



NORTHWESTERN
THE DISTRICT
WATER & SEWER

GIS/OPERATIONS/ENGINEERING INTEGRATION

2019



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THE DISTRICT
WATER & SEWER

The background is a light blue gradient. In the top-left and bottom-right corners, there are several realistic-looking water droplets of various sizes, some overlapping. The text is centered in the upper half of the image.

**WHAT WE USED TO
DO, BEFORE GIS...**

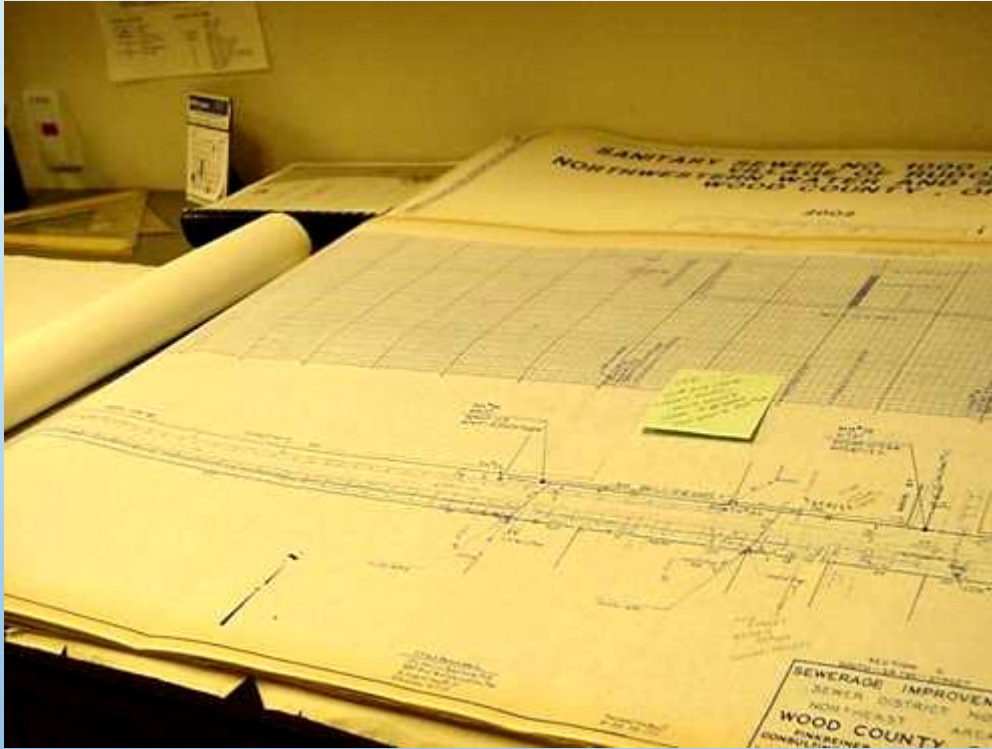
What we used to do



What we used to do



What we used to do



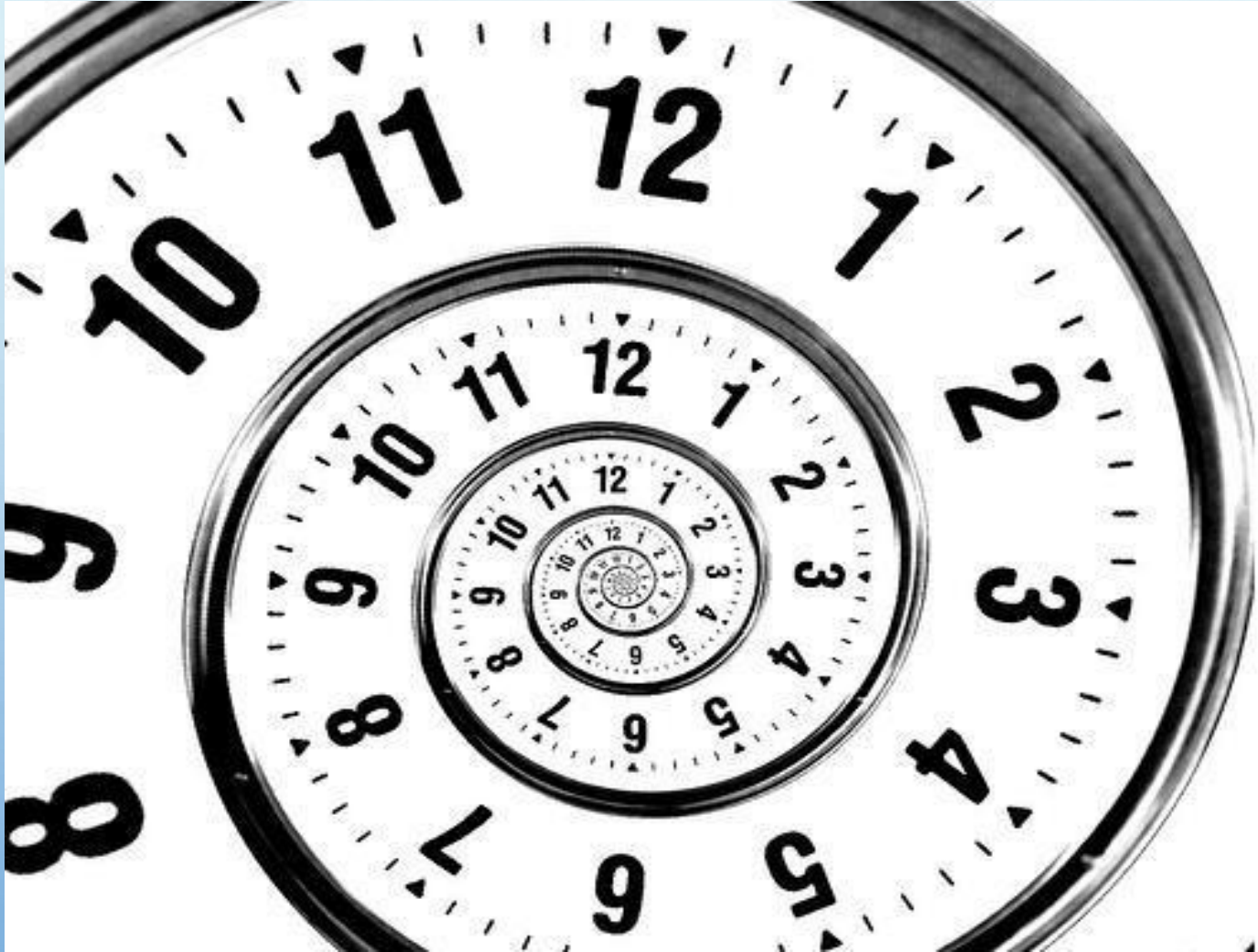
What we used to do



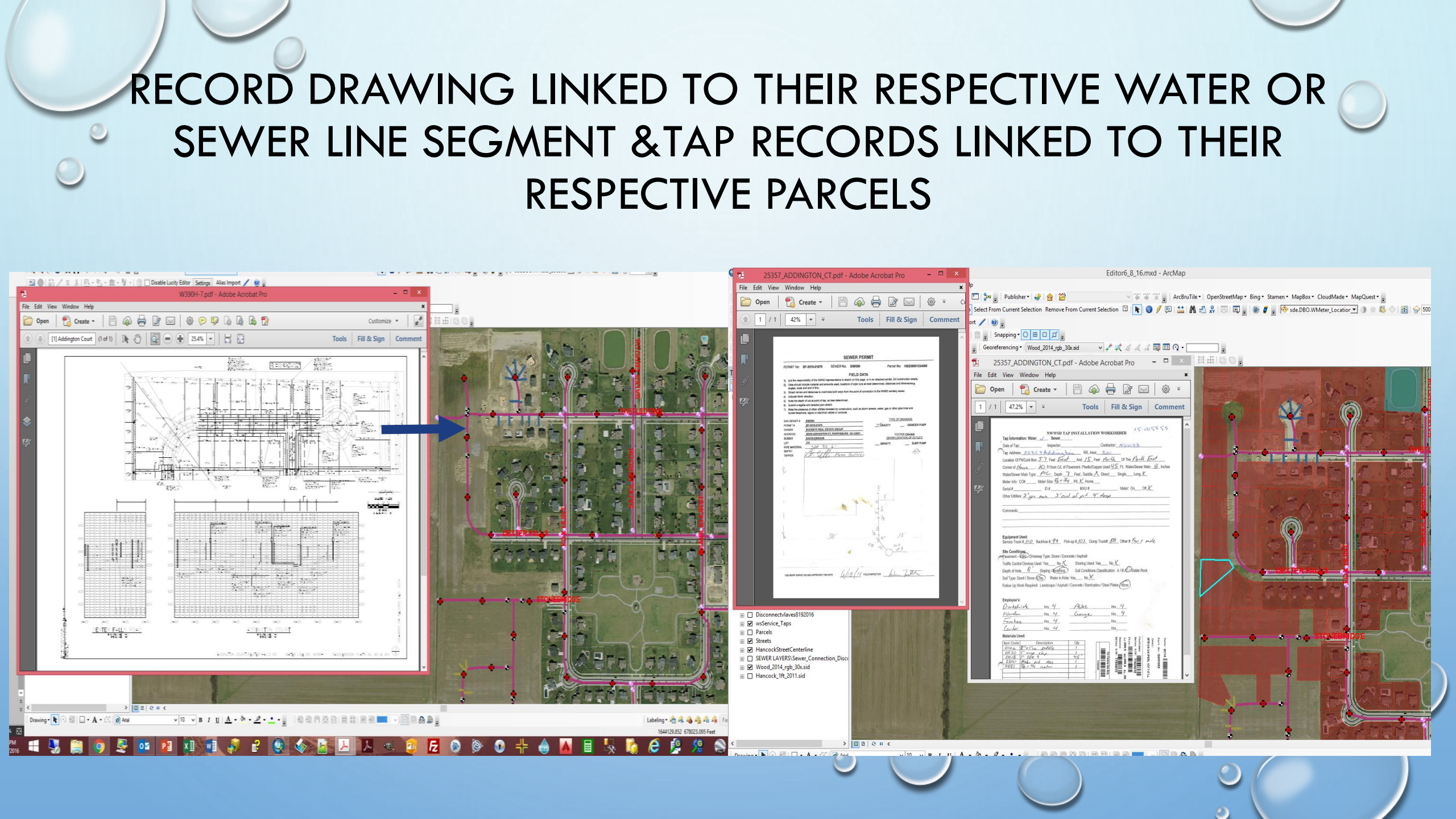
IMPLEMENTATION AND GROWING PAINS OF BUILDING A GIS PROGRAM

- **2002/2003**- CONTRACTED WITH SCHNEIDER LLC. TO DO THE INITIAL SCANNING (4500 PLAN AND PROFILE SHEETS), DIGITIZING, AND DATABASE CREATION.
