3 Rivers Wet Weather

Data Resources Workshop

26 September 2018

Today:

1. Open Wet Weather Mapping Platform
2. Data Resources
3. Maps/Applications
4. Data/Tools for Addressing Regulatory Requirements

   ~break~

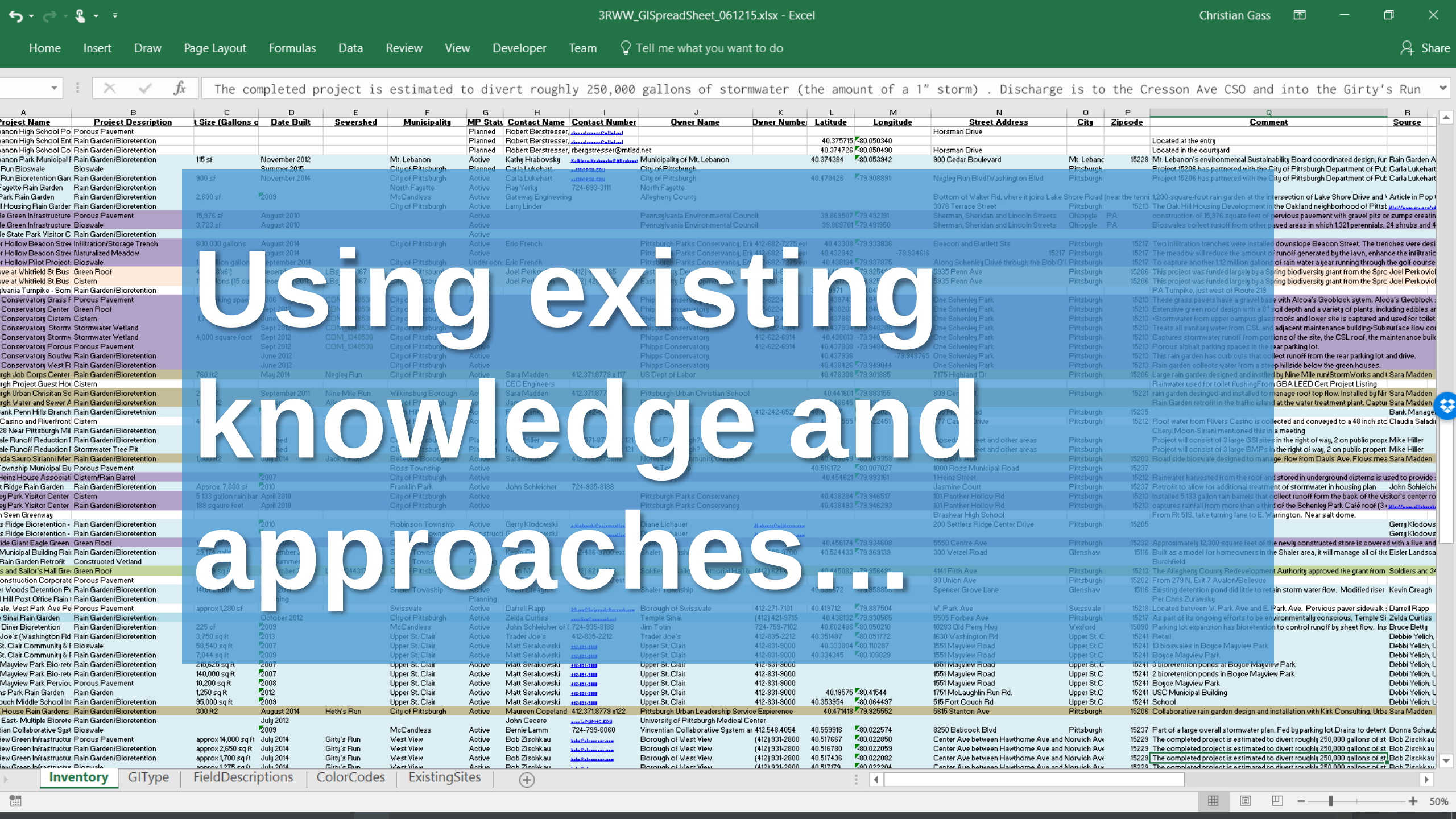
5. Discussion: Opportunities, Feedback

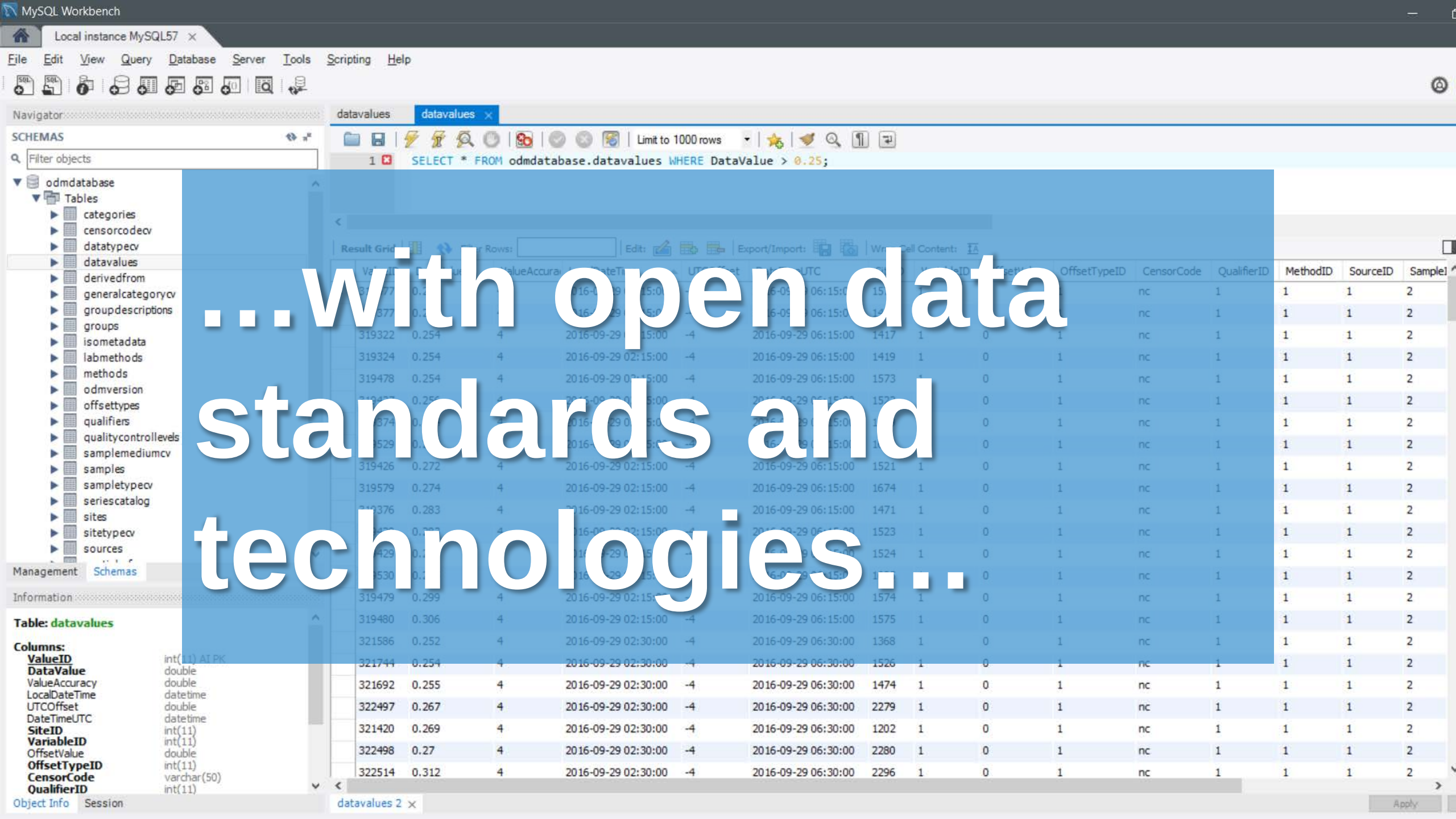
3RWW's

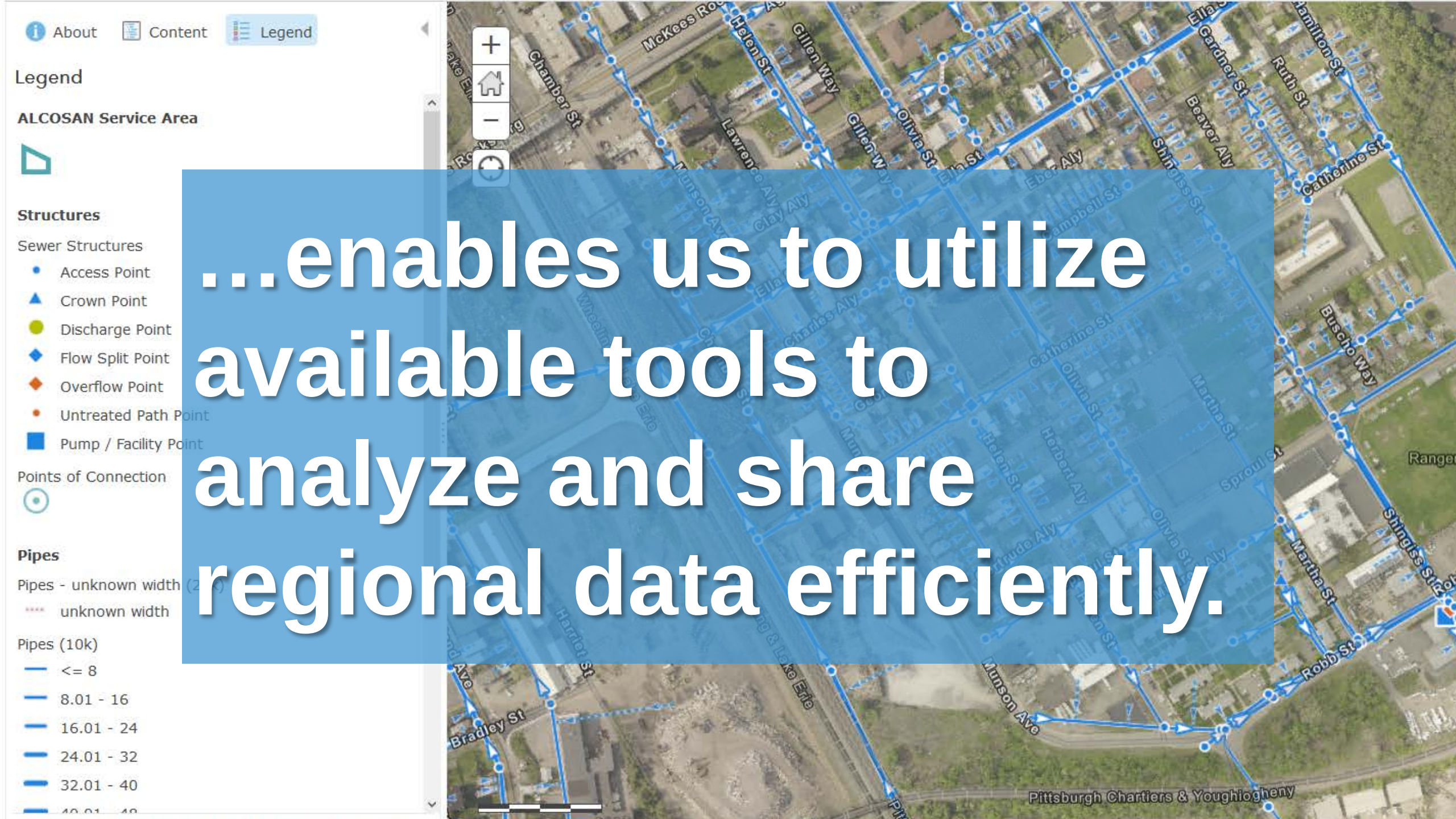
Open Wet Weather Mapping Platform

Open Wet Weather Mapping Platform

Build and maintain operational **regional-scale** wet weather **data and tools** that **support local work** to meet regulatory requirements


3RWW_GISpreadSheet_061215.xlsx - Excel
Christian Gass
Home
Insert
Draw
Page Layout
Formulas
Data
Review
View
Developer
Team
Tell me what you want to do
Share
The completed project is estimated to divert roughly 250,000 gallons of stormwater (the amount of a 1" storm) . Discharge is to the Cresson Ave CSO and into the Girty's Run
Using existing knowledge and approaches...
Inventory
GIType
FieldDescriptions
ColorCodes
ExistingSites
50%


MySQL Workbench
Local instance MySQL57
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
odmdatabase
Tables
categories
censorcodecv
datatypecv
datavalues
derivedfrom
generalcategorycv
groupdescriptions
groups
isometadata
labmethods
methods
odmversion
offsettypes
qualifiers
qualitycontrollevels
samplemediumcv
samples
sampletypecv
seriescatalog
sites
sitetypecv
sources
Management Schemas
Information
Table: datavalues
Columns:
ValueID int(11) AI PK
DataValue double
ValueAccuracy double
LocalDateTime datetime
UTCOffset double
DateTimeUTC datetime
SiteID int(11)
VariableID int(11)
OffsetValue double
OffsetTypeID int(11)
CensorCode varchar(50)
QualifierID int(11)
Object Info Session
