

DRAFT PERMIT

UTAH DIVISION OF WATER QUALITY

CLASS V AREA PERMIT

FOR AQUIFER STORAGE AND RECOVERY

UNDERGROUND INJECTION CONTROL (UIC) PROGRAM

UIC Permit Number: UTU-49-AP-4C52E67

Utah County, Utah

Permit Issued to:

Provo City Public Works Division

1377 S 350 E

Provo, Utah 84606

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DRAFT

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[Attachment A](#) - General Location Map of the Provo Aquifer Storage & Recovery Project, Utah.

[Attachment B](#) - Map of the UIC Area of Review including the Class V ASR Wells and the Project Area

[Attachment C](#) - Corrective Action Plan for Artificial Penetrations into Injection Zone within Area of Review

- [Attachment D](#) - Driller's Logs for Provo City's Riverwoods and 5600 North Well Including Injection Well Construction Plans and Details
- [Attachment E](#) - Injection Well Operating Plan and Procedures
- [Attachment F](#) - Monitoring Parameters, Schedule, Recording, and Reporting Plan

DRAFT

PART I. AUTHORIZATION TO CONSTRUCT AND INJECT

Pursuant to the Utah Underground Injection Control (UIC) Program Regulations codified in the Utah Administrative Code (UAC) R317-7,

City of Provo Public Works Division
1377 S 350 E
Provo, UT 84606

is hereby authorized to construct and operate Class V Aquifer Storage and Recovery (ASR) wells in Utah County, Utah. A general location map is included as Attachment A.

The City of Provo will be altering two of its drinking water wells (the Riverwoods and 5600 North wells) to Class V Aquifer Storage and Recover (ASR) Wells in order to inject excess treated water from the Provo culinary water system into the Pre-Lake Bonneville Aquifer.

The project will take place in two wells: the Riverwoods well located NW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 18, Twp 6S, Range 3E, while the 5600 North Well is located SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 7, Twp 6S, Range 3E. A map showing the area of review including the proposed Class V ASR wells and the project area is included as Attachment B.

All references to UAC R315-2-3, UAC R317-7, and to Title 40 of the Code of Federal Regulations (40 CFR) are to all regulations that are in effect on the date this permit becomes effective. The following are incorporated as enforceable attachments to this permit:

- Attachment A - General Location Map of the Provo Aquifer Storage & Recovery Project, Utah County.
- Attachment B - Map of the UIC Area of Review including the Class V ASR Wells and the Project Area
- Attachment C - Corrective Action Plan for Artificial Penetrations into Injection Zone within Area of Review
- Attachment D - Driller's Logs for Provo City's Riverwoods and 5600 North Well Including Injection Well Construction Plan and Details
- Attachment E - Injection Well Operating Plan and Procedures
- Attachment F - Monitoring Parameters, Schedule, Recording, and Reporting Plan

This major modification of the original permit is based upon representations made by the permittee and other information contained in the administrative record. **It is the responsibility of the permittee to read and understand all provisions of this permit.**

Any person who violates the Utah Water Quality Act (UWQA), or any permit, rule, or order adopted under it, is subject to the provisions of section UCA 19-5-115 of the UWQA governing violations.

This permit shall become effective **Month Day, Year**

This permit and the authorization to inject shall be issued for 5 years, unless terminated, and will expire on **Month Day, Year**.

John K. Mackey, P.E.
Director
Utah Division of Water Quality

PART II. GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. The permittee, authorized by this permit, shall not construct, operate, maintain, convert, plug, abandon or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water (USDW), if the presence of that contaminant may cause a violation of any primary drinking water standard under the Utah Public Drinking Water Administrative Rules, UAC R309-200 and 40 CFR Part 141, or may otherwise adversely affect the health of persons. Any underground injection activity not specifically authorized in this permit is prohibited unless otherwise authorized-by-rule or by another UIC permit. Compliance with this permit does not constitute a defense to any action brought under the Utah Water Quality Act (UWQA) Title 19, Chapter 5 Utah Code Annotated 1953, or any other common or statutory law or regulation. Issuance of this permit does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

