DWSRF and Capacity Building in Action: Strategic Planning for Prioritizing and Funding Water Infrastructure Projects

November 3rd , 2021

EPA

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Welcome!

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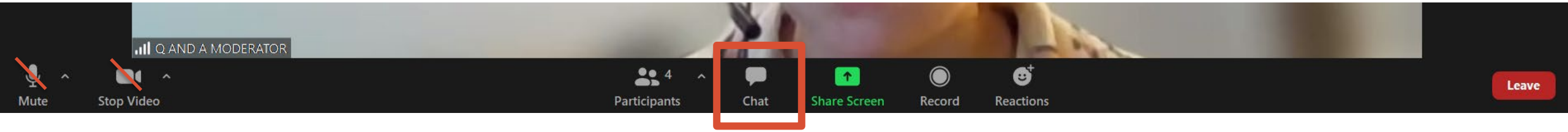
All attendees are in listen-only mode. Please do not unmute yourself during the presentation.

We will be recording this webinar. Please do not turn on your video during the presentation.

A copy of the slides is attached in the chat. The recording will be posted and a link emailed to all registered attendees 1-2 weeks after the webinar.

Check out https://www.epa.gov/dwreginfo/drinking-water-training for more drinking water webinars and trainings.

We encourage attendees to ask questions throughout the presentation by using the chat feature.
DIRECT YOUR QUESTIONS TO "Q AND A MODERATOR"



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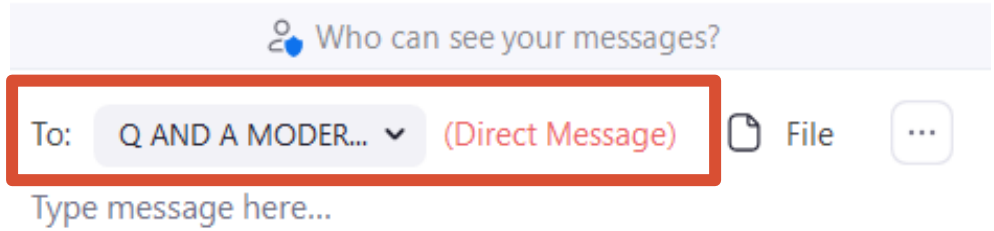

Learning Objectives

- Introduction to Strategic Planning and DWSRF Set-Asides Eligibilities

  Alison Flenniken, EPA HQ

  Kiri Anderer, EPA HQ

- State Examples:
  - Arkansas' Water System Mapping Project

    Teresa Lee, Arkansas Department of Health

  - Virginia's Planning and Design Grants

    Barry Matthews, Virginia Department of Health

- Q&A at the end of the presentation.

What's a Strategy?

Why are we talking about this?

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Significant Increases in Water Infrastructure Investment

- America's Rescue Plan Act (ARPA)
  - COVID relief bill – funds *can be* used for water infrastructure
  - Currently aligns with eligibilities of DWSRF and CWSRF
  - Several states have already appropriated funding for water and wastewater uses
- Infrastructure Investment and Jobs Act (aka "Infrastructure Bill")
  - Up to $55 Billion for modernizing drinking water, wastewater, and storm water systems
    - Focus on lead service lines, PFAS and other emerging contaminants
  - Re-authorization for DWSRF over the next 5 years significantly increased
  - Note: This proposed bill is still in Congress

The conversation of strategic planning is always relevant.

Benefits of Strategic Planning

Identifies strengths and gaps that can be addressed

Known system needs lead to stronger justification in providing financial and technical assistance

Increase Capacity, Improve Compliance

Enhanced communication, collaboration, and coordination with stakeholders

Better prepared and positioned to respond to new regulations and emergencies

Creating an equitable future to ensure all communities have access to clean, safe drinking water

- Observable Behaviors and Practices
- Level of Customer Service
- Condition and Reliability of Drinking Water
- Compliance

- Capacity Development
- DWSRF
- Operator Certification
- Sanitary Surveys
- Water System Partnerships
- Workforce Development
- Enforcement
- Source Water Protection
- Water Security
- SDWIS
- Technical Assistance
- And So On…

What Does This Mean For States?

- Can be proactively helping water systems now
- Should be focused on strategic planning
- Developing a pipeline of projects
- Utilizing DWSRF funding to full capability

Actions That Can Help

- Updating the State's Capacity Development Strategies
- Conducting Water System Capacity Assessments
- Providing Training to Water Systems
- Developing Water System Mapping
- Creating Asset Inventories
  - Including locating lead service lines
- Reviewing Rate Setting Structures
- Assisting Water Systems Apply for Funding
- Planning and Design Assistance
- Conducting Water and Energy Audits
- Conducting Leak Detection Studies
- Developing Pipe Condition Assessments
- Evaluating Alternatives to Address Emerging Contaminants
- Updating Source Water Assessments
- Preparing Vulnerability/Risk Assessments

DWSRF Loan Eligibilities

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DWSRF Set-Asides Eligibilities

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Water System Mapping Project

Engineering Section
Arkansas Department of Health
Teresa Lee
November 3, 2021

Mapping Project

Purpose:

To help small public water systems develop the ability to provide sustainable infrastructure by developing a long-term mapping plan to locate and identify key infrastructure assets with current GIS and GPS resources.

Program lasted from SFYs 2009 through 2018

(3 individual contracts – same contractor)

Mapping Project

Many transitions along the way

- Began after Katrina
- Tried to target systems with very small populations
- Required the system to have a computer
    - Most systems didn't have full-time operators
    - Most very small systems didn't have computers

Mapping Project

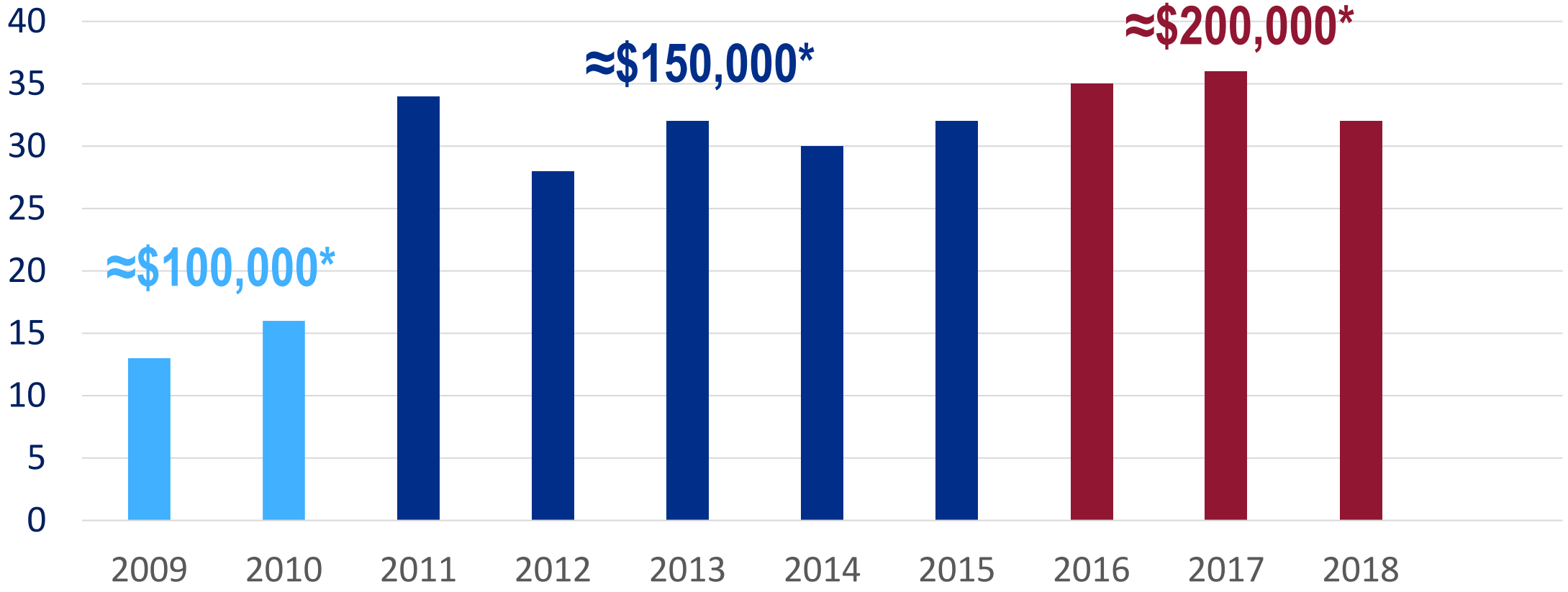
Second Contract –

- Offered the project to larger systems, but < 3,300
- Realized we also needed the data
- Realized most systems wanted hard copies of maps

