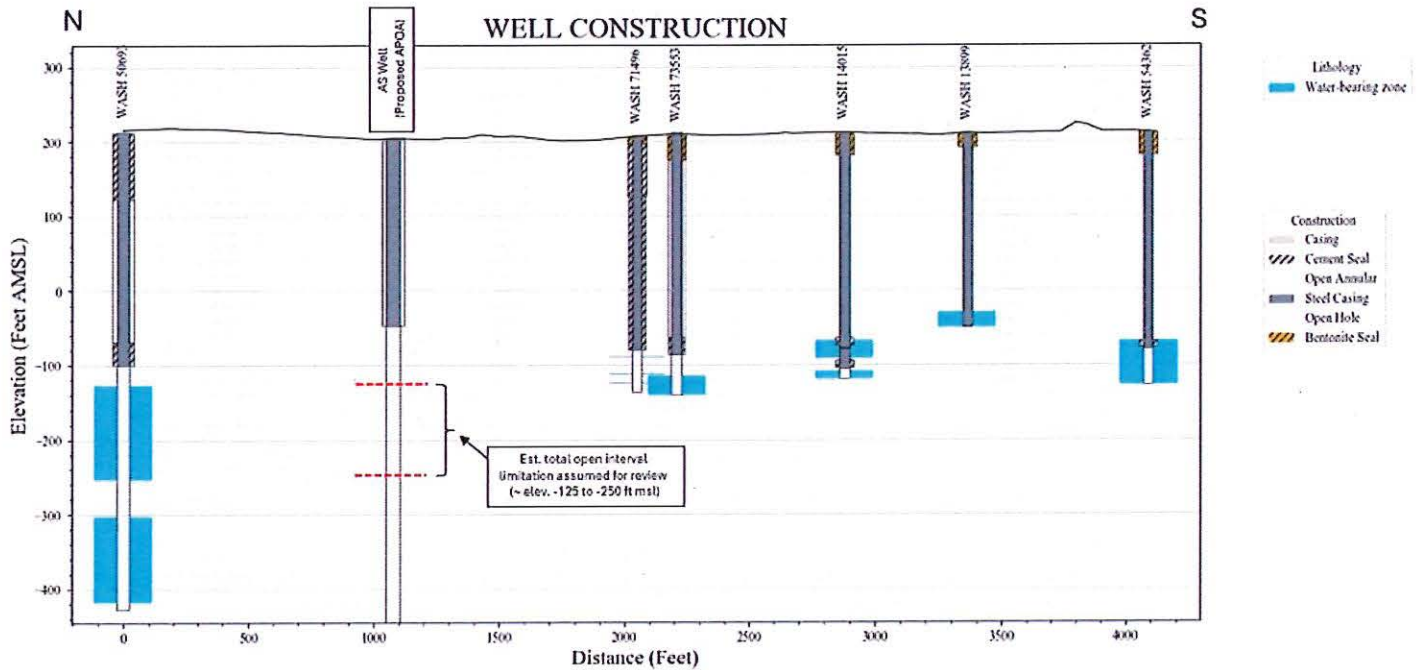
Use the Recalculate button if recalculation is set to manual

Theis Drawdown and Recovery at $r = 3000$ ft From Pumping Well

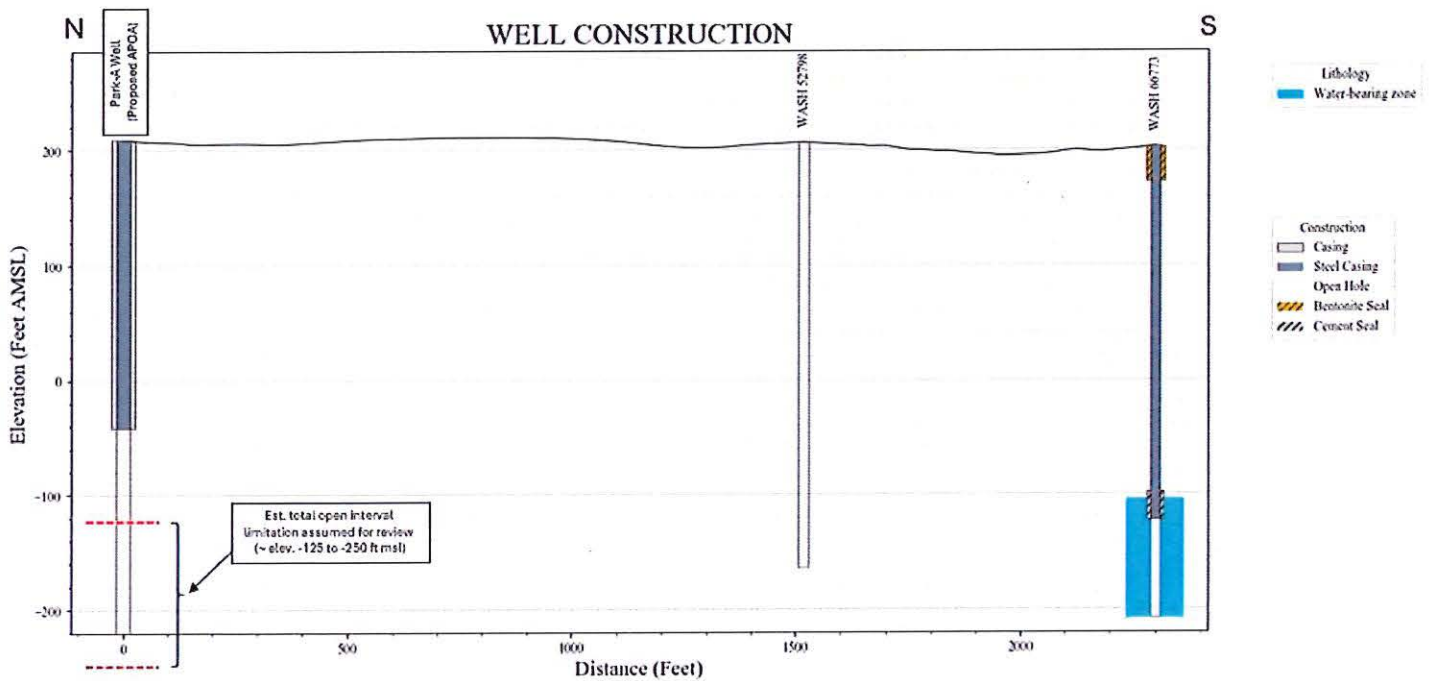
Pump on = 525600 minutes = 365.00 days

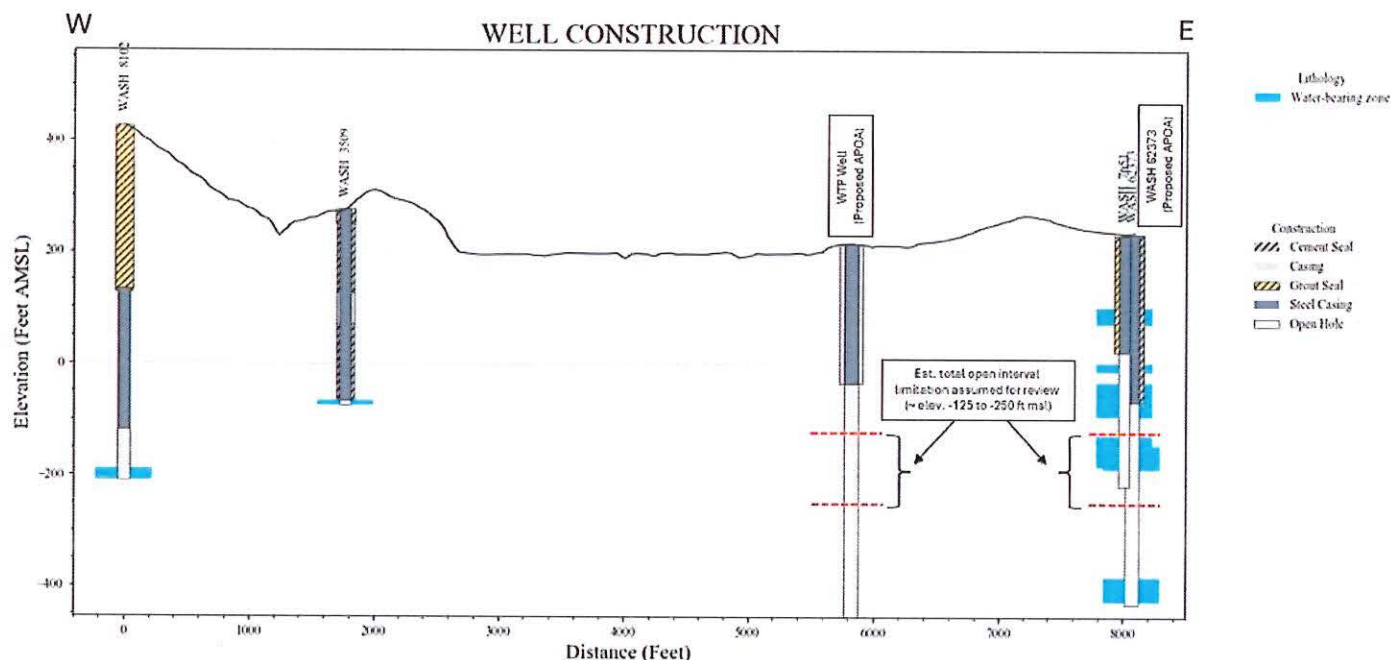


Cross-section 3: N-S, proposed APOA "AS Well" and WASH 50693, others



Cross-section 4: N-S, proposed APOA "Park-A Well" and WASH 52798



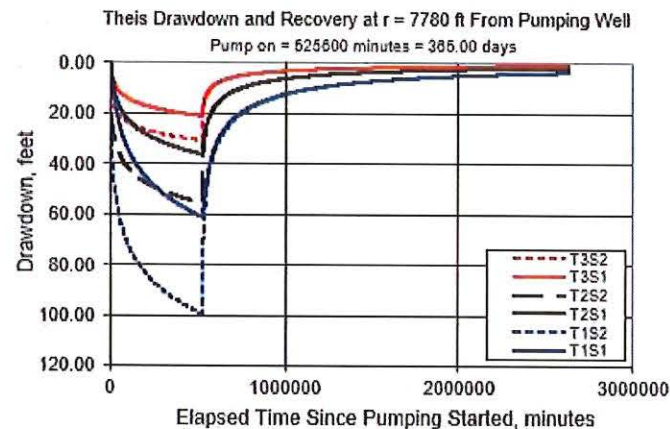
Cross-section 5: W-E, proposed APOA "WTP Well", WASH 62373 and WASH 8102/8909**Theis Drawdown Analysis, Authorized POA WASH 7651 to WASH 8102/8909****Theis Time-Drawdown Worksheet v.5.00**

Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T values and radial distance, r , from a pumping well for 3 different T values and 2 different S values.

Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well:	r		7780		ft	Q conversions
Pumping rate	Q		0.67		cfs	300.70 gpm
Hydraulic conductivity	K	5	10	20	ft/day	0.67 cfs
Aquifer thickness	b		55		ft	40.20 cfm
Storativity	S_1		0.0001			57,888.00 cfd
	S_2		0.00001			1.33 a/d
Transmissivity Conversions	T ft ² /pd	275	550	1100	ft ² /day	
	T ft ² /pm	0.190972	0.381944	0.763889	ft ² /min	
	T gpd/ft	2057	4114	8228	gpd/ft	
						Recalculate

Use the Recalculate button if recalculation is set to manual

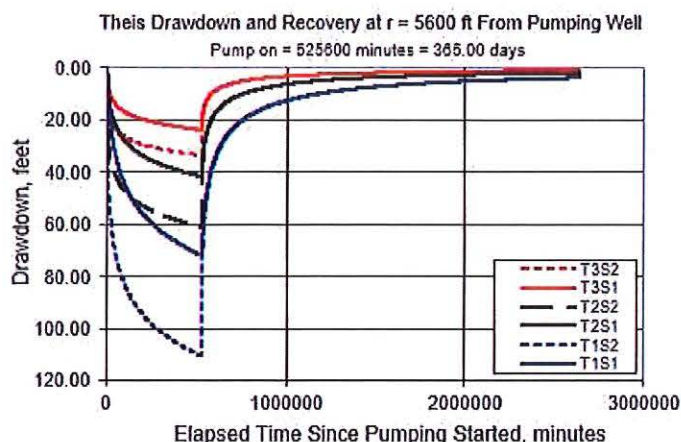


Theis Drawdown Analysis, Proposed APOA "WTP Well" to WASH 8102/8909

Theis Time-Drawdown Worksheet v.5.00
 Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T values and radial distance, r , from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well	r		5600		ft	Q conversions
Pumping rate	Q		0.67		cfs	300.70 gpm
Hydraulic conductivity	K	5	10	20	ft/day	0.67 cfs
Aquifer thickness	b		55		ft	40.20 cfm
Storativity	S_1		0.0001			57.888.00 cfd
	S_2		0.00001			1.33 afd
Transmissivity Conversions	T ft ² /d	275	550	1100	ft ² /day	
	T ft ² /m	0.190972	0.381944	0.763889	ft ² /min	Recalculate
	T gpd/ft	2057	4114	8228	gpd/ft	

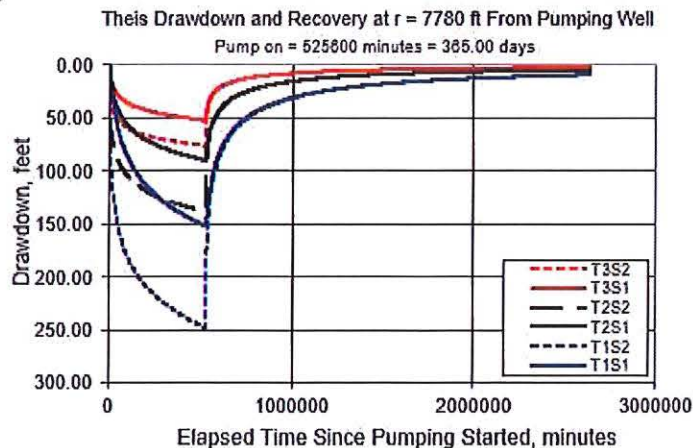
Use the Recalculate button if recalculation is set to manual

**Theis Drawdown Analysis, Proposed APOA WASH 62373 to WASH 8102/8909**

Theis Time-Drawdown Worksheet v.5.00
 Calculates Theis nonequilibrium drawdown and recovery at any arbitrary radial distance, r , from a pumping well for 3 different T values and radial distance, r , from a pumping well for 3 different T values and 2 different S values.
 Written by Karl C. Wozniak September 1992. Last modified December 17, 2019

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well	r		7780		ft	Q conversions
Pumping rate	Q		1.67		cfs	749.50 gpm
Hydraulic conductivity	K	5	10	20	ft/day	1.67 cfs
Aquifer thickness	b		55		ft	100.20 cfm
Storativity	S_1		0.0001			144.288.00 cfd
	S_2		0.00001			3.31 afd
Transmissivity Conversions	T ft ² /d	275	550	1100	ft ² /day	
	T ft ² /m	0.190972	0.381944	0.763889	ft ² /min	Recalculate
	T gpd/ft	2057	4114	8228	gpd/ft	

Use the Recalculate button if recalculation is set to manual



Watermaster Review Form: Water Right Transfer



Oregon Water Resources Department
725 Summer St NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.oregon.gov/OWRD

Transfer Application: T-14449

Review Due Date:

Applicant Name: City of Banks

Proposed Changes: ☐ POU ☐ POD ☒ POA ☐ USE ☐ OTHER

Reviewer(s): Jake Constans

Date of Review: 06/04/2024

1. Do you have evidence that the right has not been used in the last 5 years and that the presumption of forfeiture would not likely be rebuttable? ☐ Yes ☒ No If "Yes", attach evidence (e.g. dated aerial photo showing pavement or building on the land for >5 yrs.)

2. Is there a history of regulation on the source that serves this (or these) right(s) that has involved the transferred right(s) and downstream water rights? ☒ Yes ☐ No Generally characterize the frequency of any regulation or explain why regulation has not occurred:

Surface water in the Tualatin Basin is regulated each year for senior water rights.

3. Have headgate notices been issued for the source that serves the transferred right(s)?
☐ Yes ☒ No ☐ Records not available.

4. In your estimation, after the proposed change, would distribution of water for the right(s) result in regulation of other water rights that would not have occurred if use under the original right(s) was/were maximized? ☐ Yes ☒ No If "Yes", explain:

5. In your estimation, if the proposed change is approved, are there upstream water rights that would be affected? ☐ Yes ☒ No If "Yes", describe how the rights would be affected and list the rights most affected:

6. Check here ☐ if it appears that downstream water rights benefit from return flows resulting from the current use of the transferred right(s)? If you check the box, generally characterize the locations where the return flows likely occur and list the water rights that benefit most:

☒ N/A

7. For POD changes and instream transfers, check here if there are channel losses between the old and new PODs or within the proposed instream reach? If you check the box, describe and, if possible, estimate the losses:

☒ N/A

8. For instream transfers that propose protection of a reach beyond the mouth of the source stream:

☒ N/A Would the quantity be measureable into the receiving stream consistent with OAR 690-077-0015(8)? ☐ Yes ☐ No

9. For POU changes: ☒ N/A Is it likely the original place of use would continue to receive water from the same source? ☐ Yes ☐ No If "Yes", explain:

10. For POU or USE changes: ☒ N/A In your best judgment, would use of the existing right at "full face value," result in the diversion of more water than can be used beneficially and without waste? ☐ Yes ☐ No If "Yes", explain:

11. For POU changes that involve micro-irrigation: ☒ N/A

a. Has the applicant made changes (absent a transfer) to convert to micro-irrigation within the current place of use boundary of the water right proposed for transfer, and previously demonstrated to the Department through monitoring and site inspections by the Watermaster that the proposed transfer will not result in injury or enlargement?

☐ Yes ☐ No If "Yes", explain:

- b. Has a temporary transfer of this nature been previously filed and approved on the same lands (or portions thereof) as those lands involved in this transfer?

☐ Yes ☐ No If "Yes", answer the following:

- i. Were there any problems with more acres being irrigated (or wetted) than were authorized under the temporary transfer? ☐ Yes ☐ No If "Yes", explain:

- ii. Did the designated areas that were to remain dry (or not wetted) under the temporary transfer actually remain dry? ☐ Yes ☐ No If "No", explain:

- iii. Did the applicant comply with and meet all of the conditions of the temporary transfer? ☐ Yes ☐ No If "No", explain:

- iv. Do you have any other observations regarding the temporary transfer?

☐ Yes ☐ No If "Yes", describe:

- v. Did the applicant demonstrate to the Department through monitoring and site inspections by the Watermaster that neither injury nor enlargement occurred as a result of the temporary transfer? ☐ Yes ☐ No If "No", explain:

- c. To the best of your knowledge, if this transfer is approved, does it appear that:

- i. "Injury" will occur to other water rights that share the same source?

☐ Yes ☐ No If "Yes", explain:

- ii. "Enlargement" of the water right being transferred will occur?

☐ Yes ☐ No If "Yes", explain:

12. Are there other issues not identified through the above questions that should be considered in determining whether the change "can be effected without injury to other rights"?

☐ Yes ☒ No If "Yes", explain:

13. What alternatives may be available for addressing any issues identified above:

14. Do conditions need to be included in the transfer order to avoid enlargement of the right or injury to other rights? ☐ No ☒ Yes, as checked and provided below:

☐ For POU changes that involve micro-irrigation, provide the monitoring and reporting conditions necessary to prevent injury/enlargement:

☐ A Headgate should be required prior to diverting water.

