

Attachment D

Proposal Scopes and Previous Related Studies

RFP proposals shall be based upon the scopes for two PWD sites; The Northeast Water Pollution Control Plant (NE WPCP) and the Southwest Water Pollution Control Plant (SW WPCP).

In addition to the scope outlined in the RFP section 2 , the measures/suggestions delineated below shall all be evaluated and addressed as part of any RFP response, however, additional measures may be proposed as alternatives or supplements to the listed measures. Proposers shall base evaluations on technical profiles included in Attachment B along with the site walkthrough(s) and onsite investigations undertaken as part of this RFP response to evaluate the two site scopes. For further reference, a previous study on the cogeneration facility at the NE WPCP site is included.

NE WPCP and SW WPCP

As part of this RFP, the Procurement Team would like proposers to consider the following energy conservation measures at the NE WPCP and SW WPCP as part of your proposal.

1. Mixers - Implementation of mixers into the existing 20 anaerobic digesters (12 at SW WPCP, 8 at NE WPCP) to promote process efficiency, increase biogas production, and position the facilities for further renewable energy projects

Energy Conservation Measure (ECM) goals:

- We anticipate an increase in biogas production with the addition of these mixers.
- Electricity Offset – While the implementation of mixers will increase electrical consumption, some technologies such as Linear Motion Mixers are expected to be more efficient than others. Proposers should propose an efficient solution that will minimize an increase in energy needs while meeting other goals of this RFP.
- Natural Gas Offset – While difficult to quantify, digester mixing is anticipated to increase biogas production in the digesters, reducing the department’s purchased energy needs at SW WPCP and NE WPCP.

SW WPCP

As part of this RFP, the Procurement Team would like proposers to consider the following upgrades, replacements, and energy conservation measures at the SW WPCP as part of your proposal.

1. Biogas Utilization (Valve) - Installation of a new automated valve to send more biogas to the Biosolids Recycling Center (BRC) onsite at PWD's SW WPCP to utilize biogas (reducing natural gas use) and reduce flaring; this project will allow for more biogas to be utilized at the BRC, as the current process is manual and not optimized. If the biogas is utilized more productively, flaring will decrease, which will decrease Scope 1 GHG emissions.

ECM goals:

- Reducing flaring
 - Efficient use of biogas, monetization of product, and reduction of GHG
 - Natural Gas Offset estimate: 1,069,200 CCF
 - GHG Emission Reductions estimate: 3,616 mt CO₂ per year
 - Basis: Reduction of GHG emissions from using less natural gas
2. Upgrades to Preliminary Treatment building, Sludge Thickener building and Digesters
 3. Energy efficient blowers, mixers on aeration tanks and dryer
 4. Improvements to grit removal process
 5. Improvements to removal of trash and large debris from sludge (sludge screens)
 6. Addition of sludge density metering
 7. Replacement of 3-way valves for modulating the glycol heating loop in the anaerobic digesters
 8. Replacement of digester inlet valves for correct digester feeding
 9. Addition of sludge flow meters to digesters
 10. Installation of strainers on heating loops (primary and secondary)
 11. Addition of dryers to increase biogas quality

NE WPCP

As part of this RFP, the Procurement Team would like proposers to consider the following upgrades, replacements and energy conservation measures at the NE WPCP as part of your proposal.

Plant Improvements / Equipment Upgrades

1. Installation of linear motion mixers in the eight anaerobic digesters
2. Replacement of Heat, Transfer, and Recirculation pumps

3. Installation of Sludge feed totalizers on each of the digesters
4. Installation of additional density meters in sludge lines and the Gravity Thickener Tanks
5. Installation of a new scum box chopper pump in the Gravity Thickener Building
6. Installation of sludge blanket sensors on final tanks
7. Evaluate Sludge screening throughout plant
8. Evaluate transformer capacity for possible replacement at sludge buildings
9. Installation of Biogas dewatering unit dryer
10. Addition of full scale dewatering system at NE WPCP