

**NHDES DWGB  
ASSET MANAGEMENT PLANNING GRANT APPLICATION**

<b>1) General Information:</b>	
PWS Name: Town of Exeter	PWS ID: 0801010
Contact Person: Jennifer Perry, Public Works Director	Telephone: 603-773-6157
Email Address: <a href="mailto:jperry@exeternh.gov">jperry@exeternh.gov</a>	
Grant Amount Requested: \$15,000 <i>(maximum 50% of project cost up to \$15,000)</i>	Total Project Cost: \$30,000

**2) Budget:**

Provide a task-by-task budget using the budget format below. Show the costs for each budget item to be paid for by the grant and those supported by matching funds. Provide commitment letters to document match. Optionally: attach scope of services. Use the table below to list the general project tasks and the cost breakdown for each task (add additional rows as necessary). See attached.

<i>Task (provide brief description)</i>	<i>Funds provided by Grant</i>	<i>Matching Contribution</i>	<i>Total cost of task</i>
<b>Task 1: Asset Inventory and Condition Assessment</b>	\$7,500	\$7,500	\$15,000
<b>Task 2: Level of Service and Criticality</b>	\$2,500	\$2,500	\$5,000
<b>Task 3: Financial Planning</b>	\$2,500	\$2,500	\$5,000
<b>Task 4: Plan Presentation, Implementation, Communication and Training</b>	\$2,500	\$2,500	\$5,000
<b>Total:</b>	<b>\$15,000</b>	<b>\$15,000</b>	<b>\$30,000</b>

**3) Project Description & Narrative:** *Please submit a narrative that addresses the sections below.*

**A. Project Description, Schedule, Objectives and Deliverables**

Describe what you are going to do (project tasks), when you are going to do it, and what the end results will be (e.g. inventory, workshop, map, etc.). Include general time frame, objectives, deliverables that will be produced, and tasks needed to produce those deliverables.

**C. Project Staff and Commitment**

List the key staff who will be managing and working on the project and include appropriate qualifications including relevant training or references to successfully completed projects of similar scope and/or tasks. Consider who the stakeholders are and the importance of support and buy-in. Stakeholders may include staff and decision makers (selectmen, boards, commissioners, etc.).

**By November 22, 2013, submit one copy to:**

[johnna.mckenna@des.nh.gov](mailto:johnna.mckenna@des.nh.gov)

or by mail to: NHDES, ATTN: Johnna McKenna, PO BOX 95 Concord, NH 03302-0095

# NARRATIVE

## *ASSET MANAGEMENT APPLICATION*

### **A. Project Description, Schedule, Objectives and Deliverables**

See Exhibit A for a detailed scope of work, schedule and deliverables. We propose to complete this work with the assistance of a consultant.

### **B. Project Staff and Commitment**

In addition to the specialty services of a consultant, the town will provide resources from the water treatment plant and public works department to assist and provide information. The town staff will be involved throughout the process and are committed to educating our Board of Selectmen on the value of asset management.

The information and materials developed as a result of this project will be used as tools by town staff to maintain a high level of service in an efficient and cost effective manner. The asset management plan will be a working document that is continually updated and improved as the needs of the water system grow and change over time.

## EXHIBIT “A”

### SCOPE OF SERVICES *ASSET MANAGEMENT PLAN FOR TOWN OF EXETER*

#### INTRODUCTION

The NHDES has announced a Public Water System Asset Management Planning Grant program to promote asset management and assist community water systems in developing an asset management plan.

Asset management is often presented as a framework of 5 Core Components:

- Asset Inventory
- Level of Service
- Critical Assets
- Life Cycle Costing
- Long-term Funding Strategy

Addressing these core components will allow water systems 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 benefits of an asset management plan include:

- Establishing appropriate budgets
- Increased system knowledge
- Identify system elements vulnerable to the impacts of climate change
- Increased asset life when appropriate maintenance is performed
- More efficient allocation of capital funds
- Compliance with new regulations
- Reduced overall costs
- Improved system reliability/security
- Reduced service interruptions
- More efficient maintenance and replacement activities

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

Another critical component is the identification of elements of the water system that may be vulnerable to the effects of climate change. For instance, the town is moving toward removal of the Great Dam in the Exeter River, which is one of the sources for the PWS. Removal of the dam could improve flooding issues in the area, but would also require significant modification to the PWS intakes in the river.

*Elements addressed: 4 and 12*

## **SCOPE OF WORK**

The Town will provide the following professional engineering services related to development of an asset management plan.