☒ Measurement Devices for POD or POA: (if this condition is selected, also fill in the top sections of Page 4)

a. Before water use may begin under this order, the water user shall install a totalizing flow meter, or, with prior approval of the Director, another suitable measuring device, ☒ at each point of diversion/appropriation (new and existing) OR at each new point of diversion/appropriation ☐ with the exception that water rights issued to the Bureau of Reclamation or an irrigation district (or similar entity) are not subject to this condition.*

b. The water user shall maintain the meters or measuring devices in good working order.

c. The water user shall allow the Watermaster access to the meters or measuring devices; provided however, where the meters or measuring devices are located within a private structure, the Watermaster shall request access upon reasonable notice.

☐ Reservoir water use measurement: (if this condition is selected, also fill in the top sections of Page 4)

a. Before water use may begin under this order, the water user shall install staff gages, or, with prior approval of the Director, other suitable measuring devices, that measure the entire range and stage between empty and full in each reservoir. Staff gages shall be United States Geological Survey style.*

b. Before water use may begin under this order, if the reservoir is located in channel, weirs or other suitable measuring devices must be installed upstream and downstream of the reservoir, and, an adjustable outlet valve must be installed. The water user shall maintain such devices in good working order. A written waiver may be obtained, if in the judgment of the Director, the installation of weirs or other suitable measuring devices, or the adjustable outlet valve, will provide no public benefit.

* The following alternative device(s) should be substituted for the bold, underlined device in the above selected condition:

☐ Weir
☐ Parshall Flume
☐ Other: _____

☐ Submerged Orifice
☐ Flow Restrictor

Oregon Water Resources Department

Measurement Condition Information for the Applicant

(To be sent with the Draft Preliminary Determination or Final Order)

Transfer #: T- 14449



In order to avoid enlargement of the right or injury to other rights, a **totalizing flow meter** will be required to be installed **prior to diversion of water**, as a condition of this transfer:



at each point of diversion/appropriation (new and existing) **OR**



at each new point of diversion/appropriation.

For additional information, or to obtain approval of a different type of measurement device, the applicant should contact the area Watermaster:

Watermaster name: **Jake Constans**District: **18**Address: **1400 SW Walnut Street, #240**City/State/Zip: **Hillsboro, OR 97123**Phone: **503-846-7780**Email: **jake.w.constans@water.oregon.gov**

Note: If a device other than the one specified in the Preliminary Determination or Final Order is approved by the Watermaster, fill out and mail the form below to the Salem office.

Approval of an Alternate Measurement Device

T-

(to be filled out after consultation with the applicant, or after a site visit)

On behalf of the Director, I authorize use of the following suitable alternate measurement device:

 Watermaster signature

 District

 Date

If this form is used for approval of an alternative measurement device, it must be mailed to:

Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301-1266

STATE OF OREGON
WATER RESOURCES DEPARTMENT

725 Summer St. N.E. Ste. A
SALEM, OR 97301-4172
(503) 986-0900 / (503) 986-0904 (fax)

RECEIPT # **142944**

INVOICE # _____

RECEIVED FROM: City of Beaverton

BY: _____

CASH: ☐ CHECK:# X 26997 OTHER: (IDENTIFY) _____

APPLICATION	
PERMIT	
TRANSFER	<u>T-14449</u>

TOTAL REC'D \$ 2,127.06

1083 TREASURY 4170 WRD MISC CASH ACCT

0407 COPIES 47124 R-11488-25 \$
0412 OTHER: (IDENTIFY) Transfer R.A. \$ 2,127.06
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:

	EXAM FEE		RECORD FEE
0201	\$	0202	\$
0203	\$	0204	\$
0205	\$		

	EXAM FEE		LICENSE FEE
0218	\$	0219	\$
		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: **142944**

DATED: 5/17/24 BY: Leo D Miller

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal

Received by OWRD

MAY 17 2024

Salem, OR

**REIMBURSEMENT AUTHORITY
APPLICANT'S AGREEMENT
Contract Number: R11-499-25**

This Agreement is between the **Oregon Water Resources Department**, hereafter OWRD, and **City of Banks**, hereafter Applicant, hereafter known together as the parties.

OWRD Information

Contact: **Kelly Starnes**
Title: Transfer Advisor
Address: 725 Summer Street, NE, Suite A
Salem, OR 97301-1266

Phone: 503 979-3511
Fax: 503 986-0901
Email: patrick.k.starnes@water.oregon.gov

Applicant's Information

Name: City of Banks
Contact: Jolynn Becker, City Manager
Address: 13680 NW Main Street
Banks, OR 97106

Phone:
Fax:
Email: jbecker@cityofbanks.org

Applicant's Representative

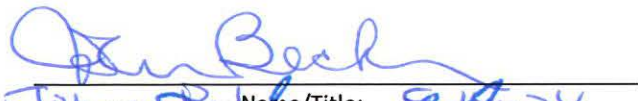
Name: CwM-H2O, LLC
Contact: Bob Long, CWRE
Address: 311 B Avenue, Suite P
Lake Oswego, OR 97034

Phone: (503) 954-1326
Fax:
Email: bob.long@cwmh2o.com

Purpose The purpose of this Agreement is to expedite the processing of the Transfer Application. (Application Number: T-14449)

1. **Authority.** The OWRD has been authorized pursuant to ORS 536.055 to enter into a voluntary agreement with any applicant, permittee or regulated entity (collectively Applicant) for expediting or enhancing a regulatory process. In making this agreement, OWRD shall require the applicant to pay the full cost of expedited process.
2. **Restrictions.** Applicant and OWRD agree that this Agreement shall not be construed to restrict in any way the decisions and actions by OWRD. OWRD shall be free to exercise independent judgment consistent with existing laws and regulations.
3. **Effective Date and Duration.** Unless otherwise terminated by non-deposit of funds by the Applicant, this Agreement shall become effective on the date on which both parties have signed the Agreement and the full deposit of the estimated cost of the proposed service.
4. **Consideration.**
 - a. Applicant shall pay OWRD in advance for actual costs incurred by OWRD. The estimated maximum reimbursement payable to OWRD under this Agreement is **\$2,127.06**. Applicant agrees to pay the full amount of **\$2,127.06** to OWRD prior to commencement of any work stated in this Agreement. This payment will be placed in an account administered by OWRD and drawn upon as costs are actually incurred. If the actual cost of performing the work is less than payments received, OWRD will refund the unspent balance. If the actual cost of processing exceeds the estimate, the Applicant can either elect to terminate this Agreement or amend the Agreement to reflect the increase in cost.
 - b. The costs stated in this Agreement do not include the statutory application processing and filing fees.
5. **Confidentiality.** Applicant agrees that any information provided to or acquired by OWRD under this Agreement will be subject to the Oregon Public Records Law and shall be considered public records.
6. **Indemnity.** Applicant shall defend, save, hold harmless, and indemnify the State of Oregon, OWRD, and their officers, employees, and agents from and against all claims, suits, actions, losses, damages, liabilities, costs, and expenses of any nature resulting from or arising out of, or relating to the activities of Applicant or its representatives, officers, employees, contractors, or agents under this Agreement or with respect to the expedited service. The Applicant acknowledges that the Oregon Water Resources Department cannot and does not guarantee a favorable review under the subject regulatory process.

7. **Termination by Applicant.** Applicant may request to terminate this agreement only in writing at anytime during the process. The Applicant agrees to pay for the work done by OWRD up until the time of the written termination request. OWRD, upon receiving such written termination request from the Applicant, will refund any unspent balance.
8. **Termination by OWRD.** OWRD may terminate this Agreement if the applicant fails to provide any requested items necessary to complete the application and/or comply with applicable rule requirements within the specified timeframe outlined in the request letter, being a period of not less than 30 days.
9. **Funds Authorized and Available.** By its execution of this Agreement, Applicants certify that sufficient funds are authorized and available to cover the expenditures contemplated by this Agreement.
10. **Duration of Estimate.** The Estimate of Time to completion is **approximately** 120 days once this Agreement has been fully executed and payment of the estimated cost deposited. If the Applicant's Agreement is not received by the Department within thirty (30) days of mailing the Agreement, the Applicant may need to re-apply for a new estimate. NOTE: Any time estimate is approximate; No guarantee of Final Order issuance of a date is certain. Duration estimates do not include any statutory waiting periods.
10. **Completion Date.** OWRD, by the execution of this Agreement does not guarantee the completion date indicated in this Agreement. Completion date is only an estimate and may be affected by the Department's workload, issues arising from the processing of the requested services and Applicant's timely response to requests for additional information.
11. **Captions.** The captions or headings in this Agreement are for the convenience only and in no way define, limit, or describe the scope, or intent, of any provision of this Agreement.
12. **Amendment and Merger.** The terms of this Agreement shall not be waived, altered, modified, supplemented, or amended in any manner whatsoever, except by written instrument signed by both parties. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements or representations, oral or written, not specified herein regarding this Agreement.
13. **Signatures.** All parties, by the authorized representative's signature below, hereby acknowledge that they have read this Agreement, understand it and agree to be bound by its terms and conditions.

For Applicant: 
Name/Title: John Beck
For OWRD: 
Dwight French – Administrator

5-14-2024
Date

5-29-2024
Date

Mail signed Agreement to:

Stacy Phillips
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301-1266

Received by OWRD
MAY 17 2024
Salem, OR

City of Banks RA# R11-499-25 T-14449						
Review Step						
Receipts received AA funds						
Transfer Support process Application						
Administrator signs AA						
NRS 1 enters workflow record in WRIS and updates RA spreadsheet						
NRS 2 completes initial review of file for deficiencies						
NRS 2 consults with Analyst and/or Manager						
Watermaster completes review						
Groundwater completes review (when applicable)						
NRS 2 completes FO, Permit, and PN						
Transfer Staff completes peer review of FO, Permit, and PN						
Transfer Analyst completes policy check at FO & Permit stage						
Data Center Reviews PD and superseding permit						
NRS 2 sends FO and Permit to app/agent by email and/or mail						
Transfer Analyst completes peer review of PN review for newspaper noticing						
Transfer Support requests newspaper quote for PN publishing						
NRS 2 sends publishing fee request to applicant/agent						
Transfer Support processes fee and newspaper publishing						
Transfer Support processes public notice (dept notice)						
Administrator signs FO and Permit						
Transfer Support issues FO and Permit, updates WRIS, copy to file, and mails hard copy to a						
NRS 1 closes out RA Contract						
TOTAL ESTIMATE HOURS				33.76		
					TOTAL	\$2,127.06

Received
MAY 17 2024
OWRD

STATE OF OREGON
WATER RESOURCES DEPARTMENT

725 Summer St. N.E. Ste. A
SALEM, OR 97301-4172
(503) 986-0900 / (503) 986-0904 (fax)

RECEIPT # 142817

INVOICE # _____

RECEIVED FROM: City of Banks
BY: _____

APPLICATION	
PERMIT	
TRANSFER	T-14449

CASH: ☐ CHECK:# 26905 OTHER: (IDENTIFY) _____

TOTAL REC'D \$ 125.00

1083 TREASURY 4170 WRD MISC CASH ACCT

0407 COPIES 47124 R11499-29 \$
0412 OTHER: (IDENTIFY) Transfer R.A \$ 125.00

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	\$	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: 142817

DATED: 4-29-2024 BY: [Signature]

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal



OREGON WATER RESOURCES DEPARTMENT
TRANSFER REIMBURSEMENT AUTHORITY
ESTIMATE APPLICATION



ORS 536.055 authorizes the Oregon Water Resources Department to expedite or enhance regulatory processes voluntarily requested under the agreement.

Please contact Transfer Staff before submitting this request, as the application fee of \$125.00 per request is non-refundable.

Checks submitted for this application must be separate from Transfer fees.

The purpose of this application is to obtain estimates of the cost and time required to process a Transfer Application Request. There is a non-refundable application fee of \$125.00 per request.

REQUEST	TYPE	FILE NUMBER
☒	Transfer Application (Permit Amendment)	T-14449 Transfer Number Not Yet Assigned (Permit G-7593)

	Applicant Information	Applicant's Representative/Contact
Name:	City of Banks (Jolynn Becker, City Manager)	Bob Long, CWRE (CwM-H2O, LLC)
Address:	13680 NW Main Street	311 B Avenue, Suite P
	Banks, OR 97106	Lake Oswego, OR 97034
Phone:		(503) 954 – 1326
Fax:		
E-Mail Address:	jbecker@cityofbanks.org	Bob.long@cwmmh2o.com

By signing this application, I understand:

- That upon receipt of my non-refundable application fee of **\$125.00**, OWRD will, within fourteen (14) days, notify me in writing of the estimate of costs and time frame for the expedited service.
- That this fee covers the reimbursement authority staff to evaluate and provide the estimate for processing of the request.
- That upon receiving the estimate, I may agree or decline to enter into a formal contract to pay the estimated cost in advance to initiate the expedited service.
- That an incomplete or inaccurate application may delay the process and increase the cost to process my request.
- That expedited processing does not guarantee a favorable review of my request.

I certify that I am the (check one):

☒ Applicant ☐ Applicant's Representative ☐ Other (Please specify)

Name:

Signature:

Send completed Application and payment to:

Oregon Water Resources Department
Transfer Reimbursement Authority Program
725 Summer St. NE, Suite A
Salem, OR 97301-1271

Received

APR 29 2024

OWRD

OWRD USE ONLY: Reimbursement Authority Number: R11-499-25



Oregon

Tina Kotek, Governor

Water Resources Department

North Mall Office Building

725 Summer St NE, Suite A

Salem, OR 97301

Phone 503 986-0900

Fax 503 986-0904

May 6, 2024

City of Banks
Attn: Jolynn Becker
13680 NW Main St.
Banks, OR 97106

Reference: Application T-14449

On April 29, 2024, OWRD received your water right Permit Amendment Application. The application was accompanied by \$4300.00. Our receipt number 142827 is enclosed.

By copy of this letter, we are asking the Watermaster for a report regarding the potential for injury to existing water rights which may be caused by the requested change. A review form will also be sent to our groundwater staff to determine whether the proposed well accesses the same source of water as the original well.

This application may require publication of a notice for two consecutive weeks in a newspaper with general circulation in the area where the water right is located. If it is determined that newspaper notice will be required, the Department will prepare the notice and notify you of the cost. You will be responsible for submitting payment to the Department prior to publication of the notice.

Except as provided under ORS 540.510(3) for municipalities, you may not use water from the new point of appropriation until a final order approving the application has been issued by the Department.

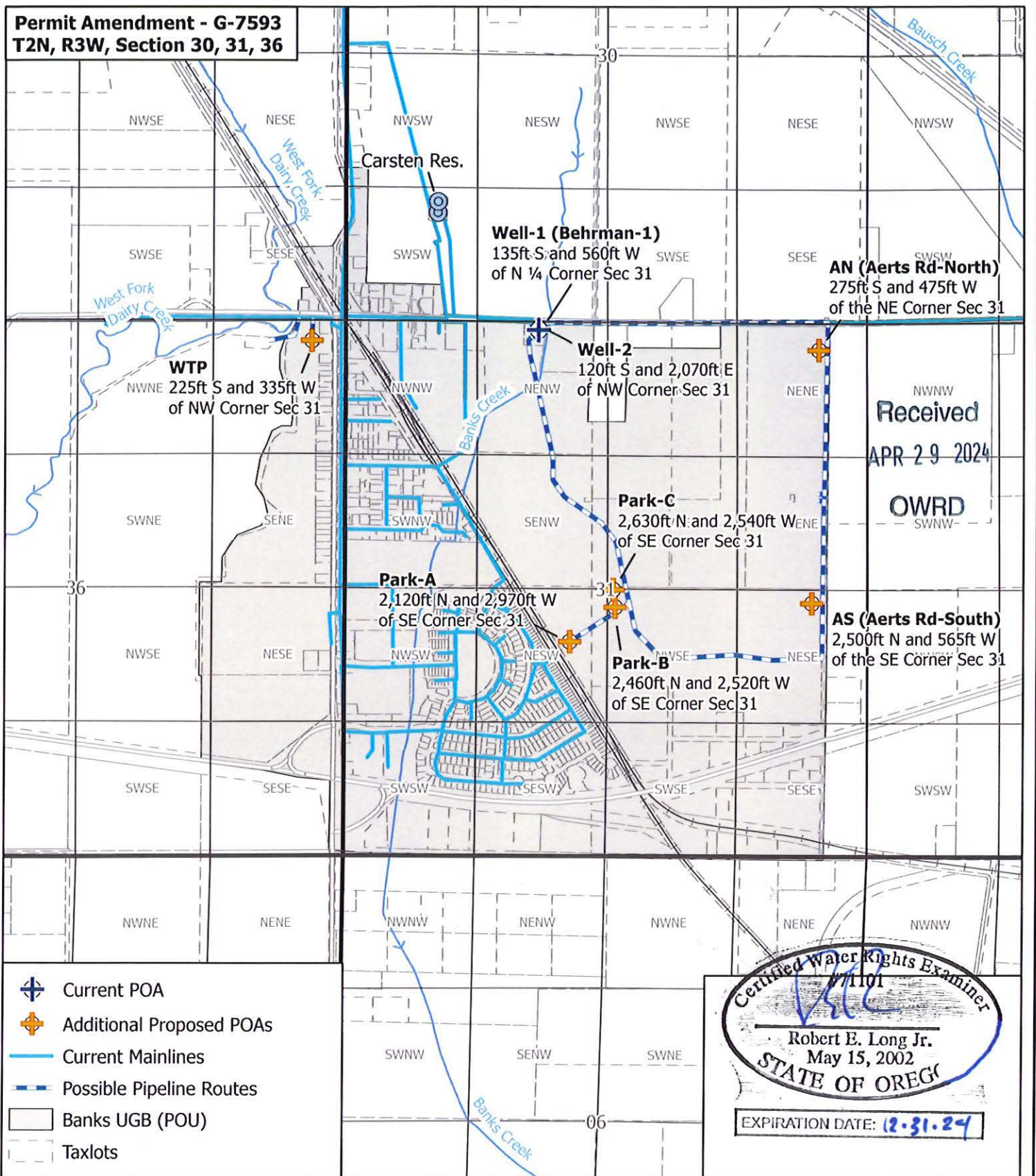
Refer to the following page for a chart showing the steps and expected timelines for the processing of your application.

If you have any questions, please contact the Transfer Section at (503) 986-0935.

