

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



The background features a light blue map with various colored pins (blue and green) scattered across it. A large white arrow points from the left side towards the right side of the image.

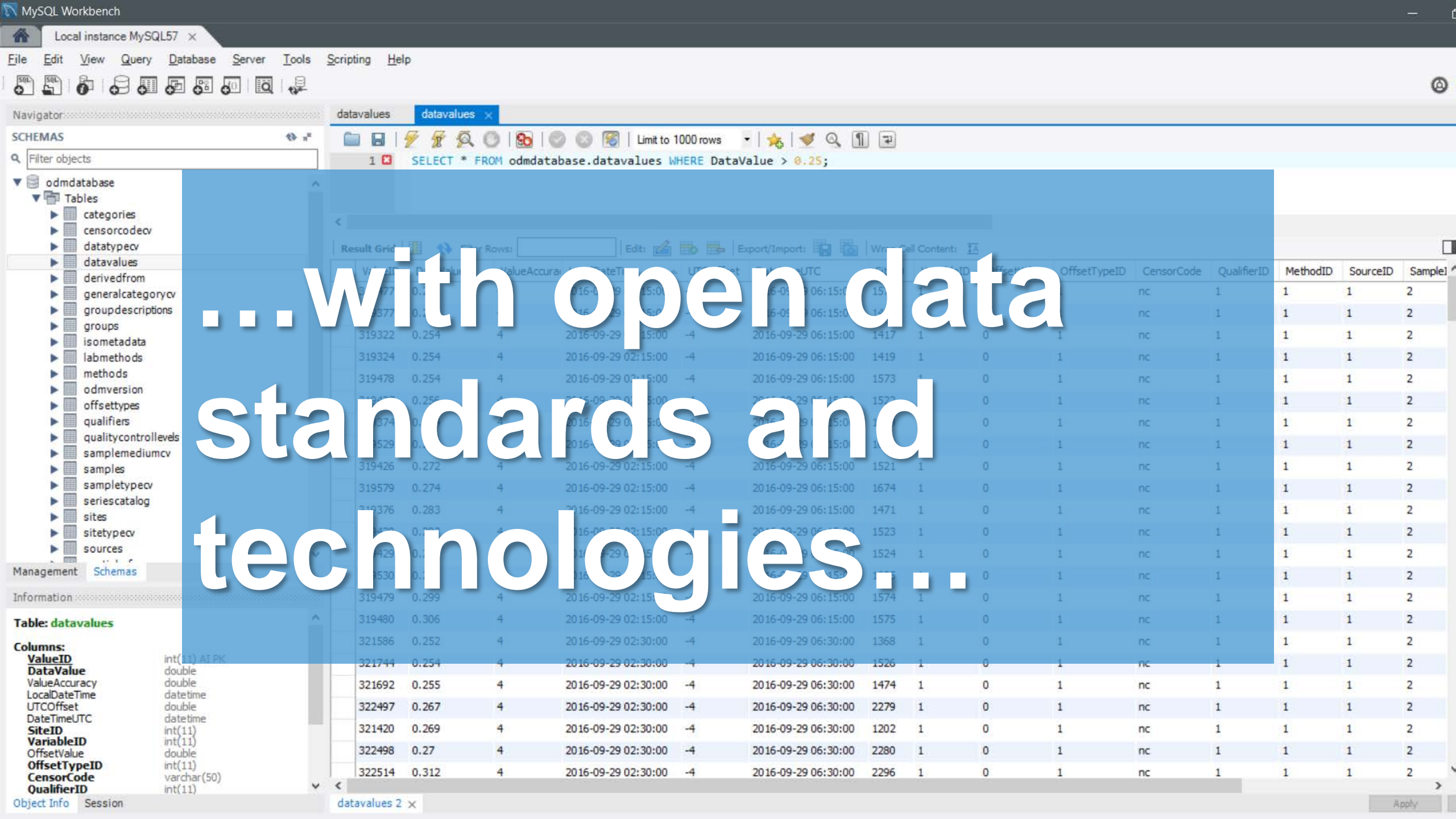
3RWW's
Open
Wet Weather
Mapping
Platform

