

Webinar
September 13, 2022

Water System Infrastructure Financing

Steps for Your Needed Infrastructure Project

Environmental Finance Center Network
EFCNetwork.org

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- Consulting Engineer, primarily small communities (<10,000), 30+ yrs.
- State & Local Government positions, 13 years

The life of an Infrastructure Project

1. Identify funding sources for the intended project
2. Assemble a team of professionals
3. Create a project plan
4. Apply for funding
5. Secure funding
6. Design and build the project
7. Operate & Maintain, R&R, Debt Service

Major Environmental Infrastructure Funding Sources

- USDA Rural Development (RD)
- State Revolving Loan Funds

Secondary Funding Sources

- H.U.D. Community Development Block Grants (CDBG)
- U.S. Economic Development Grants (EDA)
- Other State Programs

Major Environmental Infrastructure Funding Mechanism

USDA Rural Development (RD)

- National program, provides a variety of grants and loans for water and wastewater projects
- For small communities, population 10,000 or less





USDA Rural Development (RD)

- Long term loans, up to 40 years, available for water and wastewater projects.
- Interest rates, generally below market rates, vary quarterly and are based on the need for the project and the medium household income (MHI) of the area to be served.
- Grants are available to keep user costs reasonable

MHI between \$ _____* and \$ _____**, grant up to 45%

MHI < \$ _____* and project necessary to alleviate health or sanitary problem, grant up to 75%

There are other factors that are considered for grants

* 80% of state nonmetropolitan MHI

** state nonmetropolitan MHI



USDA RD Eligibility

- Who may apply
 - Public bodies, non-profit organizations, federally recognized tribes
 - Rural areas/towns of 10,000 or less
- Fund Usage
 - Acquisition, construction or improvement of projects for drinking water, sewage systems, solid waste and storm water
 - Legal and engineering fees
 - Land acquisition and equipment
 - Start up operations
 - Construction period interest
 - Purchase of facilities



USDA RD Process Overview

- Pre-Application
- Application
- Letter of Conditions
- Submit plans and specifications to RD and State Agency for review and approval
- Secure permits and easements
- Bid project
- Loan Closing
- Construction proceeds



USDA RD Application

- Standard form 424
- Brief project description/ narrative
- Preliminary Engineering Report (RUS Bulletin 1780-2)
- Environmental Review (RD instruction 1970)
- Customer information
- Project budget
- State and Regional Clearing House review submissions
- Public notice of intent to file with RD within 60 days of application

Customer User Information for RD

	Number of Existing Customers	Total Monthly Service Usage (In gallons)	Number of Users after Improvements	Projected Total Monthly Service Use (In gallons)	EDUs (Equivalent Dwelling Units)
Residential Dwellings:	_____	_____	_____	_____	_____
Commercial (non-residential) Users:	_____	_____	_____	_____	_____

EDU (residential) = Sum of monthly flow for residential units / # of residential units

Non residential EDUs = all other flow (commercial, industrial, schools, etc.) / EDU residential flow

Total EDUs = # of EDU residential + # of Non residential EDUs

Total EDUs X 1.5 % MHI = Total community Annual Affordable User Charge



USDA RD Application, cont.

- Necessary documentation
 - Audit report
 - Certification of Commercial Credit
 - Documentation of MHI < state poverty MHI, if applicable
 - Documentation of other fundraising sources
 - Documentation of consistency with Area Comprehensive Plan by county or regional agency
 - Certification regarding debarment, suspension, etc.
 - Engineering agreement
 - Legal services agreement

USDA RD Application, cont'd



- **Preliminary Engineering Report** (see RUS Bulletin 1780-2)
 - Project planning
 - Existing facilities
 - Need for the project
 - Alternatives considered
 - Selection of an alternative
 - Proposed project (the recommended alternative)
 - Project schedule and cost estimate
 - Conclusion and recommendations



USDA RD Application, cont'd

- **Environmental Report** (see attachment to RD Instr.1970)
 - Wetlands, floodplains
 - Wilderness, wildlife, national parks, trails, and landmarks
 - Wild or scenic rivers
 - Cultural resources (historic and archaeological sites)
 - Coastal barriers, critical habitats
 - Important and prime farmlands
 - Sole source aquifers
 - Air quality, transportation, and noise
 - Underground storage tanks

RD Annual User Cost (AUC) Formulae

Goal: $AUC = 1.5\%$ of MHI

$AUC = O \& M + DS$ (debt service = annual principal & interest)

SNMI = State Nonmetropolitan Median Income

$DS > 0.5\%$ of AUC, $MHI < 80\%$ of SNMI, then grant up to 75 %

$DS > 1.0\%$ of AUC, $MHI > 80\% < 100\%$ of SNMI then grant up to 45 %

$MHI > SNMI$, no grant, market rate loan only

USDA – RD Summary

Water and Waste Disposal Loan & Grant Program: for water, wastewater, and storm water projects for communities < 10,000 population

