

**City of Aurora, Illinois**  
**Utilis Satellite Leak Detection Pilot Program**

Prepared for Mark Phipps P.E., CFM, CPESC

Prepared by Paul Schumi

May 24, 2017

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Mark Phipps P.E., CFM, CPESC  
City of Aurora Engineering Division  
44 E. Downer Place  
Aurora, IL 60507

**RE: Satellite Leak Detection Pilot Program – City of Aurora Engineering Division**

Mark and Team,

Imagine for a minute a system-wide leak detection program that takes days to complete instead of years, and can be repeated monthly. Imagine finding leaks within days from when they began, and before they become pipeline failures?

When water distribution leaks start, they often go undiscovered for many years and can result in catastrophic pipeline failures. Traditional leak detection programs average 4-5 years to survey an entire system, require intensive manpower, training and experience, and are heavily reliant on the proximity of leak listening points and the experience of the leak operators.

Many of the available listening tools have known limitations due to pipe material and size, low system pressures and other audio interference which inhibit sound propagation. Space based satellite leak detection virtually eliminates every listening challenge, including reducing multi-year acoustic listening programs to just days, primarily because we are no longer “listening”.

Enclosed is our proposal for a satellite leak detection pilot program. The primary purpose of the pilot program is to facilitate your evaluation of the benefits of the technology for your water loss reduction initiatives and to demonstrate the efficacy of the technology over a 1 to 3 month period.

As a result of the pilot program, you will have a new technology at your fingertips which helps to actively and cost effectively identify and monitor NRW losses and find leaks before they become catastrophic pipeline failures.

**Hydromax USA** is a professional services firm specializing in data collection in support of locating and assessing the condition of the country’s aging water, wastewater and natural gas conveyance systems. HUSA’s vast experience with new technologies and techniques empowers contractors, engineers and utility owners to make the best rehabilitation decisions regarding their buried infrastructure.

Hydromax USA is committed to providing a world-class pilot program for the City of Aurora, Illinois and to become a trusted partner in your ongoing efforts to identify and mitigate water loss across your water network. Should you have any questions regarding the enclosed proposal, please do not hesitate to contact me directly at (812) 708-0590.

Thank you for your time and consideration.

Sincerely,



Paul Schumi  
Business Development Manager  
812.708.0590  
[paul.schumi@hydromaxusa.com](mailto:paul.schumi@hydromaxusa.com)

**Corporate Office and Data Center**  
11492 Bluegrass Parkway, Suite 106  
Louisville, KY 40299  
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## INTRODUCTION

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WELCOME TO HYDROMAX USA, A UNIQUE ORGANIZATION PROVIDING ESSENTIAL SERVICES FOR UTILITIES ACROSS AMERICA.

**Our Solutions** are designed to maximize the value of our customer's water products and services by optimizing water distribution system performance and reliability, minimizing delivery costs, controlling water loss, and enhancing water quality.

**Our Team** has performed infrastructure condition assessment programs that have evaluated *hundreds of thousands* of water distribution system assets, helped clients recover *millions of gallons* in lost water, and provided information management services for improvement of system models and development of GIS integrated solutions for utilities across the United States. Our customers consider us a part of their team and appreciate our genuine sense of accountability in meeting their goals. No matter how large or small your needs are, our professionals are ready to exceed your expectations.

...AND OUR PARTNER, UTILIS LTD

THE LEADER IN WATER LEAK DETECTION SATELLITE TECHNOLOGY



**Utilis**, founded in 2013, developed a cost-effective method for detecting fresh-water leaks in urban water supply systems, utilizing a patented, one-of-its-kind remote-sensing technology to provide leak locations with pinpoint accuracy, regardless of pipe material or demographic density. Using technology that is used to look for water on other planets, Utilis uses spectral aerial imaging – taken from satellite mounted sensor– to spot the particular spectral signature typical to drinking water to identify leakage in underground water distribution systems.

**The result?** Leak detection that covers thousands of square miles at once, and that can identify a leak within a specified buffer, saving significant resources associated with finding leaks with current tools.

Comprising of a team of experts in geophysics, hydrology and water network management, Utilis has conducted vast research, gaining expertise in analysis of urban water networks that, through a unique set of micro-parameters that provides an accurate solution for detecting fresh water leaks.

## SOLUTION OVERVIEW AND TECHNOLOGY

The Utilis technology provides a comprehensive, accurate, non-destructive remote sensing solution for locating and estimating the volume of leaks in any potable water network in the world. The technology is effective regardless of surface terrain, urban density, pipe material or size. By extracting information from aerial radar scans taken above the ground, Utilis is able to develop precise coordinates of underground water leaks.

