

# **EXETER PUBLIC WORKS DEPARTMENT**

13 NEWFIELDS ROAD • EXETER, NH 03833-3792 • (603) 773-6157 • FAX 772-1355

[www.exeternh.gov](http://www.exeternh.gov)

## **REQUEST FOR QUALIFICATIONS**

### **PROFESSIONAL ENGINEERING SERVICES Stormwater and Sanitary Sewer Asset Management Program**

**RFQ No. DPW 2018-01**

**September 6, 2018**

## **INTRODUCTION**

The Town of Exeter is requesting consulting services for the development of an Asset Management Program (AM) for the town's stormwater system and sanitary sewer system. The AM program must meet the requirements of the NH Department of Environmental Services (NHDES) Clean Water State Revolving Loan Fund (CWSRF) loans that have been approved for the town. This project has been approved for a loan with principal forgiveness of \$30,000 each for both stormwater and wastewater. The Town approved \$30,000 for each AM at the Town Vote in March 2018.

## **GENERAL REQUIREMENTS**

Consulting firms submitting qualifications must respond in writing to all requirements of this Request for Qualifications (RFQ). Responses should reflect detailed considerations of the issues and opportunities presented by this specific project. Any additional information or tasks that are felt to be relevant by the responding firm should be included together with the submittal requirements. Applicants must be on the pre-qualified consultant list for the NHDES Water Division in the categories of pollution control and sewer pipes.

Sealed qualification statements, plainly marked "**RFQ No. DPW 2018-01 - Proposal for Asset Management Program - Engineering Services**" on the outside of the mailing envelope, addressed to:

Town of Exeter  
Public Works Department  
Public Works Director  
13 Newfields Rd  
Exeter, NH 03833

Qualification statements will be accepted until **2:00 p.m. on Friday, September 28, 2018**, at the Public Works office. Six (6) copies of the proposal shall be submitted

Costs incurred for the preparation of a proposal in response to this RFQ shall be the sole responsibility of the firm submitting the proposal. The Town of Exeter reserves the right to select or reject any consulting firm that it deems to be in the best interest to accomplish the project specified. The Town reserves the right to accept the proposal on one or more items of a proposal, on all items of a proposal or any combination of items. The Town reserves the right to discontinue the selection process at any time prior to the awarding of a contract. There will be no reimbursement to any candidate firm if the selection process is terminated. The Town reserves the right to waive defects and informalities of the qualification statements.

## **BACKGROUND**

The Town has been approved for a CWSRF loan from NHDES for developing an Asset Management Program for both the stormwater and sanitary system systems. The town currently has a basic inventory of both systems' elements but has not developed a formal asset

management program that ties together all of the core components needed for a comprehensive plan. Another critical component of the program is the identification of elements of the systems that may be vulnerable to the effects of climate change.

The town's current inventory consists of GIS locations of approximately 90% of the town-owned collection system (pipes, manholes, catchbasins, and other significant elements), which includes material type and size, but not the age, condition, or capacity of the components.

## **PROJECT SCOPE**

The consultant shall provide an outline of the project tasks needed to address the 7 core components that make up a comprehensive Asset Management Program:

1. Asset Inventory
2. Level of Service
3. Critical Asset Identification and Prioritization
4. Life Cycle Costing
5. Long-term Funding Strategy
6. Implementation Plan
7. Communication Plan

Addressing these core components will allow the Town to better understand the condition of their assets, current and future deficiencies and needs, and the financial resources necessary to rehabilitate and replace assets when necessary. The project scope that was submitted as part of the CWSRF pre-application only included tasks associated with developing the Asset Inventory; however, town staff has spent considerable time in developing the asset inventory over the last year and believes the funds would be better spent in developing a full Asset Management Program.

### ***Task 1 – Asset Inventory and Condition Assessment***

Develop an inventory of stormwater and wastewater (horizontal only) assets. Incorporating the vertical assets such as the wastewater treatment facility (WWTF) and sewer pump stations are part of the current WWTF upgrade and not included in this scope; however, the inventory should allow for those elements to be added as a second phase of the program development. The inventory will be in spreadsheet form and based on information provided by the town. The asset inventory will be based on information, records, and reports to be supplied by the Town. This project does not include any field collection of existing infrastructure.