- **2004**-BEGAN FIELD VERIFICATION AND GPS COLLECTION OF FEATURES, (MANHOLES, HYDRANTS, VALVES, SERVICE CONNECTIONS, ETC.), IN-HOUSE GEOREFERENCING/DIGITIZING OF NEW RECORD DRAWINGS, TAP RECORDS, AND ANY OTHER INFORMATION PEOPLE WANT TO ACCESS THROUGH THE GIS.
- HAD ARCGIS FOR SERVER. (BUT IT WAS NEVER A BIG PART OF OUR DAY TO DAY OPERATIONS)
- ONLY HAD ABOUT 10 LAPTOPS DEPLOYED WITH ARCREADER FOR FIELD CREWS.
- ONE GPS BACKPACK UNIT
- GETTING “BUY IN” FROM THE FIELD GUYS. “STUPID COMPUTER IS WRONG AGAIN!” WHEN AN ASSET IS MISSING FROM THE MAP, OR AN ATTRIBUTE IS WRONG (I.E. CIP INSTEAD OF DIP, OR 6” INSTEAD OF 8”)

FLASH FORWARD TO TODAY...



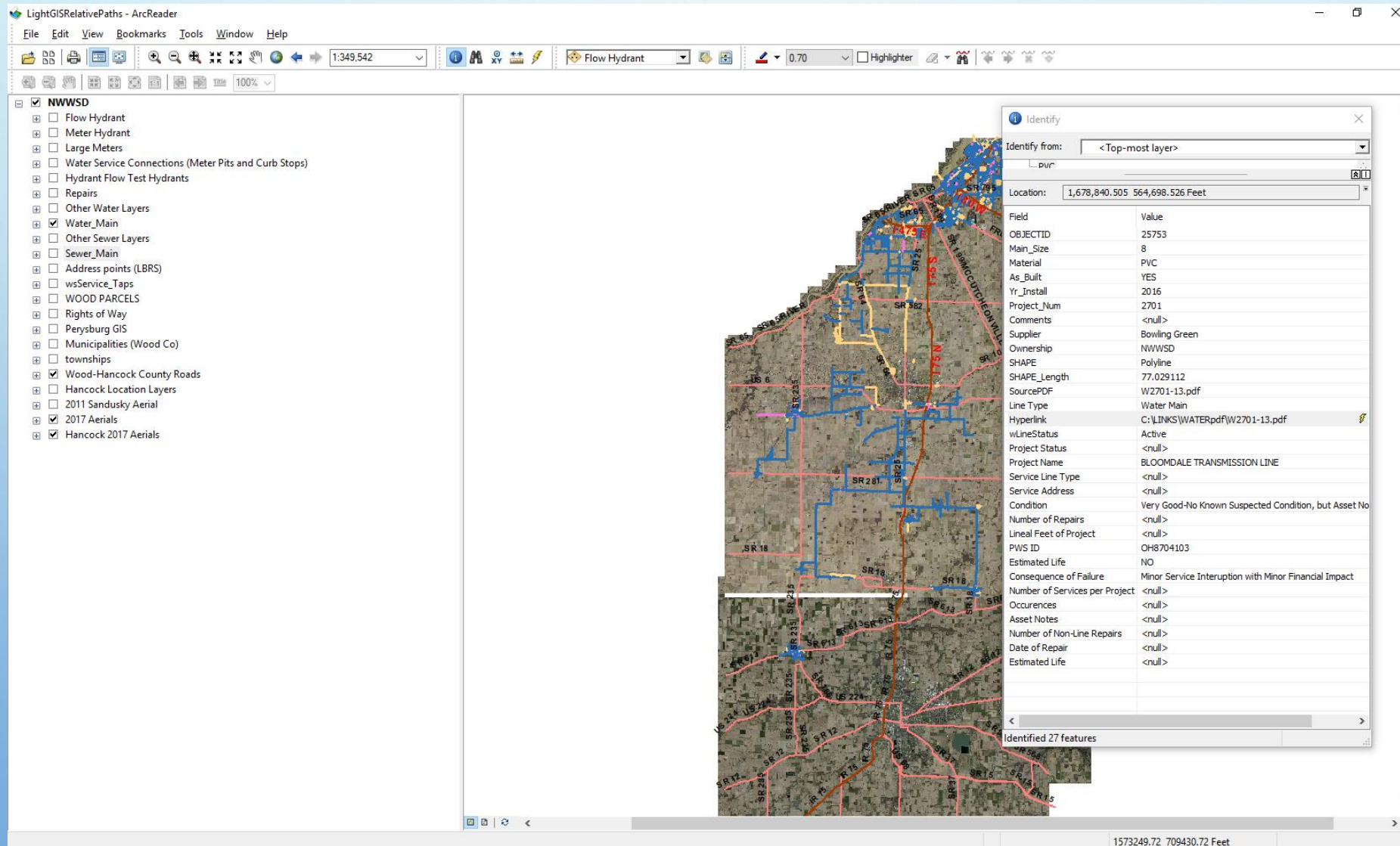
RECORD DRAWING LINKED TO THEIR RESPECTIVE WATER OR SEWER LINE SEGMENT & TAP RECORDS LINKED TO THEIR RESPECTIVE PARCELS



