

## Memorandum

To John Kelly, Town Administrator  
George Meservey, Director of Planning & Community Development  
Michael Domenica, PE, Program Manager

CC Betsy Shreve, AICP, AECOM Project Director  
Jeff Reade, AECOM WW Treatment, Reuse and Biosolids Task Lead

Subject **Town of Orleans, MA**  
**Water Quality and Wastewater Planning**  
**Task Number 2 – Tri-Town Transition Requirements**  
**Deliverable 2.c.4 – Final Technical Memorandum on the Design for Demolition of the Facility – Temporary Staffing Options**

Project Number 60476644

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

Date 02/03/16

### 1. Background

- a. A component of the Water Quality and Planning effort currently on-going with the Town of Orleans includes evaluating Transition options for the existing Tri-Town Septage Treatment Facility (“facility”).
- b. Task 2.c was originally intended to better define the design and specification requirements associated with the complete demolition of the facility. Town representatives have requested that this Task be expanded to include the evaluation of “mothballing” portions of the facility that are likely to have future value for a conventional WWTF, the possibility of transitioning the existing facility to a septage transfer station, and options for maintaining operation of the facility in the event of the loss of facility staff.

### 2. Introduction

- a. AECOM has previously submitted Technical Memoranda on the costs associated with keeping the facility operational through December 2021; the construction costs to decommission and demolish the facility at the end of the current permit cycle in December 2016; and the costs of partial mothballing and/or conversion to a septage receiving facility. Recent discussions with Orleans officials indicate that the three towns that make up the District have not approved the funding necessary to keep the facility operational. Additionally, converting the facility to a septage transfer station does not appear to be financially sustainable. It is therefore likely that the facility will be either completely demolished, or partially demolished and mothballed prior to the end of December 2016. Retention of facility staff to keep the facility operational through the October 2016 and to decommission it prior to the end of year has been identified as a concern.

Discussions with facility staff have confirmed AECOM's assessment that the facility is minimally staffed as is, and the loss of even one operator would make continued operation unsustainable. There are currently just three staff capable of operating and maintaining the facility, including the facility superintendent. In light of the impending shut-down of the facility, it is not unreasonable to expect that at least some of the staff will begin looking for other employment opportunities or consider retirement. As a result, AECOM has been asked to evaluate possible staffing scenarios.

While it is impossible to predict with any accuracy if/when supplemental staffing will be required, two possible scenarios were explored to bracket the range of options.

### 3. Description and Discussion of Options

- a. Scenario 1: This scenario assumes that the facility superintendent and at least one of the other operators remain with the facility. In this scenario, a licensed (grade 3-M) operator would be provided on a temporary basis by a contract operations firm. Overall management and operational responsibility would remain with the District and existing facility superintendent.
- b. Scenario 2: This scenario is meant to address the possibility that all existing staff move on to other employment opportunities or retire. In this scenario, a contract operations firm would be hired to take over complete O&M duties for the District. It is assumed in this case that the following staff would be required:
  - One (1) Facility Superintendent, Grade 5-C or higher;
  - Two (2) Facility O&M Technicians, Grade 3-M or higher; and
  - One (1) Lab Technician that would also assume some administrative functions.

### 4. Contract Operations Discussions

- a. Six firms providing wastewater contract O&M services were contacted to determine their interest in providing O&M labor under either scenario on a temporary (i.e. – up to 9 month) basis. The six firms contacted and a brief discussion of each are as follows:

Veolia Water North America: Based in Chicago, IL, Veolia Water North America (“VWNA”) is the largest player in the contract O&M services market in North America, operating facilities throughout North America. Locally, they operate the Fall River WWTF.

United Water: Based in Paramus, NJ, United Water is a subsidiary of Suez Environnement and a large player in the contract O&M services market in North America. Locally, they operate the East Providence WWTF.

Woodard & Curran: Based in Portland, ME, Woodard & Curran provide contract O&M services at wastewater treatment facilities throughout the northeast and beyond. Locally, they are a sub-contractor to AECOM at the Provincetown WWTF.

Weston & Sampson: Based in Peabody, MA, Weston & Sampson also provide O&M services throughout the northeast. Locally they operate the Chatham WWTF and the Yarmouth-Dennis Septage Treatment Facility.

Whitewater, Inc.: Based in Charlton, MA, Whitewater is a smaller regional firm that provides a broad array of contract O&M services. Locally, they have an office in Sandwich, MA that services smaller satellite treatment facilities in southeastern Massachusetts and Cape Cod.