### ***Task 2 – Level of Service and Criticality***

Assist with the development of Level of Service Statements for wastewater and stormwater systems. The Level of Service Statement defines the way in which the utility owners, managers, and operators want the system to perform over the long term.

***Task 3 – Prioritization of Assets***

For each asset or asset block, estimate its probability of failure and the consequences. Rank assets in order of importance (priority) based on a combination of probability and consequence of failure.

***Task 4 – Life Cycle Costing***

Prepare an opinion of probable cost to repair or replace each asset type or block. The opinions of cost will be planning level.

***Task 5 - Long-Term Funding Strategy***

Develop a plan and schedule for the rehabilitation and replacement of assets including an estimate of money needed each year for 10 years into the future and in 10-year windows for the estimated life of the assets. Determine the estimated cost per year to adequately fund repair and replacement of existing assets and compare that cost to the wastewater and stormwater systems' current operating budgets.

***Task 6 – Implementation Plan***

Develop a plan that describes how the Town will continue to maintain and use the Asset Management program.

***Task 7 - Communication Plan***

Develop a plan with a timeframe for completion to inform town staff, boards, committees, and customers of the asset management program. Create content to be incorporated into content on the Town's existing website.

**Deliverables**

1. Asset Inventory (separate for stormwater and wastewater)
  - a. Spreadsheets including asset inventory, condition assessment, the probability of failure, and consequence of failure.
  - b. System map (hard copy and GIS files)
2. Asset Management Program summary report
  - a. Level of Service statements
  - b. Prioritization of assets
  - c. Long-term funding strategy
  - d. Implementation plan
  - e. Communication plan
3. Public Education
  - a. Website content (Word document)
  - b. Public presentation (PowerPoint or similar)

**Meetings**

NHDES shall be involved in all meetings as required by the CWSRF.

1. Kick-off and site visits
2. Level of service workshop and review draft report
3. Present AM program and provide training to Select Board
4. Staff training for the implementation plan and project wrap-up meeting

## **PRE-PROPOSAL MEETING**

There will be a non-mandatory pre-proposal meeting at 10:00 a.m. on Friday, September 14, 2018, at Exeter Public Works, 13 Newfields Road, Exeter, New Hampshire to discuss this project and answer questions. NHDES staff will be in attendance.

## **TIMELINES**

The Consultant Selection Schedule is as follows:

Request for Qualifications	Thursday, September 6, 2018
Pre-proposal Meeting	Friday, September 14, 2018
Consultant Qualifications Due	Friday, September 28, 2018
Consultant Interviews (if necessary)	Week of October 15, 2018
Contract Approval	Select Board Meeting shortly thereafter
Project Completion	Six (6) Months from Contract Effective Date

## **INFORMATION AVAILABLE**

- NHDES CWSRF Pre-applications - attached
- NHDES CWSRF Intended Use Plan - <https://www.des.nh.gov/organization/divisions/water/wweb/documents/draft-iup.pdf>
- Exeter MapsOnline - GIS information <http://mapsonline.net/exeternh/>

## **PROPOSAL SUBMITTAL REQUIREMENTS**

**All submissions shall be limited to a maximum of 16 pages, including the cover letter, resumes, and schedule.** The pages shall be numbered.

1. Cover letter
2. Project understanding
3. Project approach to accomplish the Work
4. Scope of Services
5. List of similar work experience.
6. Project Team Chart identifying the team
  - a. Principal-in-Charge
  - b. Project Manager
  - c. Project Engineer(s)
7. Project Schedule in Gantt format

## **EVALUATION CRITERIA & INTERVIEWS**

The Town of Exeter will review the qualifications on the following criteria:

1. Understanding of the project
2. Approach to accomplishing the Work
3. Similar experience of the firm
4. Schedule for completing the work
5. Quality of proposal

## **CONTRACT DOCUMENT**

Upon selection, the successful Consultant will prepare Engineering Contracts for execution according to NHDES guidelines. Upon execution of the Contract, the Consultant will be instructed to commence providing the work outlined in the contract. All information, data, documents, photos, computer records and other materials of any kind acquired or developed by the Consultant pursuant to this proposal shall be the property of the Town of Exeter.