Open Wet Weather Mapping Platform

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

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

Project Name	Project Description	Size (Gallons)	Date Built	Sewershed	Municipality	MP Stat	Contact Name	Contact Number	Owner Name	Owner Number	Latitude	Longitude	Street Address	City	Zipcode	Comment	Source
Monon High School Porous Pavement	Planned						Robert Berstreser						Horsman Drive				
Monon High School Ent Rain Garden/Bioretenion	Planned						Robert Berstreser				40.375715	-80.050340				Located at the entry	
Monon High School Co Rain Garden/Bioretenion	Planned						Robert Berstreser	rberstreser@mtlisd.net			40.374726	-80.050490	Horsman Drive			Located in the courtyard	
Monon Park Municipal F Rain Garden/Bioretenion	Active	115 sf	November 2012		Mt. Lebanon		Kathy Hrabovsky	khrabovsk@mtlisd.net	Municipality of Mt. Lebanon		40.374384	-80.053942	500 Cedar Boulevard	Mt. Lebanon	15228	Mt. Lebanon's environmental Sustainability Board coordinated design, fur Rain Garden A	
Run Bioswale	Bioswale		November 2015		City of Pittsburgh		Carla Lukehart	clukehart@cityofpittsburgh.gov	City of Pittsburgh					Pittsburgh		Project 15206 has partnered with the City of Pittsburgh Department of Pub. Carla Lukehart	
Run Bioretention Gar Rain Garden/Bioretenion	Active	300 sf	November 2014		City of Pittsburgh		Carla Lukehart	clukehart@cityofpittsburgh.gov	City of Pittsburgh		40.470426	-79.308891	Negley Run Blvd/Washington Blvd	Pittsburgh		Project 15206 has partnered with the City of Pittsburgh Department of Pub. Carla Lukehart	
Fayette Rain Garden	Rain Garden/Bioretenion		2009		North Fayette		Rag Yerky	724-693-3111	North Fayette								
Park Rain Garden	Rain Garden/Bioretenion	2,600 sf			McCandless		Gateway Engineering		Allegheny County				Bottom of Walter Rd, where it joins Lake Shore Road (near the tenni	Pittsburgh		1,200-square-foot rain garden at the intersection of Lake Shore Drive and 1/2 Article in Pop	
Housing Rain Garder	Rain Garden/Bioretenion				City of Pittsburgh		Larry Linder						3078 Terrace Street	Pittsburgh	15213	The Oak Hill Housing Development in the Oakland neighborhood of Pitts	
Green Infrastructure Porous Pavement	Active	15,976 sf	August 2010						Pennsylvania Environmental Council		39.869507	-79.492191	Sherman, Sheridan and Lincoln Streets	Chicopie PA		construction of 15,976 square feet of pervious pavement with gravel pits or sumps creatin	
Green Infrastructure Bioswale	Active	3,723 sf	August 2010						Pennsylvania Environmental Council		39.869701	-79.491950	Sherman, Sheridan and Lincoln Streets	Chicopie PA		Bioswales collect runoff from other paved areas in which 1,321 perennials, 24 shrubs and 4	
State Park Visitor C Rain Garden/Bioretenion	Active																
Hollow Beacon Stref Infiltration/Storage Trench	Active	600,000 gallons	August 2014		City of Pittsburgh		Eric French		Pittsburgh Parks Conservancy, Eric	412-692-7275 ext	40.43308	-79.933836	Beacon and Bartlett Sts	Pittsburgh	15217	Two infiltration trenches were installed downslope Beacon Street. The trenches were desi	
Hollow Beacon Stref Naturalized Meadow	Active		August 2014				Eric French		Pittsburgh Parks Conservancy, Eric	412-692-7275 ext	40.432942	-79.934616		Pittsburgh	15217	The meadow will reduce the amount of runoff generated by the lawn, enhance the infiltrati	
Hollow Pilot Project: Bioswale	Active	1,000 gallons	September 2014		City of Pittsburgh		Eric French		Pittsburgh Parks Conservancy, Eric	412-692-7275 ext	40.438194	-79.937875	Along Schenley Drive through the Bob OI	Pittsburgh	15217	To capture another 1.12 million gallons of rain water a year running through the golf course	
Howe at Whitfield St Bus Green Roof	Active	4,000 sq ft	December 2013		City of Pittsburgh		Joel Perkovick	412-371-8776	East	412-371-8776	40.433254	-79.932544	9335 Penn Ave	Pittsburgh	15206	This project was funded largely by a Spring biodiversity grant from the Sprc. Joel Perkovick	
Howe at Whitfield St Bus Cistern	Active	11,000 gallons (15 cisterns)	December 2013		City of Pittsburgh		Joel Perkovick	412-371-8776	East	412-371-8776	40.433254	-79.932544	9335 Penn Ave	Pittsburgh	15206	This project was funded largely by a Spring biodiversity grant from the Sprc. Joel Perkovick	
Ulvania Turmpike - Som Rain Garden/Bioretenion	Active																
Conservatory Grass F Porous Pavement	Active		2006		City of Pittsburgh				Philip Conservatory	412-622-6314	40.433774	-79.934836	One Schenley Park	Pittsburgh	15213	These grass pavers have a gravel base with Aloca's Geoblock system. Aloca's Geoblock	
Conservatory Center Green Roof	Active		September 2013		City of Pittsburgh				Philip Conservatory	412-622-6314	40.433820	-79.934836	One Schenley Park	Pittsburgh	15213	Extensive green roof design with a 2" soil depth and a variety of plants, including dibbles an	
Conservatory Cistern	Active		June 2013		City of Pittsburgh				Philip Conservatory	412-622-6314	40.437868	-79.934836	One Schenley Park	Pittsburgh	15213	Stormwater from upper campus glass roofs and lower site is captured and used for toilet	
Conservatory Stormw Stormwater/Wetland	Active	4,000 square foot	Sept 2012		City of Pittsburgh				Philip Conservatory	412-622-6314	40.433013	-79.934836	One Schenley Park	Pittsburgh	15213	Treats all sanitary water from CSL and adjacent maintenance building-Subsurface flow co	
Conservatory Porous Pavement	Active		Sept 2012		City of Pittsburgh				Philip Conservatory	412-622-6314	40.437808	-79.934836	One Schenley Park	Pittsburgh	15213	Porous asphalt parking spaces in the rear parking lot.	
Conservatory Southw Rain Garden/Bioretenion	Active		June 2012		City of Pittsburgh				Philip Conservatory	412-622-6314	40.437936	-79.934836	One Schenley Park	Pittsburgh	15213	This rain garden has curbs out that collect runoff from the rear parking lot and drive.	
Conservatory West R Rain Garden/Bioretenion	Active		June 2012		City of Pittsburgh				Philip Conservatory	412-622-6314	40.438426	-79.943044	One Schenley Park	Pittsburgh	15213	Rain garden collects water from a steep hillside below the green houses.	
High Job Corps Center Rain Garden/Bioretenion	Active	760 ft2	May 2014		City of Pittsburgh		Sara Madden	412.371.8779 x 117	US Dept of Labor		40.478308	-79.901885	7175 Highland Dr	Pittsburgh	15206	Large rain garden designed and installed by Nine Mile run/Stormworks and Sara Madden	
High Project Guest Hox Cistern	Active						CEC Engineers									Rainwater used for toilet flushingFrom GBALEED Cert Project Listing	
High Urban Christian Sc Rain Garden/Bioretenion	Active		September 2011		Nine Mile Run		Sara Madden	412.371.8779	Pittsburgh Urban Christian School		40.441601	-79.883165	809 Cent	Pittsburgh	15221	rain garden designed and installed to manage roof top flow. Installed by Nir Sara Madden	
High Water and Sewer A Rain Garden/Bioretenion	Active						Jane									Rain Garden retrofit in the traffic island at the water treatment plant. Captur	
Bank Penn Hills Branch Rain Garden/Bioretenion	Active									412-242-652				Pittsburgh	15235	Bank Manager	
Casino and Riverfront Cistern	Active													Pittsburgh	15212	Roof water from Rivers Casino is collected and conveyed to a 48 inch stc Claudia Saladi	
28 Near Pittsburgh Mill Rain Garden/Bioretenion	Active													Pittsburgh	15212	Cheryl Moon-Sitiani mentioned this in a meeting	
ale Runoff Reduction F Rain Garden/Bioretenion	Active													Pittsburgh	15213	Project will consist of 3 large GSI sites in the right of way, 2 on public prop Mike Hiller	
ale Runoff Reduction F Stormwater Tree Pit	Active													Pittsburgh	15213	Project will consist of 3 large BMPs in the right of way, 2 on public prop Mike Hiller	
