

Simplifying Utilities:

Harnessing User-Friendly Technology for Everyday Convenience

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Coach Hawley Golf Course Superintendent

- **Sports Bar GM**
- **Town of Nashville Laborer**
- **CSCD Utility Superintendent**
 - **CSCD General Manager**
 - **Ziptility**



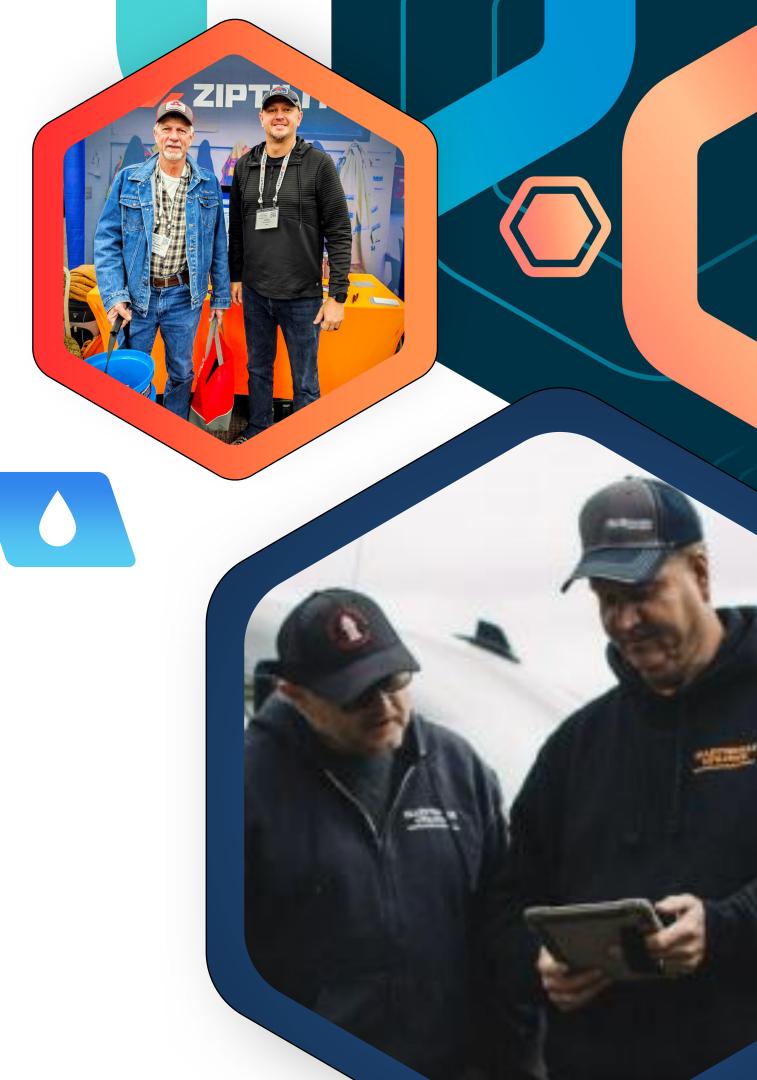
IMPORTANT FACTS

50% of Operators

75% of Managers

- Where do we find people that will WANT to do this kind of work?
- Training Nightmares
- Wage War
- Certification Woes
- Retention Issues

- Knowledge Gap
- No Succession Plans
- Wage War
- Local Politics
- Small Pool of Talent
- What if you don't find anyone?



Simpler Times











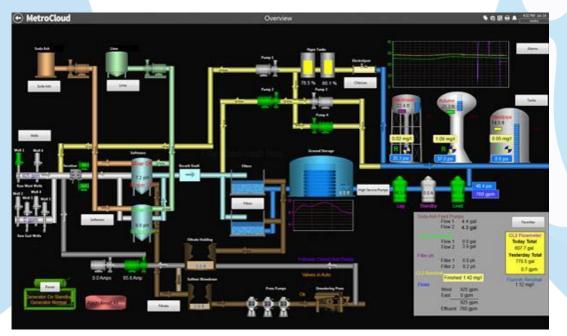




SIMPLER TIMES?







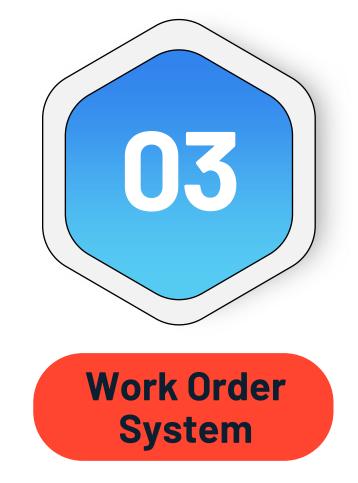




Simplification Tools











Digital Asset Management

Tools of the Trade...







When & How we do what we do





GIS | Digital Mapping

The What, Where, and Why of our operations

Project Management

Regulatory Compliance, Proactive Programs

Work Order System

Digital Asset Management

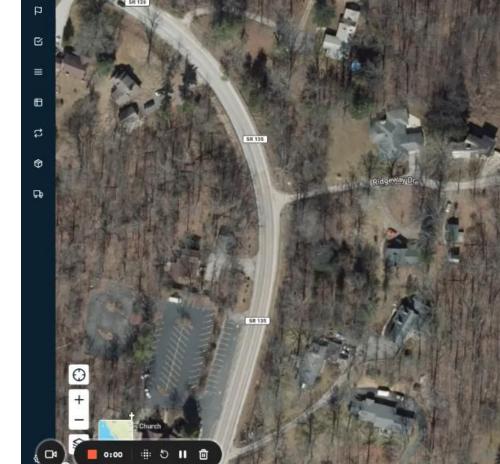
Sustainability for the future

GIS | The Foundation It's not just dots on the map...