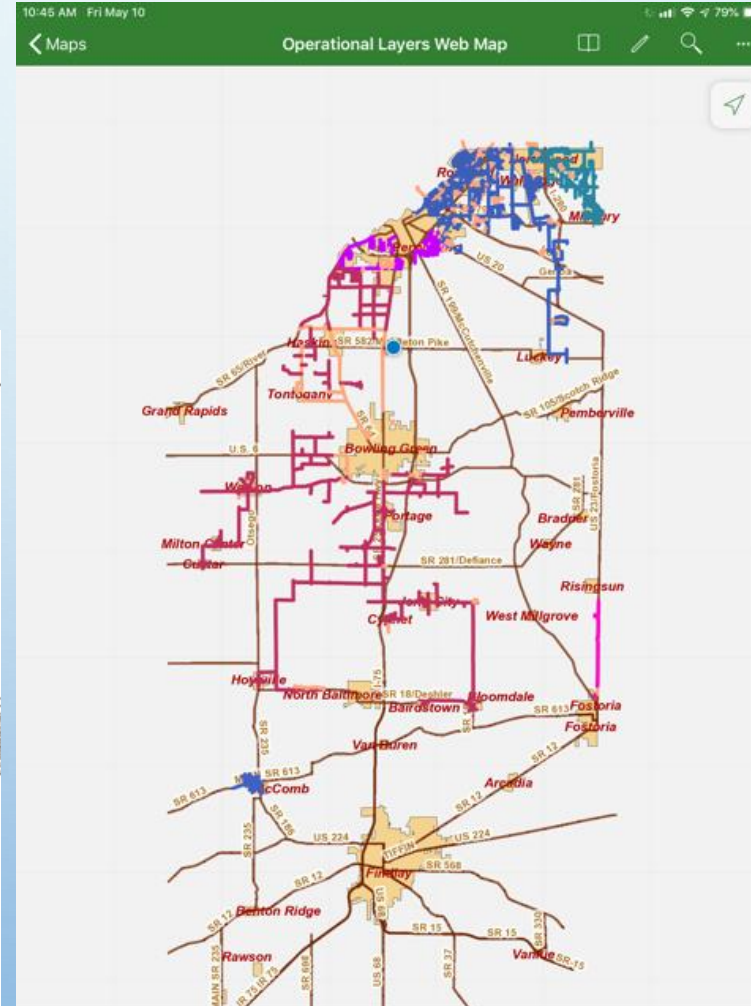
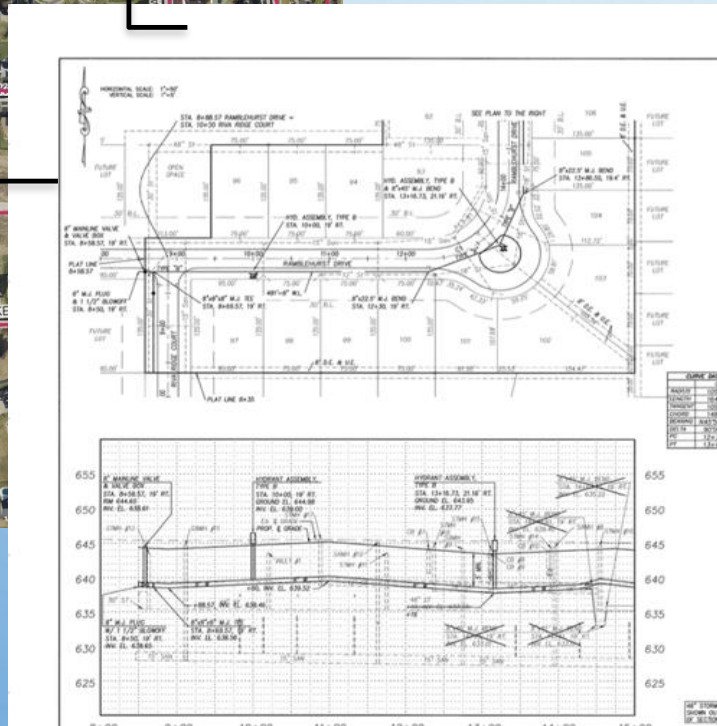
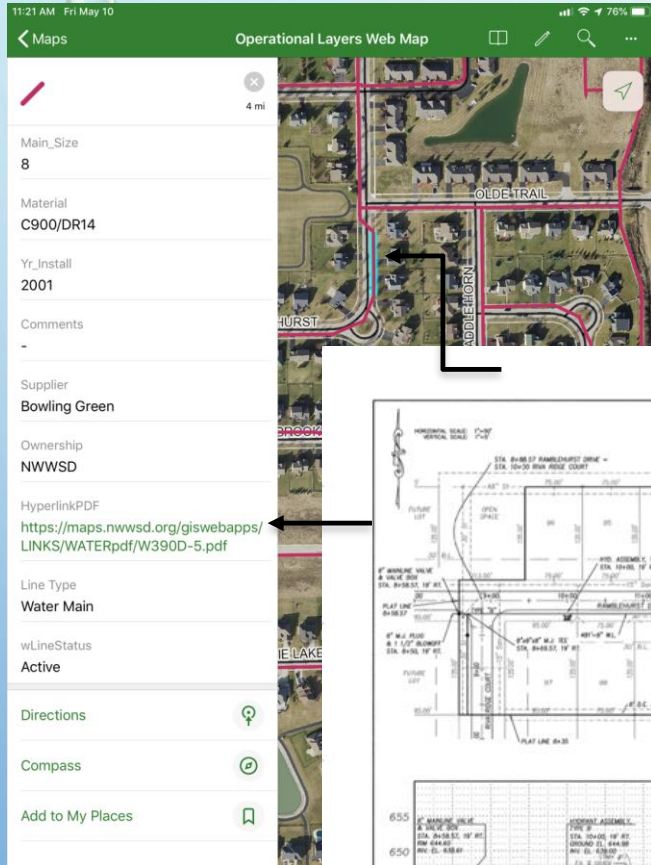
DEVICES/APPLICATIONS USED FOR ACCESSING & COLLECTING THE GIS DATA

- TABLETS (37)
- LAPTOPS (41)
- SMART PHONES (58)
- TRIMBLE R2 UNITS (3)
- EXPLORER FOR ARCGIS
- COLLECTOR
- ARCGIS ONLINE ORGANIZATION PAGE
- ELEMENTS (OUR NEW ASSET MANAGEMENT SYSTEM)
- ARCREADER





ARCREADER: USED BY OFFICE AND FIELD EMPLOYEES ON THEIR LAPTOP OR PC.




EXPLORER FOR ARCGIS APP USED WITH TABLETS AND SMART PHONES.