ada Sauro Siritanni Mer Rain Garden/Bioretenion	Active	1,000 sq ft	August 2014		Bellefonte Borough		Sara Madden	412.371.8779	North Hills Community Center		40.434949	-80.493558		Pittsburgh	15203	Road side bioswale designed to manage flow from Davis Ave. Flows me: Sara Madden	
ownship Municipal Bu Porous Pavement	Active										40.516172	-80.070217	1000 Ross Municipal Road	Pittsburgh	15237		
Heinz House Associati Cistern/Rain Barrel	Active		2007		City of Pittsburgh						40.454621	-79.939361	1 Heinz Street	Pittsburgh	15212	Rainwater harvested from the roof and stored in underground cisterns is used to provide	
Ridge Rain Garden	Rain Garden/Bioretenion	Approx. 7,000 sf	2010		Franklin Park		John Schleicher	724-935-8188					Jasmine Court	Pittsburgh	15237	Retrofit to allow for additional treatment of stormwater in housing plan John Schleich	
ey Park Visitor Center Cistern	Active	5,133 gallon rain bar	April 2010		City of Pittsburgh				Pittsburgh Parks Conservancy		40.438284	-79.946517	101 Panther Hollow Rd	Pittsburgh	15213	Installed 5 133 gallon rain barrels that collect runoff from the back of the visitor's center ro	
ey Park Visitor Center Rain Garden/Bioretenion	Active	188 square feet	April 2010		City of Pittsburgh				Pittsburgh Parks Conservancy		40.438493	-79.946239	101 Panther Hollow Rd	Pittsburgh	15213	captures rainfall from more than a third of the Schenley Park Café roof (3	
Seen Greenway	Active												Brashear High School			From Pt 515, take turning lane to E. Warrington. Near salt dome.	
s Ridge Bioretention - Rain Garden/Bioretenion	Active		2010		Robinson Township		Gerry Klodowski		Diane Lichauer				200 Settlers Ridge Center Drive	Pittsburgh	15205		Gerry Klodows
s Ridge Bioretention - Rain Garden/Bioretenion	Active													Pittsburgh	15232	Approximately 12,300 square feet of the newly constructed store is covered with a five and	
iant Eagle Green Green Roof	Active										40.456174	-79.934608	5550 Centre Ave	Pittsburgh	15232	Approximately 12,300 square feet of the newly constructed store is covered with a five and	
Municipal Building Rai Rain Garden/Bioretenion	Active	29,174 sq ft	September 2008		Shaler Township		Kevin		Shaler Township		40.524433	-79.961939	300 Wetzel Road	Glenshaw	15116	Built as a model for homeowners in the Shaler area, it will manage all of the Eisler Landso	
Rain Garden Retrofit Constructed Wetland	Active		Summer											Pittsburgh	15213	The Allegheny County Redevelopment Authority approved the grant from Soldiers an	
s and Sallor's Hall Gre Green Roof	Active		September 2008		City of Pittsburgh						40.445082	-79.956481	4141 Fifth Ave	Pittsburgh	15212	From 279 N, Exit 7 Avalon/Belleuve	
onstruction Corporate Porous Pavement	Active												80 Union Ave	Pittsburgh	15202	Existing detention pond did little to retain storm water flow. Modified riser	
oods Detention Pr Rain Garden/Bioretenion	Active	140,000 sq ft	September		Shaler Township				Shaler Township		40.433872	-79.958855	Spencer Grove Lane	Glenshaw	15116	Per Chris Zurawsky	
Hill Post Office Rain Rain Garden/Bioretenion	Active													Pittsburgh	15218	Located between W. Park Ave and E. Park Ave. Pervious paver sidewalk : Darrell Rapp	
ale, West Park Ave Pe Porous Pavement	Active	approx 1,280 sf			Swissvale		Darrell Rapp		Borough of Swissvale		412-271-7101	-79.887504	W. Park Ave	Swissvale	15218	As part of its ongoing efforts to be environmentally conscious, Temple Si	
Sinai Rain Garden	Rain Garden/Bioretenion		October 2012		City of Pittsburgh		Zelda Curtiss	(412) 421-9715	Temple Sinai		40.438132	-79.930565	5505 Forbes Ave	Pittsburgh	15217	As part of its ongoing efforts to be environmentally conscious, Temple Si	
Diner Bioretention	Rain Garden/Bioretenion	225 of	2009		McCandless		John Schleicher of	724-935-8188	Jim Totin		40.802486	-80.050210	10283 Old Perry Hwy	Westford	15090	Parking lot expansion has bioretention to control runoff by sheet flow. Ins	
Joe's (Washington Rd Rain Garden/Bioretenion	Active	3,750 sq ft	2013		Upper St. Clair		Trader Joe's	412-835-2212	Trader Joe's		40.351487	-80.051772	1630 Washington Rd	Upper St. C	15241	Retail	Debbi Yelich, U
St. Clair Community & F Bioswale	Active	58,540 sq ft	2007		Upper St. Clair		Matt Serakowski	412-831-3000	Upper St. Clair		40.333804	-80.110287	1551 Magview Road	Upper St. C	15241	13 bioswales in Bogye Magview Park	Debbi Yelich, U
St. Clair Community & F Rain Garden/Bioretenion	Active	7,044 sq ft	2009		Upper St. Clair		Matt Serakowski	412-831-3000	Upper St. Clair		40.334345	-80.103823	1551 Magview Road	Upper St. C	15241	Bogye Magview Park	Debbi Yelich, U
Magview Park Bio-ret Rain Garden/Bioretenion	Active	215,628 sq ft	2007		Upper St. Clair		Matt Serakowski	412-831-3000	Upper St. Clair		412-831-3000		1551 Magview Road	Upper St. C	15241	3 bioretention ponds at Bogye Magview Park	Debbi Yelich, U
Magview Park Bio-ret Rain Garden/Bioretenion	Active	140,000 sq ft	2007		Upper St. Clair		Matt Serakowski	412-831-3000	Upper St. Clair		412-831-3000		1551 Magview Road	Upper St. C	15241	2 bioretention ponds in Bogye Magview Park	Debbi Yelich, U
Magview Park Pervio Porous Pavement	Active	10,200 sq ft	2008		Upper St. Clair		Matt Serakowski	412-831-3000	Upper St. Clair		412-831-3000		1551 Magview Road	Upper St. C	15241	Bogye Magview Park	Debbi Yelich, U
Magview Park Rain Garden	Rain Garden	1,250 sq ft	2012		Upper St. Clair		Matt Serakowski	412-831-3000	Upper St. Clair		40.19575	-80.41544	1751 McLaughlin Run Rd.	Upper St. C	15241	USC Municipal Building	Debbi Yelich, U
uch Middle School In Rain Garden/Bioretenion	Active	95,000 sq ft	2009		Upper St. Clair		Matt Serakowski	412-831-3000	Upper St. Clair		40.353954	-80.064497	515 Fort Couch Rd	Upper St. C	15241	School	Debbi Yelich, U
House Rain Gardens	Rain Garden/Bioretenion	300 R2	August 2014		Heth's Run		Maureen Copeland	412.371.8779 x122	Pittsburgh Urban Leadership Service Experience		40.471418	-79.925552	5615 Stanton Ave	Pittsburgh	15206	Collaborative rain garden design and installation with Kirk Consulting, Urb	
East- Multiple Biorete Rain Garden/Bioretenion	Active		July 2012				John Ceere		University of Pittsburgh Medical Center								
ian Collaborative Syst Bioswale	Active		2009		McCandless		Bernie Lamm	724-799-8060	Vincental Collaborative System ar		412.548.4054	-80.022574	8250 Babcock Blvd	Pittsburgh	15237	Part of a large overall stormwater plan. Fed by parking lot.Drains to detent	
iew Green Infrastructure Porous Pavement	Active	approx 14,000 sq ft	July 2014		Girty's Run		Bob Zischkau		Borough of West View		40.517667	-80.022890	Center Ave between Hawthorne Ave and Norw	Pittsburgh	15229	The completed project is estimated to divert roughly 250,000 gallons of st	
iew Green Infrastructure Rain Garden/Bioretenion	Active	approx 2,650 sq ft	July 2014		Girty's Run		Bob Zischkau		Borough of West View		412.931.2800	-80.022093	Center Ave between Hawthorne Ave and Norw	Pittsburgh	15229	The completed project is estimated to divert roughly 250,000 gallons of st	
iew Green Infrastructure Rain Garden/Bioretenion	Active	approx 1,700 sq ft	July 2014		Girty's Run		Bob Zischkau		Borough of West View		412.931.2800	-80.022082	Center Ave between Hawthorne Ave and Norw	Pittsburgh	15229	The completed project is estimated to divert roughly 250,000 gallons of st	
iew Green Infrastructure Bioswale	Active	approx 1,275 sq ft	July 2014		Girty's Run		Bob Zischkau		Borough of West View		412.931.2800	-80.022204	Center Ave between Hawthorne Ave and Norw	Pittsburgh	15229	The completed project is estimated to divert roughly 250,000 gallons of st	



