



Hobart Stormwater Inventory & Assessment Project

**Indiana MS4 Partnership Annual Conference
Plainfield, IN - May 12, 2026**

Presenters:

Tim Kingsland (HSD Coordinator)
Megan Bolyard, CPESC, CESSWI, MS4CECI (BF&S Stormwater Specialist)
Phil Gralik, PE (BF&S Merrillville Road and Water Department Head)
Rives Deuterman (GTG GIS Manager)

Why We're Here



MS4 Mission: More Than Just Pipes



Manages urban
stormwater runoff



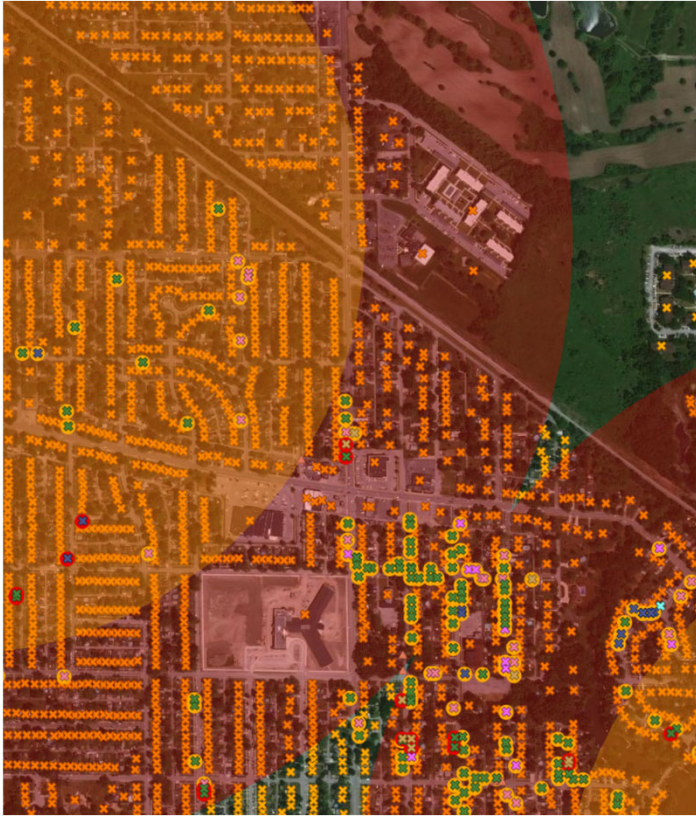
Protects receiving
waters



Required under Federal
and State Regulations

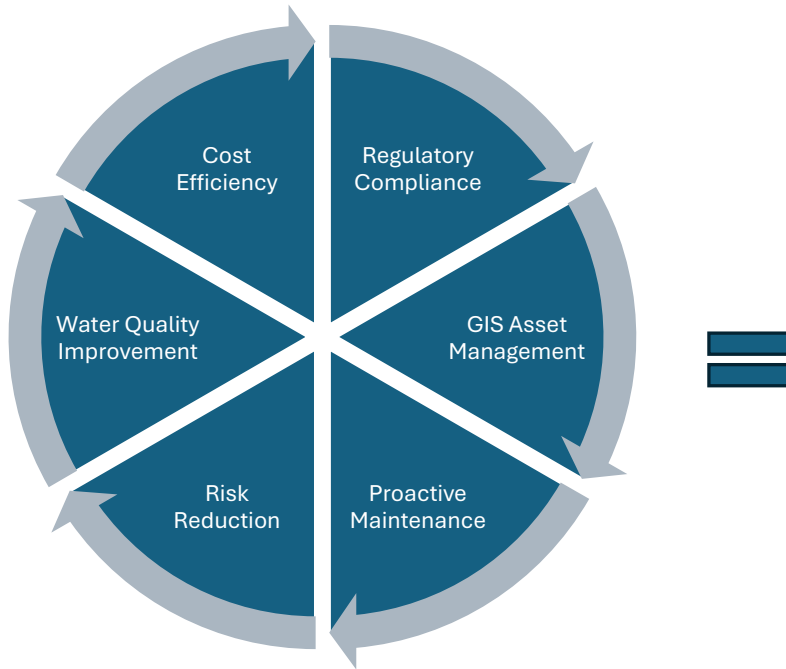
- Public Safety
- Water Quality
- Regulatory Compliance

Project Goal: The Road to More Informed Decision Making



- Locate & Map
- Condition Assessment
- Data-Driven Planning

Bottom Line



By doing all of this, we're helping to ensure we get to enjoy it!

