

SOURCES OF MANAGED AQUIFER RECHARGE PROJECT FINANCING*

Including brief descriptions and web links

- Drinking Water State Revolving Fund (DWSRF)—Administered by each state and Puerto Rico, loans are at or below market rates with terms up to 30 years, for disadvantaged communities up to 40 years or design life of project, whichever is less; submission of project nominations to include preliminary engineering with cost estimates; state discretionary grants to small water systems may be provided for preliminary design. From 1997 to 2019, state DWSRFs provided \$41.1 billion to water systems in 15,425 financial agreements with the smallest loan being \$825 and the largest loan, \$217 million, and addressed water treatment, supply, quality, and transmission, including MAR components. State Contacts are listed at: <https://www.epa.gov/dwsrf/state-dwsrf-website-and-contacts>
- Clean Water State Revolving Fund (CWSRF)—This program is similar to DWSRF but for wastewater, stormwater and water reuse, including MAR. From 1988 to 2021, state CWSRFs have provided \$153 billion to communities through over 44,500 low-interest loans and addressed wastewater treatment, sewerage, stormwater and wastewater reuse, including MAR components. State discretionary grants to small wastewater systems may be provided for technical assistance. State contacts are listed at: <https://www.epa.gov/cwsrf/state-cwsrf-program-contacts>
- Water Infrastructure Financing & Innovation Act Loan—Loans provided through the Environmental Protection Agency using the credit of the U.S. Treasury; loan terms are up to 35 years; loans can only cover 49% of project cost with a minimum \$20 M amount; EPA solicits letters of interest through announcement in the Federal Register; small communities can combine their requests to apply for the minimum small system loan of \$5 million. WIFIA project eligibilities follow the DWSRF and CWSRF eligibilities. Access WIFIA at: <https://www.epa.gov/wifia>
- Municipal Bonds—A community must have a bond rating to sell bonds and market interest rates apply
- State Grants/Principal Forgiveness—state infrastructure financing agencies may provide grants or forgive principal to small or disadvantaged communities qualifying or entities meeting other state eligibility requirements
- Donations—Private sources may contribute to the cost of a MAR project; this might occur in the case of large volume irrigators desiring to maintain

streamflows supported by groundwater discharge or for other environmental purposes

- Self-financing—This approach more likely would be done by a water-dependent business and irrigated farm having its own capital; irrigated farms may already have wells for irrigation that could be used for recharge, recovery or both.
- Revenue stream—Water utilities can draw on customer water payments to finance projects
- Water district taxing authority—A water district with taxing authority may provide tax revenue to support construction and maintenance of projects
- Other options may be available through other state and federal agencies
- In addition to federal and state resources, nonprofit foundations have provided funding for water infrastructure, such as: the Johnson Foundation, the Rockefeller Foundation, the Ford Foundation, the Walton Family Foundation and the Pisces Foundation
- The Environmental Protection Agency has established 29 environmental finance centers (EFC) across the country with an objective of assisting communities with identifying and applying for federal and state loans, grants and principal forgiveness for water projects. Access general information on EFCs at: <https://www.epa.gov/waterfinancecenter/efcn> and for specific information and contacts at: <https://arch.umd.edu/research-creative-practice/centers/environmental-finance-center>.

Other financing sources through the federal government include:

- U.S. Department of Agriculture Water and Wastewater Loans/Grants—The USDA accepts applications year-round for loans and grants to rural communities. To apply, contact the USDA offices listed at: <https://www.rd.usda.gov/about-rd/state-offices>

Other USDA programs that may provide funding for MAR projects include:

- –Section 2304 (Environmental Quality Incentives Program or EQIP) of the 2018 Farm Bill (P.L. 115-334) provides for engaging in contracts with a State, irrigation district, groundwater management district, or similar entities for water conservation or irrigation practices under a watershed-wide project to conserve water, provide fish and wildlife habitat, or mitigate drought-related environmental effects;

