

STATE OF OREGON

COUNTY OF WASHINGTON

PERMIT FOR AQUIFER STORAGE AND RECOVERY (ASR)

THIS ASR PERMIT IS HEREBY ISSUED TO:

HILLSBORO SCHOOL DISTRICT
4901 SE WITCH HAZEL
HILLSBORO, OR 97123

The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: ASR PERMIT #004

PREVIOUS ASR TESTING AUTHORIZATION: ASR LIMITED LICENSE #017

SOURCE OF WATER: ORS 538.420, CERTIFICATES 67891, 85913, 81026, 81027, 89117, 89115;
PERMITS G-8755, G-10479, G-10124, and G-10455, Transfer T-10489

POINTS OF DIVERSION:

Source Water Right	POD Location
Certificate 81026	POD 1: 750 FEET NORTH, 590 FEET EAST FROM THE SW CORNER OF SECTION 14, T1S, R5W W.M. POD 2: 650 FEET SOUTH, 650 FEET WEST FROM THE NE CORNER OF SECTION 20, T1S, R4W W.M. POD 3: 695 FEET NORTH, 685 FEET EAST FROM THE SW CORNER OF SECTION 8, T1S, R3W W.M.
Certificate 67891	POD 1: 1080 FEET NORTH, 210 FEET WEST FROM THE SE CORNER OF SECTION 20, T1S, R5W W.M. POD 2: 500 FEET NORTH, 415 FEET EAST FROM THE SW CORNER OF SECTION 8, T1S, R3W W.M.
Certificate 81027	POD 1: 750 FEET NORTH, 590 FEET EAST FROM THE SW CORNER OF SECTION 14, T1S, R5W W.M. POD 2: 650 FEET SOUTH, 650 FEET WEST FROM THE NE CORNER OF SECTION 20, T1S, R4W W.M. POD 3: 695 FEET NORTH, 685 FEET EAST FROM THE SW CORNER OF SECTION 8, T1S, R3W W.M.
Certificate 85913	POD 1: 515 FEET NORTH, 475 FEET EAST FROM THE SW CORNER OF SECTION 8, T1S, R3W W.M.
ORS 538.420	660 FEET NORTH, 670 FEET WEST FROM THE SE CORNER OF SECTION 26, T1S, R5E W.M.
Permit G-8755, T-10489	WEST WELL FIELD WELL 1 - 2250 FEET SOUTH AND 1650 FEET WEST FROM NE CORNER OF SECTION 16, T1N, R2E W.M. WEST WELL FIELD WELL 2 - 2100 FEET NORTH AND 650 FEET WEST FROM SE CORNER OF SECTION 16, T1N, R2E W.M.

