

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

In the Matter of Aquifer Storage and Recovery)
(ASR) Limited License Application #016,)
Yamhill County

SUMMARY ORDER
APPROVING RENEWED ASR TESTING

AUTHORITY

Oregon Revised Statute (ORS) 537.534 and Oregon Administrative Rule (OAR) 690-350-0020 establish the process by which an application for ASR testing under an ASR limited license may be submitted and approved. Oregon Administrative Rule (OAR) 690-350-0010 describes general provisions for ASR under Oregon law.

BACKGROUND

On May 24, 2010, the Department issued ASR Limited License # 016 to the City of Lafayette. That license authorized ASR testing for five years at one well in a Columbia River Basalt Group aquifer. Condition 1 of ASR Limited License #016 provides for renewal pursuant to OAR 690-350-0020(5)(c), and describes the following terms for renewal: The limited license may be renewed if the licensee demonstrates to the Director's satisfaction that further testing is necessary and that the licensee complied with the terms of the license.

FINDINGS OF FACT

1. On April 27, 2015, the City of Lafayette submitted a request for a five-year time renewal for ASR Limited License #016.
2. The Department provided public notice of the request in the Department's weekly public notice on May 5, 2015. A 30-day comment period followed.
3. The Department received no public comments related to the possible renewal of an ASR limited license.
4. The Department sought comments and recommendations from Oregon Department of Environmental Quality (DEQ) and Oregon Health Authority Drinking Water Program (OHA) related to the possible renewal. Comments were received from DEQ and OHA supporting renewal of ASR LL #016 and recommending conditions of that renewal. Those recommendations are addressed in the renewed ASR limited license.
5. The Department evaluated the renewal request and comments and determined the proposed renewal is consistent with Condition 1 of the ASR limited license and OAR 690-350-0020(5)(c). The licensee has demonstrated to the Director's satisfaction that further testing is necessary and that the licensee complied with the terms of the license. The request presented reasons for the renewal and also provided specific details that addressed compliance with the ASR limited license.

CONCLUSIONS OF LAW

The request to renew ASR Limited License #016 for five years is consistent with the requirements of OAR 690-350-0020(5)(c) and Condition 1 of ASR Limited License #016.

ORDER

Now, THEREFORE, it is ORDERED, ASR Limited License #016 shall be valid through the fifth anniversary of its renewal, pursuant to ORS 537.534, OAR 690-350-0020(5)(c), and Condition 1 of the original ASR limited license.

Except as modified by other provisions of this limited license, the licensee is authorized to pursue the project schedule, monitoring, and other features noted in the original and subsequent ASR test plans. That plan may be amended and approved pursuant to condition (4)(A)(iii). The project schedule in the ASR test plan may be reasonably adjusted by the licensee to reflect the license issuance date or other delays. Features of the ASR testing plan are provided in the document entitled:

City of Lafayette
Aquifer Storage and Recovery
Limited License Application and
Pilot Test Work Plan
October 2009

Prepared By
GSI Water Solutions, Inc.

ASR testing must provide data that address the following: the appropriate target storage volume; loss of stored ASR water and natural water by virtue of ASR activities; water quality changes due to ASR activities; well construction sufficiency for ASR purposes; water level response in the ASR well, aquifer, springs and nearby wells; accounting of ASR inputs, withdrawals, and storage; water quality testing needs; and well hydraulics at the ASR well.

The licensee may divert up to 0.66 cubic foot per second (cfs) from Blue Bird Spring (also known as Big Spring), in the Millican Creek Basin, using authorization of Certificate 16623.

The point of diversion from Blue Bird Spring is T3S, R3W, Section 33 SW ¼ NW ¼.

The licensee may store up to 460 million gallons in a basalt aquifer using one well. The maximum injection rate at the well is 0.66 cfs (296 gallons per minute (gpm)). The maximum recovery rate of stored water is 200 gpm through the same well. The maximum storage duration is the five-year duration of this limited license. The ASR well is the following:

<i>Well Name</i>	<i>Well Location</i>
Well No. 10 (YAMH 51004)	240 feet North, 630 feet East from NW corner of DLC 38

Other Conditions:

- 1) **License Renewal.** The limited license may be renewed if the licensee demonstrates to the Director's satisfaction that further testing is necessary and that the licensee complied with the terms of the license.