BF&S Role, Responsibilities, & Goals



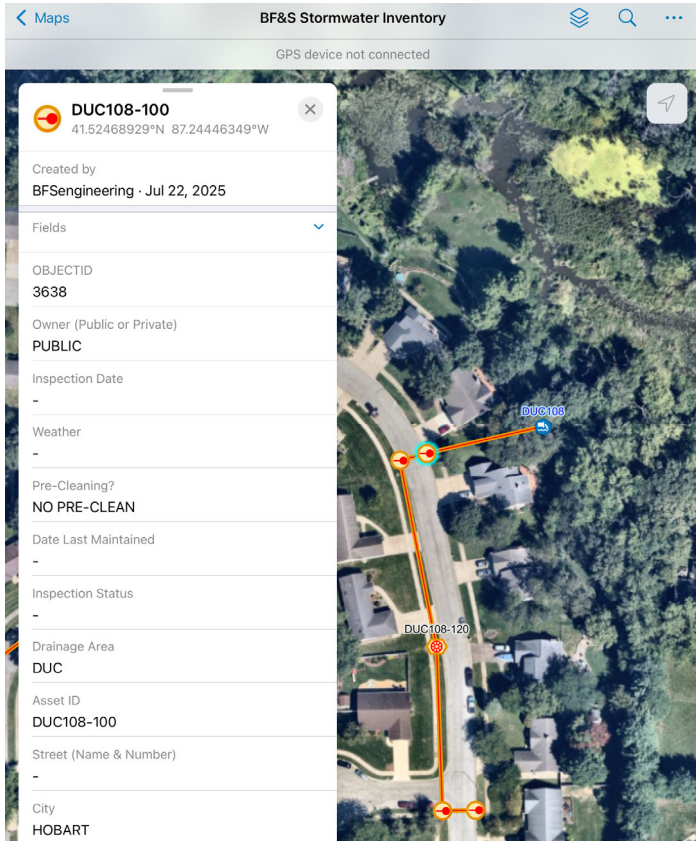
- Team Building
 - BF&S Lead
 - Geographic Technologies Group
 - Absolute Pipe
 - Christopher B. Burke Engineering
- Repeatable, scalable workflows
- Improved data quality & consistency
- Informed, long-term plans & decisions

Coordination with City Staff



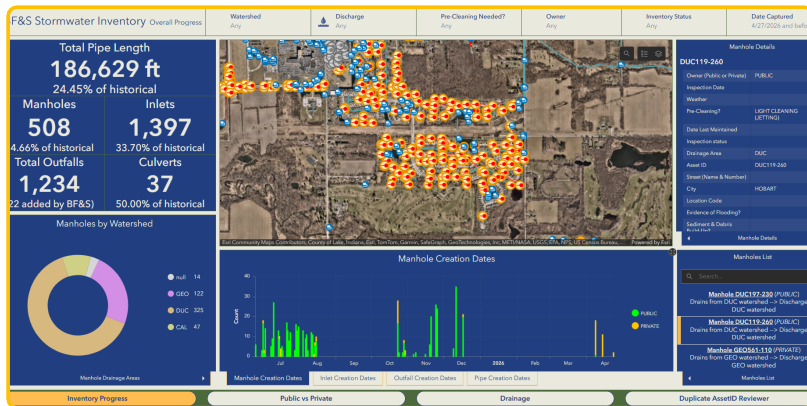
- Early Coordination
- Historical Knowledge Recognition
- Monthly Progress Meetings