Utilis solution main benefits:

- Cost effective, saving on detection equipment, work hours, expensive metering data and its acquisition, and reducing carbon foot print.
- Helps save vast amounts of water, over a large area in one instance, fast and efficient solution that enables work prioritization and quick response time.
- Highly accurate, remote, and autonomous, requiring no preparations or specific network setup, no surveys or professional training.

Utilis innovative solution is based on the analysis of spectral aerial-images acquired from commercially available satellite mounted radar that captures a large area in a single frame. Patented in-house developed algorithms are then employed to look for the specific dielectric properties found in potable water. After calculating and adjusting any distorting factors, the information is intersected with the piping infrastructure layout and the system indicates locations of potable water underground leakage. The information is then delivered for final site correlation by field teams, eliminating the manpower required to acoustically audit the entire distribution network.

### Process Overview



1

#### Satellite Spectral Image Acquisition

Raw satellite spectral images of the area are acquired.



2

#### Radiometric Corrections

Utilis takes the raw data and prepares it for analysis, by filtering bounces from buildings and other manmade objects, vegetation hydrologic objects, and more.



3

#### Algorithmic Analysis

Using Utilis advanced algorithmic analysis to track the spectral "signature" of drinking water in the ground.



4

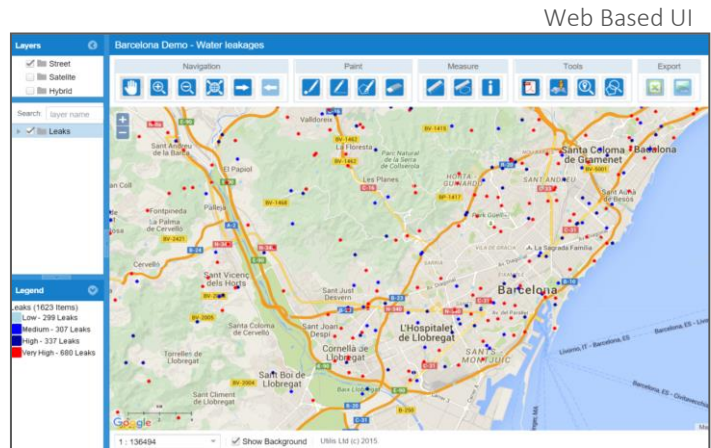
#### Web based app and intuitive UI

Leaks are displayed in user friendly GIS reports, with 6 meter radius accuracy.

## DELIVERY MODELS

Hydromax receives the data from Utilis ready for final correlation and can provide multiple options for completion of the leak verification and locating process.

**Technical Support Engagement Model:** Where the client currently has in place existing staff trained in performing site correlation for the identified points, Hydromax will provide a specific number of days of on-site professional technical/leak-detection support for each satellite scan, to ensure that the full value of the program is achieved. Data presented to the client field teams can be shared using the most current Utilis web based U/I for our clients use in correlating leaks in the field. Alternately the information can be integrated into the client side GIS and as well as most commercial work-order management systems.



**Field Coverage Engagement Option:** Where the client desires to have Hydromax perform the inclusive program of on-site field correlation and final data integration, our teams will execute and program manage the full process of final field correlation and leak pinpointing, delivering the final leak locations to the client in report and ESRI/CMMS compliant form.

After the initial leak survey has been completed, for a specific area, the next stage is to carry out the pinpointing exercise to confirm or rule out if any specific point of interest is a true leak or not. This takes a combination of skill & the best equipment available to be successful. Hydromax USA uses state-of-the-art acoustic correlation to pinpoint the potential leaks that were identified from the satellite survey. A leak noise correlator and/or a ground microphone system will be used to pinpoint potential leaks identified during the localizing stage. Traditionally the suspected leak is narrowed down to between two access points, such as two valves or hydrants. The Accelerometers (sensors) will be placed on each of the two access points on either side of the suspect pipe section. Then basic information such as pipe material, pipe size & length is entered into the base unit of the correlator. The identified leak is then highlighted in graphical and numerical form 'X' feet from each accelerometer. Groupings of 1 and/or 2 sounds are investigated if possible using multiple variable setups allowing for a verification of the pinpointed potential leak. Each pinpoint location is then checked with ground mikes to verify the information. The final leak point is logged with sub-foot GPS location, photos, and other pertinent information. An environmentally formulated marking paint will also be used to identify the potential leak location.

