



# COST-SHARE

## PROJECT FUNDING POLICY, PROCEDURES, AND GENERAL REQUIREMENTS

POLICY/GUIDELINES | SWC\_01.2025

NORTH  
**Dakota** | Water Commission  
Be Legendary.™

Effective Date 5/12/2025

## POLICY OUTLINE

<b>POLICY OUTLINE .....</b>	<b>2</b>
<b>1 POLICY STATEMENT.....</b>	<b>3</b>
<b>2 PRE-APPLICATION CONSULTATION.....</b>	<b>4</b>
<b>3 APPLICATION PROCESS, REQUIREMENTS, AND REVIEW PROCEDURES ....</b>	<b>5</b>
<b>4 COST-SHARE ELIGIBLE PROJECTS AND PROGRAMS.....</b>	<b>12</b>
<b>5 DEFINITIONS.....</b>	<b>19</b>
<b>6 POLICY HISTORY.....</b>	<b>22</b>
<b>APPENDIX A.....</b>	<b>23</b>
<b>APPENDIX B.....</b>	<b>25</b>
<b>APPENDIX C.....</b>	<b>27</b>

# 1 POLICY STATEMENT

The State Water Commission (Commission) has adopted this policy to support local sponsors in the development of sustainable water related projects in North Dakota. This policy reflects the Commission's cost-share priorities and provides basic requirements for all projects considered for prioritization during the Department of Water Resources' (Department) budgeting process. Projects and studies that receive funding from the Department's appropriated funds are consistent with the public interest. The Commission values and relies on local sponsors and their participation to assure on-the-ground support for projects and prudent expenditure of funding for project or program development.

It is the policy of the Commission that only the items described in this document will be eligible for cost-share or loans upon approval by the Commission, unless specifically authorized by Commission action.

## 1.1 POLICY AUTHORITY

This policy garners authority from North Dakota Century Code (N.D.C.C.) Chapter 61-02 and North Dakota Administrative Code (N.D.A.C.) Title 89. No funds will be used in violation of Article X, § 18 of the North Dakota Constitution (Anti-Gift Clause).

## 1.2 ACCEPTANCE OR ENFORCEMENT

The Commission reserves the right to change this policy as necessary to ensure the Commission fulfills its statutory duties.

The Commission reserves the right to return any application submitted under this policy to the applicant for correction if the application is not in compliance with the policy's intent or is insufficient for the Commission to make an informed decision.

### 1.2.1 VIOLATIONS

Applicants, and/or their representative consultant(s) who have been determined by the Commission to have intentionally provided false statements or information to acquire cost-share funding as part of the application or reimbursement process, will result in the applicant, and/or their representative consultant(s), being disqualified from participating in the Commission's Cost-Share Program for a minimum of 24 months.

Applicants that have already received Cost-Share Program funding for the project in question and have been determined by the Commission to have intentionally provided false statements or information to acquire cost-share funding, or used the funding improperly, will have remaining approved funding revoked and previous related payments reimbursed back to the state within 60 days.

## 1.3 APPEALS

Decisions may be appealed at the discretion of the Commission.

## 2 PRE-APPLICATION CONSULTATION

The Commission strongly encourages pre-application consultation prior to application submittal. Early consultation between the local sponsor, the local sponsor's representative(s), and the Department will support early understanding and compliance with this policy to limit unexpected project costs or delays.

## 3 APPLICATION PROCESS, REQUIREMENTS, AND REVIEW PROCEDURES

### 3.1 APPLYING FOR COST-SHARE ASSISTANCE

An application for cost-share is required in all cases and must be submitted by the local sponsor through North Dakota's WebGrants portal. Sponsors seeking funding for water development projects through the Department Cost-Share Program should choose the "Funding for Infrastructure in North Dakota" (FIND) option/opportunity. To apply for funding through FIND, applicants must first establish a North Dakota login and account. Specific information related to WebGrants and the application process are available at [www.dwr.nd.gov](http://www.dwr.nd.gov) under "Project Development" and then "Cost-Share." The application form is maintained and updated by the Secretary.

### 3.2 APPLYING FOR LOAN ASSISTANCE

In addition to cost-share and grants, the Commission may lend a portion of the local share based on demonstrated financial need. Project sponsors who are seeking loans for water infrastructure through the Bank of North Dakota (BND) administered Water Infrastructure Revolving Loan Fund (WIRLF) or Infrastructure Revolving Loan Fund (IRLF) must first receive Commission approval. For WIRLF or IRLF requests, sponsors must provide a letter of verification from BND indicating the sponsor's debt service capacity and an explanation of the overall economic impact of the project as part of their request to the Commission. Projects not eligible for state revolving funds under N.D.C.C. Chapters 61-28.1 and 61-28.2 must be given priority for loans from the WIRLF.

Applications for WIRLF or IRLF loans are also initiated through the WebGrants portal. After receiving Commission approval to apply to BND for WIRLF or IRLF loans, sponsors must follow BND loan application requirements.

### 3.3 PRE-APPLICATIONS FOR ASSESSMENT PROJECTS

A pre-application process is allowed for cost-share of assessment projects. This process only requires the local sponsor to submit a brief narrative of the project and a Delineation of Costs (SFN 61801). The Secretary will then review the material presented, make a determination of project eligibility, and estimate the maximum potential cost-share funding the project may anticipate receiving.

A project eligibility letter will then be sent to the local sponsor noting the maximum percent of cost-share assistance that may be expected on eligible items as well as listing those items that are not considered to be eligible costs. In addition, the project eligibility letter will state that the Secretary will recommend approval, assuming all cost-share requirements are addressed. The local sponsor may use the non-binding project eligibility letter for informational purposes to develop a project budget. However, it is expected that project sponsors follow all applicable laws pertaining to apportionment of costs to project beneficiaries, including disclosure of total project costs absent state cost-share. Upon completion of the assessment vote and all other requirements, an

application for cost-share can be submitted. (The estimated cost-share funding may be reduced subject to application of all other policy eligibility criteria at the time the project is presented to the Commission and during review for reimbursement.)

### 3.4 APPLICATION REQUIREMENTS AND MATERIALS

Applications for cost-share are accepted at any time. Incomplete applications or applications received less than 45 days before a Commission meeting will not be considered at that meeting and will be held for consideration at a future meeting. Meeting dates are available on the Department homepage.

The Commission will consider cost-share requests submitted by sponsors and will issue agreements under a two-tier process for applicable projects. Cost-share for pre-construction-related (Tier I) expenses will be considered first; followed by construction-related (Tier II) expenses after completion of pre-construction activities, including plans and specifications for bidding project construction.

In order for an application to be considered complete for Commission consideration, it must include the following supplemental materials:

#### 3.4.1 TIER I (PRE-CONSTRUCTION) APPLICATIONS

- a. Category of cost-share activity;
- b. Location of the proposed project or study area shown on a map;
- c. Description, purpose, goal, objective, and narrative of the proposed activities;
- d. Delineation of Costs (SFN 61801), with contingencies of no more than 10 percent of the total project construction costs;
- e. Anticipated timeline of project from preliminary study through final closeout;
- f. Potential federal, other state, or other North Dakota state entity participation;
- g. Meeting minutes (draft or final approved), and a cover letter acknowledging the cost-share request that is signed by a representative of the sponsoring entity (mayor, board chair, city administrator, district manager, executive director, etc.); and
- h. Completed life cycle cost analysis worksheet for water supply projects. The completed worksheet must include a no action alternative and up to three additional plausible alternatives—including repair, replacement, and regionalization options. If repair, replacement, and regionalization alternatives are excluded from the

life cycle cost analysis, justification must be provided by the project sponsor.

Under the two-tier process, approval of Tier I pre-construction cost-share does not guarantee future cost-share for construction activities.

### 3.4.2 TIER II (CONSTRUCTION) APPLICATIONS

- a. Updated Tier I pre-construction application materials (see above);
- b. Engineering plans and specifications for purposes of bidding the project;
- c. Status of required permitting, including submission of approved drain, sovereign land, or construction permits if required by state statute;
- d. Status and type of local funding sources;
- e. When applicable for flood control projects, a Conditional Letter of Map Revision (CLOMR) from the United States Federal Emergency Management Agency (FEMA);
- f. Potential territorial service area conflicts or service area agreements, if applicable;
- g. A completed Capital Improvement Plan (CIP) for water supply projects as outlined in the Commission's CIP Guidance. A completed CIP should include demonstration of a sustainable Capital Improvement Fund (CIF), that at a minimum sets aside a percentage of the cost of the asset(s) for which the Commission is cost-sharing over the expected life of the asset(s), (required at the time applications include a request for construction cost-share);
- h. Completed economic analysis worksheet for water conveyance and flood-related projects expected to cost two hundred thousand dollars or more;
- i. Results of a positive assessment vote (rural flood control projects only);
- j. A completed sediment analysis (drain reconstructions only);
- k. A property acquisition plan (flood property acquisition program only);
- l. Meeting minutes (draft or final approved), and a cover letter acknowledging the cost-share request that is signed by a

representative of the sponsoring entity (mayor, board chair, city administrator, district manager, executive director, etc.); and

- m. Additional information as deemed appropriate by the Secretary or Commission.

### 3.5 WATER DEVELOPMENT PLAN SUBMITTALS

Applications for cost-share are separate and distinct from the Department and Commission's biennial project information collection effort that is part of the budgeting process and published as the State Water Development Plan (WDP). All local sponsors are encouraged to submit project financial needs for the WDP. Projects not submitted as part of the WDP process may be held until action can be taken on those that were included during budgeting, unless determined to be an emergency that directly impacts human health and safety or that are a direct result of a natural disaster.