- 2) **Notice Prior to Injection and Recovery.** The licensee shall give notice, in writing, to the watermaster not less than 15 days in advance of either initiating any injection under the license or recovering stored water. The injection notice shall include the license number, the location of the injection source water diversion, the quantity of water to be diverted from that source, the time of injection, and the place of injection. The recovery notice shall include the license number, the location of the recovery well(s), the time of recovery, and the quantity of water to be recovered.
- 3) **Record of Use.** The licensee shall maintain a record of injection and recovery, including the total number of hours of injection and recovery and the total metered quantity injected and recovered. The record of use may be reviewed by Department staff upon request.
- 4) **Modification/Revocation.** The Department shall notify the licensee in writing and allow the licensee to respond when considering the following actions:
 - (A) The Director may modify the ASR limited license for any of the following reasons:
 - (i) to reflect changes in Oregon Health Authority Drinking Water Program (OHA) and Oregon Department of Environmental Quality (DEQ) water quality or treatment standards;
 - (ii) to address needed technological changes as requested by DEQ or OHA to minimize constituents regulated under OAR 333-61-030 (ORS 448.131 and .273) or OAR 340-40 (ORS 468B.165);
 - (iii) upon written request from the applicant for minor adjustments to the authorization in the limited license.
 - (B) The Director may revoke or modify the ASR limited license for any of the following reasons:
 - (i) to prevent or mitigate injury to other water rights, minimum perennial streamflows or aquifer water quality;
 - (ii) to address any other unintended, injurious effects of the ASR activity; or
 - (iii) failure to maintain compliance with all conditions of this limited license.
 - (C) The Department may offer an additional public comment opportunity consistent with the notice and comment provisions of OAR 690-350-020 prior to modifying the limited license.
- 5) **Priority/Protection.** This limited license does not receive a priority date and is not protected under ORS 540.045. The diversion of water for this ASR testing retains the priority date and protection of those water rights.
- 6) **Compliance with Other Laws.** The injection of acceptable water into the aquifer as well as its storage and recovery under this license shall comply with all applicable local, state or federal laws. This shall include but not be limited to compliance with the Oregon Department of Environmental Quality's Underground Injection Control registration program as authorized under the Safe Drinking Water Act (40 CFR 144.26). Also, all pilot test discharges to waterways must be covered by a DEQ National Pollution Discharge Elimination System (NPDES) permit.

7) Water Quality Conditions and Limits:

- (A) The licensee shall minimize, to the extent technically feasible, practical and cost-effective, the concentration of constituents in the injection source water that are not naturally present in the aquifer;
- (B) Except as otherwise provided in (C) of this condition, if the injection source water contains constituents regulated under OAR 333-61-030 (ORS 448.131 and .273) or OAR 340-40 (ORS 468B.165) that are detected at greater than 50 percent of the established levels (MCLs or MMLs in the cited rules), the licensee shall employ technically feasible, practical and cost-effective methods to minimize concentrations of such constituents in the injection source water;
- (C) Constituents that have a secondary contaminant level or constituents that are associated with disinfection of the injection source water may be injected into the aquifer up to the standards established under OAR 333-61-030 (ORS 448.131 and .273);
- (D) The Department may, based upon valid scientific data, further limit certain constituents in the injection source water if the Department finds that those constituents will interfere with or pose a threat to the maintenance of the water resources of the state for present or future beneficial uses;
- (E) If during the course of ASR testing, a constituent which is regulated under OAR 333-61-030 (ORS 448.131 and .273) or OAR 340-40 (ORS 468B.165) is detected above the 50% level prescribed in condition (7)(B) or the 100% level prescribed in condition (7)(C), the licensee shall stop injection activities immediately upon receipt of lab data and notify the Department within five days.

8) Water Quality Sampling.

- (A) Injection Water. The licensee shall sample and analyze injection water for the constituents described in the pilot test program dated October 2009.
- (B) Receiving Aquifer Water. The licensee shall sample and analyze receiving aquifer water at the ASR well for the constituents described in the test plan dated October 2009.
- (C) Withdrawal of Stored Water. The licensee shall sample and analyze water withdrawn from storage for the constituents described in the test plan dated October 2009.
- (D) Additional constituents. In addition to the constituents listed in the test plan, the licensee shall sample and analyze source water from Blue Bird Spring annually for the agricultural chemicals identified as an email test amendment on January 11, 2012 by the City. The constituent list includes hexazinone, sulfometuron methyl, metsulfuron methyl, imazapyr, and seventeen (17) of the pesticides labeled with the groundwater advisory statement that are registered for grape crop use in Oregon.

9) Recovery. The availability of stored water for recovery is based on the following factors:

- (A) Available stored water is determined on a well-by-well basis. The licensee may recover up to 95% of the quantity injected under this license during the water year that the water was injected. After that water year, the availability of stored water shall be further diminished each water year such that the licensee may only recover up to 95% of any water year-to-water year storage carryover. For example, water year 2015 lasts from October 1, 2014 through September 30, 2015. Data collected by the licensee may be useful in consideration of modifications to this recovery provision under the license.
- (B) Any water withdrawn from the ASR well identified in this license shall first be debited against the quantity available in the aquifer by virtue of ASR storage. When the ASR storage is depleted at the ASR well, any water withdrawn from the ASR well shall be considered a draft of natural ground water, requiring separate or additional authorization. This license does not authorize withdrawal of more water than was injected.
- (C) The availability of stored water is a running account that is subject to determination at any time.

10) Annual Reporting.