Data Collection & Approach



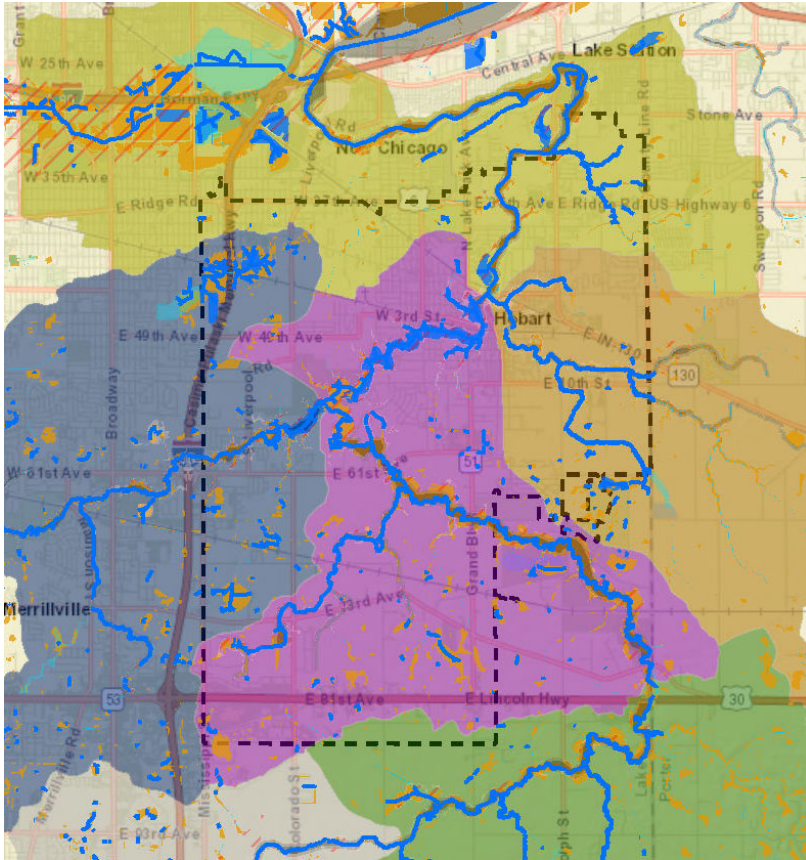
- Numbering System Update
 - DUC108-100
- Started at outfalls and worked upstream
 - Existing GIS as a guide
- GPS North Rim
 - Trimble
- SOP Development
 - Buried/Missing Structures
- Open Channel Evaluation

Data Submission & GIS Integration



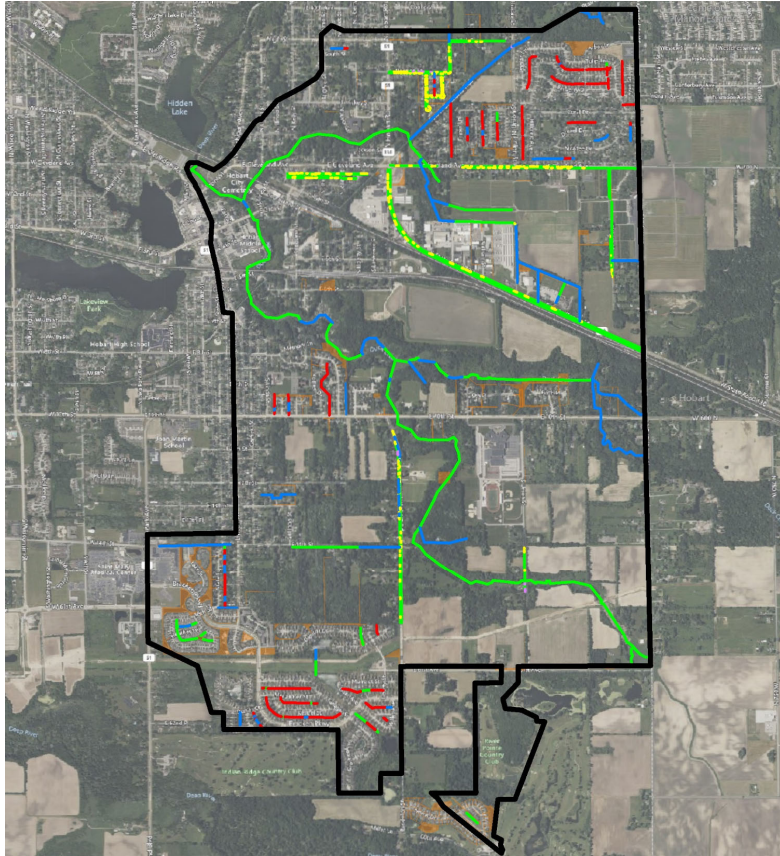
- Daily Uploads for Review
- Project Dashboard
- QA/QC Plan
 - Daily GPS Verification
 - 10% Reviews by BF&S and City
- Duplicate Point Alerts
 - QA/QC Points
 - Downspouts/Underdrains

Budget Reality & Constraints



- Balancing Schedule and Budget
- Prioritizing Areas
 - Areas with known issues
- Phased Approach

Utilizing the Data



- Identifying damaged systems
- Future Modeling
- Capital Improvement Plan
- Maintenance Tracking
- Data as a long-term asset
- Confidence in Data = Confidence in Decisions

GTG – Why GIS?



