



LETTER OF TRANSMITTAL

To: Jen Woody, OWRD

Address: Oregon Water Resources Department
North Mall Office Building
725 Summer Street NE, Suite A
Salem, OR 97031

Email Address: jennifer.l.woody@wrdd.state.or.us

From: Kenny Janssen, RG / GSI Water Solutions, Inc.
Chris Wick, RG / GSI Water Solutions, Inc.

Date: August 6, 2025

Attached to this email are digital copies of the documents/files listed below. A hard copy of the report is available upon request.

Date of Publication	Number of Copies	Description
08/05/2025	1 PDF	City of Lafayette, Aquifer Storage and Recovery Limited License #016 Renewal Request – Digital Copy

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ASR Limited License No. 016



**APPLICATION FOR RENEWAL OF
AQUIFER STORAGE AND RECOVERY (ASR) LIMITED LICENSE**

Applicant: City of Lafayette

Mailing Address: PO Box 55, Lafayette, OR 97127

Phone and Email: 503-864-2451, brandend@lafayetteoregon.gov

Authorized Agent: GSI Water Solutions Inc

Mailing Address: 650 NE Holladay Street, Suite 900, Portland, OR 97232

Phone and email: 323-610-3792, cwick@gsiws.com

Per OAR 690-350-020(5)(c), an ASR LL may be renewed upon request from the licensee if the applicant demonstrates to the Department's satisfaction that further testing is necessary and that the licensee complied with the terms of the current ASR LL. The applicant may also request modifications to an ASR LL at the time of renewal. Please consult the current ASR LL and provide as attachments the following:

- o Explanation of why further testing is necessary
- o Summary of compliance with ASR LL
- o Request for changes, as needed
- o ASR LL Renewal Fee. Consult current fee schedule at:
<http://www.oregon.gov/owrd/pages/pubs/forms.aspx#fees>
- o Submit one hard copy in person or by mail to: Oregon Water Resources
Department, 725 Summer St NE, Suite A, Salem, OR 97301
- o Submit a digital copy to: Jennifer.L.Woody@oregon.gov
- o Questions? Contact Jen Woody, OWRD Hydrogeologist, at 503-986-0855

Signature of Applicant  **Date** 8/7/2025

Title City Administrator

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ASR Limited License #016 Renewal Request – City of Lafayette

To: Jennifer Woody, RG, Oregon Water Resources Department

From: Chris Wick, RG, GSI Water Solutions, Inc.
Kenny Janssen, RG, LG, GSI Water Solutions, Inc.

CC: Brandon Dross, City Administrator, City of Lafayette
Greg Robinson, Public Works Department, City of Lafayette

Date: August 6, 2025

Ms. Woody:

On behalf of the City of Lafayette (City), GSI Water Solutions, Inc. (GSI) is submitting this letter to request a five-year renewal of ASR Limited License #16 (ASR LL #016) and to provide a statement of compliance with each condition of the limited license. ASR LL #016 was issued to the City on May 24, 2010 for developing ASR in the basalt aquifer in the City watershed and renewed for additional five-year terms on June 29, 2015 and October 2, 2020. The City continues to use ASR to recharge the basalt aquifer and maintain and/or improve the capacity of the existing City wells located in the watershed. This letter only requests a renewal of ASR LL #016 – no major or minor modifications are proposed at this time.

Enclosed is a check in the amount of \$575.00 to cover the renewal processing and review fee.

Request for Renewal

The City requests that ASR LL #016 be renewed for an additional five-year testing period, pursuant to Oregon Administrative Rule (OAR) 690-350-0020 (5)(c) and Condition 1 of ASR LL #016. The City is requesting renewal to continue developing its ASR program and evaluate the storage capacity of the basalt aquifer system.

Background

The City began pilot testing operations at its Well 10 facility during February 2012, approximately seven months after construction of the ASR facility and initial shakedown testing of the system were complete. The City has continued ASR testing operations since initiation in 2012 and pilot testing at Well 10 is currently in its fourteenth year. ASR cycle testing to date has shown that the storage and recovery of high-quality drinking water is feasible without negative impacts to proximal groundwater users, aquifer storage volumes, or water quality. The City's ASR facility continues to be a key component in managing and optimizing its water supply resources.