## **TOWN ROLE**

Town staff will be responsible for:

1. Providing all existing data for the stormwater and sanitary sewer system, including GIS data, existing studies, drawings and tie sheet information, and service or repair records.
2. Providing access to the system facilities
3. Administering the project and overseeing the consultant's work.
4. Representatives of the Town's Public Works Department will review documents prepared by the consultant prior to any submittals to NHDES.

## **RESERVATION OF RIGHTS**

The Town reserves the right to make such inquiries regarding the firm's qualifications and reputation as it deems necessary to evaluate the firm.

The Town reserves the right to negotiate directly with the firm selected for additional project work including design, construction administration services, and/or additional project engineering and design services.

## **CONTACT INFORMATION**

If you have any questions regarding the request, please contact Jennifer Mates, Assistant Town Engineer, (603) 418-6431 or [jmates@exeternh.gov](mailto:jmates@exeternh.gov).



**CWSRF Asset Management Principal Forgiveness Guidance Document  
September 2018**

**Asset Management Principal Forgiveness**

NHDES Clean Water State Revolving Fund (CWSRF) program is currently offering **up to \$30,000** per phase in principal forgiveness on loans made for the development of an asset management program for wastewater assets **AND a maximum of \$30,000** in principal forgiveness on loans made for the development of an asset management program for stormwater assets. Principal forgiveness for stormwater assets is limited to a one time eligibility. Principal forgiveness for wastewater assets can be phased and is eligible for up to \$30,000 for *each* approved phase.

The CWSRF program is a federal-state partnership that provides communities with low-cost financing (loans) for a wide range of water quality infrastructure projects. Once all eligible project expenses are incurred, and subsequently disbursed, the loan is closed and principal forgiveness is then applied to the principal balance. Potential loan recipients must receive authority to borrow through town warrant article or city equivalent process. The CWSRF loan amount may be greater than \$30,000 depending upon the estimated cost for the project, but only \$30,000 in principal forgiveness will be offered for stormwater assets and each approved phase for wastewater assets.

**Minimum Requirements**

**Stormwater and Wastewater Asset Management Programs:**

All asset management programs, while having the same elements from one community to the next, are very community-specific. For an asset management program development loan to qualify for principal forgiveness, all of the following “core” elements of asset management must be addressed and fulfilled to result in a **complete community-specific “decision making tool”**.

- Define a vision that describes what the community wishes to achieve through development of an asset management program. When properly crafted, this community-specific vision statement will help align and communicate to all involved, the purpose and overarching goals of what asset management will do for the community;
- Create an asset inventory, including a naming convention that makes sense for the specific community;
- Develop a defined level of service (LOS) through a LOS workshop approach with input from system operators, management, and engineer (if applicable). While not required, many communities have found that a score card type matrix is helpful in developing LOS. LOS goals should be specific, measurable, achievable, relevant and timely (SMART);
- Prioritize assets based on condition assessment and criticality. While not required, many communities have found that a matrix of likelihood of failure vs. consequence of failure is an effective and useful tool for helping to prioritize assets;
- Analyze life cycle costs, including capital costs, operation (with energy costs if applicable) and maintenance costs for the life of the assets;
- Identify a funding strategy for asset maintenance and replacement , showing the need for increased revenue or justification of adequate revenue for the long term management of the assets;

## CWSRF Asset Management Principal Forgiveness Guidance Document September 2018

- Develop an implementation plan or statement that explains how the community will continue to maintain and use the asset management program. For projects completed by a consultant, this implementation plan should include a description of training the consultant will conduct to enable the system operators to successfully continue with the asset management program to manage the community's assets; and
- Prepare a communication plan with time frame for completion to inform staff, community management and customers of the asset management program and its capabilities. The communication plan should also include a description of how the community will incorporate energy and water conservation, when applicable, into their asset management program.

### Wastewater Asset Management Phased Programs:

NHDES realizes that the wastewater infrastructure in each sewered New Hampshire community varies greatly in size and complexity. Based on this variability, NHDES is allowing a phased approach for larger communities or communities with complex systems to develop their asset management programs for wastewater. The asset management work completed in each wastewater phase must be for a defined group of assets, such as vertical assets or horizontal assets, or, in the case for larger systems, for a region of the community. Communities may apply for up to \$30,000 of principal for each phase of a wastewater project.

Example ways to break down assets into "phases" could include:

- Vertical wastewater assets (all pumping stations and WWTF)
- Horizontal wastewater assets (all piping, manholes, vents, drains, etc.)