datavalues datavalues
Limit to 1000 rows
1 SELECT * FROM odmdatabase.datavalues WHERE DataValue > 0.25;
Result Grid
Edit:
Export/Import:
...with open data standards and technologies...
datavalues 2
Apply


About
Content
Legend
Legend
ALCOSAN Service Area
Structures
Sewer Structures
Access Point
Crown Point
Discharge Point
Flow Split Point
Overflow Point
Untreated Path Point
Pump / Facility Point
Points of Connection
Pipes
Pipes - unknown width
unknown width
Pipes (10k)
<= 8
8.01 - 16
16.01 - 24
24.01 - 32
32.01 - 40
...enables us to utilize available tools to analyze and share regional data efficiently.
Chamber St
McKees Rocks
Helen St
Gillen Way
Lawrence Aly
Olivia St
Ella St
Ella Gardner St
Beaver Aly
Ruth St
Hamilton St
Catherine St
Clay Aly
Campbell St
Shingiss St
Buscho Way
Charles Aly
Catherine St
Olivia St
Martha St
Sproul St
Ranger
Harbert Aly
Helen St
Martha St
Shingiss St
Robb St
Munson Ave
Bradley St
Harriet St
Lake Erie
Pittsburgh Chartiers & Youghiogheny

3RWW's vision for an Open Wet Weather Mapping Platform

Principles:

- Data as a Living Product
- Open Architecture and Data Standards
- User-Focused Agile Development

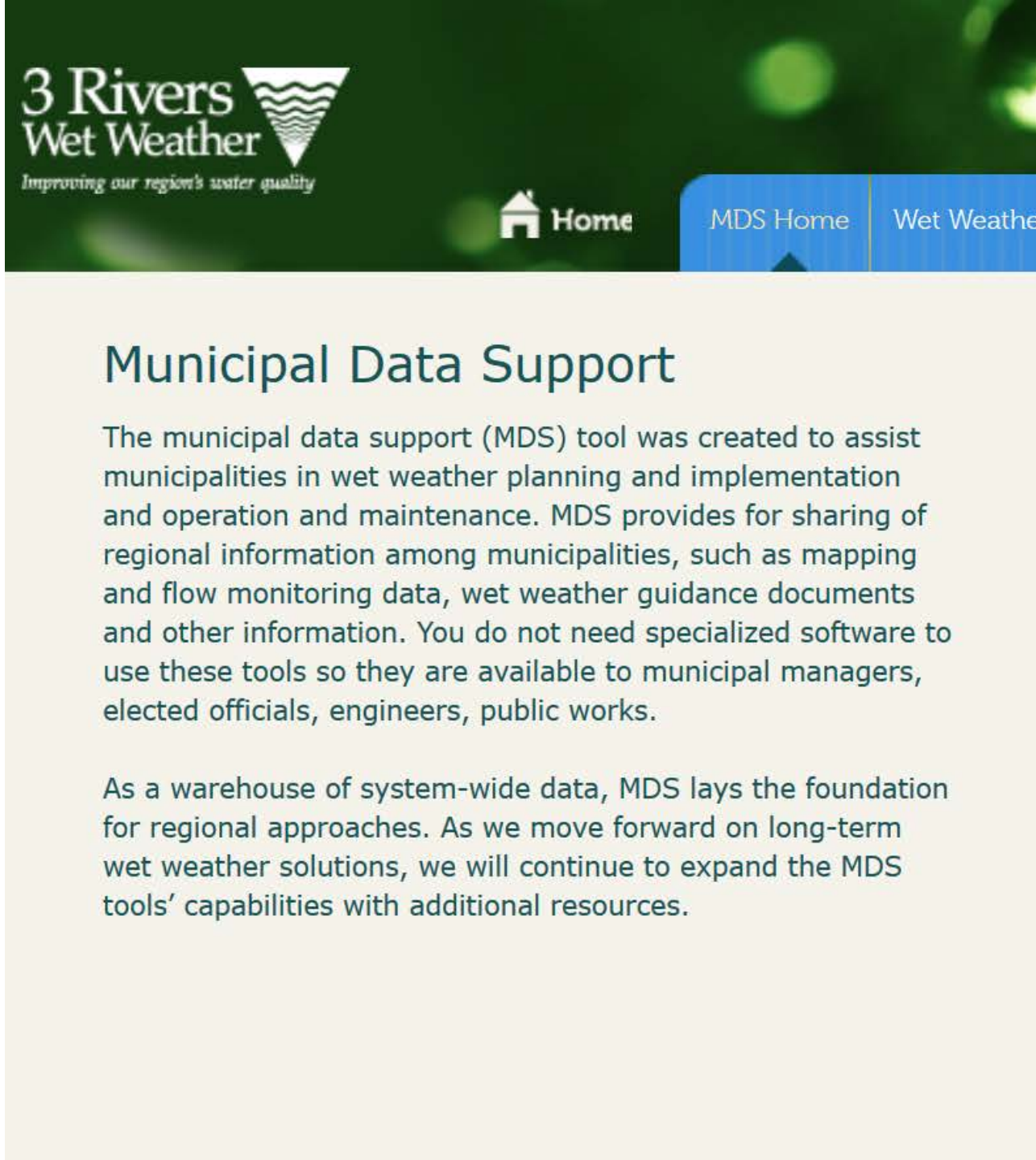
Defining "Open"		Standards / Formats	
		Proprietary	Open
Security	Secured	Data access is limited to those with credentials / authorization. Data requires specific software (typically $$) in order to use	**Data access is limited to those with credentials / authorization.** **Data format is standard and not limited to specific software.**
	Unsecured	Data is available to anyone. Data requires specific software (typically $$) in order to use	**Data is available to anyone.** **Data format is standard and not limited to specific software.**