Details Pictures

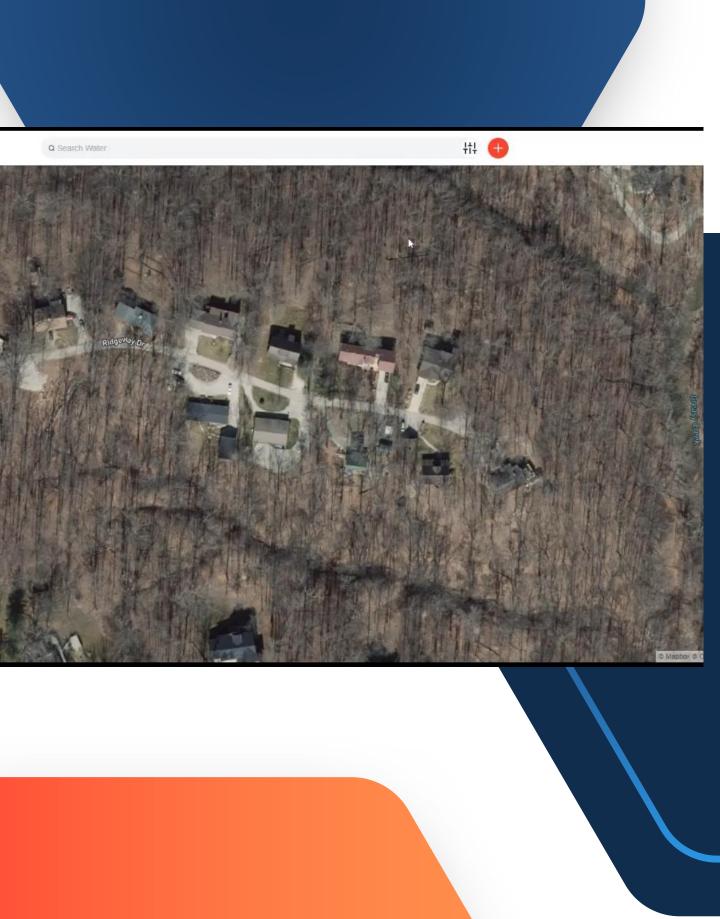
Download Brains

Accuracy Decisions



Attach Manuals & SOPs

Leak Locations



GIS Help



Class I Assets

- Big & Expensive
- Buildings/Facilities
- You know exactly where they are all located

Class II & III Assets

- Class II help locate Class III assets
- Class II: Valves, hydrants, manholes, et
- Class III: Mains