Note: The number of eligible wastewater phases will be determined by NHDES staff and varies based on system size and complexity.

### Eligibility of Costs:

All loan disbursements directly related to asset management program development are eligible for principal forgiveness, subject to **prior** approval by NHDES. Expenses must meet the documentation requirements of the CWSRF program. Typical expenses that may be incurred include but are not limited to:

- Software purchases;
- Equipment purchases/rental such as GPS and tablets;
- In-house personnel\* assigned to work on asset management program elements; and
- Consulting fees.

\* If in-house personnel time will be used on this project, a proposal for allocation of these costs must receive approval from NHDES **prior** to the initiation of work. In-house personnel time must be documented using a NHDES-approved method. NHDES IN-HOUSE LABOR REPORT form is available for this purpose.

### NHDES Review and Approval:

Work scopes, pre-applications, and phased plans need to be pre-approved by NHDES **prior** to submitting the CWSRF loan application **AND prior** to initiating work.



## CWSRF Asset Management Principal Forgiveness Guidance Document September 2018

### Deliverables and NHDES Oversight:

To maintain eligibility for CWSRF principal forgiveness, NHDES must attend the kick off meeting, the LOS workshop and the wrap up meeting. NHDES must also be notified in advance of other meetings and trainings relative to the project. The wrap up meeting may coincide with the final presentation of the project to the system management at a meeting open to the public. NHDES encourages the staff responsible for implementing and continuing the asset management work for the community to be the presenter at this meeting. Unless the community has a compelling justification for a final report summarizing the asset management program, NHDES encourages the community to use this funding to focus on developing a tool that will help the community better manage its valuable water infrastructure assets. Examples of appropriate deliverables at project completion include: an agenda and presentation slides for a final presentation to the community representatives to show the capabilities of the final work product; a communication brochure used to educate the users relative to the importance of the new asset management program; and an implementation plan for maintaining the asset management program.

### **Questions/Contact Information**

For wastewater projects/questions/approvals, contact Sharon Nall, P.E. at [Sharon.Nall@des.nh.gov](mailto:Sharon.Nall@des.nh.gov)

For stormwater projects/questions/approvals, contact Deb Loiselle at [Deborah.Loiselle@des.nh.gov](mailto:Deborah.Loiselle@des.nh.gov)

For CWSRF Loan Administration questions, contact Kathie Bourret at [Kathleen.Bourret@des.nh.gov](mailto:Kathleen.Bourret@des.nh.gov)



PRE-APPLICATION FOR THE CLEAN WATER STATE REVOLVING FUND FFY 2017 LOAN FUNDS Water Division Wastewater Engineering Bureau



RSA/Rule: RSA 486:14

Applicant: Town of Exeter

Project Name: Stormwater Asset Management

Location: Town of Exeter, NH

Proposed Project Description: (use additional pages as necessary) See additional pages

Waterbody Effected:

Name:

Assessment Unit ID: NH - - - - - letters numbers

(see http://www2.des.state.nh.us/WaterShed\_SWQA/SWQA\_Map.aspx for a map tool to determine Assessment Unit ID and a water quality report card to determine impairment status.

Impaired? Yes No If yes, will the project address the impairment? Yes No

Please check only one project category:

- Wastewater X Stormwater/Nonpoint Source Wastewater with Stormwater/Nonpoint Source component(s)

Provide a description of the need for the project and how the project will protect public health, water quality, or the environment (attach additional information if necessary):

This project will improve the way that the Town of Exeter manages its stormwater assets. The Town will continue to use PeopleGIS software in the development and tracking of inspections and condition assessments, as well as operations and maintenance optimization. The catchment delineation and priority ranking will provide the Town with a plan to effectively manage their stormwater assets to eliminate illicit discharges and protect receiving waters in compliance with the MS4 permit requirements under the Illicit Discharge Detection and Elimination program.

**ESTIMATED TIMELINE AND COST INFORMATION**

	Start Date	Completion Date	Cost
1. Authority to Borrow Funds			
2. Design Engineering**	January 2018	December 2018	\$30,000
3. Construction*			
4. 5% Construction Contingency			
5. Construction Engineering**			
6. Other Costs (Please Specify):			
<b>Total Estimated Costs</b>			<b>\$30,000</b>

Notes: \*Davis-Bacon wage rates may apply to stormwater/nonpoint source projects. To be determined based on project type and scope.  
 \*\* CWSRF funding for engineering services requires the use of the Qualifications Based Selection process described in Env-Wq 509.