Coordination with BF&S and HSD



NASSCO



- Database Design
 - Ensures organization, scalability, and that needs are met
- Inventory and Inspections
 - Essential for maintaining the system and identifying deficiencies
- Quality Control and Assurance
 - Crucial for compliance, planning, and protecting the environment

Coordination with BF&S and HSD



NASSCO

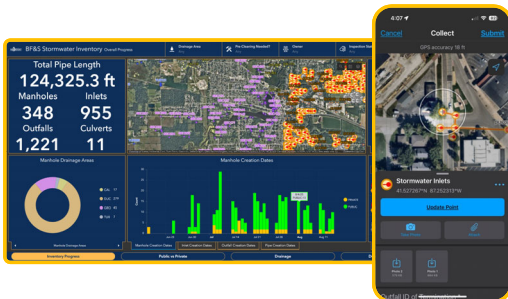


- Database Design
 - Collaboration between Hobart staff, BF&S, and GTG
 - NASSCO Guidelines for inventory and inspection workflow:
 - Pipeline Assessment Certification Program (PACP)
 - Manhole Assessment Certification Program (MACP)
 - Asset ID Convention
- Methodology
 - Building datasets and importing existing data
 - ArcGIS Field Maps form development
 - Auto-calculations
 - Required fields
 - High Accuracy GNSS

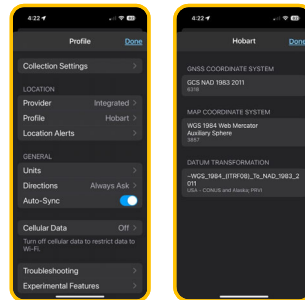
Leveraging ArcGIS



Data Accessibility



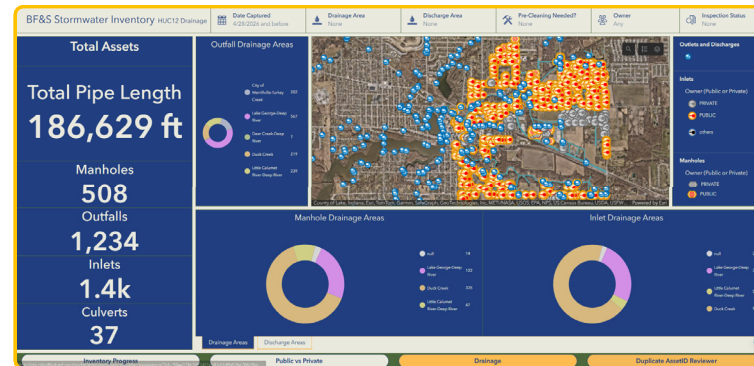
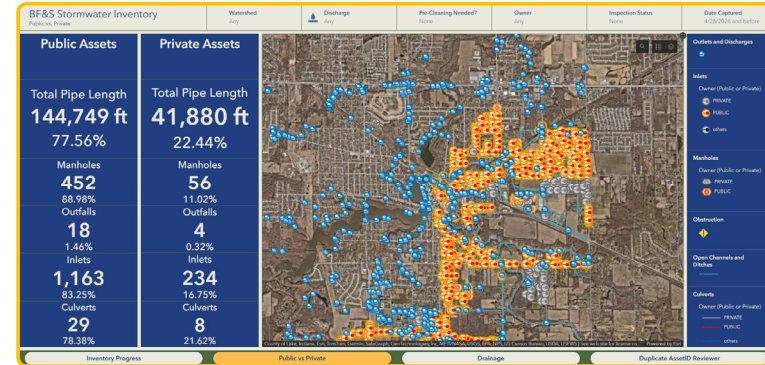
GPS Compatibility