Class IV Assets

- Require the most field work
- Meters, residential grinder pumps, etc

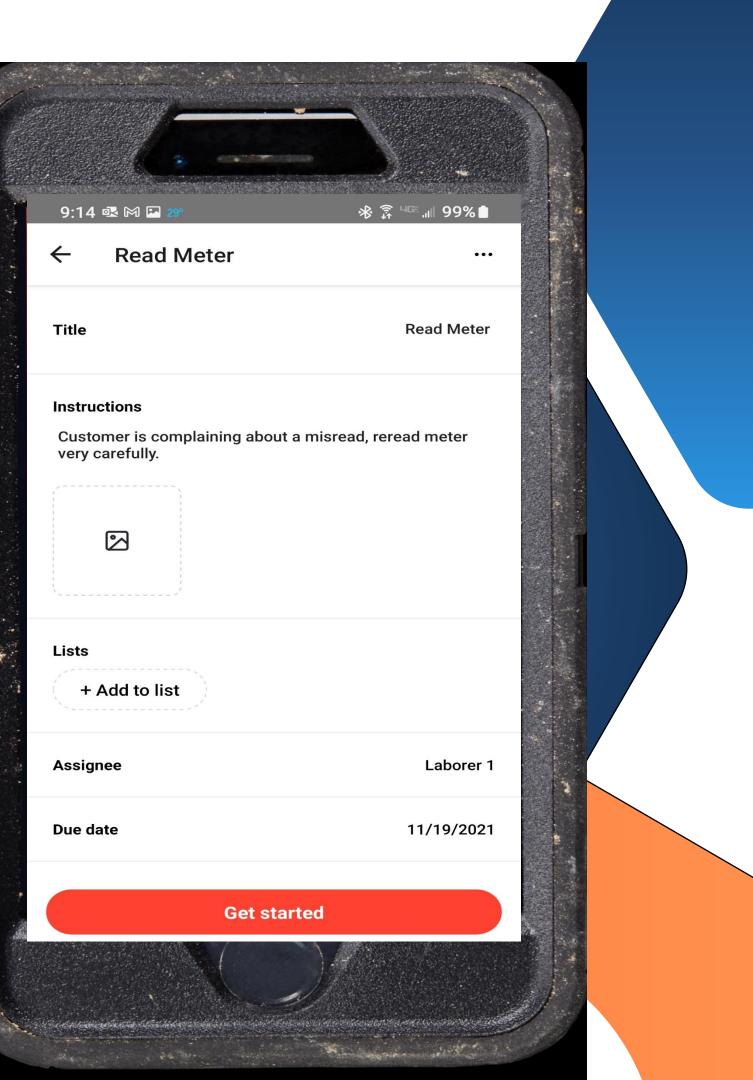
Evolution of Work

Digital Work Order Systems

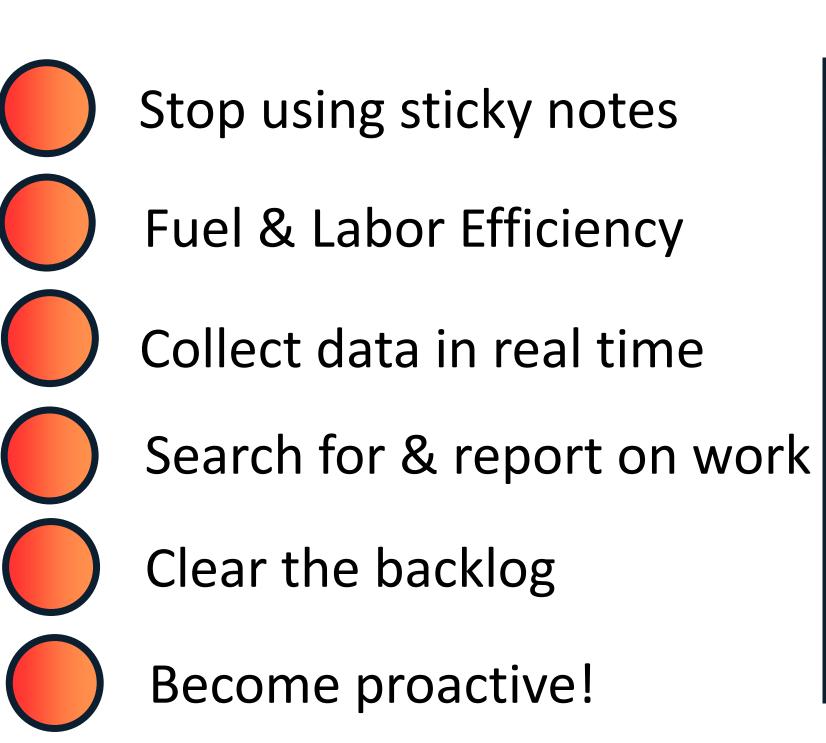
SCHEDULE • PRIORITIZE • ORGANIZE

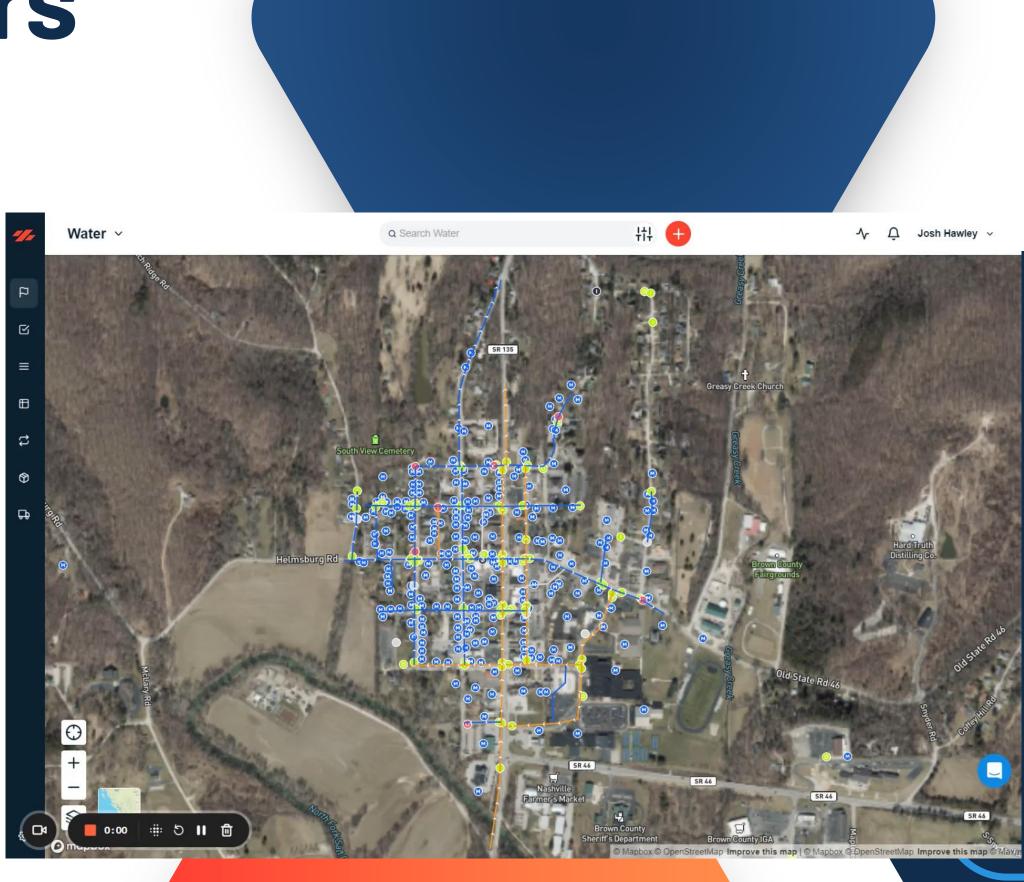
- Sustainability for the future
- Everyone on the same page at the same time
- Mobile dispatching
- Digital paper trail
- Records forever without the filing cabinets