Data Resources

	Municipal Data Support **(3RWW MDS)**	**3RWW MDS Group** on ArcGIS Online	**3RWW Open Data** on ArcGIS Online
What	Secured Content: Sewer Atlas data, Flow Monitoring Data	Same datasets as 3RWW MDS, also provided as web services. Also includes access to unsecured services.	Open Datasets
Type	Downloads	Downloads, Web Services, and Maps	Downloads, Web Services, and Maps
How	Login from 3RWW	BYO ArcGIS Online Login (for secured datasets)	Login Optional

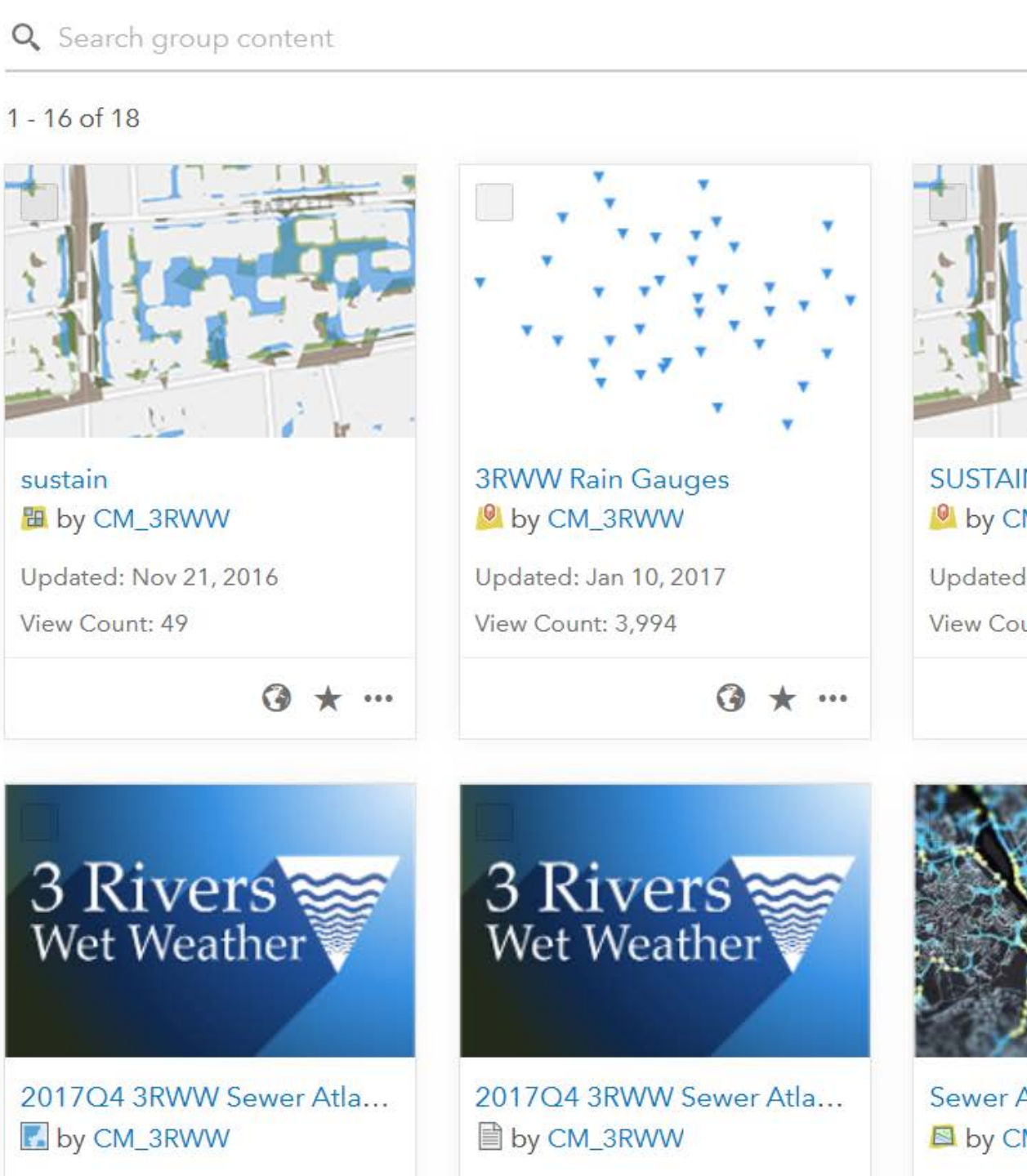
Municipal Data Support

- https://mds.3riverswetweather.org
- MDS Login from 3RWW
- Most recent Sewer Atlas data downloads
- Flow Monitoring Data (2008)
- Links to External Resources
- Legacy data downloads



3RWW MDS on ArcGIS Online

- http://3rww.maps.arcgis.com
- If using ArcGIS Online, request access to the group!
- Primarily for data services requiring secured access
- Sewer Atlas: all releases to-date (2018-Q1)
- Stormwater Atlas: beta composite layer
- ALCOSAN reference data layers



AGOL Open Data Site

- http://data-3rww.opendata.arcgis.com
- Creative Commons License
- Data services and downloads
- Interactive—get what you want
- Green Infrastructure Atlas
- Rain Gauge Locations
- SUSTAIN Data

Rainfall Data: 2 Sources

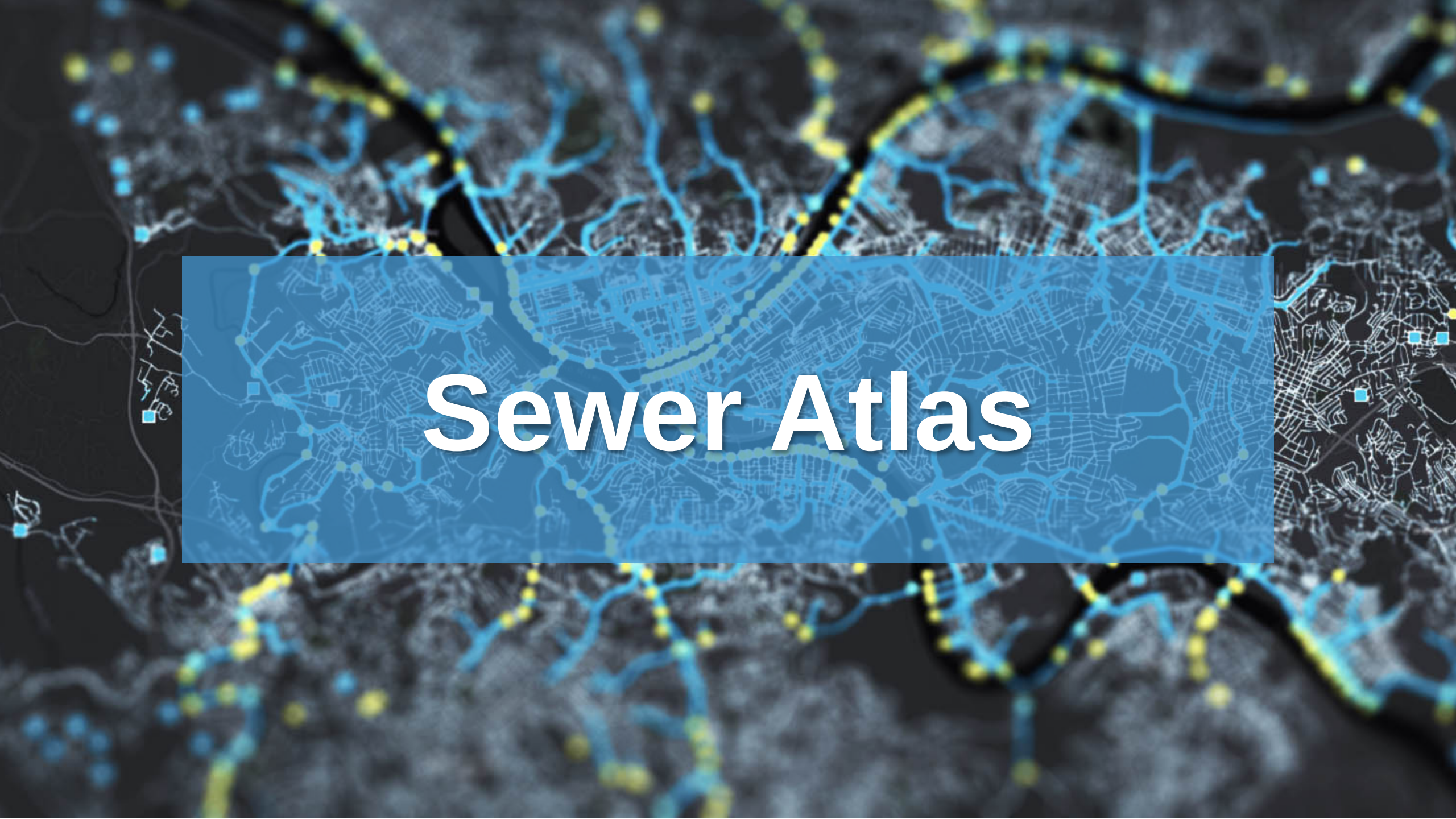
"Teragon/Vieux"	"Datawise"
• On the 3RWW Website • Calibrated Rain Gauge • Gauge-Adjusted Radar Rainfall Data (GARR) • ReST API	• Raw Rain Gauge Data • ReST API • ReST API Explorer web page