...with open data standards and technologies...

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 (2)

**** unknown width

Pipes (10k)

- <= 8
- 8.01 - 16
- 16.01 - 24
- 24.01 - 32
- 32.01 - 40
- 40.01 - 48

...enables us to utilize available tools to analyze and share regional data efficiently.



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	<p>Data access is limited to those with credentials / authorization.</p> <p>Data requires specific software (typically \$\$) in order to use</p>	<p>Data access is limited to those with credentials / authorization.</p> <p>Data format is standard and not limited to specific software.</p>
	Unsecured	<p>Data is available to anyone.</p> <p>Data requires specific software (typically \$\$) in order to use</p>	<p>Data is available to anyone.</p> <p>Data format is standard and not limited to specific software.</p>



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



MDS Home

Wet Weather

Municipal Data Support

The municipal data support (MDS) tool was created to assist municipalities in wet weather planning and implementation and operation and maintenance. MDS provides for sharing of regional information among municipalities, such as mapping and flow monitoring data, wet weather guidance documents and other information. You do not need specialized software to use these tools so they are available to municipal managers, elected officials, engineers, public works.

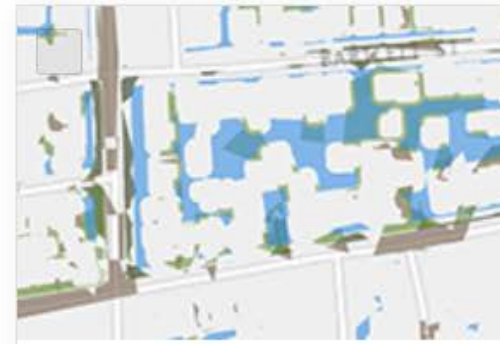
As a warehouse of system-wide data, MDS lays the foundation for regional approaches. As we move forward on long-term wet weather solutions, we will continue to expand the MDS tools' capabilities with additional resources.

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

Search group content

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sustain

by CM_3RWW

Updated: Nov 21, 2016

View Count: 49



3RWW Rain Gauges

by CM_3RWW

Updated: Jan 10, 2017

View Count: 3,994



2017Q4 3RWW Sewer Atla...

by CM_3RWW



2017Q4 3RWW Sewer Atla...

by CM_3RWW

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

SUSTAIN Data Extractor

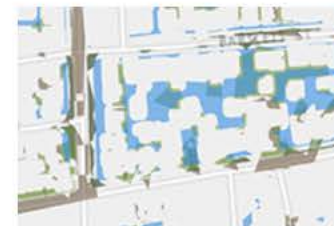
Download geographic subsets of the SUSTAIN layers clipped to municipal, watershed, or custom boundaries using our data extraction tool:

3rww.github.io/sustain-app



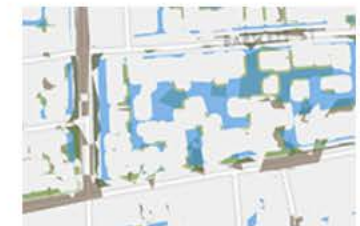
SUSTAIN GSI Suitability Layers

The following links provide direct endpoints for the individual SUSTAIN layers. From those pages, you can view, link, and download data. If you're interested in getting data for a specific municipality, watershed, or custom geography, see instead our Data Extraction tool.



SUSTAIN - Bioretention

This dataset illustrates 3 Rivers Wet Weather's (3RWW) 2013 analysis from the EPA System Urban Stormwater Treatment and Analysis



SUSTAIN - Constructed Wetland

This dataset illustrates 3 Rivers Wet Weather's (3RWW) 2013 analysis from the EPA System Urban Stormwater Treatment and Analysis

Rainfall Data: 2 Sources

"Teragon/Vieux"	"Datawise"
<ul style="list-style-type: none">• On the 3RWW Website• Calibrated Rain Gauge• Gauge-Adjusted Radar Rainfall Data (GARR)• ReST API	<ul style="list-style-type: none">• 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

An aerial photograph of a city with a complex network of sewer lines overlaid. The lines are primarily blue, with some sections highlighted in yellow. The background is a dark, textured aerial view of the city's streets and buildings.