### 3.6 APPLICATION REVIEWS

Upon receiving an application for cost-share, the Secretary will review the application and accompanying information. If the Secretary is satisfied that the proposal meets all requirements, the Secretary will give a 10-day notice to the local sponsor when their application for cost-share is placed on the tentative agenda of the Commission. The local sponsor will be required to attend that meeting in person or remotely when their application is being considered.

The Secretary will provide a recommendation to the Commission for its action. The Secretary's review of the application will include the following items and any other considerations that the Secretary deems necessary and appropriate.

- a. All required Tier I or Tier II application materials;
- b. Field inspection results, if deemed necessary by the Secretary;
- c. The percent and limit of proposed cost-share determined by category of cost-share activity and eligible expenses;
- d. Assurance of sustainable operation, maintenance, and replacement of project facilities by the local sponsor, (including a Capital Improvement Plan and evidence of a Capital Improvement Fund for water supply projects);
- e. Available funding in the Commission budget, if in the WDP, and a priority ranking when appropriate;
- f. Results of economic analysis of water conveyance or flood-related projects, when applicable; and
- g. Results of life cycle cost analysis for water supply projects, when applicable.

### 3.7 SECRETARY APPROVALS

The Secretary is authorized to approve cost-share up to \$100,000 and also approve cost overruns up to \$100,000 without Commission action. The Secretary will respond to such requests within 60 days of receipt of the request. A final decision may be deferred if warranted by funding or regulatory consideration.

### 3.8 AGREEMENT AND DISTRIBUTION OF FUNDS

No funds will be disbursed until the Commission and local sponsor have entered into an agreement for cost-share participation. No agreement for construction funding will be entered into until all required Department permits have been acquired.

For construction projects, the agreement will address indemnification and vicarious liability language. The local sponsor must require that the local sponsor and the state be made an additional insured on the contractor's commercial general liability policy including any excess policies, to the extent applicable. The levels and types of insurance required in any contract must be reviewed and agreed to by the Secretary. The local sponsor may not agree to any provision that indemnifies or limits the liability of a contractor.

For any property acquisition, the agreement will specify that if the property is later sold, the local sponsor is required to reimburse the Commission the percent of sale price equal to the percent of original cost-share.

The Secretary may make partial payment of cost-sharing funds as deemed appropriate. Upon notice by the local sponsor that all work or construction has been completed, the Secretary may conduct a final field inspection, and the local sponsor must identify with signage that the completed project was paid for through a cooperative effort with the Department. If the Secretary is satisfied that the work has been completed in accordance with the agreement, the final payment will be disbursed to the local sponsor, less any partial payment previously made.

### 3.9 PROJECT PROGRESS REPORTS

The project sponsor must provide a progress report to the Commission at least once every four years if the term of the project exceeds four years. If a progress report is not received in a timely fashion, or if after a review of the progress report the Commission determines the project has not made sufficient progress, the Commission may terminate the agreement for project funding. The project sponsor may submit a new application to the Commission for funding for a project for which the Commission previously terminated funding.

### 3.10 LITIGATION

If a project submitted for cost-share is the subject of litigation, the application may be deferred until the litigation is resolved. If a project approved for cost-share becomes the subject of litigation before all funds have been disbursed, the Secretary may withhold funds until the litigation is resolved. In either of the aforementioned cases, the local

sponsor will notify the Department and Commission of litigation related to their project(s).

### 3.11 ECONOMIC ANALYSIS

Project sponsors seeking cost-share for construction of flood control or water conveyance projects with a total cost of two hundred thousand dollars or more must complete the Commission's economic analysis worksheet. The results of the economic analysis must be provided with the sponsor's application for cost-share assistance for Department review. When the results of the economic analysis are determined by the Department to be accurate, the results will then be presented to the Commission for their consideration as part of the cost-share request.

Projects that yield a benefit to cost (BC) ratio of one to one, or greater, are eligible for up to the maximum allowable cost-share per project type and policy. Projects that yield a BC ratio of less than one to one will have the BC ratio used as a percentage of the allowable cost-share (i.e. eligible costs, multiplied by the applicable cost-share percentage, multiplied by the BC ratio), unless otherwise authorized by the Commission.

Projects that will result in FEMA accredited flood protection for communities may be exempt from the requirement of using the BC ratio as a percentage of the allowable cost-share.

### 3.12 LIFE CYCLE COST ANALYSIS

Project sponsors seeking cost-share for water supply projects must complete the Commission's life cycle cost analysis worksheet. The completed worksheet must include a no action alternative and up to three additional plausible alternatives—including repair, replacement, and regionalization options. If repair, replacement, and regionalization alternatives are excluded from the life cycle cost analysis, justification must be provided by the project sponsor.

The results of the life cycle cost analysis must be provided with the sponsor's application for cost-share assistance for Department review. When the results of the life cycle cost analysis are determined by the Department to be accurate, the results will then be presented to the Commission for their consideration as part of the cost-share request.

### 3.13 PROJECT FRACTURING

The fracturing or separating of projects into smaller components to avoid policy requirements is prohibited. If the Commission determines a project has been fractured for this purpose, the entire project, or elements of the project, may be considered ineligible for cost-share assistance.

### 3.14 INELIGIBLE ITEMS

Ineligible items from cost-share include:

- a. Administrative costs, including salaries for local sponsor members and employees as well as consultant services that are not project specific and other incidental costs incurred by the sponsor.
- b. Property and easement acquisition costs paid to a landowner unless specifically identified as eligible within the Flood Protection Program, or for water retention projects.
- c. Work and costs incurred prior to a cost-share approval date, except for emergencies as determined by the Secretary.
- d. Project-related operation and regular maintenance costs.
- e. Sediment removal as part of reconstruction of an existing drain.
- f. Funding contributions provided by federal, other state, or other North Dakota state entities that supplant costs.
- g. Elements of finished water storage projects that are sized in excess of the capacity necessary for peak daily consumption. Additional storage capacity beyond what is necessary to serve peak daily consumption is considered a local funding responsibility. This excludes storage associated with water treatment plants. Peak daily consumption means the peak reported water usage identified during the previous ten-year period.
- h. Wastewater treatment processes and wastewater effluent transmission lines not for beneficial use.
- i. Stormwater management studies and projects within the corporate limits of cities. To differentiate between a flood control project and stormwater management, the Commission may reduce the cost-share provided by the percentage of the contributing watershed that is located within the community's corporate limits as calculated on an acreage basis.
- j. Work incurred outside the scope of the approved study or project.
- k. Invoices that are dated one year or more before the date they are received by the Department for reimbursement. Invoices submitted by agricultural producers who have been approved for cost-share through the Drought Disaster Livestock Water Assistance Program are exempt.
- l. Local requirements imposed beyond State and Federal requirements for the project.
- m. Water meter replacements.

## 4 COST-SHARE ELIGIBLE PROJECTS AND PROGRAMS

The Commission supports the following categories of projects and programs for cost-share:

### 4.1 BASIC ASSET INVENTORY ASSESSMENT AND CAPITAL IMPROVEMENT PLANNING (BAIACIP) PROGRAM

The Commission encourages planning efforts that support the long-term financial sustainability of water supply infrastructure projects and works. The primary purpose of the BAIACIP program is to help local project sponsors with the development and establishment of capital improvement funds necessary for proactive financial management of their water supply systems.

Sponsors seeking cost-share assistance through the BAIACIP program must follow Commission criteria established for this program as outlined in APPENDIX\_C.

### 4.2 PRE-CONSTRUCTION

The Commission supports local sponsor development of eligible projects, including pre-construction activities. Pre-construction expenses are cost-shared at the same percent as the construction costs when approved by the Commission. Copies of the deliverables must be provided to the Secretary upon completion. The Secretary will determine the payment schedule and interim progress report requirements.

### 4.3 COST INCREASES

When a local sponsor has been approved for cost-share assistance and additional cost-share is requested as a result of increased construction-related costs, only those eligible construction-related costs, and construction engineering costs that are directly related to, and are resulting from the cost increase, are eligible for additional cost-share. Pre-construction engineering costs are a non-eligible expense as part of cost increase cost-share requests.

### 4.4 MAIN STREET INITIATIVE

The Commission supports water development infrastructure that aligns with the Main Street Initiative, which is one of North Dakota's five Strategic Initiatives. The four foundational pillars of the Main Street Initiative are Skilled Workforce; Smart, Efficient Infrastructure; Healthy, Vibrant Communities; and Economic Diversification.

In support of the Main Street Initiative, the Commission can provide additional cost-share assistance of 10 percent beyond existing cost-share percentages, with a maximum of \$250,000 in additional funding, if an eligible water infrastructure project:

- a. Is located within a community that has received a "Main Street Champion" designation from North Dakota's Department of Commerce (NDDC);

- b. Has been identified as an integral part of a completed comprehensive planning effort or action plan that was developed through the NDDC “Partners in Planning” grant program; and
- c. Meets all other Commission eligibility requirements for cost-share.

## 4.5 WATER SUPPLY

The Commission supports water supply efforts associated with regional, rural, and municipal water supply systems. The transmission of reclaimed water for beneficial use may be an eligible cost. Debt per capita, water rates, and financial need may be considered by the Commission when determining an appropriate cost-share percentage or priority. The Commission may also utilize the North Dakota Department of Environmental Quality’s Priority Ranking System for Financial Assistance through the Drinking Water State Revolving Loan Fund Program as a secondary prioritization ranking for water supply projects.

