

## DEQ Guidance for Limited-Scale Aquifer Storage and Recovery Pilot Project (LSASR) Applications

Pursuant to 27A O.S. § 2-6-110

### Applicability

Applicants requesting a permit for limited-scale ASR pilot projects shall submit a permit application to DEQ meeting the requirements of this guidance document.

### Definitions

“**Limited-Scale ASR Pilot Projects**” or “**LSASR**” means targeted ASR pilot projects authorized by 27A O.S. § 2-6-110. The objective of a LSASR is to determine the feasibility of a prospective ASR project or to obtain aquifer and flow characteristic data for research purposes. One example of LSASR might be delivery of water to the subsurface in order to gain a better understanding of subsurface pressure distribution and the fate of the injectate.

“**Area of Hydrologic Effect**” means the area determined by the projected extent of the underground stored water as calculated by using site-specific hydrogeologic information, and as influenced by the specific design of the ASR project.

### General Considerations

- (a) This guidance is general in nature.
- (b) It is not designed or intended to address all of the information the Department may need to evaluate an application for a particular LSASR project.
- (c) It does not restrict the Department from including any permit conditions the Department deems necessary or appropriate for protection of the aquifer quality.

### Permit Application Required

- (a) Applicants for LSASR shall submit an application to DEQ for review and approval. The application shall also include designs and protocols for raw water treatment for these projects, if applicable.
- (b) No applicant is authorized to begin a LSASR until receiving DEQ approval.

### Authority

- (a) DEQ is authorized by 27A O.S. (2017) § 2-6-110 to issue permits for limited-scale pilot projects for the purpose of aquifer storage and recovery. This includes the authority to determine pilot project criteria and establish a process for the consideration of applications.
- (b) DEQ incorporates by reference the federal requirements for its underground injection control program at OAC 252:652-1-3. All applicable rules to ASR projects that are incorporated at OAC 252:652-1-3 shall apply.

## Conformity with Applicable Rules

The guidelines contained in this document shall be applied and interpreted in conformity with all applicable standards and regulations of the Oklahoma Water Resources Board, the Oklahoma Corporation Commission, or other appropriate agencies. Specifically, water, as delivered to the aquifer, shall meet the numeric values and any applicable narrative criteria listed in OAC 785:45 for the class of the groundwater aquifer that will receive the water. No allowance for attenuation will be considered unless outlined in OAC 785:45 or on a case-by-case basis, at DEQ's discretion, if human health will not be impacted.

## Raw Water Characterization

If the source of raw water is different from the aquifer that is being used in LSASR, then the applicant must submit a characterization of the raw water that evaluates:

- (a) the source of the raw water;
- (b) the chemical and biological composition as well as physical characteristics of the raw water;
- (c) flow rate;
- (d) total annual volume planned to be used for ASR;
- (e) characterization of the raw water during high flow and low flow conditions and other atypical flow conditions;
- (f) the duration and frequency of sampling and sampling methodology;
- (g) reliability of deliveries; and
- (h) conveyance methods.

## Statement of Interest

- (a) All persons seeking to establish a LSASR shall submit a written statement of interest to DEQ that summarizes the project goals and objectives and describes the methods to be used to achieve the project goals.
- (b) The statement of interest shall include:
  - 1 The proposed location of LSASR, including a mapped diagram, and a complete and accurate legal description;
  - 2 A description of the purpose and scope of LSASR;
  - 3 The proposed source of water for LSASR;
  - 4 The intended use of recovered water from the LSASR, if applicable;
  - 5 A description of the proposed method of recharge (i.e. aquifer storage and recovery wells, infiltration basis, or other method);
  - 6 A topographic map which shows the location of surface water bodies (natural and man-made), and areas within the estimated areas of hydrological effect where there is potential for impairment to water rights and harm to other land owners; and
  - 7 Information on existing wells, springs, seeps, and wetlands and a description of the methods that will be used to analyze possible impairment and harm from the artificial recharge, storage, and recovery project;
  - 8 A demonstration of sufficient legal rights and access to the land surface above the area of hydrologic effect.

## **Initial Meeting with DEQ**

All persons seeking to undertake a LSASR shall request a meeting with DEQ to discuss the scope of the project prior to initiating any ASR activities required by this guidance document.

## **Fees**

No fee is required for a LSASR permit.

## **Financial Assurance for Corrective Action**

If corrective action is required, LSASR permittees shall be required to undertake a corrective action program and establish and maintain appropriate financial assurance.