



Date: July 10, 2018

To: Thomas J. Bonfield, City Manager
Through: W. Bowman Ferguson, Deputy City Manager
From: Donald F. Greeley, Director, Water Management
Subject: Demolition of Decommissioned Waste Water Treatment Facilities (WWTFs)
– Construction Award to 4 Seasons Demolition, Inc.

Executive Summary

The Department of Water Management (DWM) opened bids on June 28, 2018 for the Demolition of Decommissioned WWTFs project. The project includes the following:

1. Demolition of four (4) decommissioned WWTFs at the Eno Lift Station, Lick Creek Lift Station, Hope Valley WWTF and Farrington Road WWTF – sites contain lead and asbestos; pose a safety risk and are subject to periodic illegal dumping.
2. Demolition of a decommissioned tank structure at Sandy Creek Park – currently identified as a safety risk by Department of Parks and Recreation
3. Demolition of structures and outbuildings at seven (7) City-owned properties near the Lake Michie Reservoir – will allow for re-vegetation of these sites to improve the watershed protection of the lake. The sites are within the identified buffer area around the lake.

DWM recommends the contract be awarded to 4 Seasons Demolition, Inc., the lowest responsive and responsible bidder.

Recommendation

The DWM recommends that the City Council:

1. Authorize the City Manager to execute a contract with 4 Seasons Demolition, Inc. for the Demolition of Decommissioned WWTFs project in the amount of \$1,780,000.00;
2. Establish a contingency fund for the contract in the amount of \$178,000.00;
3. Authorize the City Manager to negotiate change orders for the contract provided that the total contract cost does not exceed \$1,958,000.00.

Background

During the 1980's and 1990's the City owned and operated four (4) WWTFs that were decommissioned and replaced with either a regional lift station (Eno and Lick Creek) or a gravity outfall (Farrington Road and Hope Valley). DWM currently maintains these properties as they require some level of maintenance and inspection. Ideally, the abandoned structures should have been demolished after decommissioning to minimize any maintenance and liability. For reasons unknown, this did not happen when these sites were decommissioned. Regardless, the demolitions of these abandoned structures are the City's responsibility.

The Hope Valley and Farrington Road sites have been completely decommissioned, i.e., there are no active operations. Both sites contain lead and asbestos. Because the sites are unmanned, they have attracted vandalism and illegal dumping (see photos below). At the Hope Valley WWTF, all of the windows have been broken out of the 2-story building, outdoor lights

are broken, and the interior and exterior of the building have a significant amount of graffiti. Additionally, illegally-dumped yard waste currently blocks the driveway. At the Farrington Rd WWTF, the onsite building has also been broken into. The exterior of this building and several structures onsite also have graffiti. Illegal dumping has occurred along the fence line, along the driveway, and in front of the gate to the WWTF. Due to the trespassing and vandalism at the Hope Valley and Farrington sites, DWM staff is concerned about the liability to the City should someone sustain an injury while engaging in these types of activities. At the Hope Valley WWTF the project includes removing the asphalt drive and the associated culvert crossing, reducing site accessibility to trespassers.

Both the Lick Creek WWTF and the Eno WWTF are located at sites where a regional lift station is currently in operation. Both sites contain lead and asbestos. DWM staff visit these lift stations daily. Despite the daily staff presence trespassing and vandalism still occur. As the structures degrade over time, the potential risk of injury for a trespasser increases. Additionally in the past marijuana plants were found growing inside the tanks at the Lick Creek WWTF. The proposed project proposes to demolish the decommissioned structures (see photos below), and the fence line will be moved in such that it encloses only the portions of the site required to operate the regional lift stations. This greatly reduces maintenance requirements at both sites.

The structure at Sandy Creek Park was added to the demolition project following a suggestion from a City Council member at Work Session on February 23, 2017. Water Management staff coordinated with the Department of Parks and Recreation (DPR) to determine which structures to include for demolition. It was determined that a single steel tank structure, once part of a treatment plant, would be included in the demolition project. The structure in question was thought to be a climbing hazard by DPR and offered little aesthetic or recreational potential.

Lastly, there are seven (7) residential City-owned properties that are included in this project, where a residential building and outbuildings are set to be demolished and all wells and septic tanks abandoned. These City-owned properties surrounding Lake Michie are being returned to natural conditions to the greatest extent possible. The intent is to allow natural vegetation to be re-established because of the proximity of these sites to Lake Michie. This process would offer additional watershed protection. The structures are no longer needed and are located within the 300-ft buffer zone, beyond the 380-ft future high water mark for Lake Michie Reservoir. A Request for Proposals (RFP) for the demolition of these structures was previously issued by DWM in March 2017. Two responses to the RFP were received; however DWM did not feel that either proposal was in the best interest of the City due to the high costs. For this reason, DWM did not proceed with either proposal and chose to include the demolition of these residential structures in the bid package with the demolition of the WWTFs.