### 4.5.1 REGIONAL, RURAL, AND MUNICIPAL WATER SUPPLY PROJECTS

The Commission reserves flexibility to adjust percentages on a case-by-case basis, but generally may provide:

#### 4.5.1.1 Up to 75 percent cost-share for:

- a. Regional and rural water system expansions and improvements
- b. New connections between communities and regional or rural systems that reduce costs through economies of scale
- c. Improvements required to meet primary drinking water standards

#### 4.5.1.2 Up to 60 percent cost-share for:

- a. Municipal water supply expansions and improvements
- b. Connection of new rural water customers located within extraterritorial areas of a municipality

#### 4.5.1.3 Water depots for industrial use receiving water from facilities constructed using Commission funding or loans have the following additional requirements:

- a. Domestic water supply has priority over industrial water supply in times of shortage. This must be explicit in the water service contracts with industrial users.
- a. If industrial water service will be contracted, public notice of availability of water service contracts is required when the depot becomes operational.

- b. Public access to water on a non-contracted basis must be provided at all depots.

#### 4.5.2 FEDERAL MUNICIPAL, RURAL, AND INDUSTRIAL WATER SUPPLY PROGRAM

The Municipal, Rural, and Industrial Water Supply Program, which uses federal funds, is administered according to N.D.A.C. Art. 89-12.

#### 4.5.3 DROUGHT DISASTER LIVESTOCK WATER ASSISTANCE PROGRAM

This program provides assistance for water supply projects that support livestock impacted during drought declarations and is administered according to N.D.A.C. Art. 89-11. The Commission may provide up to 65 percent cost-share for Drought Disaster Livestock Water Assistance Program projects, but no more than \$10,000 per project, and three projects per applicant.

### 4.6 FLOOD CONTROL

The Commission may provide cost-share for eligible items of flood control projects protecting communities from flooding and may include the repair of dams that provide a flood control benefit. When applicable, project sponsors must first acquire a CLOMR from FEMA prior to applying for construction-related cost-share assistance.

#### 4.6.1 FLOOD PROTECTION PROGRAM

This program supports local sponsor efforts to mitigate impacts and prevent future property damage due to flood events. The Commission may provide cost-share up to 60 percent of eligible costs for flood protection projects and related property acquisitions. Flood recovery acquisition efforts in severely impacted communities may be considered for alternative cost-share percentages based on the severity of the event and at the Commission's discretion.

All contracted costs directly associated with property acquisitions for project development or recovery under this program will be considered eligible for cost-share. This includes the acquisition of flood damaged properties or properties necessary for project development. Contracted costs may include: appraisals, legal fees (title and abstract search or update, etc.), property survey, closing costs, hazardous materials abatement needs (asbestos, lead paint, etc.), and site restoration.

Prior to applying for assistance related to acquisitions, the local sponsor must adopt and provide to the Secretary an acquisition plan that includes a description and map of properties to be acquired; the estimated cost of property acquisition, including contract costs and removal of structures; and the benefit of acquiring the properties.

The local sponsor must include a perpetual restrictive covenant on any properties purchased under this program. These covenants must be recorded either in the

deed or in a restrictive covenant that would apply to multiple deeds. Costs for property acquired, by easement or fee title, to preserve the existing conveyance of a breakout corridor recognized as essential to FEMA system accreditation may be eligible under this program.

The local sponsor must fund the local share for acquisitions. Federal funds are considered “local” for this program if they are entirely under the authority and control of the local sponsor. For any property acquisition, the agreement will specify that if the property is later sold, the local sponsor is required to reimburse the Commission the percent of sale price equal to the percent of original cost-share.

The cost-share application must include the return interval or design flow for which the project will provide protection. The Commission will calculate the amount of its financial assistance, based on the needs for protection against:

- a. One-hundred-year flood event as determined by a federal agency;
- b. The national economic development alternative; or
- c. The local sponsor’s preferred alternative if the Commission first determines the historical flood prevention costs and flood damages and the risk of future flood prevention costs and flood damages, warrant protection to the level of the local sponsor’s preferred alternative.

#### 4.6.2 FEMA LEVEE SYSTEM ACCREDITATION PROGRAM

The Commission may provide cost-share up to 60 percent for eligible services for FEMA 44 CFR 65.10 flood control or reduction levee system certification analysis. The analysis is required for FEMA to accredit the levee system for flood insurance mapping purposes. Typical eligible costs include site visits and field surveys to include travel expenses, hydraulic evaluations, closure evaluations, geotechnical evaluations, embankment protection, soils investigations, interior drainage evaluations, internal drainage hydrology and hydraulic reports, system modifications, break-out flows, and all other engineering services required by FEMA. The analysis will result in a comprehensive report to be submitted to FEMA and the Secretary.

Administrative costs to gather existing information or to recreate required documents, maintenance and operations plans and updates, and emergency warning systems implementation are not eligible.

#### 4.6.3 WATER RETENTION PROJECTS

The goal of water retention projects is to reduce flood damages by storing floodwater upstream of areas prone to flood damage. The Commission may provide cost-share up to 60 percent of eligible costs for water retention projects including purchase price of the property. Water retention structures constructed

with Commission cost-share must meet state dam safety requirements, including the potential of cascade failure. A hydrologic analysis including an operation plan and a quantification of the flood reduction benefits for 25, 50, and 100-year events must be submitted with the cost-share application.

#### 4.6.4 INDIVIDUAL RURAL AND FARMSTEAD RING DIKE PROGRAM

This program is intended to protect individual rural homes and farmsteads through ring dike programs established by water resource districts. All ring dikes within the program are subject to the Commission's Individual Rural and Farmstead Ring Dike Criteria provided in Appendix A. Protection of a city, community, or development area does not fall under this program but may be eligible for the flood control program. The Commission may provide up to 60 percent cost-share of eligible items for ring dikes up to a limit of \$55,000 per ring dike.

Landowners enrolled in the Natural Resource Conservation Service's (NRCS) Environmental Quality Incentive Program (EQIP) who intend to construct rural or farmstead ring dikes that meet the Department's elevation design criteria are eligible for a cost-share reimbursement of 20 percent of the NRCS construction payment, limited to a combined NRCS and Commission contribution of 80 percent of project costs.

### 4.7 WATER CONVEYANCE

The Commission may provide cost-share for eligible items of water conveyance projects. Water conveyance projects include rural flood control; bank stabilization; and snagging and clearing.

#### 4.7.1 RURAL FLOOD CONTROL

These projects are intended to improve the drainage and management of runoff from agricultural sources. The Commission may provide cost-share up to 45 percent of the eligible items for the construction of drains, channels, or diversion ditches. Assessment drains are eligible for up to 60 percent. Construction costs for public road crossings that are integral to the project are eligible for cost-share as defined in N.D.C.C. §§ 61-16.1-42 and 61-16.1-43. If an assessment-based rural flood control project involves multiple districts, each district involved must join in the cost-share application.

Cost-share applications for rural assessment drains will only be processed after the assessment vote has passed, and a drain permit has been obtained. If the local sponsor wishes to submit a cost-share application prior to completion of the aforementioned steps, a pre-application process will be followed.

A sediment analysis must be provided with any application for cost-share assistance for reconstruction of an existing drain. The analysis must be completed by a qualified professional engineer and must clearly indicate the percentage volume of sediment removal involved in the project. The cost of that

removal must be deducted from the total for which cost-share assistance is being requested.

#### 4.7.2 BANK STABILIZATION

The Commission may provide cost-share up to 50 percent of eligible items for bank stabilization projects on public lands or those lands under easement by federal, state, or political subdivisions. Bank stabilization projects are intended to stabilize the banks of lakes or watercourses, as defined in N.D.C.C § 61-01-06, with the purpose of protecting public facilities. Drop structures and outlets are not considered for funding as bank stabilization projects but may be eligible under other cost-share program categories. Bank stabilization projects typically consist of a rock or vegetative design and are intended to prevent damage to public facilities including utilities, roads, or buildings adjacent to a lake or watercourse.

#### 4.7.3 SNAGGING AND CLEARING

Snagging and clearing projects consist of the removal and disposal of fallen trees and associated debris encountered within or along the channel of a natural watercourse. Snagging and clearing projects are intended to prevent damage to structures such as bridges and maintain the hydraulic capacity of the channel during flood flows. The Commission may provide cost-share for up to 50 percent of the eligible items for snagging and clearing as well as any sediment that has accumulated in the immediate vicinity of snags and any trees in imminent danger of falling in the channel or watercourses as defined in N.D.C.C § 61-01-06. Items that are not eligible include snagging and clearing of man-made channels; the dredging of watercourses for sediment removal; the clearing and grubbing of cattails and other plant vegetation; or the removal of any other unwanted materials.

### 4.8 RECREATION

The Commission may provide cost-share up to 40 percent for projects intended to provide water-based recreation. Typical projects provide or complement water-based recreation associated with dams.

### 4.9 IRRIGATION

The Commission may provide cost-share for up to 75 percent of the eligible items for irrigation projects. The items eligible for cost-share are those associated with the off-farm portion of new central supply works, including water storage facilities, intake structures, wells, pumps, power units, primary water conveyance facilities, and electrical transmission and control facilities. The Commission will only enter into cost-share agreements with political subdivisions, including irrigation districts, and not with individual producers.

### 4.10 DAMS AND EMERGENCY ACTION PLANS

The Commission supports projects that address dam safety, deficiencies, repairs, and removals, as well as emergency action plans. In addition to the following cost-share

percentages, the Commission may lend a portion of the local share based on demonstrated financial need. For dams and emergency action plans, the Commission may:

- a. Provide cost-share for up to 60 percent of the eligible items for dam deficiency or repair projects and dam breach or removal projects.
- b. Provide cost-share up to 75 percent to mitigate public dangers associated with low head dam roller effects. Cost-share funding will be considered under this category for dam removals, or the placement of rock rip rap, but not both. Modifications, repairs, or removals that go beyond what is required to mitigate roller effects may be cost-shared at lesser amounts – depending on the purpose for which the supplemental modifications or repairs are being made (i.e. recreation, water supply, flood control, irrigation, etc).
- c. Provide cost-share up to 80 percent to develop or update emergency action plans of each dam classified as high or medium/significant hazard.

