

Although each community in the Nine Mile Run watershed has its own identity, water management is most effective when the work extends beyond political boundaries.

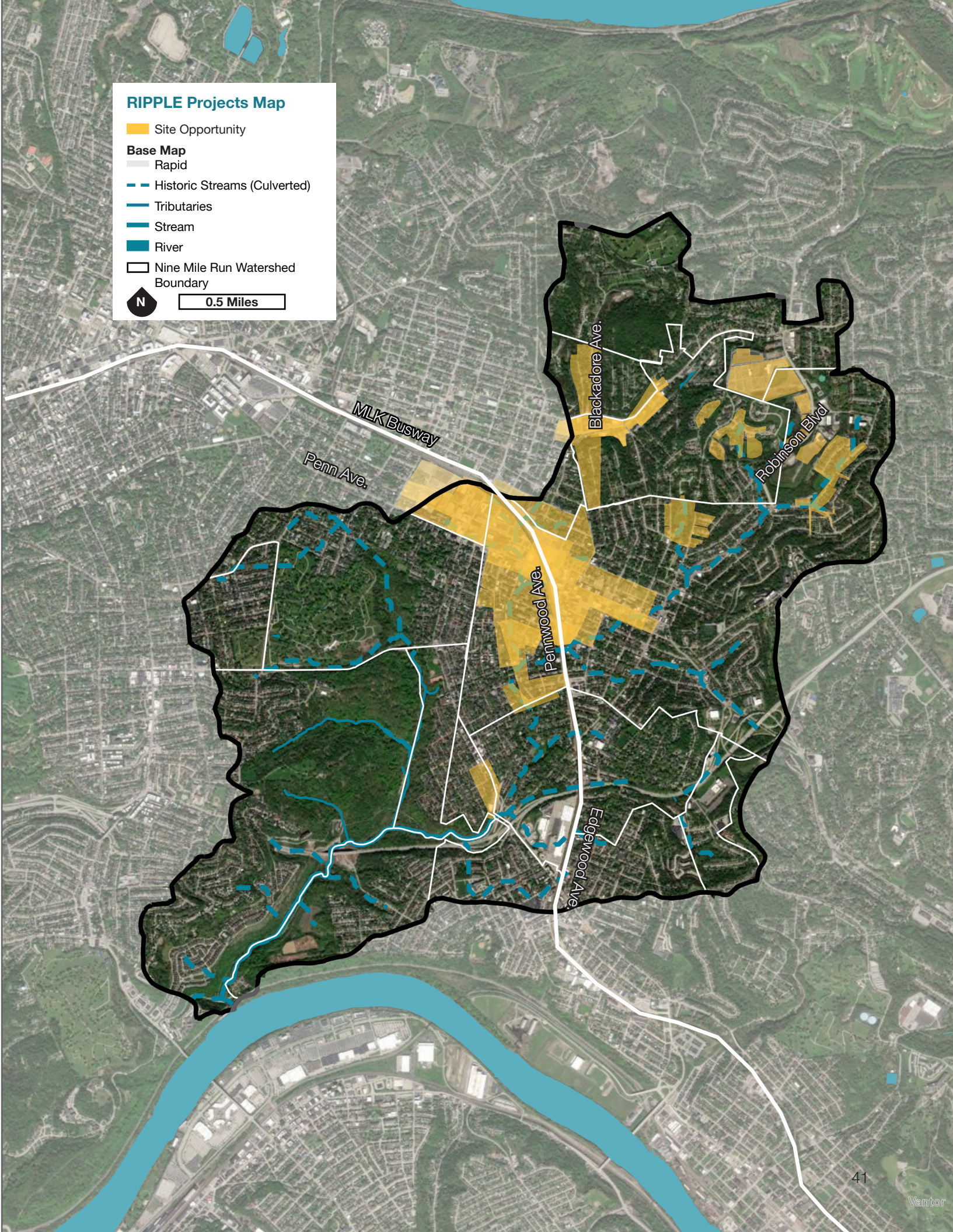
Although each community in the Nine Mile Run watershed has its own character, they are connected by a shared water system. Rain that falls in Pittsburgh, Swissvale, Edgewood, Braddock Hills, Forest Hills, Wilkinsburg, and Penn Hills ultimately flows toward Nine Mile Run, linking these municipalities through a common watershed.

