



## **CITY OF WASHINGTON, ILLINOIS**

### **City Council Agenda Communication**

**Meeting Date:** July 5, 2022

**Prepared By:** Dennis Carr – City Engineer

**Agenda Item:** Water Main Leak Detection Services

**Explanation:** The IEPA does a review of our Water Treatment System and gives staff a report of any findings that need to be addressed. One of the findings that has been brought to our attention is that we have reported 20% unaccounted water loss. IEPA is requiring the City to develop a plan to reduce this water loss. The first step in this plan is to perform a leak detection study. We intend to focus this study on the older areas of town.

Leak Detection requires specialized equipment and very few firms do this work. There is 1 local firm that performs this type of work, several firms in the suburbs, and a couple in southern Illinois. Staff has a good relationship with TWM, who is the local firm, and the Public Works Committee gave direction to move forward developing a services agreement with them instead of placing a request for qualifications in the paper.

**Fiscal Impact:** There is \$30,000 budgeted for leak detection. This will not cover the entire City, but this is a nice start and staff will continue to budget for further leak detection work in coming budgets.

#### **Recommendation Summary:**

Staff is recommending the approval to enter into an agreement with TWM to perform Water Main Leak Detection Services for a price not to exceed \$30,000.



## Proposal for Professional Services Water Main Leak Detection

### PROPOSED SCOPE OF SERVICES

We are providing this proposal to perform the following specific professional services. For the purpose of this project, you agree with us that these services, as listed below, will be considered our **Basic Scope of Services**.

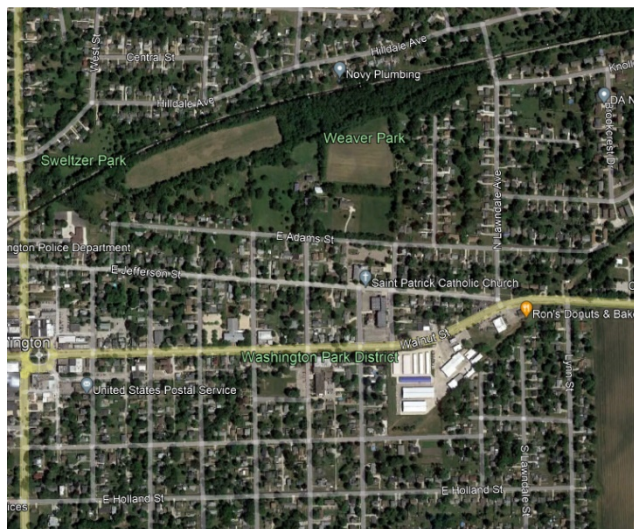
#### 1. Water Main Leak Detection

After reviewing the provided water main GIS data, it appears that the City operates approximately 150 miles of water main throughout city limits. Breaking this down a bit further, approximately 50 miles is comprised of metallic pipe (cast iron/ductile iron) and the remaining 100 miles is comprised of nonmetallic pipe (PVC/transite) or of an unknown material at this point.

For the 2022 water main leak detection services, we would like to focus our attention on the older parts of town which, we hope, encompass the bulk of the metallic pipes as these generally have a better likelihood of having unknown issues. That being said, if PVC pipes are located within the areas, we will include these within our investigation so as not to leave holes throughout that have not been reviewed.

Our work will include but not be limited to an initial survey of these areas using our DXmic Pro digital ground microphone along with GPS survey techniques to identify locations with a potential leak. We will then utilize our Sound Sens Correlation System to further investigate any potential leaks as well as pinpoint locations where leaks exist.

It is our intention to work with the city and progress as they desire but the above plan is our estimate as to how we will proceed at this point.



#### 2. Deliverables

We estimate that we will be able to complete approximately one third of the city's system. Our hope is to complete the 50 miles of metallic pipe described above. However, this will be affected by the distribution of metallic pipes throughout the city and the amount of non-metallic that has been updated within the older areas of town, in which we will focus. We would like the City to understand, it is much more time intensive to locate leaks or other issues in non-metallic pipes. It is possible that the estimated 50 miles will not be achieved during this budget period if we encounter significantly more non-metallic pipes in the areas that we search.

We propose that we will complete a report describing the areas in which we completed leak detection services highlighting and detailing locations in which we believe a leak to exist. We will also provide this data in GIS format so as to aid the City to update their GIS database.

### Fees - Basic Scope of Services

We agree to provide the **Basic Scope of Services** listed above in exchange for your payment of the following fees:

**For a Time and Materials (Not to Exceed) Fee of: \$30,000.00**