



ITRC (Interstate Technology & Regulatory Council). 2023. Managed Aquifer Recharge Guidance MAR-1. Washington, D.C.: Interstate Technology & Regulatory Council, MAR Team. <https://mar-1.itrcweb.org/>.

Case studies presented are designed to showcase a myriad of MAR elements and implementation as discussed in this document. The authors of each case study present the most unique aspects of their study, which may include operational or technical obstacles overcome, situational constraints, stakeholder issues, regulatory environment, or water quality issues and solutions identified. The uniqueness of each case study allows the opportunity for the reader to learn an aspect of each project that is not necessarily widely known and has not been previously discussed in the vast MAR literature. [Table 5-1](#) provides a list of the case studies.

Table 5-1. Case studies and their approaches

Case Study	Name	Location	Approach
5.1	HRSD Sustainable Water Initiative for Tomorrow (SWIFT) Program	Southeast Virginia	Intended Use:
			-Water supply resilience
			-Improving groundwater quality
			-Mitigation against saltwater intrusion
			-Subsidence reduction
			-Reduction of nutrient discharges to surface waters
			Source water:
			-Municipal wastewater
			Water quality:
			-Pretreatment required
			Recharge technology(s):
			-Recharge well

5.2	Using a Simple, Low-Cost, Injection Water Pretreatment System to Reduce the Concentration of Naturally Occurring Arsenic and Other Trace Metals in Recovered Water during ASR Operations	Deland, Florida	Intended use:
			-Water supply resilience
			-Improving groundwater quality
			Source water:
			-Not applicable
			Water quality:
			-Pretreatment required
			Recharge technology(s):
-ASR well			
5.3	Seawater Intrusion/Replenishment in Southern Los Angeles County	Southern Los Angeles County, California	Intended use:
			-Water supply resilience
			-Improving groundwater quality
			-Mitigation against saltwater intrusion
			Source water:
			-Municipal wastewater
			-Imported water
			Water quality:
			-Pretreatment required (tertiary treated recycled water)
			Recharge technology(s):
-Injection wells			

5.4	San Antonio Water System H2Oaks Center ASR Project	Elmendorf, Texas (south of San Antonio, Texas)	Intended use:
			-Water supply resilience
			-Resilience/climate adaptation
			Source water:
			-Alternative aquifer
			Water Quality:
			-Pretreatment required
			-Post-treatment required
			Recharge technology(s):
-Injection well			
5.5	Salinas Valley Groundwater Basin	Monterey County, California	Intended use:
			-Water supply resilience
			-Use of floodwater (control of flood, agricultural)
			-Protection of riparian ecosystems/maintenance of minimum streamflow
			Source water:
			-Rivers/streams/lakes/reservoirs
			-Captured water
			Water quality:
			-No treatment required
			Recharge technology(s):
			-Enhanced streambed recharge

5.6	Idaho's Eastern Snake Plain Aquifer MAR Program	Eastern Snake Plain, Idaho	Intended use
			-Water supply resilience
			-Use of floodwater (control of flood, agricultural)
			-Protection of riparian ecosystems/maintenance of minimum streamflow
			-Resilience/climate adaptation
			Source water
			-Rivers/streams/lakes/reservoirs
			Water quality:
			-No pretreatment required
			-No posttreatment required
			Recharge technology(s)
			-Infiltration pond
			-Wet well
			-Bank filtration
-Sinkhole			

5.7	South Hillsborough Aquifer Recharge Project (Apollo Beach)	Hillsborough County, Florida	Intended use:
			-Water supply resilience
			-Improving groundwater quality
			-Mitigation against saltwater intrusion
			Source water:
			-Recycled water (high-level disinfection public access-quality)
			Water quality:
			-Pretreatment required
			Recharge technology(s):
-Injection wells			
5.8	Mustang Creek Watershed Dry Well Pilot Study	Merced County, California	Intended use:
			-Water supply resilience
			Source water:
			-Captured water
			Water quality:
			-Pretreatment required
			Recharge technology(s):
-Dry well			

5.9	Walla Walla Basin Watershed	Oregon	Intended use:
			-Water supply resilience
			-Protection of riparian ecosystems/maintenance of minimum streamflow
			-Resilience/climate adaptation
			Source water:
			-Rivers/streams/lakes/reservoirs
			Water quality:
			-No treatment required
			Recharge technology:
			-Infiltration basin
			-Infiltration gallery

5.10	Clark Fork River Basin MAR Modeling	Deer Lodge, Montana	Intended use:
			-Water supply resilience
			-Protection of riparian ecosystems/maintenance of minimum streamflow
			-Resilience/climate adaptation
			-Agricultural
			-Water rights permitting support
			Source water:
			-Rivers/streams/lakes/reservoirs
			-Agricultural return flows
			Water quality:
			-No treatment required
			Recharge technology(s):
			-Dry well
5.11	Army Post Road ASR Well	Des Moines, Iowa	Intended use:
			-Water supply resilience
			Source water:
			-Rivers/streams/lakes/reservoirs
			Water quality:
			-Pretreatment required
			-Post-treatment required
			Recharge technology(s):
			-ASR well

5.12	South Metro Water Supply Authority Regional ASR Groundwater Model Scope of Work (August 17, 2022)	Aurora, Colorado	Intended use:
			-Water supply resilience
			Source water:
			-Rivers/streams/lakes/reservoirs
			Water quality:
			-Pretreatment required
			Recharge technology(s):
			-ASR well