B. SEVERABILITY

The provisions of this permit are severable. If any provision of this permit or the application of any provision of this permit to any circumstance is held to be invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

C. CONFIDENTIALITY

In accordance with Utah Code 19-1-306 (Records of the Department of Environmental Quality), Utah Code 63G-2-309 (Confidentiality Claims), and Utah Code 19-5-113 (DWQ Records and Reports Required by Owners/Operators) any information deemed by the permittee to be entitled to trade secret protection submitted to the DWQ pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "Confidential Business Information" on **each** page containing such information. If no claim is made at the time of submission, the DWQ may make the information available to the public without further notice. Claims of confidentiality may be denied by the DWQ according to the procedures detailed in Utah Code 63G-2 and the federal Freedom of Information Act (FOIA). Claims of confidentiality for the following information will be denied as per UAC R317-7-9.7:

1. The name and address of the permittee.
2. Information that deals with the existence, absence or level of contaminants in drinking water.

D. CONDITIONS APPLICABLE TO ALL UIC PERMITS (40CFR144.51)¹

The following conditions are required for all UIC permits. Specific requirements for implementing these conditions are included in Part III of this permit, as necessary.

1. Duty to Comply (40CFR144.51(a))

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and the UWQA and is grounds for enforcement action; permit termination, revocation and re-issuance, modification; or for denial of a permit renewal application; except that the permittee need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit issued in accordance with UAC R317-7-8 (40 CFR 144.34). Such noncompliance may also be grounds for enforcement action under the Utah Solid and Hazardous Waste Act (USHWA), Title 19, Chapter 6, Utah Code Annotated 1979.

2. Duty to Reapply (40CFR144.51(b))

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The permittee shall submit a complete permit renewal application at least 180 days before this permit expires.

3. Need to Halt or Reduce Activity Not a Defense (40CFR144.51(c))

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate (40CFR144.51(d))

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

5. Proper Operation and Maintenance (40CFR144.51(e))

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.

¹ Parenthetical references to the Code of Federal Regulations (CFR) and / or the Utah Administrative Code (UAC) for the UIC Program indicate the requirement for inclusion in the permit.

6. Permit Actions

(40CFR144.51(f), 40 CFR 124.5, 40 CFR 144.38, 40 CFR 144.39, 40 CFR 144.40, 40 CFR 144.41)

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Director's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in sections a) and b) below. All requests shall be in writing and shall contain facts or reasons supporting the request. The filing of a request for a permit modification, revocation and re-issuance, or termination on the part of the permittee, does not stay any permit condition. This permit may be transferred according to the procedures given in section d).

a) Modify or Revoke and Re-Issue Permits

When the Director of the Utah Division of Water Quality (hereafter referred to as 'the Director') receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit, receives a request for modification or revocation and reissuance, or conducts a review of the permit file), the Director may determine whether or not one or more of the causes listed in paragraphs (1) and (2) of this section for modification or revocation and reissuance or both exist. If cause exists, the Director may modify or revoke and reissue the permit accordingly, subject to the limitations of paragraph (3) of this section, and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. If cause does not exist under this section a) or under section c) for minor modifications, the Director shall not modify or revoke and reissue the permit. If a permit modification satisfies the criteria for minor modifications in section c) the permit may be modified without a draft permit or public review. Otherwise, a draft permit must be prepared and other procedures in 40 CFR 124, incorporated by reference into the Utah UIC Program rules (hereafter referred to as '40 CFR 124'), must be followed.

- (1) Causes for modification. For Class V wells the following may be causes for revocation and reissuance as well as modification if the permittee requests or agrees.
 - i. Alterations. There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.
 - ii. Information. The Director has received information. For UIC area permits, this cause shall include any information indicating that cumulative effects on the environment are unacceptable.