**RATIONALE FOR COST ESTIMATES\***

Are the cost estimates for the project supported by a document (e.g., facility plan, preliminary design report) that is signed by an engineer? If **yes**, please reference the document and identify the engineer: \_\_\_\_\_

If **no**, describe the rationale for the cost estimates (attach additional information if necessary):  
 Cost estimate developed by Wright-Pierce in preparation of this preapplication. \_\_\_\_\_

**PROJECT DATA**

**1. All Projects:**

**Water Quality & Public Health:** Project would address (check all that apply):

Federal/State administrative order/consent decree \_\_\_

Surface water quality impairment \_\_\_

Chronic NPDES compliance issue(s) \_\_\_

Surface water quality in unimpaired waters \_\_\_

NPDES MS4 Compliance Issue(s)  X

Recommendation in:

\_\_\_\_\_ NH State Nonpoint Source Plan

\_\_\_\_\_ Watershed-based plan that meets Clean Water Act Section 319 guidelines

\_\_\_\_\_ 2010 Piscataqua Region Comprehensive Conservation and Management Plan

\_\_\_\_\_ Chronic flooding that causes a water quality problem

**2. Traditional Wastewater Projects: (Stormwater/Nonpoint Source go to Section 3)**

**Population Served by Wastewater Treatment Facility**

Population Receiving Collection:	Resident Population			Non-Resident Population*		
	Present	Projected	Projected Year	Present	Projected	Projected Year
At this facility						
From system that discharges to this facility (if any)						

\*The portion of the population that does not live within the service area, but utilizes the system infrastructure. Non-resident population includes transient, seasonal and commuter workers and tourists.

**Green Project Reserve**

Percentage of the Total Estimated Costs allocated to the following and the relevant section number from 2012 CWSRF Green Project Reserve guidance:

<http://des.nh.gov/organization/divisions/water/wweb/documents/gpr-guidance.pdf>

Water Efficiency \_\_\_\_\_ Energy Efficiency \_\_\_\_\_

Green Infrastructure \_\_\_\_\_ Environmentally Innovative \_\_\_\_\_

**Sustainability** (complete all that apply):

Average monthly facility flow as a percentage of design capacity: \_\_\_\_\_%

List the pollutant(s) and loading(s), as percentage of design capacity, that exceed, on an average monthly basis, 80% design loading capacity: \_\_\_\_\_

Will the project reduce flow or loadings, or increase design capacity of the WWTF?

Yes \_\_\_ No \_\_\_ How? \_\_\_\_\_

Will the project implement a climate change adaptation or mitigation strategy (see 2016 Ranking Criteria for Wastewater Pre-Applications for guidance)? Yes \_\_\_ No \_\_\_

How?: \_\_\_\_\_

Will the project address excessive infiltration and inflow? Yes \_\_\_ No \_\_\_

Will the project implement recommendations of an asset management program that meets the NHDES CWSRF standard (see <http://des.nh.gov/organization/divisions/water/dwgb/asset-managment/documents/cwsrf-am-guide.pdf>)?

Yes \_\_\_ No \_\_\_

If "Yes," please provide documentation that demonstrates that the project is implementing part of an active asset management program.

Will the project provide for reuse or recycling of:

stormwater \_\_\_\_\_,

wastewater \_\_\_\_\_, or

treatment products \_\_\_\_\_.

**Energy Audit** (traditional wastewater projects only):

Has an energy audit been conducted at the facility? Yes \_\_\_ No \_\_\_ Planned \_\_\_;

If "Yes" or "Planned," when? \_\_\_\_\_.

Will the project address findings in an energy audit? Yes \_\_\_ No \_\_\_ How? \_\_\_\_\_

If "Yes," please provide a copy of the energy audit.

**3. Stormwater and Nonpoint Source Projects: (attach additional narrative if more space is needed)**

**Protection of Water Quality**

If the project addresses an MS4 compliance issue, describe the permit requirement being met:

Various aspects of requirement 2.3.4. Illicit Discharge Detection and Elimination (IDDE) Program, specific focus on requirement 2.3.4.7. Assessment and Priority Ranking of Outfalls/Interconnections.

