



innovative gas solutions

Transforming **Infrastructure Data**
into **Actionable Business Intelligence**

understand the present | **protect the future**



UtiliSafe

Innovative Gas Solutions

TRANSFORMING INFRASTRUCTURE DATA INTO ACTIONABLE BUSINESS INTELLIGENCE TO ENSURE PUBLIC SAFETY AND IMPROVE ASSET MANAGEMENT.

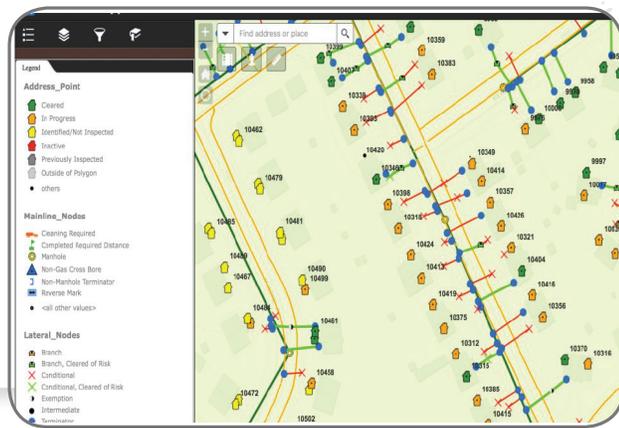
UtiliSafe Gas solutions for planning, operations and regulatory compliance, put critical data at your fingertips to reduce risks and continually improve public safety. A combination of processes, GIS platforms and rigorous QA/QC requirements deliver high confidence, verifiable results. We understand the details needed for successful cross bore identification and elimination projects better than any other company. Effective risk mitigation starts with planning and a holistic view of the problem.

Our Team has performed cross bore investigation since 2002. Our field technicians implement structured processes using GIS-referenced data to deliver the most complete solution in cross bore inspections. Hydromax USA is a service partner for many gas utilities throughout the United States.

SUPPORT FOR ALL MAJOR PROTOCOLS:

Hydromax incorporates utility data into a GIS interface, supporting:

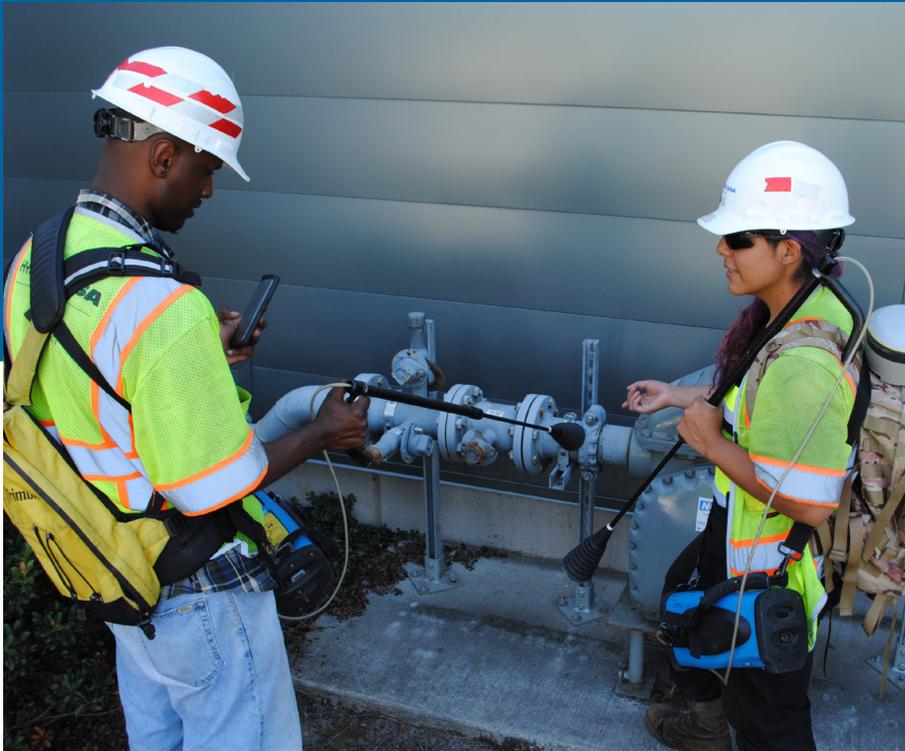
- SAP
- Maximo
- ESRI
- Smallworld
- Oracle
- PostgreSQL
- MS Access