This shared landscape requires shared action. Many municipalities already collaborate through the Municipal Separate Storm Sewer System (MS4) program administered by the Pennsylvania Department of Environmental Protection, which seeks to reduce pollution and stormwater entering the sewer network.

Through coordinated efforts such like the Regionalization Program, participating Municipalities within the M47 watershed can transfer ownership of any pipe ten inches or larger to ALCOSAN. The RIPPLE Plan builds on this cooperative structure by identifying projects that can be implemented across jurisdictions while strengthening relationships among partners.

This section summarizes seventeen (17) priority project opportunities that have been organized into three typologies: (1) Water Capture Districts, (2) Valley Park Projects, and (3) Hilltop Sending Properties. Each project includes a summary of existing conditions, possible design futures, community feedback and site specific evaluation metrics.

BELOW Volunteers collect trash from Nine Mile Run In Frick Park (UpstreamPgh)



WATER CAPTURE DISTRICTS

Across the watershed, Water Districts are where the city’s hard surfaces and hidden valleys intersect—places where stormwater challenges are most visible and where the greatest opportunities for change exist.

Structure and Issues

These districts include both the narrow valleys, where historic streams now run underground along collector roads, and the flatter East End Plateau neighborhoods characterized by extensive impervious cover. Many are commercial or mixed-use areas with large roofs, parking lots, and minimal green space. During heavy rainfall events, runoff exceeds the system’s capacity, leading to surface flooding and sewer backups that impact businesses and adjacent residential areas. The combination of low slopes, buried drainage routes, and high imperviousness creates chronic water management problems that degrade both public infrastructure and private property.

Green Stormwater Infrastructure Types

Opportunities within Water Districts range from localized, non-networked interventions—such as green roofs, rain gardens, and on-site detention—to networked systems that connect multiple sites through right-of-way improvements or shared open spaces. On public property, bioswales, tree trenches, and permeable pavements can capture and slow runoff

before it enters sewers. On private sites, retrofits such as parking lot basins or green courtyards can complement public systems. Together, these approaches can create layered water networks that restore some of the natural storage and conveyance once provided by the valley landscape.

Variables and Challenges

The potential for implementing these systems depends heavily on local conditions. In districts experiencing reinvestment or densification, redevelopment can support code-driven stormwater improvements and fund integrated systems. In areas with low market value or economic stress, large numbers of vacant parcels provide spatial opportunities but lack financial capacity for implementation. These areas will require significant public and philanthropic investment to ensure equitable outcomes. Across all contexts, cost, maintenance responsibility, and coordination among property owners remain key challenges—but also opportunities to demonstrate how water can shape more resilient, connected, and livable districts.

BELOW Neighbors making art at Dornbush Street Block Party event in East Hills (UpstreamPgh)