**Additional Options:** As the program is designed to identify an enhanced volume of system leaks, Hydromax USA can additionally support the client's current in-house capacity to perform the required repairs through discrete or comprehensive leak repair services.

## PILOT PROGRAM

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**Current State:** Current initiatives undertaken by the City of Aurora to control current real water losses associated with leakage on transmission and distribution mains includes the deployment of acoustic loggers in a “lift and shift” mode in which teams canvas the distribution system, temporarily mounting the loggers to distribution system appurtenances for a period of time designed to minimize other acoustic influences. When the loggers capture acoustic noise that fits the profile of a leak the file is then analyzed by City of Aurora staff to confirm that the results are within norms for a leak. Leaks are then advanced to the final correlation process in which teams use acoustic correlator equipment to pinpoint the exact leak location between the appurtenances used for the initial logger data collection. Typically the distances between appurtenances required to perform this correlation range from ~500ft for metallic and ac pipes and ~100ft for plastic pipes.

They also employ acoustic leak detection equipment for use in traditional acoustic surveys of the metallic pipes within the distribution system. The current process includes the establishment of hydrophone teams into the system for a first pass designed to “listen” for noise signatures that are representative of potential leaks. These points are then passed to additional teams for specific verification and correlation if a leak is confirmed. Current acoustic programs are dependent upon the “ear” of the first pass team to find all of the possible “points of interest” that the second team would then follow up on, leaving the opportunity for leaks to be missed.

Hydromax USA’s Utilis Leak Detection program can help the City of Aurora reduce costs and improve efficiency in the execution of its strategy to reduce and control real water losses. The current satellite leak detection technology can provide the City of Aurora the ability to scan the entire distribution system multiple times per year, capturing losses that are either missed by the current acoustic technology or that occur after the system audit has passed, which can result in a leak that can run for up to 12+ additional months. Additionally, the current spectral imaging technology can create significant efficiencies in manpower utilized to identify point locations for final correlation.

The purpose of the proposed Pilot is to demonstrate the benefits and the operational suitability of this new technology to the City of Aurora. Specific pilot program acceptance criteria have been established as follow:

- Identification of water leaks from satellite image process corroborated through in-field correlation activities by Hydromax USA.

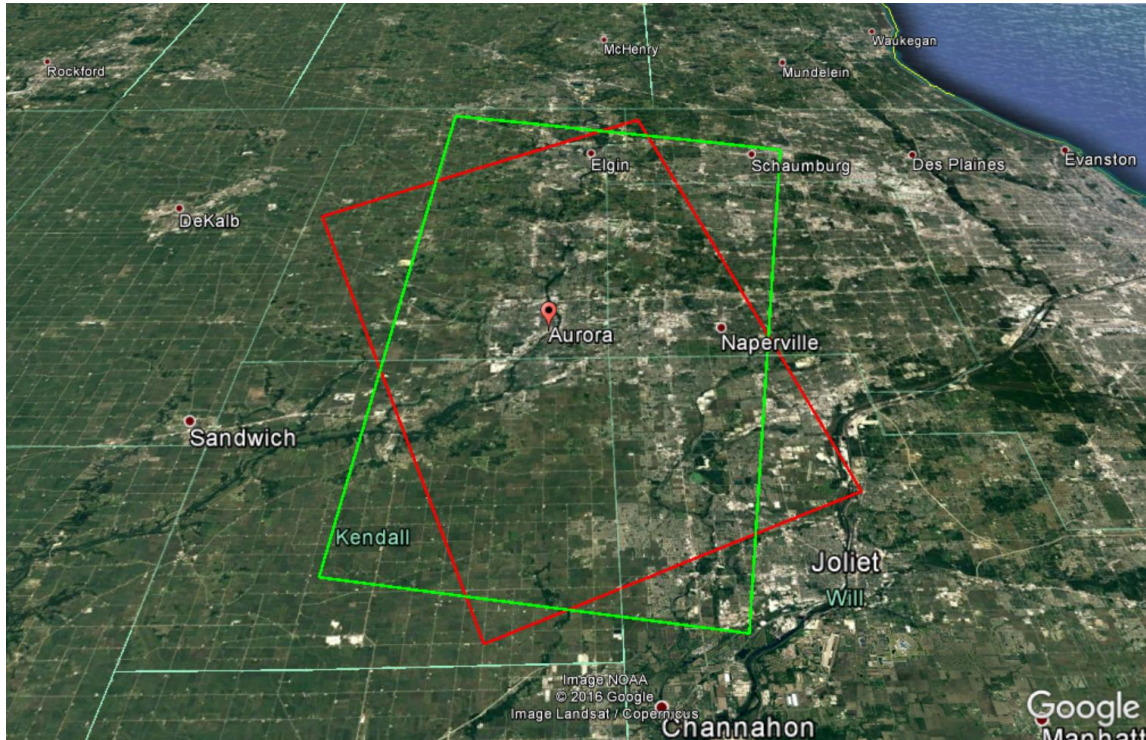
Primary focus areas of the pilot program are designed to address current challenges being encountered by the City of Aurora in its ongoing efforts to manage water loss across its distribution area:

