

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

In the Matter of Aquifer Storage and Recovery    )  
(ASR) Limited License Application #006,            )  
Umatilla 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. OAR 690-350-0010 describes general provisions for ASR under Oregon law.

**BACKGROUND**

On March 11, 2003, the Department issued ASR Limited License #006 to the City of Pendleton. That license authorized ASR testing for five years at up to six wells in a Columbia River Basalt aquifer. Condition 1 of ASR Limited License #006 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. ASR Limited License #006 was renewed April 11, 2008 and again on April 17, 2013.

**FINDINGS OF FACT**

1. On February 23, 2018, the City of Pendleton submitted an application for a five-year renewal for ASR Limited License #006. The City also requested modifications to ASR Limited License #006, including changes to the water quality sampling plan, additional ASR wells, and transitioning from a well-by-well storage account to a well field storage account. The Department requested further information regarding the proposed modifications on April 20, 2018, and received an application addendum on July 30, 2018.
2. The Department provided public notice of the application in the Department's weekly public notice on March 13, 2018. A 30-day comment period followed.
3. The Department received no public comments related to the renewal of ASR Limited License #006.
4. The Department sought comments and recommendations from the Oregon Department of Environmental Quality (DEQ) and the Oregon Health Authority Drinking Water Services (OHA). Comments were received from DEQ and OHA supporting renewal and modification of ASR LL #006.
5. The Department reviewed the proposed modifications provided by the applicant. The authorization of ASR LL #006 is conditioned accordingly.
6. The Department evaluated the application and comments and determined:
  - a. The proposed ASR testing will not impair or be detrimental to the public interest;
  - b. The proposed ASR testing will produce information that will adequately describe the water quality and quantity response in the aquifer and at nearby wells and springs due to ASR activities; and
  - c. The proposed testing will not expand the use under an existing water right.

## CONCLUSIONS OF LAW

The request to renew ASR Limited License #006 for five years is consistent with the requirements of OAR 690-350-0020(5)(c) and Condition 1 of ASR Limited License #006.

## ORDER

Now, THEREFORE, it is ORDERED, ASR Limited License #006 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 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. Test plans 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 documents entitled:

City of Pendleton, March, 2012. Aquifer Storage and Recovery (ASR) Testing Program for The City of Pendleton, Oregon.

City of Pendleton, July 14, 2014. Letter requesting water quality sampling schedule change.

GSI Water Solutions, Inc., February 23, 2018. Request for a 5-Year Renewal of City of Pendleton ASR Limited License #006.

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.

When ASR Limited License #006 was initially issued, it allowed diversion of up to 10,400 gallons per minute (gpm) from the Umatilla River, a tributary of the Columbia River, and/or 3,750 gpm using existing "spring" collection structures located along the Umatilla River, using the authorization of Certificates 2604, 2582, 3927, 7993, 8051, 8052, Permit S-458, and ORS 538.450. Subsequently, the authorizations were changed by transfer and certification. Current authorizations are Certificates 85846, 85849, 85850, 85851, 85852, 85853, 86028 and ORS 538.450. Diversion rates under this license are the same as the original license and are based on current authorizations.

The point of diversion on the Umatilla River is located at 297 feet South and 679 feet East from the North  $\frac{1}{4}$  corner of Section 12, T2N/R32E.

The licensee may store up to 3.227 billion gallons in a basalt aquifer. The maximum storage duration is the five-year duration of this limited license. With the authorization of individual ASR well test plans, up to 7 ASR wells are potentially allowed. The licensee may inject a maximum combined rate of 14,400 gpm and recover a maximum combined rate of 16,800 gpm as follows:

Well Name	Well Log ID	Injection Rate (gpm)	Recovery Rate (gpm)	Well Location in T2N/R32E W.M.
Well 1, Byers	UMAT 531	1800	1800	600 FT NORTH AND 200 FEET WEST FROM SE CORNER OF SECTION 2
Well 5, Stillman	UMAT 530	2500	3000	350 FT NORTH AND 875 FT EAST FROM SW CORNER OF SECTION 2
Well 8, Prison	UMAT 554	1700	3500	1030 FT NORTH AND 30 FT WEST FROM CENTER OF SECTION 9
Well 2, Round-Up	UMAT 53635	2400	2500	1410 FT SOUTH AND 100 FT WEST FROM NORTH ¼ CORNER OF SECTION 10
Well 14	UMAT 54072	1000	1000	1495 FT SOUTH AND 834 FT WEST FROM NE CORNER OF SECTION 7
Well 4, Hospital	UMAT 55619	2000	2000	950 FT SOUTH AND 1260 FT WEST FROM NE CORNER OF SECTION 9
Well 15	Not yet drilled	3000	3000	967 FT WEST AND 1285 FT NORTH FROM THE CENTER OF SECTION 9

