

EMERGENCY DROUGHT APPLICATION: GROUNDWATER REVIEW

TO: Water Rights Section Date 7/13/2026
FROM: Groundwater Section Grayson Fish
Reviewer's Name
SUBJECT: Application G- 19544

KLAMATH COUNTY DROUGHT MITIGATION; GROUNDWATER

This review is based on authorities laid out in OAR 690-019 Drought Mitigation rules. This is an expedited review to evaluate an emergency request for groundwater use for one season under a Governor's drought declaration. Notwithstanding groundwater availability (OAR 690-300 and -310) and State Scenic Waterway considerations, the Department may issue a drought permit for short-term emergency use provided that there is no injury and that the use is within the public interest as per OAR 690-019-0040(3).

Assessment of temporary emergency use groundwater permits for Klamath County includes special consideration of groundwater conditions in and around the United States Bureau of Reclamation Project Area as noted in Section BK of this review form. OWRD compiles and reports on groundwater conditions annually. The most recent report is available at: https://www.oregon.gov/owrd/WRDReports/USBR_2025_Klamath_Annual_Report.pdf

A. GENERAL INFORMATION: Applicant's Name: Twelve K's Cattle, LLC County: Klamath

A1. Applicant(s) seek(s) 12.85 cfs from 1 well(s) in the Klamath Basin,
subbasin

A2. Proposed use Supplemental Irrigation (1028.2 ac) Seasonality: June 15 – October 31, 2026

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

Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate (cfs)	Location (T/R-S QQ-Q)	Latitude	Longitude
1	KLAM 54078	1	Basalt	12.85	39S/10E-17 NE-SE	42.17725308	-121.65909717

* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	4138	1375	22.49	3/11/2026	1551	0 - 336	+2 - 336	--	--	6300	113	Pump

Use data from application for proposed wells.

A4. **Comments:** The applicant requests a rate of 12.85 cfs for 1028.2 acres of supplemental irrigation and a total volume of 2056.4 acre-feet during the drought declaration from a single POA (KLAM 54078). This emergency drought application is supplemental to surface water claims KA-1000 and KA-1004. KLAM 54078 is an authorized POA for supplemental groundwater Certificate 93960 and groundwater Permit 18797.

B. GROUNDWATER/SURFACE WATER CONSIDERATIONS:

B1. Is there information that this drought groundwater use will **injure senior spring or surface water rights** during the duration of the drought declaration?
(☐Yes) (☒No) If yes, explain: The applicant's well would access groundwater from volcanics starting at a depth of approximately 1,374 feet. The closest surface water source is likely the Lost River approximately 1.25 miles to the south and the closest hydraulically connected spring source is Crystal Springs located approximately 2 miles to the southwest. Given the distance to the identified surface water/spring sources, depth of groundwater to be accessed, and the presence of low permeability fine-grained sediments overlying the volcanic units, it is unlikely that senior spring or surface water rights are likely to be injured by the proposed use during the drought declaration period.