## 5 DEFINITIONS

**CAPITAL IMPROVEMENT FUND (CIF)** is money set aside from a portion of user fees for replacement of capital projects. Documentation for a Capital Improvement Fund shall include information regarding the Capital Improvement Fund's goal in meeting the Capital Improvement Plan, a rate structure to meet the goal, implementation of the rate structure, details about any restrictions on the fund, and mechanisms for releasing assets from the fund for projects.

**CAPITAL IMPROVEMENT PLAN (CIP)** is a planning and management tool that contains a timeline and estimated costs for planned replacement of individual Capital Projects for a system over a specified period of time. A Capital Improvement Plan should include an inventory of all existing assets, a condition assessment of all assets, estimated replacement costs, and an estimated timeframe for replacements.

**CAPITAL PROJECTS** include reservoirs, pump stations, water treatment plants, and pipelines.

**CONSTRUCTION COSTS** are those efforts and services to be completed as work under construction contract documents. Items could include earthwork, concrete, mobilization and demobilization, dewatering, materials, seeding, rip-rap, crop damages, re-routing electrical transmission lines, moving storm and sanitary sewer system and other underground utilities and conveyance systems affected by construction, mitigation required by law related to the construction contract, water supply works, irrigation supply works, and other items and services provided by the contractor. Construction costs are only eligible for cost-share if incurred after Commission approval and if the local sponsor has complied with N.D.C.C. in soliciting and awarding bids and contracts, and complied with all applicable federal, state, and local laws.

**COST-SHARE** means funds appropriated by the legislative assembly or otherwise transferred by the Commission to a local entity under Commission policy as reimbursement for a percentage of the total approved cost of a project approved by the Commission.

**DEPARTMENT** means the Department of Water Resources.

**ECONOMIC ANALYSIS** means an estimate of the economic benefits and direct costs that result from the development of a project.

**ECONOMIC IMPACT** describes the direct and indirect changes in a defined region's economy due to a specific business, organization, policy, program, project, activity or other economic event.

**ENGINEERING SERVICES** include pre-construction and construction engineering. Pre-construction engineering is the engineering necessary to develop plans and specifications for permitting and construction of a project including preliminary and final design, material testing, flood insurance studies, hydraulic models, and geotechnical

investigations. Construction engineering is the engineering necessary to build the project designed in the pre-construction phase including construction contract management, and construction observation. Administrative and support services not specific to the approved project are not engineering services. Engineering services are eligible costs if incurred after Commission approval.

**EXPANSIONS** are construction related projects that increase the project area or users served. Expansions do not include maintenance, replacement, or reconstruction activities.

**EXTRAORDINARY MAINTENANCE COSTS** include the repair or replacement of portions of facilities or components that are above and beyond regular or normal maintenance.

**GRANT** means a one-time sum of money appropriated by the legislative assembly and transferred by the Commission to a local entity for a particular purpose. A grant is not dependent on the local entity providing a particular percentage of the cost of the project.

**IMPROVEMENTS** are construction related projects that upgrade a facility to provide increased efficiency, capacity, or redundancy. Improvements do not include any activities that are maintenance or replacement.

**LIFE CYCLE COST ANALYSIS** means the summation of all costs associated with the anticipated useful life of a project, including project development, land, construction, operation, maintenance, and disposal or decommissioning.

**LITIGATION** for this policy is defined as legal action that would materially affect the ability of the local sponsor to construct the project; that would delay construction such that the authorized funds could not be spent; or is between political subdivisions related to the project.

**LOAN** means an amount of money lent to a sponsor of a project approved by the Commission to assist with funding approved project components. A loan may be stand-alone financial assistance.

**LOCAL SPONSOR** is the entity submitting a cost-share application and must be a political subdivision, state entity, or commission legislatively granted North Dakota recognition that applies the necessary local share of funding to match Commission cost-share. They provide direction for studies and projects, public point of contact for communication on public benefits and local concerns, and acquire necessary permits and rights-of-way.

**OPERATION & REGULAR MAINTENANCE** include processes, inputs, repairs, and general upkeep of components and facilities to support proper operation and function. These items may occur on a regular or annual basis, but not in all cases. Regular

maintenance activities simply help ensure the asset will remain serviceable throughout its originally predicted useful life.

**PRE-CONSTRUCTION** activities include study and report phase efforts, and preliminary and final design. Study and report phase efforts are meant to identify water related problems, evaluate options to solve or alleviate the problems based on technical and financial feasibility, and provide a recommendation and cost estimate of the best option to pursue. Engineering design is considered complete when final plans, drawings, and specifications for permitting and construction of a project, including associated cultural resource and archeological studies, are delivered to the local sponsor. Study and report phases, as well as design can also include mapping and surveying to gather data for a specific task such as flood insurance studies and floodplain mapping, LiDAR acquisition, and flood imagery attainment.

**RECLAIMED WATER** is municipal wastewater that has been treated to meet specific water quality criteria with the intent of being used for a range of purposes. The term recycled water is synonymous with reclaimed water.

**REPLACEMENT** means installing components similar to what currently exists with the intention of preserving existing service levels.

**STORMWATER** is rainwater or melted snow that runs off streets, lawns, and other sites.

**SUSTAINABLE OPERATION, MAINTENANCE, AND REPLACEMENT PLAN** is a description of the anticipated operation, maintenance, and replacement costs with a statement that the operation, maintenance, and replacement of the project will be sustainable by the local sponsor.

**WASTEWATER** is used water discharged from homes, businesses, industry, and agricultural facilities.

**WASTEWATER EFFLUENT** is treated wastewater flowing out of a wastewater treatment plant.

**WATER CONVEYANCE PROJECT** means any surface or subsurface drainage works, bank stabilization, or snagging and clearing of water bodies.

**WORK** includes and is the result of performing or providing all labor, services, and documentation necessary for construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the construction contract documents.<sup>1</sup>

---

<sup>1</sup> Engineers Joint Contract Documents Committee, 2014 – National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers

## 6 POLICY HISTORY

**Policy Adopted:** 8/13/1998

**Policy Version SWC\_01.2025 Adopted:** 04/10/2025

**Policy Version SWC\_01.2025 Effective:** 05/12/2025

### Previous Revision(s):

05/12/2025 Rural Flood Control	10/31/2011 State Engineer approvals
10/10/2024 Program Violations	06/21/2011 Rural flood control
06/13/2024 Meter Replacements	03/28/2011 NRCS ring dikes
10/13/2023 Irrigation Cost-Share	10/26/2010 Significant changes
08/01/2023 Ring Dike Permits	03/11/2010 Payment schedule
04/13/2023 Secretary approvals	12/11/2009 Bank stabilization
12/09/2022 Significant updates	08/18/2009 Rural flood control
12/10/2021 Minor changes	06/23/2009 Significant changes
08/12/2021 Secretary of SWC	03/23/2009 Dam removal/breach, MR&I
04/09/2020 Dam emergency action plans	12/03/2008 Rural flood control
12/06/2019 Significant changes	09/30/2008 Snagging and clearing
08/08/2019 Ineligible items	06/23/2008 Bank stabilization, dam safety repairs, dam emergency action plans
06/19/2019 Significant changes	03/18/2008 Rural flood control
10/11/2018 Water supply	07/17/2007 Rural flood control
08/09/2018 Significant changes	05/09/2007 State Engineer approvals
06/14/2018 Significant changes	06/28/2006 Rural flood control
10/06/2015 Significant changes	06/22/2005 Rural flood control
12/05/2014 Easement costs	08/06/2003 Culvert funding
09/15/2014 Significant changes	06/12/2003 Rural flood control
06/19/2013 Rural flood control	12/06/2002 Rural flood control
12/07/2012 Rural assessment drains	05/01/2002 Drain reconstruction
09/17/2012 Ring dikes, cost overruns	08/16/2001 Rural flood control
03/29/2012 Property acquisitions	08/13/1998 Original policy adoption
02/02/2012 Property acquisitions	

For questions regarding this policy, please contact the Department's Planning & Education Division at (701) 328-4989 or [dwrcostshare@nd.gov](mailto:dwrcostshare@nd.gov).

## APPENDIX A

### INDIVIDUAL RURAL AND FARMSTEAD RING DIKE CRITERIA

#### MINIMUM DESIGN CRITERIA

- Height: The dike must be built to an elevation 2 ft above either the 100-year flood or the documented high water mark of a flood event of greater magnitude, whichever is greater.
- Top Width:
  - If dike height is 5 ft or less: 4 ft top width
  - If dike height is between 5 ft and 14 ft: 6 ft top width
  - If dike height is greater than 14 ft: 8 ft top width
- Side Slopes: 3 horizontal to 1 vertical
- Strip topsoil and vegetation: 1 ft
- Adequate embankment compaction: Fill in 6-8 inch layers, compact with passes of equipment
- Spread topsoil and seed on ring dike

#### LANDOWNER RESPONSIBILITY

Landowners are responsible to address internal drainage on ring dikes. If culverts and flap gates are installed, these costs are eligible for cost-share. The landowner has the option of completing the work or hiring a contractor to complete the work.

IF CONTRACTOR DOES THE WORK, payment is for actual costs with documented receipts.