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- iii. New regulations. The standards or regulations on which the permit was based have been changed by promulgation of new or amended standards or regulations or by judicial decision after the permit was issued. Permits for Class V wells may be modified during their permit terms for this cause only as follows:
- (i) For promulgation of amended standards or regulations, when:
 - (A) The permit condition requested to be modified was based on a promulgated part 146 regulation; and
 - (B) EPA has revised, withdrawn, or modified that portion of the regulation on which the permit condition was based, and
 - (C) A permittee requests modification in accordance with § 124.5 within ninety (90) days after Federal Register notice of the action on which the request is based.
 - (ii) For judicial decisions, a court of competent jurisdiction has remanded and stayed EPA promulgated regulations if the remand and stay concern that portion of the regulations on which the permit condition was based and a request is filed by the permittee in accordance with § 124.5 within ninety (90) days of judicial remand.
- iv. Compliance schedules. The Director determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy. See also paragraph (3) under section c) – Minor Modification of Permit).
- (2) Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and re-issue a permit:
- i. Cause exists for termination under section b), and the Director determines that modification or revocation and re-issuance is appropriate.
 - ii. The Director has received notification (as required in the permit, see paragraph (4) under section c) – Minor Modification of Permit) of a proposed transfer of the permit. A permit also may be modified to reflect a transfer after the effective date of an automatic transfer (see paragraph (2) of section d) – Transfer of Permit) but will not be revoked and re-issued after the effective date of the transfer except upon the request of the new permittee.
 - iii. A determination that the water being injected is a hazardous waste as defined in 40 CFR 261.3 either because the definition has been revised, or because a previous determination has been changed.

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- (3) Facility siting. Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.

b) Termination of Permit

- (1) The Director may terminate a permit during its term, or deny a permit renewal application for the following causes:
- i. Noncompliance by the permittee with any condition of the permit;
 - ii. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time; or
 - iii. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination;
- (2) The Director shall follow the applicable procedures in 40 CFR 124 in terminating any permit under this section.

c) Minor Modification of Permit

Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following the procedures of 40 CFR 124. Any permit modification not processed as a minor modification under this section must be made for cause and with 40 CFR 124 draft permit and public notice as required in section a). Minor modifications may only:

- (1) Correct typographical errors;
- (2) Require more frequent monitoring or reporting by the permittee;
- (3) Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement; or
- (4) Allow for a change in ownership or operational control of a facility where the Director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the Director.
- (5) Change quantities or types of fluids injected which are within the capacity of the facility as permitted and, in the judgment of the Director, would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification.

(6) Change construction requirements approved by the Director pursuant to 40 CFR 144.52(a)(1) (establishing UIC permit conditions), provided that any such alteration shall comply with the requirements of 40 CFR 144 and 40 CFR 146.

(7) Amend a plugging and abandonment plan which has been updated.

d) Transfer of Permit

(1) Transfers by Modification. Except as provided in paragraph (2) of this section, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under paragraph (2)(ii) under section a)), or a minor modification made (under paragraph (4) of section c)) to identify the new permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act.

(2) Automatic Transfers. As an alternative to transfers under paragraph (1) of this section, any UIC permit for a well not injecting hazardous waste or injecting carbon dioxide for geologic sequestration may be automatically transferred to a new permittee if:

- i. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date referred to in paragraph (2)(ii) of this section;
- ii. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them, and the notice demonstrates that the following financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new permittee:

The permittee, including the transferor of a permit, is required to demonstrate and maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director until:

- (A) The well has been plugged and abandoned in accordance with an approved plugging and abandonment plan and submitted a plugging and abandonment report; or
- (B) The well has been converted; or
- (C) The transferor of a permit has received notice from the Director that the owner or operator receiving transfer of the permit, the new permittee, has demonstrated financial responsibility for the well.

The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance, such as a financial statement or other materials acceptable to the Director.

iii. The Director does not notify the existing permittee and the proposed new permittee of intent to modify or revoke and re-issue the permit. A modification under this paragraph may also be a minor modification under section c) – Minor Modification of Permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph (2)(ii) of this section.

7. Property Rights (40 CFR 144.51(g))

This permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information (40 CFR 144.51(h))

The permittee shall furnish to the Director within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and re-issuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

9. Inspection and Entry (40 CFR 144.51(i))

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by the law, to:

- a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b) Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA and / or UWQA any substances or parameters at any location.