Sewer Atlas

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

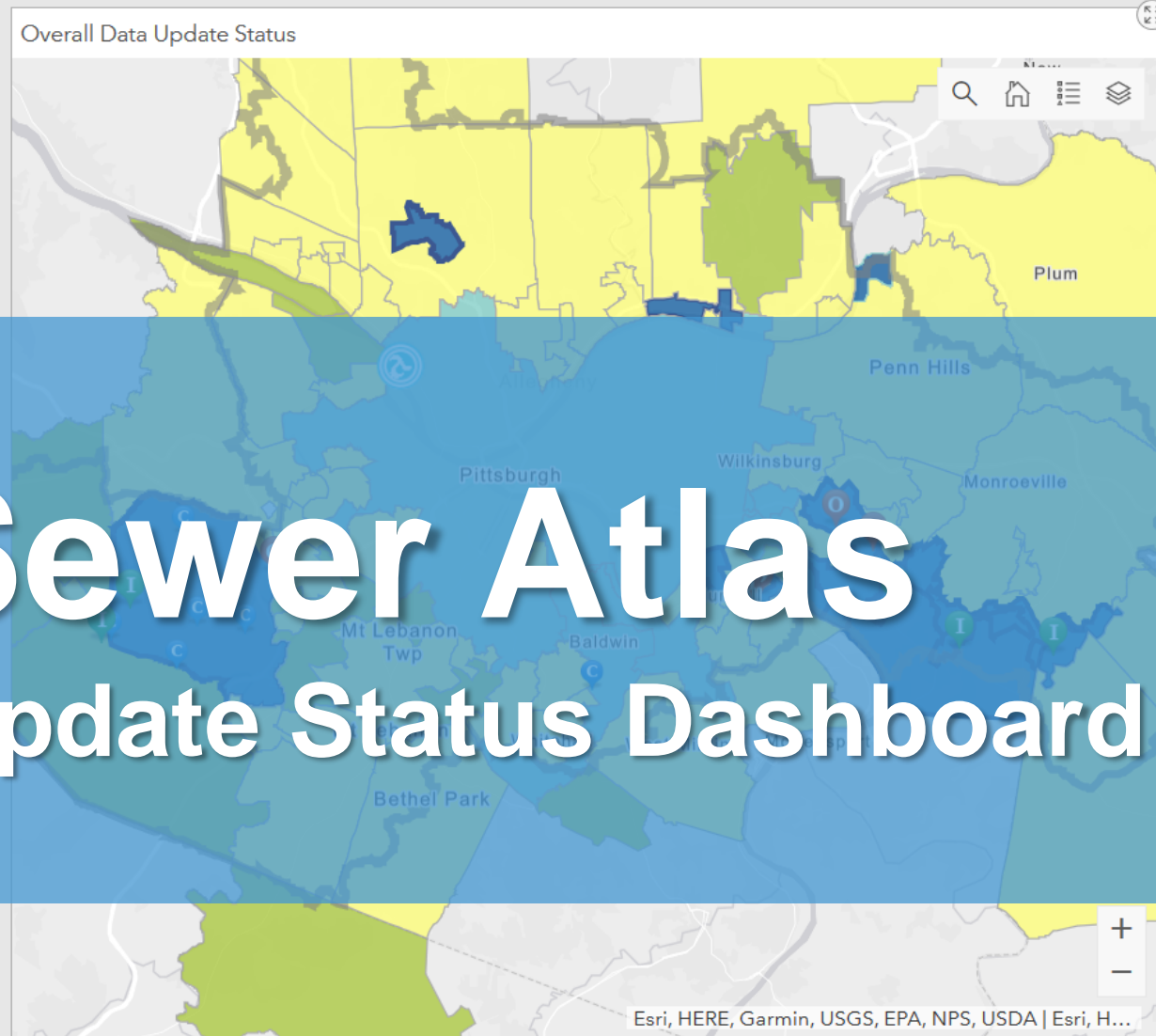
Municipality (Target Release Quarter)

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

This list shows the data request pipeline for which we've received data, but are 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



