



**CLEAN WATER AND DRINKING WATER STATE REVOLVING FUND PROGRAMS
PLANNING ASSISTANCE REIMBURSEMENT (PAR)**

ENGINEER CERTIFICATION OF SERVICES

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF MUNICIPAL FACILITIES

2-2023

Engineer Certification of Services

It is expected that studies funded through the PAR Program will meet minimum requirements. A comprehensive study of the water or wastewater system must be conducted, and a detailed report of the findings prepared. The report should provide the level of detail expected for a State Revolving Fund (SRF) Facility Plan. The report must be stamped and signed by a Professional Engineer licensed in the state of North Dakota.

The following is a summary of items that must be addressed based on project type. Please review the applicable sections and sign the form. The signed form should be included with the scope of services provided to the project sponsor.

All studies shall contain the following:

1. A narrative description of environmental considerations and map(s) showing environmentally sensitive areas such as wetlands, floodplains, agricultural lands, water supply, historic properties, population projections, permits, etc.
2. Discussion of the direct and indirect impacts that will result from the project.
3. Recommendations for improvements, unit cost breakdowns, and present worth evaluations of each feasible alternative.
4. Financial considerations for the applicant: breakdown of monthly user rates to include debt service on the proposed project, operation and maintenance, existing debt service, and capital replacement reserve fund. Compare this to the existing monthly user rates.
5. Audit reports for the most recent 3 years, if not already on file with the North Dakota Public Finance Authority.

Wastewater Collection or Treatment and Storm Sewer Study Additional Requirement

As part of the Water Resources Reform and Development Act of 2014, State Revolving Fund programs must require all assistance recipients meeting the definition of municipality or intermunicipal, interstate, or state agency to conduct a cost and effectiveness analysis. The statute requires that a cost and effectiveness analysis involve, at a minimum:

1. The state and evaluation of the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is sought under this title; and
2. The selection, to the maximum extent practicable, of a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account the cost of constructing the project or activity, the cost of operating and maintaining the project or activity over the life of the project or activity, and the cost of replacing the project or activity.

Wastewater Collection Study

1. A narrative description of the system to include age, present condition, infiltration/inflow (I/I), and type of pipe.
2. Map(s) of the system showing pipe according to type and size, and appurtenances.
3. A description of existing wastewater infrastructure to include evaluating the hydraulic capability of the treatment system, pipes, and lift stations, etc., for current and future demand(s).
4. A detailed explanation of the methods used to determine the locations and extent of I/I including smoke testing, televising and flow measurement, and a summary of the findings.
5. A narrative discussion of alternatives to include no-action, trenchless technology, open trench construction, etc.

Wastewater Treatment Study

1. Narrative describing the condition of the existing facility and explaining the need for the facility improvements or a new treatment facility.
2. Map(s) showing the project location.
3. Evidence of consultation from the North Dakota Department of Environmental Quality Division of Water Quality regarding possible stream reclassifications, change in permit conditions, etc.
4. A narrative description of alternatives to include no-action, collection line rehabilitation or replacement, and reasons for excluding certain types of treatment technologies.
5. Design calculations for each feasible alternative.

Storm Water System Study

1. A narrative description and map(s) of the existing storm water management system to evaluate watershed areas, combined sewer overflow, drainage, soil conditions, etc.
2. Map(s) of the system showing pipe according to type and size, and appurtenances.
3. A detailed explanation of the methods used to evaluate capacity of the existing system, peak flows, future flows from storm water modeling, and a summary of the findings.
4. A narrative discussion of alternatives for a storm sewer management system consisting of pipe, storage, and treatment systems; i.e. catch basins, underground pipe network, curb and gutter, drainage outfall, water quality protection, and storm water treatment. The small community planning grant is not intended for studies of storm water systems that are predominantly open channel ditches and culverts.

Water Distribution Study

1. A narrative description of the system to include age, present condition, water loss, pressure loss, and hydraulic capabilities to meet current and future demand.
2. Map(s) of the distribution system showing pipe, according to type and size, and general project area in relation to the community.
3. A narrative evaluation of alternatives with consideration to no-action, regional management and consolidation of systems, trenchless technology, and alternative routes and pipe size, etc.

Water Treatment Study

1. Narrative describing the condition of the existing facility and explaining the need for the facility improvements or new treatment facility, map(s) showing the project location.
2. All data, records, and technical information used for the basis of the design.
3. A narrative discussion of several possible alternatives to include no-action, regional management or consolidation of systems, reasons for excluding certain types of treatment technologies, etc.
4. Formal proposals or correspondence from regional water system(s) stating ability and willingness to provide service, associated cost proposals, etc.

Water Supply or Water Storage Study

1. Narrative describing the condition of the existing facility and explaining the need for the new facilities.
2. Map(s) showing the project location.
3. Historical water use records for average and peak conditions, average and peak water use projections, descriptions of all existing raw water sources, water quality data, etc.
4. A narrative discussion of several possible alternatives to include no-action, regional management or consolidation of systems, associated cost proposals, etc.

Certification

The Engineer Certifies That:

I have read and understand the requirements identified in this form and I am aware that no funds will be disbursed until the engineering report is approved by the Department of Environmental Quality. The report will be completed within six months of the award of the grant.

Signature	Date
Printed Name	Title