- Evaluating solutions/technologies that will help the City of Aurora develop a cost effective and proactive leak detection program without the need to invest in additional human capital or renew investment in current logger technology.
- Drive increased efficiency and effectiveness of current field teams in the identification and verification of leaks in the water distribution system
  - As the Utilis satellite technology can provide leak assessments multiple times per year, the technology will be used to evaluate effectiveness and efficiency in identifying leaks in the system, and identifying additional opportunities for water loss/revenue re-capture not available through single-pass acoustic audits. Additionally as the Utilis satellite technology can identify leakage regardless of acoustic interference, the technology will be used to evaluate effectiveness and efficiency in identifying leaks as compared to existing methodologies.

1. PILOT DESCRIPTION

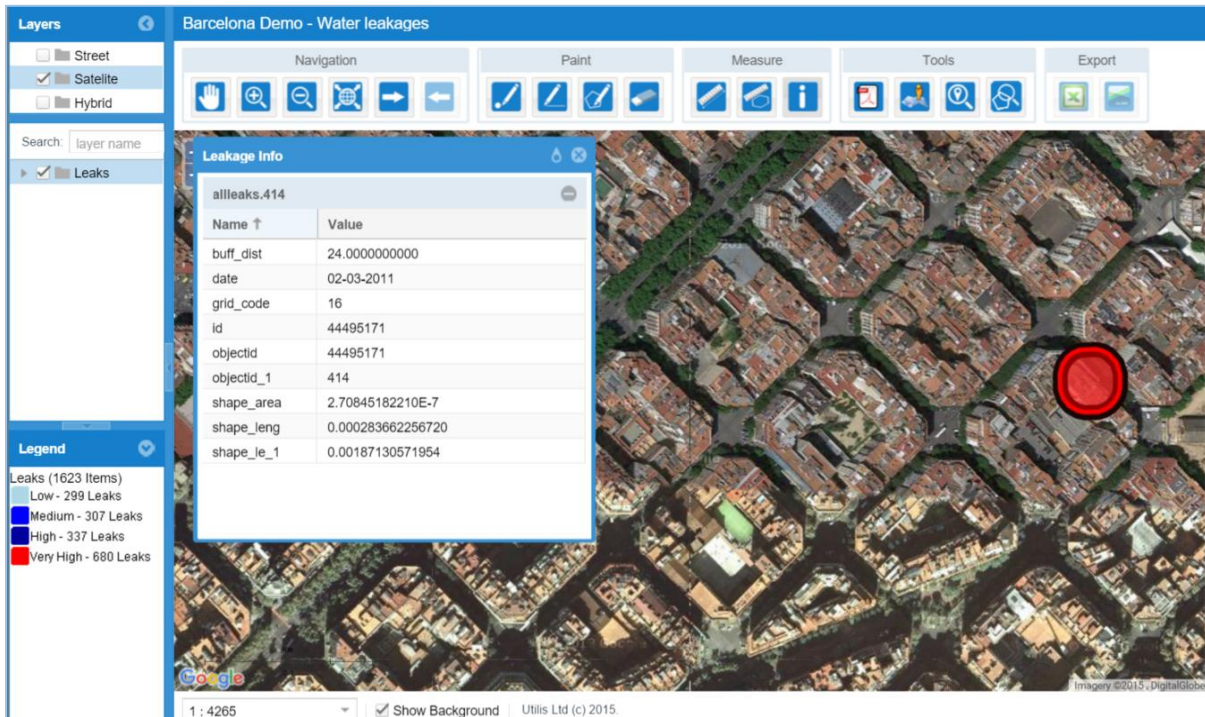
- Pilot scope: A single satellite image of the current City of Aurora area covers a significant portion of the distribution system for use in technical evaluation of the Utilis Program – an example is depicted in **Figure 1.0** below:

**Figure 1.0** – Available Satellite Polygon Geometry (Example)



- Pilot duration: 1-months and renewable for two (2) additional 1-month periods or 3 months total depending on verification speed.
- Required from Client: ESRI PGDB file containing water distribution system pipes, valves, hydrants, service laterals for use in volumetric analysis of leak size and spatial presentation of leaks within client web application. Appurtenance information will provide field teams information on available infrastructure to be used in the leak correlation phase of the program.
- The pilot will include leak detection as follows:
  1. Image acquisition (one image) and processing by Utilis.
  2. Deliverables:
    - Leakage Report indicating leak location sites for further investigation and documentation, access to Utilis application for use by field team in final correlation phase (**Figure 1.1** below).
    - ESRI compliant SHP, PGDB, or FGDB file with identified locations and leakage volume estimates for selected locations agreed with the City and Hydromax USA.
    - The deliverables for each identified and surveyed region will contain as many 50-200 findings for final pilot site selection.

Figure 1.1 – Utilis Web Application Interface



3. The City of Aurora, Hydromax USA, and Utilis meet for selection of 15-20 points for field verification each month.
4. Field verification by Hydromax USA and client field teams using appropriate acoustic equipment and/or visual inspection and produce a report for each leak with the following information;
  - Yes or no leak found
  - Approximate size (gpm)
  - Confirmed location on ground relative to application display
  - Type of leak, if can be determined
  - Is the water showing above ground
- Communications:
  1. The City of Aurora, Hydromax and Utilis will prepare and conduct a Kick-off meeting on-site, the main purpose of the meeting will be to sign a Statement of Work (SOW) (see Appendix to this proposal) and agree on the success criteria of the pilot. The SOW will be prepared jointly before the pilot kick-off.
  2. During the verification process, Utilis, in coordination with Hydromax will deploy on-site leak technician to support the process.
  3. At the end of the pilot, a summary meeting will be held to review the pilot findings.



## PILOT PRICING

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### PILOT PROGRAM

Hydromax USA's Utilis Leak Detection Pilot Program is being offered on a lump sum basis for a 1-month subscription period and is renewable for two (2) additional 1-month periods by both parties agreement, with the following components:

- a. Area 1 Setup and monthly pilot fee: \$38,000
  - i. Total 1-Month Pilot Program Cost: \$38,000
  - ii. Total 2-Month Pilot Program Renewal Cost: \$76,000
  - iii. **Total not to exceed amount of this pilot program: \$114,000**

### PAYMENT TERMS

- The City of Aurora shall issue a purchase order for 100% of the program cost due upon completion of the pilot program, payment conditioned upon successfully meeting the technology acceptance criteria defined below:
  - Identification of water leaks from satellite image process corroborated through in-field correlation activities by Hydromax USA and City of Aurora staff.
- This commercial proposal is valid for 90 days from date of issuance. Any extension of time must be agreed to in writing by Hydromax USA LLC.

APPENDIX 1 – EXAMPLE STATEMENT OF WORK

Task	Owner	Deliverable	Comments
<b>Set-up</b>			
Retrieve pipes layer in GIS format from Client GIS	Client		
Acquire Satellite images	Utilis		
Images processing for first leakage report	Utilis		
Upload Customer GIS pipes layer and Leakage Status onto Utilis app.	HUSA/Utilis		
User training	HUSA/Utilis	GIS pipes layer and initial Leakage Status uploaded	
Pilot success criteria setting and agreement	HUSA, Utilis, Client	<b>Pilot proposal:</b> - Identification of water leaks from satellite image process corroborated through in-field correlation activities by Hydromax USA and City of Aurora staff.	
Initial Leakage Status Presentation, Work plan definition and clarifications as needed	HUSA, Utilis, Client	On-site meeting	
Initial leakage status presentation	Milestone		"Good to GO"
<b>Periodic activities</b>			
Update Utilis application with new image process inputs	Utilis	<b>Refreshed Leakage Status</b>	Monthly/Quarterly process
Leaks findings and confirmations review Conference call	HUSA, Utilis, Client	<b>Call Summary</b>	
<b>Project Management</b>			
Define project key personnel	HUSA, Utilis, Client		One project manager from each

## APPENDIX 2 – STANDARD TERMS AND CONDITIONS

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The following terms and conditions of sale (these “T&Cs”) shall apply to all orders accepted by Hydromax USA LLC (“HUSA”):

### 3.1. COST

The proposed cost is provided based on the work stipulated in the contract. Any work requested by the client must be within the terms and the conditions of the contract. Any requests outside of the terms and conditions of the contract will be invoiced accordingly.

### 3.2. DISCLAIMER

All forms of non-destructive testing involve an inherent and unavoidable level of uncertainty. The results provided by HUSA are not guaranteed. The prescribed methods used for leak detection are highly dependent on input parameters; therefore, it is not possible to certify the results. HUSA is not responsible any actions taken or recommendations made by Client based on the results of the report.