Sewer Atlas

Data Update Status Dashboard

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

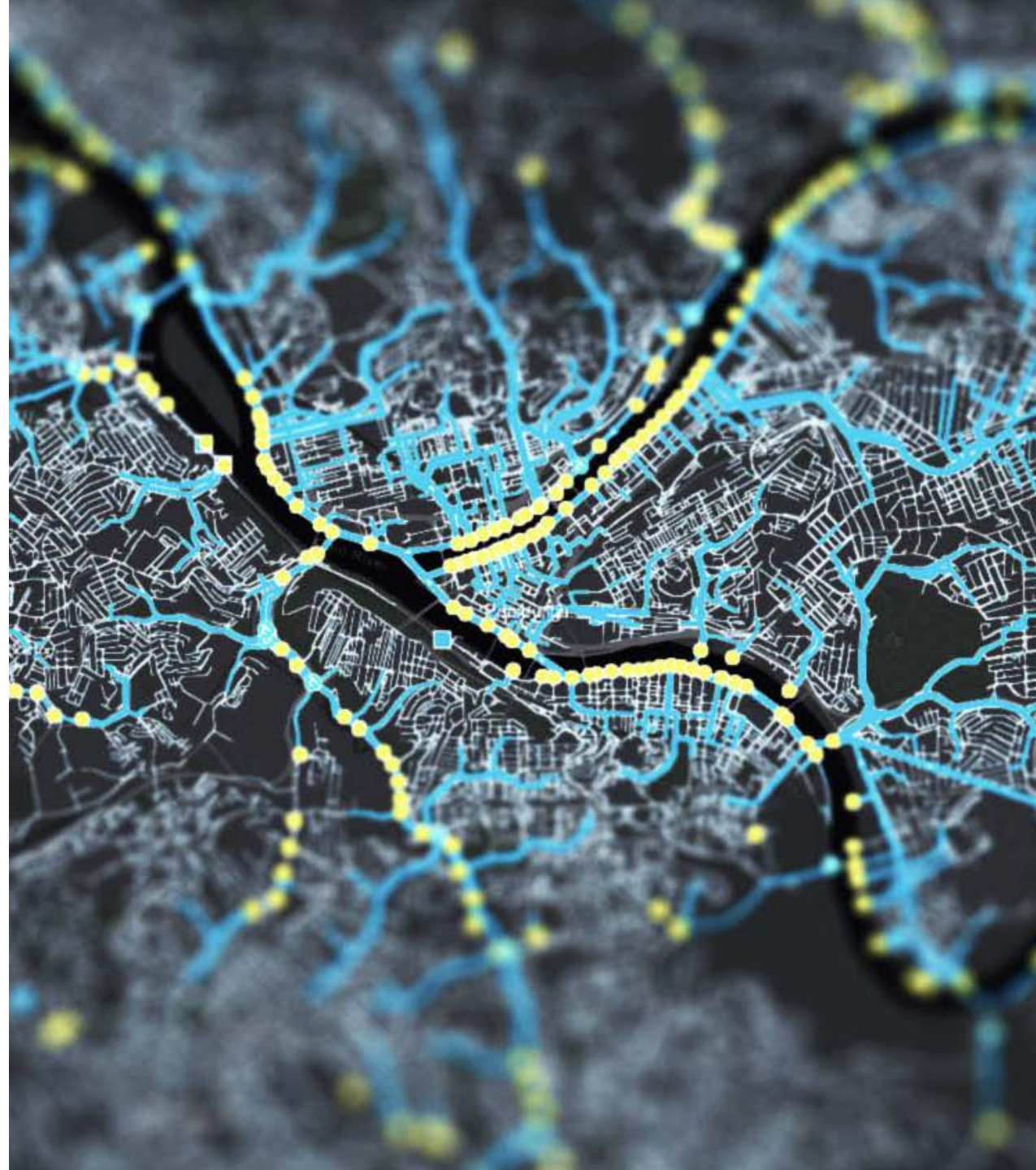
5

5 issues were not resolvable by the data

Last update: a few seconds ago

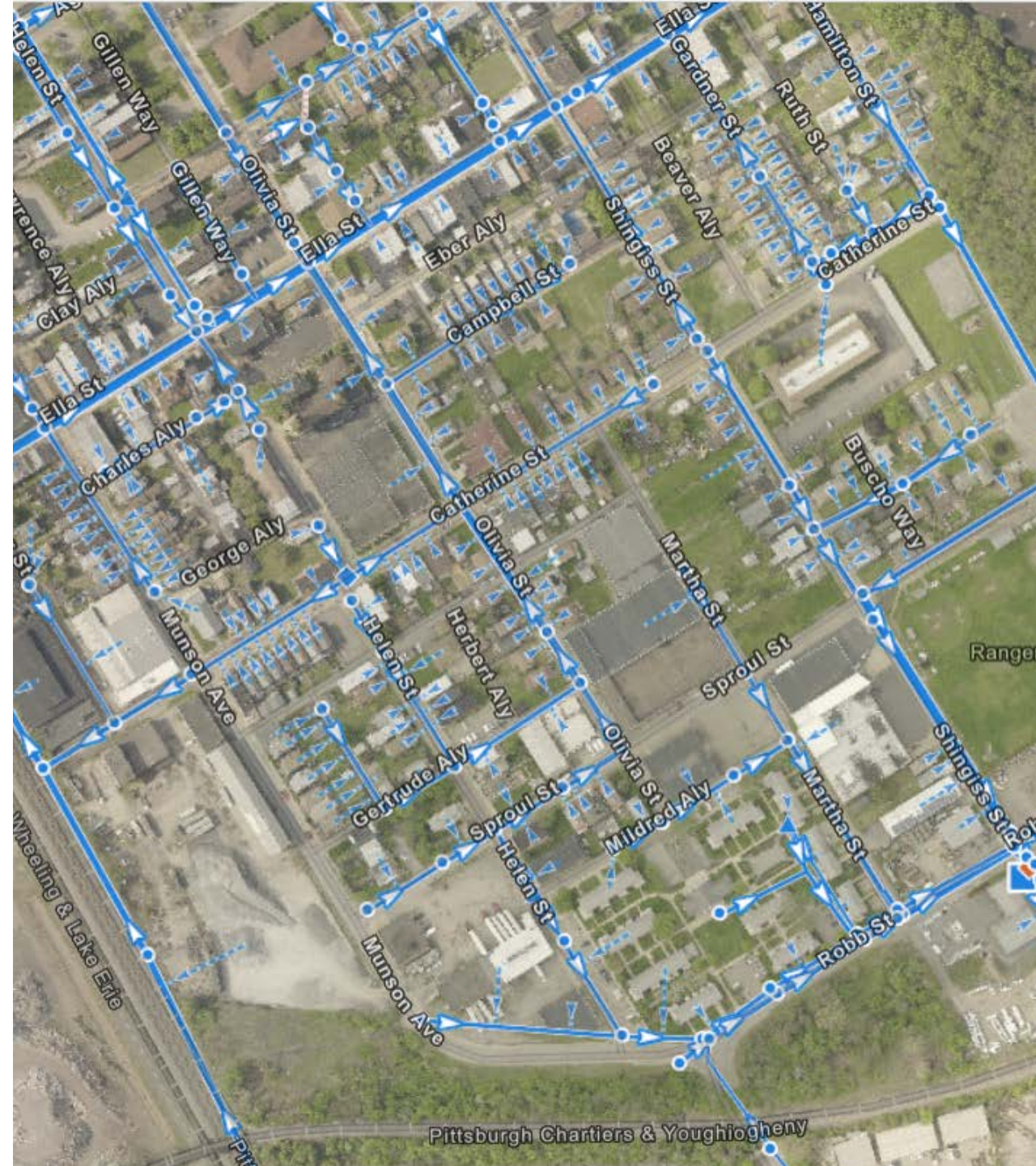
Sewer Atlas Updates

- 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

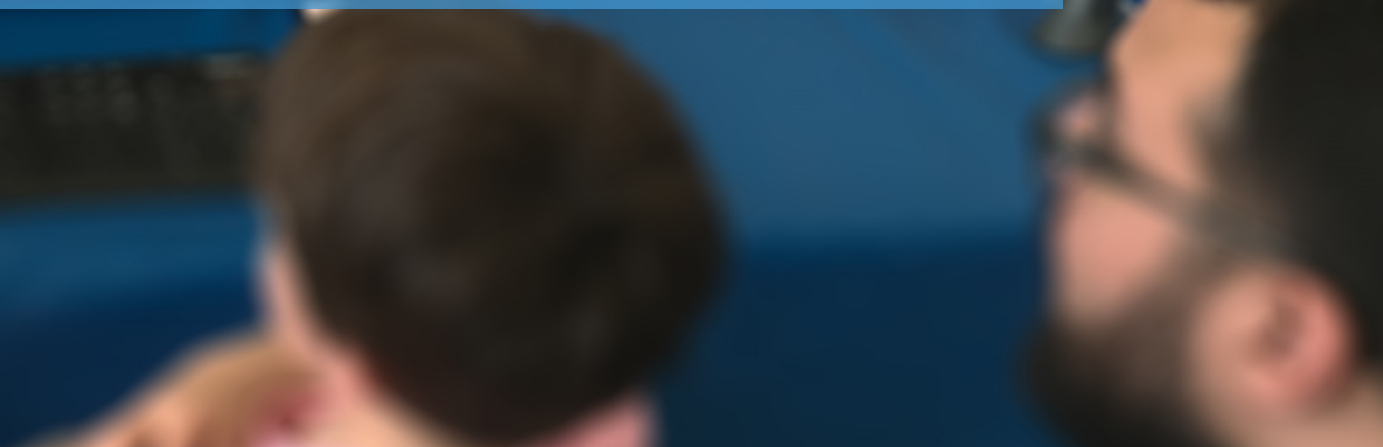
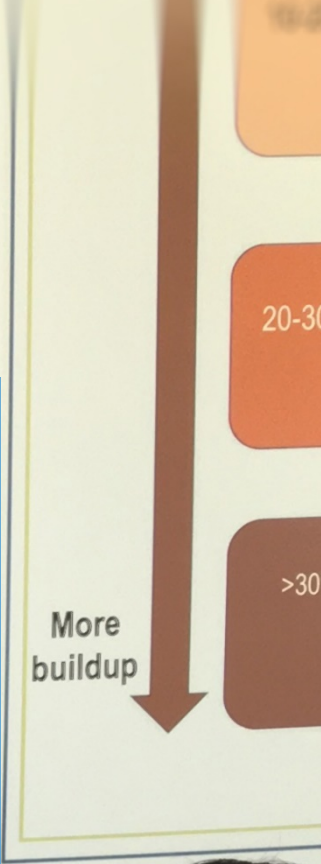
- Testing integration of data and appropriate data models
- Currently have data from Glenn Engineering; working on PWSA
- Planning to integrate into existing tables, provide separate views





Flush It!