Actionable Business Intelligence

Hydromax USA is propelling the industry forward incorporating utility data into a GIS interface resulting in efficient, user-friendly presentations that deliver:

- Asset details available across multiple departments for project design, project scheduling and operations control
- Better budgeting by combining asset characteristics from multiple department sources of traditionally siloed data
- GIS visual interface that allows users to gather assets by selecting them directly on the screen, turning them into BIM, circuit diagram, etc.
- Integration with SAP and other data structures
- A maintained database structure to search in traditional queries and reports
- GIS databases: High accuracy asset location and a transition from physical paint marks to a digital response system





ENHANCING PUBLIC SAFETY

The Cross Bore process is built on a series of inspection techniques designed to enhance public safety and reduce risk of property damage. Data analysts review every inspection providing 100% redundant review - no inspection is cleared in the field. These rigorous steps are unparalleled in the industry.

Cross Bore Inspection helps utilities:

- Reduce risk of property damage, injuries or loss of life
- Prevent catastrophic damages to life and property
- Prevent or identify compromises of underground utilities and structures
- Provides high confidence of system integrity through GIS data
- Visually assess compromised pipe with 100% video review



REAL-TIME DETECTION OF HIGH RISK UTILITIES

- Excavator mounted to discern digging activities
- Captures the GPS location of the excavator
- Transmits to a real-time GIS-enabled database

Learn more at UtilAlert.com

UtilAlert: Hydromax USA's Plug & Play notification system





PROVIDING A VERIFIABLE DIGITAL TRAIL

Our digital data collection process offers a verifiable digital trail through high-accuracy GPS breadcrumbs that ensure inspections are completed to exceed industry standards. Data collected is constantly uploaded from mobile devices where records are reviewed immediately.

Key elements of our solution:

- All data is geo-referenced
- GPS breadcrumbs include instrument readings
- Gas assets photos are geo-referenced
- Project GIS mapping validates all field work



Detected Leak 
Technician's Exact Path


“Working with Hydromax USA, PSE continues to have success in the process of moving the Leak Survey Program from a paper documentation process into a digital reporting system – knowing our natural gas infrastructure is being inspected thoroughly, down to who performed the work, the exact time and the location. The digital reporting system is helpful in being able to gather various reports and details to help with increasing productivity and accuracy based on the individual survey technician’s performance and the overall process as a whole with regards to areas of difficulty.

The Utility and Transportation Commission Audits are fast and smooth, as we are able to quickly respond to questions by displaying objective evidence in the form of photos and GPS breadcrumb trails of what was documented at particular locations. I can’t say enough about how important a digital reporting system is in maintaining a solid documentation of leak survey inspections.”

– Angela Wingate

Gas Operations Quality Control Contract Manager

To learn more about our complete UtiliSafe suite of solutions, visit hydromaxusa.com.

Hydromax USA Case In Point

Partnership with Puget Sound Energy to Modernize Gas Leak Survey.

NEED: Gas Leak Survey - A requirement for Gas Utilities.*

Gas facility operator compliance:

- Perform a leak survey according to certain prescribed methods regularly
- Above ground facility inspection for corrosion and a variety of other factors which may adversely affect the facilities and create a public safety concern.



HURDLE –Traditional Methodologies

- Rely on the word of the individual technician and their highlighted paper maps indicating which pipes they have walked over.
- Falsification of records is difficult to prevent; many utilities pay heavy fines for discovering - only after in-depth audits by their regulators - that records were incomplete or inaccurate.