Permit G-8755, T-10489 (continued)	WEST WELL FIELD WELL 3 - 2050 FEET NORTH AND 550 FEET EAST FROM THE SW CORNER OF SECTION 15, T1N, R2E W.M.
	WEST WELL FIELD WELL 4 - 3150 FEET SOUTH AND 2050 FEET EAST FROM THE NW CORNER OF SECTION 15, T1N, R2E W.M.
	WEST WELL FIELD WELL 5 - 3400 FEET SOUTH AND 1650 FEET WEST FROM THE NE CORNER OF SECTION 15, T1N, R2E W.M.
	WEST WELL FIELD WELL 6 - 650 FEET NORTH AND 150 FEET EAST FROM THE SW CORNER OF SECTION 10, T1N, R2E W.M.
	WEST WELL FIELD WELL 7 - 2550 FEET SOUTH AND 850 FEET WEST FROM THE NE CORNER OF SECTION 15, T1N, R2E W.M.
	WEST WELL FIELD WELL 8 - 2250 FEET SOUTH AND 1650 FEET WEST FROM NE CORNER OF SECTION 16, T1N, R2E W.M.
	WEST WELL FIELD WELL 9 - 2050 FEET NORTH AND 550 FEET EAST FROM THE SW CORNER OF SECTION 15, T1N, R2E W.M.
	WEST WELL FIELD WELL 10 - 1150 FEET NORTH AND 2700 FEET WEST FROM THE SE CORNER OF SECTION 15, T1N, R2E W.M.
	WEST WELL FIELD WELL 11 - 650 FEET NORTH AND 150 FEET EAST FROM THE SW CORNER OF SECTION 10, T1N, R2E W.M.
	WEST WELL FIELD WELL 12 - 450 FEET SOUTH AND 1500 FEET EAST FROM THE NW CORNER OF SECTION 15, T1N, R2E W.M.
	WEST WELL FIELD WELL 13 - 2550 FEET SOUTH AND 850 FEET WEST FROM THE NE CORNER OF SECTION 15, T1N, R2E W.M.
	WEST WELL FIELD WELL 14 - 1650 FEET SOUTH AND 700 FEET EAST FROM THE NW CORNER OF SECTION 15, T1N, R2E W.M.
	EAST WELL FIELD WELL 1 - 400 FEET NORTH AND 6000 FEET WEST FROM THE SE CORNER OF SECTION 13, T1N, R2 E, W.M.
	EAST WELL FIELD WELL 2 - 150 FEET NORTH AND 4000 FEET WEST FROM THE SE CORNER OF SECTION 13, T1N, R2 E, W.M.
	EAST WELL FIELD WELL 3 - 1750 FEET SOUTH AND 3550 FEET WEST FROM THE NE CORNER OF SECTION 24, T1N, R2 E, W.M.
EAST WELL FIELD WELL 4 - 3300 FEET SOUTH AND 4500 FEET WEST FROM THE NE CORNER OF SECTION 24, T1N, R2 E, W.M.	
EAST WELL FIELD WELL 5 - 500 FEET SOUTH AND 1350 FEET WEST FROM THE NE CORNER OF SECTION 24, T1N, R2 E, W.M.	

	<p>EAST WELL FIELD WELL 6 - 2200 FEET SOUTH AND 1250 FEET WEST FROM THE NE CORNER OF SECTION 24, T1N, R2 E, W.M.</p> <p>EAST WELL FIELD WELL 7 - 700 FEET SOUTH AND 150 FEET EAST FROM THE NW CORNER OF SECTION 19, T1N, R3E, W.M.</p> <p>EAST WELL FIELD WELL 8 - 2500 FEET SOUTH AND 200 FEET EAST FROM THE NW CORNER OF SECTION 19, T1N, R3E, W.M.</p> <p>EAST WELL FIELD WELL 9 - 850 FEET SOUTH AND 1650 FEET EAST FROM THE NW CORNER OF SECTION 19, T1N, R3E, W.M.</p> <p>EAST WELL FIELD WELL 10 - 2450 FEET SOUTH AND 1650 FEET EAST FROM THE NW CORNER OF SECTION 19, T1N, R3E, W.M.</p> <p>EAST WELL FIELD WELL 11 - 1300 FEET SOUTH AND 1450 FEET WEST FROM THE NE CORNER OF SECTION 19, T1N, R3E, W.M.</p> <p>EAST WELL FIELD WELL 12 - 4050 FEET SOUTH AND 850 FEET EAST FROM THE NW CORNER OF SECTION 20, T1N, R3E, W.M.</p> <p>EAST WELL FIELD WELL 13 - 1300 FEET SOUTH AND 1550 FEET EAST FROM THE NW CORNER OF SECTION 20, T1N, R3E, W.M.</p> <p>EAST WELL FIELD WELL 14 - 1700 FEET SOUTH AND 1100 FEET WEST FROM THE NE CORNER OF SECTION 20, T1N, R3E, W.M.</p> <p>EAST WELL FIELD WELL 15 - 1000 FEET SOUTH AND 2300 FEET EAST FROM THE NW CORNER OF SECTION 21, T1N, R3E, W.M.</p> <p>EAST WELL FIELD WELL 16 - 1400 FEET SOUTH AND 3300 FEET EAST FROM THE NW CORNER OF SECTION 21, T1N, R3E, W.M.</p> <p>WELL L-67558 - 730 FEET NORTH AND 920 FEET EAST FROM THE W¼ CORNER OF SECTION 23, T1N, R2E, W.M.</p>
Certificate 89115, Permit G-10124	<p>Well 17/MULT 1283 - 140 FEET SOUTH, 1390 FEET EAST FROM NW CORNER, JOHN CROSBY DLC 40</p> <p>Well 18/MULT 1284 - 400 FEET SOUTH, 2450 FEET EAST FROM NW CORNER, JOHN CROSBY DLC 40</p> <p>Well 19/MULT 1288: 320 FEET SOUTH, 990 FEET WEST FROM NW CORNER, JOHN CROSBY DLC 40</p>
Certificate 89117, Permit G-10479	<p>Well 34/MULT 1131 - 80 FEET NORTH, 1070 FEET EAST FROM NE CORNER, E L QUIMBY DLC 41</p>
Permit G-10455	<p>Well 15/PW-13/MULT 1286 - NORTH 60 DEGREES 30 MINUTES 48 SECONDS FROM MEANDER CORNER, SECTIONS 20 & 21</p> <p>Well 16/PW-12/MULT 1287 - NORTH 82 DEGREES 27 MINUTES 12 SECONDS FROM MEANDER CORNER, SECTIONS 20 & 21</p>