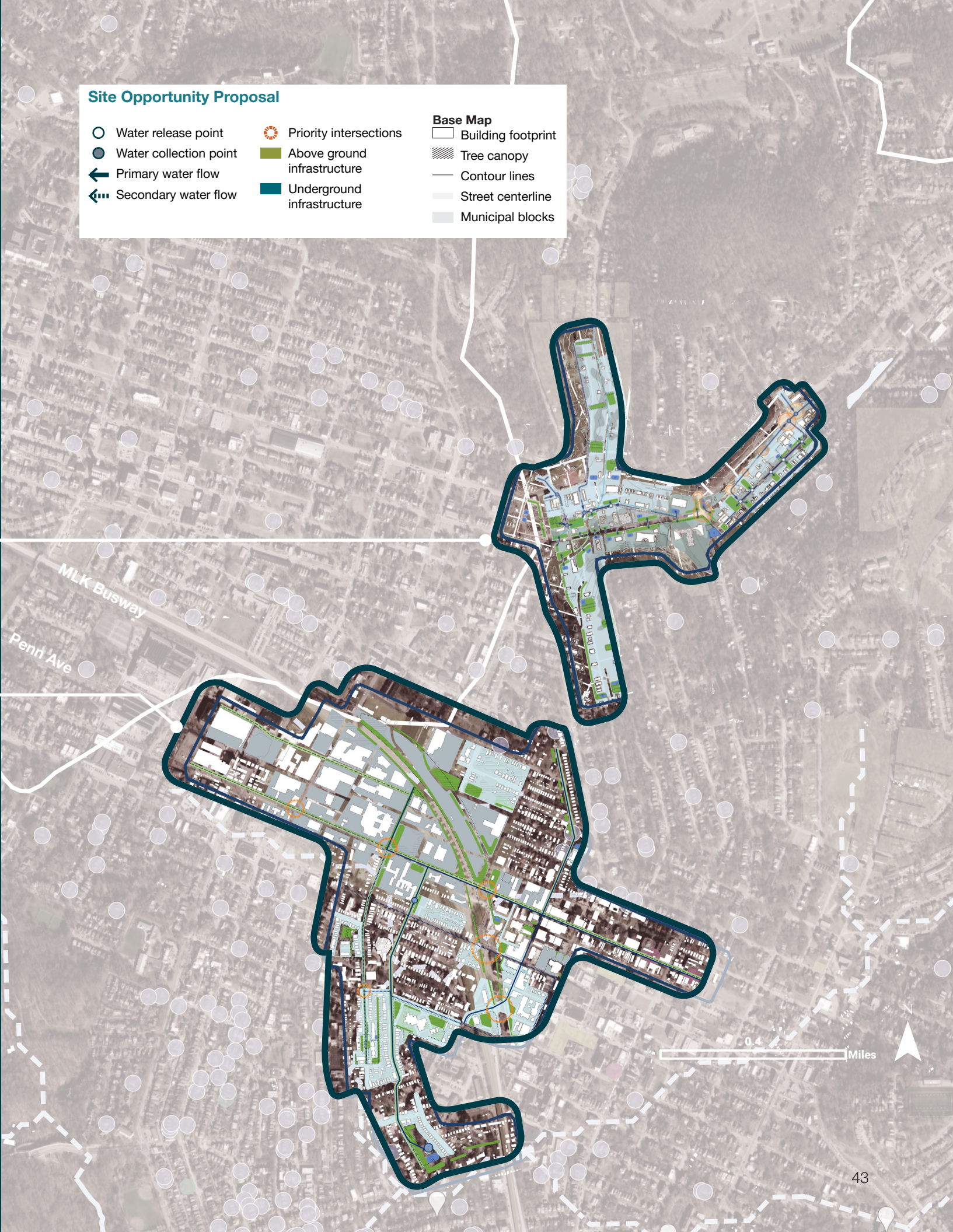


Frankstown-Bennett Water District

- Bennett Light Industrial
- Angoria Blackadore Street Stream Pairing
- Exley Way
- Conemaugh Street

Rockwell to Wilkinsburg Water District

- Park and Ride Rosedale Cluster
- Light Industrial District on lot GSI
- Whitney Park and Kelly School Micronetworks
- Light Industrial District Green Streets GSI
- Wilkinsburg Business District



Frankstown-
Bennett Water
District

What we heard

Many residents in this area reported water-related issues. Some spoke about flooding at the base of Blackadore Avenue and Frankstown Avenue, where there are storm drains packed with sediment. Others theorized that sediment washes off Parchment St, which is cobblestone. People noted small streams on Angoria Way and Wheeler St, with one person mentioning the stream on Wheeler smells like sewage. Residents were concerned about vacant lots, raccoons, cars speeding on Blackadore, and illegal dumping.