- B2. Is there information that this drought groundwater use will **injure senior groundwater rights** during the duration of the drought declaration?
(☐Yes) (☒No) If yes, explain: The closest volcanic wells to the applicant's POA are other irrigation wells and exempt wells located to the north within residential areas of Pine Grove. Irrigation wells that source water from volcanics are unlikely to experience injury due to the thickness and relatively high transmissivity of the aquifer. There have been approximately 50 dry or low production complaints received by the Department since 2021 in the residential areas north of the applicants POA where many of the wells source water from volcanics. However, these wells do not fully penetrate the aquifer and any interference experienced from additional pumping from the applicants POA during the duration of the drought declaration is unlikely to meet the definition of injury.
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- B3. Has the requested groundwater reservoir or part thereof **Declined Excessively**?
(☐Yes) (☒No) If yes, explain: Of the 10 observation wells regularly measured by OWRD staff within 2 miles of the applicant's POA, none of the wells in either the volcanic or sedimentary portion of the aquifer show a total decline of 50 feet or more over their period of record (see attached Area Hydrograph).
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- BK. Is any proposed POA in an area within the USBR Klamath Project or vicinity where groundwater levels **have NOT recovered to within 1 foot (or above) of Spring high 2020 levels OR near clusters of reported dry well complaints** received though the Department's Dry Well Form?
(☒ Yes) (☐ No) If yes, explain: A Spring 2020 water level is not available for the applicant's POA KLAM 54078. The most recent water level collected from KLAM 54078 is 22.49 feet below land surface on March 11, 2026 and is 3.39 feet lower than the water level of 19.10 feet below land surface collected on March 23, 2019. Although 2020 data is missing for the applicant's well, data from nearby volcanic wells (KLAM 12925 and KLAM 53755) historically track closely with KLAM 54078. As shown in the attached *Tracking Volcanic Wells Hydrograph*, these nearby wells experienced higher water levels in Spring 2020 than in Spring 2019. This indicates that the proposed POA is located within an area of the USBR Klamath Project where water levels have failed to recover to within 1 foot of their Spring 2020 highs. Additionally, the Department has received approximately 50 complaints of dry or low-producing wells since 2021 in the residential areas north of the applicant's POA, where many wells draw water from deeper volcanic formations.
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- B4. Groundwater levels **do NOT meet the definition of Reasonably Stable Groundwater Levels** (including insufficient data):
(☐ Yes) (☐ No) If yes, explain: All of the 10 observation wells regularly measured by OWRD staff within ~3 miles of the applicant's POA meet the definition of reasonable stable (see attached Area Hydrograph).
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- B5. Will the total requested rate of groundwater allocation **exceed what is obtainable by the expected yield of the well(s)** proposed in the application given best available information?
(☐Yes) (☒No) If yes, explain: The well log for KLAM 54078 notes a yield of ~14 cfs. This drought permit requests a rate of 12.85 cfs. KLAM 54078 is an authorized POA for two other supplemental groundwater rights: Certificate 93960 (max rate of 7.72 cfs) and Permit G-18797 (estimated rate of 1.40 cfs). While the combined total rate of the GW rights associated with the well is larger than the expected yield of the well, it is likely that the user will be able to rotate which fields are receiving water and operate within the expected yield of the well.
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- B6. There is the **Potential for Substantial Interference** with surface water (if yes, list nearest or likely most-impacted stream)
(☐ Yes) (☒ No) If yes, explain: Given the distance to the Lost River, depth of groundwater to be accessed, and the presence of low permeability fine-grained sediments overlying the volcanic units, there is not a preponderance of evidence to suggest that groundwater pumping from the proposed POA would result in stream depletion during the duration of this emergency drought permit.
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- B7. 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 **State Scenic Waterway**.
(☒ Yes) (☐ No) If yes, explain The Department has determined that groundwater pumping in the Upper Klamath Basin and Lost River subbasin has measurably reduced surface water flows within the Klamath Scenic Waterway. Groundwater use

proposed under this application would further reduce State Scenic Waterway flows (see attached Memo A - Analysis of Groundwater pumping Impacts on Scenic Waterway Flows).

B8. **Proposed Permit Conditions:** *If a permit is issued, include:*

Condition 7B (Interference Condition): Drought permits are junior to existing water rights and are subject to regulation

Condition 7P (Well Tag): If there is no existing OWRD Well ID Tag on the well, one shall be attached

Large Water Use Reporting Condition: totalizing flowmeter and reporting required. Include condition that “the readings must be reported to the Department by December 31, 2026.”

Special Condition - Regulation: “Groundwater pumping under this permit shall discontinue or be reduced if area wells with permanent primary and/or supplemental groundwater rights are being regulated off due to groundwater level decline or interference with senior water rights unless the Department determines no action is necessary (pumping under this permit can continue) because the groundwater resource can sustain continued groundwater pumping without causing substantial interference with senior water rights.”

Special Condition – Static Water Level Measurement Access: The permittee shall allow Department staff, upon reasonable notice, to access the permitted well(s) during the period of use to take static water level measurements to monitor the impact of use on the resource. To ensure accurate measurements, the permittee may be required to stop use of the well for up to 24 hours before a water level measurement.