IF LANDOWNER DOES THE WORK, payment is based on the following unit prices:

- Stripping, spreading topsoil, and embankment fill: Secretary will determine rate schedule based on current local rates.
- Seeding: Cost of seed times 200 percent
- Culverts: Cost of culverts times 150 percent
- Flap gates: Cost of flap gates times 150 percent

#### OTHER FACTS AND CRITERIA

- The topsoil and embankment quantities will be estimated based on dike dimensions. Construction costs in excess of the 3:1 side slope standard will be the responsibility of the landowner. Invoices will be used for the cost of seed, culverts, and flap gates.

- Height can be determined by existing FIRM data or known elevations available at county floodplain management offices. Engineers or surveyors may also assist in establishing height elevations.
- The projects will not require extensive engineering design or extensive cross sections.
- A dike permit is required from the Department.

## APPENDIX B

### STANDARD OPERATING PROCEDURES

It has been determined by the Commission that there are Cost-Share Program operational procedures that are more appropriately clarified through Standard Operation Procedures (SOP). The following SOP have been approved by the Commission to assist Department staff with various administrative decisions related to the Cost-Share Program.

### COST INCREASES

The following are various types of projects for which sponsors request cost increase assistance.

1. Projects approved for cost-share during the current biennium and are requesting additional cost-share funding for cost increases.

#### **SOP**

- Requests in excess of \$100,000 will be presented to the Commission for consideration.
  - Requests of \$100,000 or less will be considered by the Secretary.
2. Projects approved for cost-share during past biennia and are requesting current biennium cost-share funding or available carryover funds for cost increases.

#### **SOP**

- Requests in excess of \$100,000 may be deferred for the first six months of the biennium before being presented to the Commission for consideration.
  - Requests of \$100,000 or less may be deferred for the first six months of the biennium before being considered by the Secretary.
3. Projects that were denied or deferred for cost increase funding during the previous biennium.

#### **SOP**

- Requests in excess of \$100,000 may be deferred for the first six months of the biennium before being presented to the Commission for consideration.
- Requests of \$100,000 or less may be deferred for the first six months of the biennium before being considered by the Secretary.

### PROJECTS NOT SUBMITTED TO THE WATER DEVELOPMENT PLAN

Project sponsors will sometimes request cost-share funding for projects that are eligible under the Department's Cost-Share Policy but were not submitted or included in the current Water Development Plan (WDP). The following are various types of projects that are not included in the current WD but are submitted for cost-share consideration.

1. Projects that were, or were not identified in the previous biennium WDP, and are not included in the current WDP.

**SOP**

- These projects will be deferred for the first six months of the biennium for Commission consideration. (Exceptions are those projects considered to be an emergency—directly impacting human health and safety.)

**CENTURY CODE OR ADMINISTRATIVE CODE REFERENCE UPDATES****SOP**

- Century Code or Administrative Code reference updates in this policy may be made at the Secretary's discretion, with notification to Commission members.

**PROGRAM VIOLATIONS**

1. Project sponsors or their representative consultant(s) have engaged in a perceived professional ethics violation,

**SOP**

- Department staff and Commission members will evaluate reporting requirements to professional boards for which they are responsible, and then notify those boards if required following incidents.

2. Project sponsors or their representative consultant(s) have engaged in a perceived criminal act.

**SOP**

- In consultation with legal counsel, the Commission will determine if the facts of the incident should be referred to the State's Attorney for review, and if necessary, file a criminal complaint.

## APPENDIX C

### BASIC ASSET INVENTORY ASSESSMENT AND MANAGEMENT GUIDANCE FOR PUBLIC WATER SYSTEMS

#### C.1 INTRODUCTION

The *Basic Asset Inventory Assessment and Management Guidance for Public Water Systems (BAIA)* includes sample worksheets and instructions to help you: conduct an inventory of your utility's resources; prioritize repairs and replacements of assets; plan for future needs through development of a Capital Improvement Plan (CIP); and develop a budget to address those needs. As an addendum to this part of the guide, the North Dakota Department of Water Resources (DWR) has also developed, in cooperation with Bartlett and West Engineering and AECOM, an electronic workbook (BAIA Tool) to assist with your asset management process. The BAIA Tool is available free for download via the DWR website at [dwr.nd.gov](http://dwr.nd.gov) - then click on "Project Development."

As you work through BAIA, you may find it beneficial to review other sources or guidance. DWR suggests review of related resources provided by the North Dakota Department of Environmental Quality (ND DEQ) and US Environmental Protection Agency (US EPA). If you have questions or require additional assistance, DWR staff may be able to assist. Please call (701) 328-4989 or email [dwrcostshare@nd.gov](mailto:dwrcostshare@nd.gov).

This process is designed to provide your utility and DWR with information to assist in sound decision-making for infrastructure investments. DWR hopes this process assists local governments to keep track of the assets they do have and the cost to maintain current and future infrastructure.

#### C.2 ASSET MANAGEMENT: THE BASICS

##### C.2.1 WHAT IS ASSET MANAGEMENT?

Asset management is a planning process that prepares you to efficiently manage your infrastructure assets and provides awareness of the financial resources necessary to rehabilitate and replace them when necessary. This process provides an opportunity to understand the level of component infrastructure the community has committed to maintaining; and to reduce costs and increase the efficiency, reliability, and sustainability of your assets. For a water system, an "asset" may include any building, tool, piece of equipment, furniture, pipe, or machinery used in the operation of the system.

Asset management can help you get the most value out of the assets that make up your water system. It can also help you maintain the financial capacity to make scheduled repairs and planned replacement of assets before there is a crisis.

Appendix C includes instructions and worksheets to help you complete each of the four steps of asset management listed below. Plans should be adjusted

based on experience and the characteristics of your system. Plans can be reevaluated every year as part of budgeting and rate determination activities, and prior to financially committing to additional or new infrastructure. Your plan is most useful if it reflects the current conditions of your water system. This should be done to the best of your reasonable ability. Some systems will have precise inventory and location information already on hand, other systems may only be able to estimate what infrastructure they have and may even be uncertain of age, location, and materials used. The point is to do the best you can but not to incur unreasonable expenses solely for the purpose of developing this inventory and plan.

To ensure your system is sustainable for the next several decades, it is important to evaluate immediate needs along with future needs. For successful asset management planning to occur, you must also consider:

- Projected growth or decline in population or users served;
- Equipment costs;
- Inflation; and
- The overall age and life span of the infrastructure within your system.

## C.2.2 HOW DO I PRACTICE PROPER ASSET MANAGEMENT?

### **Step 1. Take an inventory of your system and prioritize your assets.**

Document what assets you have and determine how critical each of your inventoried assets, and their failure, is to your operations. This will help you make informed decisions to ensure that you have funds available for the repair or replacement of the vital parts of the system.

### **Step 2. Develop a comprehensive plan for managing your assets.**

Based on your inventory and prioritization efforts in Step 1, identify the repairs and replacements you expect to make to your assets within the timeframe you expect to make them. Then estimate the amount of money your system would need to address those items today. The BAIA Tool will help estimate how much money you will need to set aside or put into reserves for these expenses. This plan can address multiple time horizons as you look at near and long-term reserve needs and future expenses.

### **Step 3. Develop a budget for managing your assets.**

Based on your comprehensive plan from Step 2, identify your expected revenues and compare them to your expected expenses. This process may involve conducting a rate study. Again, you can use this process to look at assets and budget implications for the near- and long-term.

### **Step 4. Implement your asset management plan.**

Once you have completed the initial three steps of your asset management plan you need to implement it. Work with your management team - including your council or board members if appropriate, to complete your identified repairs and

maintenance, and to make sure you have the technical and financial means necessary to provide long-term reliable service.

### C.3 INVENTORY YOUR SYSTEM AND PRIORITIZE YOUR ASSETS

Use the electronic fillable BAIA Tool (available for download at [dwr.nd.gov](http://dwr.nd.gov) and then click on “Project Development”) to create a comprehensive inventory of your system and to prioritize your assets. Developing (as best you can) an accurate inventory of your system’s assets is important to overall asset management, as all other steps will refer back to the data gathered during this step. It will also help you to establish the relative importance of the equipment and components of your system, and to identify the assets that are most critical to operations. A utility’s assets include the facilities that make up the water system as well as all the equipment and supplies that are used to operate the system.

The most significant asset of a water system is the water source. A well-run system is worthless without a reliable water source and delivery system. If you have not assessed the health and sustainability of your water source and you are not maintaining water-availability data, you should complete a “source assessment.” Guidance for a source assessment can be found on the ND DEQ website.

You may find it necessary to make adjustments to your budget if you need to drill a new well or make an interconnection with another system. DWR is highly supportive of leveraging regionalization efforts to achieve economies of scale and reduce redundant infrastructure.

You will need to assess your source to ensure that it is reliable for the long-term and that your well field or surface water intake is adequate to provide water to your system. If you have assessed your source and you know your source is reliable for the long-term, you may not need to include expenditures for well drilling or rehabilitation in near-term budgets. However, it is a good idea to assess your source annually to ensure that your system maintains an adequate water supply and to include longer-term expected expenditures to address the rehabilitation of water sources when they are needed.

#### C.3.1 BASIC ASSET INVENTORY TOOL

Before you begin to fill in specific information related to your system’s assets in the BAIA Tool, fill in all of the black information fields in the Basic Input tab (Figure 1). You should update this worksheet at least once a year. You can either make adjustments to the worksheet as the conditions of your assets change or start a new worksheet each year.

