

GIS-Based Work Orders

A Practical & Intuitive Approach

About Us

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Wightman & Associates, Inc.



Founded in 1946

THEN (1971)

- 7 Employees
- 2,500 Ft² office
- 2 Service: Engineering, Survey



Wightman & Associates, Inc.



NOW

100+ Employees

3 Offices

- Benton Harbor
- Allegan
- Portage (Soon to be Kalamazoo)

4 Main Disciplines

- Architecture
- Engineering
- Survey
- Environmental
- **Over 70 Services!**



Asset Management Basics

- What do I own?
- Where is it located?
- What condition is it in?
- When should it be repaired/replaced?
- How am I going to pay for it?

SAW Basics

- Asset Inventory & Assessment
- Establish Level of Service
- Evaluate Criticality
- Develop Capital Improvement Plan
- Present 20-year Revenue & Funding Forecast

- **Proactive vs Reactive**

How we got here (The Problem)

Cityworks®

 **lucity™**

Cartegraph™
The Operations Management System.



AxCIENT™

How we got here...

- Solution for small to medium size organizations
- GOALS
 - **Scalable**
 - **Intuitive/User-Friendly**
 - **Cost-Effective**
 - Mobile
 - Attachments
 - Offline

Our Approach

- GIS widget-based
- ArcGIS Online/Server (Enterprise)
- Custom & OOTB widgets (JavaScript)
- Lightweight application hosted on webserver (browser-based)



Widgets

- Out of the Box
 - Layers
 - Measurement
 - Draw
 - Edit
 - Print
- Custom
 - Administration
 - Work Order
 - Reporting
 - Find
 - Offline

▶ Administration	
▶ Work Orders	
▶ Layers	
▶ Reporting	
▶ Draw	↩
▶ Measurement	↩
▶ Bookmarks	
▶ Editor	
▶ Offline BaseMaps	
▶ Find	↩
▶ Print	↩
▶ Google Street View	↩

Widgets

Administration

- Manage workforce
- Notification options
- Group assignments
- Reassign work orders

Administration

Admin Tools

Employee List

[+ Add](#) [Edit](#)

13 Results found

Name	Role
Rachael	Office
employee2	Administrator
employee4	Administrator
Ryan Miller	Administrator
April Kibby	Office
John Smith	Field

[Calculate Criticality](#)

[Reassign Work Order](#)

Employee List

Employees

Ryan Miller

department1

Administrator

Home Phone Number

269-599-4587

rmiller@wightman-assoc.com

Notes

Verizon

Troubleshooting

Email And Text

[Cancel](#) [Update](#)

[Delete](#)

Widgets

Work Order

- Add new work orders
 - To map or single asset
 - To multiple assets
- Manage open WO's
- Feature Clustering
- Export to PDF

Work Orders

[+ Add New WO](#) [+ Add Multiple WOs](#)

[✎ Edit WO](#) [✎ Move WO ## to Asset](#)

101 Open Work Orders

Priority	WO ID	Assigned	Problem
H	10	Ryan Miller	
H	100	Ryan Miller	
M	101	Ryan Miller	
M	106	employee4	
H	107	employee4	
H	109	Anril Kibhv	

[⚡ Cluster WOs on/off](#)

[Export WOs to PDF](#)

Workorder ID

10

Workorder Status

Open - Assigned

Facility ID Key

ssMH-1564-3

Priority

High

Assigned By

Assigned To

Reporter Comments

Date Taken

10/21/2016

Reported By

Reporter Name

Reporter Phone Number

Reporter Email Address

Follow-Up Required?

Utility System

Problem Reported

Field Work Start Date

Field Work End Date

Field Notes

Problem Location

Associated Purchase Order Number

Associated Invoice Number

Related Work Order ID from BSA

Billable?

Routine Maintenance?

[✕ Cancel](#) [📄 Update](#)

☒ Mark as Complete

Widgets

Work Order

- Service Requests
 - Calls for service
 - Trouble reports
- Preventative Maintenance (Coming Soon)
 - Scheduled maintenance
 - Running list of tasks in app
 - Due date
 - Frequency
 - Notify when app is opened
 - Prompted when work is complete to reschedule
 - User can convert service request to PM

Work Orders

[Add New WO](#) [Add Multiple WOs](#)

[Edit WO](#) [Move WO ## to Asset](#)

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Assigned To

Reporter Comments

Date Taken

10/21/2016

Reported By

Reporter Name

Reporter Phone Number

Reporter Email Address

Follow-Up Required?