Sewer Outreach & Education Tool





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

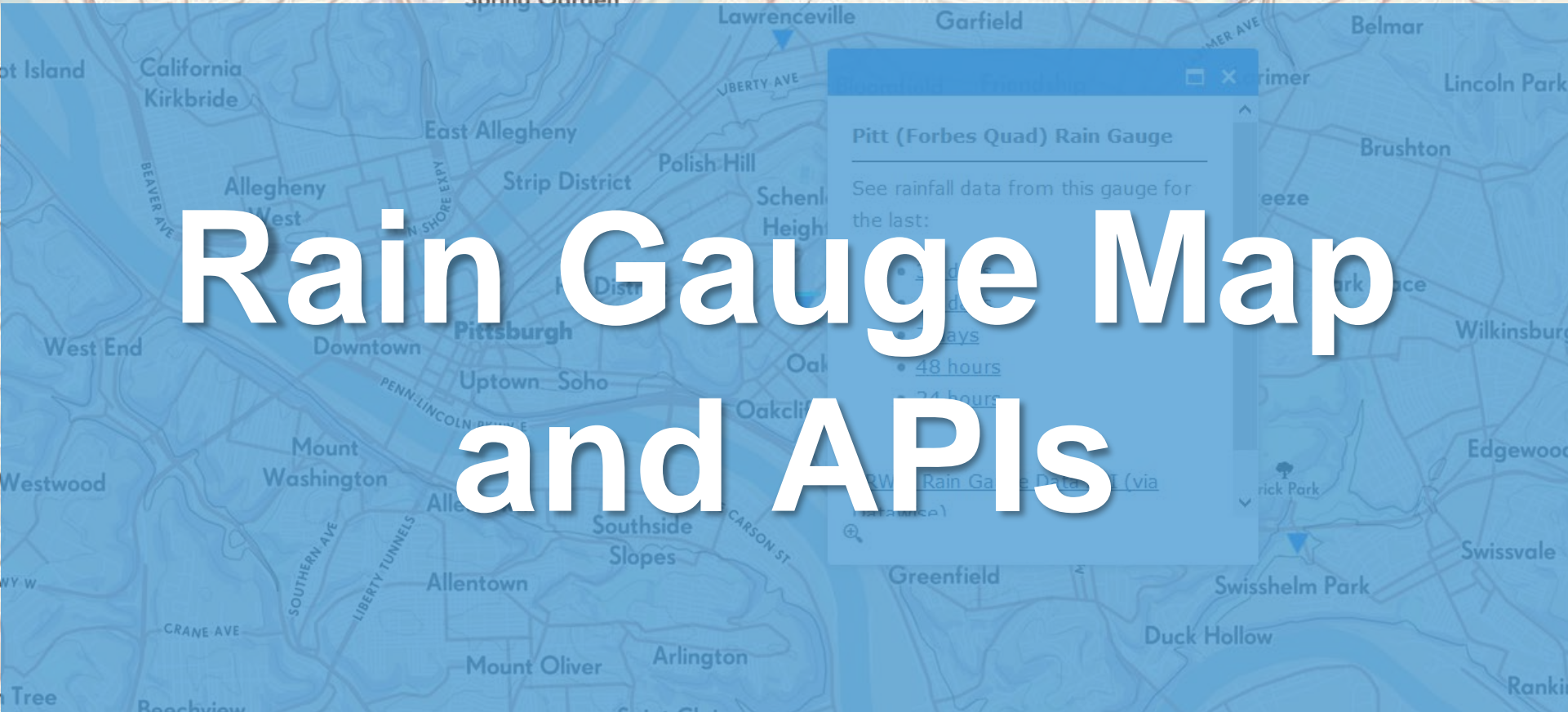
[Zoom to](#)



Green Infrastructure Atlas Public Project Entry Forms



- 3RWW Rain Ga
- Allegheny Cour
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Rain Gauge Map and APIs

Pitt (Forbes Quad) Rain Gauge

See rainfall data from this gauge for the last:

- 48 hours
- 24 hours

[3RWW Rain Gauge Data API \(via GitHub\)](#)

Flow Monitors

In the Pipeline:

- Rainfall (“Rain-It”)
- RainWays 3

```
Ln: 246 Col: 29  ASCII Python master
class Sources(BaseModel):
    sourceid = PrimaryKeyField(db_column='SourceID')
    organization = CharField(db_column='Organization')
    sourcedescription = TextField(db_column='SourceDescription')
    sourcelink = TextField(db_column='SourceLink', null=True)
    contactname = CharField(db_column='ContactName')
    phone = CharField(db_column='Phone')
    email = CharField(db_column='Email')
    address = CharField(db_column='Address')
    city = CharField(db_column='City')
    state = CharField(db_column='State')
    zipcode = CharField(db_column='ZipCode')
    citation = TextField(db_column='Citation')
    metadataid = ForeignKeyField(db_column='MetadataID', rel_model=Isometadata, to_f

class Meta:
    db_table = 'sources'

class Datavalues(BaseModel):
    valueid = PrimaryKeyField(db_column='ValueID')
    datavalue = FloatField(db_column='DataValue')
    valueaccuracy = FloatField(db_column='ValueAccuracy', null=True)
    localdatetime = DateTimeField(db_column='LocalDateTime')
    utcoffset = FloatField(db_column='UTCOffset')
    datetimeutc = DateTimeField(db_column='DateTimeUTC', null=True)
```

Toolbox

- odm_models.py
- Imports
- Global Variables
- UnknownField
- BaseModel
- Datatypecv
- Generalcategorycv
- Samplemediumcv
- Speciationcv
- Units
- Valuetypecv
- Variablenamecv
- Variables

Tables

- categories
- sensorcodecv
- datatypecv
- datavalues
 - ValueID
 - DataValue
 - ValueAccuracy

Management Schemas

Information

Table: datavalues

Columns:

ValueID	int(11) AI PK
DataValue	double
ValueAccuracy	double
LocalDateTime	datetime
UTCOffset	double
DateTimeUTC	datetime

Object Info Session

```
3
4 SELECT * FROM odmdatabase.datavalues WHERE DataValue >=
```

Result Grid

ValueID	DataValue	ValueAccuracy	LocalDateTime	UTCOffset	DateTimeUTC
329505	0.154	4	2016-09-29 03:30:00	-4	2016-09-29 07:34:00
329506	0.179	4	2016-09-29 03:30:00	-4	2016-09-29 07:34:00
329507	0.158	4	2016-09-29 03:30:00	-4	2016-09-29 07:34:00
329541	0.177	4	2016-09-29 03:30:00	-4	2016-09-29 07:34:00
329542	0.151	4	2016-09-29 03:30:00	-4	2016-09-29 07:34:00

datavalues 4 x

Output

#	Time	Action	Message
46	09:57:52	SELECT * FROM odmdatabase.datavalues LIMIT 0, 50000	50000 row(s) returned
47	09:58:19	SELECT * FROM odmdatabase.datavalues WHERE DataValue >=	244 row(s) returned

Project Site and Study Area Identification ? The map is currently in SELECT mode.