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

- Attend one (1) kick-off meeting with town staff to discuss the goals of the project and collect additional information to supplement what town has already provided to the consultant. (See list of requested information below.)
- Conduct a site visit to accessible facilities. The site visit will be coordinated for the same day as the kick-off meeting.
- Develop an inventory of water assets. The inventory will be in spreadsheet form and based on information provided by the town.
- A “top down” approach will be used, which inventories assets in blocks or types, as opposed to a “bottom up” approach which considers each individual asset (valve, hydrant, service, etc.). The top down approach is more cost effective and will result in an asset inventory framework that covers the entire water system. The following asset types are anticipated:
  - Tanks
  - Supplies and treatment facilities
  - Transmission mains
  - Distribution mains
  - Unique components (interconnections, river crossings, etc.)
- Evaluate the condition of each block of assets based on a site visit to accessible assets and a desktop evaluation using available information such as hydrant flow tests, operator input, and service history (number of breaks, etc.).
- Estimate remaining service life for each block 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 Water Distribution System map in AutoCAD (and/or GIS, pending funding availability.) Provide up to three (3) hard copies in color and digital files (PDF and AutoCAD).

Elements addressed: 1 and 5

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

#### **Level of Service**

- Assist with development of a Level of Service Statement. The Level of Service Statement defines the way in which the water system owners, managers, and operators want the system to perform over the long term. Typical Level of Service Statements include items relating to water quality, frequency of main breaks, interruptions in service, etc.
- Prepare a draft Level of Service Statement based on consultant’s experience and knowledge of the water system for review and comment by the town.

- Conduct a management workshop with officials to discuss the draft Level of Service Statement and town comments. To be coordinated with the meeting to review the draft Asset Management Plan as part of this scope of work (see below).
- Respond to town comments and finalize the Level of Service Statement in the final Asset Management Plan.

#### Assess Criticality

- For each asset or asset block, estimate its probability of failure. Develop a scoring system (matrix) to rank assets based on their probability of failure. Consider material, age, condition, climate change vulnerability and other factors as appropriate.
- For each asset or asset block, estimate its consequence of failure. Develop a scoring system (matrix) to rank assets based on the impact their failure would have on the system's ability to meet the desired level of service. Consider remaining useful life, protection of public health and welfare, importance of the asset to operation of the system, and redundancy or lack thereof.
- Rank assets in order of importance (priority) based on a combination of probability and consequence of failure.

*Elements addressed: 6, 9 and 12*

### ***Task 3 – Financial Planning***

#### 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. Using the "top down" approach, opinions of cost will be developed for each asset block and will include all work assumed for full replacement of the asset. (For example, water main costs will include hydrants, services, and restoration.)

#### 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 water system's current operating budget.

*Elements addressed: 2 and 7*

### ***Task 4 – Plan Presentation, Implementation, Communication and Training***

#### Asset Management Plan

- Prepare a written Asset Management Plan presenting the results of the above tasks. Submit a draft for review.
- Attend one (1) meeting to review the draft Plan with the town and receive comments.
- Revise the Plan in response to comments and submit up to five (5) copies of the final Plan.

### Implementation / Communication Plan and Training

- The Asset Management Plan will include recommendations for implementation and communication to customers.
- Prepare a flyer or brochure summarizing the Asset Management Plan for distribution to customers.
- Attend up to one (1) meeting of the water system's governing body to present the Asset Management Plan and provide training in asset management principles.

*Elements addressed: 3 and 11*

### ***Deliverables***

1. Asset Inventory spreadsheet (Tasks 1 and 2), including:
  - a. Asset inventory
  - b. Condition assessment
  - c. Probability of failure
  - d. Consequence of failure
2. System Map: hard copy and digital (Task 1)
3. Asset Management Plan (Task 4), including:
  - a. Level of service statement
  - b. Life-cycle costing
  - c. Long-term funding strategy
  - d. Implementation/Communications plan
4. Public outreach brochure (Task 4)

### ***Meetings***

1. Kick-off and site visits (Task 1)
2. Level of service workshop and review draft report (Tasks 2 and 4)
3. Present plan and provide training to governing body (Task 4)

### ***Limitations / Assumptions***

- The asset inventory will be based on information, records, and reports to be supplied by the Town.

### ***Information Requested from the Town***

- Existing studies, drawings, tie sheet information, service or repair records, NHDES sanitary surveys.
- Access to water system facilities.

### ***Alternate scope items***

The scope developed is based on the anticipated availability of funds to match the grant; however, the following items may be incorporated into the scope if additional town funds become available:

- Hydraulic modeling of the water system to refine the criticality component.
- Further develop the existing GIS model.
- Perform additional condition assessment or inspections, other than those specifically noted above.
- Perform a water rate study.

***Schedule***

Award of Grant	Winter 2014
Authorization to Proceed*	Winter 2014
Kick-off and Site Visits	Spring 2014
Develop Plan	Summer 2014
Level of Service Workshop and Review Draft Plan	Fall 2014
Present Final Plan	Fall 2014
Public Outreach	Winter 2014-15

\*Pending authorization of Town funds.