### 3.3. SCOPE

These T&Cs apply to all quotations made and sales agreements entered into by HUSA with the Purchaser relating to leak detection products and services. For the purposes of these T&Cs, “Purchaser” means the party purchasing products and services from HUSA, and “Products” means those products and services to be delivered by HUSA to the Purchaser. Any and all purchase orders and contracts to provide Products that are accepted by HUSA shall be deemed to incorporate and be governed by these T&Cs unless agreed separately in writing to the contrary. In the event of inconsistency between these T&Cs and the Purchaser's terms and conditions contained on the Purchaser's purchase order or other document, these T&Cs shall prevail. No variation of these T&Cs shall be binding upon HUSA unless and until such variation has been accepted in writing by a duly authorized person on behalf of HUSA.

### 3.4. SERVICES

For Product sales which are services, HUSA uses a commercial reasonable and technology-based best effort methodology developed through experience and expertise in satellite and acoustic-based leak detection. The accuracy of our assessments is subject to:

- a. Interference from the background noise in the available satellite spectral imagery and in specific cases it may make elements of the data unsuitable for analysis; and
- b. The accuracy of certain information provided to HUSA by the Client including, but not limited to, pipe infrastructure description and layout, water pressure, distance and size of pipes.

The results may vary significantly if the data described in either or both of the above clauses is inaccurate.

### 3.5. PURCHASE ORDERS

Purchaser may issue HUSA purchase orders (“Purchase Orders”) for the purchase of Products from HUSA. All Purchase Orders are subject to acceptance by HUSA. The Purchase Order shall provide for the description of the Product being purchased, the purchase price (“Purchase Price”), the currency, and frequency of scheduled service.

### 3.6. PURCHASE AND SALE

Subject to these T&Cs, HUSA hereby sells, conveys and transfers the specified Products to Purchaser and the Purchaser hereby purchases such Products from HUSA.

### 3.7. PURCHASE PRICE AND TAXES

- (a) Price: The Purchase Price to be paid by the Purchaser to HUSA for the Products is as stipulated in the Purchase Order as accepted by HUSA and excludes any applicable taxes.
- (b) Taxes: Purchaser shall pay any and all taxes, however designated or incurred, which are paid or payable as a result of or otherwise in connection with the transaction and the applicable Purchase Order, including, without limitation, federal, provincial and local, excise, sales, use, goods and services and any taxes or other amounts in lieu thereof, except for any taxes based on HUSA's net income.
- (c) Payment Terms – Pilot Program: 100% of the program cost is due within forty five (45) days from the date of completion of the pilot program including all field verifications activities, payment conditioned upon successfully meeting the technology acceptance criteria defined within the above proposal. HUSA shall invoice the Purchaser upon completion of the pilot program.
- (d) Payment Terms – Subscription Service:
  - (i) When HUSA is engaged to perform full program management including all field correlation activities, 50% of payment is due upon delivery of initial satellite imagery to HUSA for use in field correlation activities. Remaining 50% is billed

monthly as percentage of completion of field work performed. Payment is due within forty five (45) days from the date the Purchaser receives each invoice from HUSA.

(ii) When HUSA is NOT engaged to perform full program management including all field correlation activities, 100% of payment is due within forty five (45) days from the date of delivery of satellite imagery to Purchaser for use by Purchaser to perform field correlation activities. HUSA shall invoice the Purchaser upon delivery of satellite imagery.

(e) Interest on Late Payments: Where Purchaser fails to pay the Purchase Price in accordance with the terms of this Section, HUSA shall have the right, in addition to any other rights or remedies available to it, to charge, and Purchaser shall pay, interest on such overdue amounts at the rate of interest allowed under the Illinois Local Government Prompt Pay Act, 50 ILCS 505/1, *et seq.*

### 3.8. DELIVERY

HUSA will use reasonable commercial efforts to avoid delay in delivery on the notified delivery dates. Failure to deliver by the specified date will not be a sufficient cause for cancellation, nor will HUSA be liable for any direct, indirect, consequential or economic loss due to delay in delivery.

### 3.9. LIMITED WARRANTIES AND DISCLAIMERS

(a) Warranties: THE SERVICES COVERED BY THIS AGREEMENT ARE PROVIDED ON AN "AS IS" BASIS. HUSA MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, RELATING TO THE SERVICES COVERED BY THIS AGREEMENT. HUSA DOES NOT REPRESENT OR WARRANT THAT THE SERVICES COVERED BY THIS AGREEMENT BE UNINTERRUPTED OR ERROR-FREE. HUSA DISCLAIMS AND EXCLUDES THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE. BUSINESS PARTNER SHALL MAKE NO OTHER WARRANTY, EXPRESS OR IMPLIED, ON BEHALF OF THE HUSA.

