Groundwater Application Review Summary Form

Application # LL- _1983_

GW Reviewer _Phillip I. Marcy_ Date Review Completed: _10/16/2024_

Summary of GW Availability and Injury Review:

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

Summary of Potential for Substantial Interference Review:

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

Summary of Well Construction Assessment:

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

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

WATER RESOURCES DEPARTMENT

MEMO **_October 16, 2024_**

TO: **Application** LL-**_1983_**

FROM: **GW:** **_PhillipI. Marcy_**
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

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

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

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

☐ Per ORS 390.835, the Groundwater Section is **unable** to calculate ground water interference with surface water that contributes to a scenic waterway; **therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway**

DISTRIBUTION OF INTERFERENCE

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

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

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

PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 10/16/2024
FROM: Groundwater Section Phillip I. Marcy
Reviewer's Name
SUBJECT: Application LL- **1983** Supersedes review of _____
Date of Review(s)

PUBLIC INTEREST PRESUMPTION; GROUNDWATER

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

A. GENERAL INFORMATION: Applicant's Name: **Fry Foods Inc.** County: **Malheur**

A1. Applicant(s) seek(s) 1.14 cfs from 1 well(s) in the Malheur Basin, _____ subbasin

A2. Proposed use Industrial/Manufacturing Seasonality: Year-round (365 days)

A3. Well and aquifer data **(attach and number logs for existing wells; mark proposed wells as such under logid)**:

POA Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	Proposed	3	Alluvium	1.114	17S/46E-13 NE-SE	1469.43'N, 110'W fr SE cor S 13
2						
3						
4						

* Alluvium, CRB, Bedrock

POA Well	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Drawdown (ft)	Test Type
1	75	0-38	0-55	Unknown	55-60	NA	NA	NA
2								
3								
4								

POA Well	Land Surface Elevation at Well (ft amsl)	Depth of First Water (ft bls)	SWL (ft bls)	SWL Date	Reference Level (ft bls)	Reference Level Date
1	2377	NA	NA	NA	NA	NA
2						
3						
4						

Use data from application for proposed wells.

A4. **Comments:** The applicant proposes to develop a new well to replace production under Permit G-17300. According to the application materials, yield has decreased below acceptable levels in currently authorized POA MALH 53047 and the applicant intends to file for a permit amendment on the newly developed well to replace production in the long-term.

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

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

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

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

a. ☐ **is** over appropriated, ☒ **is not** over appropriated, *or* ☐ **cannot be determined to be** over appropriated during any period of the proposed use. * This finding is limited to the groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;

b. ☐ **will not** *or* ☐ **will** likely be available in the amounts requested without injury to prior water rights. * This finding is limited to the groundwater portion of the injury determination as prescribed in OAR 690-310-130;

c. ☐ **will not** *or* ☐ **will** likely to be available within the capacity of the groundwater resource; or

d. ☒ **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater resource:

i. ☒ The permit should contain condition #(s) **7N, Water Use Reporting**;

ii. ☐ The permit should be conditioned as indicated in item 2 below.

iii. ☒ The permit should contain special condition(s) as indicated in item 3 below;

B2. a. ☐ **Condition** to allow groundwater production from no deeper than _____ ft. below land surface;

b. ☐ **Condition** to allow groundwater production from no shallower than _____ ft. below land surface;

c. ☐ **Condition** to allow groundwater production only from the _____ groundwater reservoir between approximately _____ ft. and _____ ft. below land surface;

d. ☐ **Well reconstruction** is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Groundwater Section.

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

B3. **Groundwater availability remarks:** Water levels in both the Glenns Ferry Formation silts and overlying sands and gravels are relatively stable based upon monitoring data collected by OWRD and submitted under permit condition. Measurements of the currently authorized POA well under Permit G-17300, MALH 53047, display year to year fluctuations but no significant declines in the productive aquifer. The proposed construction of the POA well on this application is likely to result in production of groundwater from the Upland Gravel Aquifer of Gannett (GWR-34, 1990), characterized as largely unconfined to poorly confined by overlying silts. Groundwater production is limited in the immediate vicinity with the greatest influence on seasonal water levels the presence or absence of irrigation canal flow, return flow, and downward percolation of flood irrigation water, resulting in the highest seasonal groundwater elevations during irrigation season.