A summary of the structures set to be demolished at each site is as follows:

- **Eno:** 1 underground pump station, 2 buildings, 4 package plant tanks, yard piping and site demo (i.e. valve, boxes, manholes, sidewalk, fencing, etc.)
- **Lick Creek:** 1 influent box, 1 underground pump station, 1 building, 2 package plant tanks, yard piping and site restoration
- **Hope Valley:** 1 underground pump station, 1 2-story building, 1 package plant tank, 1 generator slab, yard piping and site restoration
- **Farrington:** 1 underground pump station, 2 buildings, 3 package plants, yard piping and site restoration
- **Sandy Creek:** 1 steel tank

- **Lake Michie:** 7 homes and multiple outbuildings, 7 wells to be abandoned, 7 septic tanks to be abandoned, 1,000 feet of Roberts Rd. to be abandoned and installation of a new turnaround and barricade.

DWM has consulted with both the City’s Attorney’s office (Don O’Toole) and the Finance Department’s Risk Management division (Glenn LaGrande) who agree these sites are a liability to the City.

Removal of these structures align with the DWM’s Strategic Goal #4 (Well Managed City) by providing *accountable* professional management; and Strategic Goal #5 (Stewardship of the City’s Physical Assets) where we plan, provide, and maintain infrastructure that supports quality of life.

Issues and Analysis

The DWM formally advertised the project for bid on May 17, 2018. The project was bid as a combination of lump sum and unit price contract. One bid was received on June 19, 2018 but could not be opened due to the 3-bid minimum requirement. The project was re-advertised on June 20, 2018, yielding one bid which was opened on June 28, 2018. The bid results are:

| Contractor | Total Bid |
|----------------------------|------------------|
| 4 Seasons Demolition, Inc. | \$1,780,000.00 |

This bid is broken down as follows:

| | |
|--|----------------|
| Lump Sum Item - Demolition at five (5) WWTF sites..... | \$1,660,000.00 |
| Unit Price Items - Demolition of homes at Lake Michie/Roberts Rd | \$116,000.00 |
| Total | \$1,780,000.00 |

The Engineer’s opinion of probable construction cost was \$1.5M. Therefore, the low bid of \$1.78M is almost 19% higher than the estimate. However, there are factors that drive the cost higher than anticipated:

1. Construction costs are increasing due to a thriving economy; so contractors are being more selective on the projects they bid.
2. Demolition costs are difficult to estimate in this economic climate.
3. Asbestos abatement is required at the Eno, Lick Creek, Hope Valley and Farrington sites.
4. Lead abatement is required at all the WWTF sites.
5. After removing components, the remaining underground portions of the structures will be filled with flowable fill to 3-feet below grade.
6. Demolition costs will continue to rise over time.

It is DWM’s recommendation to move forward with the project to demolish the decommissioned facilities and award the contract to 4 Seasons Demolition as the lowest responsive and responsible bidder.

Alternatives

Alternative #1 - Do not go forward with the project. This alternative would leave the sites as they exist today, and allow the structures to deteriorate. This could increase the City’s liability with these sites if someone were to be injured while vandalizing the site, or just exploring it. Also, public perception may raise questions about the City’s responsibility for adequately maintaining City property when the City also cites residents for poor maintenance of their private property. Additionally demolition costs will only rise in the future. The sites that contain lead

and asbestos could eventually cause soil contamination. The remediation costs for this would significantly increase the costs to the City.

Alternative #2 - Do not go forward with the project and install fencing around the sites. This alternative has the same concerns raised in Alternative #2. Although a deterrent, fencing will not totally eliminate trespassing and illegal dumping at these remote unmanned facilities. Additionally, fencing may even attract additional trespassing. Any fencing would have to be inspected periodically and repaired as needed. Fencing around abandoned structures is usually installed as a temporary measure until such time another use for the site is identified. In these cases the future use for these sites will be to return them to a natural state.

Financial Impact

Funding for this project has been programmed in the Water & Sewer CIP and is available in the following accounts:

| Organization Code | Object Code | Project Code | Amount |
|-----------------------------|-------------|--------------|-----------------------|
| 4100 P002 | 731000 | P25DE | \$1,780,000.00 |
| 4100 P002 | 731900 | P25DE | \$178,000.00 |
| TOTAL PROJECT AMOUNT | | | \$1,958,000.00 |

Equal Business Opportunity Summary

The Equal Opportunity/Equity Assurance Department reviewed the bid submitted by 4 Season’s Demolition, Inc. of Wilmington, NC to determine if they are in compliance with Ordinance to Promote Equal Business Opportunities in City Contracting. The goals for this project are **MUBE** 11% and **WUBE** 7%. Although, 4 Seasons Demolition, Inc. did not meet the *Women* goal, it was determined 4 Seasons Demolition, Inc. demonstrated Good Faith Effort and is in compliance with the Ordinance to promote Equal Business Opportunities in City Contracting.