Third Contract –

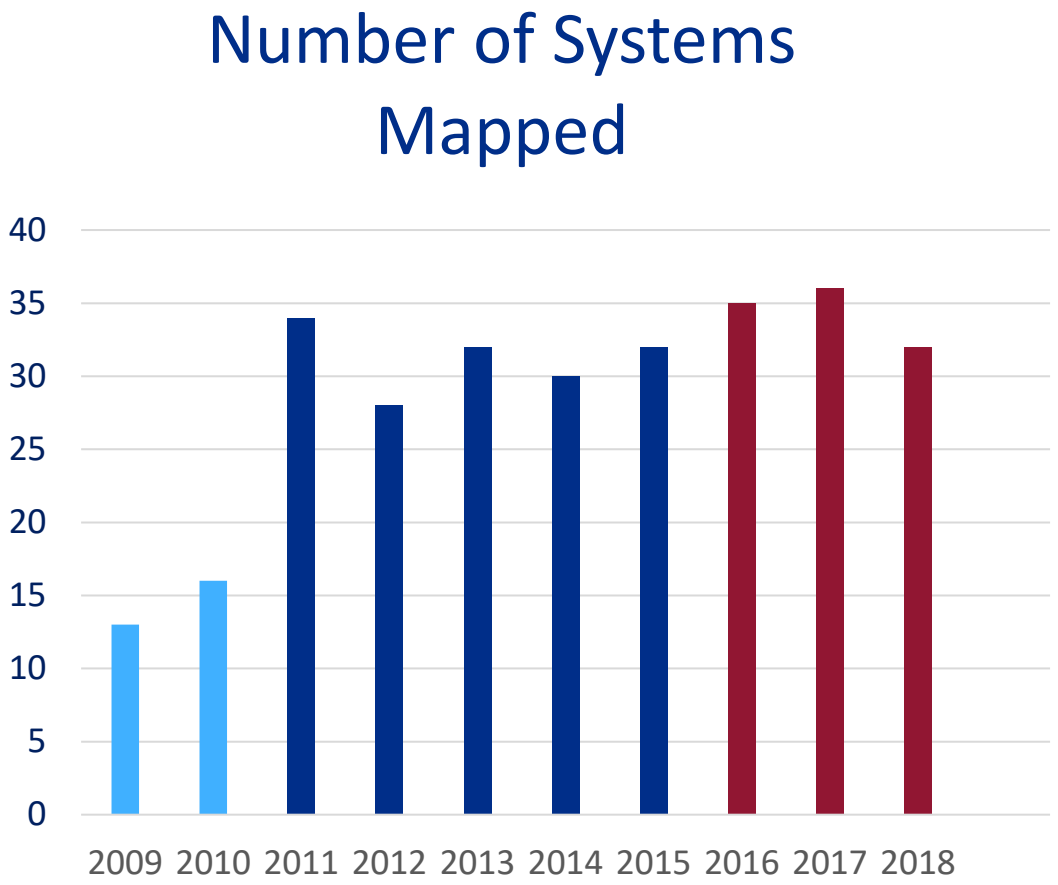
- Mapped more rural systems
- Transitioned to Google Earth for more “techy” operators
- Continued to collect data for our state program

Number of Systems Mapped



*Cost per year

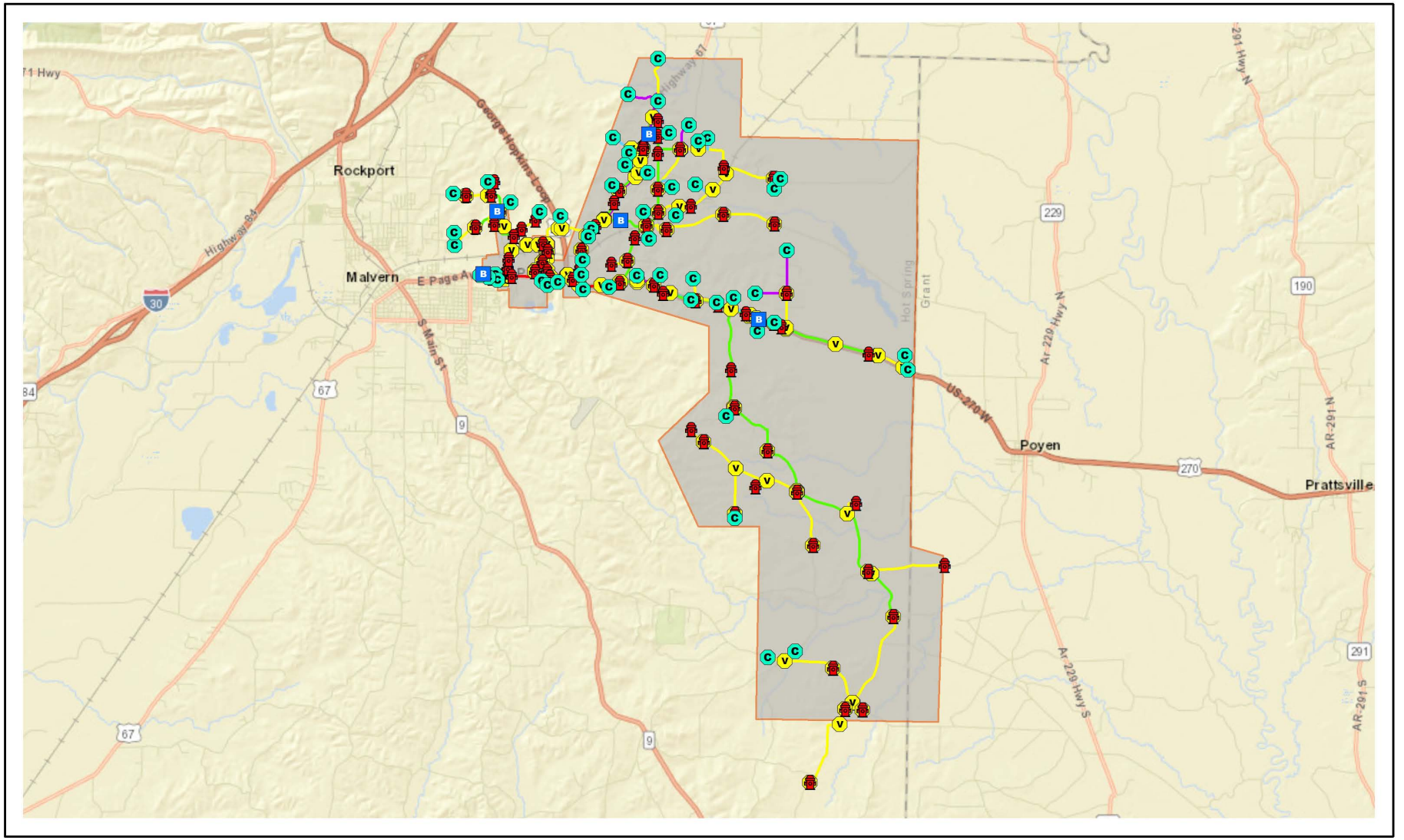
Project Statistics



- Project lasted 10 years
- 288 systems mapped
- Total cost $1,472,800
- $5,100 ave. cost/system