<b>Current Year:</b>	<b>2023</b>
<b>Inventory Date :Month/Day/Year</b>	
<b>Project:</b>	Name that matches the application
<b>Sponsor:</b>	Name of the sponsoring entity
<b>Sponsor Contact:</b>	Person to contact at the sponsoring entity
<b>Phone:</b>	Contact phone number
<b>Engineer (If Applicable):</b>	Name of engineer or consultant if applicable
<b>Phone:</b>	Contact phone number
<b>Number of System Customers</b>	650
<b>Interest Earned on Capital Improvement Funds (CIF)</b>	4.50%
<b>Current CIF Balance</b>	\$100,000.00
<b>Annual CIF Contribution</b>	\$25,000.00
<b>Cash Funding Target (Percentage %) New Assets</b>	35%
<b>Cash Funding Target (Percentage %) Existing Asets</b>	50%
<b>DWR Date Received :Month/Day/Year</b>	

Figure 1. Basic Input Tab Information

### C.3.2 IDENTIFY YOUR CURRENT ASSETS

The BAIA Tool includes tabs for you to inventory your utility’s assets to the best of your ability. The tabs are organized by asset type, including: 1a Source & Treatment, 1b Storage & Pump Stations, 1c Mains & Distribution Lines, 1d Other Asset Appurtenances, and 1e Other Assets (Figure 2). Within these tabs you will be including specific assets such as pumps, chlorinators, wells, tanks, buildings, vehicles, intake structures, lift stations, water mains, and all other physical assets, as examples. If you do not have a current list and location for each asset, and this is your initial inventory, it may help to organize them by type of asset and year installed (or age), or expected repair/replacement date. This may allow you to group items of the same life and expected replacement schedule together where detailed information is not available.

If you have the information available to you, be as specific as possible by providing the location, manufacturer, material composition, horsepower (hp), gallon-per-minute (gpm) capacity, or other identifying characteristics for each asset; or refer to this information if it is included in your operations and maintenance manual. This information will be useful when calculating replacement costs in step 7. For example, you might list a piece of equipment as “Well 1 Pump (25 hp, 200 gpm), 2003” or a section of your distribution system as “10-inch Glued PVC on 300-700 Blocks Main St., 2012.” These items should be noted so more information can be added during the subsequent annual updates to the inventory.

Current Asset Inventory - Source and Treatment								Current Year: 2023
Note: Depending on project size and complexity, multiple worksheets may be used for different asset classes (pump stations, tanks, treatment plants, etc.)								CCI: 3%
Asset Type	Asset Description	Unique ID (If Applicable)	Installation Year	Original Cost/ Cost Basis	Current or Original Cost	Useful Life (Years)	Projected Replacement Year	Condition Assessment (If Completed)
Sensors	SCADA		2016	\$ 250,000	O	7	2023	3 - Minor Repairs Required
Intake Structure	System North Segment		1992	\$ 650,000	O	35	2027	2 - Normal Wear & Tear
Hydrants	All		1986	\$ 80,000	C	40	2026	1 - Good Working Order
Valves - Mechanical	All		2015	\$ 26,000	O	15	2030	N/A
Pump Equipment	Spare On-Hand		2020	\$ 125,000	C	10	2030	5 - Complete Replacement
Cast-In-Place Concrete	Treatment Plant		1948	\$ 6,000	O	75	2023	1 - Good Working Order
Mainlines	Raw Water to Treatment Plant		2020	\$ 235,000	C	75	2095	1 - Good Working Order

Basic Input	1a. Source and Treatment	1b. Storage & Pump Stations	1c. Mains & Distribution Lines	1d. Other & Asset Appurtenances	1e. Other Asset
-------------	--------------------------	-----------------------------	--------------------------------	---------------------------------	-----------------

Figure 2. Current Asset Inventory Information

### C.3.3 ASSET AGE (INSTALLATION YEAR)

For each asset, fill in the installation year (Figure 2). If an asset has been previously used by another system, you should list the total age, not just the length of time your system has used it. If age is unknown, then estimate to the best of your ability.

### C.3.4 USEFUL LIFE

Use the manufacturer's recommendations, if available, or the information in Table 1 to enter the expected useful life for each asset (Figure 2). Table 1 provides the estimated useful life for many standard pieces of equipment, assuming proper maintenance has been conducted. For new equipment, use the expected useful life. For existing or older assets, estimate based on useful life when installed and maintenance records.

When entering this information, consider the current condition of each asset as well as routine maintenance activities, repairs, and rehabilitation. Focus on conditions that may affect its useful life (e.g., rust or broken parts). If your asset is in poor condition, has not been maintained according to the manufacturer's recommendations, or operates under challenging circumstances (poor water or soil quality, excessive use, etc.), then the expected useful life is likely to be only a fraction of the original expected useful life. If the asset is in good condition and has been properly maintained according to the manufacturer's recommendations, use the full expected useful life. If the asset is not listed in the useful life dropdown list, enter the asset under its own line in the Useful Life tab (Figure 3). Entering a lower useful life produces a more conservative estimate, which may help to replace an asset in a worst-case scenario.



Figure 3. Useful Life Tab in BAIA Tool

The expected useful life is affected by several factors, such as the frequency and quality of the maintenance, extraordinary maintenance intended to extend the life, and local environmental factors.

### C.3.5 DESCRIBE THE CONDITION (CONDITION ASSESSMENT)

Choose the dropdown value that best describes the current condition of each of the system's assets. You will be presented with five options ranging from "Good Working Order" to "Complete Replacement" (Figure 2). Use ancillary information or sources if necessary. Items such as when repairs to the system included similar assets within the system may provide insight regarding the condition of like assets.

### C.3.6 CALCULATING REMAINING USEFUL LIFE

For each asset, the BAIA Tool will calculate the remaining useful life by adding the Expected Useful Life to the Installation Year and subtracting the Current Year column. You may also adjust this by entering data into the Adjustment to Useful Life column.

Table 1. Estimated Useful Life For Standard Equipment

<b>Asset Type</b>	<b>Expected Useful Life (Years)</b>
Backflow Prevention	15
Primary & Backup Gensets	20
Blow-off Valves	40
Building	50
Cast-In-Place Concrete	75
Cathodic Protection	20
Chlorination Equipment	15
Computer-Communication Equipment	5
Disinfection Equipment	5
Distribution Lines	75
Fencing	20
Groundwater Wells	20
Heavy Equipment	10
Hydrants	40
Intake Structure	35
Lab & Monitoring Equipment	5
Landscaping & Grading Equipment	40
Mainlines	75
Meter - Master	10
Meters	20
Motor Controls / VFD*	10
Office Equipment	15
Other	50
Pipeline Appurtenances	20
Pump Equipment	10
Real Estate	50
Reservoir & Storage - Concrete	50
Reservoir & Storage - Metal	30
SCADA*	15
Sensors	7
Surface Water Intake	20
Tools & Shop Equipment	15
Transportation Equipment	10
Valves	35
Valves - Mechanical	15
Water Treatment - Filtration	30
Water Treatment - Membrane	20

\*VFD (Variable Frequency Drives), SCADA (Supervisory Control and Data Acquisition)

### C.3.7 CALCULATING EXPECTED (CONDITION-BASED) REPLACEMENT YEAR

For each asset, the worksheet will calculate the expected replacement year by adding the Useful Life to the Installation Year and the Adjustment to Useful Life factor, which should be justified by condition inspections or other replacement or rehabilitation actions (Figure 4).

Current Asset Inventory - Source and Treatment							
Condition Assessment (If Completed)	Assessment Completed (Date)	Assessment Notes	Adjustment to Useful Life If Necessary (Years)	Condition-based Replacement Year	Risk Analysis: Consequence of Failure	Risk Analysis: Probability of Failure	Asset Risk Rating Out of 10
3 - Minor Repairs Required				2023	2 - Low	1 - Highly Unlikely	3
2 - Normal Wear & Tear				2027	5 - Critical	5 - Very High Likelihood	10
1 - Good Working Order				2026	1 - Marginal	3 - Moderate Likelihood	4
N/A				2030	1 - Marginal	1 - Highly Unlikely	2
5 - Complete Replacement				2030	4 - High	5 - Very High Likelihood	9
1 - Good Working Order				2023	3 - Moderate	2 - Unlikely	5
1 - Good Working Order				2090	5 - Critical	1 - Highly Unlikely	6

Figure 4. Additional Current Asset Information.

### C.3.8 DESCRIBE THE RISK (RISK ANALYSIS)

Choose the consequence of failure for each element listed (Certain equipment redundancy is required by rule for drinking water systems. Please refer to the appropriate state or federal code.). For each asset, consider how critical it is to the operation of your system, its remaining useful life, the availability of other assets to replace it or be used as a backup for it, its maintenance history, and any other factors relevant to evaluating its priority for funding. Rank each asset from “1” to “5,” where “1” is the lowest consequence of failure and “5” is the highest, for each asset in the Risk Analysis: Consequence of Failure (Figure 4).

Finally, estimate the probability of failure using the dropdown list under Risk Analysis: Probability of Failure (Figure 4). Rank each asset from “1” to “5,” where “1” is the lowest risk of failure and “5” is the highest. The Consequences of Failure and Probability of Failure are combined to provide a combined Asset Risk Rating (Figure 4). Use this combined information to determine how each asset should be prioritized. Because there are only ten combined risk levels, some assets will have the same level.

As these assets are evaluated you may want to consider several factors.

- Are there backups?
- Are there different assets that can do the same job?
- How large is the impact to the entire system or a single user?
- Has extraordinary maintenance been performed to extend the life or condition of the asset?

