



# City of Norman, OK

Municipal Building  
Council Chambers  
201 West Gray  
Norman, OK 73069

## Master

**File Number: K-1819-75**

**File ID:** K-1819-75                      **Type:** Contract                      **Status:** Consent Item

**Version:** 1                                      **Reference:** Item 28                      **In Control:** City Council

**Department:** Utilities Department                      **Cost:** \$106,900.00                      **File Created:** 10/31/2018

**File Name:** Preliminary design of WRF Co-Composting Improvements                      **Final Action:**

**Title:** CONTRACT K-1819-75: A CONTRACT BY AND BETWEEN THE NORMAN UTILITIES AUTHORITY AND GARVER, L.L.C., IN THE AMOUNT OF \$106,900 TO PROVIDE PRELIMINARY DESIGN SERVICES FOR THE CO-COMPOSTING IMPROVEMENTS.

**Notes:** ACTION NEEDED: Acting as the Norman Utilities Authority, motion to approve or reject Contract K-1819-75 WITH Garver, L.L.C., in the amount of \$106,900; and, if approved, authorize the execution thereof.

ACTION TAKEN: \_\_\_\_\_

**Agenda Date:** 11/13/2018

**Agenda Number:** 28

**Attachments:** Text File, Co-Composting K-1819-75, Attachment C-Potential Compost Sites Exhibit, WRF Co-Composting Budget

**Project Manager:** Mark Daniels, Utilities Engineer

**Entered by:** mark.daniels@normanok.gov

**Effective Date:**

### History of Legislative File

Ver- sion:	Acting Body:	Date:	Action:	Sent To:	Due Date:	Return Date:	Result:

### Text of Legislative File K-1819-75

Body

**BACKGROUND:** The Co-Composting Improvements project (WW0312) will provide benefits to both the Water Reclamation Facility (WRF) and the Yard Waste Composting Facility, both of which are located south of Highway 9 between Jenkins and Chautauqua. The project will co-mingle treated "Class B" wastewater sludge (biosolids), currently produced at the WRF, with yard waste and/or wood chips currently available at the Composting Facility. Additional information on each of these facilities follows.

Yard Waste Composting Facility: This 10-acre facility opened in September 2009 and contains six acres for compost windrows. The additional area provides for material unloading and loading as well as a maintenance road and perimeter security fencing. The construction cost of the compost facility was \$1.8 million and includes a looped irrigation water system to supply water for proper moisture control and curing. The composting facility has reduced the amount of waste disposed at the landfill by an average of about 15,500 tons each year (FYE16

through FYE18) and produces a valuable end product for our citizens. Over the last 3 years, landfill disposal fees have been reduced an average of approximately \$320,000 annually (not including transportation costs).

Yard waste including grass, leaves, shrubs, and tree limbs two inches in diameter or less are collected by Sanitation crews once a week from Norman residents. Yard wastes from commercial landscaping or yard service companies are accepted at the composting facility at no charge. Yard waste is ground into mulch by a tub grinder, mixed in the correct proportions (nitrogen to carbon or green waste to brown waste) to aid decomposition and laid out in long rows called windrows. Initially, the windrows are about six feet high and sixteen feet wide, are kept moist with the aid of spray irrigation and mixed by turning about three times each week. The heat generated by the decomposition process raises the internal windrow temperature to approximately 130 degrees Fahrenheit. The composting process is complete in 90 to 120 days and the volume of mulch is reduced about 50% as the mulch decomposes. Cured compost is then released to our citizens.

Wastewater Sludge Processing: The Phase 2 WRF Improvements increasing the sewage treatment capacity to 17 million gallons per day (MGD) were recently completed at a construction cost of \$52,154,160. The improvements were accepted by the NUA on September 11, 2018. Anaerobic Digesters at the WRF process and treat the thickened sludge to meet Oklahoma Department of Environmental Quality (ODEQ) standards for "Class B" biosolids. Beneficial reuse of "Class B" biosolids is restricted to non-public access areas such as farmland permitted by the DEQ. Thickened biosolids (4 to 6% solids) may be applied by tanker truck or dewatered biosolids (18 to 24% solids) may be applied by mechanical means to permitted farmland; in both cases the biosolids are incorporated into the soil. Garver, LLC (Garver) with offices in Norman assisted the NUA in the design and construction of the Phase 2 WRF Improvements. Staff recommends that Garver be allowed to continue with the design of the Co-Composting Improvements.