ASR WELL LOCATION:

ASR WELL (WASH 58925):	SW ¼ SW ¼, SECTION 14, T2N, R27E, W.M.; 670 FEET NORTH, 1450 FEET EAST FROM SW CORNER, SECTION 14, T1N, R2W W.M.
MAXIMUM DIVERSION RATE:	0.22 CUBIC FEET PER SECOND (100 GPM)
MAXIMUM INJECTION RATE:	0.14 CUBIC FEET PER SECOND (65 GPM) AT THE ASR WELL
MAXIMUM VOLUME OF STORAGE:	25 MILLION GALLONS (92.07 ACRE-FEET)
MAXIMUM WITHDRAWAL RATE:	0.95 CUBIC FEET PER SECOND (425 GPM) OF STORED WATER THROUGH THE ASR WELL
MAXIMUM STORAGE DURATION:	ONGOING

The ASR project shall be operated according to the following conditions, pursuant to OAR 690-350-0030(6). Failure to comply with any of the provisions of this permit may result in action including, but not limited to, revocation of the permit.

1) **Record of Use.** The permittee 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.

2) **Modification/Revocation.** The Department shall notify the permittee in writing and allow the permittee to respond when considering the following actions:

(A) The Department may modify the ASR permit for any of the following reasons:

(i) to reflect changes in Oregon Health Authority (OHA) and Oregon Department of Environmental Quality (DEQ) water quality or treatment standards;

(ii) to address needed technological changes as requested by OHA or DEQ to minimize constituents regulated under OAR 333-061-0030 (ORS 448.131 and ORS 448.273) or OAR 340-040 (ORS 468B.165);

(iii) upon written request from the permittee for minor adjustments to the authorization in the permit.

(iv) upon written request from the permittee for changes to the limits for the recovery of stored water. Any person operating an ASR project under a permit, upon approval by the Director, may recover up to 100 percent of the water stored in the aquifer storage facility if valid scientific data gathered during operations under the limited license or permit demonstrate that the injected source water is not lost through migration or other means and that groundwater otherwise present in the aquifer has not been lost irretrievably as a result of aquifer storage or recovery.

(B) The Director may revoke or modify the ASR permit for any of the following reasons:

(i) to prevent or mitigate substantial interference with other water rights, minimum perennial streamflows established prior to the granting of the ASR permit, or aquifer water quality; or

(ii) to address any other unintended, injurious effects of the ASR activity.

(C) The Department shall offer an additional public comment opportunity consistent with the notice and comment provisions of OAR 690-350-0030 prior to modifying the permit.