ARCGIS ONLINE ACCOUNT


[Home](#) [Gallery](#) [Map](#) [Scene](#) [Groups](#) [Content](#) [Organization](#)     Erik Blak
etylerNww


 **NORTHWESTERN
THE DISTRICT**
WATER & SEWER **Responsible for every drop.**

Gallery Maps


NWSD Fire Hydrants & Waterlines


Wood County Fire Departments Web App


Signed Petition Requesting Water Services


Signed Petition Requesting Water Services

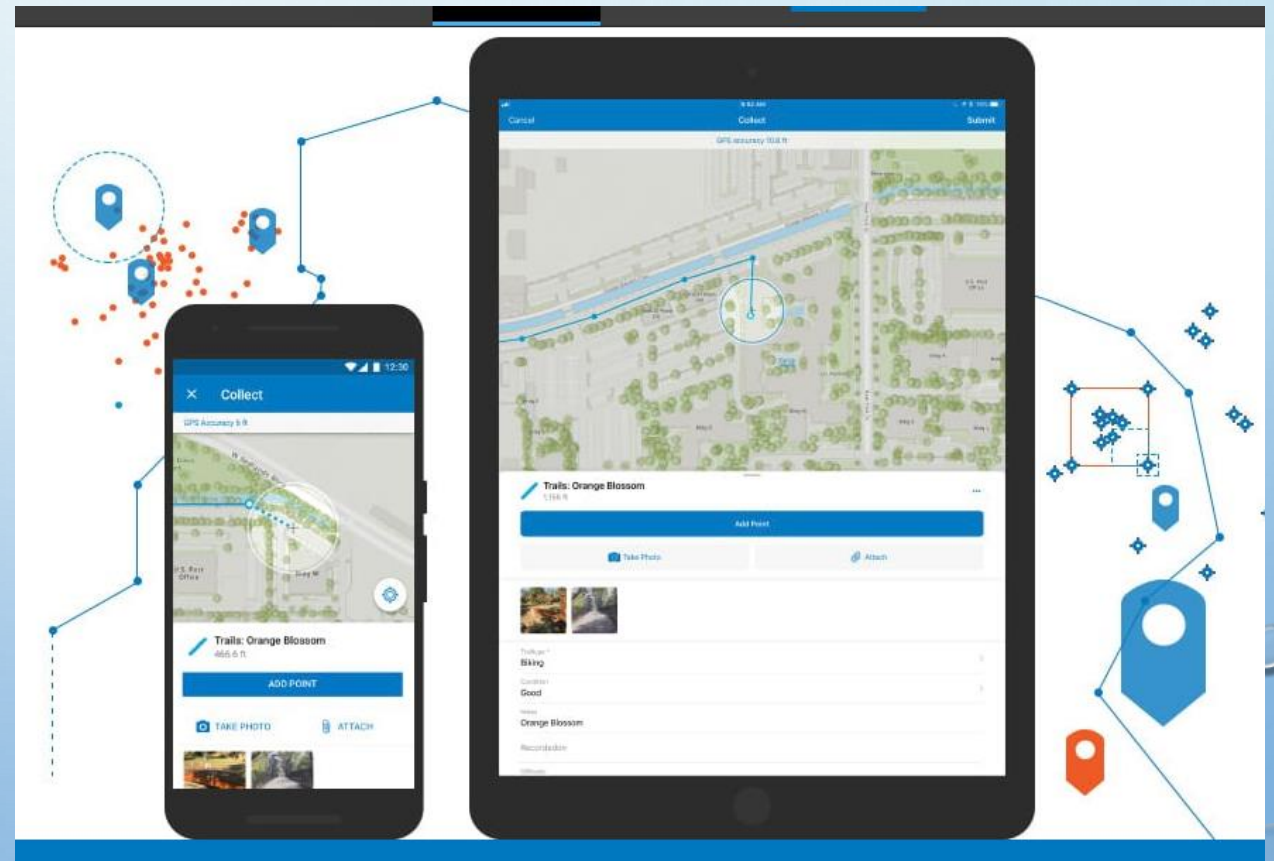
The Northwestern Water & Sewer District ("District") is a regional water and sewer district chartered under section 6119 of the Ohio Revised Code. Organized in 1994 to take over the water and sewer operations of the Wood County Sanitary Engineer, the District is specifically intended to meet the following goals within our service area:

- To establish a uniform water distribution and wastewater collection system
- To create uniform and equitable rates
- To provide uniform services
- To institute consistent regulatory authority for water and wastewater services

By combining systems to share operation and maintenance costs, the District is able to provide professional management and experienced service personnel throughout our service area.

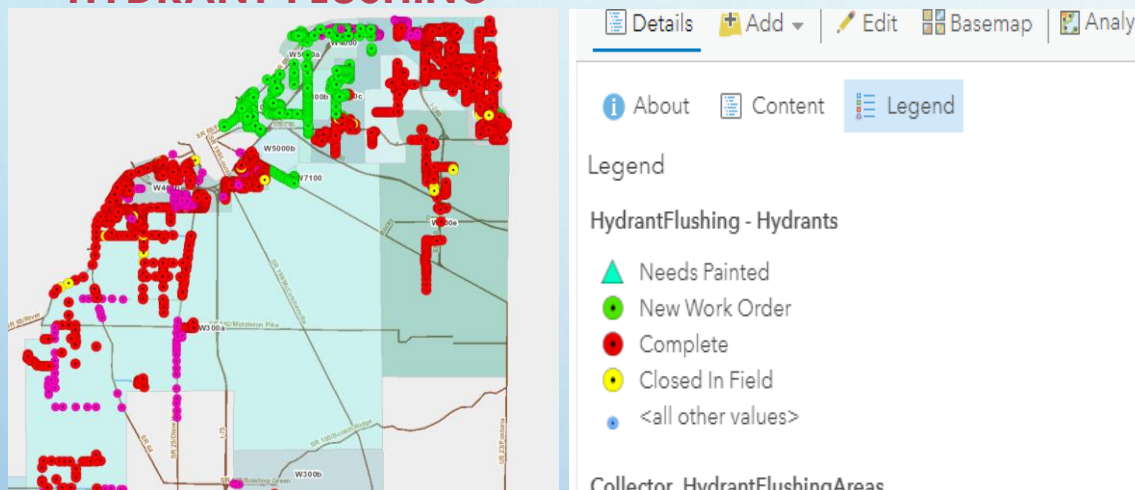
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FIELD COLLECTION OF ASSETS WITH TRIMBLE'S R2 GPS UNITS & ESRI COLLECTOR FOR ARCGIS.