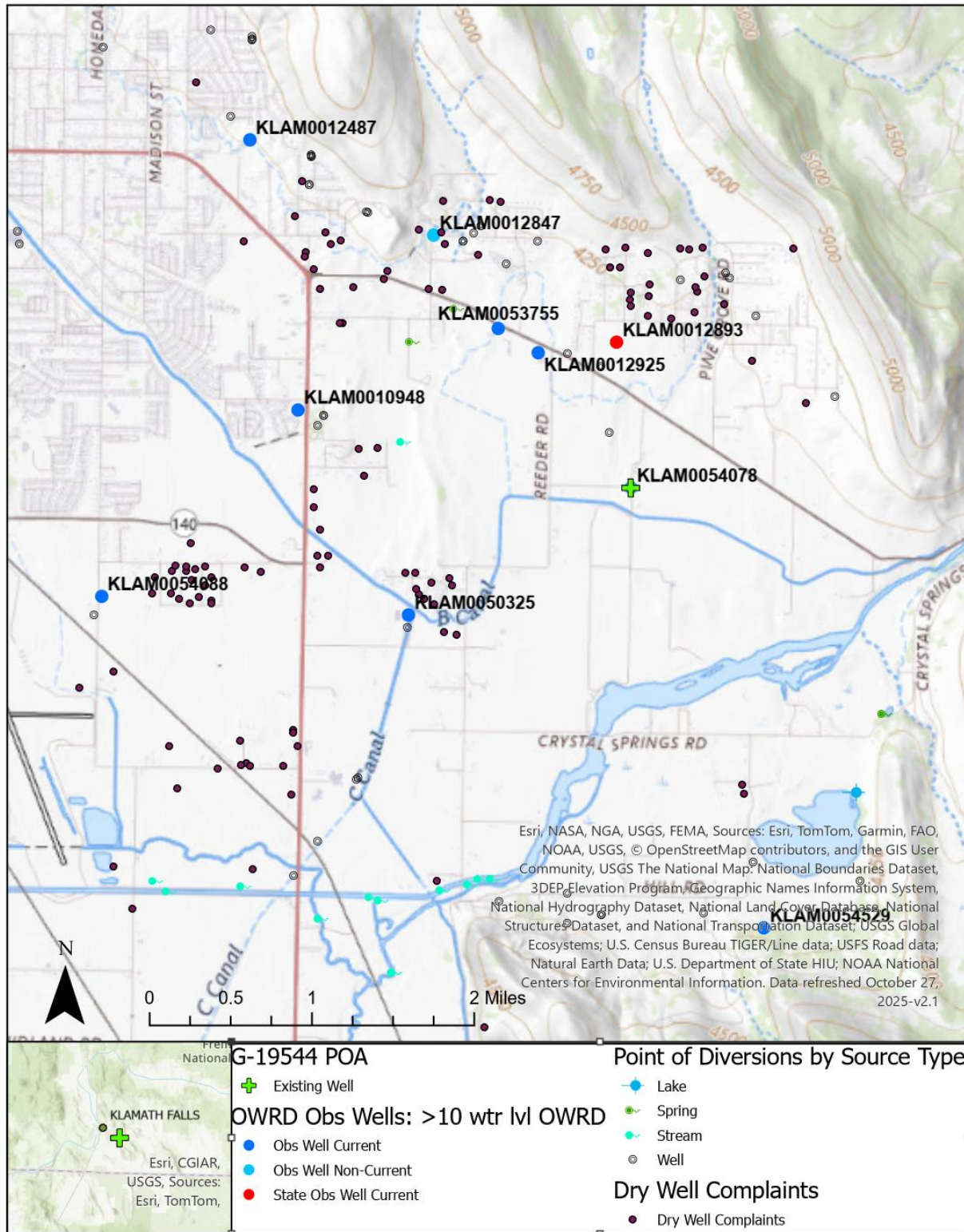
B9. **References Used:**

Gannett, M.W., Lite, K.E., Jr., La Marche, J.L., Fisher, B.J., and Polette, D.J., 2007. Ground-water hydrology of the Upper Klamath Basin, Oregon and California; U.S. Geological Survey Scientific Investigation Report 2007-5050, 84p.