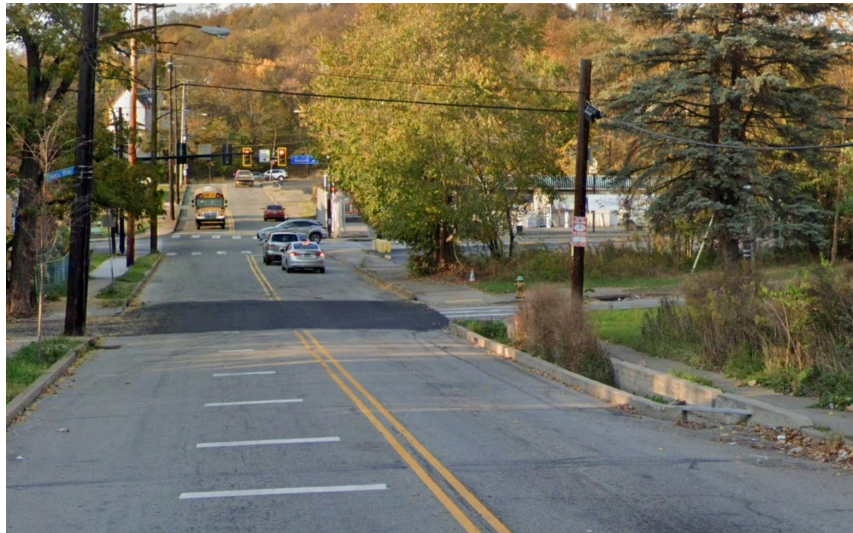
People noted that water collects in an alley behind Seagirt St (which is also behind Crescent School) and is directed towards homes, causing major issues during heavy rainfall. Water running off the steep slopes around Haverhill street is also a concern. People flagged the intersection of Seagirt, Bricelyn, and Tokay as very dangerous, especially given its proximity to a school.

Residents noted water flooding at the base of Wilkinsburg Ave, off Frankstown Ave, and down Bricelyn St. Some of the contributing factors are clogged storm drains on Wilkinsburg Ave and the lack of a street gutter on parts of Bricelyn Street. Residents were concerned about the abandoned vehicles, illegal dumping, and the lack of tree pruning and maintenance.

At the open house, residents asked to plan GSI up around Nimick Place, Haverhill St, and Fahnestock.

BELOW UpstreamPgh's green stormwater infrastructure at Batavia Street can be expanded in a networked system.





ABOVE Bennett Street at Oakwood Street

Frankstown Avenue and Bennett Street travel through a mixed use district that was home to many small streams and seasonal runs.

Water in the Frankstown-Bennett water district can be managed through networked infrastructure in the public right-of-way as well as with on-lot GSI installations.

Bennett Street On-lot GSI.

Located along the southern edge of the district, this area includes several commercial and auto-related properties with large impervious surfaces. Runoff from these sites contributes to localized flooding and sewer backups. Introducing on-lot and vacant-lot GSI could intercept runoff and improve both hydrological performance and neighborhood character.

Angoria Way Street-Stream Pairing. Angoria Way follows a buried stream corridor where runoff currently accumulates with limited conveyance. The right-of-way and adjacent vacant parcels could be reconnected through visible green infrastructure that restores natural drainage patterns.