## C.4 CURRENT REPLACEMENT COSTS (CALCULATING COST TO REPLACE)

Based on your estimate for the cost of replacing assets entered into the inputs covered in Section 1, the BAIA Tool will estimate the cost of replacing each asset when the useful life expires. When possible, current replacement costs should be used. The BAIA Tool will automatically adjust for inflation. If you only have historic costs, when you select “O” for Original Cost (Figure 2), the system will estimate today’s cost for the same

asset. However, this may not be as accurate as using current costs if they are available or can be inferred from other or neighboring projects that were recently completed or bid. In this case select “C” for Current Cost to replace (Figure 5). It is a challenge to place a specific value on future costs since changes in the economy may be difficult to predict. A value for inflation is identified on the spreadsheet, however an alternate value may be manually entered in the space provided. The projected inflation rate may be increased if a more conservative capital improve plan is desired. The default inflation rate is based on the last 10 years Construction Cost Index (CCI) and a discount rate is then calculated from that value. The default inflation rate is set based on the best available information from the US Department of Commerce. If you have questions about using an alternative inflation rate, consult your local auditor or reach out to the DWR.

Current Asset Inventory - Source and Treatment									
Asset Type	Asset Description	Unique ID (If Applicable)	Installation Year	Original Cost/ Cost Basis	Current or Original Cost	Useful Life (Years)	Projected Replacement Year	Condition Assessment (If Completed)	
Sensors	SCADA		2016	\$ 250,000	O	7	2023	3 - Minor Repairs Required	
Intake Structure	System North Segment		1992	\$ 650,000	O	35	2027	2 - Normal Wear & Tear	
Hydrants	All		1986	\$ 80,000	C	40	2026	1- Good Working Order	
Valves - Mechanical	All		2015	\$ 26,000	O	15	2030	N/A	
Pump Equipment	Spare On-Hand		2020	\$ 125,000	C	10	2030	5 - Complete Replacement	
Cast-In-Place Concrete	Treatment Plant		1948	\$ 6,000	O	75	2023	1- Good Working Order	
Mainlines	Raw Water to Treatment Plant		2020	\$ 235,000	C	75	2095	1- Good Working Order	

Figure 5. Type of Cost (Original or Current) Dropdown Pick List.

The BAIA Tool Tab 2 “Current Replacement Costs” provides summary information on the assets and estimates the future price at the time of replacement (Figure 6). The replacement year is highlighted and repeated based on the next time an asset will need to be replaced. For example, if an asset had a 10-year useful life and was recently installed, the projected cost to replace it in year 10 and year 20 and year 30 and so on is highlighted. Recognizing that once an asset is replaced it will still have to be replaced again at some predictable time in the future.

Replacement Costs Based on Inflation Indices											
Current Year: 2023		Alleimate CCI:		$N = r + i$ Where: $r$ = Real Interest Rate $N$ = Nominal Rate, $i$ = Inflation		$d(\text{Discount Rate}) = \frac{(1 + N)}{(1 + (N - r))} - 1$					
Average CCI: 2.94%		Asset Category 1a   2.83%									
Interest Rate CIF: 4.50%		Asset Category 1b   3.00%									
Discount Rate: 1.51%		Asset Category 1c   3.00%									
		Asset Category 1d   2.83%									
		Asset Category 1e   2.83%									
Forecasted Replacement Year & Nominal Cost											
Asset Type 1a											
Asset Type	Asset Description	Installation Year	Projected Replacement Year	Original Cost/ Cost Basis	Risk Rating (Out of 10)	2023	2024	2025	2026	2027	2028
Sensors	SCADA	2016	2023	\$ 306,309	3	\$ 306,309	\$ 315,328	\$ 324,611	\$ 334,168	\$ 344,007	\$ 354,135
Intake Structure	System North Segment	1992	2027	\$ 1,598,099	10	\$ 1,598,099	\$ 1,645,153	\$ 1,693,593	\$ 1,743,459	\$ 1,794,793	\$ 1,847,639
Hydrants	All	1986	2026	\$ 80,000	4	\$ 80,000	\$ 82,355	\$ 84,778	\$ 87,274	\$ 89,842	\$ 92,487
Valves - Mechanical	All	2015	2030	\$ 32,794	2	\$ 32,794	\$ 33,759	\$ 34,752	\$ 35,774	\$ 36,826	\$ 37,910
Pump Equipment	Spare On-Hand	2020	2030	\$ 125,000	9	\$ 125,000	\$ 128,680	\$ 132,467	\$ 136,367	\$ 140,381	\$ 144,514
Cast-In-Place Concrete	Treatment Plant	1948	2023	\$ 52,890	5	\$ 52,890	\$ 54,446	\$ 56,048	\$ 57,697	\$ 59,395	\$ 61,143
Mainlines	Raw Water to Treatment Plant	2020	2090	\$ 235,000	6	\$ 235,000	\$ 241,918	\$ 249,041	\$ 256,372	\$ 263,920	\$ 271,690
Asset Type 1b											
Asset Type	Asset Description	Installation Year	Projected Replacement Year	Original Cost/ Cost Basis	Risk Rating (Out of 10)	2023	2024	2025	2026	2027	2028
Pipeline Appurtenances	Miscellaneous	2007	2027	\$ 39,773	4	\$ 39,773	\$ 40,943	\$ 42,147	\$ 43,387	\$ 44,664	\$ 45,978
Primary & Backup Gensets	Backup Power	2004	2024	\$ 125,000	4	\$ 125,000	\$ 128,680	\$ 132,467	\$ 136,367	\$ 140,381	\$ 144,514
Heavy Equipment	Construction Equip	2015	2025	\$ 425,000	7	\$ 425,000	\$ 437,513	\$ 450,394	\$ 463,655	\$ 477,306	\$ 491,359
Building	Maintenance Shop	1978	2028	\$ 62,745	6	\$ 62,745	\$ 64,592	\$ 66,492	\$ 68,449	\$ 70,464	\$ 72,538
Computer-Communication Equipment	Radios	2020	2025	\$ 2,500	4	\$ 2,500	\$ 2,573	\$ 2,647	\$ 2,724	\$ 2,804	\$ 2,885
Building	10' x 15' Storage Shed	1988	2038	\$ 9,000	4	\$ 9,000	\$ 9,264	\$ 9,536	\$ 9,816	\$ 10,104	\$ 10,400
Reservoir & Storage - Concrete	Underground Storage Tank	1985	2035	\$ 75,310	6	\$ 75,310	\$ 77,526	\$ 79,808	\$ 82,157	\$ 84,575	\$ 87,064
Asset Type 1c											
Asset Type	Asset Description	Installation Year	Projected Replacement Year	Original Cost/ Cost Basis	Risk Rating (Out of 10)	2023	2024	2025	2026	2027	2028
Backflow Prevention	Backflow valves	2018	2033	\$ 25,000	7	\$ 25,000	\$ 25,735	\$ 26,492	\$ 27,271	\$ 28,073	\$ 28,898
Mainlines	PVC 6" -1000 feet	2010	2065	\$ 120,000	7	\$ 120,000	\$ 123,532	\$ 127,169	\$ 130,912	\$ 134,765	\$ 138,733
Pipeline Appurtenances	Various	2010	2030	\$ 15,000	4	\$ 15,000	\$ 15,441	\$ 15,894	\$ 16,361	\$ 16,842	\$ 17,337
Blow-off Valves	Blow Off	2002	2042	\$ 5,000	3	\$ 5,000	\$ 5,146	\$ 5,297	\$ 5,452	\$ 5,611	\$ 5,775
Distribution Lines	Service lines 2" 4000feet	2004	2079	\$ 80,000	3	\$ 80,000	\$ 82,355	\$ 84,778	\$ 87,274	\$ 89,842	\$ 92,487
Meters	Meters	2015	2035	\$ 31,533	4	\$ 31,533	\$ 32,460	\$ 33,418	\$ 34,398	\$ 35,410	\$ 36,451

Figure 6. Forecasted Replacement Years and Cost Estimates – Tab 2 “Current Replacement Costs” of BAIA Tool.

### C.5 REPLACEMENT SCHEDULE (CALCULATING COSTS AND WHEN REPLACEMENT COST MAY BE INCURRED)

Based upon the replacement cost estimations above, a summary table is developed for each year in the future analysis period in the BAIA Tool Tab 3 “Replacement Schedule.” This table identifies each item, the cost, and the financial need to replace each. The example in Figure 7 is from the year 2023 for Asset Type 1, as an example. You can see the financial capital set aside needed to facilitate the replacement of the asset at the time needed. The Risk Rating is also carried forward for prioritization considerations by the appropriate decision authorities.

Replacement Schedule (Current Assets) Current Year: 2023  
Interest Earned on Capital Improv 4.50%  
Update formula like

2023 Replacement Forecast							
Asset Type	Asset Description	Year of Installation	Projected Replacement Year	Original Cost	Risk Rating (Out of 10)	Projected Replacement Cost	Annual Financial Need
Asset Type 1A							
Sensors	SCADA	2016	2023	\$ 306,309	3	\$ 306,309	\$ 153,155
Cast-In-Place Concrete	Treatment Plant	1948	2023	\$ 52,890	5	\$ 52,890	\$ 26,445

Figure 7. Replacement Forecast Information – Tab 3 “Replacement Schedule” of BAIA Tool.

### C.6 NEW CAPITAL IMPROVEMENTS AND INVESTMENT SCHEDULE

Enter any planned capital improvements or investments in the schedule provided in BAIA Tool Tab 4 “New Capital Improvements” (Figure 8). This tab will calculate capital cost based on the current cost and the inflation factors provided. These investments will then be included in the year that has been specified for the capital improvement plan.