Cc: Watermaster Dist. #18, Jacob W. Constans (via email)
Bob Long, Agent
Irrigation District: Tualatin Valley Irrigation District

Enclosure

Permit Amendment - G-7593
T2N, R3W, Section 30, 31, 36



CwM-H2O 
 Complete Water Management

311 B Avenue, Suite P
 Lake Oswego, Oregon 97034
 (503) 954-1326

Figure 1
Permit Amendment Map
Permit G-7593 - City of Banks

1	DATE	AUTH	DRAFT
No.	Date	By	Revisions

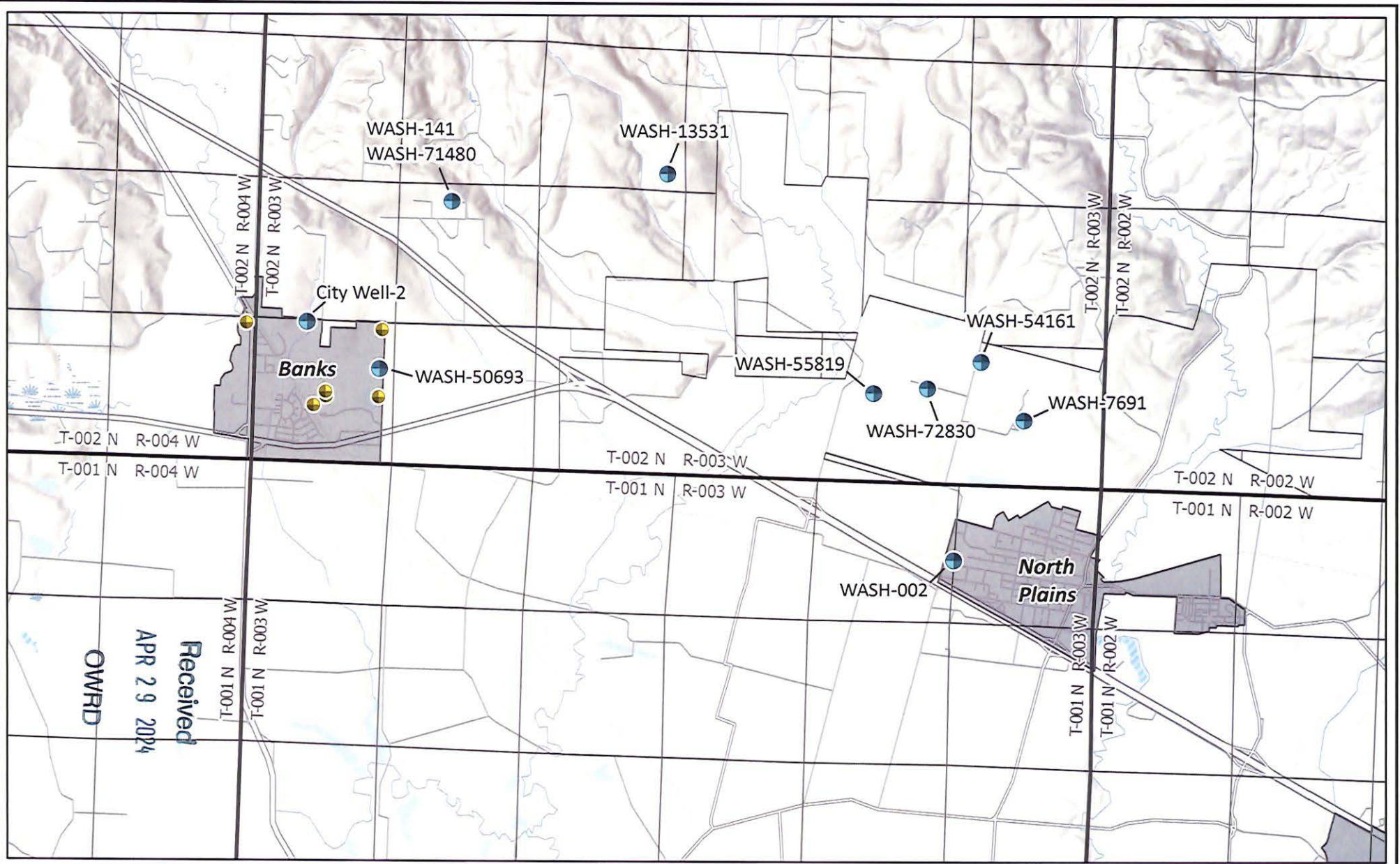
N 0 500 1,000 2,000 ft

 Scale: 1" = 1,320'

Proj#: 1501007
 Banks Eastside

City of Banks
 13680 NW Main Street
 Banks, OR 97106

14449 -



1319 SE MLK Jr. Blvd, Suite 204
Portland, Oregon 97214
(503) 954-1326

**Figure 1
Vicinity Map**

1	DATE	AUTH	DRAFT
No.	Date	By	Revisions



0 2,000 4,000 8,000 ft
1" = 5,000'

Proj#: 1501009
City of Banks Hydrogeology
City of Banks
13680 NW Main Street
Banks, OR 97106

- Reference Basalt Wells
 - Additional Proposed POAs
 - Urban Growth Boundaries
 - Township-Range
 - Section
- 14449 -

STATE OF OREGON
WATER RESOURCES DEPARTMENT

725 Summer St. N.E. Ste. A

SALEM, OR 97301-4172

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

RECEIPT # 142827

INVOICE # _____

RECEIVED FROM: City of Beavercreek

BY: _____

APPLICATION	
PERMIT	
TRANSFER	T-14449

CASH: ☐ CHECK:# ☒ 26933 OTHER: (IDENTIFY) ☐

TOTAL REC'D \$ 4,300.00

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	\$
0203	GROUND WATER	\$
0205	TRANSFER	\$ 4,300.00
WELL CONSTRUCTION		
0218	WELL DRILL CONSTRUCTOR	\$
	LANDOWNER'S PERMIT	\$
	OTHER (IDENTIFY)	

EXAM FEE	
0202	RECORD FEE
0204	\$
EXAM FEE	
0219	LICENSE FEE
0220	\$

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: 142827

DATED: 4-29-2024 BY: Lisa D. Miller

Distribution - White Copy - Customer, Yellow Copy - Fiscal, Blue Copy - File, Buff Copy - Fiscal

Application for Permit Amendment

Part 1 of 5 – Minimum Requirements Checklist



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.oregon.gov/OWRD

This permit amendment application **will be returned** if Parts 1 through 5 and all required attachments are not completed and included.

For questions, please call (503) 986-0900, and ask for Transfer Section.

Received

APR 29 2024

Check all items included with this application. (N/A = Not Applicable)

OWRD

- ☒ Part 1 – Completed Minimum Requirements Checklist.
- ☒ Part 2 – Completed Application Map Checklist.
- ☒ Part 3 – Application Fee, payable by check to the Oregon Water Resources Department, and completed Fee Worksheet, page 3: **\$4,300**
- ☒ Part 4 – Completed Applicant Information and Signature.
- ☒ Part 5 – Information about Permits to be Amended: **Number of permits to be amended: 1**
List the Permits here: Permit G-7593
Please include a separate Part 5 for each permit. (See instructions on page 6)
- ☒ Completed Permit Amendment Application Map (Does not have to be prepared by a Certified Water Right Examiner). **(Attachment 1)**
- ☐ ☒ N/A Request for Assignment Form and statutory fee. The request for assignment form has to be completed if the applicant is **not** the permit holder of record and needs to be assigned to the permit; or the landowner of the proposed place of use is **not** the permit holder of record and needs to be assigned to the permit. Assignment is not needed if the applicant is the permit holder of record.
- ☒ ☐ N/A Affidavit(s) of Consent are required from all permit holder(s) of record if the permit is not assigned to the applicant or other permit holders of record that are not listed as applicants. **(Attachment 2)**
- ☒ ☐ N/A Oregon Water Resources Department's Land Use Information Form with approval and signature (or signed land use form receipt stub) from each local land use authority in which water is to be diverted, conveyed, and/or used. Not required if water is to be diverted, conveyed, and/or used only on federal lands or if all of the following apply: a) a change in place of use only, b) no structural changes, c) the use of water is for irrigation only, and d) the use is located within an irrigation district or an exclusive farm use zone. **(Attachment 3)**
- ☒ ☐ N/A Water Well Report/Well Log for changes in point(s) of appropriation (well(s)) or additional point(s) of appropriation. **Existing Well-1 Log Included (Attachment 4)**
- ☐ ☒ N/A Geologist Report for a change from a surface water point of diversion to a ground water point of appropriation (well), if the proposed well is more than 500 feet from the surface water source and more than 1000 feet upstream or downstream from the point of diversion. (ORS 540.531(2) or (3)).

(For Staff Use Only)

WE ARE RETURNING YOUR APPLICATION FOR THE FOLLOWING REASON(S):

- ☐ Application fee not enclosed/insufficient
- ☐ Land Use Form not enclosed or incomplete
- ☐ Additional signature(s) required
- ☐ Map not included or incomplete
- ☐ Part _____ is incomplete

Other/Explanation _____

Staff: _____ 503- _____ Date: ____/____/____

Received

APR 29 2024

OWRD

Part 2 of 5 – Permit Amendment Map Checklist

Your permit amendment application will be returned if any of the map requirements listed below are not met.

Please be sure that the map you submit includes all the items listed below and meets the requirements of OAR 690-380-3100, however, the map does not have to be prepared by a

Certified Water Right Examiner. Check all boxes that apply.

Received
APR 29 2024

OWRD

- ☐ ☒ N/A If more than three permits are involved, separate maps for each permit.
- ☒ Permanent quality printed with dark ink on good quality paper.
- ☒ The size of the map can be 8½ x 11 inches, 8½ x 14 inches, 11 x 17 inches, or up to 30 x 30 inches. For 30 x 30 inch maps, one extra copy is required.
- ☒ A north arrow, a legend, and scale.
- ☒ The scale of the map must be: 1 inch = 400 feet, 1 inch = 1,320 feet, the scale of the county assessor map if the scale is not smaller than 1 inch = 1,320 feet, or a scale that has been pre-approved by the Department.
- ☒ Township, Range, Section, ¼ ¼, DLC, Government Lot, and other recognized public land survey lines.
- ☒ Tax lot boundaries (property lines) are required. Tax lot numbers are recommended.
- ☒ Major physical features including rivers and creeks showing direction of flow, lakes and reservoirs, roads, and railroads.
- ☒ Major water delivery system features from the point(s) of diversion/appropriation such as main pipelines, canals, and ditches.
- ☒ Existing place of use that includes separate hachuring for each water use permit, priority date, and use including number of acres in each quarter-quarter section, government lot, or in each quarter-quarter section as projected within government lots, donation land claims, or other recognized public land survey subdivisions. If less than the entirety of the permit is being changed, a separate hachuring is needed for the portion of the permit left unchanged.
- ☐ ☒ N/A If you are proposing a change in place of use, show the proposed place of use with hachuring that includes separate hachuring for each permit, priority date, and use including number of acres in each quarter-quarter section, government lot, or in each quarter-quarter section as projected within government lots, donation land claims, or other recognized public land survey subdivisions.
- ☒ Existing point(s) of diversion or well(s) with distance and bearing or coordinates from a recognized survey corner. This information can be found in your water use permit.
- ☒ ☐ N/A If you are proposing a change in point(s) of diversion or well(s), show the proposed location and label it clearly with distance and bearing or coordinates. If GPS coordinates are used, latitude-longitude coordinates may be expressed as either degrees-minutes-seconds with at least one digit after the decimal (example – 42°32'15.5") or degrees-decimal with five or more digits after the decimal (example – 42.53764°).

Received

~~APR 29 2024~~

OWRD

1. For irrigation calculate cfs for each permit involved as follows:
 - a. Divide total authorized cfs by total acres in the permit (*for S-12345, $1.25 \text{ cfs} \div 100 \text{ ac}$*); then multiply by the number of acres to be changed to get the application cfs (*$\times 45 \text{ ac} = 0.56 \text{ cfs}$*).
 - b. If the water right permit does not list total cfs, but identifies the allowable use as 1/40 or 1/80 of a cfs per acre; multiply number of acres proposed for change by either 0.025 (1/40) or 0.0125 (1/80). (*For S-87654, $45.0 \text{ ac} \times 0.0125 \text{ cfs/ac} = 0.56 \text{ cfs}$*)
2. Add cfs for the portions of permits on all the land included in the application; however **do not count cfs for supplemental permits on acreage for which you have already calculated the cfs fee for the primary permit on the same land**. The fee should be assessed only once for each “on the ground” acre included in the application. (*In this example, blank 5a would be only 0.56 cfs, since both permits serve the same 45.0 acres. Blank 5b would be 0 and Line 5 would then also become 0*).

Part 4 of 5 – Applicant Information and Signature

Applicant Information

APPLICANT/BUSINESS NAME City of Banks (Jolynn Becker, City Manager)			PHONE NO.	ADDITIONAL CONTACT NO.
ADDRESS 13680 NW Main Street				FAX NO.
CITY Banks	STATE OR	ZIP 97106	E-MAIL jbecker@cityofbanks.org	
BY PROVIDING AN E-MAIL ADDRESS, CONSENT IS GIVEN TO RECEIVE ALL CORRESPONDENCE FROM THE DEPARTMENT ELECTRONICALLY. COPIES OF THE FINAL ORDER DOCUMENTS WILL ALSO BE MAILED.				

Agent Information – The agent is authorized to represent the applicant in all matters relating to this application.

AGENT/BUSINESS NAME Bob Long, CWRE, RG, RHG			PHONE NO. 503-954-1626	ADDITIONAL CONTACT NO.
ADDRESS 311 B Ave, Suite P				FAX NO.
CITY Lake Oswego	STATE OR	ZIP 97034	E-MAIL bob.long@cwmmh2o.com	
BY PROVIDING AN E-MAIL ADDRESS, CONSENT IS GIVEN TO RECEIVE ALL CORRESPONDENCE FROM THE DEPARTMENT ELECTRONICALLY. COPIES OF THE FINAL ORDER DOCUMENTS WILL ALSO BE MAILED.				

City of Banks Permit G-7593 currently has only one approved point of appropriation (POA), Well-1. Well-1 is constructed within 70 ft of City Well-2, and the two wells cause pumping interference when operated in conjunction. Well-2 has a higher pumping capacity and a higher pumping rate available on its water right. When Well-2 pumps, the water level in Well-1 drops (and vice-versa). Therefore, Well-1 cannot effectively operate at the same time as Well-2 and is only able to produce a fraction of its water right.

The purpose of this permit amendment application is to add additional POA locations to the Well-1 water right. Wells constructed at these additional POAs will be sufficiently separated from Well-2 that they will be able to operate independently without incurring significant interference. Furthermore, having multiple wells under Permit G-7593 will allow the City to optimize production under this right and limit the compounding drawdown effects between Well-1 and Well-2.

This amendment application includes 7 additional POA locations. The City intends to develop between 1 and 3 of these new wells on Permit G-7593. Adding the 7 proposed locations will give the City the flexibility to move forward with well construction planning and negotiations with landowners at the selected sites. The proposed POAs are located on property not owned by the City. The City is currently in negotiations to purchase the land at one of the proposed locations (WTP). Landowner consent has been granted for the City to develop the other proposed well location (AN), as documented in the attached consent forms.

☐ Check this box if this project is fully or partially funded by the American Recovery and Reinvestment Act (Federal stimulus dollars)

Is the applicant the permit holder of record? ☒ Yes ☐ No

If NO, include either:

☐ A completed assignment form (with required statutory assignment fee), assigning all or a portion of the permit to the applicant(s), OR

☐ An affidavit of consent from the permit holder(s) of record that gives permission for the applicant to amend the permit.

Has the Completion ("C") Date of the permit(s) in this application expired? ☐ Yes ☒ No

If YES, this application will not be accepted by the Department.

If NO, what are the completion dates of the permit(s)? Extended Completion Date: 10/01/2027

- If the permit completion date expires while the Permit Amendment Application is pending, the Department will not approve the Permit Amendment Application until an Extension of Time Application is approved for the permit.

Received
APR 29 2024
OWRD

- You may consider using the Reimbursement Authority process to expedite the processing of this Permit Amendment Application if the completion date of the permit expires within 6 months of the date of filing this application.

By my signature below, I confirm that I understand:

- Prior to Department approval of the permit amendment, I may be required to submit payment to the Department for publication of a notice in a newspaper with general circulation in the area where the permit is located, once per week for two consecutive weeks. If more than one qualifying newspaper is available, I suggest publishing the notice in the following newspaper: _____

I (we) affirm that the information contained in this application is true and accurate.

Received



Applicant Signature


City Manager

Print Name (and Title if applicable)

Date

4-10-24

APR 29 2024

OWRD

Check one of the following:

- ☒ The applicant is responsible for completion of change(s). Notices and correspondence should continue to be sent to the applicant.
- ☐ The permit holder(s) of record will be responsible for completing the proposed change(s) after the final order is issued. Copies of notices and correspondence should be sent to the permit holder(s) of record.

Check the appropriate box, if applicable:

- ☒ Check here if any of the permits proposed for amendment are or will be located within or served by an irrigation or other water district.

IRRIGATION DISTRICT NAME Tualatin Valley Irrigation District	ADDRESS 2330 Elm Street	
CITY Forest Grove	STATE OR	ZIP 97116

**The City of Banks Urban Growth Boundary falls within the same Sections and Quarter-quarters as portions of the Tualatin Valley Irrigation District's service area. The water produced, conveyed, and used under the City's water rights and water distribution system is separate from water that may be provided by the District.*

- ☐ ~~Check here if water for any of the permits supplied under a water service agreement or other contract for stored water with a federal agency or other entity.~~

ENTITY NAME	ADDRESS	
CITY	STATE	ZIP

To meet State Land Use Consistency Requirements, you must list all local governments (each county, city, municipal corporation, or tribal government) within whose jurisdiction water will be diverted, conveyed or used.

ENTITY NAME City of Banks	ADDRESS 13680 NW Main Street	
CITY Banks	STATE OR	ZIP 97106

**The current and proposed POAs and the existing POU are located completely within the City of Banks' service area as defined by the Urban Growth Boundary. Therefore, all water production and usage under this right occurs within the jurisdiction of the City alone.*

Part 5 of 5 – Water Use Permit Information

Please use a separate Part 5 for each permit being changed. See instructions on page 6, to copy and paste additional Part 5s, or to add additional rows to tables within the form.

PERMIT # G-7593

Table 1. Location of Authorized and Proposed Point(s) of Diversion (POD) or Appropriation (POA)
(Note: If the POD/POA name is not specified in the permit, assign it a name or number here.)

POD/POA Name or Number	Is this POD/POA Authorized by the permit or is it Proposed?	If POA, OWRD Well Log ID#	Twp	Rng	Sec	¼ ¼	Tax Lot, DLC or Gov't Lot	Measured Distances (from a recognized survey corner)
Well-1 (Behrman Well 1)	☒ Authorized ☐ Proposed	WASH-7651	2 N	3 W	31	NE NW	0402	135ft S & 560ft W of N ¼ Corner Sec 31
WTP (Water Treatment Plant)	☐ Authorized ☒ Proposed	PROPOSED	2 N	4 W	36	NE NE	0600	175 ft S & 335 ft W of NW Corner Sec 31
AN (Aerts Rd North)	☐ Authorized ☒ Proposed	PROPOSED	2 N	3 W	31	NE NE	0100	275 ft S & 475 ft W of the NE Corner Sec 31
AS (Aerts Rd South)	☐ Authorized ☒ Proposed	PROPOSED	2 N	3 W	31	NE SE	0100	2,500 ft N & 565 ft W of the SE Corner Sec 31
Park-A (Park Primary)	☐ Authorized ☒ Proposed	PROPOSED	2 N	3 W	31	NE SW	0600	2,120 ft N & 2,970 ft W of the SE Corner Sec 31
Park-B (Park Alternative)	☐ Authorized ☒ Proposed	PROPOSED	2 N	3 W	31	NW SE	0100	2,460 ft N & 2,520 ft W of the SE Corner Sec 31
Park-C (Park Alternative)	☐ Authorized ☒ Proposed	PROPOSED	2 N	3 W	31	NW SE	0400	2,630 ft N & 2,540 ft W of the SE Corner Sec 31
Well-2 (Behrman Well 2)	☐ Authorized ☒ Proposed	WASH-62373	2 N	4 W	31	NE NW	0402	120ft S & 2,070 ft E of the NW Corner Sec 31

Check all type(s) of change(s) proposed below (change "CODES" are provided in parentheses):

- | | |
|---|--|
| ☐ Place of Use (POU) | ☐ Point of Appropriation/Well (POA) |
| ☐ Point of Diversion (POD) | ☒ Additional Point of Appropriation (APOA) |
| ☐ Additional Point of Diversion (APOD) | ☐ Surface water POD to Ground Water POA |

Will all of the proposed changes affect the entire water use permit?

- ☒ Yes Complete only the proposed ("to" lands) section of Table 2 on the next page. Use the "CODES" listed above to describe the proposed changes.
- ☐ No Complete all of Table 2 to describe the portion of the permit to be changed.