Data QA/QC

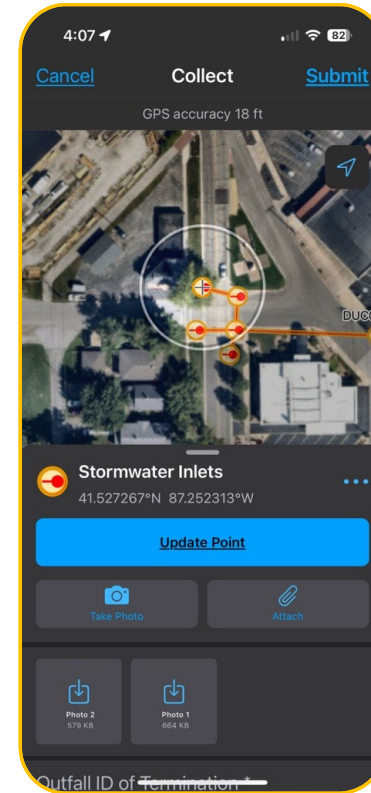
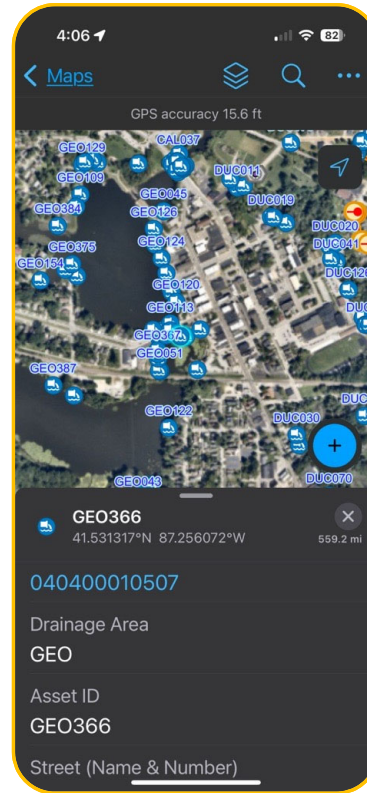