If the project addresses chronic flooding, describe the water quality problem caused by flooding:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If the project implements a plan recommendation in the [NH Nonpoint Source Management Plan](#), a [watershed-based plan](#), or the [2010 Piscataqua Region Comprehensive Conservation and Management Plan](#), cite the specific plan recommendation being implemented, including the page number and document referenced:

\_\_\_\_\_  
\_\_\_\_\_

**Green Infrastructure** Project would address (check all that apply):

\_\_\_\_\_ Disconnection of impervious cover from a stormwater drainage system

If checked, estimate # of square feet of impervious cover disconnected: \_\_\_\_\_

\_\_\_\_\_ Protection or restoration of natural hydrology, floodplains, and wetlands

If checked, describe how the project protects or restores natural hydrology, floodplains, or wetlands:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ Improved stream connectivity with respect to aquatic life

If checked, describe the barriers to be removed and estimate the # of miles of stream to be reconnected:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ Smart Growth as defined in RSA 9-B:3

If checked, describe how the proposed project addresses water quality goals through smart growth:

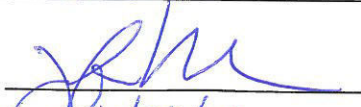
\_\_\_\_\_  
\_\_\_\_\_

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**APPLICANT INFORMATION**

Name: Jennifer Mates

Signature\*: 

Title: Assistant Town Engineer

Date: 6/30/17

Email: jmates@exeternh.gov

Phone No.: (603) 418-6431

\*Must be signed by applicant to be included in Clean Watershed Needs Survey (see **RATIONALE FOR COST ESTIMATES**, Page 2).

**Return by June 30, 2017 to:**

Daniel Fenno, SRF Program Manager  
NH Department of Environmental Services  
29 Hazen Drive  
PO Box 95  
Concord, NH 03302-0095  
(603) 271-3448  
[daniel.fenno@des.nh.gov](mailto:daniel.fenno@des.nh.gov)

**PRE-APPLICATION FOR THE  
CLEAN WATER STATE REVOLVING FUND  
FFY 2017 LOAN FUNDS  
Water Division  
Wastewater Engineering Bureau**

Applicant: Town of Exeter

Project Name: Stormwater Asset Management

Location: Town of Exeter, NH

**Proposed Project Description:**

The Town of Exeter is developing a Stormwater System Asset Management Plan program to better understand the condition of their assets, current and future deficiencies and needs, and the financial resources necessary to rehabilitate and replace assets when necessary.

The asset management will consist of 5 core components:

1. Asset Inventory
2. Level of Service
3. Critical Assets
4. Life Cycle Costing
5. Long-term Funding Strategy

The town currently has a basic inventory of the stormwater system elements but has not developed a formal asset management plan that ties together all of the core components listed above.

The town is requesting a CWSRF loan to assist with component 1 of the asset management program. The town has been using PeopleGIS software to manage its stormwater assets in compliance with MS4 permit requirements for about a decade and is currently working to update its stormwater infrastructure inventory and condition assessment data. Once these updates are complete the Town will proceed with assessment and priority ranking of stormwater outfalls and interconnections to assess illicit discharge potential based on existing information and system vulnerability factors. The catchment delineation and ranking will provide a plan for managing stormwater assets associated with each outfall/interconnection and is a critical step in the Town's Illicit Discharge Detection and Elimination program (for compliance with the MS4 permit). The ranking will also allow the town to prioritize areas for future capital improvement projects.

The following tasks outline the efforts involved with the project for which the town is requesting the CWSRF loan:

- Refinement of the existing stormwater asset inventory and condition assessment data, including outfall inspection and review of existing system information;
- Delineation of catchments associated with each outfall and interconnection;
- Priority ranking of catchments in accordance with MS4 Permit requirements;
- Develop written procedures for dry weather outfall/interconnection screening and sampling;
- Develop written procedures for catchment investigation; and,

- Identify asset maintenance and replacement funding strategy to address both stormwater quality and quantity issues.