Results for all pilot test cycles complete to date (Cycles 1 through 13) are presented and discussed in the City's annual ASR reports (GSI 2013, 2014a, 2015, 2016a, 2017, 2019, 2020, 2021, 2022, 2023, 2024, and 2025). The annual reports were prepared and submitted to OWRD after each year of piloting, as required

by Condition 10 and 11 of ASR LL #016, with the exception of Cycle 6. Results from Cycle 6 (Water Year 2017) pilot testing were included in the annual report for Cycle 7 (Water Year 2018; GSI 2019). System operation summaries and monitoring results provided in the reports demonstrate general compliance with the provisions and conditions of ASR LL #016 and support this renewal request.

The City submitted a request for a five-year renewal for ASR LL #016 on May 11, 2020. The OWRD concluded that the request to renew was consistent with the requirements of OAR 690-350-0020(5)(c) and Condition 1 of ASR LL #016 and subsequently ordered ASR LL #016 valid through October 2, 2025.

Compliance with the Conditions of Renewal ASR LL #016

Several conditions have been defined relative to ASR pilot testing as authorized by renewed ASR LL #016. These conditions have been issued to regulate the activities associated with ASR pilot testing, such as license renewal, notifications, compliance with relevant laws and statutory rules, monitoring, and reporting.

It is our opinion that the City has predominantly complied with all conditions outlined in renewed ASR LL #016 and that ASR pilot testing activities have been conducted in accordance with the monitoring activities outlined in the approved ASR Pilot Test Workplan (GSI 2016b)¹. There have been minor deviations to the monitoring schedule in Cycles 11 through 13, primarily due to the loss of City public works' staff familiar with ASR operations, the transition and training of new public works' staff, and reconciling data gaps. The City continues to invest in their ASR program and considers it an essential water management tool to help meet summer peak demands.

To facilitate your review of the City's third renewal request, we have listed the conditions associated with the 2020 renewed ASR LL #016 below and included a statement of compliance for each condition.

Condition 1 – License Renewal

The City herein requests a five-year extension to ASR LL #016. The City is requesting renewal to continue developing its ASR program and evaluate the storage capacity of the basalt aquifer system. The City's compliance with the terms of the license is documented herein.

Condition 2 – Notice Prior to Injection and Recovery

The City provided Watermaster notice before initiating injection and recovery operations for Cycles 9 through 13.. The City sent notification to the Watermaster for Cycle 14 recharge operations on January 16, 2025 but decided before recharge operations began to postpone all ASR activities for water year 2025. The City suspended their ASR program so they could use the ASR supply water from Blue Bird Spring to fill a new one million gallon aboveground reservoir recently constructed to increase the storage capacity of their water system. The City notified the watermaster on April 8, 2025, that they were postponing all ASR activities for water year 2025 and planning to resume ASR activities for water year 2026. The City will continue to notify the Watermaster in writing each year before initiating injection and recovery.

Condition 3 – Record of Use

The City has kept records of the injection and recovery rates, durations, and volumes during all testing years. These records have been reported in the ASR annual reports (as required by Condition 10) and in digital files presented in OWRD-specified formats (as required by Condition 11).

Condition 4 – Modification/Revocation

The City has not received any correspondence from OWRD informing the City of any modifications or revocations to the limited license, nor has the City requested any modifications to the limited license. The City

¹ Accepted July 2016 and replaced the earlier test plan dated October 2009.

understands that any requests to modify the limited license will be made in writing and submitted to OWRD for review.

Condition 5 – Priority/Protection

The City understands that the limited license does not receive a priority date like a water right does.

Condition 6 – Compliance with Other Laws

The City has complied with local, state, and federal permits and laws where applicable with regard to injecting acceptable water into the aquifer. The City's ASR well (Well 10; YAMH 51004) was registered with the Oregon Department of Environmental Quality (ODEQ) Underground Injection Control (UIC) program before any injection activities commenced (UIC #11412 and approved September 21, 2010). Compliance with the requirements of UIC #11412 have been met since pilot testing activities began in February 2012. No discharge to waterways takes place as part of the City's ASR pilot testing activities and no ODEQ National Pollution Discharge Elimination System (NPDES) permit is needed.