Leveraging ArcGIS – Data Accessibility

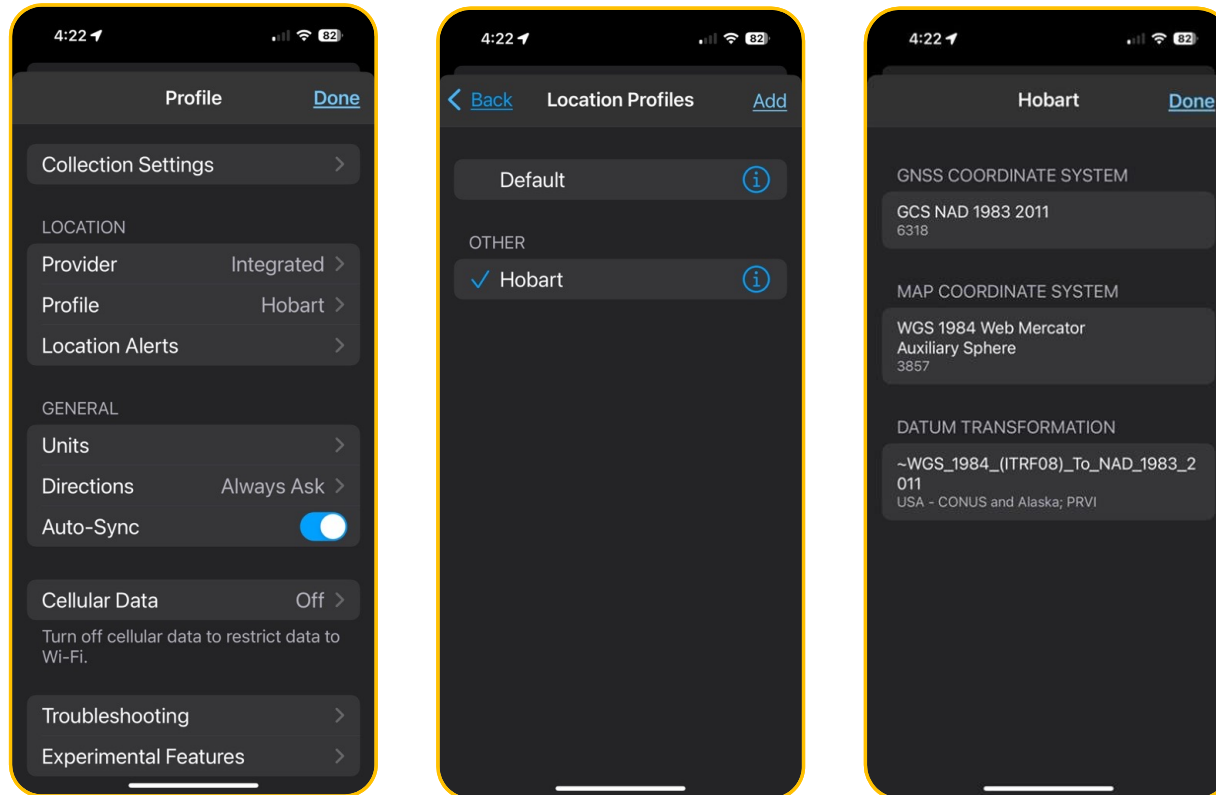


Leveraging ArcGIS – Data Accessibility

ArcGIS Field Maps



Leveraging ArcGIS – Compatibility with External GPS



Leveraging ArcGIS – Data Quality Control and Assurance

Attribute Rules and Arcade Expressions

Asset ID

☒ Read-only ☐ * Required ☒ Calculated

Owner (Public or Private)

* Required

Elevation

Calculate AssetID

Run

```
1 var StructureNum = $feature.StructureNumber
2 var AssetID = $feature.OutfallTerminationID + "-" + text(StructureNum)
3
4 return AssetID
```

