

**STATE OF OREGON**  
**Water Resources Department**  
**725 Summer St. N.E.**  
**Salem, OR 97301**

**MEMORANDUM**

DATE: 8/28/2020

TO: Mary Bjork, Permit Extension Review; Justin Iverson, GW Section Manager  
FROM: Travis Brown, Hydrogeologist  
SUBJECT: Application G- 16018      Permit G- 17513  
Information to Assess Permit Renewal Request

Location: T **8S**/ R **3W**- S **27**  
GW Limited Area **South Salem Hills**  
Permittee: **Rainbow Heights Homeowners Association**  
Use: **Irrigation (4.0 acres)**  
Priority Date: **5/28/2003**  
Permit History:

Document/Permit	Date Issued	Date Expired
Permit G-16042	3/20/2006	10/1/2010
Permit G-16800	9/30/2010	10/1/2015

Q: **0.05** cfs  
Well Logs: **MARI 54504**  
Decline Triggers: Use shall be controlled or shut off if the well displays: a) average decline of 3 or more feet per year for 5 consecutive years, b) a total decline of 15 or more feet, c) a hydraulic interference decline of 15 or more feet in any neighboring well providing water for senior exempt uses or wells covered by prior rights.  
Special Conditions: Irrigation by drip or equally efficient method only. Irrigation only between 8 PM and 9 AM. Duty of 1.0 af/acre.  
Renewal Criteria: Director finds the gw resource can probably support the extended use.  
Pump Test: None found.  
Long-term Supply Plan: None found.  
Meas. Tube/Air Line: Not required  
Water Use Reporting: Submitted and entered through November 2019.  
COBU: Application received 5/2/2011.  
Water Level Reporting: Permittee is required to submit a March water level each year. No measurement submitted for March 2018, but otherwise complete through March 2020.  
Ref. Water Level: 147.6 ft below land surface

SWL Data:

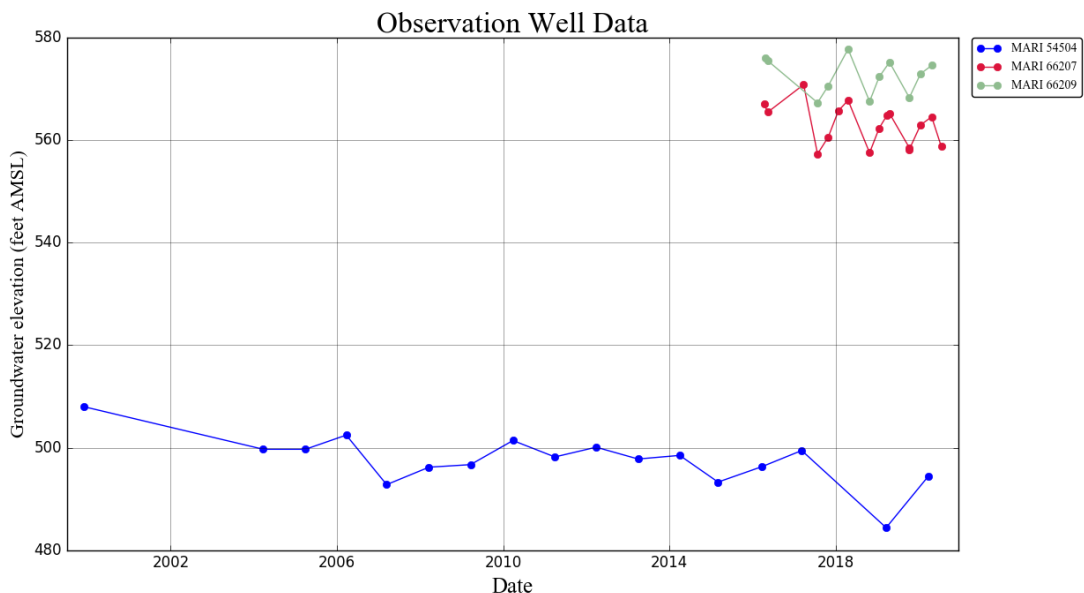
Date	SWL [ft BLS]	Comment
5/2/2003	167.9	submittal
3/23/2004	150.3	Groundwater Section
3/30/2005	150.3	submittal
3/23/2006	147.54	submittal, reference level
3/13/2007	157.2	submittal
3/19/2008	153.8	submittal
3/19/2009	153.3	submittal
3/27/2010	148.6	submittal
3/30/2011	151.8	submittal
3/27/2012	149.9	submittal
3/30/2013	152.2	submittal
3/31/2014	151.5	submittal
3/3/2015	156.7	submittal
3/22/2016	153.7	submittal
3/7/2017	150.55	submittal
3/29/2018		not measured
3/19/2019	165.6	submittal, "system cannot be shut down"
3/26/2020	155.5	submittal

**Comments**

**TRIGGERS.** The March 2019 water level measurement of 165.6 ft bls exceeded the decline trigger of 15 ft below the reference level of 147.6 ft bls. However, a comment accompanying the submitted measurement noted that the "system cannot be shut down due to constant need." Therefore, the March 2019 may not have represented a true static measurement.

**RECOVERY FROM TRIGGER LEVELS.** The subsequent March 2020 water level measurement was ~10 ft higher and within the limitations of the decline conditions.

**AREA WATER LEVEL BEHAVIOR.** Reported water levels for MARI 54504 have overall been relatively stable, with an average decline of ~0.2 ft/year from 2006–2020. Observation wells in the area (MARI 66207, 66209) show greater declines, but have a limited period of record; additionally, the highly faulted and compartmentalized nature of the basalts in the South Salem Hills means that impacts from groundwater use are often highly localized.



**PERMIT RENEWAL.** The groundwater resource can probably support the extended use.

**CONCLUSIONS:** I recommend that the permit be renewed with an expiration date of 10/31/2025, to synchronize it with the common review schedule intended for the South Salem Hills GWLA. The applicant must continue to monitor and report water use and static water levels. Submission of water use or water level data as “not measured” is unacceptable.

Additionally, reported water use appears to have exceeded the authorized rate during several months since the last permit renewal. At the maximum authorized rate (0.05 cfs), the applicant should be able to produce up to 2.97 af in a 30-day month and up to 3.069 af in a 31-day month. Reported water use exceeded these limits for the following months:

<u>Month &amp; Year</u>	<u>Reported Use [af]</u>	<u>Exceedance [af]</u>
June 2019	3.47	0.5
July 2018	3.13	0.061
July 2017	3.18	0.111
May 2016	4.21	1.141
July 2012	5.39	2.321

The permittee should explain these exceedances to the local watermaster and ensure that use under the permit does not exceed the authorized rate and duty.