10. Monitoring and Records (40 CFR 144.51(j))

- a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b) The permittee shall retain records of all monitoring information, including the following:
 - (1) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this

permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time; and

- (2) The nature and composition of all injected fluids until three years after the completion of any plugging and abandonment as appropriate. The Director may require the owner or operator to deliver the records to the Director at the conclusion of the retention period.
- c) Records of monitoring information shall include:
- (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The names of individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.

11. Signatory Requirements (40 CFR 144.51(k))

All reports or other information, submitted as required by this permit or requested by the Director, shall be signed and certified as follows:

- a) Applications. All permit applications shall be signed as follows:
- (1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note:

DEQ does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR 144.32(a)(1)(i). DEQ will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under 40 CFR 144.32(a)(1)(ii) rather than to specific individuals.

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- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- b) Reports. All reports required by permits and other information requested by the Director shall be signed by a person described in section a), or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- (1) The authorization is made in writing by a person described in paragraph a) of this section;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - (3) The written authorization is submitted to the Director.
- c) Changes to authorization. If an authorization under section b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of section b) must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
- d) Certification. Any person signing a document under section a) or b) shall make the following certification:
- “I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OF THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.”

12. Reporting Requirements (40 CFR 144.51(l))

Specific requirements for reporting the following items are included in Part III of the permit.

- a) **Planned Changes**

The permittee shall give written notice to the Director, as soon as possible, of any planned physical alterations or additions to the UIC-permitted facility. Notification of planned changes on the part of the permittee, does not stay any permit condition.
- b) **Anticipated Noncompliance**

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements. Notification of anticipated noncompliance on the part of the permittee, does not stay any permit condition.
- c) **Permit Transfers**

This permit is not transferable to any person except in accordance with section d) of Permit Actions – Transfer of Permit. The Director may require modification or revocation and re-issuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act and / or the UWQA.
- d) **Monitoring Reports**

Monitoring results shall be reported at the intervals specified in Part III of this permit.
- e) **Compliance Schedule**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule specified in Part III B of this permit shall be submitted no later than 30 days following each schedule date.
- f) **Endangering Noncompliance**

The permittee shall report to the Director any noncompliance that may endanger health or the environment, as follows:

 - (1) **Twenty-four Hour Reporting**

Endangering noncompliance information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. Such reports shall include, but not be limited to, the following information:

 - i. Any monitoring or other information that indicates any contaminant may cause an endangerment to a USDW, or
 - ii. Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs.
 - (2) **Five-day Reporting**

A written submission shall be provided within five days of the time the permittee becomes aware of the circumstances of the endangering

noncompliance. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

g) Other Noncompliance

The permittee shall report all instances of noncompliance not reported under 12d) (Monitoring Reports), 12e) (Compliance Schedule Reports), or 12f) (Endangering Noncompliance Monitoring) of this section in the next Monitoring Report. The reports shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

h) Other Information

When the permittee becomes aware of a failure to submit any relevant facts in the permit application or submitted incorrect information in a permit application or in any report to the Director, the permittee shall submit such facts or information within 10 days after becoming aware of the failure to submit relevant facts.

13. Requirements Prior to Commencing Injection (40 CFR 144.51(m))

a) For new injection well authorized by individual permit, a new injection well may not commence injection until construction is complete, and

(1) The permittee has submitted notice of completion of construction to the Director; and

(2) Either of the following:

i. The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or

ii. The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in section a), in which case prior inspection or review is waived and the permittee may commence injection. The Director shall include in his notice a reasonable time period in which he shall inspect the well.

b) For new injection wells authorized by an area permit under UAC R317-7-7 (40 CFR 144.33), requirements prior to commencing injection shall be specified in Part III of the permit.

14. Notification Prior to Conversion or Abandonment. (40 CFR 144.51(n))

The permittee shall notify the Director at such times as the permit requires before conversion or abandonment of the well or in the case of area permits before closure of the projects.