Received
APR 29 2024
OWRD

For a change in place of use: **N/A**

~~Does the permit holder of record own or control the land TO which the place of use is being moved?~~

~~☐ Yes ☐ No~~

~~If NO, the landowner of the land TO which the place of use is being moved must be assigned to the permit as a permit holder of record by submitting a completed Request for Assignment form and the required statutory fee for an assignment.~~

~~Is the proposed place of use contiguous to the authorized place of use? ☐ Yes ☐ No~~

~~The permitted place of use can be moved only to lands that are contiguous to the authorized place of use unless the change to non-contiguous lands is in furtherance of mitigation or conservation efforts undertaken for the purposes of benefiting a species listed as sensitive, threatened, or endangered under ORS 496.171 to 496.192 or the federal Endangered Species Act of 1973 (16 U.S.C. 1531 to 1544), as determined by the listing agency. Contiguous land being either adjacent land or land separated from the land to which a permit is authorized by roads, utility corridors, irrigation ditches or publicly owned rights of way.~~

Received
APR 29 2024
OWRD

Please use and attach additional pages of Table 2 as needed.
See page 6 for instructions.

Do you have questions about how to fill-out the tables?
Contact the Department at 503-986-0900 and ask for Transfer

Table 2. Description of Changes to Water Use Permit # G-7593

List the change proposed for the acreage in each ¼ ¼. If more than one change is proposed, specify the acreage associated with each change.
If there is more than one POD/POA involved in the proposed changes, specify the acreage associated with each POD/POA.

AUTHORIZED (the "from" or "off" lands) The listing that appears on the certificate BEFORE PROPOSED CHANGES List only that part or portion of the water right that will be changed.									Proposed Changes (see "CODES" from previous page)	PROPOSED (the "to" or "on" lands) The listing as it would appear AFTER PROPOSED CHANGES are made.								
Twp	Rng	Sec	¼ ¼	Tax Lot	Gvt Lot or DLC	Acre (if applicable)	POD(s) or POA(s) (name or number from Table 1)	Priority Date		Twp	Rng	Sec	¼ ¼	Tax Lot	Gvt Lot or DLC	Acre	POD(s) or POA(s) to be used (from Table 1)	Priority Date
									APOA	The City of Banks Municipal Service Area WELL-1 AN WTP AS PARK-A PARK-B PARK-C WELL-2 9/29/1977								
TOTAL ACRES										TOTAL ACRES						N/A		

Additional remarks: *The proposed changes effect the entire water right. The place of use for Permit G-7593 is the City's municipal service area.*

Received
APR 29 2024
14449 - OWRD

Are there other water rights certificates, water use permits or ground water registrations associated with the "from" or "to" lands? ☐ Yes ☒ No

If YES, list the other certificate, permit, or ground water registration numbers: N/A (no "from" lands)

If the permit(s) are for irrigation or supplemental irrigation use, other water rights existing on the same land for irrigation that are subject to transfer must either change concurrently or be cancelled. Any change to a water right certificate or ground water registration must be filed separately in a water right transfer application or ground water registration modification application, respectively.

For a change in point(s) of appropriation (well(s)) or additional point(s) of appropriation:

- ☒ Well log(s) are attached for each authorized and proposed well(s) that are clearly labeled and associated with the corresponding well(s) in Table 1 above and on the accompanying application map. Well-1 Log is Attachment 4, Well-2 Log is Attachment 5, other new POAs are proposed, see Attachment 6 – Basalt Aquifer Memo.

AND/OR

- ☒ Describe the construction of the authorized and proposed well(s) in Table 3 for any wells that do not have a well log. For *proposed wells not yet constructed or built*, provide "a best estimate" for each requested information element in the table. The Department recommends you consult a licensed well driller, geologist, or certified water right examiner to assist with assembling the information necessary to complete Table 3.

Table 3. Construction of Point(s) of Appropriation

Any well(s) in this listing must be clearly tied to corresponding well(s) described in Table 1 and shown on the accompanying application map. Failure to provide the information will delay the processing of your transfer application until it is received. The information is necessary for the department to assess whether the proposed well(s) will access the same source aquifer as the authorized point(s) of appropriation (POA). The Department is prohibited by law from approving POA changes that do not access the same source aquifer.

Received

APR 29 2024

OWRD

Proposed or Authorized POA Name	Is well already built?	If an existing well, OWRD Well ID Tag No. L-____	Total well depth	Casing Diam.	Casing Intervals (feet)	Seal depth(s) (intervals)	Perforated or screened intervals (in feet)	Static water level (in feet)	Source aquifer	Well - specific rate (cfs or gpm).
WELL-1	YES	-	450 ft	8-5/8"	0-210 ft	0-210 ft	Open-hole to 450 ft	32.2 ft bgs*	CRBG	0.67 CFS
WELL-2	YES	WASH- 62373	665 ft	12"	0-300 ft	0-300 ft	Open-hole to 665 ft	34.4 ft bgs*		
AN	NO	-	650- 750 ft	12"	Wells will be cased and sealed from the surface to approx. 200-250 ft (depending on conditions encountered in the field)	Open-hole to depth of ~650-750 ft	~30-50 ft			
AS	NO	-								
PARK-A	NO	-								
PARK-B	NO	-								
PARK-C	NO	-								
WTP	NO	-								

**The proposed well designs are based on the general construction of Well-2, which is proposed to be added as a POA to this permit. The attached Basalt Aquifer Memo (Attachment 6) describes available data that suggests the two water-bearing zones function as a single aquifer.*

**Measurement at Well-1 collected on April 7, 2023.*

Received
APR 29 2024

OWRD

Well-1

Application for Water Right Transfer



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

Consent by Deeded Landowner

State of Oregon)
County of Washington)ss

I Martin Cropp in my/our capacity as Owner of the land containing a proposed POA,
mailing address 33687 NW Mountaindale Rd, North Plains, OR
telephone number 503-939-3507, duly sworn depose and say that I/We 97133

consent to the proposed change(s) to Water Right Certificate Number Permit G-7593

described in a Water Right Transfer Application (T- Not yet assigned),
(transfer number, if known)

submitted by The City of Banks, Jolynn Becker, City Manager

on the property in tax lot number(s) 2N43600 (TL 0600)

Section 36 NENE Township 2N North/South Range 4W East/West, W.M.

located at Southwest of the intersection of N Main Street and NW Cedar Canyon Road (WTP-1)
(site address)

M. Cropp
Signature of Affiant

3/5/2024
Date

Signature of Affiant

Date



Subscribed and Sworn to before me this 5th day of March, 2024.

Angela G. Lanter
Notary Public for Oregon

My commission expires September 26, 2025

Well-1

Application for Water Right Transfer



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

Consent by Deeded Landowner

State of Oregon)
County of WASHINGTON)ss

I Robert S. Bobosky in my/our capacity as Owner of the land containing a proposed POA,
Manager, Wolverine Financial, LLC
mailing address 6770 SW Canyon Dr, Portland, OR 97225

telephone number 503 292-8261, duly sworn depose and say that I/We

consent to the proposed change(s) to Water Right Certificate Number Permit G-7593

described in a Water Right Transfer Application (T- Not yet assigned),
(transfer number, if known)

submitted by The City of Banks, Jolynn Becker, City Manager

on the property in tax lot number(s) 2N43600 (TL 0600)

Section 36 NENE Township 2N North/South Range 4W East/West, W.M.

located at Southwest of the intersection of N Main Street and NW Cedar Canyon Road (WTP-1)
(site address)

Robert Bobosky
Signature of Affiant

January 9th, 2024
Date

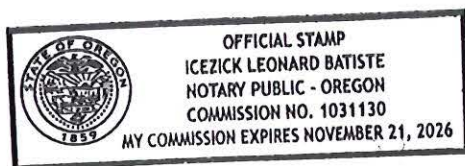
Signature of Affiant

Date

Subscribed and Sworn to before me this 09 day of January, 2024.

F L Batiste
Notary Public for Oregon

My commission expires 11/21/2026



ATTACHMENT 2
Application for
Water Right Transfer



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

Consent by Deeded Landowner

State of Oregon)
County of WASHINGTON)ss

I QUAIL VALLEY GOLF COURSE in my/our capacity as Owner of the land containing a proposed POAs,

mailing address 12565 NW AERTS RD BANKS OR 97106,

telephone number 503-324-4444, duly sworn depose and say that I/We

consent to the proposed change(s) to Water Right Certificate Number G-7593

described in a Water Right Transfer Application (T- Not yet assigned),
(transfer number, if known)

submitted by The City of Banks, Jolynn Becker, City Manager

on the property in tax lot number(s) 2N331CA06900 (TL 6900),

Section 31 NESW Township 2N North/South Range 3W East/West, W.M.

located at in a proposed park area (Park-1)
(site address)

Doug Hixson
Signature of Affiant

4.9.2024
Date

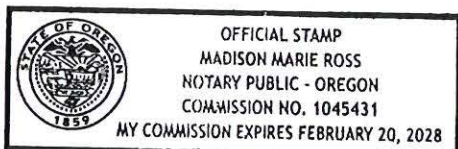
Signature of Affiant

Date

Subscribed and Sworn to before me this 9 day of April, 2024.

Madison Marie Ross
Notary Public for Oregon

My commission expires February 20 2028



Application for Water Right Transfer



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

Consent by Deeded Landowner

State of Oregon)
County of WASHINGTON)ss

I QUAIL VALLEY GOLF COURSE in my/our capacity as Owner of the land containing a proposed POA,

mailing address 12565 NW AERTS RD BANKS OR 97106

telephone number 503-324-4444, duly sworn depose and say that I/We

consent to the proposed change(s) to Water Right Certificate Number G-7593

described in a Water Right Transfer Application (T-Not yet assigned),
(transfer number, if known)

submitted by The City of Banks, Jolynn Becker, City Manager

on the property in tax lot number(s) 2N3310000100 (TL 0100)

Section 31 NENE Township 2N North/South Range 3W East/West, W.M.

located at near the intersection of Banks Rd and Aerts Rd (AN)
(site address)

Doug Hixson
Signature of Affiant

4.9.2024
Date

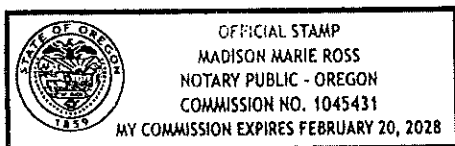
Signature of Affiant

Date

Subscribed and Sworn to before me this 9 day of April, 2024

Madison Marie Ross
Notary Public for Oregon

My commission expires February 2028



14449 -

Received

APR 29 2024

OWRD

ATTACHMENT 2
Application for
Water Right Transfer



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

Consent by Deeded Landowner

State of Oregon)
County of WASHINGTON)ss)

I QUAIL VALLEY GOLF COURSE in my/our capacity as Owner of the land containing three proposed POAs,

mailing address 12565 NW AERTS RD BANKS OR 97106,

telephone number 503-324-4444, duly sworn depose and say that I/We

consent to the proposed change(s) to Water Right Certificate Number G-7593

described in a Water Right Transfer Application (T- Not yet assigned),
(transfer number, if known)

submitted by The City of Banks, Jolynn Becker, City Manager

on the property in tax lot number(s) 2N331D000100 (TL 0100),

Section 31 NWSE/NESE Township 2N North/South Range 3W East/West, W.M.

located at along Aerts Rd (AS) and in two locations in a proposed park area (Park-B and Park-C)
(site address)

Dan Axson
Signature of Affiant

4.9.2024
Date

Signature of Affiant

Date

Subscribed and Sworn to before me this 9 day of April, 2024.

Madison Marie Ross
Notary Public for Oregon

My commission expires February 20, 2028



Land Use Information Form



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.oregon.gov/OWRD

Applicant(s): City of Banks (Jolynn Becker, City Manager)

Mailing Address: 13680 NW Main Street

City: Banks

State: OR

Zip Code: 97106

Daytime Phone: 503-324-5112

A. Land and Location

Please include the following information for all tax lots where water will be diverted (taken from its source), conveyed (transported), and/or used or developed. Applicants for municipal use, or irrigation uses within irrigation districts may substitute existing and proposed service-area boundaries for the tax-lot information requested below.

Township	Range	Section	¼ ¼	Tax Lot #	Plan Designation (e.g., Rural Residential/RR-5)	Water to be:	Proposed Land Use:
2N	3W	31	All		*	☐ Diverted ☒ Conveyed ☒ Used	
		31	NE NW	0402		☒ Diverted ☐ Conveyed ☐ Used	
		31	NE NE	0100		☒ Diverted ☐ Conveyed ☐ Used	
		31	NE SW	6900		☒ Diverted ☐ Conveyed ☐ Used	
		31	NW SE	0100		☒ Diverted ☐ Conveyed ☐ Used	
		31	NE SE	0100		☒ Diverted ☐ Conveyed ☐ Used	
		25	SE SE	0600		☐ Diverted ☒ Conveyed ☒ Used	
		30	SW SW	*		☐ Diverted ☒ Conveyed ☒ Used	
		30	NW SW			☐ Diverted ☒ Conveyed ☒ Used	
	4W	36	NE NE	0600		☒ Diverted ☒ Conveyed ☒ Used	
		36	E ¼	*		☐ Diverted ☒ Conveyed ☒ Used	
		36	NW SE			☐ Diverted ☒ Conveyed ☒ Used	
		36	SW SE			☐ Diverted ☒ Conveyed ☒ Used	

*City of Banks Urban Growth Boundary is the City's service area. Various taxlots and land use classifications within the UGB.

List all counties and cities where water is proposed to be diverted, conveyed, and/or used or developed:

City of Banks (All water production, conveyance, and usage occurs within the City of Banks Service Area as defined by the City's Urban Growth Boundary)

Received

APR 29 2024

B. Description of Proposed Use

Type of application to be filed with the Water Resources Department:

OWRD

- ☐ Permit to Use or Store Water ☐ Water Right Transfer ☒ Permit Amendment or Ground Water Registration Modification
☐ Limited Water Use License ☐ Allocation of Conserved Water ☐ Exchange of Water

Source of water: ☐ Reservoir/Pond ☒ Ground Water ☐ Surface Water (name) _____

Estimated quantity of water needed: 0.67 ☒ cubic feet per second ☐ gallons per minute ☐ acre-feet

Intended use of water: ☐ Irrigation ☐ Commercial ☐ Industrial ☐ Domestic for _____ household(s)
☒ Municipal ☐ Quasi-Municipal ☐ Instream ☐ Other _____

Briefly describe:

Permit amendment application to add additional POAs to support potential construction of new well(s) for one of the City's two groundwater supply rights (G-7593).

For Local Government Use Only

The following section must be completed by a planning official from each county and city listed unless the project will be located entirely within the city limits. In that case, only the city planning agency must complete this form. This deals only with the local land-use plan. Do not include approval for activities such as building or grading permits.

Please check the appropriate box below and provide the requested information

☒ Land uses to be served by the proposed water uses (including proposed construction) are allowed outright or are not regulated by your comprehensive plan. Cite applicable ordinance section(s):

☐ Land uses to be served by the proposed water uses (including proposed construction) involve discretionary land-use approvals as listed in the table below. (Please attach documentation of applicable land-use approvals which have already been obtained. Record of Action/land-use decision and accompanying findings are sufficient.) **If approvals have been obtained but all appeal periods have not ended, check "Being pursued."**

Type of Land-Use Approval Needed (e.g., plan amendments, rezones, conditional-use permits, etc.)	Cite Most Significant, Applicable Plan Policies & Ordinance Section References	Land-Use Approval:	
	Received APR 29 2024 OWRD	☐ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued
		☐ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued
		☐ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued
		☐ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued
		☐ Obtained ☐ Denied	☐ Being Pursued ☐ Not Being Pursued

Local governments are invited to express special land-use concerns or make recommendations to the Water Resources Department regarding this proposed use of water below, or on a separate sheet.

Name: Johanna Becker Title: City Manager

Signature: [Signature] Phone: 503-324-5112 Date: 4-9-24

Government Entity: _____

Note to local government representative: Please complete this form or sign the receipt below and return it to the applicant. If you sign the receipt, you will have 30 days from the Water Resources Department's notice date to return the completed Land Use Information Form or WRD may presume the land use associated with the proposed use of water is compatible with local comprehensive plans.

Receipt for Request for Land Use Information

Applicant name: _____

City or County: _____ Staff contact: _____

Signature: _____ Phone: _____ Date: _____

ATTACHMENT 4

CTOR
ort

WATER WELL REPORT

RECEIVED
STATE OF OREGON
(Please type or print)

State Well No.

2N/3W-31
Received

State Permit No.

APR 29 2024

of well completion.

SEP - 6 1977 (Do not write above this line)

WASH
7651

(1) OWNER: WATER RESOURCES DEPT.
Name City of Banks SALEM, OREGON
Address Banks, Oregon

(2) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: (4) PROPOSED USE (check):

Rotary ☒ Driven ☐ Domestic ☐ Industrial ☐ Municipal ☒
Cable ☐ Jetted ☐ Irrigation ☐ Test Well ☐ Other ☐
Dug ☐ Bored ☐

(5) CASING INSTALLED:

Threaded ☐ Welded ☒
8-5/8" Diam. from plus 2 ft. to 210 ft. Gage 250
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

(6) PERFORATIONS:

Perforated? ☐ Yes ☒ No.

Type of perforator used

Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? AMJannsen
Yield: 275 gal./min. with 224 ft. drawdown after 48 hrs.
150 " 146 " " "

Baller test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m.

Temperature of water 58° Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used Cement grout & 2% gel
Well sealed from land surface to 210 ft.
Diameter of well bore to bottom of seal 12-1/4" in.
Diameter of well bore below seal 8" in.
Number of sacks of cement used in well seal 25 sacks
How was cement grout placed? Placed on o.d. of casing
through grout pipe - 20 sacks run @ 210',
5 sacks run to top off at ground level upon
completion

Was a drive shoe used? ☐ Yes ☒ No Plugs Size: location ft.
Did any strata contain unusable water? ☒ Yes ☐ No

Type of water? insufficient depth of strata 130' to 160'
Method of sealing strata off cased and cemented

Was well gravel packed? ☐ Yes ☒ No Size of gravel:
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Washington Driller's well number OWRD
1/4 1/4 Section 81 T. 2 N R. 8 W. 4W.M.
Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 130 ft.
Static level 84 ft. below land surface. Date 8/24/77
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 8"

Depth drilled 450 ft. Depth of completed well 450 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Dark brown clay topsoil	0	8	
Silty brown clay	8	15	
Red-brown clay w/rotten rock fragments	15	50	
Sticky red clay-occ. rotten rock streaks	50	95	
Brown clay & rotten rock	95	110	
Dark brown & gray-brown clay --organic material	110	120	
Soft blue-gray cemented gravel	120	130	
Rotten brown basalt	130	160	20 gpm
Soft brown basalt-occ. weathered	160	195	
Black-brown basalt	195	215	
Hard gray-black basalt	215	230	
Broken brown basalt w/soapstone and lava interbeds	230	245	10 gpm
Fractured black basalt--occ. crevice	245	265	
Hard gray-black basalt, occ-			

Work started 8/16/77 19 Completed 8/24/77 19
Date well drilling machine moved off of well 8/24/77 19

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] *A. M. Jannsen* Date 8/29/77, 19
(Drilling Machine Operator)

Drilling Machine Operator's License No. 523

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name A. M. Jannsen Drilling Co.
(Person, firm or corporation) (Type or print)

Address 21075 SW Tualatin Valley Hwy. Aloha, Oregon

[Signed] *Edward M. Jannsen*
(Water Well Contractor)

Contractor's License No. 79 Date 8/29/77, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

14449 -

SP-45656-110

The original and first copy of this report
are to be filed with the
WATER RESOURCES DEPARTMENT.

REPORT
STATE OF OREGON
(Please type or print)
SEP - 61977
(Do not write above this line)

State Permit No. _____

Contractor's License No. Date, 19....