LIMITATION OF LIABILITY. IN THE EVENT THAT, NOTWITHSTANDING THE TERMS OF THIS AGREEMENT, HUSA IS FOUND LIABLE FOR DAMAGES OF ANY KIND OR BASED ON ANY THEORY OF LIABILITY (INCLUDING LIABILITY FOR NEGLIGENCE) CONNECTED AND/OR RELATED TO THE SERVICES COVERED BY THIS AGREEMENT, HUSA'S TOTAL LIABILITY FOR SUCH DAMAGES WILL BE LIMITED TO DAMAGES EITHER SET FORTH BY SETTLEMENT AGREEMENT OR ADJUDICATED DAMAGES. THE REMEDIES SPECIFIED BY THIS AGREEMENT MAY NOT EXCEED THE INSURANCE COVERAGE AND/OR BENEFITS PROVIDED BY HUSA FOR SUCH MATTER

NON-APPLICABILITY OF STATUTORY LIMITATIONS. HUSA SHALL NOT BE LIABLE FOR ANY CLAIMS MADE A SUBJECT OF A LEGAL PROCEEDING AGAINST IT, MORE THAN TWO (2) YEARS AFTER ANY SUCH CAUSE OF ACTION FIRST AROSE.

(b) Disclaimer: EXCEPT AS OTHERWISE STATED HEREIN, PURCHASER ACKNOWLEDGES THAT THERE ARE NO REPRESENTATIONS OR WARRANTIES CONCERNING THE PHYSICAL AND MECHANICAL CONDITION, SUITABILITY, DURABILITY, MERCHANTABILITY OR FITNESS OF THE PRODUCTS FOR ANY PURPOSE, WHETHER EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR INTENDED PURPOSE OR THAT THE PRODUCTS OR DOCUMENTATION WILL MEET PURCHASER'S NEEDS OR WILL BE AVAILABLE FOR USE AT ANY PARTICULAR TIME OR WILL BE ERROR FREE.

### 3.10. LIMITATION OF LIABILITY

(a) Exclusion of Consequential Damages: IN NO EVENT SHALL HUSA BE LIABLE FOR ANY LOST REVENUE, LOST PROFITS, LOST SAVINGS OR CONSEQUENTIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES EVEN IF ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES.

(c) Asbestos: DURING THE COURSE OF PERFORMING THE CONTRACT, HUSA MAY CONDUCT ACOUSTIC TESTS ON ASBESTOS CEMENT PIPE. ANY INFORMATION PROVIDED TO THE CLIENT BY HUSA REGARDING THE CONDITION OF SUCH PIPE RELATES ONLY TO ITS CAPACITY TO HOLD AND TRANSPORT WATER. AS BETWEEN THE PARTIES, THE CLIENT IS SOLELY RESPONSIBLE FOR COMPLYING WITH ALL LAWS AND REGULATIONS RELATED TO ASBESTOS AND ASBESTOS CEMENT PIPE. CLIENT SHALL PROTECT, INDEMNIFY AND HOLD HARMLESS HUSA, ITS MEMBERS, MANAGERS, OFFICERS, AGENTS AND EMPLOYEES FROM AND AGAINST ANY AND ALL ACTIONS, CAUSES OF ACTION, PROCEEDINGS, LOSSES, DAMAGES, JUDGMENTS, PENALTIES AND EXPENSES WHICH MAY BE IMPOSED ON, INCURRED BY OR ASSERTED OR THREATENED AGAINST HUSA WHICH ARE RELATED TO ASBESTOS OR ASBESTOS CEMENT PIPE AND HUSA'S PERFORMANCE OF THIS CONTRACT.

### 3.11. INTELLECTUAL PROPERTY RIGHTS

(a) HUSA makes no express or implied representation or warranty that the Products will not infringe any patent, copyright or other intellectual property rights. HUSA shall indemnify Purchaser against all claims, liabilities, and costs, including reasonable attorneys' fees, reasonably incurred in the defense of any claim brought against Licensee by third parties relating to, or arising from, claims of infringement or misappropriation of any United States patent; copyright; or trade secret rights. Purchaser shall promptly notify HUSA in writing of any such claim. HUSA may settle any claim on a basis

requiring HUSA to substitute for the services provided hereunder with alternative substantially equivalent non-infringing programs. Notwithstanding the above, no such settlement may include a financial obligation on Purchaser.