Future steps in developing the asset management plan include:

2. Level of Service: The Level of Service Statement defines the way in which the town wants the system to perform over the long term.
3. Assess Criticality: Develop a scoring system to rank assets based on their probability of failure. Consider material, age, condition, climate change vulnerability and other factors as appropriate. Rank assets in order of importance (priority) based on a combination of probability and consequence of failure.
4. Life Cycle Costing: Develop planning level cost estimates to repair or replace each asset type.
5. Long-Term Funding Strategy: Develop a plan and schedule for the rehabilitation and replacement of assets to coincide with the town's Capital Improvement Plan.





PRE-APPLICATION FOR THE CLEAN WATER STATE REVOLVING FUND FFY 2017 LOAN FUNDS Water Division Wastewater Engineering Bureau



RSA/Rule: RSA 486:14

Applicant: Town of Exeter

Project Name: Wastewater Asset Management Plan

Location: Exeter, New Hampshire

Proposed Project Description: (use additional pages as necessary)

See additional pages

Waterbody Effected:

Name: Squamscott River

Assessment Unit ID: NH-EST600030806-01-01

(see http://www2.des.state.nh.us/WaterShed\_SWQA/SWQA\_Map.aspx

for a map tool to determine Assessment Unit ID and a water quality report card to determine impairment status.

Impaired? X Yes \_\_\_ No

If yes, will the project address the impairment? \_\_\_ Yes X No

Please check only one project category:

- X Wastewater
\_\_\_ Stormwater/Nonpoint Source
\_\_\_ Wastewater with Stormwater/Nonpoint Source component(s)

Provide a description of the need for the project and how the project will protect public health, water quality, or the environment (attach additional information if necessary):

This project will improve the way that the Town of Exeter manages its wastewater assets. The Town will continue to use PeopleGIS software in the development and tracking of inspections and condition assessments, as well as operations and maintenance optimization. The priority ranking will provide the Town with a plan to effectively manage these assets to mitigate future failures, and therefore reduce potential future environmental impacts.

**ESTIMATED TIMELINE AND COST INFORMATION**

	Start Date	Completion Date	Cost
1. Authority to Borrow Funds			
2. Design Engineering**	Summer 2018	Summer 2019	\$30,000
3. Construction*			
4. 5% Construction Contingency			
5. Construction Engineering**			
6. Other Costs (Please Specify): Software package, field tablets, software support			
<b>Total Estimated Costs</b>			<b>\$30,000</b>

Notes: \*Davis-Bacon wage rates may apply to stormwater/nonpoint source projects. To be determined based on project type and scope.  
 \*\* CWSRF funding for engineering services requires the use of the Qualifications Based Selection process described in Env-Wq 509.

**RATIONALE FOR COST ESTIMATES\***

Are the cost estimates for the project supported by a document (e.g., facility plan, preliminary design report) that is signed by an engineer? If **yes**, please reference the document and identify the engineer: \_\_\_\_\_

If **no**, describe the rationale for the cost estimates (attach additional information if necessary):

Cost estimate developed by Wright-Pierce in preparation of this preapplication

**PROJECT DATA**

**1. All Projects:**

**Water Quality & Public Health:** Project would address (check all that apply):

Federal/State administrative order/consent decree  X

Surface water quality impairment  X

Chronic NPDES compliance issue(s)  X

Surface water quality in unimpaired waters     

NPDES MS4 Compliance Issue(s)     

Recommendation in:

    NH State Nonpoint Source Plan

    Watershed-based plan that meets Clean Water Act Section 319 guidelines

    2010 Piscataqua Region Comprehensive Conservation and Management Plan

    Chronic flooding that causes a water quality problem

**2. Traditional Wastewater Projects: (Stormwater/Nonpoint Source go to Section 3)**

**Population Served by Wastewater Treatment Facility**

Population Receiving Collection:	Resident Population			Non-Resident Population*		
	Present	Projected	Projected Year	Present	Projected	Projected Year
At this facility	9,000	9,900	2038	2,000	2,200	2038
From system that discharges to this facility (if any)						

\*The portion of the population that does not live within the service area, but utilizes the system infrastructure. Non-resident population includes transient, seasonal and commuter workers and tourists.