8P*45656-119

ATTACHMENT 5

JUN 02 2005

WELL I.D. # L 75346

START CARD # 173577

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

(1) LAND OWNER
Name City of Banks
Address 100 South Main Street
City Banks State Or Zip 97106

(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 665 ft.
Explosives used: ☐ Yes ☒ No Type _____ Amount _____

BORE HOLE			SEAL			Sacks or Pounds
Diameter	From	To	Material	From	To	
16	0	300	Cem/Bent	0	300	115 sks
12	300	665				

How was seal placed: Method ☐ A ☒ B ☒ C ☐ D ☐ E
☐ Other

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER				Steel	Plastic	Welded	Threaded
Casing:	Diameter	From	To				
	12	+2	300	☒	☐	☒	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
Liner:				☐	☐	☐	☐
				☐	☐	☐	☐
				☐	☐	☐	☐

Drive Shoe used ☐ Inside ☐ Outside ☒ None
Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS							
☐ Perforations				Method _____			
☐ Screens				Type _____ Material _____			
From	To	Slot Size	Number	Diameter	Tele/plpe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour			
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian			
Yield gal/min	Drawdown	Drill stem at	Time
650+		660	1hr.
275-280		200	1hr.

Temperature of water 57°F Depth Artesian Flow Found _____
Was a water analysis done? ☒ Yes By whom A.M.J.
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____
Depth of strata: _____

(9) LOCATION OF WELL (legal description)
County Washington
Tax Lot 402 Lot _____
Township 2N N or S Range 3W E or W WM
Section 31 NE 1/4 NW 1/4
Lat _____ " or _____ (degrees or decimal)
Long _____ " or _____ (degrees or decimal)

Street Address of Well (or nearest address)
42000 NW Banks Rd. Banks, Or

(10) STATIC WATER LEVEL
48 ft. below land surface. Date 5-25-05
_____ ft. below land surface. Date _____
Artesian pressure _____ lb. per square inch Date _____

(11) WATER BEARING ZONES			
Depth at which water was first found <u>378</u>			
From	To	Estimated Flow Rate	SWL
378	468	350 gpm	48
615	660	300 gpm	48

(12) WELL LOG			
Material	From	To	SWL
Brn & red-brn cly			
sticky, firm.	0	69	
Red-brn basalt, very			
weathered.	69	102	
Green clay soft	102	121	
Gry-brn clay firm	121	155	
Red-brn basalt very			
weathered.	155	179	
Brn basalt, weathered	179	201	
Gry-brn basalt	201	206	
Gry/gry-blk basalt hrd	206	231	
Gry-brn basalt w/			
interbeds.	231	251	
Gry-gry blk basalt hrd	251	313	
Brn basalt interbed	313	325	
Date Started <u>3-22-05</u> Completed <u>5-25-05</u>			

(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 573 Date 5-31-2005
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 1266 Date May 31, 2005
Signed _____

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

JUN 02 2005

WELL I.D. # L 75346

START CARD # 173577

WATER RESOURCES DEPT
OREGON

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

(1) LAND OWNER

Well Number _____
Name City of Banks Conti. Page 2
Address 100 South Main Street
City Banks State OR Zip 97106

(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 665 ft.
Explosives used: ☐ Yes ☒ No Type _____ Amount _____

BORE HOLE			SEAL			Sacks or Pounds
Diameter	From	To	Material	From	To	

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☐ Other _____

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

Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Drive Shoe used ☐ Inside ☐ Outside ☐ None

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS

☐ Perforations Method _____
☐ Screens Type _____ Material _____

From	To	Slot Size	Number	Diameter	Tele/plpe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min _____ Drawdown _____ Drill stem at _____ Time _____

Temperature of water _____ Depth Artesian Flow Found _____

Was a water analysis done? ☐ Yes By whom _____Did any strata contain water not suitable for intended use? ☐ Too little☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____

Depth of strata: _____

(9) LOCATION OF WELL (legal description)

County Washington
Tax Lot 402 Lot _____
Township 2N N or S Range 3W E or W WM
Section 31 NE 1/4 NW 1/4
Lat _____ " or _____ (degrees or decimal)
Long _____ " or _____ (degrees or decimal)

Street Address of Well (or nearest address)

42000 NW Banks Rd., Banks, OR

(10) STATIC WATER LEVEL

48 ft. below land surface. Date 05/25/2005
_____ ft. below land surface. Date _____
Artesian pressure _____ lb. per square inch Date _____

(11) WATER BEARING ZONES

Depth at which water was first found		Estimated Flow Rate	SWL
From	To		

(12) WELL LOG

Ground Elevation		From	To	SWL
Material				
Blk basalt, frags, occ soapstone.	325	378		
Brn/gry-brn basalt frag broken occ red-brn basalt/lava streaks	378	420	48	
Blk/gry blk basalt/lava	420	468		
Blk/gry blk basalt, hard occ frags.	468	615		
Blk basalt interbed, occ claystone occ lava streaks.	615	660	48	
Blk/gry-blk basalt, frags.	660	665		

Date Started 3-22-2005 Completed 5-25-2005 29 2024

(unbonded) Water Well Constructor Certification

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

WWC Number 573 Date 5-31-2005

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 1266 Date May 31, 2005

Signed _____

April 17, 2024

1501011

Oregon Water Resources Department
Attn: *Groundwater Hydrogeology Section*
725 Summer St. NE Ste A
Salem, Oregon 97301

c/o: Dennis Orlowski, *Northeast Region Lead Hydrogeologist*

RE: INTERPRETATION OF BASALT WATER-BEARING ZONES IN THE AREA OF BANKS, OREGON

CwM-H2O (CwM) presents this technical memorandum to the Oregon Water Resources Department (OWRD) on behalf of the City of Banks (City). The purpose of the Technical Memorandum is twofold: 1) to present the results of additional investigations into the nature of two water-bearing zones (WBZs) within the Columbia River Basalt Group (CRBG), and 2) to support an application to modify Certificate 95849 that requests the additional points of appropriation and proposes the development of all basalt WBZs encountered to a depth of 665 feet below ground surface (bgs) as one aquifer unit. The WBZs investigated are documented in the City's primary production well, Well 2 (WASH 6237) and in the nearby Quail Valley Irrigation Well (QV Well, WASH 50693). The locations of each well are presented in Figure 1 - Vicinity Map.

This technical memorandum also presents a correction to the 2018 Banks-Green Mountain Aquifer Storage and Recovery Feasibility Study (ASR Feasibility Study) which incorrectly interpreted a downhole video observation to suggest water was moving within the borehole of Well 2. This interpretation is incorrect based on a reevaluation of the original video log and the new evidence presented in sections that follow which demonstrate that the WBZs encountered in Well 2 were in equilibrium and that no flow was evident in the video log.

Recent Geophysical Evidence

The investigation of Well 2 was conducted in 2017 as part of the Banks-Green Mountain Aquifer Storage and Recovery Feasibility Study (CwM, 2018). The investigation of the QV Well was completed in two separate investigations. The first was conducted by CwM to assess the condition of the QV Well as a potential asset for the City (CwM, 2020). A separate assessment was conducted by Holt Development and Summit Water Resources, LLC (Summit) in 2023, which focused on the potential flow between water bearing units in the QV Well. Both investigations utilized Pacific Survey, LLC of Auburn, CA for geophysical survey. The array of downhole methods used to evaluate both production wells included the following:

- Video Survey with down- and side-casting camera
- Caliper Log
- Dynamic Spinner Log
- Static Spinner Log
- Temperature Log

Received

APR 29 2024

OWRD

All information gathered in these assessments is available for OWRD to review. However, for the purposes of this technical memorandum, the pertinent evidence of potential flow within the basalt borehole is found in the static spinner log data collected in each well. The raw data for static spinner log for each of these investigations is provided here for OWRD technical review in the attached Exhibit A - Geophysical Log Surveys with the original State of Oregon Water Well Reports (well logs) from each well.

Exhibit A also contains an excerpt from a report provided by Summit where Pacific Survey provides commentary on the 2017 Banks Well 2 and the 2023 QV Well spinner log results. Pacific Survey's analysis of the spinner logs states that zero flow is detected between the two WBZs. This indicates that, in both wells, the two WBZs are of equal head value and in combination act as a single aquifer without loss of water or artesian head from one zone to the other.

Evidence from Area Water Well Reports of Equivalent Static Water Levels

The observations of equivalent head values between upper and lower WBZs in Well 2 and the QV Well are also supported in the original well logs which document no change in static water level as the borehole was advanced through each WBZ during the time of drilling. This observation is not uncommon in the northern Tualatin Valley in the area of the City. In a limited search, CwM identified eight other deep (greater than 400 ft bgs) basalt wells in the area that tap a number of WBZs and show no change in static water levels as the wells were constructed. These wells include WASH 7691, WASH 13531, WASH 54161, WASH 55819, WASH 71480, WASH 72830, WASH 141, and WASH 0002 with deepening log WASH 199. The well locations are shown in Figure 1. The well logs for each are included in Exhibit B - Area Basalt Wells. The lack of a change in static water level suggests that the WBZs are interconnected, in equilibrium between WBZs, and that these basalt water WBZs act as one aquifer in the area of the City.

Evidence from Recent Water Level Elevations: Wells 1 and 2

Previous water levels reported to CwM from the City and to OWRD in annual report as "SCADA" reading are incorrect due to a long-term failure in the transducers measuring water levels in the City's Well 1 and Well 2. The City has recently completed an elevational survey of both wellheads and begun reconditioning and repairs for the pump and motor equipment in Well-1. This reconditioning included the replacement of the older non-functional transducer system. Concurrently, the City has also replaced the previous transducer system that was installed in Well-2.

Since March 2023, Well-1 has been offline as the equipment has been removed for repair or replacement. This allowed for direct access to Well 1 water levels by hand measurement with a well sounder. CwM geologists have collected three water levels during this time period when Well 2 has been idle for at least 7-days. The static water elevations (calculated with survey elevations and manual depth measurements) between the wells differed by 0.62 – 1.12 feet, Table 1.

Under static winter-spring conditions, groundwater elevations were less than 1 ft apart. Some variability in water level is expected due to the irrigation season and the use of multiple area wells for residential use. However, little variation has been observed. In summary, the static water

elevations are essentially equivalent, and the very small differences measured between the wells would not be sufficient to move groundwater between WBZs or cause a loss of water from one zone to the other.

Table 1 – Manual Groundwater Elevation Measurements

Date	Well-1 Groundwater Elevation	Well-2 Groundwater Elevation	Difference in Elevation	Time Since Well-2 Pumped
3/15/2023	197.60 ft	196.98 ft	0.62 ft	7+ days
4/7/2023	199.17 ft	198.05 ft	1.12 ft	7+ days
10/13/2023	185.85 ft	184.89 ft	0.96 ft	7+ days

2023 Review of Video Survey of Well-2 completed in 2018

A video survey of Well-2 was conducted by Pacific Surveys LLC and CwM on January 12, 2018. The video covered the entire length of Well 2 including the cased and open-hole intervals. A CwM Principal-level review of the video was completed by Robert E. Long Jr. *RG, CWRE* in October of 2023 to assess the origin of comments made in the 2018 ASR Feasibility Study regarding the exchange of water between the upper and lower WBZs within Well 2. The quote “the exchange of water between the two water bearing zones was observed, with water from the water from the lower water bearing zone moving upwards and mixing with the upper water bearing zone” is found on page 11 of the ASR Feasibility Study and in Appendix C page 1.

In the review of the video survey, documented suspended sediment and debris dislodged from the inside of the well was observed floating downward in the water column, including when the camera was not in motion. The video survey from top of casing to the bottom of the well (0 to 669.7 bgs) at no time indicates evidence of upward flow. It is CwM’s conclusion that the survey interpretation error occurred as the video camera was retracted from the well. Specifically, it is believed that upward movement of sediment upon the retraction of the camera was interpreted as upward flow. In reality, this effect is the result of suction created behind the camera when it is being pulled back up the well.

CwM’s intent with this memo is to correct this statement about upward water flow and exchange between WBZ in Well 2. There is no evidence from the video survey of water movement in either direction. The evidence provided by the downhole video suggests that the two WBZs share very similar hydraulic pressure regimes under static conditions.

Summary

The goal of this memo is to update the factual evidence related to two water bearing zones (WBZ) within the Columbia River Basalt Group (CRBG) that supply groundwater water to production wells in and around Banks, Oregon in the northern Tualatin Valley in support of a proposed application to add five additional points of appropriation to Certificate 95849. The application proposes to use both WBZs as a single aquifer for both production and for future ASR operations. It is the professional opinion of CwM, based on the evidence presented in geophysical analysis, well log static water levels,

and current static water levels measured by CwM at Well 1 and Well 2, that these basalt WBZ are in equilibrium and operate as a single aquifer unit. Previous observations in the 2018 ASR Feasibility Study and interpretations of flow within the borehole based on a downhole video data are incorrect and are amended herein based on the reevaluation of the 2018 video in question.

Please let us know if there are any issues with processing this application or questions regarding the information included therein. Thank you for your assistance.

Sincerely,

CwM H2O, L.L.C.



Robert Long, CWRE

CC Jolynn Becker, City Manager, City of Banks
Joe Schiewe, Holt Homes
Paul Sellke, AKS Engineering & Forestry

Received

APR 29 2024

OWRD

14449 -

Jason Melady
Summit Water Resources, LLC

November 9, 2022

RE: Technical Memo: Static Spinner

Under non-pumping condition the spinner/flowmeter is lowered into the boring/well at a constant speed. The revolutions of the impeller are recorded as counts/sec. Once the spinner/flowmeter reaches total depth, the survey is stopped and a new survey begins with the tool ascending the boring/well. The spinner/flowmeter is raised to the surface at a constant rate and the revolutions of the impeller are recorded.

Both the down and up runs are merged onto one graph and scaled so that both spinner response overlay one another in a zone of known zero-flow. This zone is typically above all perforations. In the case of Well #2, this would be in the 12-inch casing that is set to 300ft. This zone of zero-flow demonstrates that the revolutions of the spinner is directly a result of the speed of descent/ascent of the tool.

If both the down and up run overlay one another throughout the entire boring/well, the inference would be that there is no vertical flow anywhere in the boring/well. If vertical flow was occurring, the down and up runs would diverge from one another in response to the direction of the flow (velocities are additive). In the case for Well #2, there is no significant divergence between the down and up runs, indicating zero-flow through the entire interval.

Best Regards,
Michael Ridder
Pacific Surveys, LLC

Received

APR 29 2024

OWRD

PACIFIC SURVEYS

STATIC SPINNER UP & DOWN RUNS NON-PUMPING CONDITION

Job No.

23530

Company CITY OF BANKS

Well WELL 2

File No.

Field BANKS

County WASHINGTON State OR

Location:

41700 NW BANKS RD.
GPS: 45.6214 -123.1066

Other Services:

VIDEO CALIPER
DYNAMINC SPINNER
STOP COUNTS
SPINNER ANALYSIS

Sec. Twp. Rge.

Permanent Datum	T.O.C.	Elevation	Elevation
Log Measured From	T.O.C.	above perm. datum	K.B. D.F. G.L.
Drilling Measured From	N/A		

Date	01-12-2018
Run Number	ONE
Depth Driller	669'
Depth Logger	669'
Bottom Logged Interval	660'
Top Log Interval	225'
Pump Set @	196' (BOTTOM)
Time Pumping Prior to Survey	30 MIN
Pumping Water Level	NOT MEASURED
Max. Recorded Temp.	N/A
Pump Rate (GPM)	N/A
Time Well Ready	0800
Time Logger on Bottom	1200
Equipment Number	PS-7
Location	SAC
Recorded By	SCHUMACHER
Witnessed By	R. DOUGHERTY

Received

APR 29 2024

OWRD

Perforation Record

Perforation Record

Type	Slot Size	From	To	Type	Slot Size	From	To
------	-----------	------	----	------	-----------	------	----

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	12"	N/A	0'	300'
Camera Tube				
Production String				
Liner	14449 -			

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

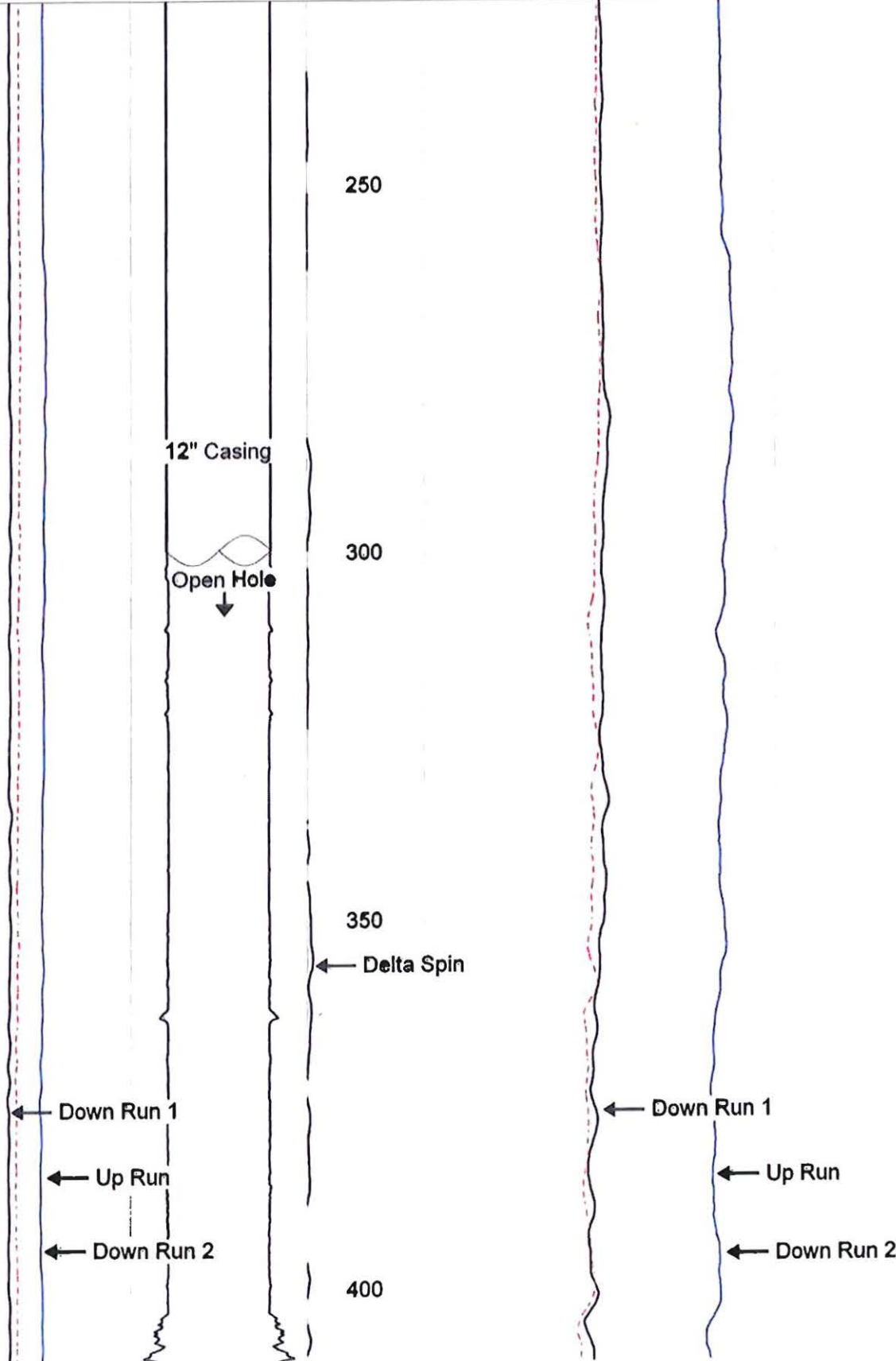
Comments

FULL BORE
12" OPEN HOLE BELOW 300'

Database File 23530.db
Dataset Pathname statD1
Presentation Format spinner
Dataset Creation Fri Jan 12 10:11:44 2018
Charted by Ninth in Feet scaled 1:240

0	(ft/min) 100
LS	
0	(ft/min) 100
LS	
0	(ft/min) -100

0	Spinner Down Run (cps)	40
1.5	Spinner Up Run (cps)	41.5



Received
APR 29 2024
OWRD

14449 -

450

500

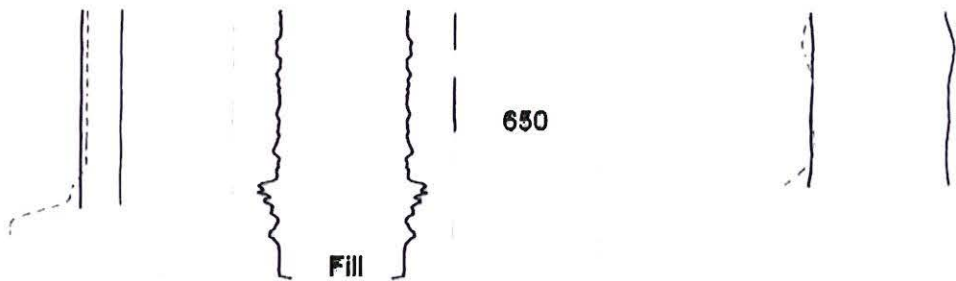
550

600

Received
APR 29 2024

OWRD

14449 -



650

Fill

LS	Delta Spin	0	Spinner Down Run (cps)	40
0 (ft/min) 100		0	Spinner Down Run (cps)	40
LS		1.5	Spinner Up Run (cps)	41.5
0 (ft/min) 100				
LS				
0 (ft/min) -100				

Received

APR 29 2024

14449 -

OWRD

The original and first copy of this report
are to be filed with the

WATER RESOURCES DEPARTMENT
SALEM, OREGON 97310
within 30 days from the date
of well completion.

