



City of Galveston

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March 20, 2019

To: Hon. Mayor and City Council Members
Brian Maxwell, City Manager

From: Brandon Cook, Assistant City Manager

RE: Consider approving a professional services agreement with the engineering firm Pure Technologies U.S. Inc. in the amount of \$395,100 for implementation of a non-revenue water mitigation program aimed at reducing water leakage and lost revenue in the Combined Utility System Fund. (RFP #19-09 “Water Loss Mitigation/Non-Revenue Water Loss Control Program Plan).

I. Background

In 2018, the City of Galveston commissioned a non-revenue water (NRW) analysis in accordance with the standards of the American Water Works Association’s “Water Audit Method” and “The M36 Manual for Water Audits & Loss Control Programs”. The results of this audit revealed substantial water loss volumes at levels greater than optimal for a system with the characteristics and operation of the Galveston system. The audit report estimated a water loss of 1,031 MG/year (at an economic value of \$2.57 Million) for the 2018 Calendar year and found that the annual economic water loss target it should aim for to achieve optimal efficiency is 316 MG/year (or a value of \$733,626). This would yield an annual savings of \$1.837 Million (or 715 MG/year). Based on the audit findings, Cavanaugh recommended:

- implementation of a pro-active leak detection program;
- developing a system-wide asset management program;
- developing a district metering area program; and
- developing a methodology to manage and optimize pressure throughout the water delivery system.

II. Current Situation

The City issued a Request for Proposals to craft and implement a non-revenue water program that addresses the recommendations contained in the study. The committee selected Pure Technologies as one of the firms to engage in negotiations. Pure and the City agreed on the implementation of several strategies as Phase I of the NRW program:



- A “mass balance” of purchased water to monitor leakage in the primary water mains;
- Identify customer meter inaccuracies with targeted algorithms in lieu of random metering sampling;
- Establishment of District Metered Area’s on the west end of the island; and
- Conducting a city-wide leak inspection survey.

The City’s draft 2019 Water Conservation Plan (which is being considered for adoption at this very Council meeting) provides for aggressive water loss reduction goals that are 40% more than the state recommended targets. These goals were crafted assuming that the NRW program would be implemented.

III. Issues

1. *Cost* – Phase I of the program is anticipated to not exceed \$395,100. However, the City has recently applied for a Federal WaterSMART Grant that would cover half the cost of the program, if awarded. Furthermore, the program could potentially fund itself through cost savings
2. *Timing* – The program should be implemented as soon as possible to meet the aggressive water loss reduction goals set in the Water Conservation Plan.
3. *Liability* – The city doesn’t have any unusual foreseeable liability related to implementing the program.
4. *Impact or ramifications* – The state’s 2017 Region H Water Plan recommends the City “implement municipal conservation and water loss reduction measures to alleviate the need for the development of additional water supplies.” This would satisfy the provisions of the state plan and would decrease the need to acquire additional supply for the region as population increases and industry expands.

IV. Alternatives in order of priority

1. That the City Council approve the professional services agreement with the engineering firm Pure Technologies U.S. Inc. in the amount of \$395,100 for implementation of a non-revenue water mitigation program aimed at reducing water leakage and lost revenue in the Combined Utility System Fund.
2. That the City Council select certain programs it wishes to implement in the professional services agreement.
3. That the City Council votes against approval of the professional services agreement and instructs staff to negotiate with another firm.
4. That the City Council votes against approval of the professional services agreement and votes to change the goals provided for in the draft Water Conservation Plan to a more conservative target.

V. Recommendation

Concur in Alternative 1. and approve the professional services agreement.



VI. Fiscal Impact Report

Funding Source Combined Utility System Fund, Water and Sewer Certificates of Obligation, and potential WaterSMART Grant Funds.

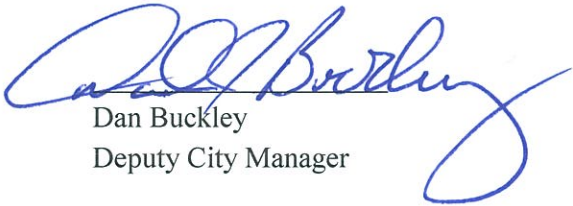
Costs of implementation:	Phase I –	\$370,100
	Contingency	\$25,000
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	Not to exceed	\$395,100

Respectfully Submitted,



Brandon Cook
Assistant City Manager

Approved,



Dan Buckley
Deputy City Manager