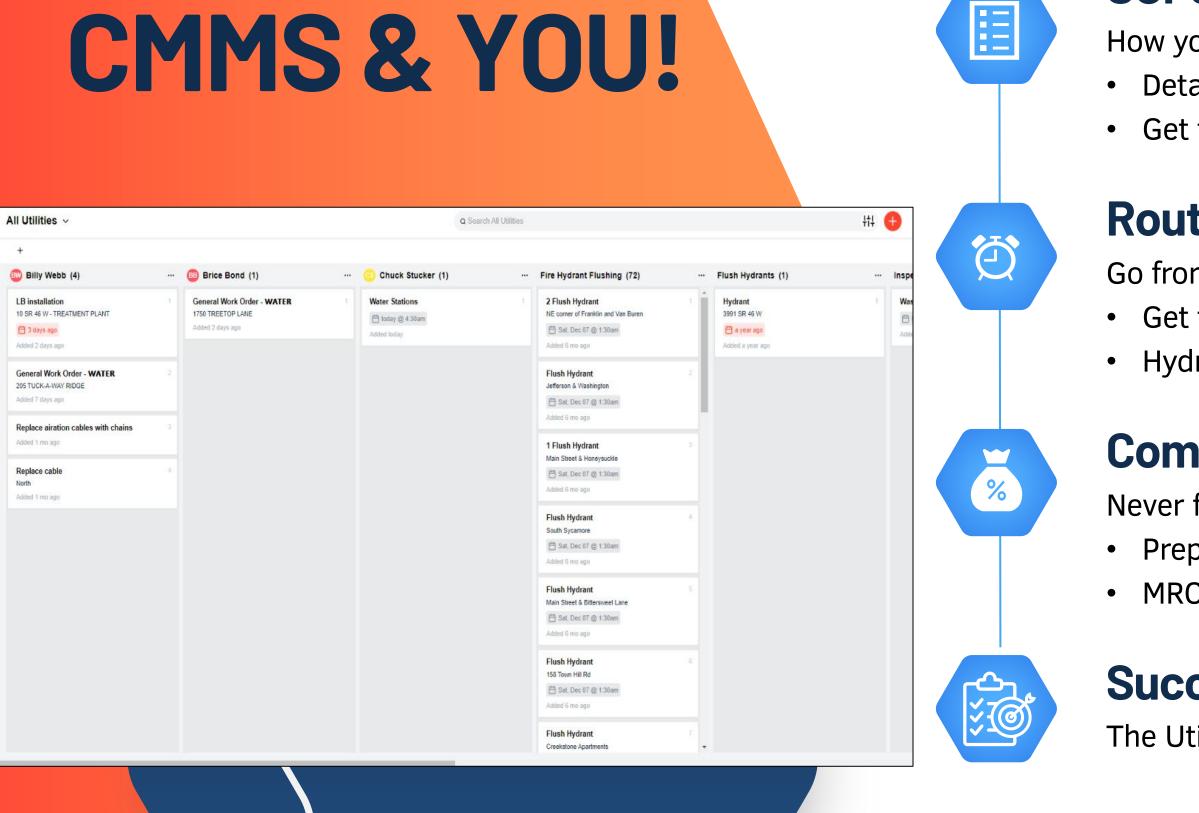




CMMS | Work Orders More than logging maintenance







SOPs

How you do...what you do...when you do itDetailed instructions w/ photosGet the information you want

Routines & Schedules

Go from Reactive to PROACTIVEGet those routine inspections on a scheduled listHydrant flushing, valve exercising, pump maintenance

Compliance

Never forget important dates or to-dos againPrepare for sanitary surveysMRO data right into the phone