3RWW is working to integrate these seamlessly, and with other data resources

“Datawise” Website

“Teragon/Vieux” Website

Maps


Sewer Atlas

Sewer Atlas

Data Update Status Dashboard

Data Coming In

Municipality (Target Release Quarter)

- CASTLE SHANNON (2018-Q3)
- DORMONT (2018-Q3)
- NEVILLE (2018-Q3)
- NORTH FAYETTE (2018-Q3)
- SCOTT (2018-Q3)
- SOUTH FAYETTE (2018-Q3)
- BETHEL PARK (2018-Q4)
- KENNEDY (2018-Q4)

This list shows the data request pipeline: what we're targeting for the next quarterly release, and whether data has been received, or requests are still outstanding.

The list is sorted first by *Quarterly Release Target*, then by *Data Requested/Received status*, then by Municipality.

Last update: a few seconds ago

Work in Progress

Municipality (Target Release Quarter)

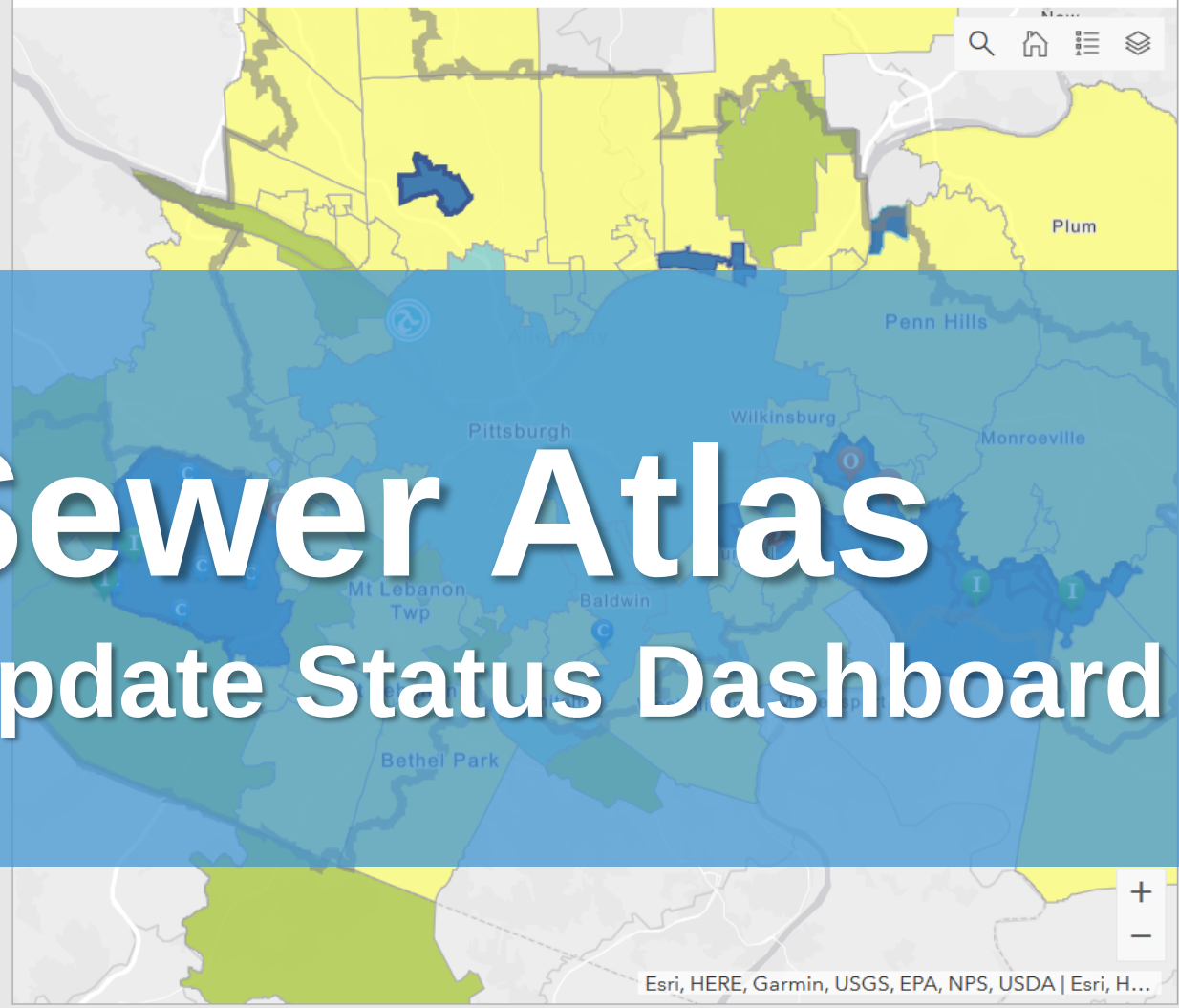
- BALDWIN (2018-Q3)
- EDGEWOOD (2018-Q3)
- SWISSVALE (2018-Q3)
- PITTSBURGH (2018-Q4)

This list shows the municipalities for which the sewer data is actively being updated. This work occurs in two phases:

- **Editing:** when the initial update work is performed
- **QAQC:** when the work is being reviewed with the data maintainer and final edits are being made

Last update: a few seconds ago

Overall Data Update Status



Map Legend

ALCOSAN Plant

ALCOSAN Plant

ALCOSAN Service Area

GeoIssues

- Open
- Pending Information
- Closed

curation_status

- 0. Update Required
- 1. Data Requested
- 2. Data Received
- 3. Editing in Progress
- 4. QAQC in Progress
- 5. Up-to-Date, Confirmed No Changes
- 5. Up-to-Date

Issues

During the course of editing, we identify issues with the data that may not be able to be resolved at that time with the data maintainer. Reasons might include:

- the resolution requires also seeing data from a neighboring municipality
- the data maintainer needs to perform further field work to verify

Resolved Issues

6

(of 17)

Last update: a few seconds ago

Open Issues (Pending Info.)

5

5 issues require additional, anticipated information.