The Co-Composting Improvements project will consider co-composting treated "Class B" wastewater biosolids, currently produced at the WRF, with yard waste and/or wood chips currently available at the composting facility. This process to further reduce pathogens (PFRP) will allow production of "Class A" biosolids. This higher level of biosolids treatment when co-mingled with yard waste results in a better product which may be beneficially reused by our citizens and other entities without restriction; this includes public places such as parks, greenbelts and by homeowners and gardeners. Additionally, the time to produce cured compost ready for reuse is reduced from 90 to 120 days for yard waste compost to 15 to 30 days co-composted materials. This shortened curing time will reduce storage of stockpiled mulch at the compost facility and will allow more frequent release of compost materials to the public. Reuse of "Class A" biosolids also significantly reduces record keeping required by WRF staff. Co-composting is currently completed in at least three Oklahoma communities: Ardmore, Midwest City and Tahlequah.

The Preliminary Engineering Report (PER) for the Phase 2 WRF Improvements completed by Garver in November 2011 estimated the construction cost of the Co-Composting Improvements at \$1.7 million. This cost included construction of concrete paving under co-composting area, site improvements and the purchase of additional equipment such as a compost turner and front-end loader. These costs originally estimated in 2011 have been increased by 2.5% per year to account for inflation.

The Fiscal Year Ending 2019 (FYE19) budget for the Co-Composting Improvements includes \$414,000 for design/inspection and \$2,070,000 for construction for a total of \$2,484,000. The funding is split equally between the Water Reclamation Fund (032) and the Sanitation Fund (033).

**DISCUSSION:** Proposed Contract K-1819-75 authorizes Garver to proceed with Preliminary Engineering Report (PER) phase for the Co-Composting Improvements. The contract envisions adding design, bidding and construction phase services through future contract amendments, if deemed appropriate by the NUA.

The proposed scope of the work and its cost has been negotiated with Garver; the proposed lump sum fee is fixed at \$106,900. Attachment A details the proposed schedule and work scope, Attachment B defines the costs of the initial tasks and Attachment C is a Location Map. As shown in Attachment B, the initial tasks performed herein will be supplemented in the future by design, bidding and construction phase services. As detailed in the contract, tasks to be performed at this time generally include:

- a brief evaluation of available processes to achieve “Class A” biosolids;
- a review of regulatory requirements of both the Water Quality Division (wastewater biosolids) and the Land Protection Division (yard waste) as necessary to permit a co-composting facility;
- an analysis of current and future generation rates of “Class B” biosolids as compared to yard waste production;
- a determination if the permitted area for existing Yard Waste Composting Facility is adequate and suitable for co-composting facilities;
- an evaluation of the suitability of additional adjacent sites (if required);
- an update to our existing sludge management plan for beneficial reuse of “Class B” biosolids (liquid and dewatered biosolids) with additional discussion regarding the reuse of co-composted “Class A” biosolids; and
- delivery of a PER with associated costs for the Co-Composting Improvements.

The FYE19 budget for the Co-Composting Improvements (WW0312) includes \$414,000 for design/inspection; \$207,000 is budgeted in the Water Reclamation Fund, Design (account 032-9363-432.62-01) and \$207,000 is budgeted in the Sanitation Fund, Design (account 033-9975-432.62-01); the proposed contract will be split equally with each design account funding \$53,450.

**RECOMMENDATION:** Staff recommends that the NUA approve Contract K-1819-75 with Garver, LLC of Norman, Oklahoma to complete the preliminary engineering report phase for the Co-Composting Improvements project for a total fee of \$106,900.