

Aquifer Recharge & Recovery

Utah Division of Water Rights

6/27/2018

Boyd Clayton

Deputy State Engineer

Summary

- ❑ Legislation
- ❑ Permitting Process
- ❑ Data Required

Legislation

73-3b Groundwater Recharge and Recovery Act

- Recharge Permit
- Recovery Permit

Recharge Application

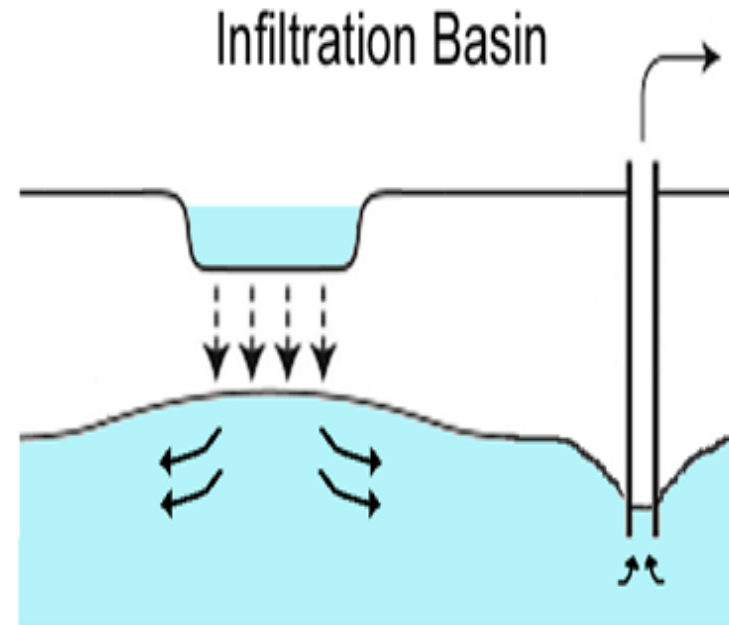
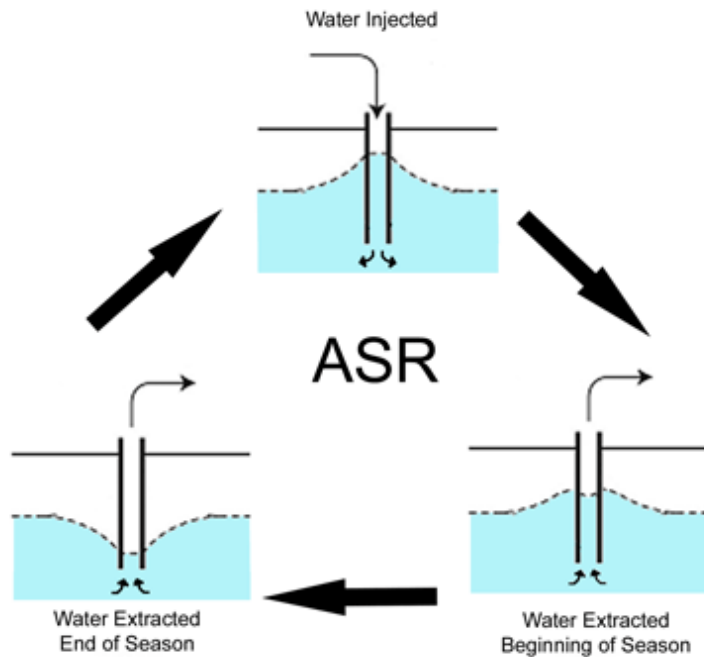
- Applicant information
- Detailed description of the
- Evidence of water quality p
- Plan of operation
- Valid water right
- Fee