Draw/Edit a Study Area or GSI Project(s)

Select a Study Area from a Map Layer

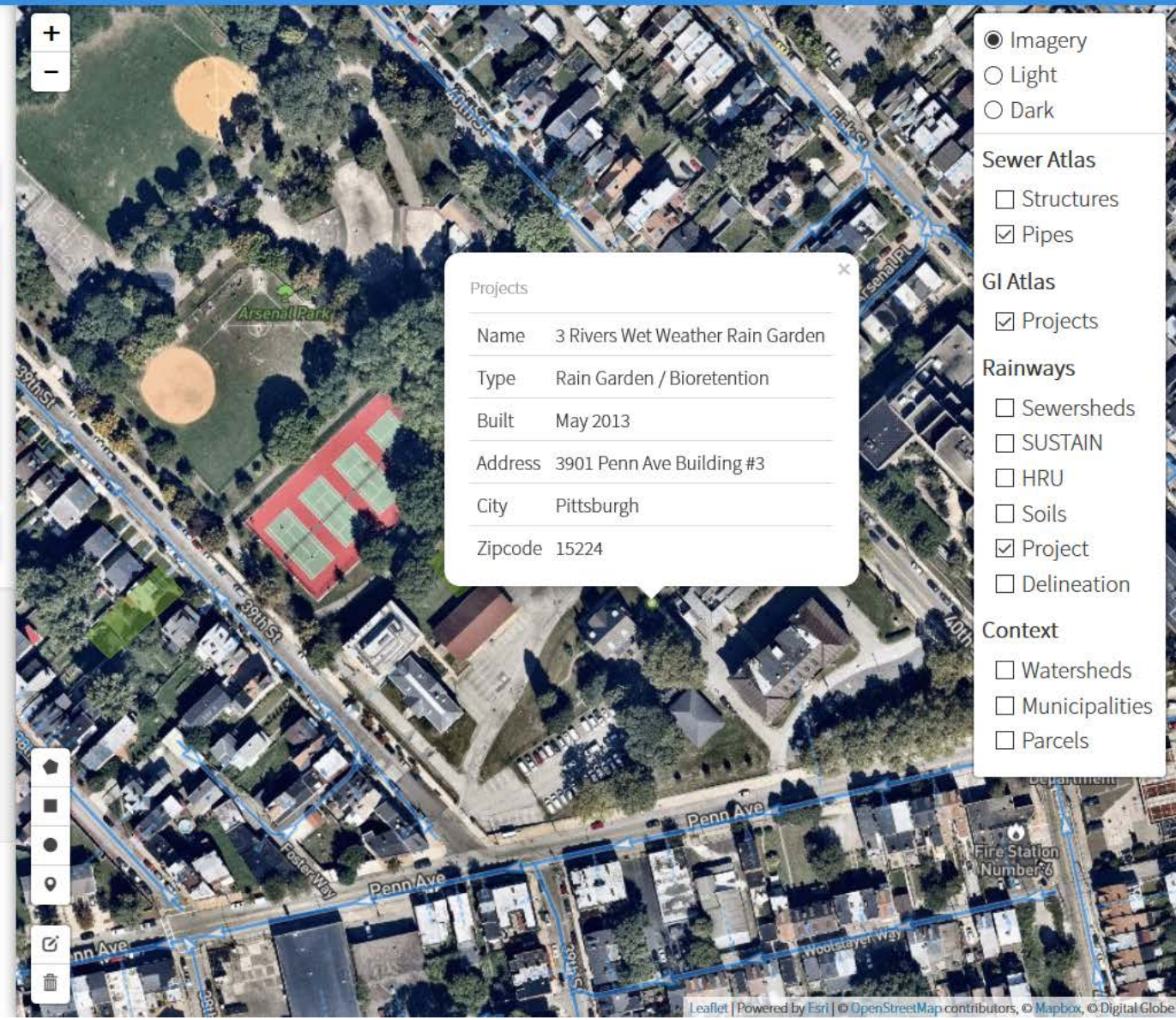
Select a study area from one or more existing map layers. Use the draw tools to select. The toggles at right indicate which layer will be included when selecting areas on the map. You can select geometries from multiple layers to assemble your study area.

Upload a Study Area or GSI Projects(s)

Once you've created a project location or study area on the map, Delineate will analyze hydrologic response, GSI suitability, and topography for your project location. Optionally, you can extend this to include the contributing area: the land area upstream of your project site. This is a computationally intensive process; consequently it may take some time. Note that projects represented only as point locations will trigger the delineation of the contributing area automatically.

Delineate Project Include Contributing Area

Adjust Parameters



- Imagery (selected)
Light
Dark
Sewer Atlas
Structures
Pipes
GI Atlas
Projects (checked)
Rainways
Sewersheds
SUSTAIN
HRU
Soils
Project (checked)
Delineation
Context
Watersheds
Municipalities
Parcels

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



Allegheny County

Allegheny County

ALCOSAN Service

SUSTAIN: Constructed

SUSTAIN: Infiltration

SUSTAIN

(System Urban Stormwater
Treatment and Analysis Integration)

Map



SUSTAIN Data Extractor

1 Choose Area

- Current Map View
- Municipality
- Watershed
- Draw a polygon

2

Choose Green Stormwater Infrastructure download

- Bioretention ⓘ
- Constructed Wetland ⓘ
- Grassed Swales ⓘ
- Infiltration Basin ⓘ
- Porous Pavement ⓘ
- Vegetated Filterstrip ⓘ

3 Download!

GEOJSON

CSV

SHAPEFILE

Informational Resources

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

break



The background features a light blue map with several location pins in shades of blue and green. A large white geometric shape, resembling a stylized '4' or a corner cut, is positioned on the right side of the slide. The text is overlaid on the left side of the map.

Discussion: Opportunities, Feedback, and Future Mapping Initiatives

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>

3RWW on GitHub

<https://github.com/3rww>

Repositories 5

People 2

Teams 0

Projects 0

Settings

Search repositories...

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

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!

www.3riverswetweather.org

mwolinsky@3rww.org

bdupton@3rww.org

srectenwald@3rww.org

www.civicmapper.com

3rww@civicmapper.com