New Capital Improvements Current Year: 2023  
CCI: 3%  
Interest Rate: 4.50%

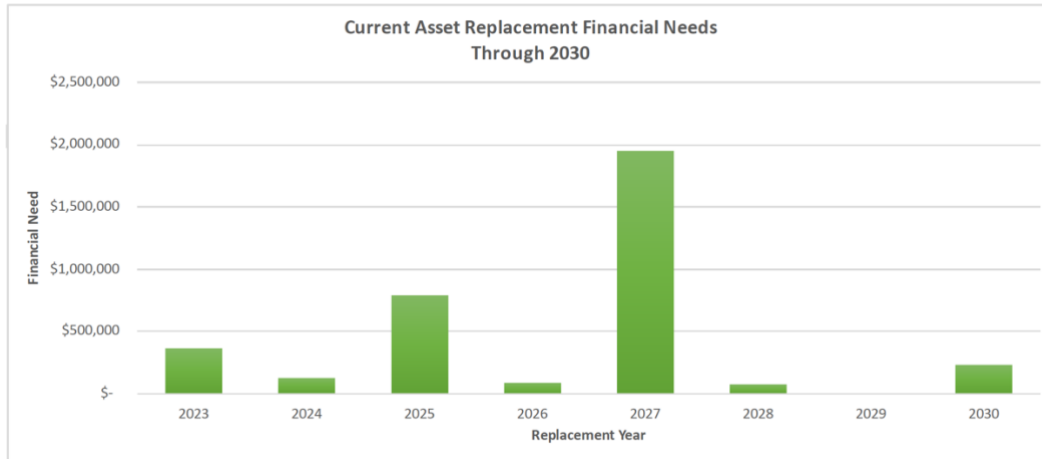
New Asset Self-Funding Percentage	30%
\$	11,172

Project Type	Project Description	Year Planned	Useful Life (Years)	Cost Estimate (Today's Dollars)	Adjusted Cost Estimate (Planned Year)	Replacement Cost Estimate	New Asset CIP Future Annual Payment
Reservoir & Storage - Metal	Tank	2024	30	\$ 400,000	\$ 411,777	\$ 983,396	\$ 4,836
Distribution Lines	System 5 Expansion	2026	75	\$ 125,000	\$ 136,367	\$ 1,201,798	\$ 621
Building	New Headquarters & Office	2027	50	\$ 75,000	\$ 84,227	\$ 359,305	\$ 604
Distribution Lines	4" PVC	2029	75	\$ 90,000	\$ 107,111	\$ 943,909	\$ 487
Pump Equipment	Main Avenue Pump	2030	10	\$ 26,000	\$ 31,849	\$ 42,560	\$ 1,039
Disinfection Equipment	Chlorine Auto Feed System	2030	5	\$ 13,500	\$ 16,533	\$ 19,109	\$ 1,048
Pump Equipment	Test	2045	10	\$ 25,000	\$ 47,307	\$ 63,223	\$ 1,544
Backflow prevention	test2	2055	15	\$ 10,000	\$ 25,258	\$ 39,016	\$ 563
Primary & Backuo Gensets	test3	2055	20	\$ 10,000	\$ 25,258	\$ 45,103	\$ 431

Figure 8. New Capital Improvement Information – Tab 4 “New Capital Improvements” of BAIA Tool.

A year-by-year forecast expenditure table is presented next to the data entry table. Tab 4a “Current Financial Needs” presents new and replacement asset expenditures in easy-to-follow charts (Figure 9). These charts may be used to assist decision-makers in their capital planning process.

Current Financial Needs Forecast Chart



Year	Total Financial Need
2023	\$ -
2024	\$ 983,396
2025	\$ -
2026	\$ 1,201,798
2027	\$ 359,305
2028	\$ -
2029	\$ 943,909
2030	\$ 61,669
2031	\$ -
2032	\$ -
2033	\$ -
2034	\$ -
2035	\$ -
2036	\$ -
2037	\$ -
2038	\$ -
2039	\$ -
2040	\$ -
2041	\$ -
2042	\$ -
2043	\$ -
2044	\$ -
2045	\$ 63,223
2046	\$ -
2047	\$ -
2048	\$ -
2049	\$ -
2050	\$ -
2051	\$ -
2052	\$ -
2053	\$ -
2054	\$ -
2055	\$ 84,118
2056	\$ -
2057	\$ -
2058	\$ -
2059	\$ -
2060	\$ -

Year	Total Financial Need
2023	\$ 367,199
2024	\$ 130,624
2025	\$ 792,557
2026	\$ 91,290
2027	\$ 1,953,184
2028	\$ 78,186
2029	\$ -
2030	\$ 235,125
2031	\$ -
2032	\$ 517,630
2033	\$ 38,812
2034	\$ -
2035	\$ 181,161
2036	\$ -
2037	\$ -
2038	\$ 17,397
2039	\$ -
2040	\$ -
2041	\$ -
2042	\$ 11,510
2043	\$ -
2044	\$ -
2045	\$ 131,646
2046	\$ -
2047	\$ -
2048	\$ -
2049	\$ -
2050	\$ -
2051	\$ -
2052	\$ -
2053	\$ -
2054	\$ -
2055	\$ -
2056	\$ -
2057	\$ -
2058	\$ -
2059	\$ -
2060	\$ -

New Project Financial Needs Forecast Chart

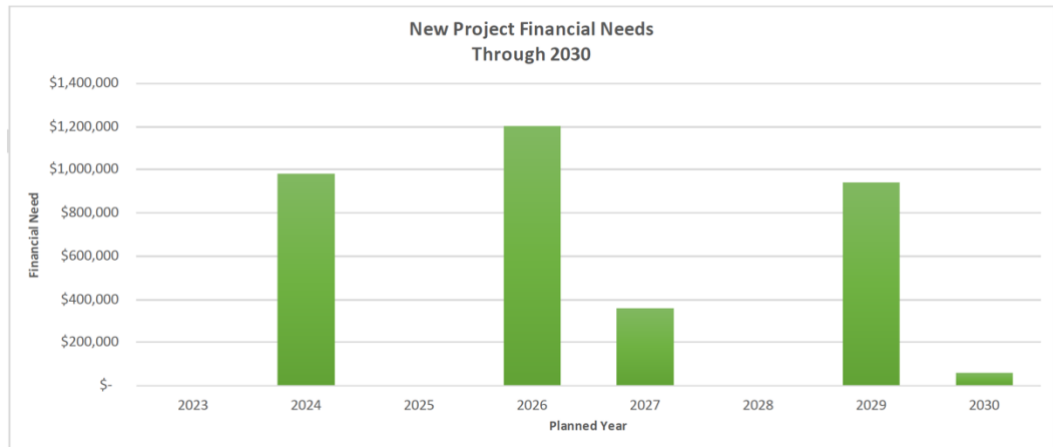


Figure 9. Current and New Asset Financial Needs.



## C.8 REPEAT THE PROCESS IN FUTURE YEARS

Use these data and charts to develop your system rate structure and for financial planning each year and into the future. DWR, DEQ, and the EPA all recommend basic asset inventory data be updated annually in advance of budget development.

If you choose to draft a CIP stand-alone document, you should first decide how far out to plan. Many short-term plans focus on 3-5 years while long-term plans may look at 3-50 years into the future. The information provided in this tool is applicable to any future point in time included. If you are looking at multiple planning horizons the tool is conducive to providing consistent information so that for example 5, 10 and 30-year plans are consistent and relevant to each other.

You can then use this information to determine infrastructure capacity limits and financial strategies to address current and future infrastructure needs. These data may assist in determinations on potential rate increases/decreases, customer surcharges, state or federal grants or loans you may pursue, or if other sources of funding might be required.

## C.9 IMPLEMENTING YOUR ASSET MANAGEMENT PLAN

Congratulations! You have completed the initial steps of your asset management plan, inventory development, asset prioritization, and capital planning. Now you should work with your management team, including council or board members, if appropriate, to complete your identified repairs and maintenance and to make sure that you have the technical and financial means necessary to offer reliable service. Ideally, you will create a plan for at least the next five years that integrates into your rate setting and budgeting processes.

### C.9.1 HOLD A MEETING

Arrange a meeting with your management team, stakeholders, or others as appropriate. Present the following items as available at the meeting.

- A map of the system;
- A list of current assets with their value or cost to replace, and the remaining useful life (from the BAIA Tool);
- A list of priority asset repairs and replacements appropriate to the planning horizon for the meeting (from the BAIA Tool);
- A list of costs associated with the expected repairs or replacements (from the CIP Tab);
- The current budget allotment, as well as the projected budgetary requirements (from your budget process and the CIP Tab); and
- The cost of maintaining and replacing the existing infrastructure and the projected responsibility for new infrastructure.

### C.9.2 PRIORITIZE

You may find that your current budget will cover only one or two of your priority needs. Explain why these items are priorities and the manner in which you plan to take care of them. Discuss each of the items on the priority list and how you

plan to address them, creating an action timeline with a projected budget. If the current budget is lower than what you need to take care of priority items, discuss potential funding options for management or stakeholder input and approval, and develop a plan (fees, taxes, loans, or grants) to obtain necessary funding.

### C.9.3 COMMUNICATE REGULARLY

Keep your management team and stakeholders updated with progress and significant changes through progress reports. Many systems do this quarterly or with letters included in billing statements. Modern systems may use email and social contact platforms to further disseminate information. This will reinforce your dedication to the plan and help make certain that your system is functioning optimally. It will also ensure that you maintain management and stakeholder support throughout the implementation process.

### C.9.4 UPDATE CHANGES

Keep up with the changes that occur as your plan is implemented, including changes in the system's equipment, finances, and personnel. This will help ensure that you successfully manage your utility's assets.

### C.9.5 CONDUCT A RATE STUDY

If you determine that your utility is not bringing in enough money to be sustainable or to complete necessary improvements, you may need to raise your rates. That process will depend on what type of utility you are. For example, a rural or regional utility applies for a rate change through their governing board, whereas a municipality would change rates through the city council.

Regardless of the process, it is recommended you conduct a rate study before raising your rates. Rate studies may be complicated and may require professional help. You may decide to hire a consultant; or apply for financial, managerial, or technical assistance through state or federal funding partners.