- Long term loans (up to 40 years) with low interest rates that vary quarterly and are determined by the MHI, currently P = 2.0%, I = 2.625%, M = 3.25%
- Grants are available to assist communities.
- MHI < SNM* MHI > 80 % of SNM MHI grant up to 45%
- MHI < 80 % SNM MHI grant up to 75%
- MHI > SNM MHI no grant, all loan
- Goal User fee = 1.5% of MHI, similar systems

*SNM = State Non-Metropolitan

USDA RD Apply (the electronic application)



- Step 1: Level 2 eAuthorization ID
Personal information
- Step 2: Authorized Representative
Legal Name of Municipality
Name of users
- Step 3: Authorized Representative Request- Point of Contact
Submit to RD
RD approves and links your e-Auth. ID to municipal Emp. ID
- Step 4: Login to RD Apply and create the Application*
Link other users
Click ADMIN (see Customer User Guide, 3/22/17, Ver. 1.6)

* Online application addresses items presented in previous slides.



USDA RD Letter of Conditions

- Lists all conditions to be met before project can proceed
- Obligates funds, sets interest rate
- Sets construction timeline
- Provides details: disbursement, cost overruns, excess, use of remains
- Sets Loan repayment schedule & reserves
- Lists requirements for users, taxes, hookups, budget, insurance, bonding, side agreements, audits, compliance
- Requires Right-of-way map and title opinions (this can be time consuming)
- Final Construction plans and specifications approved by RD & State agency



Project Permits and Easements

- State Agency Construction Permit
- Dept. of Transportation
- County Road Commission
- State Agency for Wetlands, stream crossings, endangered species
- US Fish & Wildlife
- US Corps of Engineers (USCOE)
- Private party construction and permanent easements



Bid Project

- Place bid ad in local newspaper (30-day minimum notice) and send to qualified contractors
- Notify builder's exchanges, trade magazines
- Open bids publically
- Review bids
- Meet with lowest bidder to review project
- Request RD approval to award bid
- Award bid to low qualified contractor

Loan Closing

- Schedule loan closing date
- Resolution approving the award of construction contract(s) and approval for officers to sign contract documents
- Attendees
 - RD representative
 - Bond counsel
 - Local attorney
 - Engineer
 - Municipal officials



Construction Process

- Periodic progress meetings
- Monthly pay requests by contractor
- Monthly drawdown of RD loan/grant proceeds (loan \$\$ first)
- Monthly approvals by grantee to pay contractor
- Construction complete
- Review final punch list with contractor
- Approve final payment



State Revolving Loan Funds - Two Programs

- Clean Water State Revolving Fund, low-interest loans
- Drinking Water State Revolving Fund, low interest loans
- Principal Forgiveness- disadvantaged community/affordability (MHI & annual user costs) & Green project components

Federal Water Pollution Control Act

- Federal Water Pollution Control Act Amendments of 1972 ([33 U.S.C. 1251 et seq.](#)), as amended in 1977 (P.L. 95-217), this law became commonly known as the **Clean Water Act** (CWA). The CWA is the principle law governing pollution control and water quality of the Nation's waterways.
- The **Clean Water State Revolving Fund** (CWSRF) is a self-perpetuating **loan** assistance authority for **water** quality improvement projects in the United States. [Congress](#) established the fund in the [Water Quality Act of 1987](#). The **fund** is administered by the Environmental Protection Agency and state agencies. The CWSRF, which replaced the [Clean Water Act](#) Construction Grants program, provides loans for the construction of municipal [wastewater](#) facilities.
- The Water Resources Reform and Development Act of 2014 (WRRDA) amended the Federal Water Pollution Control Act to require Clean Water State Revolving Fund (CWSRF) programs to develop affordability criteria that includes income and unemployment data, population trends, and other data determined relevant by the State.

Drinking Water State Revolving Fund

- The Drinking Water State Revolving Fund (DWSRF) program is a federal-state partnership to help ensure safe drinking water. Created by the 1996 Amendments to the Safe Drinking Water Act (SDWA) the program provides financial support to water systems and to state safe water programs.
- The DWSRF program is a State operated program to provide loans and other financial assistance for public drinking water improvement projects. The SDWA requires that states provide 20 percent matching funds to federal dollars, in order to capitalize the DWSRF program. Therefore, every one dollar invested by the State secures five federal dollars.
- The DWSRF provides funding to public water systems to improve or replace water system pipes, treatment plants, storage tanks and sources of water to ensure safe drinking water and provide essential public health protection.