MALH 2571, a domestic well to the immediate south of the applicant's facility, is the nearest well able to be positively located at a distance of 1,500' from the proposed POA well. A series of Theis calculations were performed across a range of parameters provided in the application and aquifer values from local well logs and GWR-34 (Gannett, 1990). Given the unconfined nature of the target aquifer, projected drawdown on the neighboring well after 365 days of continuous pumping at the proposed POA well ranged from less than 4 feet to greater than 14 feet, with higher values resulting from assigning lower than anticipated hydraulic conductivity values, rather than the expected 440-670 ft/day as interpreted by Gannett. All other model outputs projected less than 10 feet of total drawdown after one year, even assuming continuous year-round pumping.

If a license is issued as a result of this application, a modified Condition 7N is recommended, requiring annual measurements in the month of March for the duration of the limited license.

C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

C1. **690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	**Upland Gravel Aquifer of Gannett (1990)**	☐	☒
		☐	☐
		☐	☐
		☐	☐

Basis for aquifer confinement evaluation: There are no discernable barriers to vertical migration of groundwater between the target aquifer and overlying irrigated lands and canals, allowing downward percolation of flood irrigation water and contributions from canal flow. Groundwater levels typically remain at the level at which they were encountered within boreholes, in both Upland Gravels and underlying silts.

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

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected? YES	NO	ASSUMED	Potential for Subst. Interfer. Assumed? YES	NO
1	**1**	**Jacobsen Gulch**	**~2334**	**2310***	**5075**	☒	☐	☐	☐	☒
1	**2**	**Malheur River**	**~2334**	**2150**	**15100**	☒	☐	☐	☐	☒
						☐	☐	☐	☐	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Based upon our conceptual model of the local hydrogeologic framework, groundwater within the target aquifer discharges as seeps and springs that are typically ephemeral and either do not contribute substantially to flow or do so through diffuse and inefficient flow paths. Groundwater here is largely recharged by downward percolation from flood irrigation and canal flows, though a substantial unsaturated zone exists above the unconfined aquifer.

Water Availability Basin the well(s) are located within: No WAB exists at the proposed location.

C3a. **690-09-040 (4):** Evaluation of stream impacts for each well that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water (SW) source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that SW source, not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% *natural* flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked ☒ box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐
		☐	☐			☐		☐		☐

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

	SW #		Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
			☐			☐		☐		☐
			☐			☐		☐		☐

Comments: This section does not apply as the proposed POA is not located within a Water Availability Basin (WAB). See attached Watermaster statement and cited text below in Section C6.

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

Basis for impact evaluation:

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

C5. ☐ **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:

i. ☐ The permit should contain condition #(s)_____;

ii. ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** Groundwater within the target aquifer is unconfined, exhibited by repeated reports that the final static water levels within boreholes are the same as the depth at which water was first encountered. Furthermore, there does not appear to be a difference in water levels between wells producing from Upland Gravels versus underlying silts of the Glenns Ferry Formation. While yield is expected to be significantly higher from the more conductive coarse-grained lithologies, impacts to nearby surface water are not anticipated to be substantially greater, as the two lithologic units appear to function as a single aquifer system. The nearby Owyhee Canal lies well above the groundwater level at the proposed well and nearby monitoring wells with similar construction, leaving an unsaturated zone tens of feet thick. Hydraulic connection to Jacobsen Gulch to the north and the Malheur River to the south likely rely on seepage from these upland gravels becoming overland flow, as heads in the uplands are generally 150-200 feet higher than those in the adjacent valleys (Gannett, 1990), and are therefore can be described as inefficient at best.

Since no WAB exists for the proposed location of the POA, a Water Availability Statement was submitted by Jared Hoshaw, Malheur County Watermaster as part of the assessment to impacts to surface water resulting from the proposed use: "Jacobsen Gulch is the closest stream system which is tributary to the Snake River. It is highly influenced by return flow/run-off water from Owyhee Irrigation District. Outside of Irrigation season flows are generally much lower and depending on conditions, supplied mostly from charged and running spring water. There is some but very little intermittent run-off from snow/storm systems."

References Used:

Gannett, M.W., 1990, Hydrogeology of the Ontario Area, Malheur County Area: Oregon Water Resources Department Groundwater Report 34.

Local well logs, GWIS water level database, Application LL-1983, Application review G-17639.