**The ASR testing project shall be operated according to the following conditions, pursuant to OAR 690-350-0020(5). Failure to comply with any of the provisions of this license may result in action including, but not limited to, revocation of the license.**

- 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 and conditions 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 Services (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 448.273) or OAR 340-40 (ORS 468B.165);

(iii) to address a 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 the source 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) **Detailed Testing Plans.** The licensee shall submit a detailed testing plan for each injection well as the project develops. The plan shall include precise well location and construction information, in addition to other testing features, and shall be sealed and signed by a professional(s) registered or allowed, under Oregon law, to practice geology. The licensee shall obtain Departmental approval of a detailed plan before injection testing at any well may begin. The Department may approve, condition, or reject a detailed plan.
- 8) **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 448.273) 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 according to the standards established under OAR 333-61-030 (ORS 448.131 and 448.273);

- (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 (8)(B) or the 100% level prescribed in condition (8)(C), the licensee shall stop injection activities immediately upon receipt of lab data and notify the Department within five days.
- 9) **Water Quality Monitoring.** The licensee shall sample and analyze injection, receiving and recovered water as described in the currently approved test plan.
- 10) **Water Level Monitoring.** The licensee shall monitor water levels in wells in the manner described in the currently approved test plan. The licensee shall submit a detailed water level monitoring plan for testing at each subsequent injection well.
- 11) **Recovery.** The amount of stored water available for recovery is based on the following factors:
- (A) Available stored water is determined on a well field basis beginning in Water Year 2018. 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. Data collected by the licensee may be useful in consideration of modifications to this recovery provision under the license. The Department may review, modify or revoke this condition and re-evaluate the storage account balance.
- (B) Any water withdrawn from an 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 zero, any water withdrawn from an ASR well shall be considered a draft of natural ground water, thereby requiring separate or additional authorization. This license does not authorize recovery of more water than was injected.
- (C) The availability of stored water is a running account that is subject to determination at any time.
- 12) **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 April 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 9, 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) Annual reporting shall include the formatting and additional information cited in Condition 13 below.



- 13) **Special Reporting Condition.** The licensee shall provide the following 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.
  - (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.
- 14) **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.
- 15) **Well Construction.** Injection and recovery wells shall be open to a single aquifer in the Columbia River Basalt Group and shall meet applicable well construction standards (e.g., OAR 690-200 and OAR 690-210). Following well drilling to total depth, new wells shall be thoroughly developed to remove cuttings and drilling fluids. The licensee or their agent shall consult with a Department Hydrogeologist and the Department's Well Construction and Compliance Section before well completion to obtain approval of the proposed final casing and seal depth. The wells shall be designed to limit the irretrievable loss of injected water to unsaturated zones.
- 16) **Cuttings.** During drilling of new project wells, the licensee shall collect cuttings at a minimum of 10-foot intervals and at major formation changes. The licensee shall provide a split of the cuttings to the Department.
- 17) **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.
- 18) **Use of Recovered Water.** The licensee shall use any recovered water for the use allowed in the diversion authorization.
- 19) **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.

- 20) **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.
- 21) **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.
- 22) **Well Repairs.** The Department reserves the right to examine well construction issues at the time of ASR permit issuance. A decision will be made at that time based upon whether well construction results in damage to the resource or injury to other users, or whether use of the well in its current state would preclude the proper operation of the project for its intended purpose. This could include, but is not limited to, consideration of water quality factors including the potential for contamination, mechanical stability of the well, commingling of aquifers, adequacy of access for measurement purposes, and the potential for loss of artesian head.

Dated at Salem, Oregon on October 8, 2018.



Dwight French for Thomas M. Byler, Director  
Water Resources Department

This order was produced by Jen Woody. If you have other 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 #006 - RENEWAL**

**Original mailed to Applicant:**

City of Pendleton ✓  
c/o Bob Patterson  
Public Works Department  
500 SW Dorian Ave  
Pendleton, OR 97801

<b>Copies Mailed</b>	
by: <u>SP</u>	
(STAFF)	
on: <u>10-8-18</u>	
(DATE)	

**Copies of FO sent to WRD:**

1. Greg Silbernagel, Watermaster District 5 ✓
2. Mike Ladd, Region Manager ✓
3. File ✓

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

- Email
1. Tom Pattee, Oregon Health Authority Drinking Water Program, Springfield office ✓
  2. Phil Richerson, Oregon Department of Environmental Quality, Pendleton office ✓
  3. DeEtta Fosbury, GSI Water Solutions, Inc., Portland office ✓