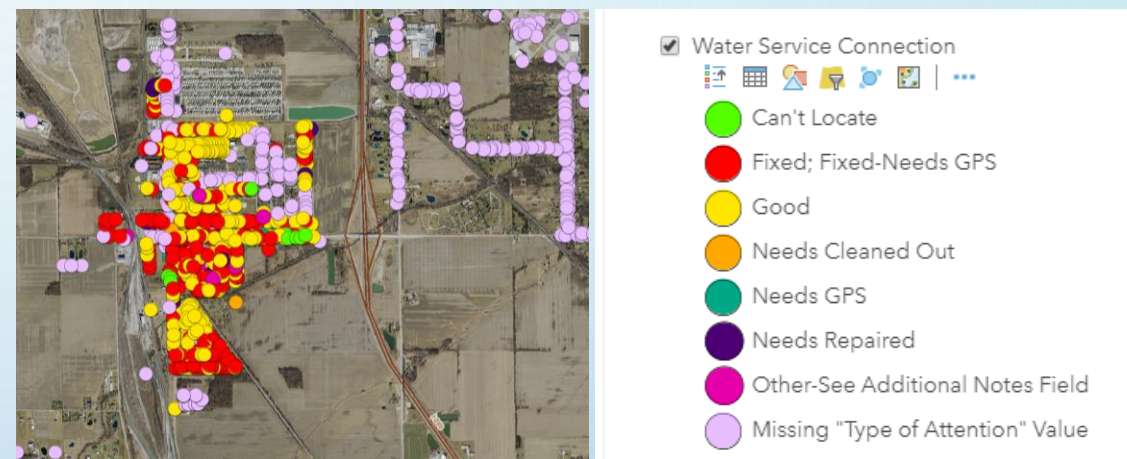


APPS DESIGNED FOR OPERATIONS DEPARTMENT

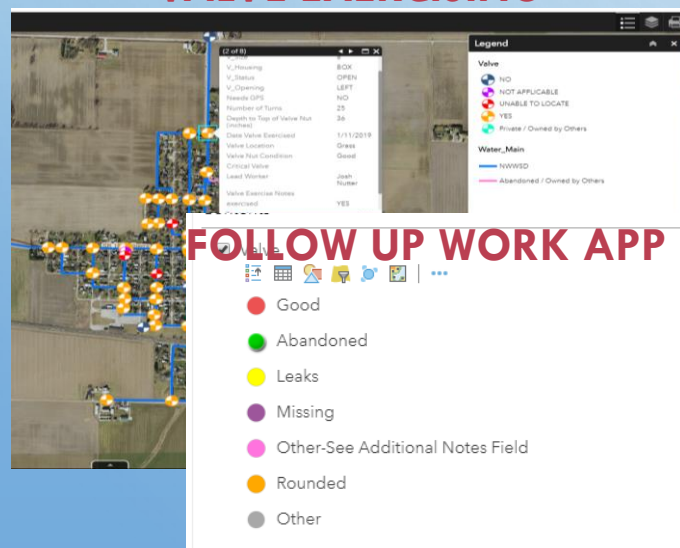
HYDRANT FLUSHING



FIELD VERIFICATION FOR LEAK DETECTION



VALVE EXERCISING

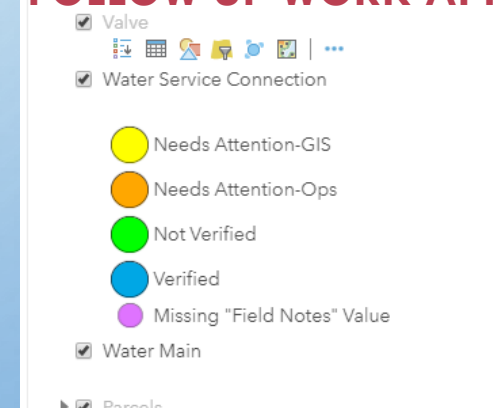


(2 of 8)

V_Size	8
V_Housing	BOX
V_Status	OPEN
V_Opening	LEFT
Needs GPS	NO
Number of Turns	25
Depth to Top of Valve Nut (inches)	36
Date Valve Exercised	1/11/2019
Valve Location	Grass
Valve Nut Condition	Good
Critical Valve	
Lead Worker	Josh Nutter
Valve Exercise Notes exercised	YES

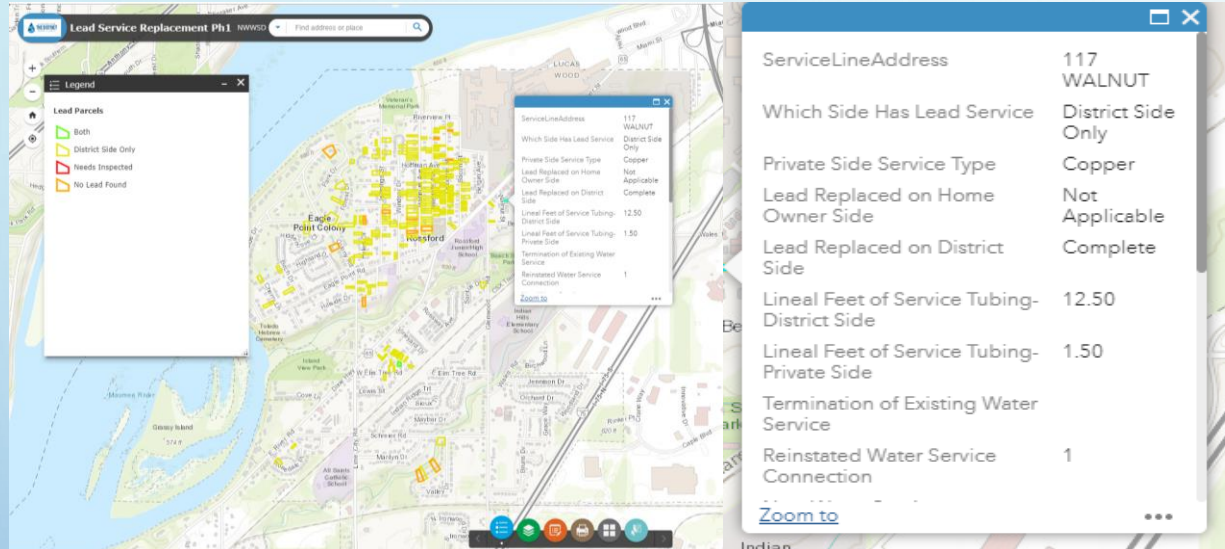
[Zoom to](#)

FOLLOW UP WORK APP

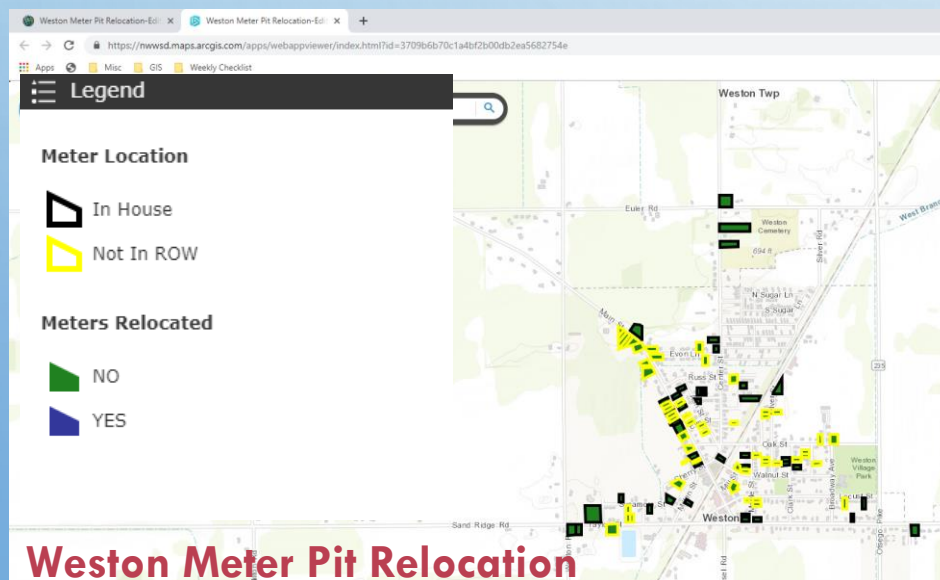
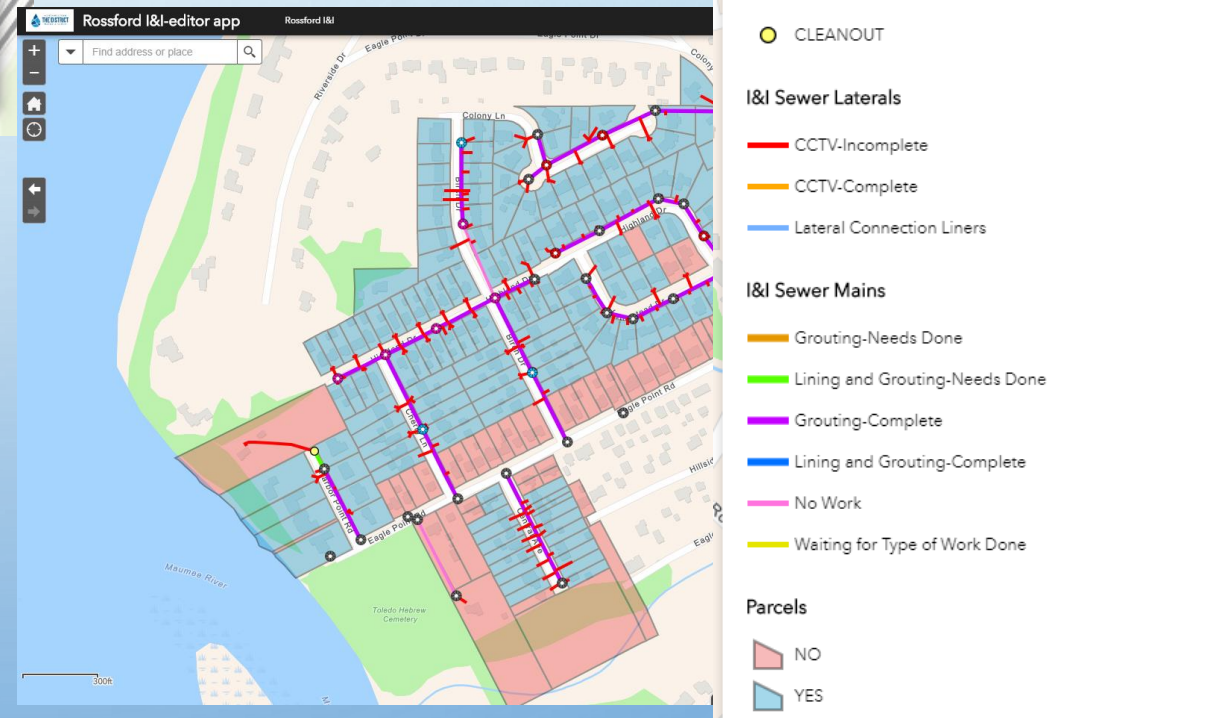