**3. Stormwater and Nonpoint Source Projects: (attach additional narrative if more space is needed)**

**Protection of Water Quality**

If the project addresses an MS4 compliance issue, describe the permit requirement being met:

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If the project addresses chronic flooding, describe the water quality problem caused by flooding:

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If the project implements a plan recommendation in the [NH Nonpoint Source Management Plan, a watershed-based plan](#), or the [2010 Piscataqua Region Comprehensive Conservation and Management Plan](#), cite the specific plan recommendation being implemented, including the page number and document referenced:

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**Green Infrastructure** Project would address (check all that apply):

\_\_\_\_\_ Disconnection of impervious cover from a stormwater drainage system

If checked, estimate # of square feet of impervious cover disconnected: \_\_\_\_\_

\_\_\_\_\_ Protection or restoration of natural hydrology, floodplains, and wetlands

If checked, describe how the project protects or restores natural hydrology, floodplains, or wetlands:

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\_\_\_\_\_ Improved stream connectivity with respect to aquatic life

If checked, describe the barriers to be removed and estimate the # of miles of stream to be reconnected:

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\_\_\_\_\_ Smart Growth as defined in RSA 9-B:3

If checked, describe how the proposed project addresses water quality goals through smart growth:

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**APPLICANT INFORMATION**

Name: Jennifer Mates, P.E. Signature\*:   
Title: Assistant Town Engineer Date: 6/30/17  
Email: jmates@exeternh.gov Phone No.: (603) 418-6431

\*Must be signed by applicant to be included in Clean Watershed Needs Survey (see **RATIONALE FOR COST ESTIMATES**, Page 2).

**Return by June 30, 2017 to:**

Daniel Fenno, SRF Program Manager  
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**PRE-APPLICATION FOR THE  
CLEAN WATER STATE REVOLVING FUND  
FFY 2017 LOAN FUNDS  
Water Division  
Wastewater Engineering Bureau**

Applicant: Town of Exeter

Project Name: Wastewater Asset Management

Location: Town of Exeter, NH

**Proposed Project Description:**

The Town of Exeter is developing a Wastewater Asset Management Plan program to better understand the condition of their assets, current and future deficiencies and needs, and the financial resources necessary to rehabilitate and replace assets when necessary.

The asset management will consist of 5 core components:

1. Asset Inventory
2. Level of Service
3. Critical Assets
4. Life Cycle Costing
5. Long-term Funding Strategy

The town currently has a basic inventory of the wastewater system elements but has not developed a formal asset management plan that ties together all of the core components listed above.

The town is requesting a CWSRF loan to assist with component 1 of the asset management program. The town has been using PeopleGIS software to manage its wastewater assets in compliance with Capacity Management, Operation, and Maintenance (CMOM) requirements for about a decade and continues to update its wastewater infrastructure inventory and condition assessment data. The next step in developing an asset management program is assessment and priority ranking of system components based on existing information and system vulnerability factors. The ranking will provide a plan for managing wastewater assets and is a critical step in the CMOM program. The ranking will also allow the town to prioritize areas for future capital improvement projects.

The following tasks outline the efforts involved with the project for which the town is requesting the CWSRF loan:

- Refinement of the existing wastewater asset inventory and condition assessment data, including review of existing system information;
- Evaluate the condition of the assets based on a site visit to accessible assets and a desktop evaluation using available information such as operator input and service history (number of backups, etc.).
- Estimate remaining service life for each type of assets based on manufacturer's published literature (where available), industry standards and reference material, engineering judgment, operator input and experience with the system, and service history.

- The inventory will include type of asset, age, condition, service history, and estimated remaining useful life.
- Update the existing collection system mapping in PeopleGIS;
- Priority ranking of assets in accordance with CMOM requirements; and
- Identify asset maintenance and replacement funding strategy to address deficient system components.

Future steps in developing the asset management plan include:

1. **Asset Inventory:** Develop an asset inventory for the vertical components of wastewater system such as pump stations and the wastewater treatment facility.
2. **Level of Service:** The Level of Service Statement defines the way in which the town wants the system to perform over the long term.
3. **Assess Criticality:** Develop a scoring system to rank assets based on their probability of failure. Consider material, age, condition, climate change vulnerability and other factors as appropriate. Rank assets in order of importance (priority) based on a combination of probability and consequence of failure.
4. **Life Cycle Costing:** Develop planning level cost estimates to repair or replace each asset type.
5. **Long-Term Funding Strategy:** Develop a plan and schedule for the rehabilitation and replacement of assets to coincide with the town's Capital Improvement Plan.