Equipment/Software

- Trimble Geo7x handheld device (submeter accuracy)
- Trimble Pathfinder Office
- ESRI ArcMap – digitizing
- ESRI ArcReader - installing on water systems' computers
- Google Earth – For KMZ or Google Earth files on users' computers or phones



BACTI
Blow Off
Hydrant
Master Meter
Office
System Valve
Perla Water Service Area

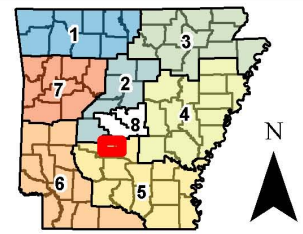
Main Diameter Size

2"
3"
4"
6"
8"
10"

623 Perla Water Association
Water Distribution Map

Created: 7/13/21

ARKANSAS DEPARTMENT OF HEALTH



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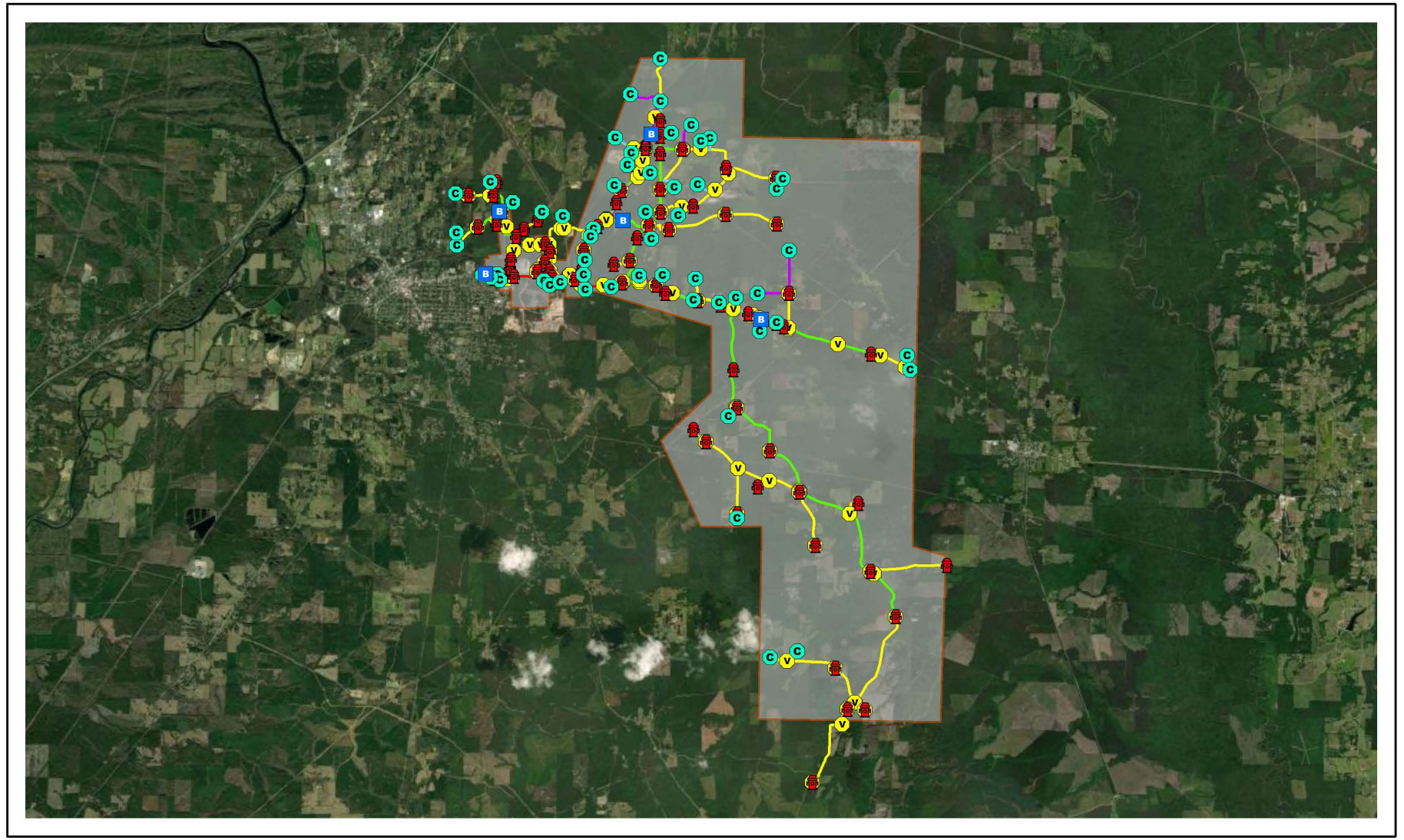

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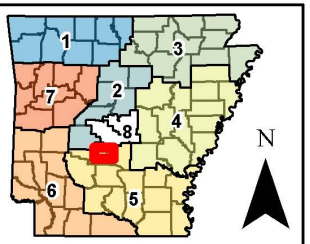