FEE SCHEDULE				
Flow-CFS		Acre-Feet		FEE
More Than	Not to Exceed	More Than	Not to Exceed	
0	0.1	0	20	\$ 150
0.1	0.5	20	100	\$ 200
0.5	1.0	100	500	\$ 250
1.0	2.0	500	1,000	\$ 300
2.0	3.0	1,000	1,500	\$ 350
3.0	4.0	1,500	2,000	\$ 400
4.0	5.0	2,000	2,500	\$ 430
5.0	6.0	2,500	3,000	\$ 460
6.0	7.0	3,000	3,500	\$ 490
7.0	8.0	3,500	4,000	\$ 520
8.0	9.0	4,000	4,500	\$ 550
9.0	10.0	4,500	5,000	\$ 580
10.0	11.0	5,000	5,500	\$ 610
11.0	12.0	5,500	6,000	\$ 640
12.0	13.0	6,000	6,500	\$ 670
13.0	14.0	6,500	7,000	\$ 700
14.0	15.0	7,000	7,500	\$ 730
15.0	16.0	7,500	8,000	\$ 760
16.0	17.0	8,000	8,500	\$ 790
17.0	18.0	8,500	9,000	\$ 820
18.0	19.0	9,000	9,500	\$ 850
19.0	20.0	9,500	10,000	\$ 880
20.0	21.0	10,000	10,500	\$ 910
21.0	22.0	10,500	11,000	\$ 940
22.0	23.0	11,000	11,500	\$ 970
23.0	and above	11,500	and above	\$1000

Types of Projects

Injection Wells

Infiltration Ponds

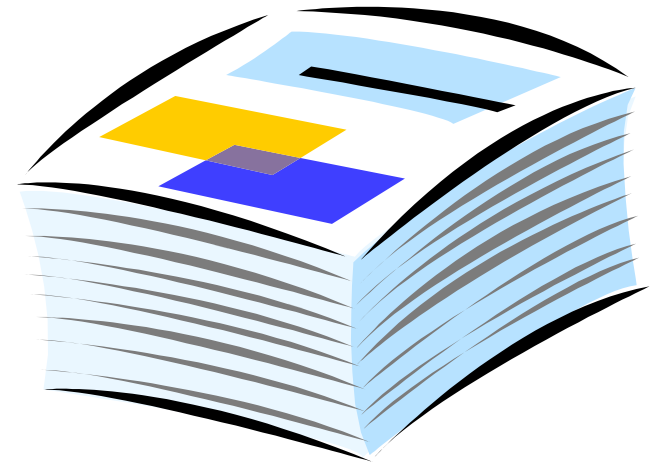


Water Quality Permits

- * Underground Injection Control (UIC) program
- * Safe Drinking Water Act (SDWA)