Last update: a few seconds ago

Open Issues

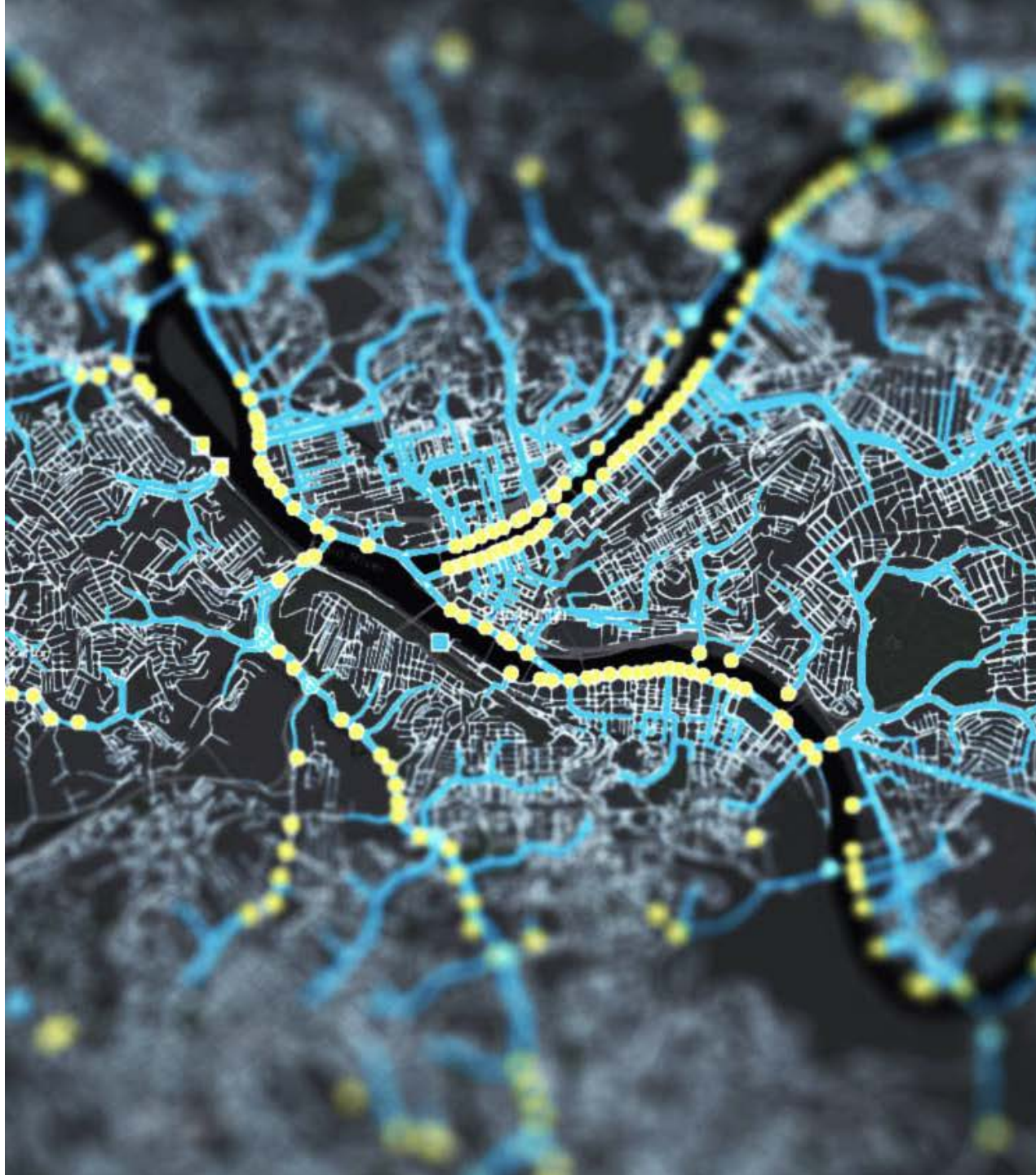
5

5 issueswere not resolvable by the data

Last update: a few seconds ago

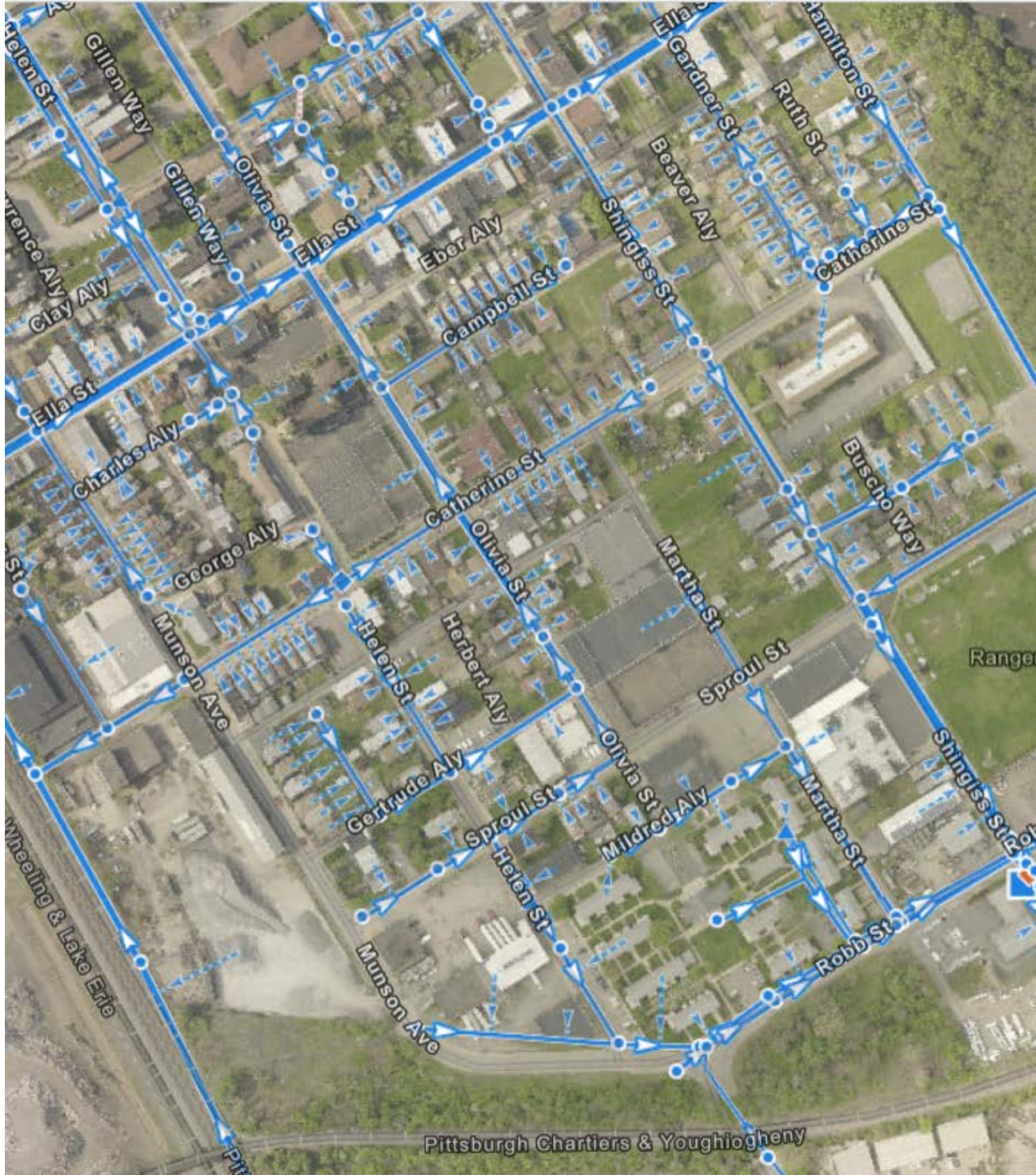
Sewer Atlas Updates

- Rolling Update Process
- Quarterly Release Cycle
- Using provided data to *update* existing network dataset
- Logging issues, consulting with data maintainers