WATER WELL REPORT

RECEIVED

STATE OF OREGON

(Please type or print)

SEP - 6 1977 (Do not write above this line)

State Well No. 2N/3W-31

State Permit No. _____

(1) OWNER:

WATER RESOURCES DEPT.
Name City of Banks SALEM, OREGON
Address Banks, Oregon

(2) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary ☒ Driven ☐
Cable ☐ Jetted ☐
Dug ☐ Bored ☐

(4) PROPOSED USE (check):

Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(5) CASING INSTALLED:

8-5/8" Diam. from plus 2 ft. to 210 ft. Gage 250
" Diam. from _____ ft. to _____ ft. Gage _____
" Diam. from _____ ft. to _____ ft. Gage _____

(6) PERFORATIONS:

Perforated? ☐ Yes ☒ No.

Type of perforator used _____

Size of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

(7) SCREENS:

Well screen installed? ☐ Yes ☒ No

Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.
Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

(8) WELL TESTS:

Drawdown is amount water level is
lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? AM Janssen
Yield: 275 gal./min. with 224 ft. drawdown after 48 hrs.
150 " 146 " " "

Ballor test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Artesian flow _____ g.p.m.

Temperature of water 58° Depth artesian flow encountered _____ ft.

(9) CONSTRUCTION:

Well seal—Material used Cement grout & 2% gel
Well sealed from land surface to 210 ft.
Diameter of well bore to bottom of seal 12-1/4" in.
Diameter of well bore below seal 8" in.
Number of sacks of cement used in well seal 25 sacks
How was cement grout placed? Placed on o.d. of casing
& through grout pipe - 20 sacks run @ 210',
5 sacks run to top off at ground level upon
completion

Was a drive shoe used? ☐ Yes ☒ No Plugs _____ Size: location _____ ft.

Did any strata contain unusable water? ☒ Yes ☐ No

Type of water? insufficient depth of strata 130' to 160'

Method of sealing strata off cased and cemented

Was well gravel packed? ☐ Yes ☒ No Size of gravel: _____

Gravel placed from _____ ft. to _____ ft.

(10) LOCATION OF WELL:

County Washington Driller's well number _____
1/4 1/4 Section 81 T. 2 N R. 8 W. W.M.
Bearing and distance from section or subdivision corner _____

(11) WATER LEVEL: Completed well.

Depth at which water was first found 130 ft.
Static level 84 ft. below land surface. Date 8/24/77
Artesian pressure _____ lbs. per square inch. Date _____

(12) WELL LOG:

Diameter of well below casing 8"

Depth drilled 450 ft. Depth of completed well 450 ft.

Formation: Describe color, texture, grain size and structure of materials;
and show thickness and nature of each stratum and aquifer penetrated,
with at least one entry for each change of formation. Report each change in
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Dark brown clay topsoil	0	8	
Silty brown clay	8	15	
Red-brown clay w/rotten rock fragments	15	50	
Sticky red clay-occ. rotten rock streaks	50	95	
Brown clay & rotten rock	95	110	
Dark brown & gray-brown clay --organic material	110	120	
Soft blue-gray cemented gravel	120	130	
Rotten brown basalt	130	160	20 gpm
Soft brown basalt-occ. weathered	160	195	
Black-brown basalt	195	215	
Hard gray-black basalt	215	230	
Broken brown basalt w/soapstone and lava interbeds	230	245	10 gpm
Fractured black basalt--occ. orevice	245	285	
Hard gray-black basalt, occ-			

Work started 8/16/77 19 Completed 8/24/77 19
Date well drilling machine moved off of well 8/24/77 19

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.
Materials used and information reported above are true to my
best knowledge and belief.

[Signed] A. M. Janssen Date 8/29/77, 19____
(Drilling Machine Operator)

Drilling Machine Operator's License No. 523

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is
true to the best of my knowledge and belief.

Name A. M. Janssen Drilling Co.
(Person, firm or corporation) (Type or print)

Address 21075 SW Tualatin Valley Hwy. Aloha, Oregon

[Signed] Edward M. Janssen
(Water Well Contractor)

Contractor's License No. 79 Date 8/29/77, 19____

(USE ADDITIONAL SHEETS IF NECESSARY)

14449 - SP-45656-119

Pacific Surveys, LLC

A full service geophysical well logging company

Ryan Dougherty
Summit Water Resources, LLC

December 14, 2022

RE: Static Spinner

On November 30th, 2022, we performed a static spinner survey on the Quail Valley Golf Course Well in Banks, OR. Only one down and up run were required for this survey, as both the down and up run overlaid one another throughout the entire cased and open-hole portions of the well, with no significant divergence. This corresponds with the Temperature Log performed on this well from November 2020, which, similarly, revealed no significant divergence from the expected geothermal gradient. Therefore, it appears that there is no vertical flow in the boring/well.

Best Regards,
Mike Schumacher

Pacific Surveys, LLC

Received

APR 29 2024

OWRD



30460

Well QVGC WELL

Field BANKS

County WASHINGTON State OR

Location:

12565 NW AERTS RD
GPS: 45.6167 -123.0958

Other Services:

CALIPER

Sec. Twp. Rge.

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	above perm. datum	K.B. D.F. G.L.
Drilling Measured From	N/A		

Date	11-30-2022
------	------------

Run Number	ONE
------------	-----

Depth Driller	640'
---------------	------

Depth Logger	641'
--------------	------

Bottom Logged Interval	620'
------------------------	------

Top Log Interval	0'
------------------	----

Static Water Level	~25'
--------------------	------

Depth Of Pump Bowls	N/A
---------------------	-----

Density / Viscosity	N/A
---------------------	-----

Max. Recorded Temp.	N/A
---------------------	-----

Pump Rate (GPM)	N/A
-----------------	-----

Time Well Ready	0900
-----------------	------

Time Well Read	0930
Time Logger on Bottom	0945

Equipment Number	PS-1
------------------	------

Equipment Number	PS-4
Location	SAC

Location	SAC
Recorded By	SCH

Recorded By	SCF
Witnessed By	R. D.

Witnessed By _____ R. D. _____
Borehole Record

Borehole Record

Tubing Record

Solenoid Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

DATE	BY	FROM	TO	QTY	WEIGHT	FROM	TO

--	--	--	--	--	--	--	--

--	--	--	--	--	--	--	--

Casing Record	Size	Wgt/Ft	Top	Bottom
---------------	------	--------	-----	--------

Surface String				
----------------	--	--	--	--

Prot. String				
--------------	--	--	--	--

Production String	10.25" ID	0.25" WALL	0'	315.1'
-------------------	-----------	------------	----	--------

[illegible][illegible]

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

OPEN HOLE FROM 315.1 FT TO APPROX. 645 FT.

Database File	30460.db
Dataset Pathname	spn_d4
Presentation Format	spinmerg
Dataset Creation	Wed Nov 3
Created by	Nanth in F

Wed Nov 30 11:05:14 2022
Nenth in Fast scaled 1.240

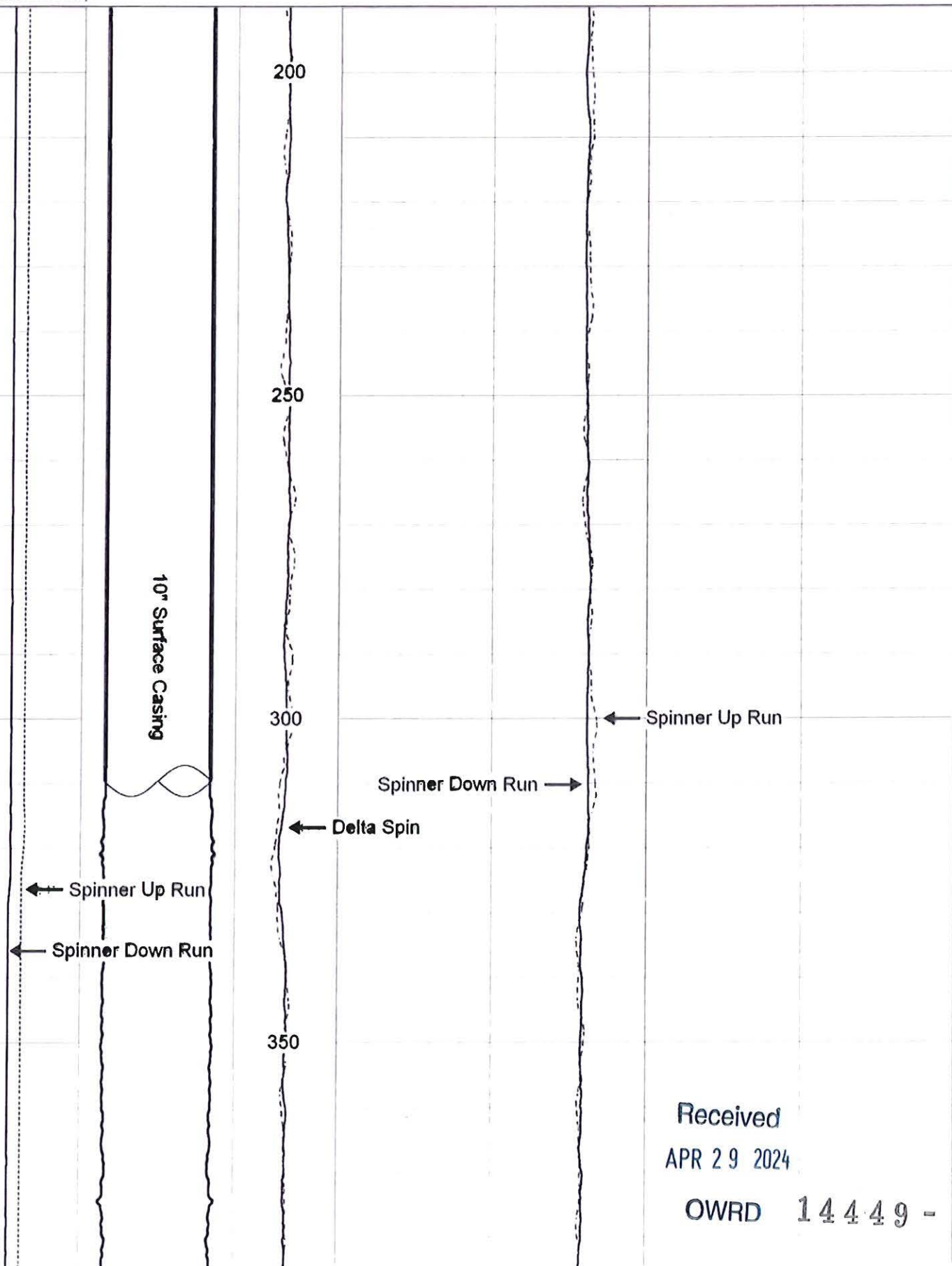
0 (ft/min) -100
LS
0 (ft/min) 100

Image

Delta Spin -1.2

Spinner Up Run (cps)

48.8



Received

APR 29 2024

OWRD 14449 -

400

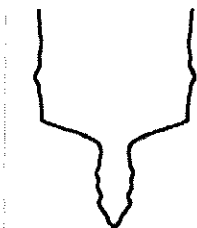
450

500

550

600

Received
APR 29 2024
OWRD 14449 -



OWRD

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

RECEIVED

62373

CITY WELL-2

WELL I.D. # L 75346

JUN 02 2005

START CARD # 173577

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

(1) LAND OWNER
Name City of Banks
Address 100 South Main Street
City Banks State Or Zip 97106

(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 665 ft.
Explosives used: ☐ Yes ☒ No Type _____ Amount _____

BORE HOLE			SEAL			Sacks or Pounds
Diameter	From	To	Material	From	To	
16	0	300	Cem/Bent	0	300	115 sks
12	300	665				

How was seal placed: Method ☐ A ☒ B ☒ C ☐ D ☐ E
☐ Other

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER
Casing: Diameter 12 From +2 To 300 Gauge .250 Steel ☒ Plastic ☐ Welded ☒ Threaded ☐
Liner: _____

Drive Shoe used ☐ Inside ☐ Outside ☒ None
Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS
☐ Perforations Method _____
☐ Screens Type _____ Material _____
From To Slot Number Diameter Tele/pipe Casing Liner
Size size size
☐ ☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailor ☒ Air ☐ Flowing Artesian
Yield gal/min Drawdown Drill stem at Time
650+ 275-280 660 200 1hr. 1hr.

Temperature of water 57°F Depth Artesian Flow Found _____
Was a water analysis done? ☒ Yes By whom A.M.J.
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____
Depth of strata: _____

(9) LOCATION OF WELL (legal description)
County Washington
Tax Lot 402 Lot _____
Township 2N N or S Range 3W E or W WM
Section 31 NE 1/4 NW 1/4
Lat _____ " or _____ (degrees or decimal)
Long _____ " or _____ (degrees or decimal)

Street Address of Well (or nearest address)
42000 NW Banks Rd. Banks, Or

(10) STATIC WATER LEVEL
48 ft. below land surface. Date 5-25-05
_____ ft. below land surface. Date _____
Artesian pressure _____ lb. per square inch Date _____

(11) WATER BEARING ZONES
Depth at which water was first found 378

From	To	Estimated Flow Rate	SWL
378	468	350 gpm	48
615	660	300 gpm	48

(12) WELL LOG Ground Elevation _____

Material	From	To	SWL
Brn & red-brn cly			
sticky, firm.	0	69	
Red-brn basalt, very			
weathered.	69	102	
Green clay soft	102	121	
Gry-brn clay firm	121	155	
Red-brn basalt, very			
weathered.	155	179	
Brn basalt, weathered	179	201	
Gry-brn basalt	201	206	
Gry/gry-blk basalt hrd	206	231	
Gry-brn basalt w/			
interbeds.	231	251	
Gry-gry blk basalt hrd	251	313	
Brn basalt interbed	313	325	

Date Started 3-22-05 Completed 5-25-05

(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 573 Date 5-31-2005
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 1266 Date May 31, 2005
Signed _____

ORIGINAL - WATER RESOURCES DEPARTMENT

FIRST COPY - CONSTRUCTOR

SECOND COPY - CUSTOMER

06/16/2004

14449

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

MAY 28 1996

QV WELL

(START CARD) # 86703

Instructions for completing this report are on the last WATER RESOURCES DEPT.

(1) OWNER: Well Number
Name QUAIL VALLEY GOLF COURSE
Address 12565 NW AERTS RD.
City BANKS State OR Zip 97106

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

(3) DRILL METHOD:
☒ Rotary Air ☒ Rotary Mud ☐ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☒ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval ☐ Yes ☒ No Depth of Completed Well 640 ft.
Explosives used ☐ Yes ☒ No Type Amount

HOLE SEAL
Diameter From To Material From To Sacks or pounds
14-3/4 0 312 Cement 0 90 35 SKS
10 312 640 Cement 280 312 20 SKS

How was seal placed: Method ☐ A ☒ B ☒ C ☐ D ☐ E
☐ Other
Backfill placed from 90 ft. to 280 ft. Material Hivisc Gel & Bent. chips
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:
Diameter From To Gauge Steel Plastic Welded Threaded
Casing: 10" +1 312 250 ☒ ☐ ☒ ☐
Liner: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Final location of shoe(s)
(7) PERFORATIONS/SCREENS:
☐ Perforations Method
☐ Screens Type Material
From To Slot size Number Diameter Tele/pipe size Casing Liner

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

☐ Pump ☐ Bailor ☒ Air ☐ Flowing
Yield gal/min Drawdown Drill stem at Time
300+ 280 1 hr.
200 180 "
180 100 "

Temperature of water 56 F Depth Artesian Flow Found

Was a water analysis done? ☒ Yes By whom AMT

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:
County WASHINGTON Latitude Longitude
Township 2N N or S Range 3W E or W. WM.
Section 31 NW 1/4 SE 1/4
Tax Lot 00100 Lot Block Subdivision
Street Address of Well (or nearest address) 12565 NW AERTS RD
BANKS, OR

(10) STATIC WATER LEVEL:
18 ft. below land surface. Date 05/20/96
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:
Depth at which water was first found 340

From	To	Estimated Flow Rate	SWL
<u>340</u>	<u>465</u>	<u>100 GPM</u>	<u>18</u>
<u>515</u>	<u>575</u>	<u>100 "</u>	<u>18</u>
<u>575</u>	<u>630</u>	<u>100+GPM</u>	<u>18</u>

(12) WELL LOG:
Ground Elevation

Material	From	To	SWL
<u>Topsoil</u>	<u>0</u>	<u>1</u>	
<u>Dark brown clay</u>	<u>1</u>	<u>4</u>	
<u>Sticky brown clay</u>	<u>4</u>	<u>16</u>	
<u>Sticky gray-brown clay</u>	<u>16</u>	<u>94</u>	
<u>Sticky red-brown clay</u>	<u>94</u>	<u>156</u>	
<u>Decomp. brown basalt, occ.</u>	<u>156</u>	<u>283</u>	
<u>clay interbeds</u>			
<u>Soft brown basalt</u>	<u>283</u>	<u>298</u>	
<u>Firm gray-brown basalt</u>	<u>298</u>	<u>310</u>	
<u>Hard gray basalt</u>	<u>310</u>	<u>340</u>	
<u>Gray-brown, gray-black basalt</u>	<u>340</u>	<u>465</u>	<u>18</u>
<u>occ. brown basalt streaks</u>			<u>"</u>
<u>(caving zone 420-435, grouted solid)</u>			
<u>Brown basalt & ash, cemented</u>	<u>465</u>	<u>515</u>	
<u>debris</u>			
<u>Gray-brown basalt, frac. occ.</u>	<u>515</u>	<u>575</u>	<u>18</u>
<u>broken green mineral stain</u>			<u>"</u>
<u>Brown & gray-brown basalt,</u>	<u>575</u>	<u>630</u>	<u>18</u>
<u>brown</u>			
<u>Gray-black basalt, hard, frac.</u>	<u>630</u>	<u>640</u>	