Follow-Up Required?

Utility System

Utility System

Problem Reported

Problem Reported

Field Work Start Date

Field Work End Date

Field Notes

Problem Location

Associated Purchase Order Number

Associated Purchase Order Number

Associated Invoice Number

Associated Invoice Number

Related Work Order ID from BSA

Related Work Order ID from BSA

Billable?

Billable?

Routine Maintenance?

Routine Maintenance?

[Cancel](#) [Update](#)

☒ Mark as Complete

Widgets

Reporting

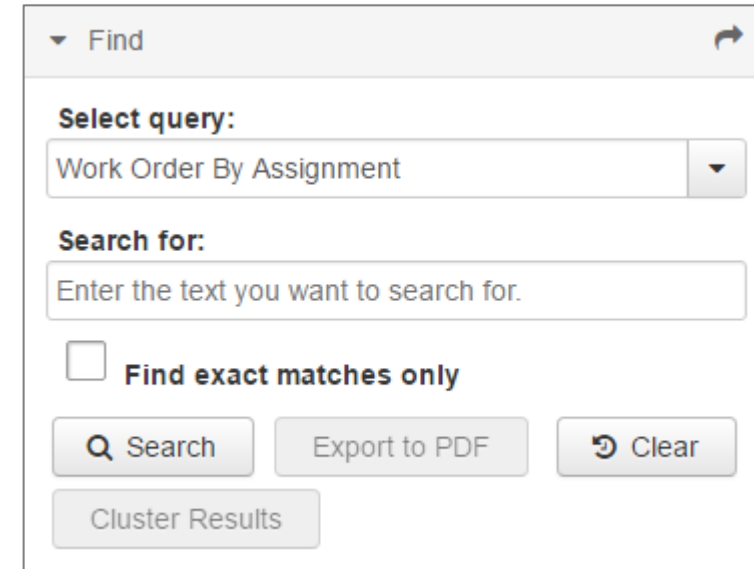
- Configurable widget
- Export data to .CSV
 - Monthly reports
 - Equipment used
 - Labor hours

The screenshot displays a software interface for configuring a reporting widget. On the left, a dropdown menu is open, showing a list of report categories: 'Routine Maintenance Report', 'Work Orders By Date', 'New Work Orders', 'Open Work Orders', 'Closed Work Orders', 'Sanitary System Work Orders', 'Storm System Work Orders', 'Water System Work Orders', and 'Other System Work Orders'. The 'Open Work Orders' option is currently selected. To the right, a configuration panel titled 'Reporting' contains three input fields: the first is a dropdown menu set to 'Open Work Orders', the second is a date field set to '4/18/2016', and the third is a date field set to '4/18/2017'. Below these fields, a text box displays the number '365'. At the bottom right of the panel is a button with a floppy disk icon and the text 'Create'.

Widgets

Find

- Configurable widget
- Feature Cluster results
- Export results to PDF



The screenshot shows a 'Find' widget interface. At the top, there is a title bar with a dropdown arrow and the text 'Find', followed by a refresh icon. Below this, the 'Select query:' section contains a dropdown menu with 'Work Order By Assignment' selected. The 'Search for:' section has a text input field with the placeholder text 'Enter the text you want to search for.'. Below the input field is a checkbox labeled 'Find exact matches only'. At the bottom, there are four buttons: 'Search' (with a magnifying glass icon), 'Export to PDF', 'Clear' (with a circular arrow icon), and 'Cluster Results'.

Uses

- Flexible & Dynamic Design
 - Utilities
 - Parks
 - Buildings
 - Compliance
 - Other maintenance examples
 - Hydrant flushing
 - Tree trimming
 - Anything mapped in GIS...

Demonstration

Lessons Learned

- Get clients more involved in the beginning
- Do lunch and learn/presentations
- Standardize testing
- Document updates/versions
- Keep it Simple!

What's Next?

- Beta testing
- Additional updates/additions
- Rollout to SAW clients
- Multi-user version
- Marketing/Branding
- Hosting?

Q & A / Recommendations



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