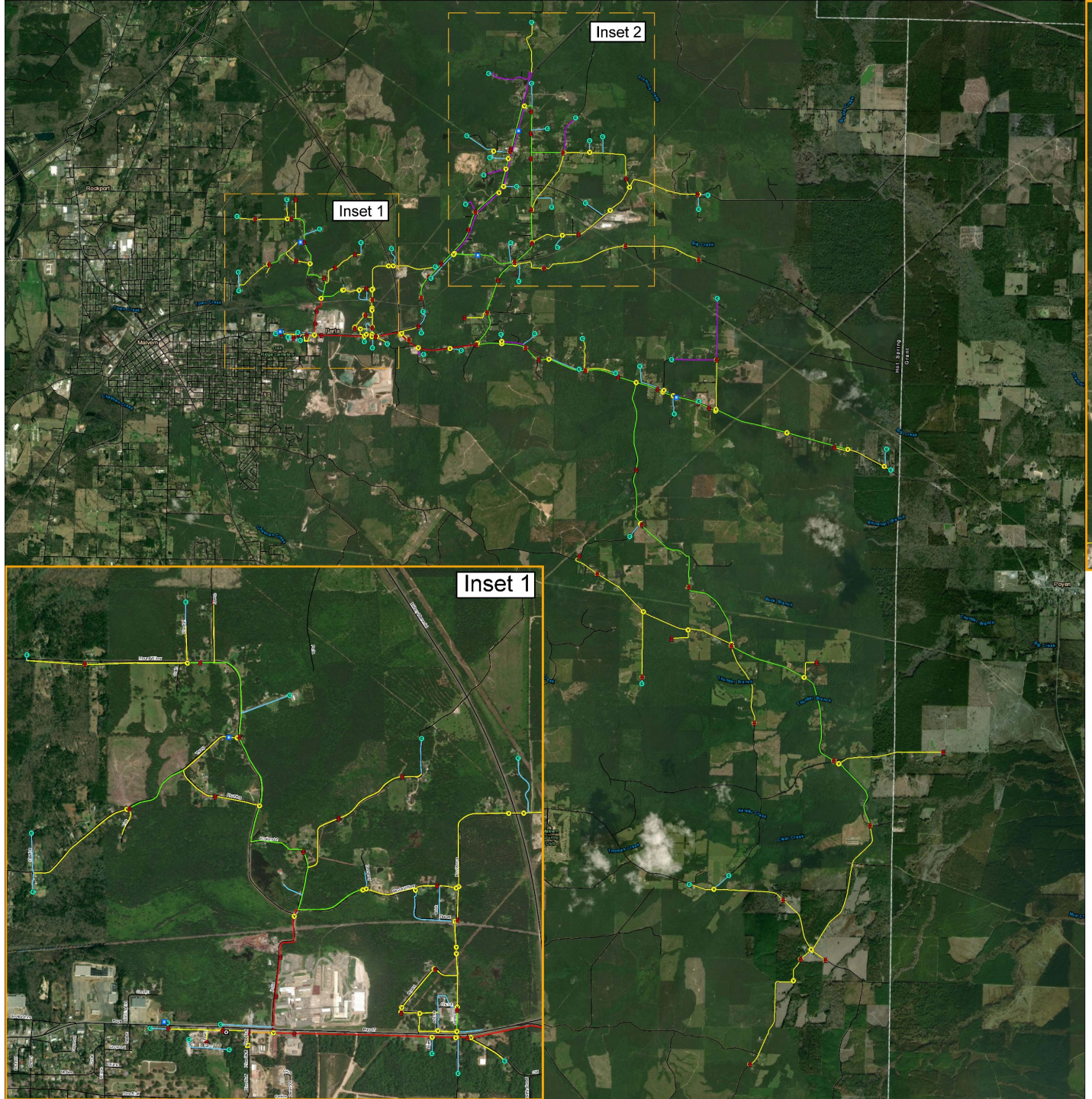

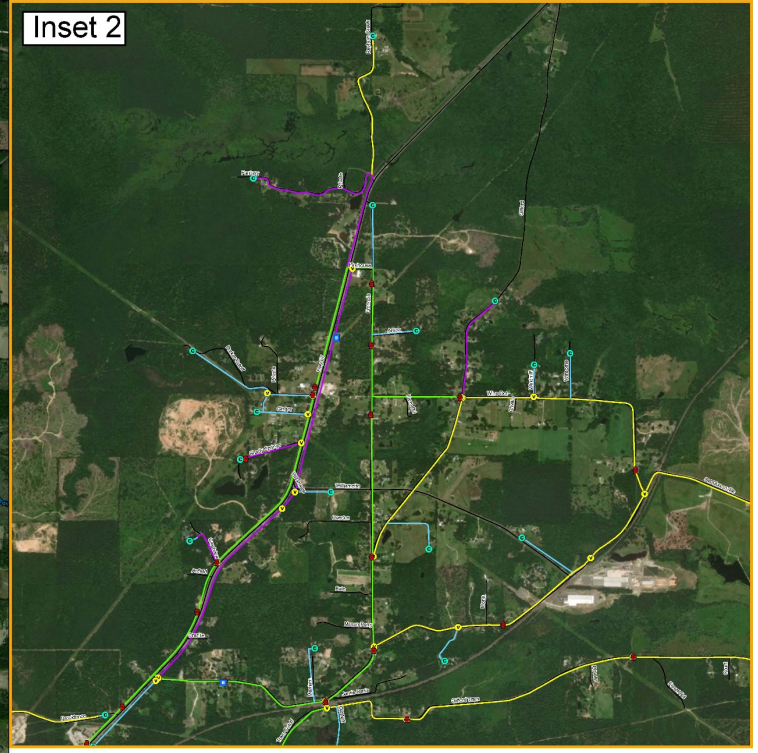

623 Perla Water Association

		Main Diameter	
B	BACTI		2"
C	Blow Off		3"
	Hydrant		4"
M	Master Meter		6"
O	Office		8"
V	System Valve		10"
	Roads		

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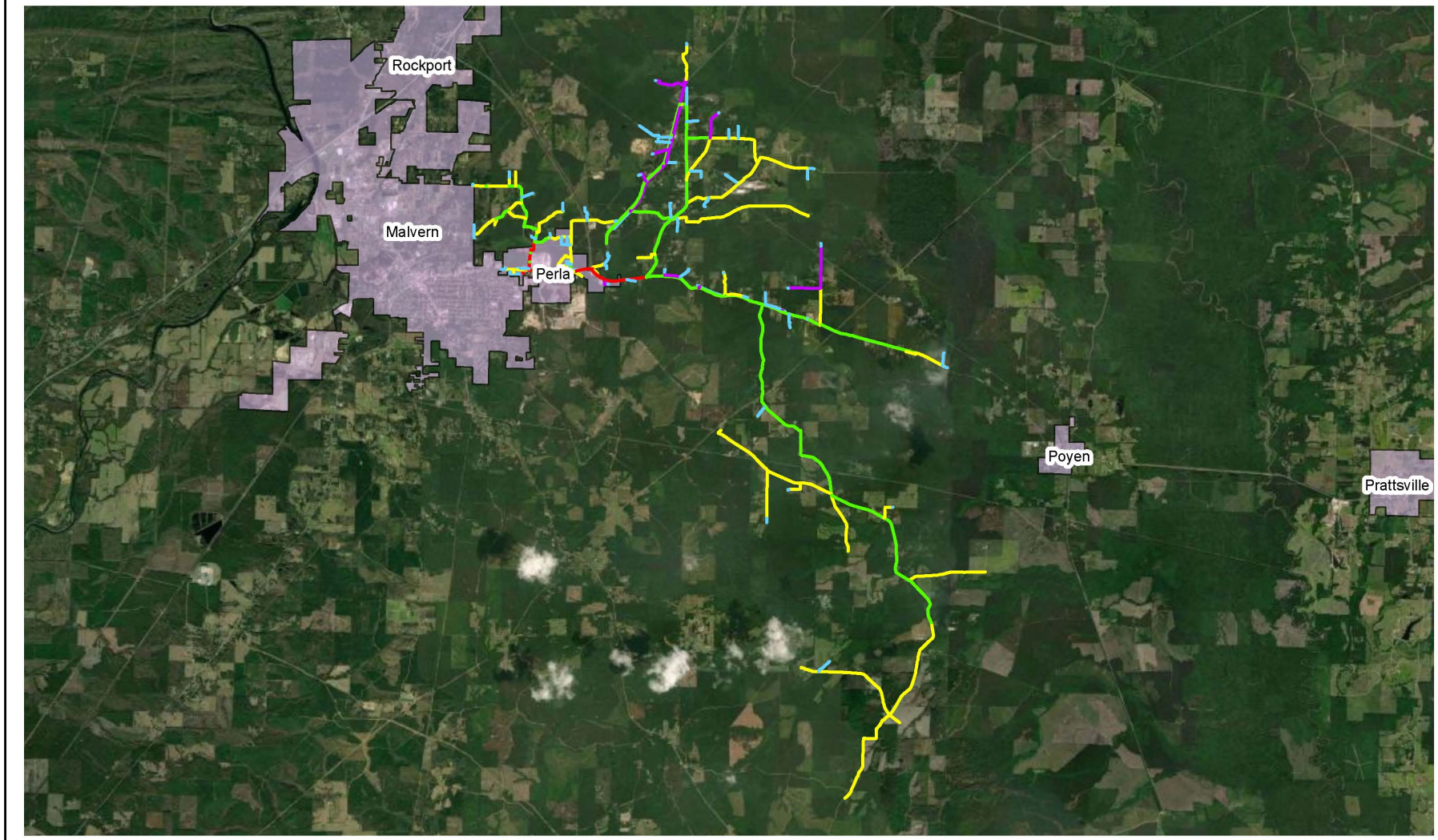
Miles



Main Diameter Size

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- 10"
- Municipal Boundaries

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Water Distribution Map

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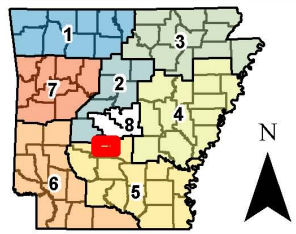