Date started 04/02/96 Completed 05/20/96
(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, 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
Signed Date

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, 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 1266 & 573
Signed Date 05/22/96

ORIGINAL & FIRST COPY WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

14449 -

Received

APR 29 2024

OWN

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

JUN 02 2005

WELL I.D. # L 75346

WATER RESOURCES DEPT
OREGON

START CARD # 173577

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

(1) LAND OWNER

Well Number _____
Name City of Banks Conti. Page 2
Address 100 South Main Street
City Banks State OR Zip 97106

(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 665 ft.
Explosives used: ☐ Yes ☒ No Type _____ Amount _____

BORE HOLE			SEAL			Sacks or Pounds
Diameter	From	To	Material	From	To	

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☐ OtherBackfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Drive Shoe used ☐ Inside ☐ Outside ☐ None

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS

☐ Perforations Method _____
☐ Screens Type _____ Material _____

From	To	Slot Size	Number	Diameter	Tele/pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time

Temperature of water _____ Depth Artesian Flow Found _____

Was a water analysis done? ☐ Yes By whom _____Did any strata contain water not suitable for intended use? ☐ Too little☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____

Depth of strata: _____

(9) LOCATION OF WELL (legal description)

County Washington
Tax Lot 402 Lot _____
Township 2N N or S Range 3W E or W WM
Section 31 NE 1/4 NW 1/4
Lat _____ " or _____ (degrees or decimal)
Long _____ " or _____ (degrees or decimal)

Street Address of Well (or nearest address)

42000 NW Banks Rd., Banks, OR

(10) STATIC WATER LEVEL

48 ft. below land surface. Date 05/25/2005
_____ ft. below land surface. Date _____
Artesian pressure _____ lb. per square inch Date _____

(11) WATER BEARING ZONES

From	To	Estimated Flow Rate	SWL

(12) WELL LOG

Material	From	To	SWL
Blk basalt, frags, occ soapstone.	325	378	
Bm/gry-brn basalt frac broken occ red-brn basalt/lava streaks	378	420	48
Blk/gry blk basalt/lava	420	468	
Blk/gry blk basalt, hard occ frags.	468	615	
Blk basalt interbed, occ claystone occ lava streaks.	615	660	48
Blk/gry-blk basalt, frags.	660	665	

Date Started 3-22-2005 Completed 5-25-2005

(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 573 Date 5-31-2005

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 1266 Date May 31, 2005

Signed _____

Received

14449 -

APR 29 2024

OWRD

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.785)

RECEIVED

SEP 29 1989

(START CARD) #

13022

pg. 1

(1) OWNER:

Name Pumpkin Ridge Development, Inc. Well Number: WATER
Address One Southwest Columbia, Suite 1010
City Portland State OR Zip 97258

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable
☐ Other

(4) PROPOSED USE:

☐ Domestic ☐ Community ☐ Industrial ☒ Irrigation
☐ Thermal ☐ Injection ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes ☐ No ☒ Depth of Completed Well 583 ft.
Explosives used ☐ Yes ☒ No ☐ Type _____ Amount _____

HOLE			SEAL			Amount
Diameter	From	To	Material	From	To	sacks or pounds
17 1/2	0	65	Cement	0	65	50 sacks
17 1/2	65	200	Drill gel	65	200	
17 1/2	200	224	Cement	200	224	25 sacks
14-3/4	224	232	Cement	224	232	" "

How was seal placed: Method ☐ A ☐ B ☒ C ☒ D ☐ E

☐ Other

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

Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 12"	+2	232	.250	☒	☐	☒	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
Liner:				☐	☐	☐	☐
				☐	☐	☐	☐

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

☐ Perforations Method _____
☐ Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☒ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
280	103.		24 xhr.
350	148		30 hr.
400	195		48 hr.

Temperature of water _____ Depth Artesian Flow Found _____

Was a water analysis done? ☐ Yes By whom _____

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____

Depth of strata: _____

(9) LOCATION OF WELL by legal description:

Latitude _____ Longitude _____
Township 2 N Nor S, Range 3 W E or W, WM.
Section 36 SE 1/4 SW 1/4
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____

(10) STATIC WATER LEVEL:

40 ft. below land surface. Date 9/21/89
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found		245	
From	To	Estimated Flow Rate	SWL
245	253	20 gpm	40
335	350	10 gpm	"
380	403	70 gpm	"
413	417	15 gpm	"

(12) WELL LOG:

Material	From	To	SWL
Topsoil	0	1	
Firm brown clay	1	4	
Soft brown silty clay	4	23	
Sticky light gray-brown clay	23	47	
Sticky red-brown clay	47	79	
Sticky light gray clay	79	97	
Sticky red-brown clay	97	136	
Sticky red clay	136	151	
Decomposed brown basalt	151	156	
Firm decomp. gray-brown basalt	156	160	
Interbedded red, brown & gray clay	160	170	
Soft decomposed brown basalt	170	191	
Firm decomposed brown basalt	191	218	
Firm gray-brown basalt	218	220	
Hard gray basalt	220	253	
Firm gray-black basalt	253	261	
Soft black basalt	261	268	
Firm gray-black basalt	268	289	
Hard gray basalt	289	299	
Firm gray basalt	299	305	
Soft gray-black basalt	305	312	
Firm gray basalt	312	316	

Date started 8/10/89 Completed 9/25/89

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my knowledge and belief.

WWC Number _____

Signed _____ Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. I work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1266

Signed [Signature] Date 9/27/89

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.785)

RECEIVED Ridge Development N/3W/36C0
SEP 29 1989 (START CARD) # 13022 pg 2

(1) OWNER:

Name _____ Well Number: WATER RESOURCES DEPARTMENT
Address _____
City _____ State _____ Zip _____

(2) TYPE OF WORK:

☐ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable
☐ Other _____

(4) PROPOSED USE:

☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other _____

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes No Depth of Completed Well _____ ft.

Explosives used ☐ ☐ Type _____ Amount _____

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
12"	232	552				
10"	552	583				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E

☐ Other _____

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

Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

☐ Perforations Method _____
☐ Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☐ Pump ☐ Bailer ☐ Air ☐ Flowing
Artesian

Yield gal/min	Drawdown	Drill stem at	Time
			1 hr.

Temperature of water _____ Depth Artesian Flow Found _____

Was a water analysis done? ☐ Yes By whom _____

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____

Depth of strata: _____

LOCATION OF WELL by legal description:

Township _____ Nor S, Range _____ E or W, WM.
Section _____ 1/4 _____ 1/4
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____

(10) STATIC WATER LEVEL:

_____ 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
		434	443	20 gpm	4'
		453	458	30 "	"
		458	519	85 "	"
		559	575	150 "	"

(12) WELL LOG:

Material	From	To	SWL
Hard gray basalt	316	335	
Soft reddish-black basalt w/ green claystone (335-337)	335	350	
Hard gray basalt	350	403	
Firm gray-black basalt	403	417	
Hard gray basalt	417	430	
Soft gray-black basalt	430	443	
Firm gray-black basalt	443	447	
Soft gray-black basalt	447	453	
Hard gray basalt	453	458	
Soft gray-black basalt w/clay- stone	458	504	
Soft gray-green Claystone	504	508	
Firm gray-black basalt	508	519	
Wood	519	523	
Soft gray-green claystone	523	528	
Gray basalt w/gray claystone interbeds	528	533	
Hard gray basalt	533	559	
Firm gray-black basalt, occ. broken streak	559	583	

Date started _____ Completed _____

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my knowledge and belief.

WWC Number _____
Signed _____ Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. Work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number _____
Signed _____ Date _____

Geologic Log for Site WASH 7691

NWIS Site ID: 453650123000301

OWRD Log ID: WASH 7691

Well location: 02N/03W-36CAA

Depth drilled, in feet below land surface: 583

Land surface altitude, in feet above Nation Geodetic Vertical Datum of 1929: 220

Logged by: T. L. Tolan and M. H. Beeson

Date drilled: 08/10/1989

Depth	Symbol	Lithologic Description	Elevation	Water Bearing Zones	Geochem Sample	Remarks
0		Wanapum Basalt, Frenchman Springs Member Ground Surface Basalt of Sand Hollow deeply weathered (laterite)	218			Top of CRBG at ground surface; very deeply weathered 0 to 218 ft. No samples from 0 to 235 ft. Unit contacts interpreted from drillers log.
100		deeply weathered (laterite) Basalt of Ginkgo?	121			
		Vantage Interbed claystone	58 48			160 ft. Vantage Interbed estimated to be approx. 10 ft. thick.
200		Grande Ronde Basalt, Sentinel Bluffs Member flow 1 (-1) weathered flow top deeply weathered interior dense interior - columnar	27 0			Sentinel Bluffs Member flow 1 (-1): aphyric flow 2: sparsely plagioclase phyric with small phenocrysts
		normal flow top dense interior - columnar, flow lobe	-32 -42	20gpm	245	
		normal flow top dense interior - columnar	-57			
300		interbed - claystone	-83		300	305 ft. Interbed <2 ft. thick.
		Grande Ronde Basalt, Winter Water Member flow 1 normal flow top dense interior - columnar interbed - claystone	-97 -117 -137	10gpm	320	335 ft. Interbed <2 ft. thick.
		normal flow top dense interior - entablature dense interior - columnar	-167	70gpm	390	Winter Water Member flows 1 & 2: plagioclase phyric with small glomerocrysts
400		flow top dense interior	-197 -202	16gpm	420	Note: Winter Water flows 2 and 3 may be flow lobes of a single flow.
		normal flow top dense interior - entablature	-212			flow lobe: plagioclase phyric with small glomerocrysts flow 3: plagioclase phyric with small glomerocrysts
		pillow complex with massive claystone rip-ups			480 500	
		interbed - siltstone with wood	-302			520 ft. Interbed approx. 10 ft. thick.
		Grande Ronde Basalt, Ortle Member normal flow top dense interior - entablature	-312 -322		565 575	Ortle Member: aphyric
600		TD 583 ft	-583			

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

JUN 10 1987 RECEIVED 013531 24/3W-21dd

(1) OWNER:

Name Harry Lazott
Address Box 20
City Banks State OR Zip 97108

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation

☐ Thermal ☐ Injection ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes ☐ No ☒ Depth of Completed Well 500 ft.

Explosives used Yes ☐ No ☒ Type _____ Amount _____

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
6"	0	100	Cement	0	100	28 sacks
	100	500				

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E

☐ Other

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

Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+1	180	1/4	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:	4	10	500	1/4 R.R.	☐	☒	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) Drill shoe 180 ft

(7) PERFORATIONS/SCREENS:

☐ Perforations Method Drill
☐ Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
400	490	1/2	160			☐	☒
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☐ Pump ☐ Bailor ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50		480	1 hr.
40		420	1/2
15		360	1/2

Temperature of water 55 Depth Artesian Flow Found _____

Was a water analysis done? ☐ Yes By whom _____

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____

Depth of strata: _____

(9) LOCATION OF WELL by legal description:

County Wash Latitude _____ Longitude _____
Nor S, Range 3W E or W, WM.
Section 21 SE 1/4 SE 1/4
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) Hahn rd.

(10) STATIC WATER LEVEL:

357 ft. below land surface. Date 5-19-87

Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found _____

From	To	Estimated Flow Rate	SWL
300	320	6	250
440	490	50	250

(12) WELL LOG:

Ground elevation _____

Material	From	To	SWL
Brown soil	0	2	
Red clay	2	40	
Tan clay	40	90	
Brown clay	90	140	
Brown clay - Broken rock	140	300	
Black Gravel - W.B.	300	320	250
Brown clay - Jayors rock	320	440	
Black Gravel W.B.	440	490	250
Brown clay	490	500	250

Received

APR 29 2024

OWRD

Date started 5-18-87 Completed 5-19-87

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number _____

Signed _____ Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, 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 well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 711

Signed Joseph Trussell Date 5-21-87

WASH
54161

RECEIVED

NOV 27 1998

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

Instructions for completing this report are on the last page of the report. WATER RESOURCES DEPT.
SALEM, OREGON

WELL I.D. # L 27709
START CARD # 118198

(1) OWNER: Well Number _____

Name BILL & RHONDA OWEN
Address 4850 NW KAHNEETA CRT.
City PORTLAND State OR Zip 97229

(2) TYPE OF WORK

☐ New Well ☒ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other _____

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other _____

(5) BORE HOLE CONSTRUCTION:

Special Construction approval ☐ Yes ☒ No Depth of Completed Well 465 ft.
Explosives used ☐ Yes ☒ No Type _____ Amount _____

HOLE		SEAL					
Diameter	From To	Material	From To	Sacks or pounds			
6	210 465	SEAL NOT	DISTURBED				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☐ Other _____

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

Diameter	From To	Gauge	Steel	Plastic	Welded	Threaded
Casing:			☐	☐	☐	☐
			☐	☐	☐	☐
			☐	☐	☐	☐
Liner:	4 1/2 0	455	200#	☒	☒	☐
				☐	☐	☐

Final location of shoe(s) 4 1/2 x 6 K-Packer @ 355 (SEE NOTE)

(7) PERFORATIONS/SCREENS:

Perforations		Method		Material		PVC 200	
☒		SAW CUT					
☐		Screens		Type			
From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
435	455	1/8x12	80			☐	☒
						☐	☐
						☐	☐
						☐	☐

Received
APR 29 2024

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

☐ Pump		☐ Bailor		☒ Air		☐ Flowing	
Yield gal/min		Drawdown		Drill stem at		Time	
100+				350 to T.D.		1 hr.	
60				180		"	
18-20				100		"	

Temperature of water 53°F Depth Artesian Flow Found _____

Was a water analysis done? ☒ Yes By whom AMT

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____

Depth of strata: _____

(9) LOCATION OF WELL by legal description:

County WASHINGTON Latitude _____ Longitude _____
Township 2N N or S Range 3W E or W. WM.
Section 36 NW 1/4 NW 1/4
Tax Lot 103 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) 13990 NW OLD PUMPKIN RIDGE RD., CORNELIUS, OR

(10) STATIC WATER LEVEL:

62 ft. below land surface. Date 11/18/98
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found 2/210

From	To	Estimated Flow Rate	SWL
--	210	6 GPM	62
210	435	4 GPM	"
435	465	90+GPM	62

(12) WELL LOG:

Ground Elevation _____

Material	From	To	SWL
Existing 6" steel cased well open hole	0	210	62
Red minerals sludge & rock fragments	200	210	
Gray-black basalt, occ. blk lava	210	257	
Multi-colored claystone, ash, spongia coleamic debris	257	270	
Black basalt & lava, occ. broken, creviced	270	390	
Gray-black basalt, occ. lava streaks	390	438	
Black lava, very broken, occ. gray-black basalt	438	455	
Black & red basalt & lava	455	465	62
NOTE: Liner hung on packer @ 355', wedged on bell.			

Date started 11/12/98 Completed 11/18/98

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, 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 _____

Signed _____ Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, 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 573

Signed [Signature] Date 11/20/98

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

WASHINGTON 55819
APR - 5 2000
WATER RESOURCES DEPT.
SALEM, OREGON

WELL I.D. # L 38991
START CARD # 129593

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

(1) OWNER: Well Number _____
Name CROPP FARMS
Address 31345 NW NORTH AVE.
City NORTH PLATIN State OR Zip 97133

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

(3) DRILL METHOD:
☐ Rotary Air ☒ Rotary Mud ☐ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:
☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval ☐ Yes ☒ No Depth of Completed Well 420 ft.
Explosives used ☐ Yes ☒ No Type _____ Amount _____

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
10	0	281	Cement	0	45	17 sks
			Drill gel	45	250	
8	281	363	Cement	250	363	28 sks
6	363	420				

How was seal placed: Method ☐ A ☐ B ☒ C ☒ D ☐ E
☐ Other

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 6"	+1	363	250	☒	☐	☒	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
				☐	☐	☐	☐
Liner:				☐	☐	☐	☐
				☐	☐	☐	☐
				☐	☐	☐	☐

Final location of shoe(s) _____

(7) PERFORATIONS/SCREENS:

From		To	Slot size	Number	Diameter	Material	Casing	Liner
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐

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

☐ Pump	☐ Bailor	☒ Air	Flowing ☐ Artesian
Yield gal/min	Drawdown	Drill stem at	Time
45		400	1 hr.
36		250	"
21		150	"

Temperature of water 56°F Depth Artesian Flow Found _____

Was a water analysis done? ☒ Yes By whom AMT

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☒ Muddy ☐ Odor ☒ Colored ☐ Other

Depth of strata: 231-278' (SEALED OFF)

(9) LOCATION OF WELL by legal description:
County WASHINGTON Latitude _____ Longitude _____
Township 2N N or S Range 3W E or W. WM.
Section 35 SE 1/4 NW 1/4
Tax Lot 500 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) 34051 NW MTN DALE RD

(10) STATIC WATER LEVEL:
38 ft. below land surface. Date 03/30/2000
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found 383

From	To	Estimated Flow Rate	SWL
383	388	21 GPM	38
391	405	24 GPM	38

(12) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
Topsoil	0	1	
Brown clay	1	17	
Gray clay	17	24	
Sticky brown clay	24	102	
Sticky gray clay	102	130	
Fine to coarse black sand	130	141	
Sticky gray clay	141	178	
Fine gray sand w/wood	178	190	
Soft dark gray clay	190	231	
Fine to med. black gravel	231	243	wh
Fine to med. brown gravel	243	247	wh
Fine to med. black gravel	247	278	wh
Sticky gray clay	278	318	
Firm gray-brown basalt	318	329	
Soft brown basalt	329	350	
Firm gray-brown basalt	350	391	38
Soft dk. gray-brown basalt	391	405	38
Firm gray-brown basalt	405	412	
Hard gray basalt	412	420	

Date started 03/06/2000 Completed 03/30/2000

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, 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 _____
Signed _____ Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, 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 1266
Signed _____ Date 03/31/2000

STATE OF OREGON
WATER SUPPLY WELL REPORT

(ORS 537.765 & OAR 690-205-0210)

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

WASH 71480

WELL LABEL # L 107489

START CARD # 207761

ORIGINAL LOG #

(1) LANDOWNER

Owner Well I.D. _____
First Name Brady & Darci Last Name Wilson
Company _____
Address 1815 NW 143rd Ave B 28
City Portland State OR Zip 97229

(2) TYPE OF WORK

☒ New ☐ Conversion ☐ Deepening
☐ Alteration (complete Sections 2a & 10) ☐ Abandonment (complete Section 5a)

(2a) PRE-ALTERATION:

Well Depth _____ ft.