Default values can be set on the Templates tab

Logic

Set dynamic behavior with Arcade expressions

☐ Editable ☒ Required ☒ Visible

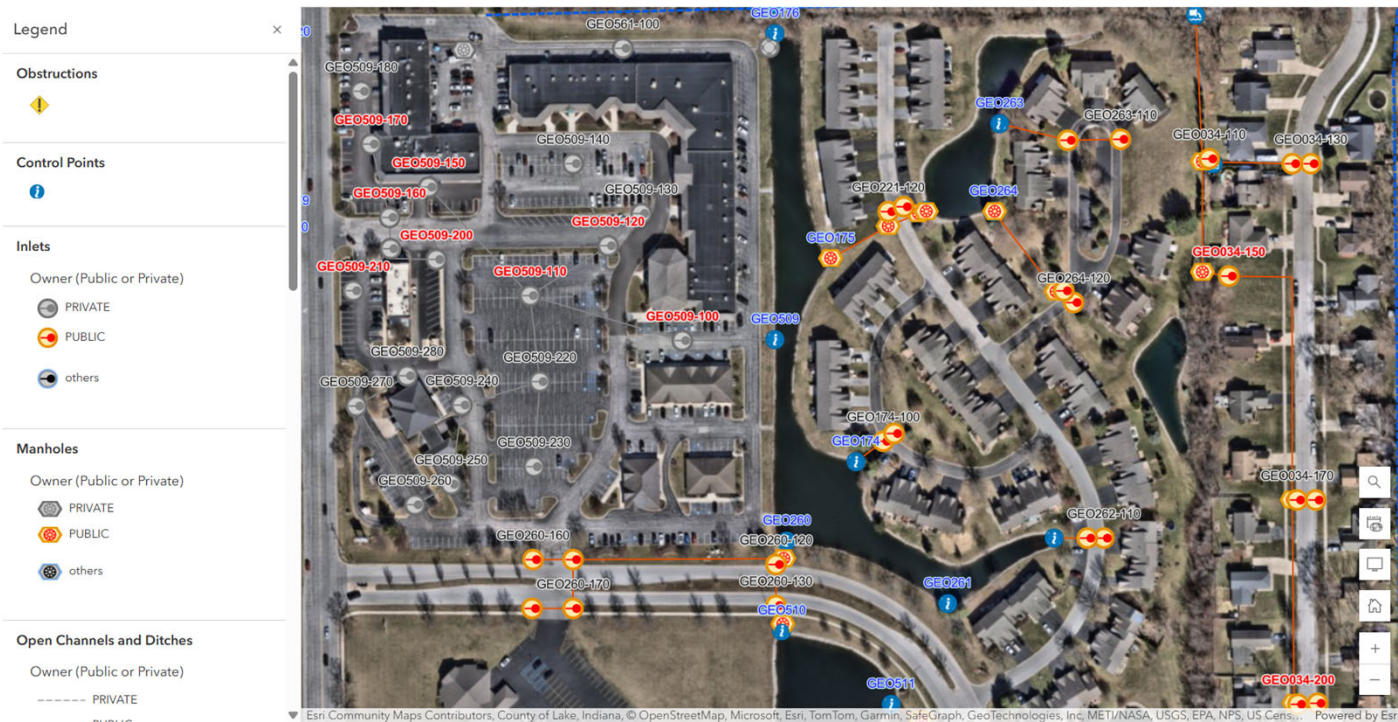
Calculated expression

Calculate AssetID

expr/calculateassetid

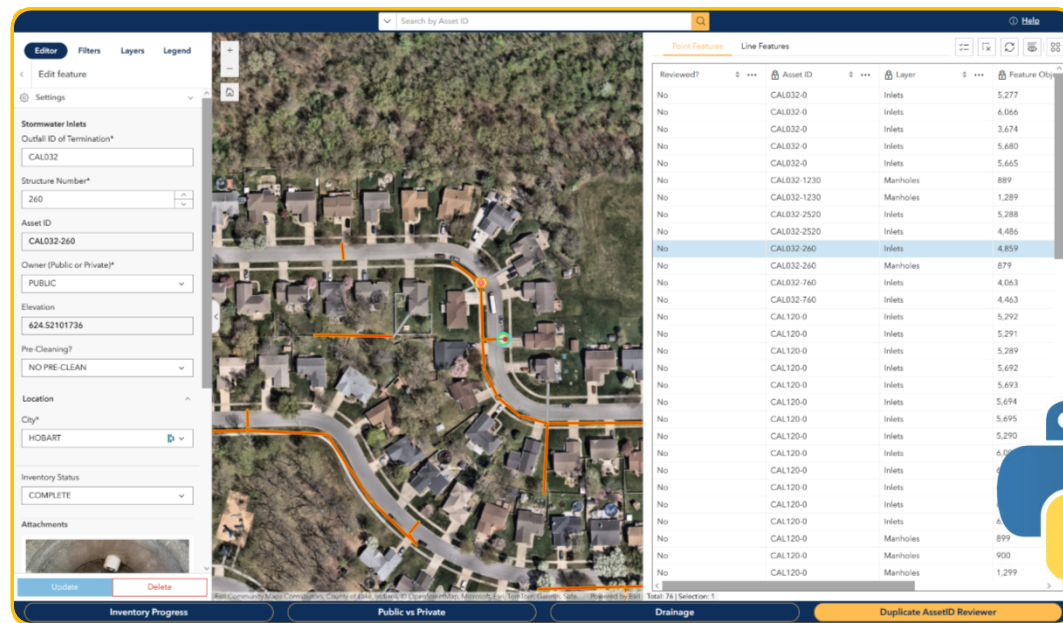
Leveraging ArcGIS – Data Quality Control and Assurance

Control Points and Obstructions



Leveraging ArcGIS – Data Quality Control and Assurance

Duplicate Asset ID Reviewer



Additional Use: Site Inspections



Current Solution

HSW-010 City of Hobart SWPPP Site Inspection Form

City of Hobart Final Stormwater Inspection Form

414 Main Street, Hobart, IN 46342 · 219-942-3619

In compliance with:

City of Hobart Chapter 152 Stormwater Management Ordinance

City of Hobart Stormwater Technical Standards Manual

→ Inspection Details

Inspection Date

Inspection Time

Inspection Name

Inspector Title

Inspection Type

→ Location Details

Project Name

Stormwater Permit Number

Project Owner

Property Owner Address

Project Address/Site Description

HSW-010 City of Hobart SWPPP Site Inspection Form

1 of 1

→ Observations & Corrective Actions

Observations

Corrective Actions

1 of 1

Additional Notes

NOTE: Deficiencies identified during an inspection shall be addressed with corrective actions. The City will not issue approval of permit termination until deficiencies have been addressed.

→ Notice of Permit Termination Verification

The City of Hobart has verified that this site is eligible to terminate permit coverage. If covered under the Indiana Department of Environmental Management (IDEM) Construction Stormwater General Permit (CSGP), submit Notice of Termination (NOT) to IDEM. In order to receive Final Notice of Permit Termination Approval for the Stormwater Permit issued by the City of Hobart, Submit to Hobart, a copy of the NOT document that is submitted to IDEM.

☐ Yes

☐ No

Refer to observations and corrective actions.