Supplemental Project Funding

- American Rescue Plan Act 2021, \$1.9T distributed to state and local units of government over two years
- Infrastructure Investment Jobs Act (IIJA), \$1.2 T distributed to state governments over five years, includes \$50B for EPA SRF programs with 49% principal forgiveness for disadvantaged communities

Assemble Team of Professionals

- Financial: A consultant to assist with financial projections (e.g. financial packaging, debt service structuring, user rates).
- Legal: Local attorney to review contracts, land issues and related project details. If the state requires municipal bonds as collateral for debt then a Bond counsel is needed to provide a legal opinion on the bonds and prepare related paperwork. Some states provide for direct loans from the SRFs thus no Bond Counsel required.
- Technical: Engineer to assist with the funding application and prepare preliminary engineering report, design, construction plans, specifications, bidding documents and construction oversight.

Selection of Team of Professionals

- Financial Consultant & Bond Counsel: Experience with the agency and program that is being considered
- Local Attorney: Someone you can work with and who can complete assignments in a timely manner



Selection of the Engineer

- Extremely important.
- Many communities have a working relationship with an Engineer or Engineering firm.
- A new major project should present a reason for the community to select the most qualified engineer and engineering firm available.
- Process for selection, Quality Based Selection (QBS).
- QBS is not a selection based upon low price, it is not a bid process.

Quality Based Selection (QBS) Process

- Prepare a formal Request for Qualifications (RFQ)
 - Must be advertised publicly
 - Should include planning, design and construction project services
 - Criteria: demonstrated competence and qualifications for the type of project being considered
- Review submitted Statements of Qualifications (SOQ), prepare a short list, and interview at least three firms

Interview the Engineer

- Be sure the person you are interviewing/meeting with is going to be the project manager assigned to your project
- Communication skills are critical
- Needs experience with your type of project and the funding programs to be used
- Discuss anticipated concepts and methods for furnishing services
- Secure and check references, from both local government and funding agencies
- Visit a community where the engineer did a similar project, ask questions about communications, project planning/design process, change orders, budgets

Scoring the interviews

Develop a matrix to compare	Engineer 1	Engineer 2	Engineer 3
<u>Experience as a Project Manager</u>	_____	_____	_____
<u>Communication</u>	_____	_____	_____
<u>Type of project</u>	_____	_____	_____
<u>Funding</u>	_____	_____	_____
<u>Concepts proposed</u>	_____	_____	_____
<u>Methods for providing services</u>	_____	_____	_____
Reference checks			
<u>Municipal</u>	_____	_____	_____
<u>Agencies</u>	_____	_____	_____
<u>Visit past client community</u>	_____	_____	_____

Engineering Fees

- Engineering fees will be fairly significant and in the range of 10 – 20 % of the total project cost, could be higher, probably not less.

Engineer's Contract

- Negotiate a contract with the most qualified Engineer/Firm
- Compensation needs to be fair and reasonable
- If contract negotiations with the preferred Engineer are not satisfactory to the community move on to the next firm

Engineer - Preliminary Phase

- Assists in defining the project.
- Prepares project proposal or preliminary engineering report
- Assists in preparation of the funding application/proposal
- Assists with presenting the project to the public

Application Details

- Brief project narrative:
 - Need
 - Services to be provided
 - Benefits
 - Public perception
 - History
 - Map
- Documented need from the State Agency
- State and Regional clearinghouse submittals

Application Details cont.

- State Historic Preservation Officer (SHPO) review and comments
- Environmental Assessment to determine if additional environmental information is necessary
- Evidence of the community financial need

Preliminary Engineering Report (req'd by USDA)

- 1) Project planning
- 2) Existing facilities
- 3) Need for the project
- 4) Alternatives considered
- 5) Selection of an alternative
- 6) Proposed project (the recommended alternative)
- 7) Preliminary schedule and cost estimate
- 8) Conclusion and recommendations



Public Participation

- Vital to the success of the project
- Newspaper articles, notices with billing statements, and mass mailings
- Public hearing generally required by the funding agency
- Methods to win community support
 - Contact likely supporters first – publicize support
 - Know your opposition
 - Show benefits of the completed project
 - Listen to the community and respond
 - Fill in information gaps
 - Don't overwhelm people with technical data

Engineer - Design Phase

- Creates design documents
- Directs necessary investigations, i.e. soil borings, bench tests
- Prepares construction plans and specifications
- Directs surveys for land and easements needed
- Applies for and secures all necessary permits
- Assembles bidding and contract documents

Engineer - Construction Phase

- Assists with **bid** advertisements
- **Reviews** submitted bids
- Recommends selection of low qualified bidder
- Oversees completion of contract documents
- Monitors construction progress and **payments**
- Reviews and recommends **change orders**
- Conducts construction testing, inspection, and oversight
- Prepares final punch list and project closeout

Operate and Maintain the System

- Establish a budget and a rate structure to cover operations, maintenance, repair & replacement reserves, debt service, and other reserve funds.

Questions?

Contact information

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