



**City of Missoula, Montana
City Council Committee Agenda Item**

Committee: Public Works and Mobility

Item: Professional Services Agreement with Utilis, Inc. for an Underground Water Leaks Satellite Imagery Analysis

Date: April 14, 2022

Sponsor(s): Jerry Ellis

Prepared by: Katie Emery

Ward(s) Affected:

<input type="checkbox"/> Ward 1	<input type="checkbox"/> Ward 4
<input type="checkbox"/> Ward 2	<input type="checkbox"/> Ward 5
<input type="checkbox"/> Ward 3	<input type="checkbox"/> Ward 6
<input type="checkbox"/> All Wards	<input checked="" type="checkbox"/> N/A

Action Required:

Approve a Professional Services Agreement with Utilis, Inc. for an Underground Water Leaks Satellite Imagery Analysis.

Recommended Motion(s):

I move the City Council: Approve and authorize the Mayor to sign a Professional Services Agreement with Utilis, Inc. dba ASTERRA for an Underground Water Leaks Satellite Imagery Analysis for a cost not to exceed \$27,200.00.

Timeline:

Committee discussion:	April 20, 2022
Council action (or sets hearing):	April 25, 2022
Public Hearing (if required):	N/A
Final Consideration	N/A
Deadline:	N/A

Background and Alternatives Explored:

Since the City acquired the water system, staff has been working diligently to address the system leakage issue. Millions of dollars have been invested into water system infrastructure improvements to reduce the amount of water leaking into the ground. City staff have researched multiple methods and strategies to aid in the process. As a result of the research, staff have decided to coordinate with ASTERRA.

ASTERRA uses Utilis-patented technology for infrastructure condition assessment, pipe replacement modeling, and leak detection in urban treated water networks, using L-band synthetic aperture radar (SAR) mounted on a satellite. The technology is based on a proprietary algorithm that detects soil moisture resulting from treated (chlorine) water leaks, through the analysis of SAR data. City staff contacted the City of Spokane to inquire about its use of the technology; which, has resulted in a major success for its improvement of its water system.

ASTERRA will:

- Conduct a full system scan
- Provide a recover report with a prioritized list of Points of Interest (POIs) for leak survey

- Provide best practices for leak survey including up to 1.5 hours of remote training
- Provide a dashboard for leak detection tracking and reporting (app is included)

Financial Implications:

\$27,200.00 from the Water Enterprise Fund

Links to external websites:

<https://asterra.io/>