Condition 7 – Water Quality Conditions and Limits

Water quality test results from baseline (pre-recharge) groundwater, source (injection, or recharge) water, stored water, and recovered water samples indicate that the water quality is suitable for its intended use. Field parameter monitoring and sample collection has deviated from the Limited License work plan (GSI, 2016b) on occasion due to staff turnover in the City's public works' department during active ASR operations. The recovered water quality overall, however, has met state and federal drinking water standards and met OAR 690-350-0010(6) water quality standards for ASR systems.

Analytical test results from baseline (pre-recharge) source water samples exhibit negative Langelier Saturation Index (LSI) values, which suggest somewhat corrosive conditions. LSI levels not in agreement with the non-corrosive secondary maximum contaminant level (SMCL) may contribute to color or objectionable taste in water.

Total coliform was detected in baseline source water samples collected at the start of Cycles 10-12. All source water and follow-up bacteriological samples, however, were negative for *E.coli* and fecal coliform.

Agricultural contaminants have not been detected in any of the baseline source water recharge samples since routine screening began in Cycle 5 (Water Year 2016). The agricultural chemical contaminants, however, were not monitored in the baseline source water samples for Cycles 11 and 12 due to the loss of City public works' staff familiar with ASR operations and the transition and training of new staff.

Condition 8 – Water Quality Sampling

The City has collected (and continues to collect) injection, storage, and recovery water quality samples as described in the approved ASR Pilot Test Work Plan (GSI, 2016b), with occasional deviations. Deviations from the test work plan are identified below:

- Cycle 10 – No bacteriological samples and field parameters were collected during recovery due to turnover of City operations staff.
- Cycle 11 – Missed agricultural chemical samples from the source water during the baseline monitoring period.
- Cycle 11 – A zero percent recovery was not sampled with the exception of bacteriological samples.
- Cycle 11 – No bacteriological samples were collected during the 50 percent due to turnover of City operations staff.

- Cycle 12 – Missed agricultural chemical samples from the source water during the baseline monitoring period.
- Cycle 12 – Miscellaneous analytes were mistakenly not sampled for during zero percent recovery.
- Cycle 12 – No bacteriological samples were collected during the 50 percent recovery sample.
- Cycle 13 – No bacteriological samples were collected during the 50 percent recovery sample.

Condition 9 – Recovery

The City has recovered up to 95 percent of the stored volume each year and utilized its existing water right at Well 10 (authorized by T-8178) to pump groundwater after the ASR storage has been depleted, as needed. As required by the condition, water withdrawn from Well 10 is first debited against the quantity available by virtue of ASR storage before being considered a draft of natural groundwater. Annual reporting to OWRD has documented the amount of recover water; both ASR water and native groundwater.

Condition 10 – Annual Reporting

Annual ASR reports for Cycles 9 through 13 were submitted to OWRD for each year of pilot testing under the original term of ASR LL #016 (GSI 2013, 2014a, and 2015). Under the second renewed term, annual reports documenting results of Cycles 9 through 12 were submitted to OWRD on or before February 15 of each reporting year (GSI 2021, 2022, 2023, and 2024). The annual report documenting results of Cycle 13, was submitted to OWRD on June 10, 2025 (GSI 2025). Additional time was needed to complete the Cycle 13 annual report to reconcile gaps identified in data provided by the City and water quality laboratory.

Condition 11 – Special Reporting Condition

Hydrogeologic and water level data collected, and annual ASR reports developed, as part of ASR pilot testing have been submitted to OWRD in digital and OWRD-specified formats. The digital data and electronic copies of the reports have been submitted with each annual report and/or submitted directly via electronic mail. The project well data submitted provide reference to Well ID Number, Well Log ID Number and project Well Name when available. No changes in well construction have been made to Well 10.

Condition 12 – Well Tag Condition for Licensee Wells

Well Identification Numbers have been assigned to each well by OWRD (see Table 1) and tags have been attached by the City.

Table 1. OWRD Well Identification Numbers for City Wells

City Well No.	Well Report No.	Well Identification No.
Well 1	YAMH 4623	L-130714
Well 2	YAMH 4622	L-130715
Well 8	YAMH 154	L-130716
Well 10	YAMH 51004	19469

Condition 13 – Protection for Existing Users

No injuries to existing groundwater users have been reported since the start of ASR activities.