- (b) The Purchaser recognizes and acknowledges the great value of the goodwill associated with the name and trade-marks of HUSA, and the identification of the Products therewith. The Purchaser shall not obscure, effect or permit the removal or alteration of any trade-marks, copyright notices, patent numbers, labels, serial numbers or the like affixed to any Product, related materials or packaging.
- (c) All rights, title, and interest in and to the designs, models, patterns, specifications, copyrights, patents, trade secrets, trade-marks and other intellectual and industrial property in the Products, documentation and related materials are and shall remain vested in HUSA or its third party suppliers. The Purchaser shall not copy, make extracts from, translate or otherwise modify any of the Products, documentation or related materials provided by HUSA.
- (d) The Purchaser expressly acknowledges and agrees that any software delivered as a Product or as part of a Product is not sold, but rather is licensed to the Purchaser. All rights, title and interest in and to the software shall remain vested in HUSA or its third party suppliers, and the Purchaser is granted only a limited license to use the software in conjunction with the Products. The Purchaser shall not, and shall prevent others from copying, translating, modifying, creating derivative works, reverse engineering, decompiling or otherwise using the software except as expressly permitted under the terms of the End User License Agreement associated with such software.

### 3.12. MISCELLANEOUS

- (a) These T&Cs shall be binding upon and shall endure to the benefit of HUSA and the Purchaser and their respective successors and permitted assigns. Notwithstanding anything to the contrary contained herein, the obligations of HUSA under these T&Cs may be assigned or delegated to any company affiliated with HUSA, including all subsidiaries of Hydromax USA LLC and its employees and agents, provided that HUSA shall remain responsible to the Purchaser as otherwise provided.
- (b) Governing Law: These T&Cs shall be governed by, and construed and enforced in accordance with, in the case of HUSA operations in the United States, the laws in force in the State of Illinois (in each case, excluding any conflict of laws rule or principle which might refer such construction to the laws of another jurisdiction). The Parties hereto agree to submit to the jurisdiction of the courts of Kane County or any federal district in the State of Illinois and waive any objection relating to improper venue or forum non conveniens to the conduct of any proceeding in any such court.
- (c) Severability: In the event that any provision (or any portion of a provision) of these T&Cs shall for any reason be held by a court of competent jurisdiction to be invalid, illegal, or unenforceable for any reason, such invalidity, illegality or unenforceability shall not affect any other provision hereof and these T&Cs shall be construed as if such invalid, illegal or unenforceable provision (or portion of a provision) had never been contained herein in regards to that particular jurisdiction.
- (d) United Nations Convention: The Parties hereby expressly exclude the application of the United Nations Convention on Contracts for the International Sale of Goods and any local implementing legislation related thereto.
- (e) Press Releases: HUSA may disclose the existence of these T&Cs, the agreement with Purchaser or the relationship between the Parties.

## PRICING SUMMARY

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Hydromax USA's Utilis Leak Detection Pilot Program is being offered on a lump sum basis for a 1-month subscription period and is renewable for two (2) additional 1-month periods by both parties agreement, with the following components:

- b. Area 1 Setup and monthly pilot fee: \$38,000
  - iv. Total 1-Month Pilot Program Cost: \$38,000
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  - vi. **Total not to exceed amount of this pilot program: \$114,000**

### PAYMENT TERMS

- The City of Aurora shall issue a purchase order for 100% of the program cost due upon completion of the pilot program, payment conditioned upon successfully meeting the technology acceptance criteria defined below:
  - Identification of water leaks from satellite image process corroborated through in-field correlation activities by Hydromax USA and City of Aurora staff.
- This commercial proposal is valid for 90 days from date of issuance. Any extension of time must be agreed to in writing by Hydromax USA LLC.

## ACCEPTANCE AND AGREEMENT

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By signing below, Client accepts this proposal as per the terms and conditions indicated herein. Once signed by both Client and HUSA this proposal shall constitute an agreement for HUSA to provide the services indicated herein for the consideration indicated herein.

### Accepted on behalf of Client:

SIGNATURE: \_\_\_\_\_

TITLE: \_\_\_\_\_

\_\_\_\_\_  
Print Name

DATE: \_\_\_\_\_

### Accepted on behalf of Hydromax USA LLC:

SIGNATURE: \_\_\_\_\_

TITLE: \_\_\_\_\_

\_\_\_\_\_  
Print Name

DATE: \_\_\_\_\_