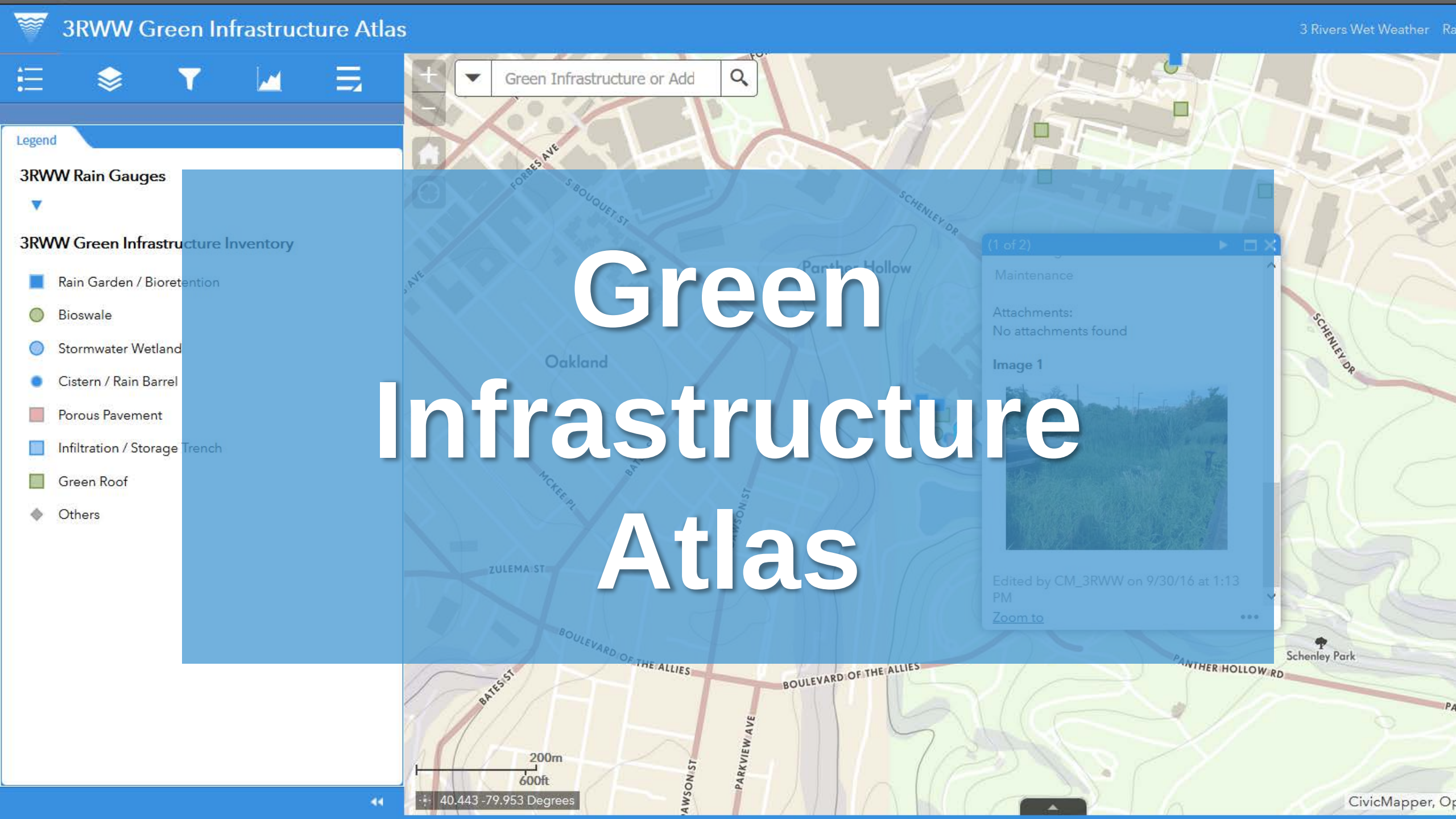
Stormwater Data in the Sewer Atlas

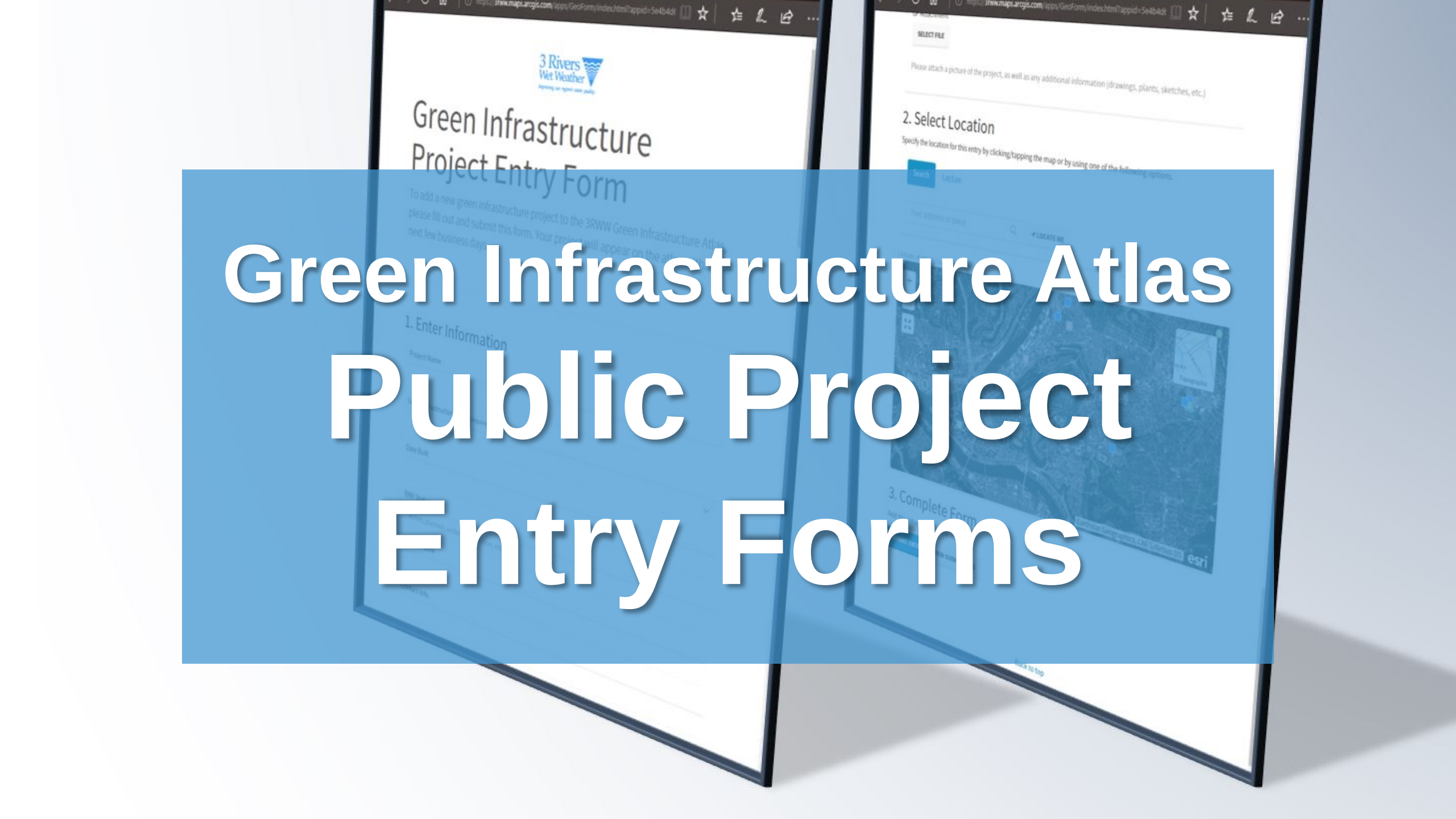
- Testing integration of data and appropriate data models
- Currently have data from Glenn Engineering; working on PWSA
- Planning to integrate into existing tables, provide separate views

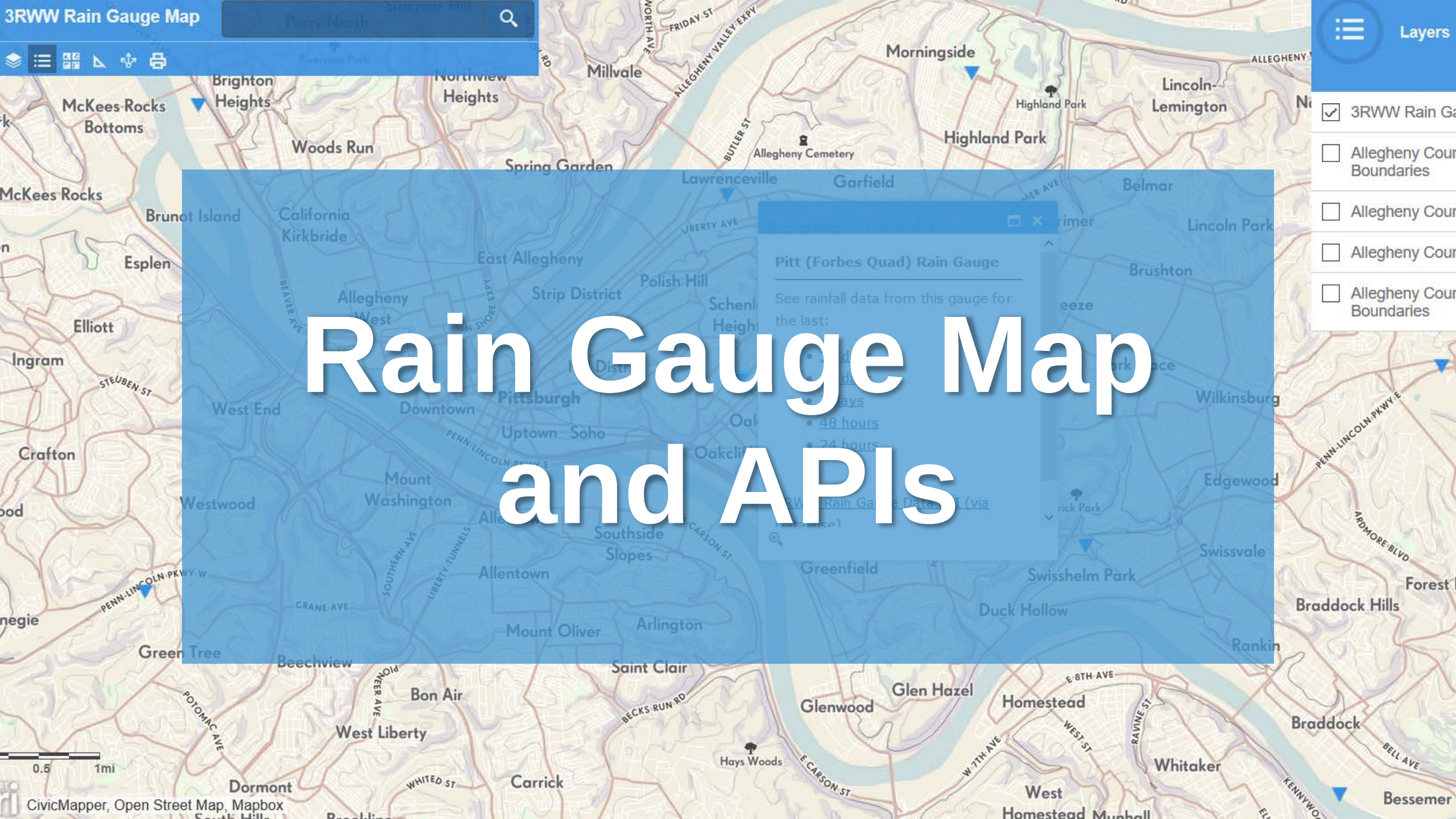


Flush It!