Seal Material _____

Casing Type: ☐ Steel ☐ Plastic ☐ Other _____

Casing Gauge _____ Casing Diameter _____

(3) DRILL METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Auger
☒ Cable ☐ Cable Mud ☐ Reverse Rotary ☐ Other _____

(4) PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Community
☐ Industrial/Commercial ☐ Livestock ☐ Dewatering ☐ Injection
☐ Thermal ☐ Other _____

(5) BORE HOLE CONSTRUCTION

Depth of Completed Well 486 ft. Special Standard: ☐ Yes (attach copy)

BORE HOLE

SEAL

Dia	From	To	Material	From	To	Amount	Scks/lbs
10"	0	35	bentonite	0	35	30	
6"	35	98					
8"	98	133	cement	98	133	9	
6"	133	486					

How was seal placed: Method ☐ A ☐ B ☐ C ☒ D ☐ E

☒ Other bentonite poured in dry

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

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

(5a) ABANDONMENT USING UNHYDRATED BENTONITE:

Calculated Amount Proposed to be Used: _____ sacks/lbs

Actual Amount Used: _____ sacks/lbs

(6) CASING/LINER

Casing	Linr	Dia	+	From	To	Gauge	Steel	Plastic	Welded	Thrd
X		6"	+	1 1/2	133 1/2	250	X		X	
	X	4 1/2		6	486			X		

Shoe ☐ Inside ☒ Outside ☐ Other Location of shoe(s) 133 1/2

Temporary casing ☐ Yes Diameter _____ From _____ To _____

(7) PERFORATIONS/SCREENS

Perforations Method drilled

Screens Type _____ Material _____

Perf	Scrn	Casing	Linr	Screen Dia	From	To	Screen/slot width	Slot length	# of slots	Tele/pipe size
X			X		446	486	3/8"		120	4 1/2

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

☐ Pump ☒ Bailor ☐ Air ☐ Flowing Artesian

Yield gal/min _____ Drawdown _____ Drill stem/Pump depth _____ Duration (hr) _____

temperature 55 °F Lab analysis ☐ Yes By _____

Water quality concerns? ☐ Yes (describe below) TDS _____ ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)

County Washington Twp 2N Nor S Range 3W E or W W.M.

Sec 29 NE 1/4 of the NW 1/4 Tax Lot 1400

Tax Map Number _____ Lot _____

Lat _____ " or _____ DMS or DD

Long _____ " or _____ DMS or DD

Street Address of Well (or nearest address) 15600 NW Roads En.

Banks Oregon 97106

(10) STATIC WATER LEVEL

	Date	SWL (psi)	+	SWL (ft)
Existing Well/Pre-Alteration				
Completed Well	<u>1-29-13</u>			<u>232</u>

Flowing Artesian? ☐ Yes Dry Hole? ☐ Yes

WATER BEARING ZONES

Depth water was first found 350

SWL Date	From	To	Est Flow	SWL (psi)	+	SWL (ft)
<u>1-29-13</u>	<u>350</u>	<u>365</u>	<u>10</u>			<u>232</u>
<u>1-29-13</u>	<u>415</u>	<u>430</u>	<u>15</u>			<u>232</u>
<u>1-29-13</u>	<u>472</u>	<u>486</u>	<u>35</u>			<u>232</u>

(11) WELL LOG

Ground Elevation _____

Material	From	To
brown soil	0	2
brown clay	2	5
red brown sandstone	5	12
red clay	12	48
brown clay	48	69
red clay	69	87
brown sandstone	87	98
grey rock	98	387
grey rock w/clay + wood	387	411
grey rock	411	460
grey rock w/clay + wood	460	471
grey rock	471	486

Date Started 11-19-12 Completed 1-29-13

(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 MAR 06 2013

Signed _____ RECEIVED BY OWRD

(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 1430 Date 2-16-13

Signed Jeff Nabors Received _____
Contact Info. (optional) _____

APR 29 2024

OWRD

ORIGINAL - WATER RESOURCES DEPARTMENT ONE COPY FOR CONSTRUCTOR ONE COPY FOR CUSTOMER
SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

01/02/2009

14449 -

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

WELL LABEL # L 113897

START CARD # 210675

(1) LAND OWNER

Owner Well I.D. _____

First Name **MATTHEW**Last Name **HUNT**

Company _____

Address **32790 NW PEACEFUL LANE**City **NORTH PLAINS**State **OR**Zip **97133****(2) TYPE OF WORK**
☒ New Well ☐ Deepening ☐ Conversion
☐ Alteration (repair/recondition) ☐ Abandonment
(3) DRILL METHOD
☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud
☐ Reverse Rotary ☐ Other _____
(4) PROPOSED USE
☒ Domestic ☐ Irrigation ☐ Community
☐ Industrial/ Commercial ☐ Livestock ☐ Dewatering
☐ Thermal ☐ Injection ☐ Other _____
(5) BORE HOLE CONSTRUCTIONSpecial Standard ☐ Attach copy _____Depth of Completed Well **515** ft.**BORE HOLE**

Dia	From	To	Material	From	To	Amt	sacks/ lbs
10	0	30	Bentonite	0	25	16	S
6	30	350					
8	350	428	Cement	350	428	20	S
5.5	428	515					

SEALHow was seal placed: Method ☐ A ☒ B ☐ C ☐ D ☐ E☒ Other **POUR SLOWLY & PROD**

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	☒	2	428	250	☒	☐	☒	☐
☐	☐		☐				☐	☐	☐	☐
☐	☐		☐				☐	☐	☐	☐
☐	☐		☐				☐	☐	☐	☐

Shoe ☐ Inside ☐ Outside ☐ Other Location of shoe(s) _____Temp casing ☐ Yes Dia _____ From _____ To _____**(7) PERFORATIONS/SCREENS**

Perforations Method _____

Screens Type _____ Material _____

Perf/S	Casing/	Screen	Dia	From	To	Screen/Slot	Slot	# of	Tele/
creen	Liner					width	length	slots	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)
80		515	1
80		425	.25
50		325	.25

Temperature **54** °F Lab analysis ☐ Yes By _____Water quality concerns? ☐ Yes (describe below)

From	To	RECEIVED BY OWRD

(9) LOCATION OF WELL (legal description)County **WASHING** Twp **2** N N/S Range **3** W E/W WMSec **35** SW 1/4 of the **NE** 1/4 Tax Lot **207**

Tax Map Number _____

Lot _____

Lat _____

or _____

DMS or DD

Long _____

or _____

DMS or DD

☐ Street address of well☒ Nearest address**32790 NW PEACEFUL LANE****(10) STATIC WATER LEVEL**

Date _____ SWL (psi) + SWL (ft)

Existing Well / Predeepening			
Completed Well	07-08-2014		59

Flowing Artesian? ☐ Dry Hole? ☐**WATER BEARING ZONES**Depth water was first found **434**

SWL Date	From	To	Est Flow	SWL (psi)	+ SWL (ft)
07-07-2014	434	505	24		59
07-08-2014	505	515	56		59

(11) WELL LOG

Ground Elevation _____

Material	From	To
BROWN CLAY	0	19
GRAY CLAY	19	29
STICKY BROWN CLAY	29	43
SOFT BROWN SILTY CLAY	43	59
STICKY BROWN CLAY WITH GRAY STREAKS	59	135
STICKY GRAY CLAY WITH SOFT GRAY	135	
BROWN SEAMS		194
SOFT BROWN SANDY CLAY	194	198
STICKY GRAY CLAY WITH OCC. BROWN	198	
STREAKS		295
RED BROWN CLAY	295	314
BROWN, GRAY BROWN CLAY WITH BROKEN	314	
ROCK		363
GRAY & BROWN CLY W/ ROTTEN WOOD STRK	363	405
GRAY BROWN CLAY	405	419
GRAY SANDSTONE WITH CLAY	419	433
GRAY CLAY	433	434
GRAY, GRAY BROWN BASALT	434	478
GRAY BASALT	478	515

Date Started **06-23-2014**Completed **07-08-2014****(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 **1492**Date **07-09-2014**

Password: (if filing electronically)

Signed *Mei R. Biggs***(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 **1266**Date **07-09-2014**

Password: (if filing electronically)

Signed _____

Contact Info (optional) _____

Received

APR 29 2024

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

SEP 24 1990

WATER RESOURCES DEPT.
SALEM, OREGON

(START CARD) #

20118

2N/3W/29ba

(1) OWNER: James & Chantal Faraulo
Name: James & Chantal Faraulo
Address: 808 S.W. 175th Pl.
City: Beaverton State: OR Zip: 97006

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable
☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes ☐ No ☒ Depth of Completed Well: 455 ft.
Explosives used Yes ☐ No ☒ Type: Amount:

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
10	0	179	Cement Bentonite	0	179	38
6	179	455				

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other

Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	1	179	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:	4	5	455		☐	☒	☐	☐
					☐	☐	☐	☐

Final location of shoe(s): none

(7) PERFORATIONS/SCREENS:

☒ Perforations Method: DRILL
☐ Screens Type: Material:

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
435	455		40	5/8		☐	☒
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☐ Pump ☐ Bailer ☒ Air ☐ Flowing
☐ Artesian

Yield gal/min	Drawdown	Drill stem at	Time
5		440	1 hr.

Temperature of water _____ Depth Artesian Flow Found _____
Was a water analysis done? ☐ Yes By whom _____
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:

County: Wash Latitude _____ Longitude _____
Township: 2N Nor S. Range: 3W E or W, WM.
Section: 29 NE 1/4 NW 1/4
Tax Lot: 510 Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address): Malvern Road
Banks, OR.

(10) STATIC WATER LEVEL:

305 ft. below land surface. Date: 9-19-90
Artesian pressure _____ lb. per square inch. Date: _____

(11) WATER BEARING ZONES:

Depth at which water was first found: 374

From	To	Estimated Flow Rate	SW
374	383	3	30
393	397	2	30

(12) WELL LOG:

Material	From	To	SW
Red Clay	0	26	
Ban Clay	26	150	
Weathered Rock	150	165	
Mth. Gray Rock	165	205	
Sandy Gray Rock	205	240	
Ban Rock	240	289	
Gray Rock	289	295	
Ban Rock	295	334	
Dark Gray Rock	334	346	
Gray Rock	346	374	
Black Por Rock	374	383	30
Gray Rock	383	393	
Black Rock	393	397	30
Ban Clay	397	402	
Blue Clay	402	406	
Ban/Gray Clay	406	418	
Dark Gray Sandstone	418	446	
Dark Gray Clay	446	455	

Date started: 9-17-90 Completed: 9-19-90

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed _____ WWC Number _____
Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. Work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

Signed: Dan Fralin WWC Number: 715
Date: 9-20-90

#18

STATE OF OREGON

WATER WELL REPORT

(as required by ORS 537.765)

Wash
199

(START CARD) #

1N/3W/1 CC
18727

(1) OWNER:

Name Forest Products Oregon Canadian Inc.

Address

City North Plains State Ore Zip 97133

(2) TYPE OF WORK:

☐ New Well ☒ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable☐ Other

(4) PROPOSED USE:

☐ Domestic ☐ Community ☒ Industrial ☐ Irrigation☐ Thermal ☐ Injection ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes ☐ No ☐ Depth of Completed Well 500 ft.Explosives used Yes ☐ No ☐ Type _____ Amount _____

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
8	380	500				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E☐ Other

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

Gravel placed from _____ ft. to _____ ft. Size of gravel _____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					☐	☐	☐	☐
EXISTING well					☐	☐	☐	☐
Liner:					☐	☐	☐	☐

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

☐ Perforations Method _____☐ Screens Type _____ Material _____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☐ Pump ☐ Bailor ☐ Air ☐ Flowing

Yield gal/min Drawdown Drill stem at Time

500+	Full	500	1 hr.
250	Full	200	
120	Full	150	

Temperature of water 60° Depth Artesian Flow Found _____Was a water analysis done? ☐ Yes By whom _____Did any strata contain water not suitable for intended use? ☐ Too little☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____

Depth of strata: _____

(9) LOCATION OF WELL by legal description:

County Wash Latitude _____ Longitude _____Township 1N Nor S, Range 3W E or W, WM.Section 1 SW 1/4 SW 1/4

Tax Lot _____ Lot _____ Block _____ Subdivision _____

Street Address of Well (or nearest address) 7408 WestCommercial - North Plains Ore

(10) STATIC WATER LEVEL:

9.5 ft. below land surface. Date June 13

Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:

Depth at which water was first found _____

From	To	Estimated Flow Rate	SWL
Existing well		150 ±	95
413	434	150 ±	95
475	500	150 ±	95

(12) WELL LOG:

Ground elevation 200 ±

Material	From	To	SWL
Existing well 380 Deep			
Broken Brown Basalt	380	413	
Dark grey Basalt broken	413	434	
Blue Basalt with holes	434	475	
Brown Basalt Broken w/holes	475	500	

RECEIVED

DEC 17 1990

Received

APR 29 2024

OWRD

Date started June 12 Completed 13 June

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number _____

Signed _____ Date _____

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 128Signed Gale S. Abernathy Date June 19 9



April 17, 2024

Oregon Water Resources Department
 Attn: *Water Rights Services Division*
 725 Summer St. NE Ste A
 Salem, Oregon 97301

RE: CITY OF BANKS – PERMIT AMENDMENT APPLICATION FOR PERMIT G-7593

Dear OWRD Staff,

Please find accompanying this letter an Application for Permit Amendment for the City of Banks (City) groundwater Permit G-7593. The City currently has one point of appropriation (POA) on this right, City Well-1 (WASH-7651). The City is proposing to add multiple potential well locations distributed throughout the City with the intent of eventually developing viable wells at between one and three of these locations. This amendment also adds the City's other well, Well-2 (WASH-62373), as a POA on the Well-1 permit. No change the place of use or character of use is proposed.

This amendment is proposed to meet two goals. The City's utilization of Well-1 is limited due to the well's close proximity to Well-2, the City's primary groundwater source. Operations of Well-2 result in interference at Well-1 and, for this reason, Well-1 is operated only infrequently. By adding Well-2 and additional locations to the permit, the City will be able to remove the interference limitation as an operation factor and develop a greater portion of the permitted rate. Distributing the production under Permit G-7593 between two or three wells will also reduce localized drawdown effects on the basalt aquifer due to pumping during peak-demand season.

The City previously submitted a permit amendment in 2005 (T-10055) to add Well-2 as a POA under G-7593. Based on the Oregon Water Resource Department's (OWRD) review of T-10055 and various discussions between the OWRD and the City between 2008 and 2015, it was determined that such a transfer was not possible. The reasoning was that there was not sufficient evidence to show that the two basalt water-bearing zones tapped by the two wells (upper and lower zones) were a single aquifer (based on information from OWRD staff Marc Norton, Karl Wozniak, Michael Thoma, and Kris Byrd). An administrative hold was placed on T-10055 in September 2015. It has been the City's intent to withdraw T-10055, although this has not been completed to date.

The City would now like to request that T-10055 be withdrawn, as more recent groundwater data has elucidated the details aquifer question. Spinner log analyses from Well-2 and the nearby Quail Valley irrigation well, along with static groundwater elevation data from the winter and spring seasons, have demonstrated that the upper and lower water-bearing zones do behave as a single aquifer in the Banks area, as discussed in Attachment 6 – Basalt Aquifer Memo. For this reason, the City again proposes to add POAs to the Well-1 permit, including Well-2, to allow the City to develop its permitting rate under G-7593. As of 2021, the previous development limitation on G-7593 has been removed (WMCP FO, 2021), allowing the City to develop the full 0.67 cfs.

Some of the proposed well locations are not on City-owned property. One of the proposed POAs (WTP) is located on a lot that the City is currently in negotiations to purchase. The other proposed

Received

APR 29 2024

OWRD

14449

POAs are on developer-owned lands. The City has obtained agreements with the landowners for access to drill, construct, develop, and operate municipal wells at the proposed locations. Landowner consent forms are included in this application package (Attachment 2).

The Permit Amendment application is accompanied by a variety of supplemental forms and attachments:

- Reimbursement Authority (RA) Request for Expedited Review
- Attachment 1 – Transfer Map
- Attachment 2 – Landowner Consent Forms
- Attachment 3 – Land Use Information Form
- Attachment 4 – Well-1 Well Log
- Attachment 5 – Well-2 Well Log
- Attachment 6 – Basalt Aquifer Memo
- A check from the City for the RA fee of \$125
- A check from the City for the transfer application fee of \$4,300

Please let us know if there are any issues with processing this application or questions regarding the information included therein. Thank you for your assistance.

Sincerely,

CwM H2O, L.L.C.



Robert Long, CWRE

Received

APR 29 2024

OWRD

Permanent Transfer Application Checklist

Check the Certificates in WRIS

Transfer # T-14449

Checked by <u>___ Dante ___</u> Date <u>5/2/2024</u>	Type of Change(s) Proposed: NO other changes allowed other than those listed	
Fee Received: \$4300	☐ POU ☐ POD ☐ APOD ☐ POA ☒ APOA ☐ USE	
Calculated Fee: \$4300		How many rights to be Transferred? 1
Deficiencies and Observations:		Certificate #(s) Permit G-7593

If OK, check box; if not, fill in.

- ☒ 1. Is the applicant information complete? Have all the applicants listed at the top of the page signed at the bottom?
 If not, what is missing? Whose signature is missing? _____
- ☒ 2. Has the applicant indicated that the place of use is in or near an irrigation district? Have they included a Form D? ☒ N/A.
 Name of the District _____
- ☒ 3. Part 5 of application, has the applicant completed the entire page and does the information match the description of the explanation of the reasons on Part 4 of the application?
 If not, you may need to contact the applicant or agent? _____
- ☒ 4. For multiple certificates, do each of the certificates listed on Application Page 1 have their own separate completed Part 5 tables 1 & 2? (compare with OAR 690-380-3220-may need to return)
 If no, which certificates are missing a separate Part 5, tables 1 & 2? _____
- ☒ 5. Has the map been completed and signed by a CWRE? Does the map meet the requirements?
 If not, what is missing? _____. Map waiver included? ☐
- ☒ 6. If a change in point of appropriation, have the well logs been included? ☐ N/A.
- ☒ 7. If a change in place of use within Umatilla County, have the applicant(s) provided a Supplemental Form U? ☒ N/A.
- ☒ 8. Has applicant filled out the Minimum Requirements Checklist (Part 1 of 5)? Is the application complete? If not, what is missing (check Evidence of Use and Land Use)? _____

- ☒ 9. If all boxes on this checklist are checked (with no remaining deficiencies identified), accept the application. Put this check sheet in the transfer folder.

OR:

- ☐ This application is deficient, and **CANNOT** be accepted.
 It should be returned and the deficiencies listed in the "staff" section at the bottom of Application Page 1, unless the applicant or agent can resolve the deficiencies within 2-3 days.

Actions taken:

_____ date _____

Permanent Transfer Application Checklist

FEE WORKSHEET for PERMANENT TRANSFER (except Substitution)			
1	Base Fee (includes one type of change to one water right for up to 1 cfs)	1	\$1,360
	Types of change proposed: ☐ Place of Use ☐ Character of Use ☐ Point of Diversion/Appropriation Number of above boxes checked = _____ (2a) Subtract 1 from the number in line 2a = _____ (2b) <i>If only one change, this will be 0</i>		
2	Multiply line 2b by \$930 and enter » » » » » » » » » » » » » » » »	2	0
	Number of water rights included in transfer _____ (3a) Subtract 1 from the number in 3a above: _____ (3b) <i>If only one water right this will be 0</i>		
3	Multiply line 3b by \$520 and enter » » » » » » » » » » » » » » » »	3	0
	Do you propose to add or change a well, or change from a surface water POD to a well? ☐ No: enter 0 » ☐ Yes: enter \$410 »		
4		4	0
	Do you propose to change the place of use or character of use? ☐ No: enter 0 on line 5 » ☐ Yes: enter the cfs for the portions of the rights to be transferred (see example below*): _____ (5a) Subtract 1.0 from the number in 5a above: _____ (5b) If 5b is 0 or less, enter 0 on line 5 » If 5b is greater than 0, round up to the nearest whole number: _____ (5c) and multiply 5c by \$350, then enter on line 5 »		
5		5	0
6	Add entries on lines 1 through 5 above » » » » » » » » » » Subtotal:	6	0
	Is this transfer: ☐ necessary to complete a project funded by the Oregon Watershed Enhancement Board (OWEB) under ORS 541.932? ☐ endorsed in writing by ODFW as a change that will result in a net benefit to fish and wildlife habitat? If one or more boxes is checked, multiply line 6 by 0.5 and enter on line 7 »		
7	If no box is applicable, enter 0 on line 7 »	7	0
8	Subtract line 7 from line 6 » Transfer Fee:	8	