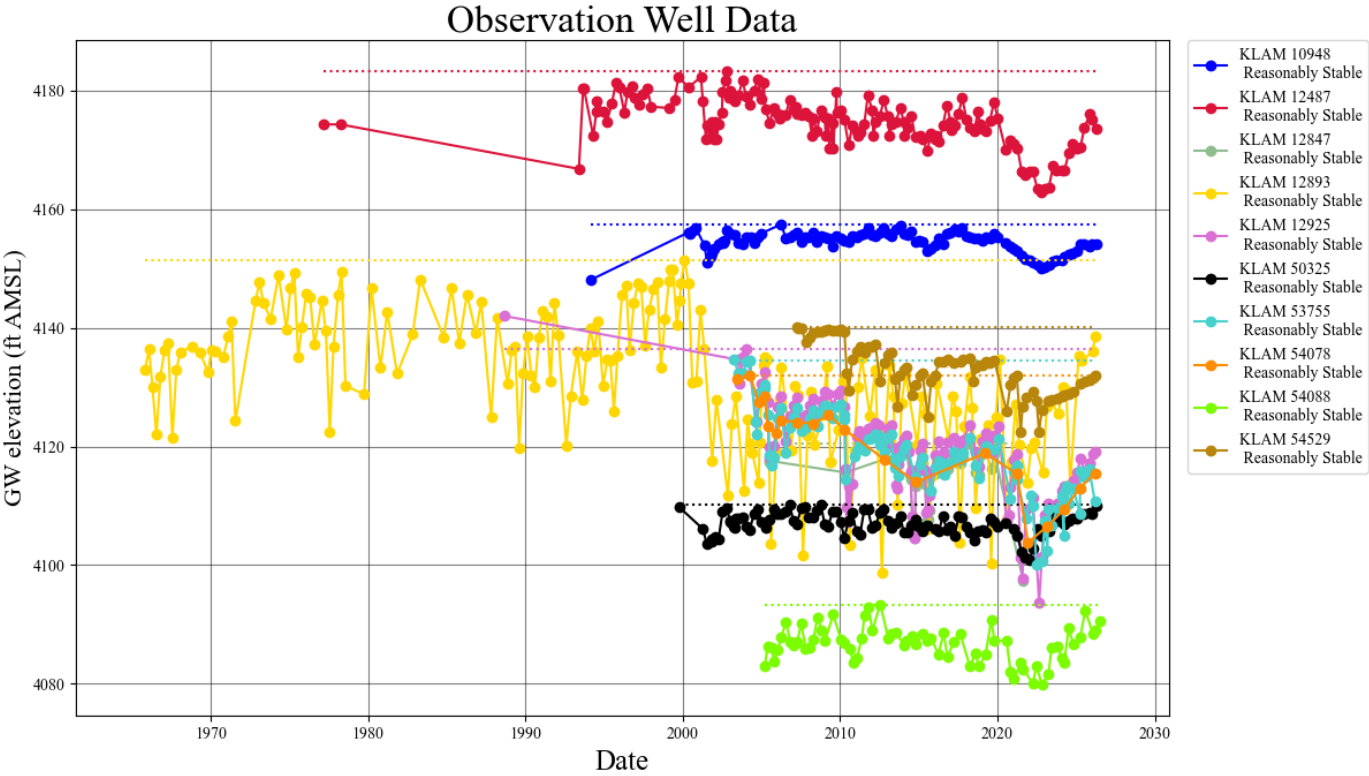
OWRD Groundwater Information System (GWIS) Database – Accessed 7/13/2026