Sewer Outreach & Education Tool


3RWW Green Infrastructure Atlas
3 Rivers Wet Weather
Green Infrastructure or Add
Legend
3RWW Rain Gauges
3RWW Green Infrastructure Inventory
Rain Garden / Bioretention
Bioswale
Stormwater Wetland
Cistern / Rain Barrel
Porous Pavement
Infiltration / Storage Trench
Green Roof
Others
Green Infrastructure Atlas
(1 of 2)
Maintenance
Attachments:
No attachments found
Image 1
Edited by CM_3RWW on 9/30/16 at 1:13 PM
Zoom to
Oakland
Panther Hollow
Schenley Park
FORBES AVE
S BOUQUET ST
SCHENLEY DR
MCKEE PL
ZULEMA ST
BOULEVARD OF THE ALLIES
BATES ST
PARKVIEW AVE
PANTHER HOLLOW RD
200m
600ft
40.443 -79.953 Degrees
CivicMapper, Op


Green Infrastructure Atlas
Public Project Entry Forms

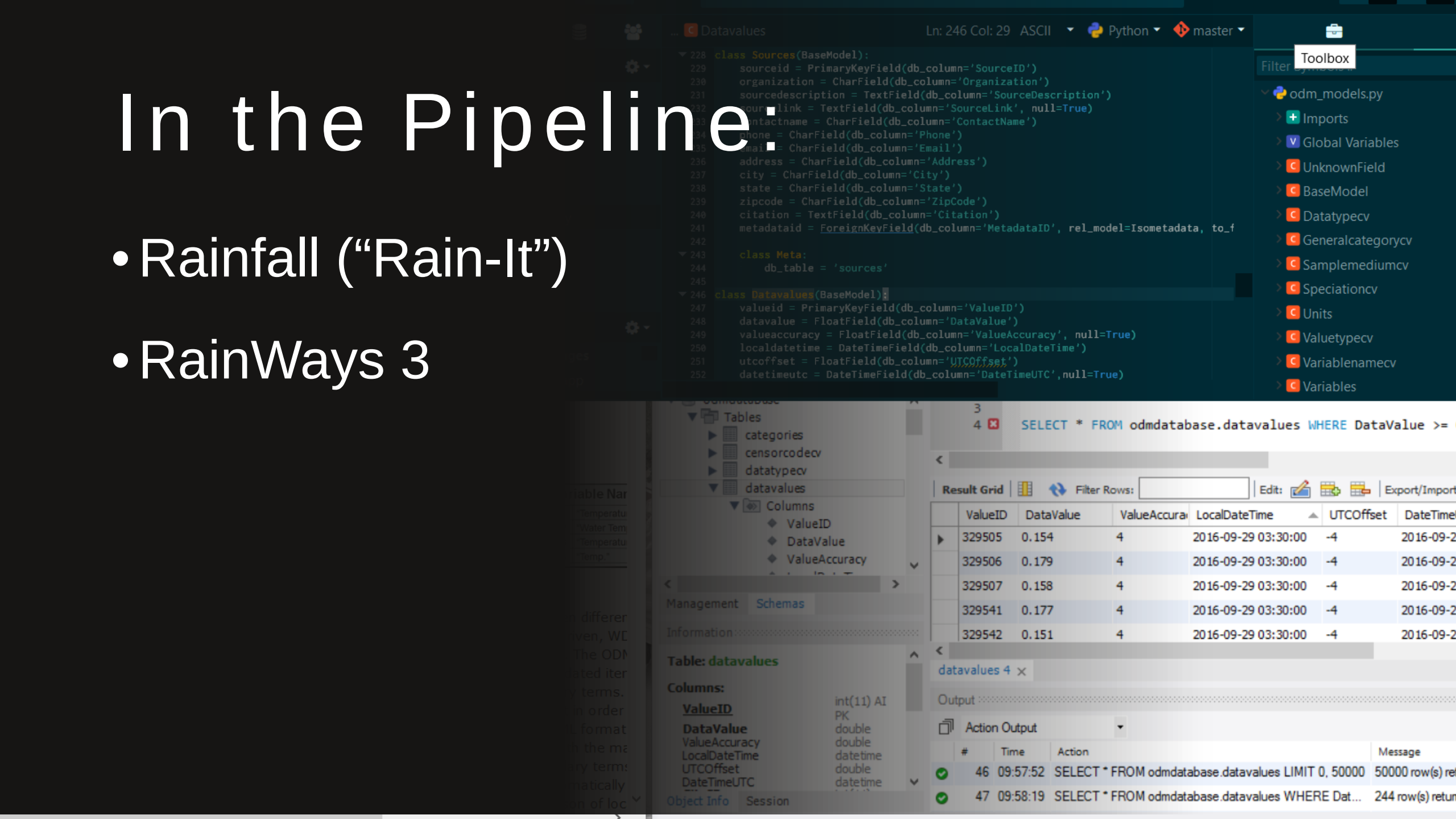


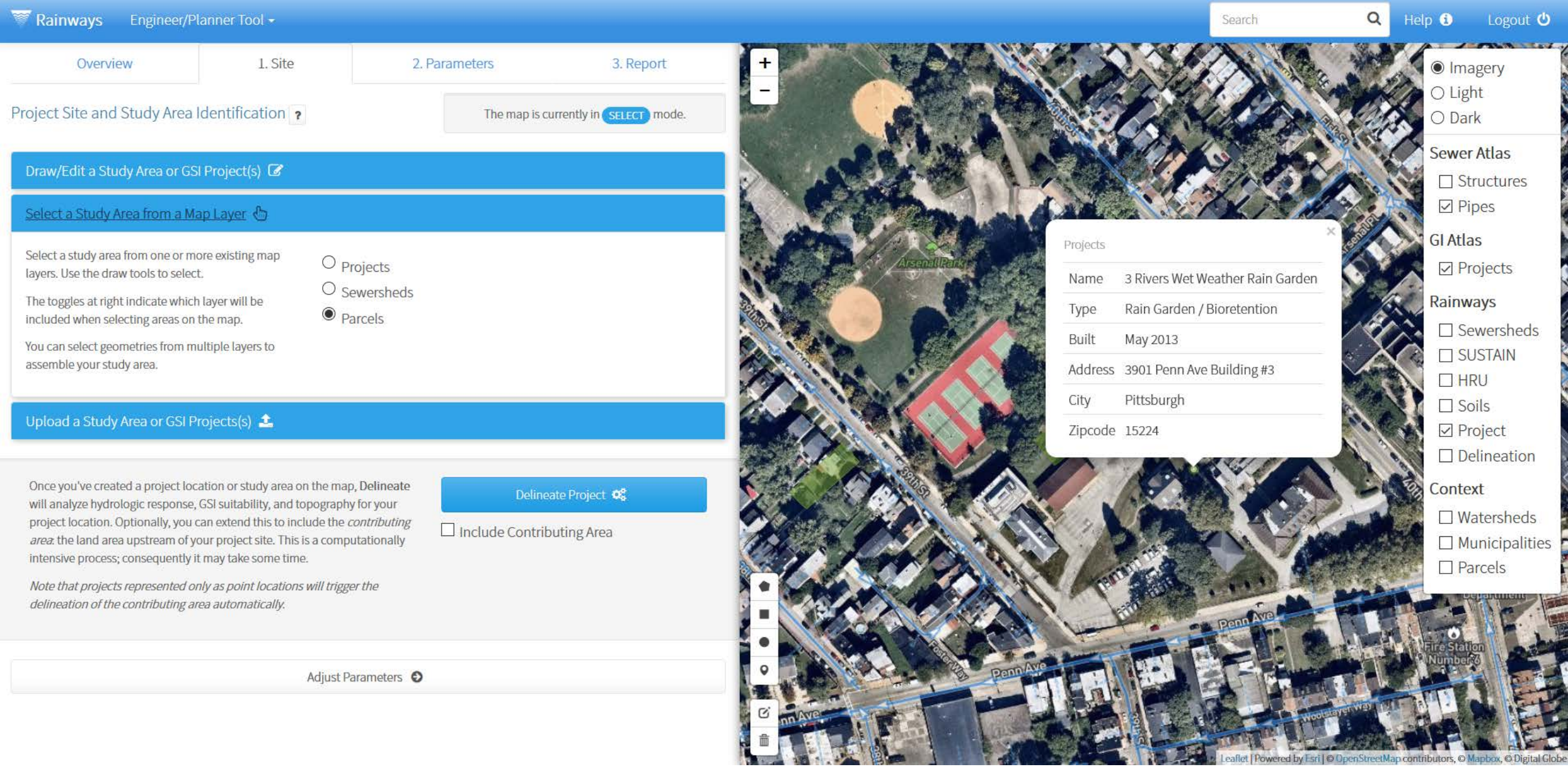
Rain Gauge Map and APIs

Flow Monitors

In the Pipeline:

- Rainfall (“Rain-It”)
- RainWays 3



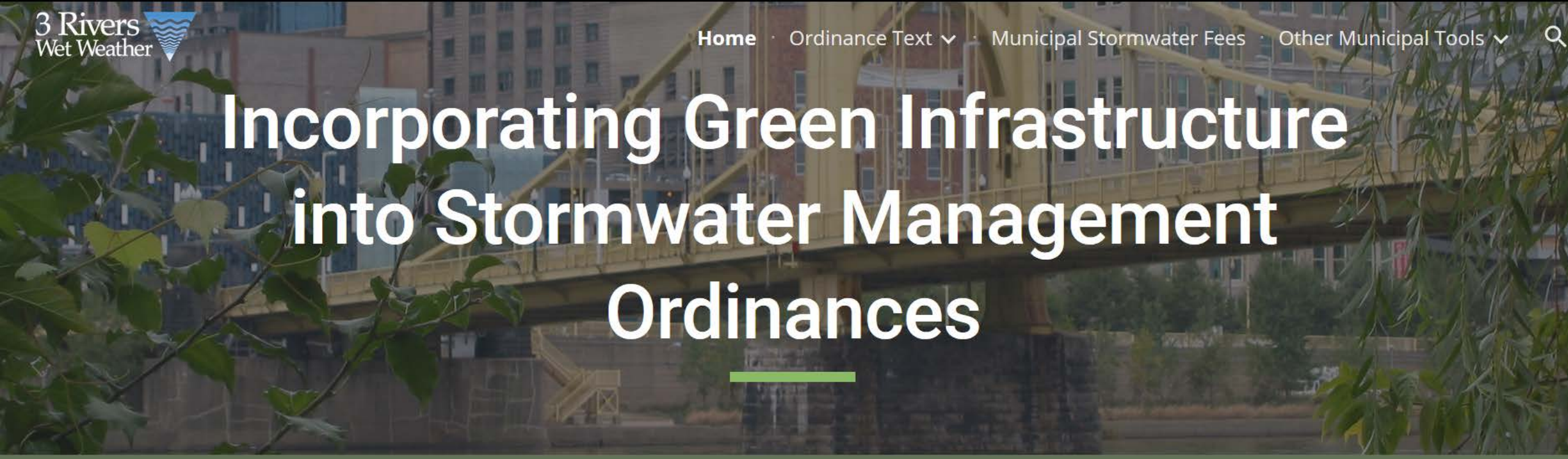


RainWays 3 Prototype

Data/Tools designed to Address Regulatory Requirements

Addressing Act 167

https://sites.google.com/view/pa-green-stormwater/home%20



Incorporating Green Infrastructure into Stormwater Management Ordinances

Purpose

The purpose of this report is to provide municipalities in Allegheny County, PA with guidance for incorporating additional green stormwater infrastructure measures in their Act 167 Stormwater Management plans and stormwater ordinances. In addition, this content offers guidance on options for municipalities to defray the costs of stormwater management, as well as provides resources for MS4/CSO communities.

How to Use This Information

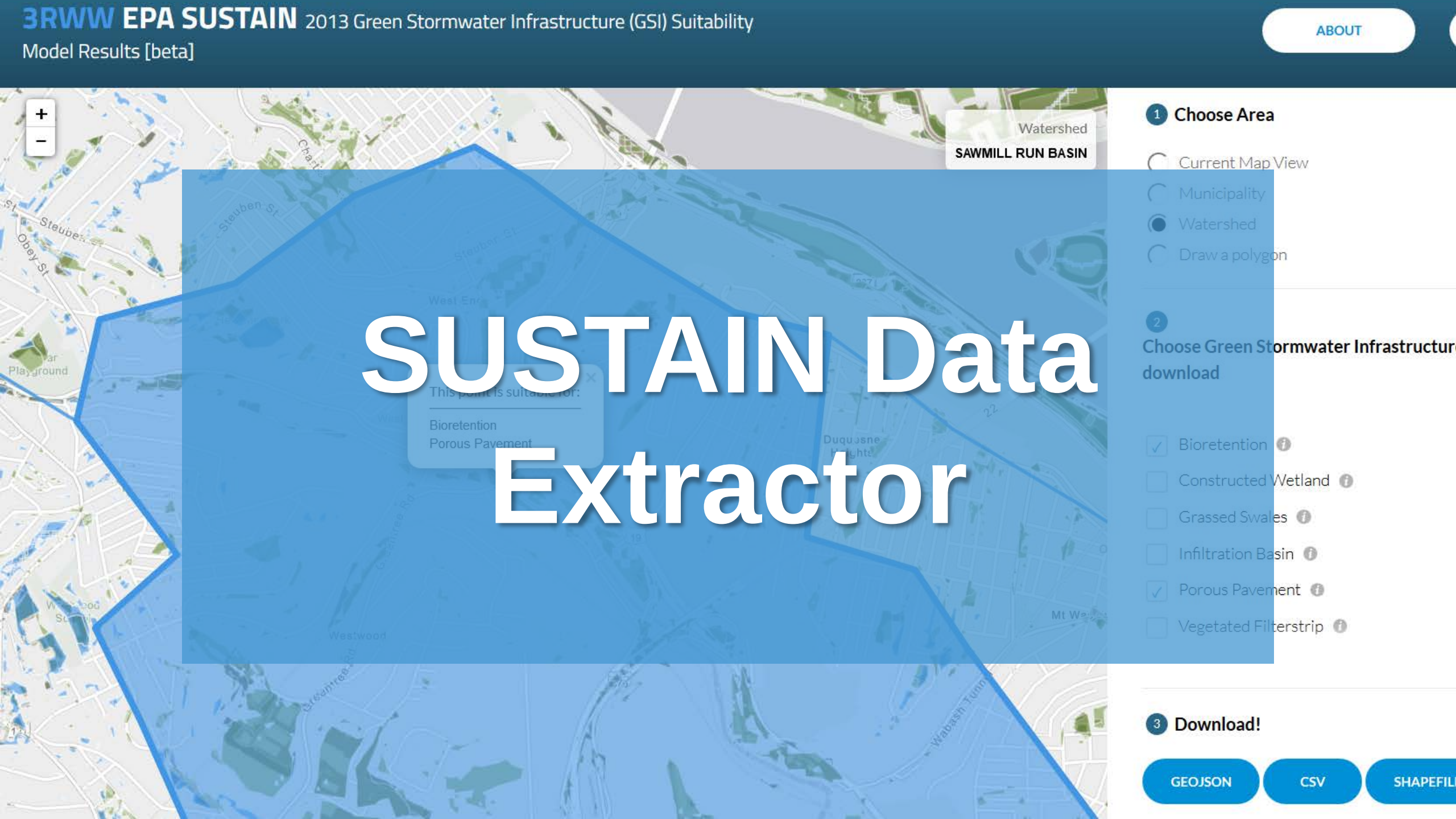
SUSTAIN Mapping

- EPA **System Urban Stormwater Treatment and Analysis Integration** (SUSTAIN) model
- Conducted by 3 Rivers PM Team in 2013 for the ALCOSAN service area (possibly looking to re-run with newer input data, e.g., landcover)
- Useful in identifying opportunities for Green Infrastructure

SUSTAIN

(System Urban Stormwater Treatment and Analysis Integration)

Map


3RWW EPA SUSTAIN 2013 Green Stormwater Infrastructure (GSI) Suitability
Model Results [beta]
ABOUT
Watershed
SAWMILL RUN BASIN
1 Choose Area
Current Map View
Municipality
Watershed
Draw a polygon
2
Choose Green Stormwater Infrastructur
download
Bioretention
Constructed Wetland
Grassed Swales
Infiltration Basin
Porous Pavement
Vegetated Filterstrip
3 Download!
GEOJSON
CSV
SHAPEFIL
This point is suitable for:
Bioretention
Porous Pavement
SUSTAIN Data Extractor

Informational Resources

- MS4 Resources (MDS)
- Flow Monitoring (MDS)
- Stormwater
- Wet Weather Workshops
- Educational Materials
- Private Lateral Testing


break

Discussion: Opportunities, Feedback, and Future Mapping Initiatives

4

FYI: Updated 3RWW Website in the Works

Search or jump to... / Pull requests Issues Marketplace Explore

3 Rivers Wet Weather

A nonprofit environmental organization that supports Allegheny County municipalities and the City of Pittsburgh in addressing the region's wet weather problems.

Pittsburgh, Pennsylvania, USA http://www.3riverswetweather.org

Repositories 5 People 2 Teams 0 Projects 0 Settings

3RWW on GitHub

https://github.com/3rww

Search repositories... Type: All Language: All New

rainfall

Visualize rainfall data in Allegheny County

visualization animation radar leaflet geodata spatial

JavaScript MIT Updated on Jun 12

sewer-atlas-docs

Documentation and Guides for the 3RWW Sewer Atlas, built with MkDocs

JavaScript Python

People 2 >

gassc
Christian Gass

srectenwald

Discussion: Opportunities and Future Mapping Initiatives

- What can we do to help?
- Municipal / Agency / Stakeholder Needs
- Data Collaboration Opportunities
- Future Projects

How we can help:

- Assemble and share regional datasets
- Assemble and share regional maps
- Create regional analysis that will support local efforts to meet regulatory requirements
- Provide user-focused, workflow-specific guides for the data and tools

Some Questions:

- What regional data do you need? We might have it, or know how to get it or make it in a format you use.
- Linking to geospatial data sources, or downloading (and how do you keep your data up-to-date)?
- Is anyone using CAD software that does not support geographic reference systems?
- Is anyone programmatically accessing data for further analysis?

Thank you!

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srectenwald@3rww.org

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www.civicmapper.com

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