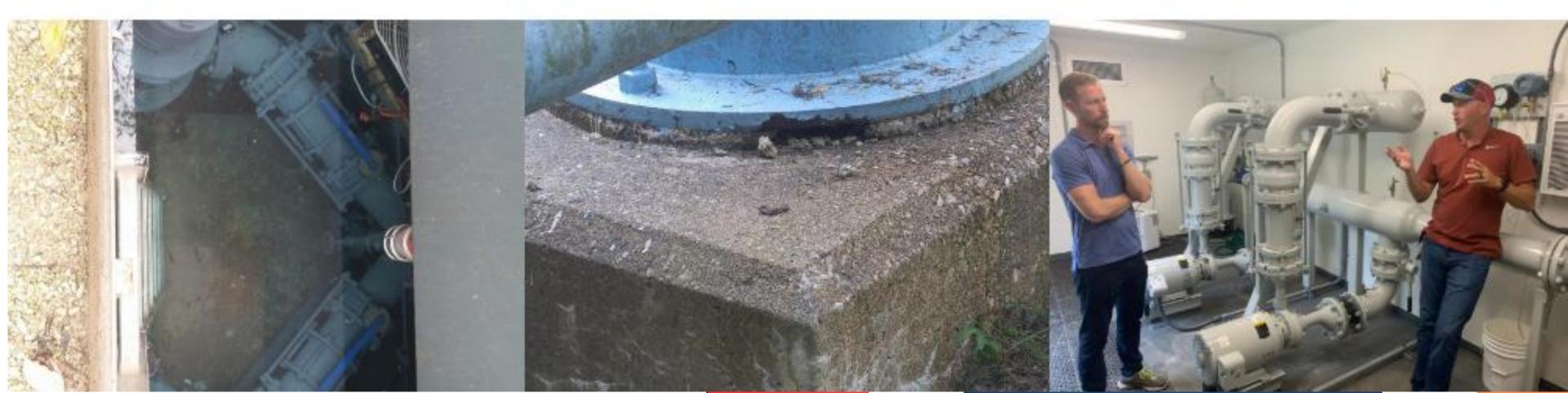
Succession Planning

The Utility Train never leaves the tracks

REACTIVE

- Fix it when it breaks
- Constant repairs
- Impossible to schedule around
- Always behind





PROACTIVE

- Catch it before its an emergency
- General maintenance mode
- Schedule your PMs
- Make some headway

How to Get Going



Get Buy-In...from Everyone!

- Mobile Crew
- Office Staff
- Board



Scheduled Routines | Add work from the field

- Inspections & PMs
- Improve optics of operations



2 HAVE A GREAT DAY!

Customer Service

- Faster service
- Better record keeping \bullet
- Everyone on the same page

CMMS Winning Strategies

Track Time & Materials

SOPs

Unlock Asset Management

Right-hand Planning (Wo)man

Nothing slips through the cracks

Tell Your Story



左 ZIPTILITY

Project Management Get Ahead... Stay Ahead



Manage entire projects from GIS & CMMS



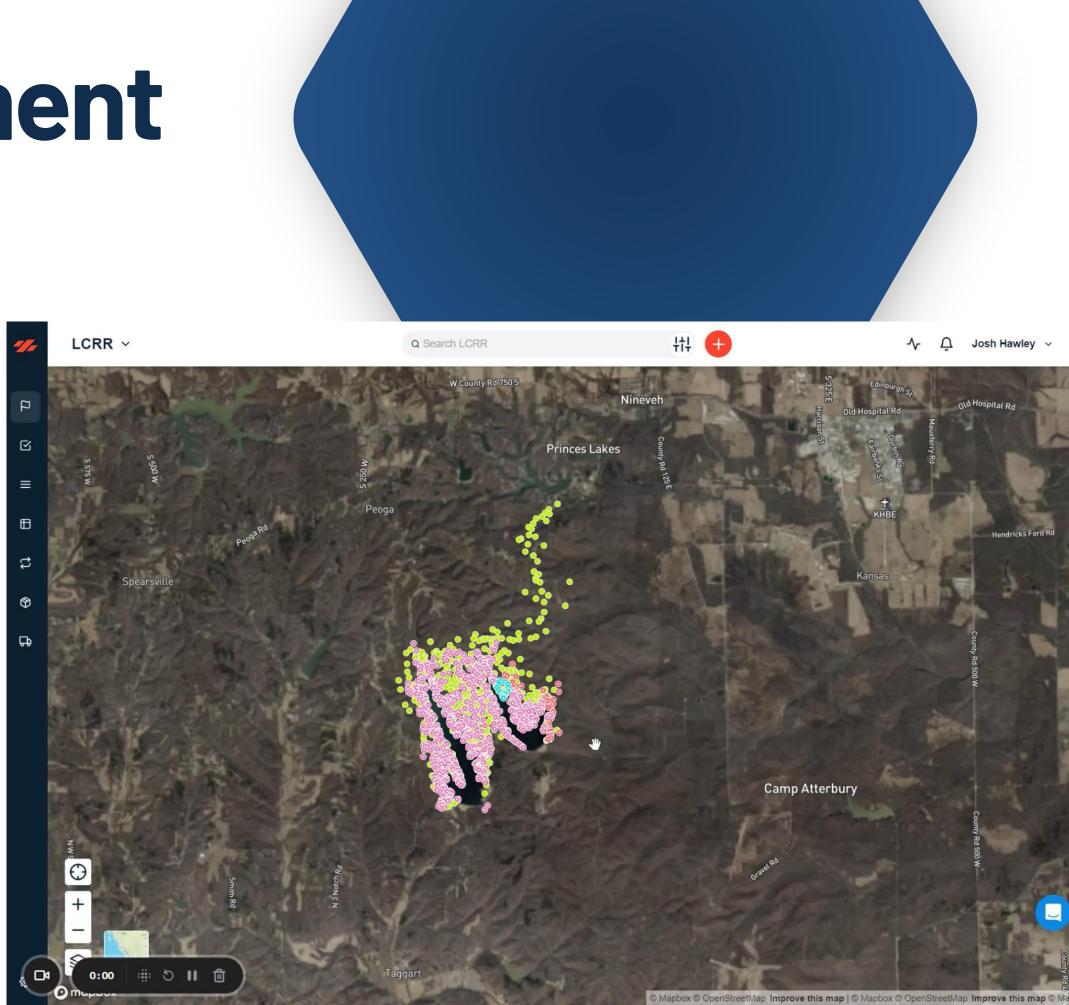
Project planning



Visualize current projects



Never miss important milestones, goals, or meetings





- Water Leaks •
- **Daily Readings** .
- Meter Reading ٠
- Disconnects ٠
- Customer Requests •
- Line Locates •
- **Emergency Repairs**
- Leak Detection
- Hydrant Flushing •
- Hydrant Painting •
- Valve Exercising ٠
- Clean around Valves & Hydrants .
- Plant Maintenance .
- Pump Maintenance •
- Manhole Inspections .
- Smoke Testing
- CCTV •
- **New Connections** ٠
- **Equipment Maintenance & Repairs** •
- **Board/Council Meetings** .
- Projects ٠
- Compliance •
- Sampling ٠
- Meter Change-outs ٠
- Meter Testing
- **Re-Reads**
- Final Reads
- Reports
- Tank Maintenance