UBE REQUIREMENTS

4 Seasons Demolition, Inc. will subcontract to the following certified firm:

| Firm | ID | City/State | Amount | % of Contract |
|----------------------------|------|-------------|--------------|---------------|
| Cadet Construction Company | MUBE | Raleigh, NC | \$407,000.00 | 23% |

Cadet Construction is an SLBE firm.

After the Bid Opening and Good Faith Effort determination, 4 Seasons Demolition, Inc. submitted the following **WUBE** participation:

| Firm | ID | City/State | Amount | % of Contract |
|-------------------------|-----------|-------------------|---------------|----------------------|
| Brockmeier Grading, Inc | WUBE | Swannanoa, NC | \$124,600.00 | 7% |

WORKFORCE STATISTICS

Total Workforce:

| Employment Category | Total Employees | Total Males | Total Females |
|----------------------------|------------------------|--------------------|----------------------|
| Project Manager | 2 | 2 | 0 |
| Professional | 9 | 8 | 1 |
| Technical | 0 | 0 | 0 |
| Clerical | 3 | 0 | 3 |
| Labor | 4 | 4 | 0 |
| Total | 18 | 14 | 4 |

Male:

| Employment Category | White | Black | Hispanic | Asian or Pacific Islander | Indian or Alaskan Native |
|----------------------------|--------------|--------------|-----------------|----------------------------------|---------------------------------|
| Project Manager | 2 | 0 | 0 | 0 | 0 |
| Professional | 8 | 0 | 0 | 0 | 0 |
| Technical | 0 | 0 | 0 | 0 | 0 |
| Clerical | 0 | 0 | 0 | 0 | 0 |
| Labor | 4 | 0 | 0 | 0 | 0 |
| Total | 14 | 0 | 0 | 0 | 0 |

Female:

| Employment Category | White | Black | Hispanic | Asian or Pacific Islander | Indian or Alaskan Native |
|----------------------------|--------------|--------------|-----------------|----------------------------------|---------------------------------|
| Project Manager | 0 | 0 | 0 | 0 | 0 |
| Professional | 1 | 0 | 0 | 0 | 0 |
| Technical | 0 | 0 | 0 | 0 | 0 |
| Clerical | 3 | 0 | 0 | 0 | 0 |
| Labor | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 0 | 0 | 0 | 0 |

Photos are included below.



Photo 1: Heavily vandalized 2-story building to be demolished at Hope Valley WWTF.



Photo 2: Interior of 2-story building at Hope Valley WWTF



Photo 3: Vandalized steel package plant tank to be demolished at Hope Valley WWTF



Photo 4: Heavily vandalized building to be demolished at Farrington Rd. WWTF



Photo 5: Illegal dumping outside the gate, fence, and along the drive at Farrington Rd. WWTF



Photo 6: Illegal dumping at Farrington Rd. WWTF



Photo 7: Tank to be demolished at Farrington Rd. WWTF



Photo 8: Tanks 2 and 3 to be demolished at Eno WWTF



Photo 9: Tank 1 to be demolished at Eno WWTF



Photo 10: interior of tank to be demolished at Eno WWTF



Photo 11: Interior of tank to be demolished at Eno WWTF



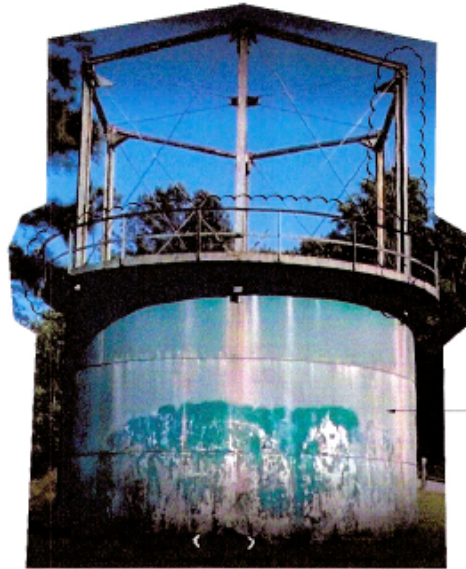
Photo 12: Tanks, shed and building to be demolished at Lick Creek WWTF



Photo 13: Tank to be demolished at Lick Creek WWTF



Photo 14: Structure to be demolished at Sandy Creek Park



EXIST. STORAGE TANK
N.T.S.