OWRD Water Rights Information System (WRIS) Database – Accessed 7/13/2026

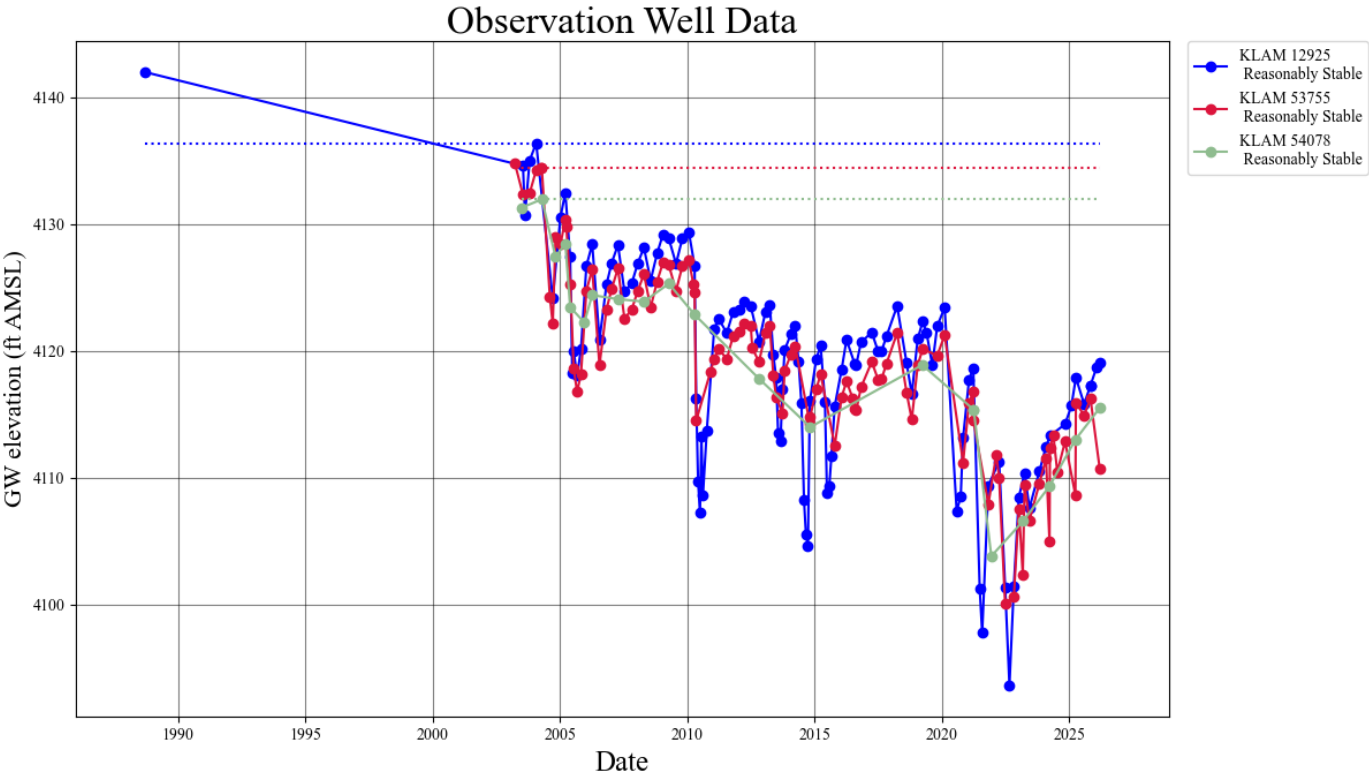
G-19544 Klamath Drought GW App



Water-Level Measurements in Nearby Wells
Area Hydrograph



Tracking Volcanic Wells



Well Report

KLAM 54078

Amend *

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537765)

Klam 54078

WELL ID # L64053
(START CARD) # 156043

(1) OWNER 03 08
KNOLL RANCH
5429 REEDER RD
KLAMATH FALLS OR 97603

(2) TYPE OF WORK : NEW WELL

(3) DRILL METHOD : ROTARY MUD

(4) PROPOSED USE: Irrigation

(5) BORE HOLE CONSTRUCTION:

Special Construction Approval NO Depth of Completed Well 1551 ft.

Explosives used NO Type Amount

HOLE SEAL AMOUNT

Diameter From To Material From To Sacks

24" 0 336 CEMENT & 0 336 151

12" 336 1551 BENITONITE

How was seal Placed C

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of Gravel

(6) CASING / LINER:

Dia. From To Gage Material

CASING 20" +2 336 375 STEEL / WELDED

Final location of shoe (s)

(7) PERFORATIONS / SCREENS:

METHOD TYPE MATERIAL

From To Slot size Number Dia. Tele / pipe size

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

TESTING METHOD PUMP

Yield GPM Drawdown Drill stem at Time

6300 113' 24 HOUR

Temperature of Water 76 F Depth Artesian Flow Found

Was a water analysis done? NO By whom

Did any strata contain water not suitable for intended use? No

(9) LOCATION OF WELL by legal description:

County KLAMATH Latitude Longitude

Township 39 S Range 10 E

Section 17 NE 1/4 SE 1/4

Tax Lot 2900 Lot Block Subdivision

Street Address of Well (or nearest address)

5429 REEDER RD KLAMATH FALLS OR 97603

(10) STATIC WATER LEVEL:

6' 8" ft. below land surface Date June 26, 2003

Artesian pressure Date

(11) WATER BEARING ZONES:

Depth at which water was first found 1375

From To Estimated Flow Rate SWL

1374 1551 5000 GPM 6' 8"

(12) WELL LOG:

Ground Elevation

FROM TO SWL

TOP SOIL 0 3

BROWN CLAY 3 13

BLUE CLAY 13 17

BROWN CLAY 17 18

BLUE CLAY 18 27

SANDY BLUE CLAY 27 73

BLUE SAND 73 79

SANDY BLUE CLAY 79 99

BLUE CLAY 99 223

COURSE SAND 223 231

BLUE CLAY 231 248

BLUE CLAY 248 314

SANDY BLUE CLAY 314 327

BLUE CLAYSTONE 327 1330

GREY CLAYSTONE 1330 1374

FRACTURED GREY BASALT 1374 1551 6' 8"

Date started March 31, 2003 Completed August 8, 2003

(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.