- Potholes •
- Signs •
- Ditching •
- Spread Gravel •
- Paving Plans •
- Grant Writing •
- Trim Trees •
- Cut Trees
- Storm Cleanup •
- Clear Storm Drains ٠
- **Equipment Maintenance & Repairs**
- Reports

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- Litter Pickup
- Mowing Roadsides •
 - Plowing
- Brine Pre-Treatment
- Snow Equipment
- Salt Spreading
- Parking Lot Lines •
- Stop Block Lines •
- Speed Bumps ٠
- Culvert Cleanouts •
- Road Drainage Design ٠
- Projects ٠
- Herbicide Management
- **Guardrail Maintenance**

- Beach Maintenance ٠
- Aquatic Weed Control
- Mow Dams •
- Mow Parks ٠
- Playground Maintenance •
- Trail Maintenance •
- Park Plans •
- Leaf Pile Maintenance •
- Morning Trash Pickup •
- Bench Maintenance •
- **Building Maintenance** •
- Canopies for Marinas ٠
- Dock Maintenance •
- **Boat & Equipment Maintenance** •
- Buoys •
- Inlet & Outlet Maintenance •
- Coffer Dam Maintenance •
- **Community Garden** •
- **Baseball Diamond** •
- Driving Range Tee •
- Parking Lots •
- Wildflower Habitats •
- **Beach Samples** •
- **Property Maintenance** •
- Park Signs
- Landscaping



SOPs & Schedules





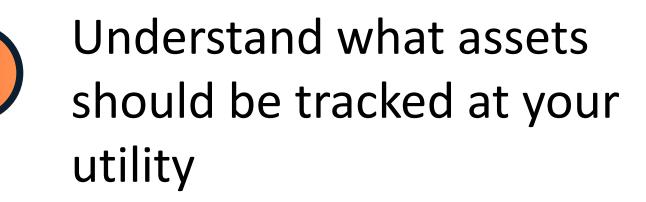
- Trucks/ Vehicles
- Tractors
- Vac Trailer / Truck
- UTVs
- Sprayers
- Chainsaws
- Leak Detection Equipment
- Mowers
- Weedeaters
- Brine Maker
- Pumps
- Generators
- Sand-Pro for Beach
- Power Tools
- Backhoe
- Mini Excavator
- Skid Steer
- Commercial Leaf Blower
- Snow Equipment