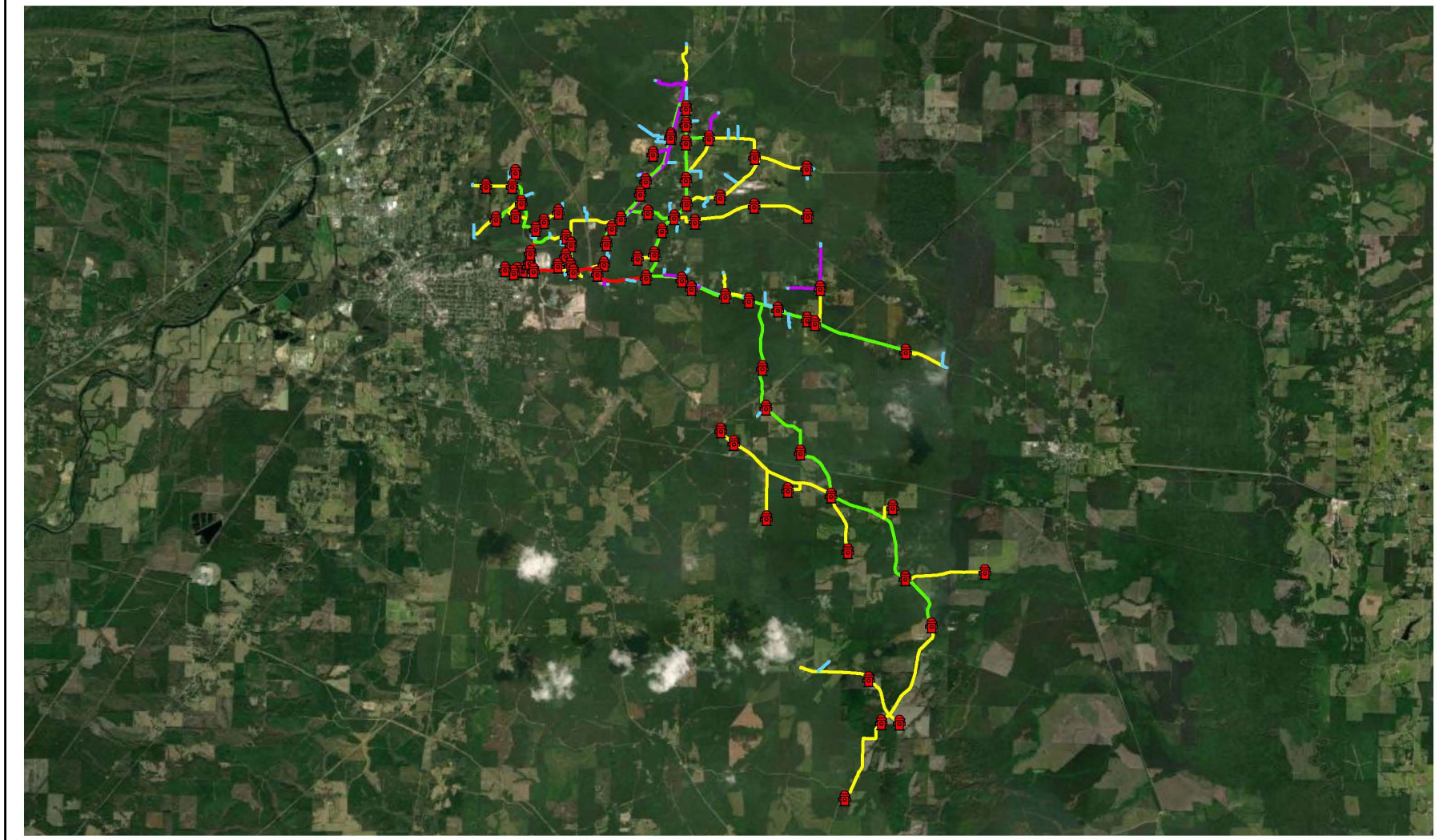

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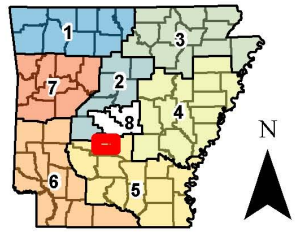

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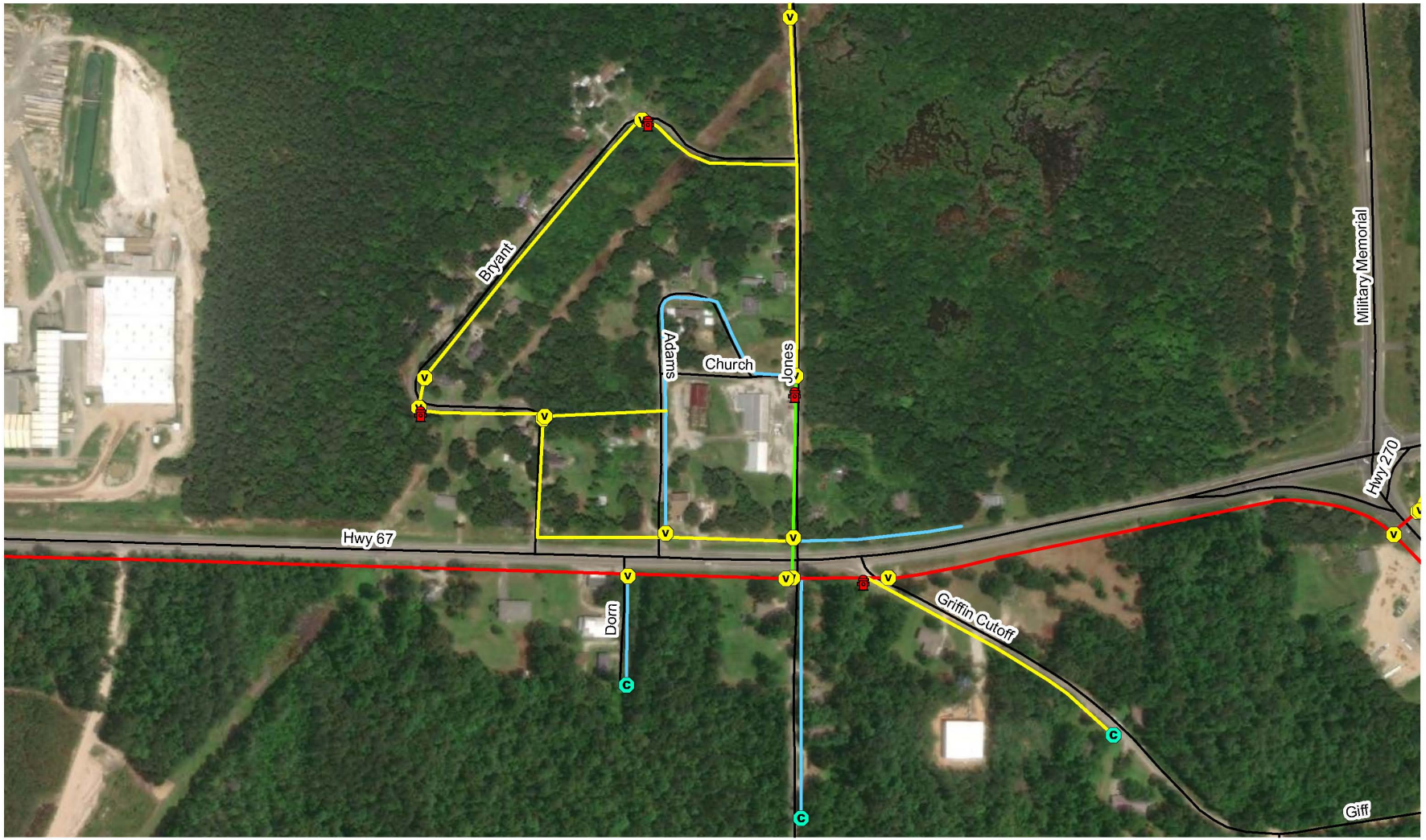

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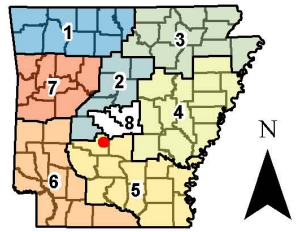