Signature

Title

Date

→ Site Photos

CITY OF HOBART FINAL STORMWATER INSPECTION FORM

414 Main Street, Hobart, IN 46342 · 219-942-3619

In compliance with:

City of Hobart Chapter 152 Stormwater Management Ordinance

City of Hobart Stormwater Technical Standards Manual

INSPECTION DETAILS

**Photos included at end of form.

- Inspection Date: October 2, 2025
- Inspection Time: 09:54
- Inspector Name: Sample Test
- Inspector Title: Designer
- Inspection Type: Test

LOCATION DETAILS

- Project Name: Test Survey
- Stormwater Permit Number: 000
- Project Owner: City of Hobart
- Property Owner Address: 414 Main St
- Project Address/Site Description: City Hall

UTILITY INFRASTRUCTURE OBSERVATIONS

- Observations: All clear
- Corrective Actions: None

SWPPP SITE CONDITIONS OBSERVATIONS

- Observations: No observations
- Corrective Actions: No actions needed

ADDITIONAL NOTES

- No additional notes

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NOTICE OF PERMIT TERMINATION VERIFICATION

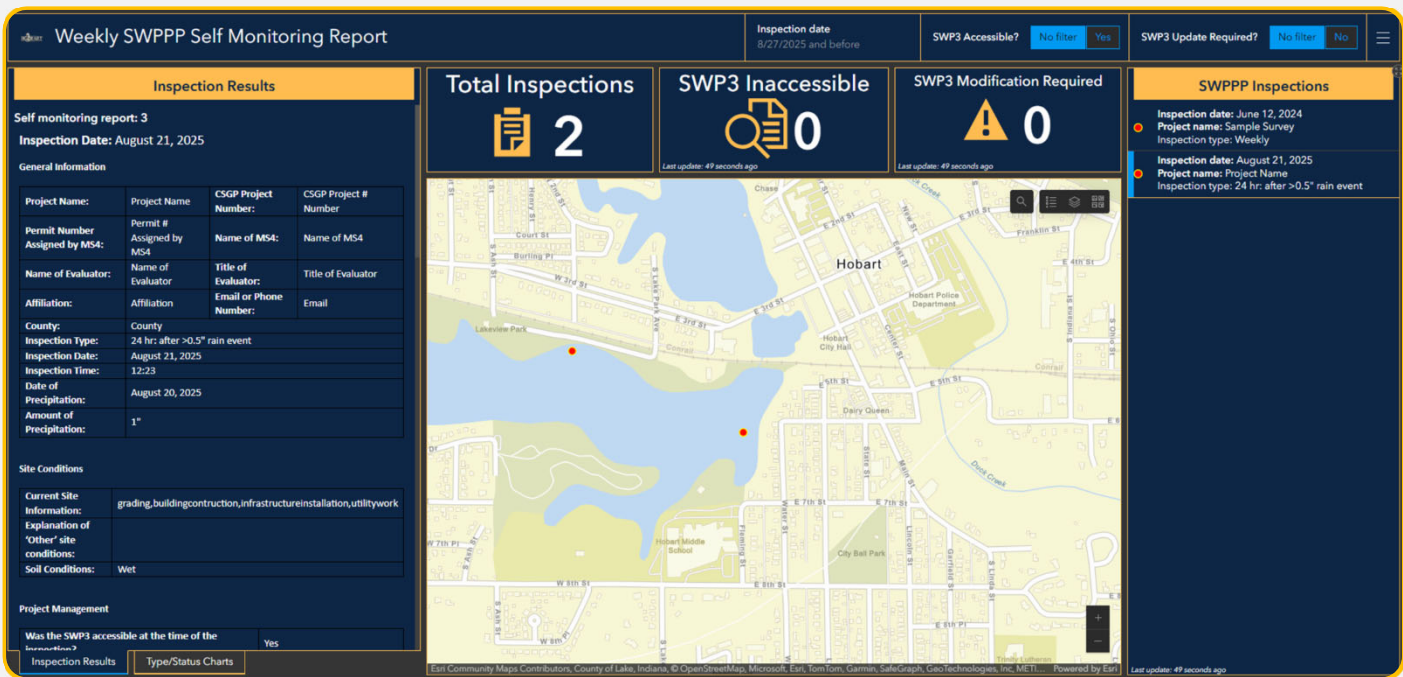
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Yes Refer to observations and corrective actions.

Additional Use: Site Inspections



Current Solution



Questions & Discussion



- Thank you for supporting this project!
- Open for questions.