- –Food Security Act of 1985 (P.L. 99-198, 99 Stat. 1504, as amended through P.L. 115-423, 2019)—payments for water conservation to facilitate drought mitigation and address declining aquifers;
 - –2014 Agricultural Act (2014 farm bill; P.L. 113-79)—cost-sharing assistance for farm and ranch owners adopting water conserving measures.
- U.S. Environmental Protection Agency—The Funding Integration Tool for Source Water (FITS) offers users a one-stop feature that integrates various federal funding sources to support activities that protect sources of drinking water. Access the tool at: <https://ordspub.epa.gov/WFCfiles/FITSFinal/index.html>
- U.S. Housing and Urban Development Grants and loans—The Community Development Block Grant program can provide grants for new water sources and for disaster recovery. Low interest loans are also available. Application information for grants and loans is available at: <https://www.epa.gov/fedfunds/hud-community-grants-and-loans>
- Federal Emergency Management Agency—FEMA supports community resilience applicants with grants to respond to drought or other natural hazards. The application process for assistance is at: <https://grantee.fema.gov/>
- U.S. Bureau of Reclamation—Bureau of Reclamation's WaterSMART Water & Energy Efficiency Grants provide funding for water supply reliability and require a 50% cost share. To initiate application, contact the Bureau of Reclamation at 303-445-2839 or send an email to jgerman@usbr.gov .—Title IX, Subtitle F (Secure Water), Section 9504 (Water Management Improvement) of the Omnibus Public Land Management Act of 2009 (P.L. 111-11) <https://www.usbr.gov/watersmart/weeg/index.html>

Other Bureau of Reclamation programs that may address MAR include:

- –Section 9 of the Reclamation Project Act of 1939 (43 U.S.C. §485)—Engage in contracts for irrigation, municipal, and miscellaneous water supply purposes, interpreted to include groundwater recharge;
- –Section 1 of the Warren Act of February 21, 1911 (43 U.S.C. §523)—Contract provision of conveying and storing of non-project water through federal reclamation projects with excess capacity exists;
- –Section 215 of the Reclamation Reform Act of 1982 (P.L. 97-293)—Participate in temporary water service contracts for excess flood flows;

- –Section 101(d) of the Reclamation States Emergency Drought Relief Act of 1991 (P.L. 102-250)—contribute to state-established water banks for drought response;
- –Section 3408((c), (d), and (e)) of the Central Valley Project (CVP) Improvement Act of 1992 (P.L. 102-575)—bank CVP water;
- –Title III, Section 4007(c) of the Water Infrastructure Improvements for the Nation Act (WIIN Act; P.L. 114-322)—Engage in state-led groundwater storage projects;
- –Title III, Section 4009(a) of the WIIN Act amended the Water Desalination Act of 1996 (P.L. 104-298)—furnish financial assistance for brackish groundwater desalination;
- –Reclamation Title XVI program (Title XVI of P.L. 102-575)—Carry out water recycling and reuse projects that may include impaired groundwater;
- –Inflation Reduction Act of 2022; Part 3—Drought Response and Preparedness, Sec. 50,231. Bureau of Reclamation Domestic Water Supply Projects—\$550,000,000, to remain available through September 30, 2031, for grants, contracts, or financial assistance agreements for disadvantaged communities for up to 100% of the cost of the planning, design, or construction of water projects with the primary purpose of providing domestic water supplies to communities or households that do not have reliable access to domestic water supplies;
- –Small Storage Program—A grant program authorized by sections 40901(1) and 40903 of the Bipartisan Infrastructure Law to promote Federal assistance to enhance water storage opportunities.
- U.S. Army Corps of Engineers-Water Resources Development Act of 2022, Section 8108.—Establishes a MAR Study and Working Group to conduct an assessment of MAR nationally and evaluate the feasibility of MAR in 10 locations to address drought, water resilience and aquifer depletion with a 90%:10% federal/non-federal partner cost share.

*Reference: Job, C. 2023. Financing Managed Aquifer Recharge Projects. In *Groundwater Monitoring and Remediation*, Vol. 43, Issue 4. Published 07 November 2023. Wiley Periodicals LLC, Hoboken NJ. Pages 11-17. <https://doi.org/10.1111/gwmr.12620>.