Asset Management **Maintain & Plan for the Future**

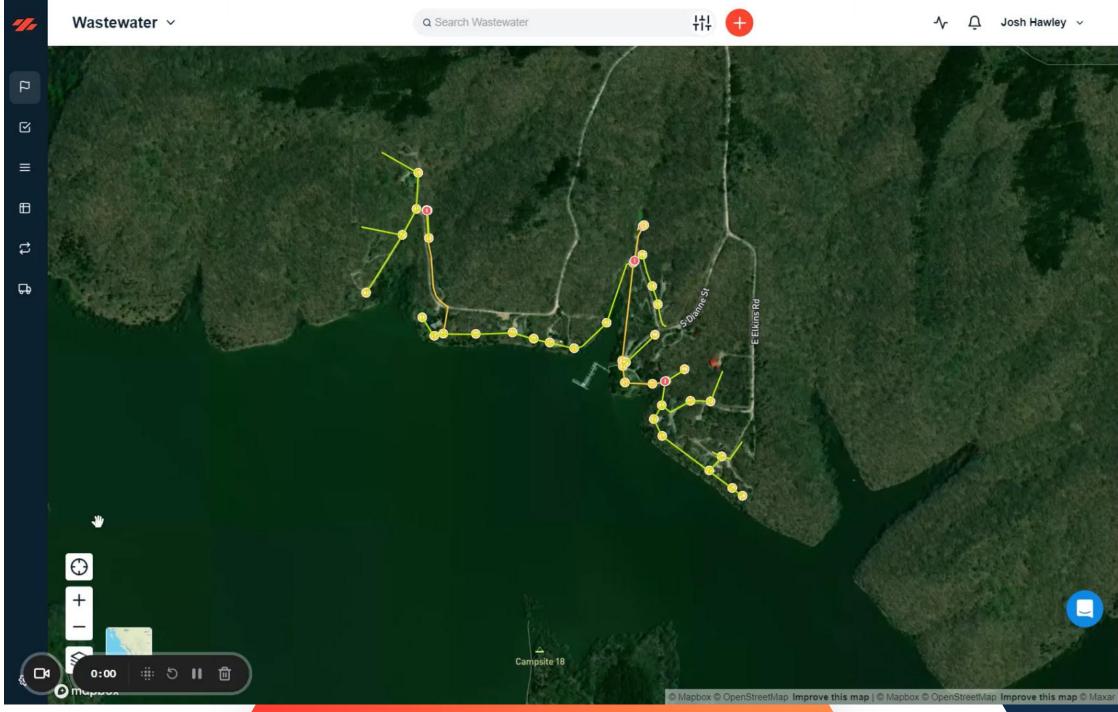


Manage inspections, repairs, PM's all from one program





Condition, Probability of Failure, Consequence of Failure, Criticality

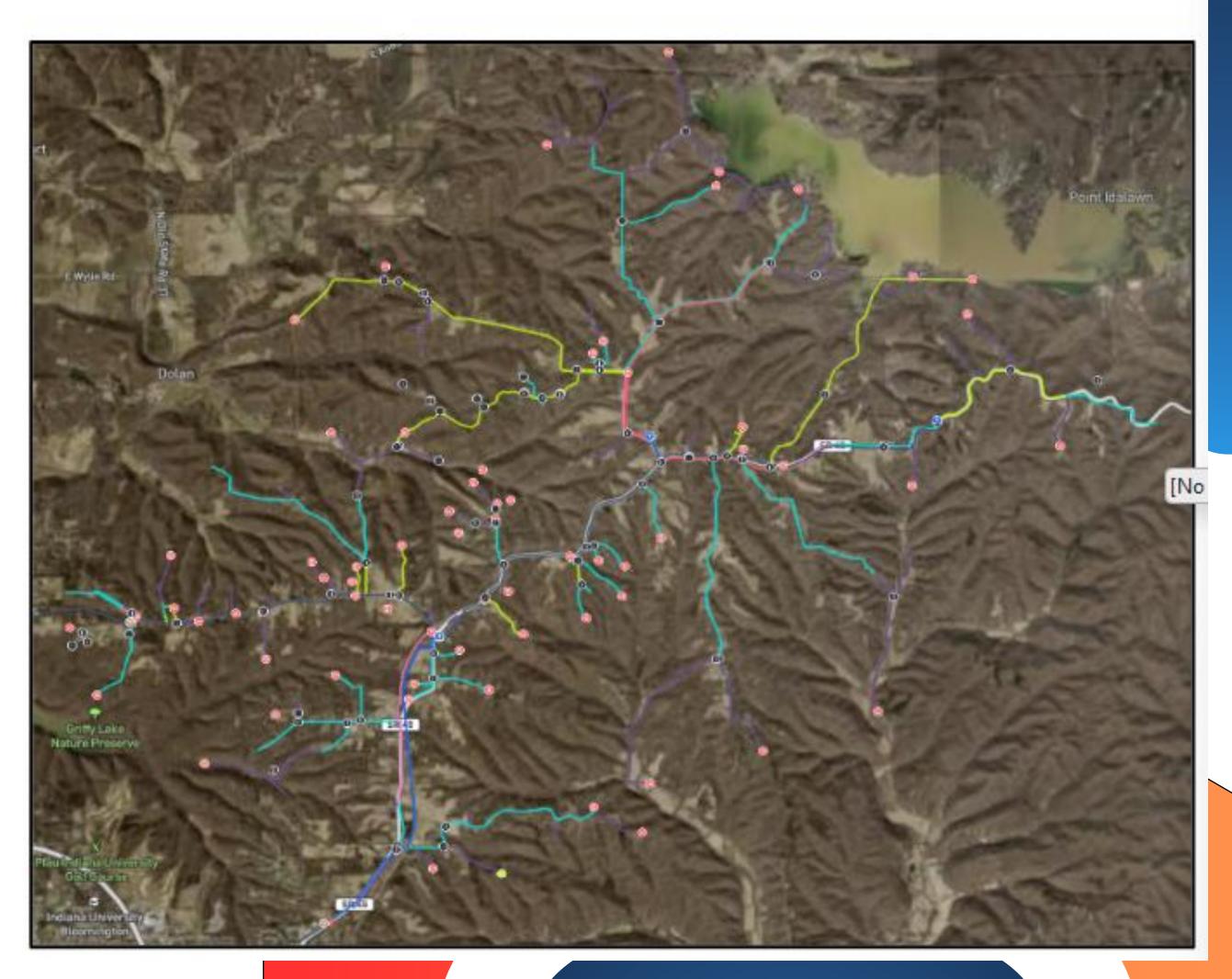






B & B Water AMP Real Life Example

Vater Main 68 It Glead & Upper Birdle Main 🥢	
About	
Likelihood Of Failure	5 - Imminent
Consequence Of Failure	4 - Major disruption
Original Cost (\$)	
Replacement Cost (\$)	2307736
Year Installed	7/1/1957
Expected Useful Life (yrs)	50
Is Redundancy In-place	D
Remaining Useful Life (yrs)	-7
Criticality	3 - Critical
Condition	-