15. Plugging and Abandonment Requirements. (40 CFR 144.51(o))

A Class V permit may include, conditions for developing a plugging and abandonment plan that meets the applicable requirements of UAC R317-7 to ensure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. If the plan meets the plugging and abandonment requirements of UAC R317-7, the Director shall incorporate it into the permit as a permit condition. Where the review of the plan submitted in the permit application indicates the plan is inadequate, the Director may require the applicant to revise the plan, prescribe conditions meeting the requirements of this paragraph, or deny the permit. For purposes of this paragraph, temporary or intermittent cessation of injection operations is not abandonment. Requirements for implementing the approved plugging and abandonment plan are specified in Part III of this permit.

16. Plugging and Abandonment Report. (40 CFR 144.51(p))

If a plugging and abandonment plan is required, requirements for submitting a plugging and abandonment report are specified in Part III of this permit.

PART III. SPECIFIC PERMIT CONDITIONS

A. DURATION OF PERMIT
(R317-7-9.5 and 40CFR144.36)

This UIC Class V ASR area well permit (Category UIC Well 5B4) shall be issued for 5 years.

B. COMPLIANCE SCHEDULE
(40 CFR 144.53)

There are no compliance schedule items.

C. CONSTRUCTION REQUIREMENTS

This permit does not authorize the construction of new ASR wells. If Provo City wishes to construct a new ASR well, an application for a major permit modification will be required.

D. REQUIREMENTS PRIOR TO INJECTION
(40 CFR 146.34(b))

In accordance with Part II (D)(13) of this permit, the following requirements must be met prior to commencing injection:

1. Demonstration of Adequate Monitoring Equipment

Prior to commencing injection, Provo City must demonstrate to the Director that adequate instrumentation and methods have been put in place to acquire the monitoring data of Part III (F) of this permit.

2. Director's Approval to Commence Injection

Prior to commencing injection, Provo City must receive written notice from the Director granting approval to commence injection.

E. OPERATING REQUIREMENTS
(R317-7-10.2(A))

1. Class V ASR Injection Well Operation Standards

Class V ASR wells shall be operated to meet the performance standard (R317-7-5.3 and 40 CFR 144.12(a)) for the UIC Program which states that:

No owner or operator of an injection well shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that

allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation or may otherwise adversely affect the health of persons.

2. Operating Plan

The approved and enforceable Operating Plan that meets all the operating requirements of this section is included as Attachment E of this permit.

3. Maximum Allowable Injection rate:

The injection water will be discharged into the wells at a rate no greater than described in the permit application which sets the maximum injection rate of 1,500 gallons per minute (gpm) in the 5600 North Well, and 2,000 gpm into the Riverwoods Well. Injection rate may be increased with notification and approval.

4. Maximum Allowable Surface Injection Pressure (MASIP)

Except during well stimulation, the maximum allowable surface injection pressure (MASIP) at the wellhead shall be calculated to assure that pressure in the injection zone during injection does not initiate new fractures or propagate existing fractures in the injection zone. In no case shall the injection pressure initiate fractures in the confining zone or cause the migration of injection or formation fluids into an USDW.

5. Borehole – Casing Annulus Injection Prohibited

Injection between the outermost casing protecting USDW's and the well bore is prohibited.

6. Injection Zone

Injection is explicitly limited to the Pre-Lake Bonneville Aquifer.

7. Injection Fluid Limitations

- a) Fluid injected is limited to water originating from the Provo City culinary supply.
- b) Injected water shall meet all Federal and State Maximum Contaminate Levels for Drinking Water (MCLSs) and State Groundwater Quality Standards. The Maximum Total Dissolved solids of the injected water shall not exceed 500 milligrams per liter (mg/L).
- c) The Permittee shall not inject any hazardous waste as defined by UAC R315-2-3 or 40 CFR 261 at any time during the operation of the facility.