APPS DESIGNED FOR ENGINEERING DEPARTMENT

Lead Service Line Replacement.



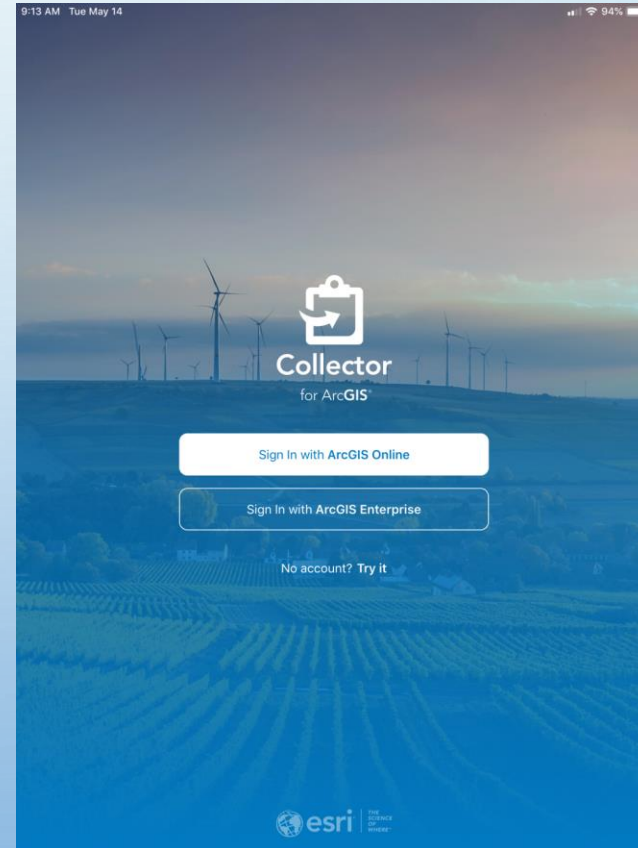
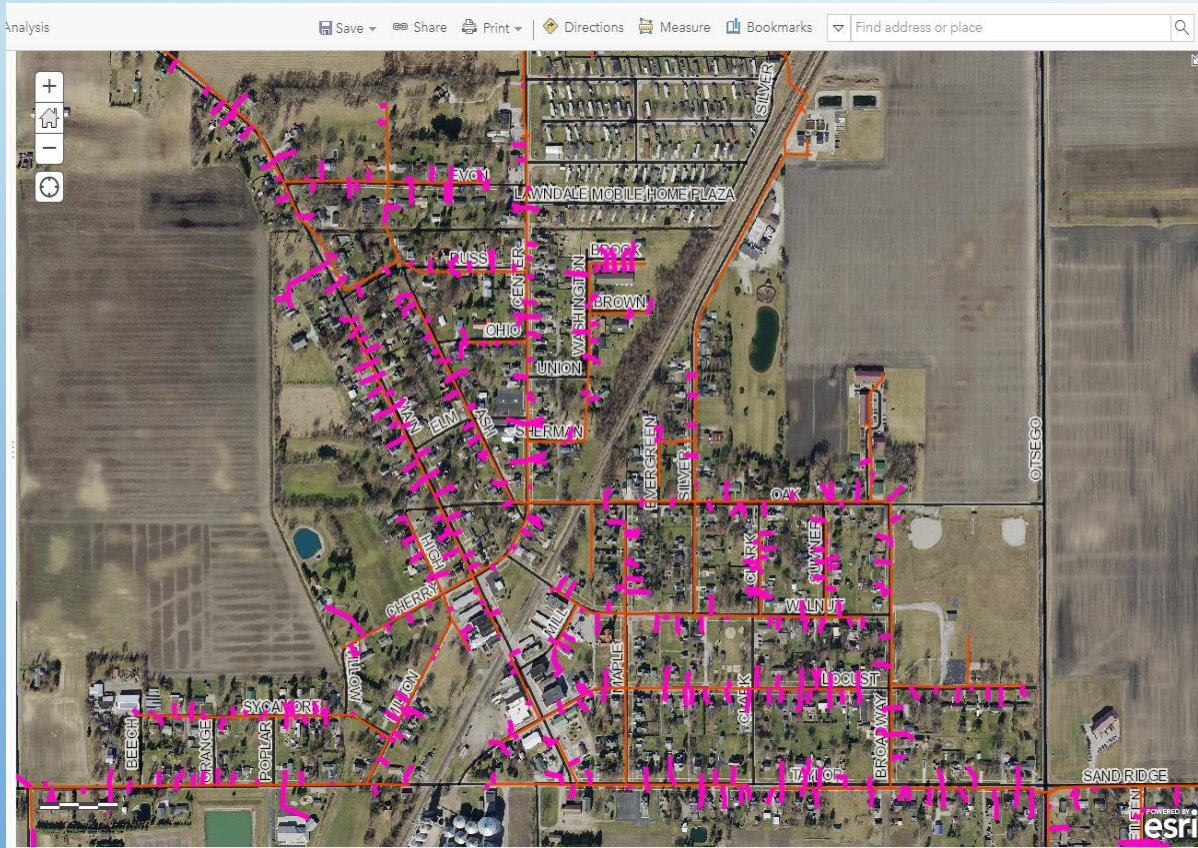
Rossford I&I Rehab