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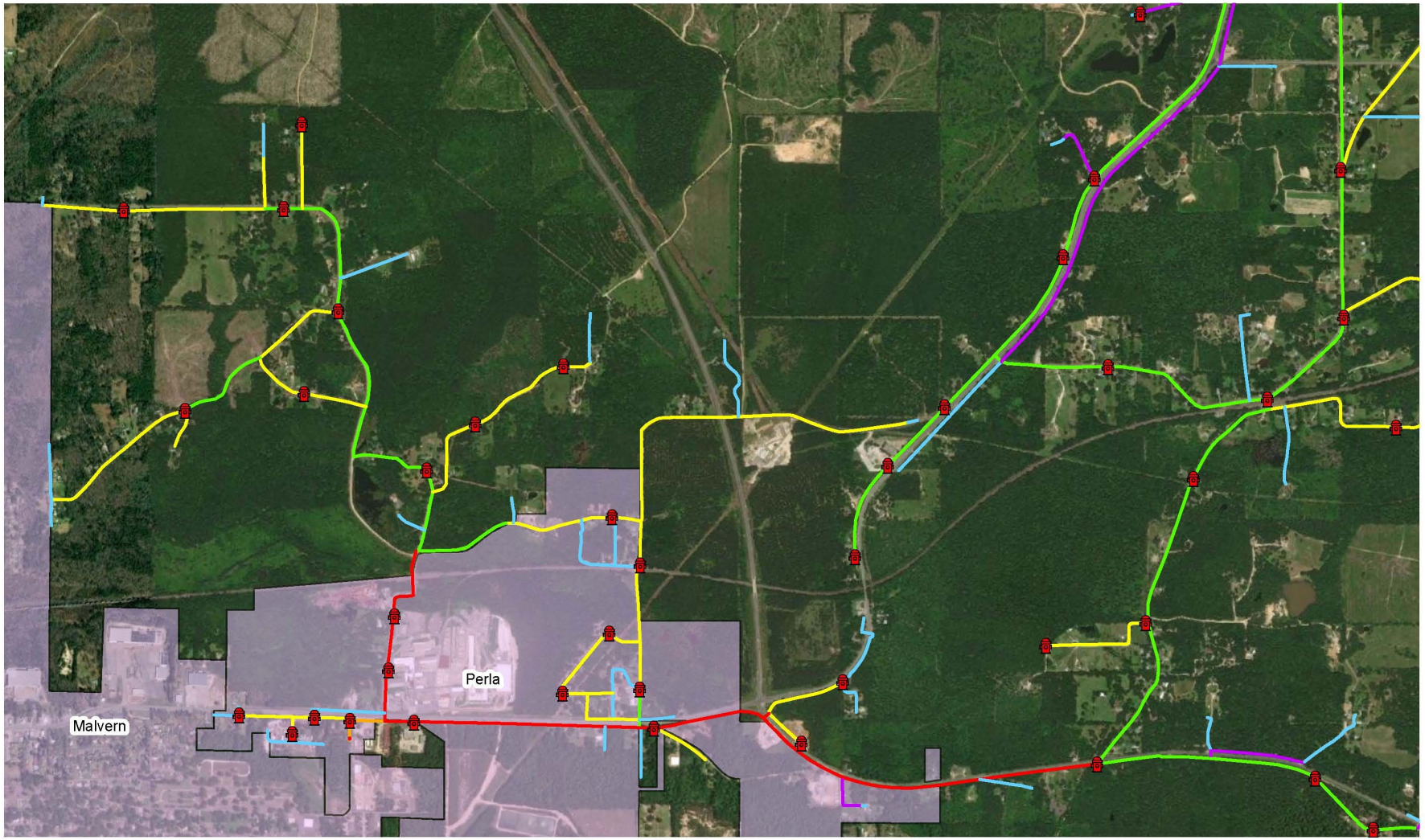

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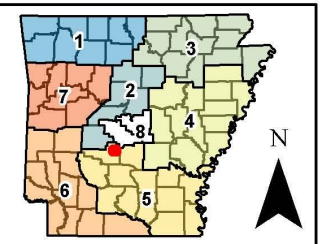

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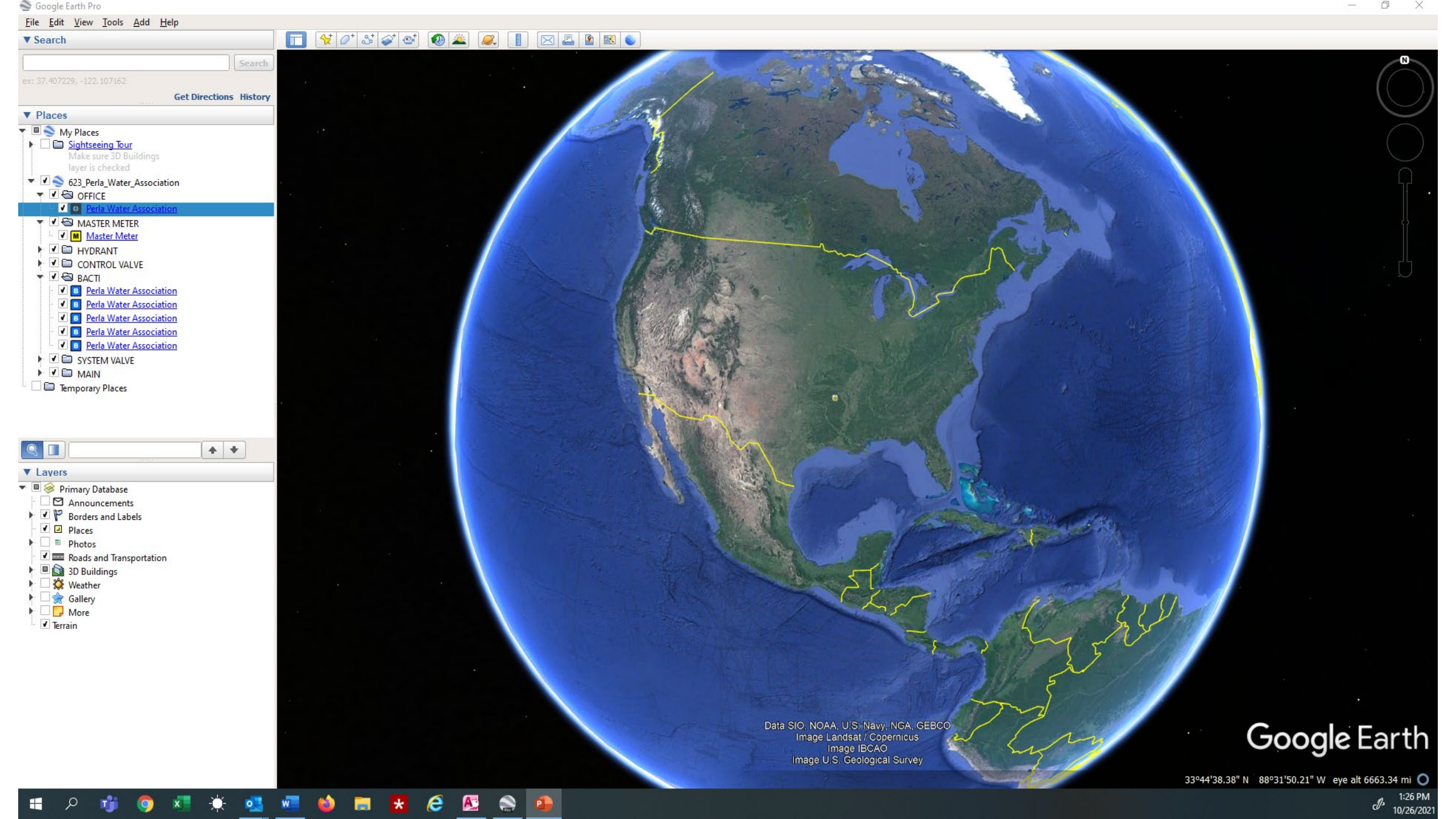
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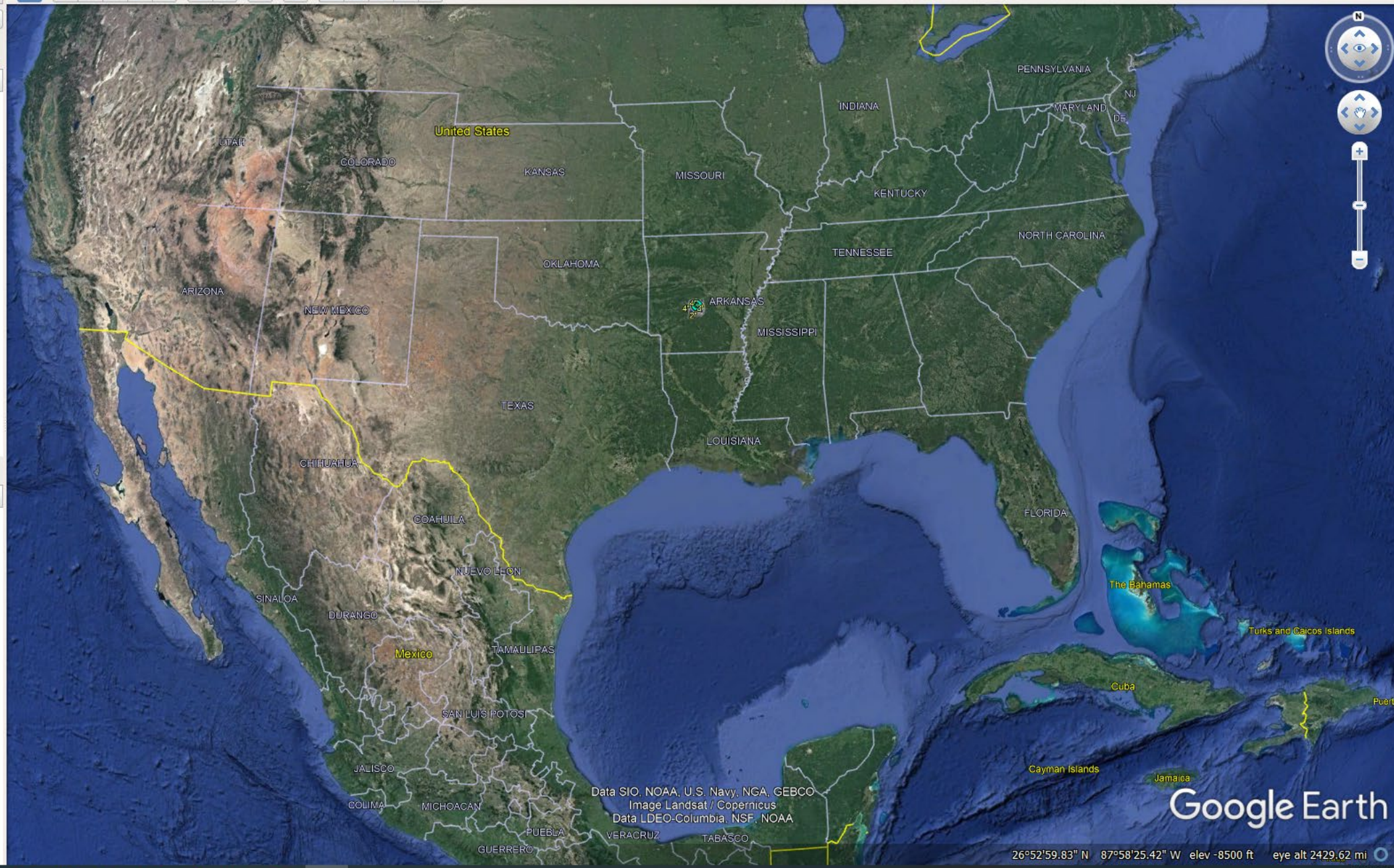