Plan of Operation

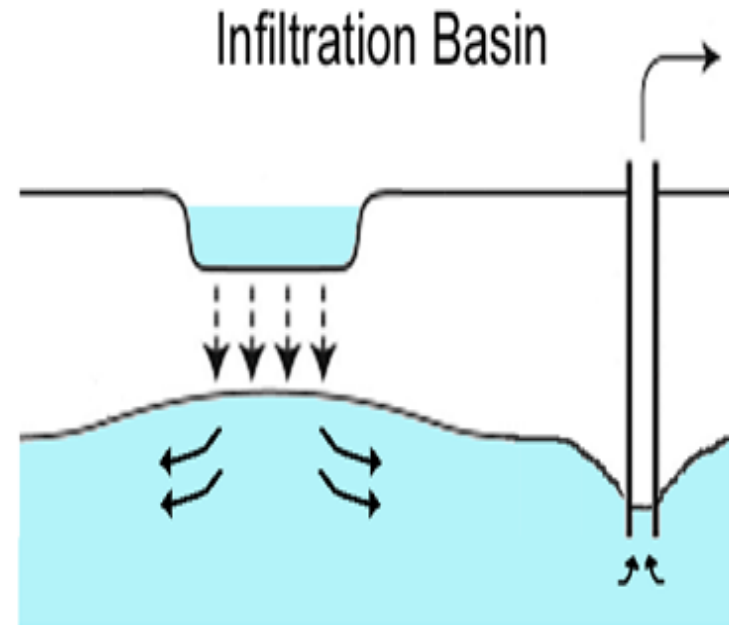
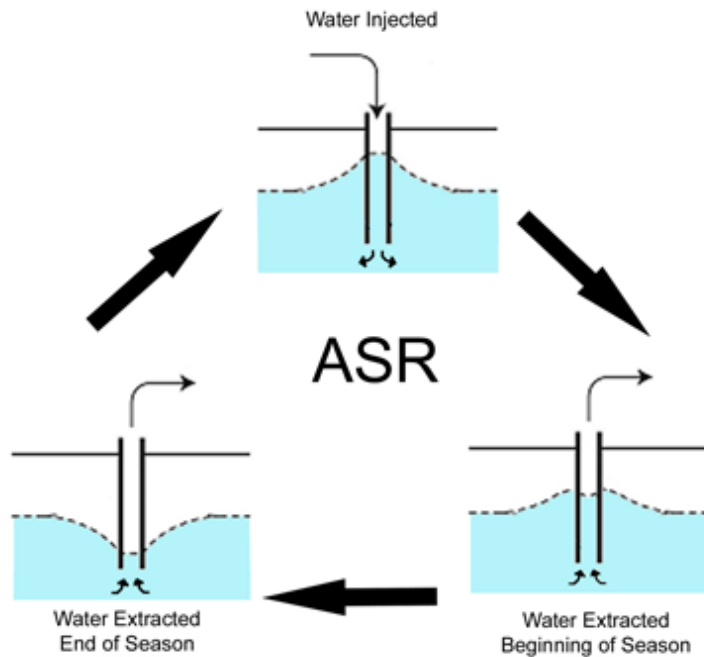
- * Detailed description of the project
- * Design capacity
- * Monitoring program
- * Duration of the project
- * Groundwater study
 - * Area of hydrologic impact
 - * Hydrologic feasibility
 - * Harm to land or existing water rights
 - * Recoverable water
 - * Financial and technical capability



Types of Projects

Injection Wells

Infiltration Ponds



Plan of Operation

- * Pilot Program
- * Temporary Change Application / Recharge Application
 - * Feasibility
 - * Helps define parameters

Valid water Right

73-3b-106. Water right for recharged water -- Change of use of recovered water.

(1) A person proposing to artificially recharge water into an aquifer must have:

- (a) a valid water right for the water proposed to be recharged; or
- (b) an agreement to use the water proposed to be recharged with a person who has a valid water right for the water proposed to be recharged.

(2) A person who holds a recovery permit may use or exchange recovered water only in the manner in which the water was permitted to be used or exchanged before the water was artificially recharged, unless a change or exchange application is filed and approved pursuant to Section 73-3-3 or 73-3-20, as applicable.

Recovery Application

- Applicant Information
- Consent from Owner of Recharge Permit
- Recovery Well Description
 - Location
 - Depth and Diameter
 - Design Pumping Capacity
- Fee (\$2,500.00)
- Storage Account Parameters