Water Availability Statement from Jared Hoshaw, 06/17/2024

D. WELL CONSTRUCTION, OAR 690-200

D1. **Well #:** _____ **Logid:** _____

D2. **THE WELL does not appear to meet current well construction standards based upon:**

a. ☐ review of the well log;

b. ☐ field inspection by _____;

c. ☐ report of CWRE _____;

d. ☐ other: (specify) _____

_____

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

_____

_____

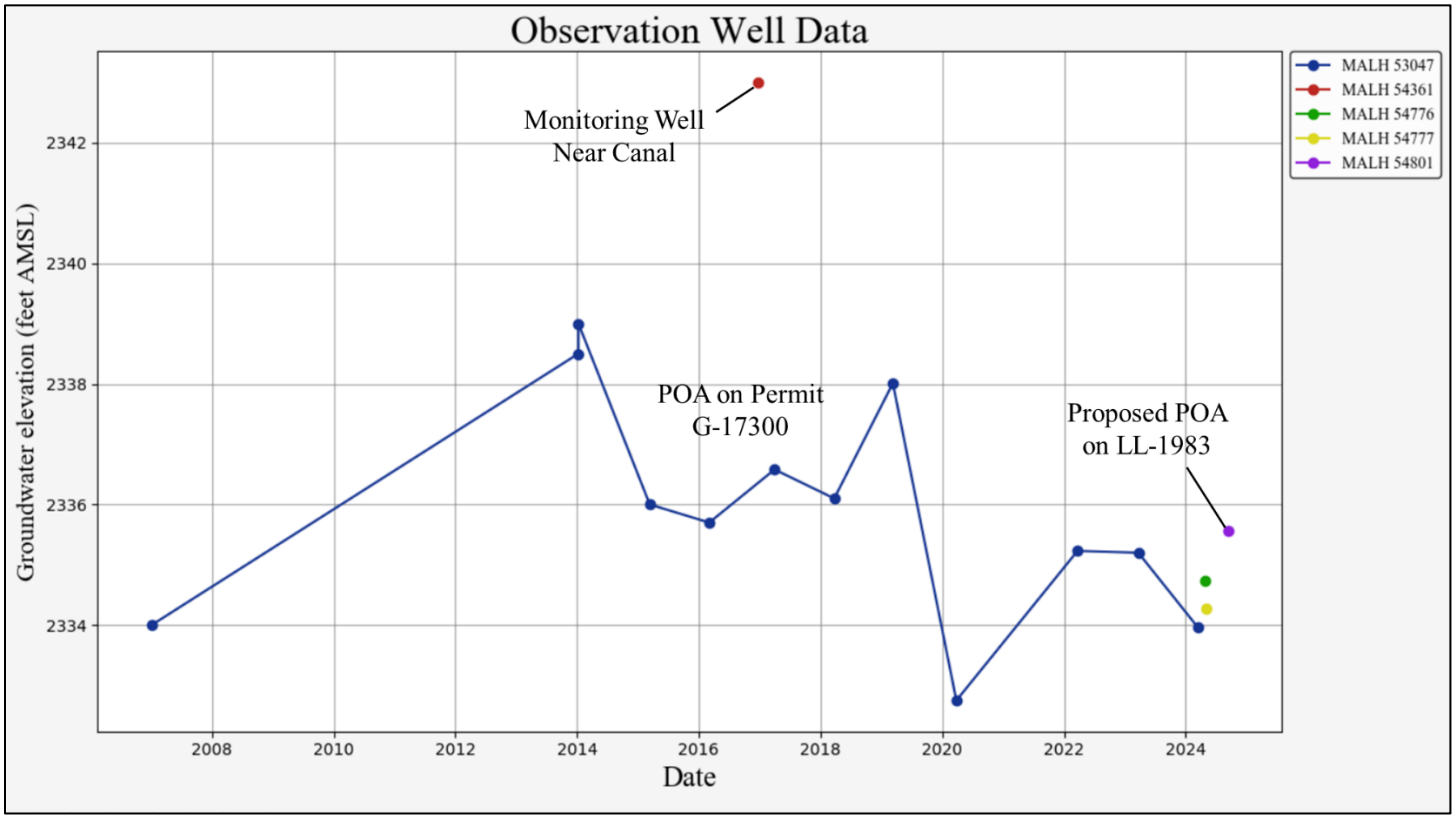
_____

_____

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

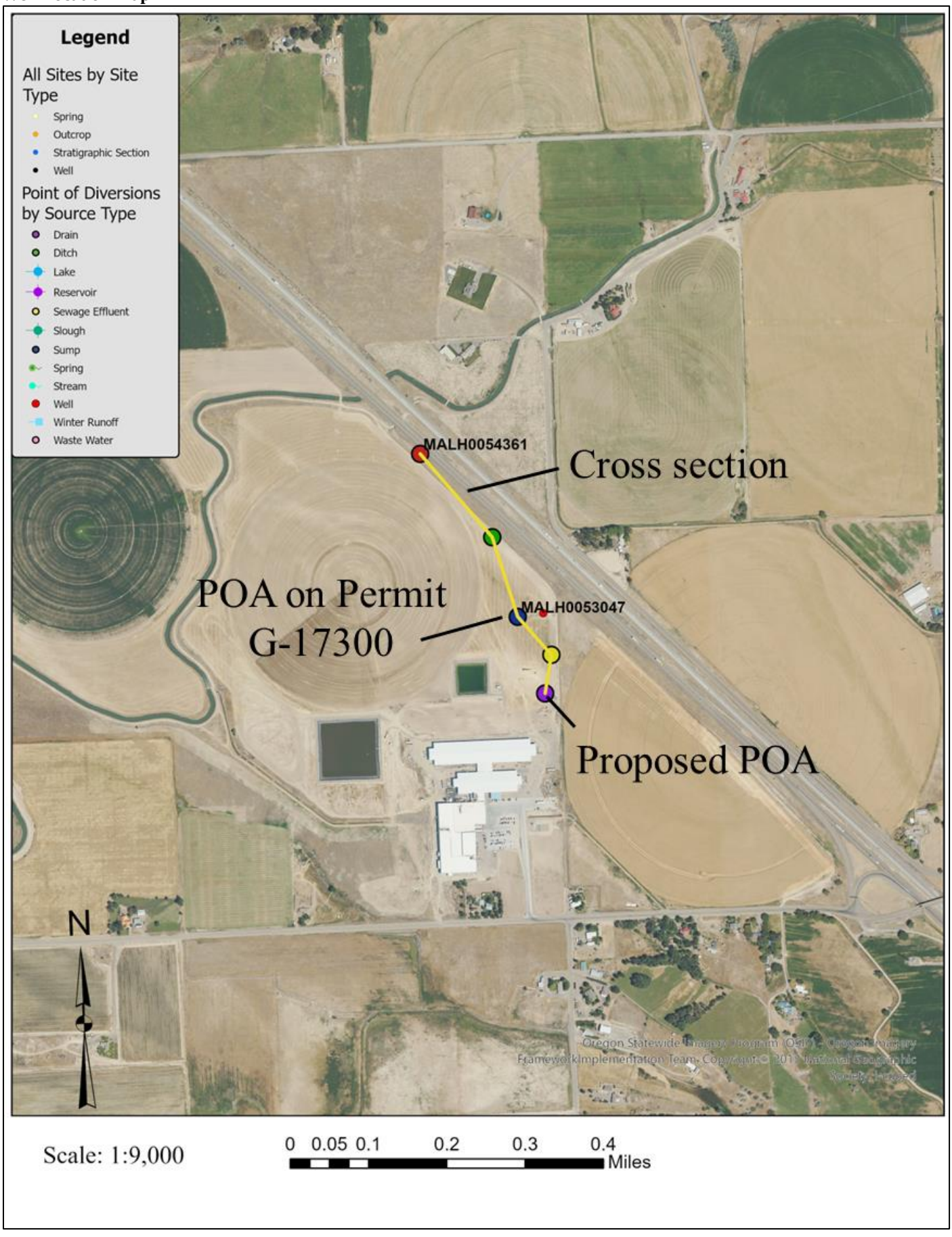
Water Availability Tables
No WAB exists at this location.