3) Compliance with Other Laws. The injection of acceptable water into the aquifer, as well as its storage and recovery under this permit, shall comply with all applicable local, state or federal laws. This shall include, but not limited to, compliance with the DEQ Underground Injection Control registration program as authorized under the Safe Drinking Water Act (40 CFR 144.26). Also, discharges to waterways must be in compliance with all DEQ requirements.

4) Water Quality Conditions and Limits:

(A) The permittee 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 333-061-0030 (ORS 448.131 and ORS 448.273) or OAR 340-040 (ORS 468B.165) that are detected at greater than 50 percent of the established levels (MCLs or MMLs in the cited rules), the permittee 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 333-061-0030 (ORS 448.131 and ORS 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 333-061-0030 (ORS 448.131 and ORS 448.273) or OAR 340-040 (ORS 468B.165) is detected above the 50% level prescribed in condition (4)(B) or the 100% level prescribed in condition (4)(C), the permittee shall immediately stop injection activities upon receipt of lab data and notify the Department within five days. Injection may recommence after constituent levels return to acceptable levels pursuant to conditions (4)(B) or (4)(C).

5) Water Quality Sampling.

(A) The permittee shall sample and analyze injection source water for the constituents and at the frequency described in the current, approved monitoring program. Modifications to this plan may be proposed to the Department in writing for review and written approval or denial.

6) Water Level Monitoring.

(A) The permittee shall monitor groundwater levels in wells in the manner described in the approved ASR water-level monitoring plan. Modifications to this plan may be proposed to the Department in writing for review and written approval or denial.

(B) Transducer and airline data shall be verified and corrected with 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.

7) 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.

(B) The following two-step accounting method applies to each annual cycle:

(i.) The permittee may recover up to 95 percent of the quantity injected during the same water year.

(ii.) At the end of each water year, 95 percent of the storage account balance is carried over to the next year. The storage account balance consists of the sum of water not recovered within the water year and water carried over from previous ASR cycles.

(C) Any water withdrawn from an ASR well identified in this permit shall first be debited against the quantity available in the aquifer by virtue of ASR storage. When the ASR storage is depleted at an ASR well, any water withdrawn from an ASR well shall be considered a draft of natural groundwater, thereby requiring separate or additional authorization. At no time does this permit authorize withdrawal of more water than was credited by injection.

(D) The availability of stored water is a running account that is subject to determination at any time.

8) Annual Reporting. The permittee shall provide the Department a written report of ASR operations for each water year by February 15th of the following water year. Modifications to this reporting plan may be proposed to the Department in writing for review, approval or denial.

(A) The report shall:

- Summarize water quality data and include laboratory analytical reports
- Account for the volumes injected and recovered
- Identify injection and recovery schedules

(B) The permittee also shall provide the following to the Department:

(i) 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.

(ii) 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).

(iii) Submission of annual reports with locations and elevations for all project wells (actual locations of built wells and proposed locations for proposed wells) 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).

(iv) Notification in the annual report of any changes in well construction.

(v) 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.

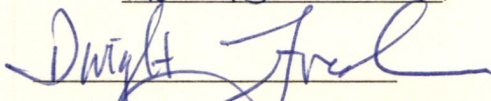
9) **Protection for Existing Water Users.** In the event of conflicts with existing appropriators, the permittee shall conduct all testing so as to mitigate the injurious effects. In addition, the permittee shall cooperate with the efforts of the Department to protect existing water rights and the water quality of existing users that rely upon the receiving aquifer and the injection source water.

10) **Use of Recovered Water.** The permittee shall use any recovered water for the purposes described in the source water rights that authorize diversion.

11) **Additional Conditions on an Informal Basis.** The Department may suggest additional conditions to the permittee. Provided that those conditions are agreed to and undertaken by the permittee, the Department may forego formal changes to this permit. This informal process does not extend to obligation reductions.

12) **Other Measures.** The permittee shall take any additional measures appropriate to address ASR-related issues of landslide activation, seepage, streamflow increases, aquifer boundary determination, aquifer storage efficiency, and water quality protection.

Issued Nov. 13th, 2019


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