- Multiple

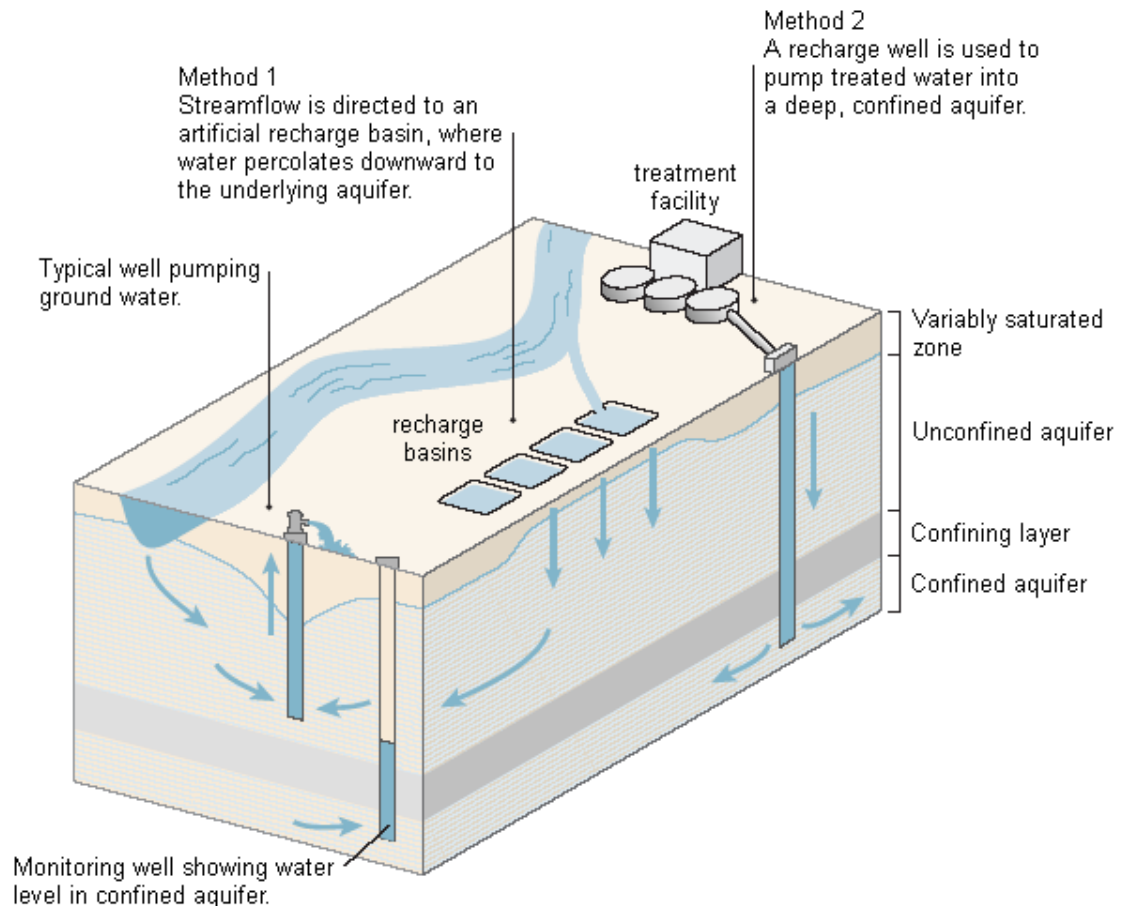
Permit Conditions

- * Proof Time Frame– 5 years
- * Monitoring Program
- * Reports on Water Stored and Recovered
- * Reports on Water Quality
- * Storage Accounts
- * Annual Fee
- * Modification of recharge or recovery permits
- * **Critical Groundwater Basin special conditions**

Storage Accounts

Parameters:

- * Initial Wait Period
- * Loss Factor
- * Month Of Loss



Storage Accounts

Parameters:

- * Initial Wait Period
- * Loss Factor
- * Month Of Loss

Considerations:

- * Type of Recharge
 - * Water Balance
- * Location of Recovery
- * Aquifer Parameters
 - * Confined vs unconfined
 - * Hydraulic Conductivity

Regulation

- * Periodic Review
- * Online Reporting

Recharge & Recovery Input

Select the date for which the data applies, enter the corresponding value and any comments about the data, and hit the Submit button to upload the data.