APPROACH

Puget Sound Energy partners with Hydromax USA for their Sewer Cross Bore Program. Hydromax USA employs:

- High-accuracy GPS
- Digitized workflows with multiple levels of QC review and QA automation
- A geo-centric tracking and reporting system that delivers high confidence deliverables in a field where there is zero margin for error.

Therefore, it was a natural evolution for PSE to reach out to Hydromax USA to discuss the application of these same processes to Gas Leak Survey.

IMPLEMENTATION REQUIREMENTS – Challenging...

1. Mapping utilized in the field needed to be converted to digital so that collected records of work performed would be harder to falsify than to perform correctly.
2. Records for instrument calibration and operator qualification needed to be incorporated into the workflow so that the work performed was never out of compliance and sufficient documentation was available at a moment's notice to validate that fact.
3. The process for tracking access issues, pipeline markers, pipeline patrols, and other special programs needed to be digitized.
4. Deliverable needed to be accessible to all stakeholders in an easy-to-access format while at the same time maintain the required data security and data recovery required by a Gas Utility.

*Mandate PHMSA 49 CFR Part 192.05

SOLUTION

Utilizing the ESRI suite of mobile applications, custom-built workflows and validation tools Hydromax USA and Puget Sound Energy worked together to create a platform that not only satisfied every compliance requirement for Puget Sound Energy, but considerably improved their confidence in the adherence to their standards for the work performed.

Importance of Details

Over the past three years, Hydromax USA has collected:

- 1,000,000 GPS points at meter locations
- 225,000,000 breadcrumbs indicating the exact path that the technician walked
- 500,000 photos of abnormal conditions, potential threats, and corrosion measurements.

This level of detail has allowed Puget Sound Energy to gain better control of their program, but the real power of this paradigm shift has been in their ability to use the data collected within the leak survey program in other areas of the company including their:

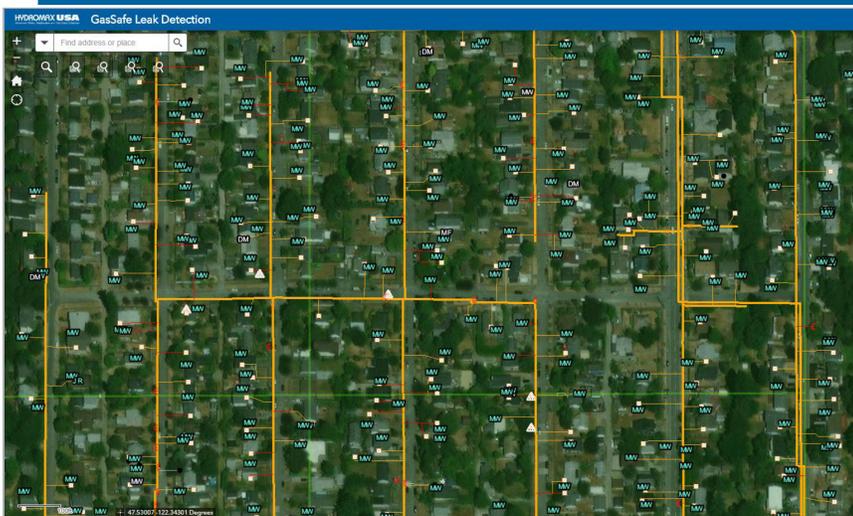
- Internal GIS system
- Corrosion control team
- Sub-contractors who perform leak repairs and other construction tasks
- Emergency responders

Results – The Value of Digital

Stressful Compliance Audits: mandated by the Utility and Transportation Commission (www.utc.wa.gov) on a regular basis.

Typical Audit Question: “Please provide evidence that the address 1234 E Main St was completed within compliance requirements”. Previously, that meant a trip to map storage, find the right box, right map and search for the correct plat map. Once found, review hand written notes to ensure compliance.

Time spent? Typically several days.



With results almost completely digital, data is now posted to webmaps for easy viewing and review. Any address or inspection can be reviewed within a few clicks of the mouse. Any doubts about the inspection being conducted properly, completely and on time are eliminated.

Time spent? Just a few hours.

HYDROMAX USA

hydromaxusa.com

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