ASSET MANAGEMENT PLANS A Living Plan for Utility Sustainability

Assessment as of:				4/15/24									
Asset	Ziptility ID	Length	Material	Size	Consequence of Failure	Probability of Failure	Criticality	Date Installed	Yrs. Of Service	Expected Life (YR)	Years of Life Remaining	Replacement Cost	
Water Main ID													NOTES:
Mt Gilead & Upper Birdie Main	68	13038.06	PVC	2	4	5	20	7/1/1967	56	60	4	\$ 2,307,736.62	Replacement costs calculated from Engineering report
Hinkle Road Main	30	3697.35	PVC	3	4	4	16	7/1/1967	56	60	4	\$ 654,430.95	Includes cost per LF of pipe
Bethel Hinkle Main	40	519.53	PVC	5	4	4	16	7/1/1967	56	60	4	\$ 110,140.36	Plus all other costs per LF
Secondary Bethel Ln Main	46	1303.72	PVC	3	4	4	16	7/1/1967	56	60	4	\$ 230,758.44	Assumes an upsizing for 2", 4", 5" to either 3" or 6"
Far West Bethel Ln Main	44	2364.11	PVC	3	4	4	16	7/1/1967	56	60	4	\$ 418,447.47	
Shilo Tunnel Main	119	6999.13	PVC	3	4	4	16	7/1/1967	56	60	4	\$ 1,238,846.01	
Shilo After John Young Intersection	121	2062.47	PVC	3	4	4	15	7/1/1967	56	60	4	\$ 365,057.19	
E Lanam Main	3	3725	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 659,325.00	
E Decker Main	11	2752.09	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 487,119.93	
West SR 45 2"	10	3004.66	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 531,824.82	
2" off Timbercrest	4	577.93	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 102,293.61	
Serendipity Main	8	1050.48	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 185,934.96	
Timbercrest Main	5	2580.65	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 456,775.05	
2" N Side off Mt Gilead	16	491.75	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 87,039.75	
2" off Mt Gilead	12	1244.43	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 220,264.11	
2" off SR 45 1	18	601.9	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 106,536.30	
2" in New Unionville near SR 45	26	710.46	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 125,751.42	
2" W of Bethel Church	34	815.68	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 144,375.36	
Baugh Main	32	2024.92	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 358,410.84	
2" at Beginning of Bethel	28	1024.56	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 181,347.12	
Nellie Main	29	268.36	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 47,499.72	
Wesley Main	42	1502.47	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 265,937.19	
2" off Bethel 1	45	1084.36	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 191,931.72	
Stidd Main	47	1738.52	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 307,718.04	
N East Richland Dr Main	48	2017.74	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 357,139.98	
2" off Bethel 2	43	679.36	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 120,246.72	
E Boltinghouse Main	51	1433.33	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 253,699.41	
Wellston Main	57	2000.22	PVC	2	3	5	15	7/1/1967	56	60	4	\$ 354,038.94	





ASSET MANAGEMENT PLANS A Living Plan for Utility Sustainability

Assessment as o	fe	4/11/2024											
Asset	Ziptility ID	Consequence of Failure	Condition	Probability of Failure	Criticality	Manufacturer	Date Installed	Yrs. Of Service	Expected Life (YR)	Remaining Useful Life	Initial Cost	Rep (
Hydrant ID													
Unionville School	57	4		3	12		7/1/1968	55	60	5		\$	6,0
End Benton Ct	8	3		3	9		7/1/1968	55	60	5		\$	6,000
End Martin	4	3		3	9		7/1/1968	55	60	5		\$	6,000.
5080 Limberlost Ln	5	3		3	9		7/1/1968	55	60	5		\$	6,000.0
End Bent Pine	6	3		3	9		7/1/1968	55	60	5		\$	6,000.0
Decker	0	3		8	9		7/1/1968	55	60	5		\$	6,000.0
2148 N Mt Gilead Rd	1	3		3	9		7/1/1968	55	60	5		\$	6,000.0
SR 45 Near RR Tracks Intersection	2	3		3	9		7/1/1968	55	60	5		\$	6,000.
Ratliff	3	3		3	9		7/1/1968	55	60	5		\$	6,000.
SR 45 New Unionville Tracks	7	3		3	9		7/1/1968	55	60	5		\$	6,000.
End Greylock	12	3		3	9		7/1/1968	55	60	5		\$	6,000.
Mt Gilead North of Collins	21	3		3	9		7/1/1968	55	60	5		\$	6,000.
Hinkle Lane	13	3		3	9		7/1/1968	55	60	5		\$	6,000.
End of Clavbrooke Court East	17	3		3	9		7/1/1968	55	60	5		S	6.000.

Asset	Ziptility ID	Consequence of Failure	Condition	Probability of Failure	Criticality	Manufacturer	Date Installed	Yrs. Of Service	Expected Life (YR)	Remaining Useful Life	Initial Cost	Replacement Costs
Pump Name												
State Road 45 Pump 1	1	3	4	5	15	Peerless	7/1/1991	32	20	-12		\$ 50,000.00
State Road 45 Pump 2	2	3	4	5	15	Peerless	7/1/1991	32	20	-12		\$ 50,000.00
Hinkle Road Pump 1	3	3	1	2	6	Paco	7/1/2019	4	20	16		\$ 50,000.00
Hinkle Road Pump 2	4	3	1	2	6	Paco	7/1/2019	4	20	16		\$ 50,000.00



Bringing it all Together...



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Your Operations at Your Fingertips Going Beyond Dots on a Map...



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ILLINOIS RURAL WATER ASSOCIATION

DIGITAL MAPPING • WORK ORDERS • INVENTORY • ASSET MANAGEMENT