Natural Systems Utilities/Applied Water Management: Based in Hillsborough, NJ, Applied Water specializes in Design/Build/Operate projects for municipal and commercial client and they provide O&M services to a variety of smaller facilities throughout the Northeast. Locally, they have an office in Fall River, MA and they operate the wastewater treatment and reuse system at Gillette Stadium in Foxborough, MA.

b. Summary of Discussions

The two larger firms, Veolia Water North America and United Water, were both non-responsive. This could possibly be the result of them not having an existing presence on Cape Cod, of the fact that they are configured to service large, longer term contracts at larger facilities.

Weston & Sampson responded, but were not able to provide an answer within the time frame requested, as compared to a 4 to 8 week period, as to their interest in providing these services, and if so, what the cost would be.

Citing their own difficulties in sourcing/retaining qualified staff at the Provincetown WWTF, Woodard & Curran responded in the negative

Natural Systems Utilities indicated that the most they could provide would be part-time oversight, in the order of 10 hours/week.

The one firm that did express an interest was Whitewater, Inc., however they too were unable to provide pricing within the time frame requested.

**5. Contract Operations Estimated Costs**

In view of the limited response from contract O&M firms, AECOM estimated what contract O&M services would cost based on the rates for the Provincetown O&M contract. Provincetown utilizes a Grade 5-C superintendent, and when available, grade 3-M or higher licensed O&M technicians. Given the difficulty in finding O&M staff for this facility, and for facilities on the lower/outer Cape in general, a contingency factor was placed on what would be considered industry standard rates to reflect the premium that may be necessary to attract both firms and individuals to the facility for a limited 3 to 6 month contract. An estimate of monthly cost is as shown in Table 1 below.

Table 1: Estimated Contract Labor Rates

Position	Estimated Bill Rate (\$/hour)
Grade 5-C Supervisor	\$105
Grade 3-M O&M Tech	\$75
Lab/Admin	\$60

At these rates, supplementing existing staff (i.e.: Scenario 1) with a Contract O&M Technician (Grade 3-M) or higher, would cost in the order of \$13,000/month. In the event that it was necessary to provide a full complement of staff to operate the facility (i.e.: Scenario 2), the cost would be in the order of \$55,000/month.

A previous report<sup>1</sup> prepared for the Town estimated the time required for closure/decommissioning to be in the order of 6 weeks. In discussions with facility staff and AECOM's experience, AECOM believes 12 weeks to be a more conservative and realistic estimate. If the decision were made to begin closure of the facility immediately upon the contract operator assuming operational responsibility, and a 3 month closure/decommissioning schedule is assumed, then the cost of contract O&M labor to close the facility would in the order of \$165,000. AECOM would recommend carrying an additional 25 percent contingency on this estimate, which then becomes \$210,000.

## 6. Summary and Recommendation

In summary, if existing facility staff simply need to be supplemented by one contract O&M technician that would work under the direction of the existing facility superintendent, the O&M labor cost is estimated to be in the order of \$13,000/month. If however there is a need to completely replace facility staff, then the O&M labor cost would be more in the order of \$55,000/month. If a contract O&M firm was brought in to operate the facility for the complete three month closure/decommissioning of the facility, the cost would be in the order \$210,000, which includes a 25 percent contingency intended to cover uncertainty in the cost and duration of the contract.

AECOM would caution that these estimates are prorated off of contract labor rates at the nearby Provincetown WWTF. AECOM was unable to get any of the six contract O&M firms contacted to commit to even budgetary pricing within the time frame requested as compared to a typical 4 to 8 week period. Given difficulties experienced in the past in recruiting/retaining qualified staff in this region, there is a significant risk that the procurement process for a contract for a complete replacement team from an O&M firm could end up being costly and result in significant time delays.

To that end, AECOM recommends that the District consider closure decommissioning prior to the fall of 2016. One potential option is to issue closure notices and commence decommissioning activities immediately upon the resignation of even one of the existing staff. Discussion with facility management indicates that while it would not be possible to continue full operations with the loss of one of the operators, it may be possible to carry-out decommission/closure and it's likely that remaining staff would remain until decommissioning is complete. If additional staff were required, it is likely to be far easier to supplement a single O&M position than to replace the entire staff.

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<sup>1</sup> "Tri-Town Septage Treatment Facility Decommissioning Action Plan", Stantec Consulting Services, October 2013