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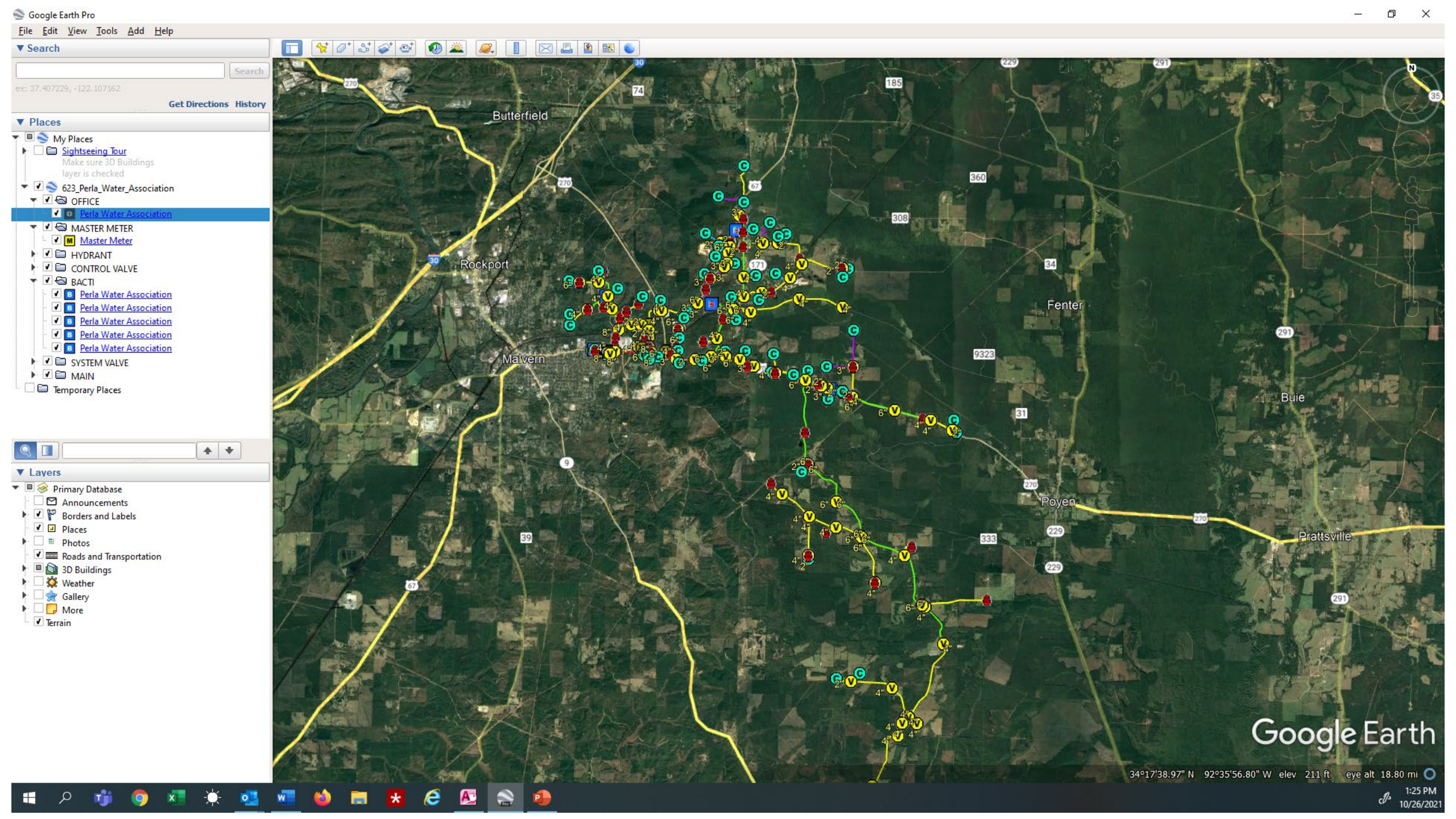
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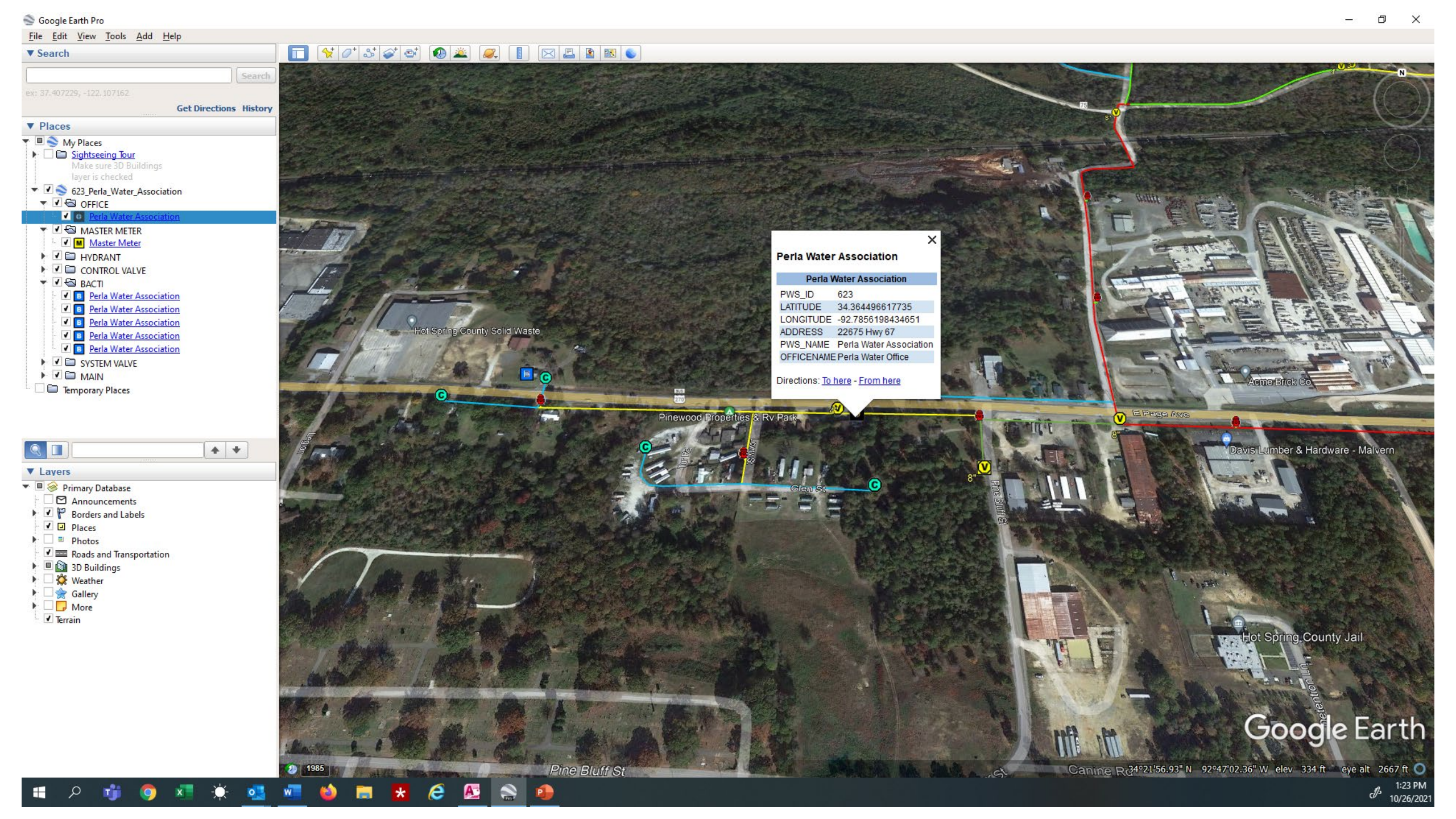
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LONGITUDE -92.7856198434651
ADDRESS 22675 Hwy 67
PWS_NAME Perla Water Association
OFFICENAME Perla Water Office
Directions: To here - From here
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Pinewood Properties & Rv Park
Acme Brick Co
E Page Ave
Davis Lumber & Hardware - Malvern
Hot Spring County Jail
Glen St
Pine Bluff St
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Problems

