

## Memorandum

To George Meservey, Director of Planning & Community Development  
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Betsy Shreve, AICP, AECOM Project Director

CC Mark Abrahams, The Abrahams Group  
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Subject **Town of Orleans, MA**  
**Water Quality and Wastewater Planning**  
**Task Number 5.4 – Program Cost Impact Assessment and Affordability**

Project Number 60476644

From Thomas Parece, P.E., AECOM Project Manager

Date 02/15/16

### 1. Background

- a. Purpose of Program Cost Impact Assessment and Affordability Technical Memorandum (1 paragraph).

### 2. Introduction

- a. Describe Program Cost Impact Assessment and Affordability (1 paragraph).
- b. Definitions (Define Program Cost Impact Assessment, Affordability, and Other Terminology).
- c. Describe program cost impact assessment and affordability functionality in the latest version of the financial model developed by the Town.
- d. Describe the planned role of Program Cost Impact Assessment and Affordability in the updated financial model.

### 3. Description of Program Cost Impact Assessment

- a. Describe methodology used to complete a program cost impact assessment, including the following steps:
  - i. Determine engineering solutions to be used.
  - ii. Determine a revenue requirement, based on costs to implement the engineering solutions. The costs can be capital costs, operating and maintenance costs, monitoring costs, and replacement costs and a revenue requirement for each may be determined.
  - iii. Select revenue options to satisfy the revenue requirement.

- iv. Using affordability assessment results available for review, determine if the project with the revenue options as described is affordable.
- b. Describe methodology used to run additional program cost impact assessments.

#### 4. Description of Affordability

- a. Describe affordability and its potential impact on alternative wastewater solutions, including:
  - i. Affordability assessments to determine whether the average wastewater cost per household satisfies certain affordability criteria.
  - ii. Affordability assessments to be analyzed based upon one or more of the affordability criteria.
  - iii. Results of affordability assessments may lead to 1) acceleration of project phasing if the results show the project is affordable, (2) no changes in project plans, (3) spreading phases of the project over a longer period of time to make the project more affordable, or (4) greater substantiation of need for grant funding or private-public partnership arrangement.
- b. Affordability criteria used may include:
  - i. EPA Primary Affordability Indicators.
  - ii. Barnstable County Indicators.
  - iii. Commonwealth of Massachusetts Indicators.
  - iv. Comparative Community Wastewater Cost Indicators.

#### 5. Development of Program Cost Impact Assessment and Affordability

- a. Using the updated financial model, determine the revenue requirement, based on engineering solutions selected and the potential splitting of the revenue requirement by types of costs (e.g., capital, operating, etc.).
- b. Using the updated financial model, with the revenue requirement determined and revenue options selected, assess the project's affordability using one or more affordability criteria.
- c. Show impact of potential changes to revenue options on affordability in a table format.
- d. Determine an updated revenue requirement and project affordability if/when cost projections change.

#### 6. Conclusion

- a. Prepare a summary presenting the program cost impact assessment and affordability assessment based on the engineering solutions in place (1 paragraph).