-
- d) The permittee shall notify the Director in writing within 10 days of any changes in the injection fluid or process additives that may alter the quality or chemical composition of the injection fluid.
 - e) Upon notification of a spill or contamination incident which may adversely affect the quality of the injectate or any finding by the permittee or the Director that the injection fluid has exceeded Federal or State MCLs, state Groundwater Quality Standards, TDS of 500 mg/L, or may otherwise affect the health of person, the permittee shall stop injection immediately. Injection shall not recommence until approval has been received by the director.

8. Security

- a) The Pump Houses shall be secured at all times.

F. MONITORING AND RECORDING REQUIREMENTS
(R317-7-10.3(B), 40 CFR 144.54, and 40 CFR 146.34)

1. Class V ASR Injection Well Monitoring and Recording Standards

Monitoring and recording requirements for the drilling and solution mining of each well are set forth in R317-7-10.3(B) and 40 CFR 144.54 details of which are included in the following permit conditions.

2. Monitoring, Recording, and Reporting Plan

The approved and enforceable Monitoring, Recording and Reporting Plan that meets all the monitoring and recording requirements of this section is included as Attachment F of this permit.

3. Monitoring Equipment and Methods

All monitoring equipment shall be properly selected, installed, used, and maintained according to the manufacturer's specifications so as to yield data which are representative of the monitored activity. All monitoring methods shall be properly selected and implemented at appropriate intervals and frequency so as to yield data which are representative of the monitored activity. Documentation verifying, if applicable, the proper selection, installation, use, and maintenance of monitoring equipment and the proper implementation of monitoring methods shall be made available to the Director upon request.

4. Injectate Characterization

Provo City shall monitor the nature of injected fluids with sufficient frequency to yield representative data on its characteristics. The permittee shall provide qualitative analysis and ranges in concentrations of all constituents of injected fluids as indicated in Part J Section 1.4.2 of Attachment F. Whenever the injection fluid is modified to the extent that this analysis is incorrect or incomplete, a new

analysis shall be provided to the Director. The applicant may request confidentiality in accordance with Part II C of this permit. If the information is proprietary an applicant may, in lieu of the ranges in concentrations, choose to submit maximum concentrations which shall not be exceeded. In such a case the applicant shall retain records of the undisclosed concentrations and provide them upon request to the Director as part of any enforcement investigation.

5. Injection Pressure, Injection Rate, and Injection Volume

Provo City shall monitor the injection pressure and either the injection rate or injection volume semi-monthly, or metering and daily recording of injected and produced fluid volumes as appropriate.

6. Injection Zone Fluid Level

Provo City shall monitor the fluid level in the injection zone semi-monthly, where appropriate.

G. REPORTING REQUIREMENTS
(R317-7-10.4(B) and 40 CFR 144.54)

1. Quarterly Monitoring Reports

a) Schedule for Submitting Quarterly Monitoring Report

<u>Quarter</u>		<u>Report Due On:</u>
1 st Quarter	Jan 1 – Mar 31	Apr 15
2 nd Quarter	Apr 1 – Jun 30	July 15
3 rd Quarter	Jul 1 – Sep 30	Oct 15
4 th Quarter	Oct 1 – Dec 31	Jan 15

b) Content of Quarterly Monitoring Reports

Monitoring data for the following shall be included in the quarterly monitoring reports:

- (1) Injectate Characterization
- (2) Injection Pressure, Rate, Volume
- (3) Injection Zone Fluid Level
- (4) Monitoring Wells
- (5) Noncompliance Not Previously Reported – Such reports shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and

steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

(6) If no injection has occurred during the specified quarter, a letter documenting the lack of injection is sufficient.

(7) Other Required Monitoring

c) Reduction of Sampling Frequency

(1) If water quality remains consistent over time, Provo City may request the Division of Water Quality to approve a reduction in sampling frequency to semi-annual or annual.

2. Endangering Noncompliance Reporting

Provo City shall report to the Director any noncompliance that may endanger health or the environment, as follows:

a) Twenty-four Hour Reporting

Endangering noncompliance information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. Such reports shall include, but not be limited to, the following information:

(1) Any monitoring or other information that indicates any contaminant may cause an endangerment to a USDW, or

(2) Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs.

b) Five-day Reporting

A written submission shall be provided within five days of the time the permittee becomes aware of the circumstances of the endangering noncompliance. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

3. Planned Changes

The permittee shall give written notice to the Director, as soon as possible, of any planned physical alterations or additions to the UIC-permitted facility. Notification of planned changes on the part of the permittee, does not stay any permit condition.

4. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity that may result in noncompliance with permit

requirements. Notification of anticipated noncompliance on the part of the permittee, does not stay any permit condition.

5. Permit Transfers

This permit is not transferable to any person except in accordance with Part II (D)(6)(d) of this permit. The current permittee shall notify the Director at least 30 days in advance of the proposed transfer date. Notification shall comply with the requirements in Part II(D)(6)(d) of this permit.

6. Compliance Schedule Reporting

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule specified in Part III B of this permit shall be submitted no later than 30 days following each schedule date.

7. Mechanical Integrity Reporting

- a) Mechanical Integrity Demonstration - The permittee shall submit the results of any MI demonstration within 60 days after completion of the test. The permittee shall include in the report, a detailed description of the tests and the methods used to demonstrate MI. In the case of MI failure, the permittee shall also describe in detail what and when steps were taken to reestablish MI.
- b) Loss of Mechanical Integrity –
 - (1) In the event of a mechanical integrity failure which may potentially endanger an USDW, report to the Director verbally within 24 hours followed by submission of a written report within 5 days.
 - (2) Within 15 days after loss of MI, submit to the Director a schedule indicating what will be done to restore MI to the well, or if it will be plugged.

8. Plugging and Abandonment (“As-Plugged”) Report

Within 60 days after permanently or temporarily plugging and abandoning a well, the permittee shall submit a Plugging and Abandonment Report to the Director. The report shall be certified as accurate by the person who performed the plugging operation, and shall consist of either:

- a) A statement that the well was plugged in accordance with the P&A Plan(s) previously submitted to, and all conditions of approval provided by, the Director; or
- b) If the actual plugging differed from the approved plan(s), a statement and diagrams defining the actual plugging and why the Director should approve such deviation. Any deviation from the previously approved individual plugging and abandonment plans required by this permit which may endanger waters of the State of Utah, including USDWs, is cause for the Director to require the operator to re-plug the well.

9. Permit Review Report

Within 30 days after receipt of this permit, the permittee shall report to the Director that the person(s) responsible for implementing this permit has read and is personally familiar with all terms and conditions of this permit.

10. Electronic Reporting

In addition to submittal of the hard copy data, Provo City shall submit the required monitoring data in the electronic format specified by the Director.

H. MECHANICAL INTEGRITY
(R317-7-10.3(B) and 40CFR146.8)

Mechanical integrity testing is not required of Class V ASR wells for the protection of USDWs.

I. PLUGGING AND ABANDONMENT REQUIREMENTS
(40 CFR 146.10 and R317-7-10.5)

In the event the Provo City ASR wells are required to be plugged and abandoned, it shall be done so in such a manner as to be protective of any USDW and according to the closure requirements of the Utah Divisions of Water Rights and Drinking Water.

J. FINANCIAL RESPONSIBILITY
(R317-7-9.1(24) and 40 CFR 144.52)

Provo City is not required to maintain financial responsibility and resources to plug and abandon the permitted injection well facilities beyond that which is required by the Utah Divisions of Water Rights and Drinking Water.

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Attachment A

General Location Map of the Provo Aquifer Storage & Recovery
Project, Utah County.

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Attachment B
Map of the UIC Area of Review
Including the Class V ASR
Wells and the Project Area

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Attachment C

Corrective Action Plan for Artificial Penetrations into Injection
Zone within Area of Review

(At the Time of the effective date of this permit no corrective
action was required.)

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Attachment D
Driller's Log for Provo City's
Riverwoods and 5600 North Well
Including Injection Well
Construction Plan with Details

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Attachment E
Injection Well Operating Plan and Procedures

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Attachment F

Monitoring Parameters, Schedule, Recording, and Reporting Plan

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