- (A) Except as otherwise noted, the licensee shall provide the Department a written report of the results of ASR testing for each water year by February 15th of the following water year. The report shall detail the several kinds of data collected during the water year (including the water quality results in condition 8, in a DEQ-specified format), analyze those data to show the ASR project impacts on the aquifer, analyze for loss, indicate the testing/development progress made under the terms of the limited license, and account for the injection of stored water, withdrawals of stored and natural water, and the new-year carryover storage at each well. Annual reports shall be sealed and signed by a professional(s) registered or allowed, under Oregon law, to practice geology.
- (B) As pertinent, annual reporting shall include the formatting and additional information cited in Condition 11 below.

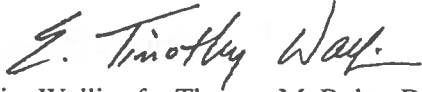
11) Special Reporting Condition. The licensee shall provide the following information to the Department:

- (A) Submission of any and all hydrogeologic data collected and reports developed for the project, including but not limited to cuttings analysis, video logs, geophysical logs, aquifer tests and step tests.
- (B) Submission of digital water level data for all ASR wells and any other wells measured in conjunction with the project (in a Department-specified format), including annual report data.
- (C) Submission of annual reports with locations and elevations for all project wells (actual locations of built wells and proposed locations for proposed locations) and locations and elevations for all non-project wells that have been used for collecting water levels or other data pertinent to the project (in a Department-specified format).
- (D) Notification in the annual report of any changes in well construction to the ASR license file.

(E) Associating all project well data with the Department Well Identification Number (Well ID Number), the Department Well Log ID, if available, and the project Well Name.

- 12) **Well Tag Condition for Licensee Wells.** The licensee shall ensure that their wells have been assigned a Department Well Identification Number (Well ID Number). A tag showing the Well ID Number shall be permanently attached to the well. If a well does not have a Well ID Number, the licensee shall apply for one from the Department and attach it to the well. The Well ID Number shall be used as a reference in any correspondence regarding the well, including any reports of water use, water level, or pump test data.
- 13) **Protection for Existing Users.** In the event of conflicts with existing appropriators, the licensee shall conduct all testing so as to mitigate the injurious effects. In addition, the licensee shall cooperate with the efforts of the Department to protect existing water rights and the water quality of existing users that rely upon the receiving aquifer and the injection source water.
- 14) **Use of Recovered Water.** The licensee shall use any recovered water for the use allowed in the diversion authorization.
- 15) **Additional Conditions on an Informal Basis.** The Department may suggest additional conditions to the licensee. Provided that those conditions are agreed to and undertaken by the licensee, the Department may forego formal changes to this license. This informal process does not extend to condition reductions. These additional conditions may be part of any license renewal or permit.
- 16) **Publicity.** The licensee shall maintain a public information program about the ASR project, which may include press releases, neighborhood meetings, brochures, or other activities. This program shall include information on potential project impacts and how to report possible impacts to the licensee. The licensee shall share such reports with the watermaster within five days of receipt.
- 17) **Other Measures.** The licensee shall take any additional measures, as appropriate, to address ASR-related issues such as landslide activation, seepage, streamflow increases, interference with nearby wells, aquifer storage limitations, and water quality protection. The licensee shall resolve these issues prior to submittal of an ASR permit application.
- 18) **Carryover Storage.** At the end of testing under this license, the licensee shall provide an accounting to the Department of the residual stored water based on the methods of determination given in this license. The Department shall consider this residual for carryover to a permanent ASR permit based on information which discloses the aquifer's ability to retain stored water.
- 19) **Water Level Monitoring.**
 - (A) The licensee shall monitor water levels in wells in the manner described in the approved ASR monitoring plan.
 - (B) Transducer and airline data shall be verified and corrected with quarterly manual measurements if an e-tape can be lowered past obstructions to the water level. In the event a pump is pulled, wells shall be equipped with an unobstructed, dedicated measuring tube pursuant to figure 200-5 in OAR 690-200.

Dated at Salem, Oregon on June 29, 2015.



Tim Wallin *for* Thomas M. Byler, Director
Water Resources Department

If you have questions about the Department or any of its programs please contact our Customer Service Group at 503-986-0801. Address all other correspondence to: Groundwater Section, Oregon Water Resources Department, 725 Summer St NE, Suite A, Salem OR 97301-1266, Fax: 503-986-0902.

Mailing List for FO

Scheduled Mailing Date:

Application:

ASR Limited License #016 - RENEWAL

Original mailed to Applicant:

City of Lafayette
c/o Trena McManus
PO Box 55
Lafayette, OR 97127

Copies Mailed	
by:	<u> BW </u>
	(STAFF)
on:	<u> 6/30/15 </u>
	(DATE)

Copies of FO sent to WRD:

1. Joel Plahn, Watermaster District 5
2. Mike McCord, Region Manager
3. File

Copies of FO sent to other interested persons (CWRE, Agent, Commenter, etc.):

1. Tom Pattee, Oregon Health Authority Drinking Water Program
2. Jack Arendt, Oregon Department of Environmental Quality
3. Kenneth Janssen, GSI Water Solutions, Inc.