DATE 9-3-03 WWC # 1758

(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.

DATE 9-3-03 WWC # 693

Attachments:

Attachment Memo A: Analysis of Groundwater pumping Impacts on Scenic Waterway Flows



**State of Oregon
Water Resources Department**

Memorandum

To: Barry Norris – Administrator, Technical Services Division
Dwight French – Administrator, Waterrights Division
Tom Paul – Deputy Director
Doug Woodcock – Administrator, Field Services Division

From: Ivan Gall – Manager, Groundwater Section *I.G.*

Date: February 19, 2013

Subject: Analysis of Groundwater Pumping Impacts on Klamath Scenic Waterway Flows

In 1971 the Oregon Legislature created the Scenic Waterway Act, codified by Oregon Revised Statutes 390.805 to 390.925, to preserve for the benefit of the public Waldo Lake and selected parts of the state's free-flowing rivers. The Klamath Scenic Waterway was part of the Act and includes the Klamath River from the John Boyle Dam powerhouse downstream to the Oregon-California border. Under the Act, the Water Resources Commission is allowed to allocate small amounts of surface water for human consumption and livestock watering, as long as issuing the water right does not significantly impair the free-flowing character of these waters in quantities necessary for recreation, fish and wildlife, and the amount allocated may not exceed a cumulative total of one percent of the average daily flow or one cubic foot per second (cfs), whichever is less.

In 1995 the Scenic Waterway Act was modified to address the impact of groundwater uses that, based upon a preponderance of evidence, would measurably reduce the surface water flows within a scenic waterway. "Measurably reduce" means that the use authorized will individually or cumulatively reduce surface water flows within the scenic waterway in excess of a combined cumulative total of one percent of the average daily flow or one cfs, whichever is less.

In 2012 the United States Geological Survey (USGS), in cooperation with OWRD and the US Bureau of Reclamation, completed groundwater flow and management models for the Upper Klamath Basin. The 2012 groundwater flow model uses generally accepted hydrogeologic methods and the relevant field data to model the cumulative effects of groundwater pumping within the Klamath Scenic Waterway, and provides a comprehensive methodology for analyzing the relevant field data necessary to determine whether the cumulative use of groundwater in the Klamath Basin will measurably reduce the surface water flow necessary to maintain the free-flowing character of the Klamath Scenic Waterway.

In September 2012 the OWRD Groundwater Section conducted two model simulations. The two simulations used the 2012 USGS flow model, incorporating groundwater permits issued (61.96 cfs) since adoption of the 1995 Scenic Waterway Act amendment up through 2004. Each simulation was run to steady-state, where inflows and outflows for that model run balanced. An evaluation of the water budgets showed that groundwater discharge to the Klamath Scenic Waterway decreased by 5.88 cfs as a result of the 61.96 cfs of groundwater uses issued between 1995 and 2004. These results indicate to the OWRD that a preponderance of evidence exists to establish that groundwater development occurring in the Upper Klamath Basin in Oregon since 1995 has "measurably reduced" surface water flows within the Klamath Scenic Waterway.

In January 2013 the OWRD Groundwater Section conducted flow model simulations to evaluate impacts to streams from pumping groundwater within the Lost River subbasin. Groundwater pumping was simulated by placing wells in the model that correspond to the center of 39 townships in the southeast part of the Klamath Basin in Oregon. Each of the simulations was run to steady-state, where inflows and outflows for that model run balanced. These results indicate that the scenic waterway is impacted by pumping groundwater in all of the townships evaluated in Oregon in the Lost River subbasin. In summary, a preponderance of evidence exists to establish that groundwater development occurring in Oregon since 1995 in the Upper Klamath Basin and Lost River subbasin has "measurably reduced" surface water flows within the Klamath Scenic Waterway.

References:

Gannett, M.W., Lite, K.E., Jr., La Marche, J.L., Fisher, B.J., and Polette, D.J., 2007. Ground-water hydrology of the upper Klamath Basin, Oregon and California: U.S. Geological Survey Scientific Investigations Report 2007-5050, 84p.

Gannett, M.W., Wagner, B.J., and Lite, K.E., Jr., 2012. Groundwater simulation and management models for the upper Klamath Basin, Oregon and California: U.S. Geological Survey Scientific Investigations Report 2012-5062, 92p.