Water-Level Measurements in Nearby Wells

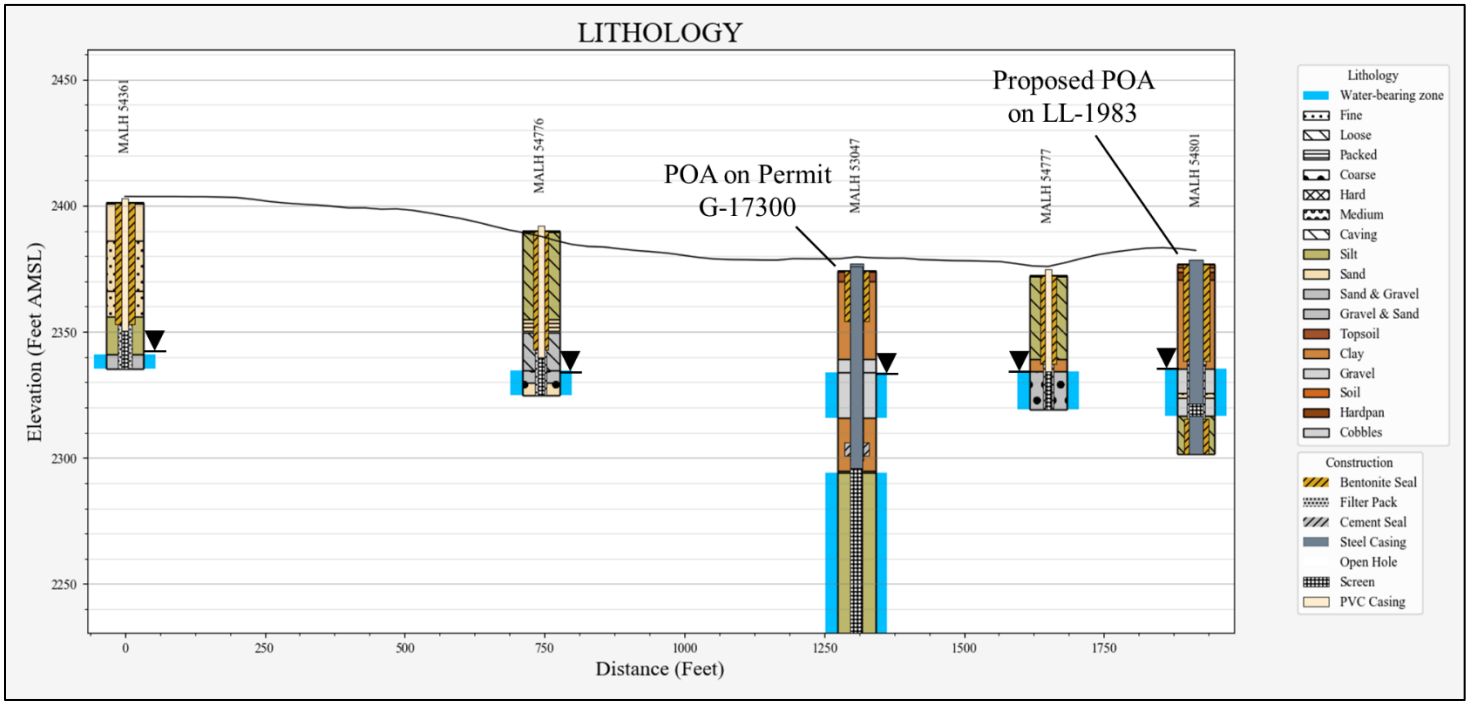


Nearby wells recently drilled for the proposed use, including monitoring wells, correspond closely with water levels in the production well under Permit G-17300, despite the open interval being much shallower in the Upland Gravel Aquifer instead of the underlying Glenns Ferry Formation silt. Water level trends in MALH 53047 suggest water levels are relatively stable.