- Some operators didn't trust the contractor
- Time consuming to collect GPS data in the field

  (mostly relating to valves that were buried over the years)
- Operators had to stop for day-to-day

  duties
- Missing as-builts

Benefits

- Allowed a water operator to physically touch and see everything for the first time in years
- Operators would mark valves
- Newer operators were able to understand how the system worked
- They were proud of the large wall map they received
- For more technical users, the computer maps were more useful
  - Details were embedded – number of hydrants/valves, specific manufacturers and sizes, miles and sizes of distribution mains
- FREE to water systems!

Questions?

Teresa.Lee@arkansas.gov

Office of Drinking Water Capacity Development Funding

Barry E. Matthews, CPG

Office of Drinking Water

Safe Drinking Water for a Healthy Virginia

VDH VIRGINIA DEPARTMENT OF HEALTH

Protecting You and Your Environment

Planning & Design Grants

- Planning & Design Grants
  - Began with the first Intended Use Plan in 1997 – 15% set-aside funded
  - Have been very popular funding source (Construction Applications required PERs until 2017)
  - Have funded 2.2 million dollars since 2014
  - Number of grant applications fell off when Construction applications could fund PERs
  - Issued as a Request for Application

Planning & Design Grants

- $35,000 maximum grant
  - Local match of funds not required
- Applications - Year-round - Reset January 1
- Waterworks can submit up to 3, will fund up to 2
- If not immediately funded, reviewed in September
- Funding 6 - 8 Grants for each Fiscal Year
- Currently funding only Acute and Chronic Health Issues
- 15 Month project schedule
  - Starts after all paperwork is signed

Examples

- Preliminary Engineering Reports
  - DBPs (construction)
  - Treatment
  - Storage
  - Distribution System
  - Source (wells)
- Asset Management Plans
- Rate and Financial Studies
- Waterworks Business Operations Plans
- Climate Change Mitigation Studies
- Sustainability/Reliability Studies
- Leak Detection Study
- Other Planning for Water Systems

Procurement & Payment

- Virginia Procurement Act procedures must be followed
- No expenses reimbursed before proper procurement
- Preliminary Engineering Reports (PER)
  - Half costs reimbursed after submittal to Field Office
  - Second half reimbursed after approval

Funding Levels

- 2014 $ 282,800
- 2015 $ 330,800
- 2016 $ 264,575
- 2017 $ 491,150
- 2018 $ 170,000
- 2019 $ 295,000
- 2020 $ 197,100
- 2021 $ 175,000* Tentative amount based on applications

Chatham

The Town of Chatham in Pittsylvania County has been experiencing numerous leaks in their water system over the past few years, which have required complete system shut downs to repair. ODW will offer a Planning and Design Grant to develop a Preliminary Engineering Report assessing the distribution system.

This will allow the Town to determine logical steps in upgrading and repairing the system in a phased approach. ODW is encouraging the Town to develop an Asset Management and consider a rate study to move the Town toward solid sustainability.

Walkerton

Walkerton is a small village in King and Queen County. They operate a two well drinking water system. Walkerton has been required by the Virginia Department of Environmental Quality to abandon and replace their wells due to the wells being screened over multiple aquifers.

ODW will be offering Planning and Design funds to develop a Preliminary Engineering Report and plans for the abandonment and replacement of wells, along with engineering solutions for additional storage. ODW is evaluating using ARPA funds for construction.

Questions?

Barry E. Matthews, CPG

Division Director

Division of Training, Capacity Development and Outreach

Email: barry.matthews@vdh.virginia.gov (804) 477-5171

Links:

Planning Grant Applications

https://www.vdh.virginia.gov/drinking-water/capacity-development/planning-and-design-fund/

THANK YOU FOR ATTENDING!
TIME FOR Q&A

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Teresa Lee
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Barry Matthews
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You many find additional drinking water webinars and resources at www.epa.gov/dwcapacity

Please stay at the end to take a 5-question survey