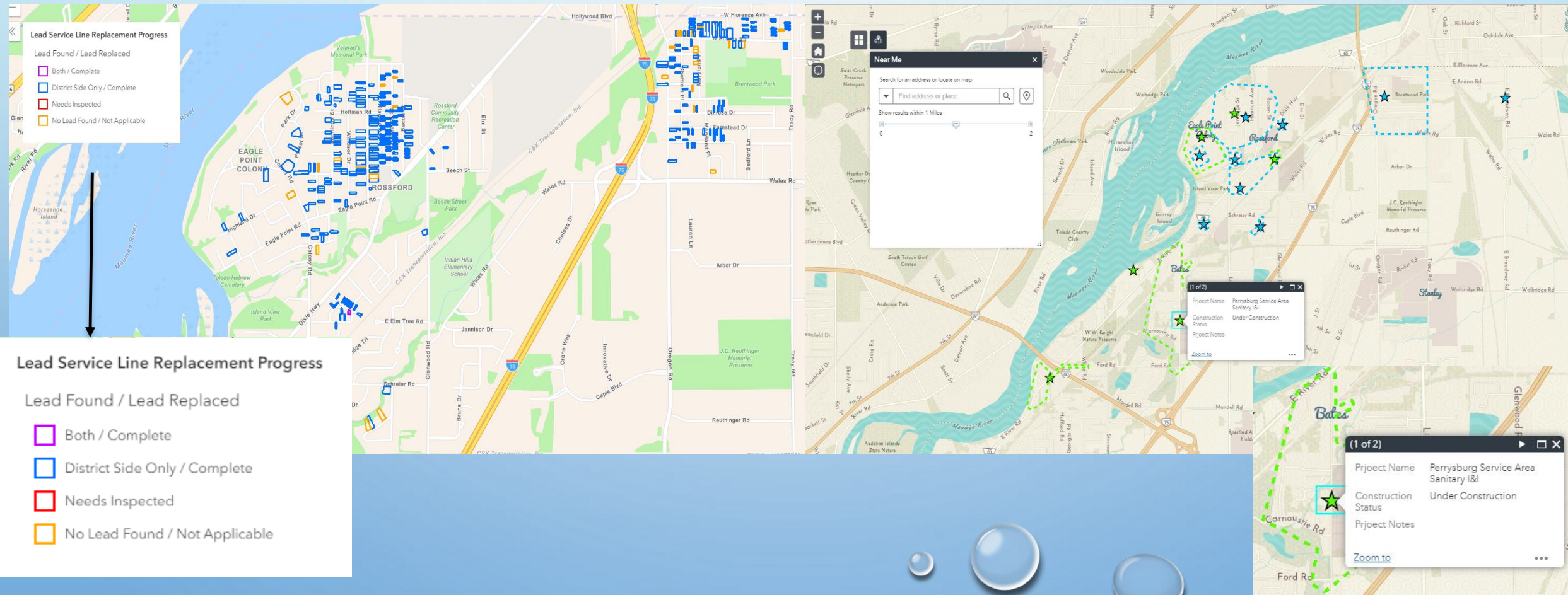
Weston Meter Pit Relocation

APPS DESIGNED FOR ENGINEERING DEPARTMENT

- **SEWER LATERAL CONNECTION POINTS CAPTURED BY CAMERA TRUCK CREW WITH GPS AND COLLECTOR.**

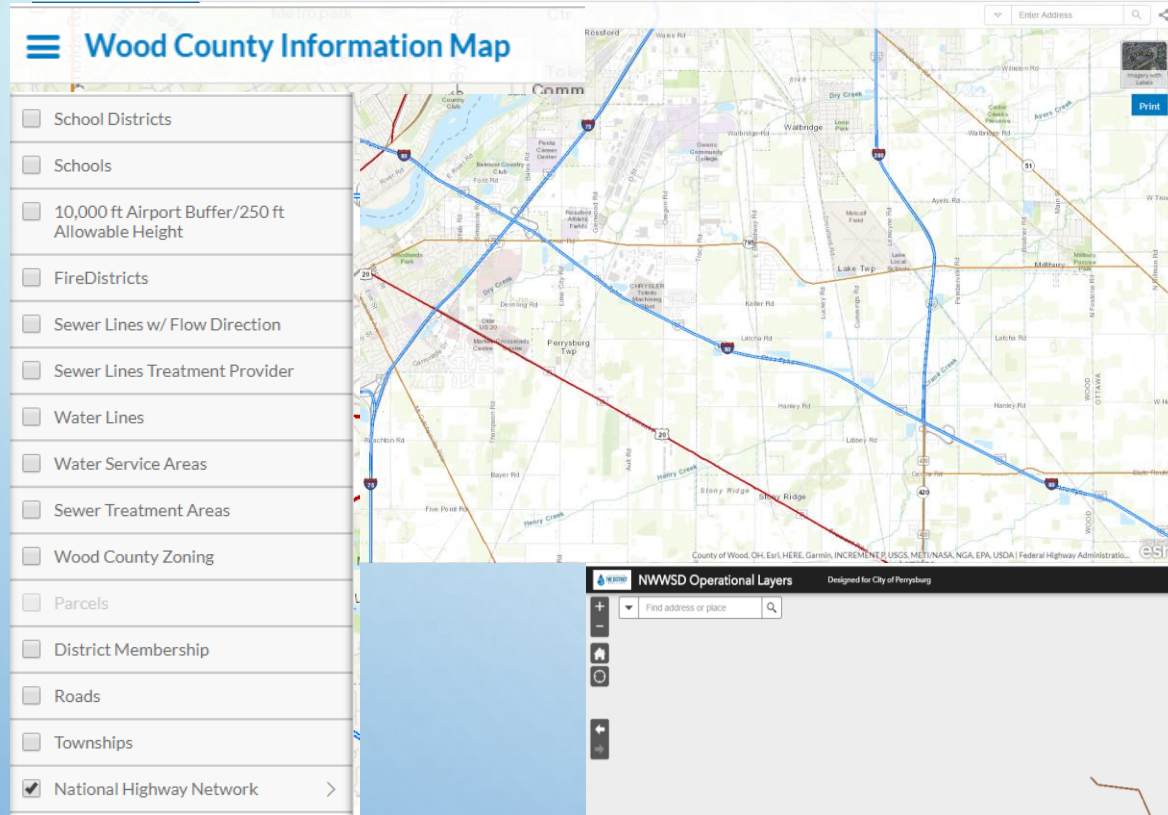


APPS USED FOR INFORMING OUR CUSTOMERS AND PUBLIC ON CURRENT AND UPCOMING PROJECTS.