Well Location Map

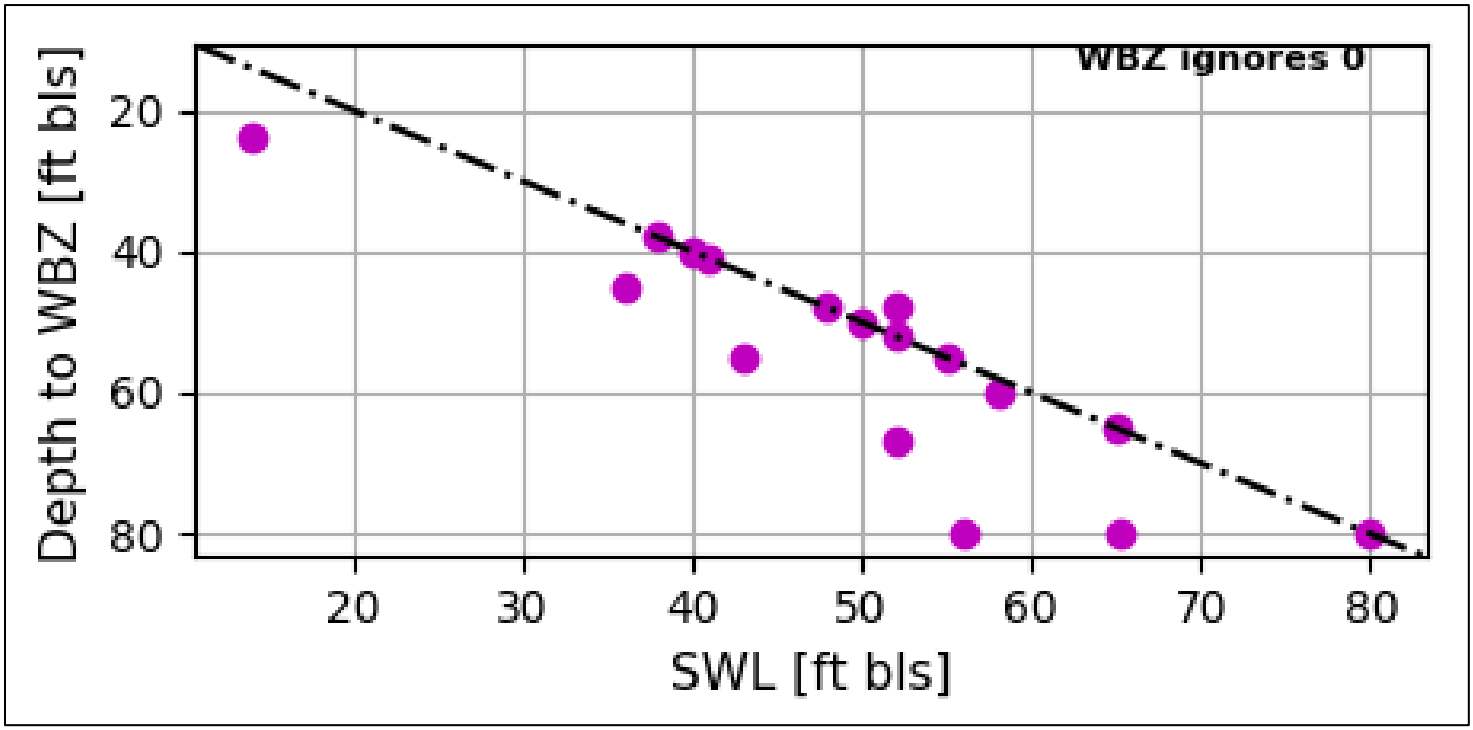


Cross-Section



Basic cross-section showing reported lithologies and well construction for proposed POA and nearby wells. Despite differences in depth and target lithology, water level elevations are nearly identical, suggesting one aquifer system. Groundwater elevations are typically at or slightly below the top of Upland Gravels.