Submit Recharge Data

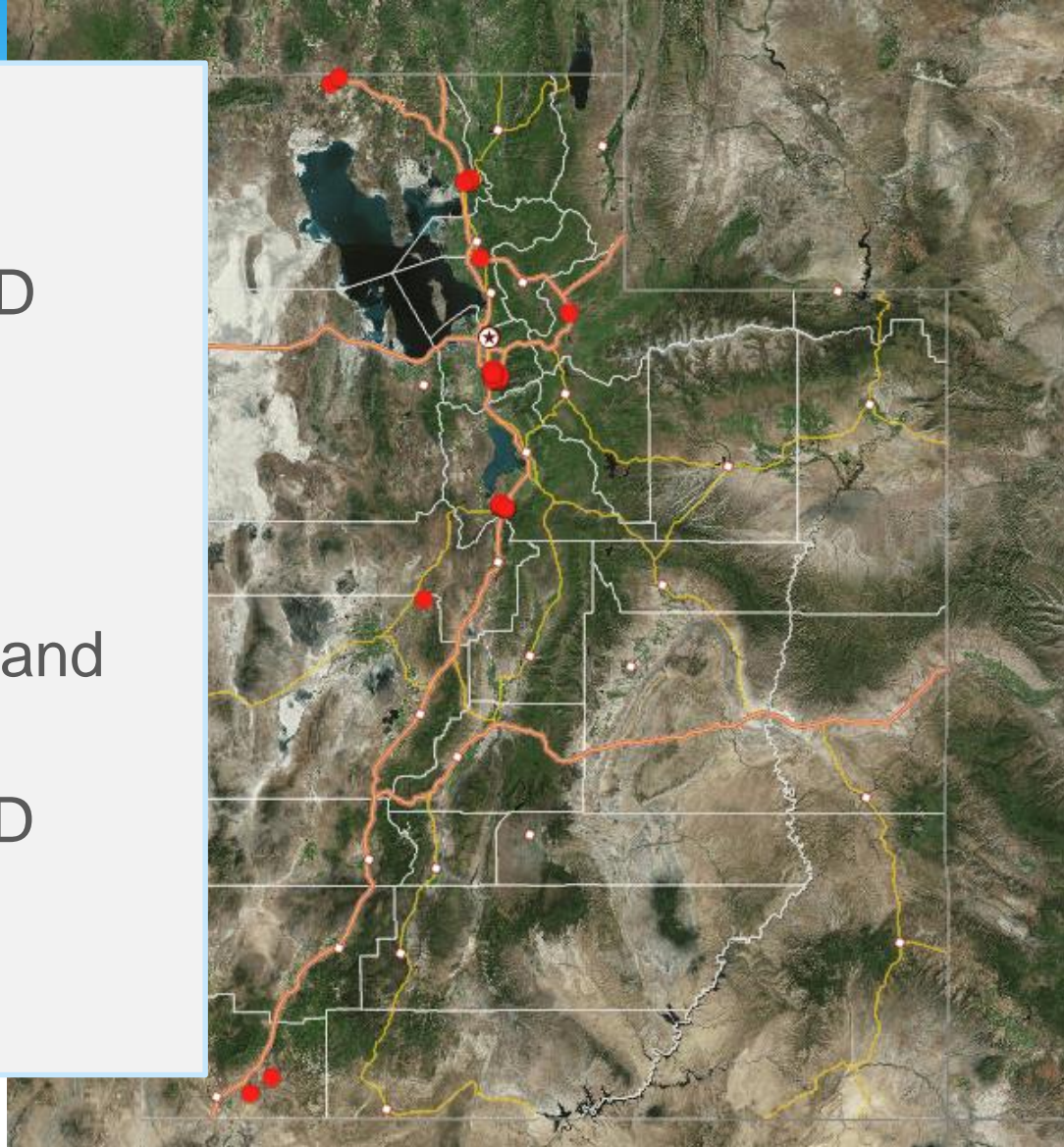
Recharge Number: RC004

Month Amount Recharged Acre-Feet

Comments:

Current Projects

- Jordan Valley WCD
- Brigham City
- Washington County WCD
- Leamington Town
- Weber Basin WCD
- Santaquin City
- Summit Creek Irrigation and Canal Company
- Central Iron County WCD



Growing Challenges

- * Purpose of Recharge Project
 - * Water Quality
 - * Keep others from using water
 - * Get credits for historical losses
 - * Appropriate water for recharge



Questions

www.waterrights.utah.gov