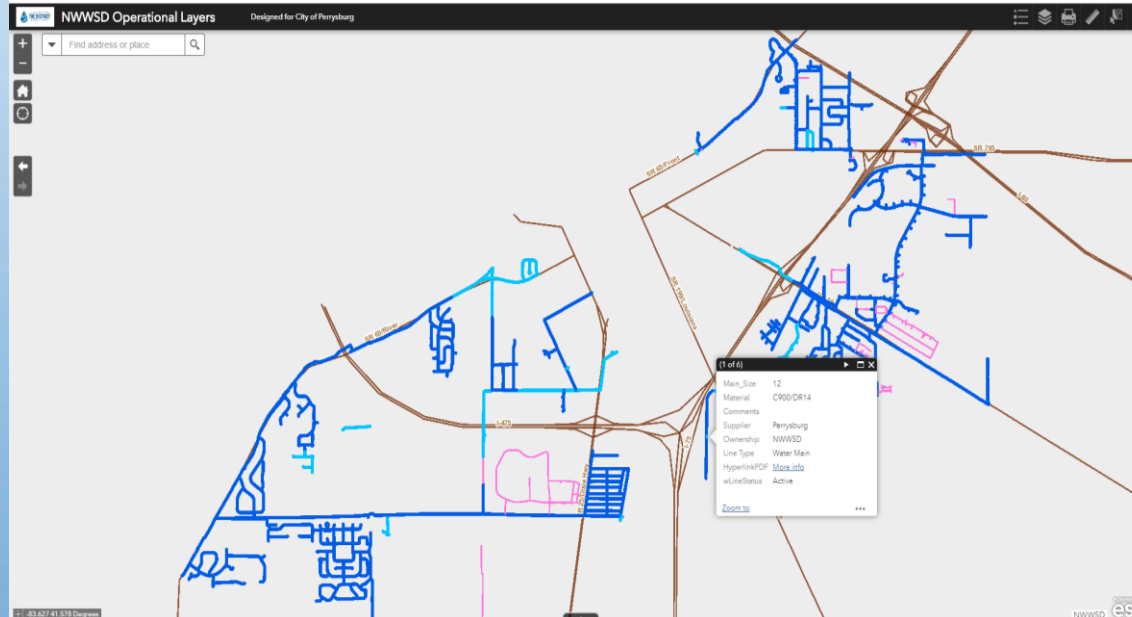
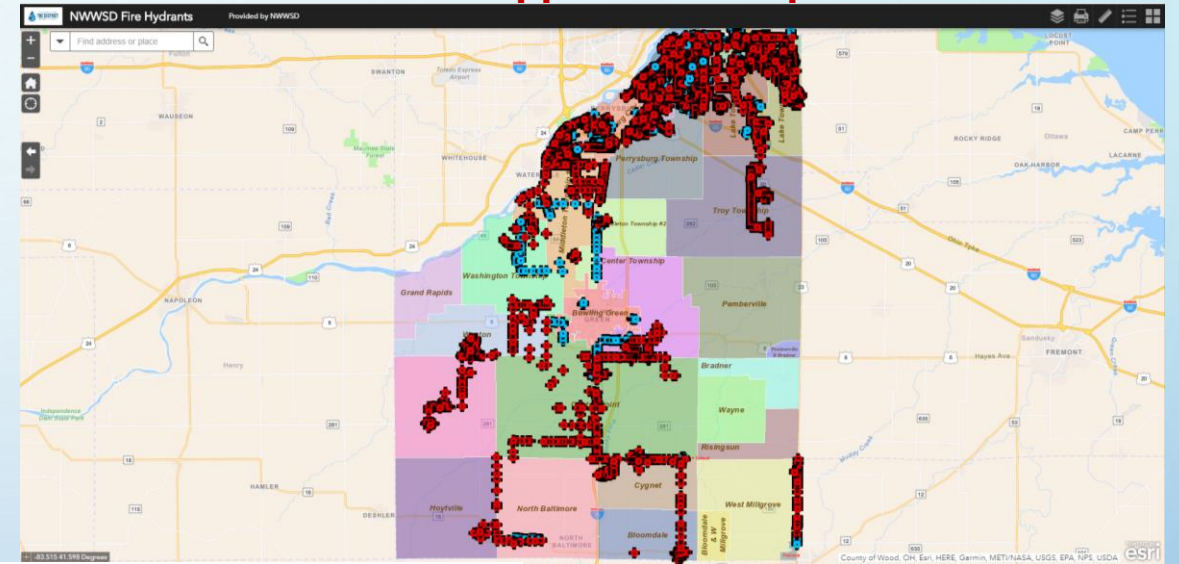


DATA SHARING IS AT THE HEART OF GIS.

Web App for built for Economic Dev. Planning



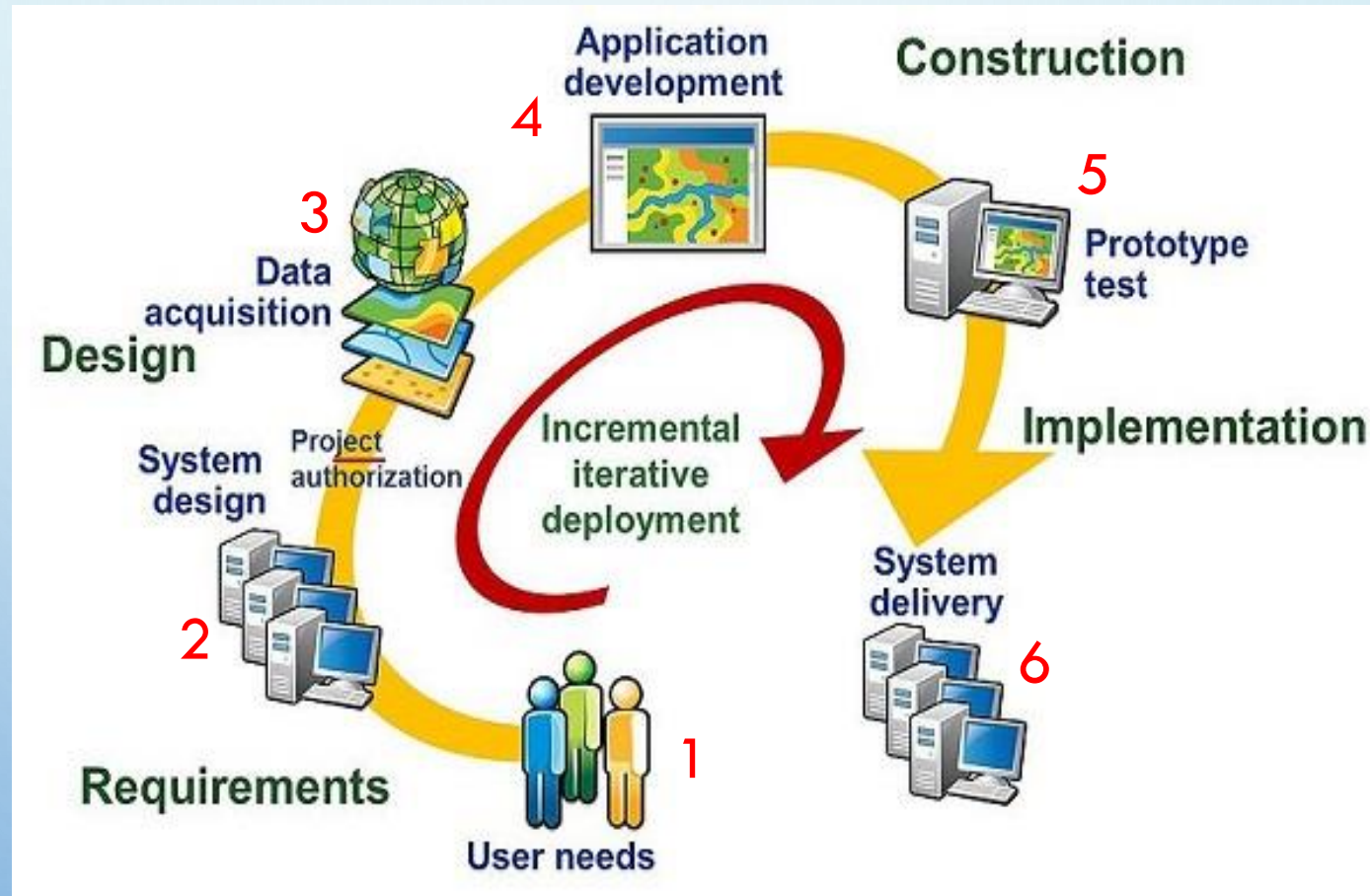
Web App for Fire Depts.



Web App Built for City of Perrysburg

A FEW THINGS TO CONSIDER BEFORE STARTING A GIS PROGRAM.

1. Assess your agency's need.
2. What is your existing system architecture and what do you need to set up.
3. Where is the existing data that will become your GIS data. (Record drawings, tabular data either in databases or spreadsheets, hire interns or contract a company to GPS field assets, digitize As-builts, etc.



4. Hiring the GIS team to build applications and maintain the data.
5. Do a small rollout of applications and software to a few employees first.
6. What devices will be used to access the GIS data. (tablets, smart phones, laptops, PC's, etc)

THANKS!

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