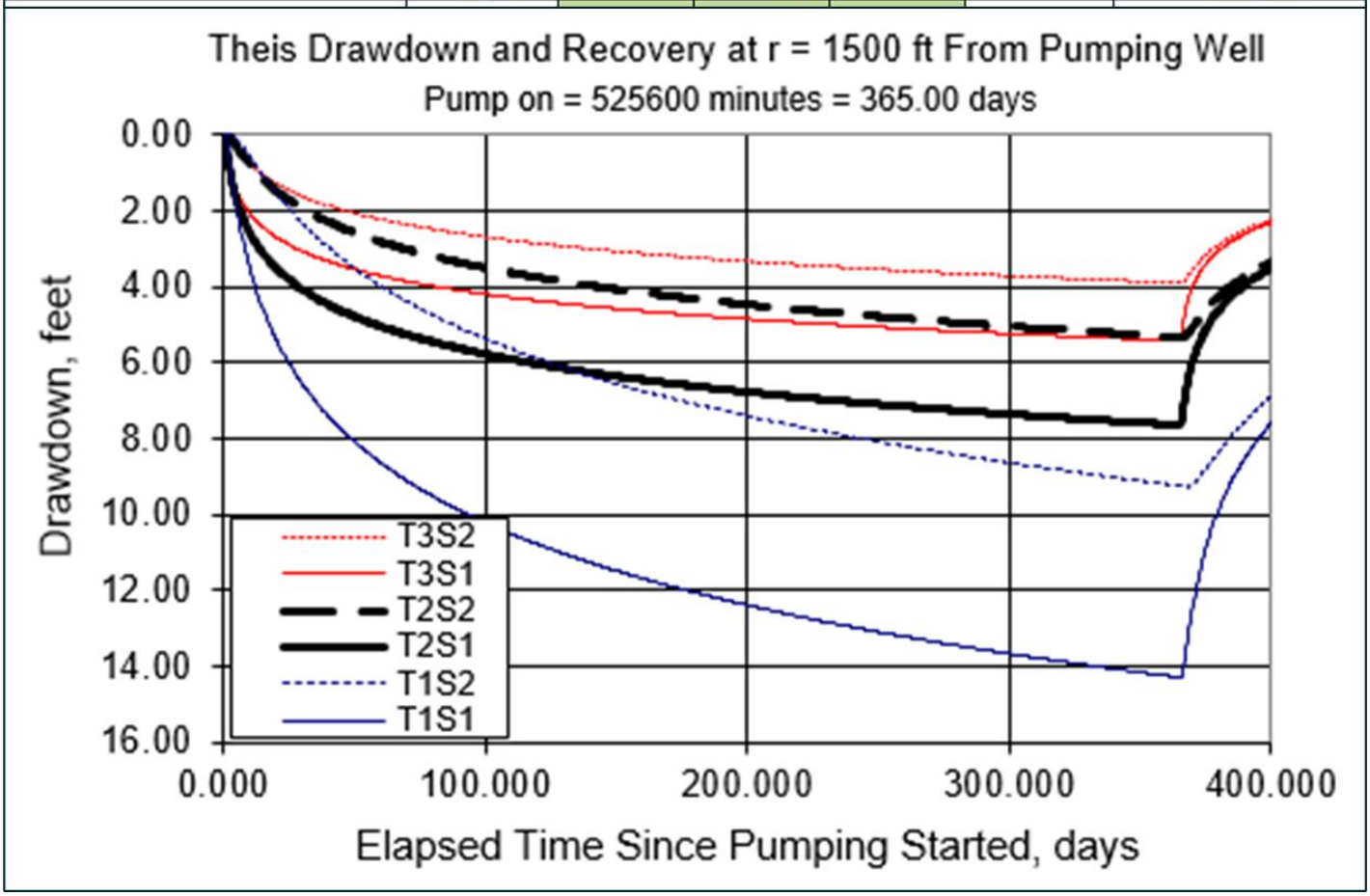
Well Statistics



Comparison of water levels versus depth of water-bearing zones illustrates little to no confining pressure in the Upland Gravel Aquifer or underlying Glenns Ferry Formation silts. Well logs considered here are all wells within 17S/46E-S13 and 17S/47E-S18.

Theis Drawdown Calculation

Input Data:	Var Name	Scenario 1	Scenario 2	Scenario 3	Units	
Total pumping time	t		365		d	
Radial distance from pumped well:	r		1500		ft	**Q conversions**
Pumping rate	Q		1.14		cfs	511.63 gpm
Hydraulic conductivity	K	200	440	670	ft/day	1.14 cfs
Aquifer thickness	b		12		ft	68.40 cfm
Storativity	S_1		0.01			98,496.00 cfd
	S_2		0.05			2.26 af/d



Water Availability Statement

This page to be completed by the local Watermaster.

WATER AVAILABILITY STATEMENT

Name of Applicant: Fry Foods Inc. Limited License Number: LL-1983

1. To your knowledge, has the stream or basin that is the source for this application ever been regulated for prior rights?

☐ Yes ☒ No

If yes, please explain:

2. Based on your observations, would there be water available in the quantity and at the times needed to supply the use proposed by this application?

☒ Yes ☐ No

3. Do you observe this stream system during regular fieldwork?

☒ Yes ☐ No

If yes, what are your observations for the stream?

Jacobsen Gulch is the closest stream system which is tributary to the Snake River. It is highly influenced by return flow/run-off water from Owyhee Irrigation District. Outside of Irrigation season flows are generally much lower and depending on conditions, supplied mostly from charged and running spring water. There is some but very little intermittent run-off from snow/storm systems.

4. If the source is a well and if WRD were to determine that there is the potential for substantial interference with nearby surface water sources, would there still be ground water and surface water available during the time requested and in the amount requested without injury to existing water rights?

☐ Yes ☒ No ☐ N/A

What would you recommend for conditions on a limited license that may be issued approving this application?

Installation of a Totalizing Flowmeter at the point of appropriation.

Received by OWRD
JUN 20 2024
Salem, OR

5. Any other recommendations you would like to make?

Signature [signature] WM District #: 9 Date: June 17, 2024

Application for Limited Water Use License/3 WTR