Condition 14 – Use of Recovered Water

Water recovered from storage has been put to beneficial municipal use as described in water right certificate 16623.

Condition 15 – Additional Conditions on an Informal Basis

OWRD has not suggested additional conditions to the limited license since its issue date.

Condition 16 – Publicity

The City has kept the public informed of its ASR program and recovered water quality through its annual Consumer Confidence Report and through other presentations, publications, and community meetings (e.g., City Council and Water Resources Committee meetings).

Condition 17 – Other Measures

No adverse effects related to ASR operations or activities have been observed or reported since the start of ASR pilot testing operations in February 2012. The City continues to monitor for adverse effects resulting from ASR activities based on the approach and monitoring outlined in the ASR Pilot Test Work Plan (GSI, 2016b).

Condition 18 – Carryover Storage

A running account of the amount of recovered ASR water has been submitted to OWRD each year as part of the ASR annual reporting. The City has recovered 95 percent of the volume injected during each year and has not carried any residual storage from year-to-year.

Condition 19 – Water Level Monitoring

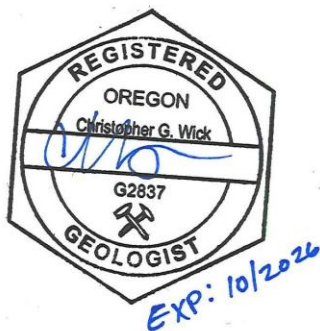
Water level monitoring has been conducted in accordance with the approved ASR Pilot Test Work Plan (GSI, 2016b), except for routine manual water level measurements and instrumentation. The City has attempted to collect manual water level measurements from Wells 1, 2, 8, and 10, but have been unsuccessful at times (particularly at Wells 1, 2, and 8) because of obstructions inside the well casing. All wells are equipped with pumping systems, and as pumping systems have been removed and/or replaced, the City has installed drop tubes installed in Wells 1, 2, 8, and 10. In accordance with the approved ASR Pilot Test Work Plan (GSI, 2016b), the City collects weekly manual water level readings from Wells 1, 2, 8, and 10.

Pressure transducers installed in the observation wells are not equipped with datalogger units, and consequently, water level readings from the transducers are manually recorded by City personnel once per day. The City is aware of the water level monitoring discrepancies between pressure transducers and manual readings and is working with vendors to recalibrate, recondition, and reprogram the pressure transducers. The City will continue routine manual water level monitoring.

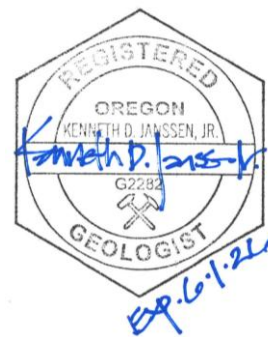
Closing

Thank you for considering this request. Please reach out should you have any questions or require additional information during your review.

Regards,



Chris Wick, RG
Principal Hydrogeologist
GSI Water Solutions, Inc.

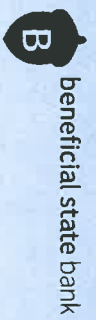


Kenny Janssen, RG
Principal Hydrogeologist
GSI Water Solutions, Inc.

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650 NE Holladay Street Suite 900 Portland OR 97232
P: 503.239.8799 F: 503.239.8940
info@gsiwater.com www.gsiwater.com



027616
90-82051211

DATE

August 6, 2025

PAY

Five Hundred Seventy Five and 00/100 Dollars

AMOUNT

TO THE
ORDER
OF

Oregon Water Resources Department
725 Summer St NE, Suite A
Salem, OR 97301-1271

VOID AFTER 90 DAYS 575.00



Emily Mackley
AUTHORIZED SIGNATURE

⑈027616⑈ ⑆121182056⑆ 2230007936⑈

GSI WATER SOLUTIONS INC

Check Date: 8/6/2025

027616

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
ASR_108.047 - 8-4-25	8/4/2025	0026376	575.00			575.00
Oregon Water Resources Department		TOTAL	575.00			575.00
Beneficial Checking	8	00275				

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