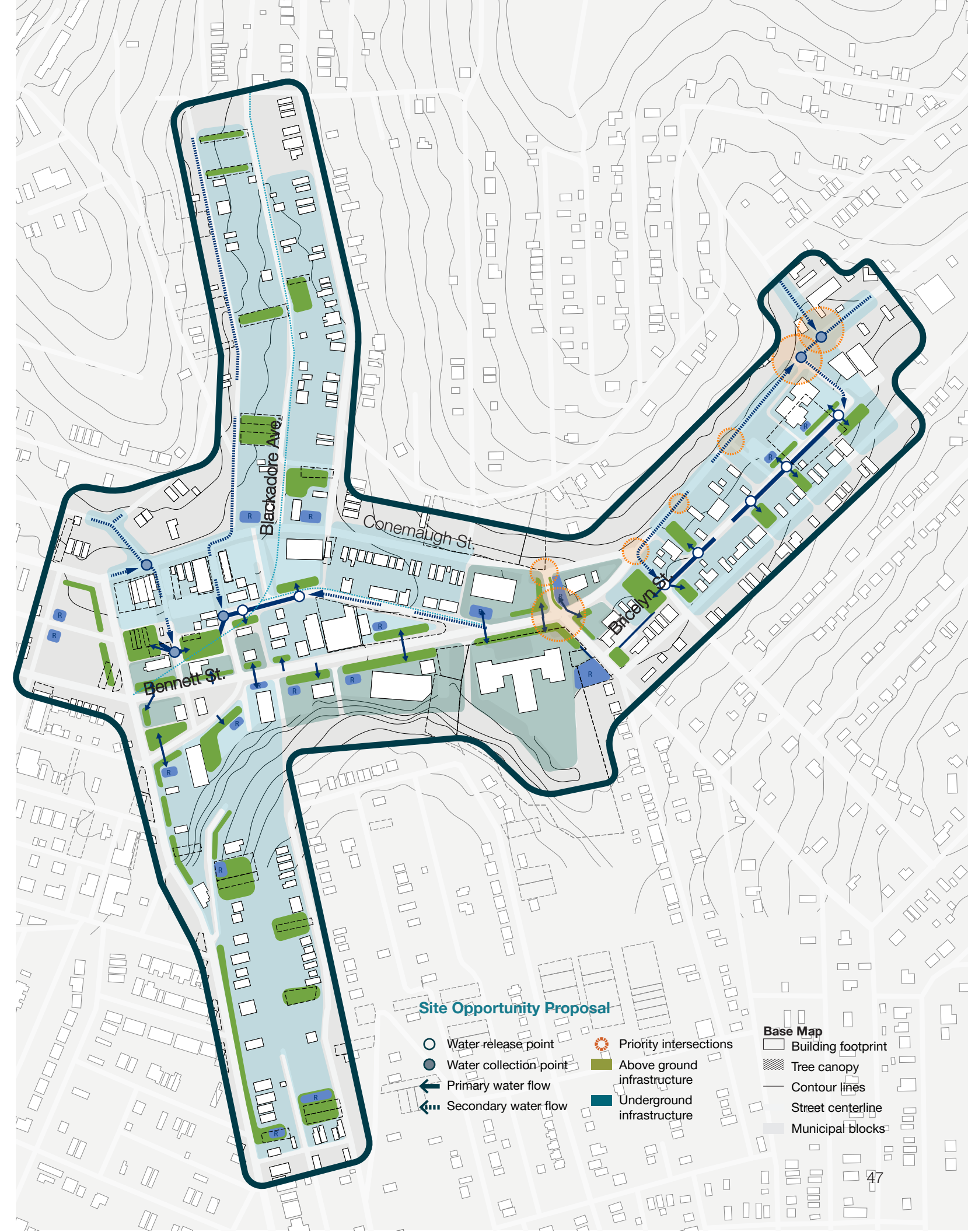
Conemaugh Street-Stream Pairing. Conemaugh Street traces another historic stream alignment, offering a corridor for distributed stormwater management. Existing runoff and flooding issues suggest strong potential for integrated public-private strategies.

Exley Street-Stream Pairing.

Exley Way provides another opportunity to manage stormwater along a buried stream corridor. Distributed interventions could reconnect small parcels and improve water storage and infiltration.

Frankstown and Bennett Street Improvements. The intersection of Frankstown and Bennett Streets offers a prime opportunity to integrate stormwater management with mobility and streetscape upgrades. Green infrastructure here could also improve safety and community identity.

Bennett and Oakwood Networked GSI. The intersection of Oakwood and Bennett Streets includes multiple vacant and tax-delinquent parcels suitable for a connected GSI network. Linking public and private sites here could demonstrate the benefits of distributed, multi-owner stormwater management.





WATER CAPTURE DISTRICT FRANKSTOWN BENNETT
Bennett Street On-lot GSI

Time Frame
short term

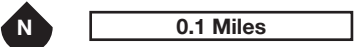
Location
Primarily on Bennett Street and the southern edge of the district, including commercial and light industrial properties, as well as a school property.

GSI Strategy
Private parcel GSI, Vacant Lot GSI

UpstreamPgh's Role
support, advocate

Potential Partners
business owners, business district group, East Hills and Homewood community, Pittsburgh Public Schools, ALCOSAN

Further Investigation
Engage the community to understand how they perceive these properties. Investigate if there is a district business group.



LEFT Streetview of Bennet Street looking toward Conemaugh Street (Google Maps)

WATER CAPTURE DISTRICT FRANKSTOWN BENNETT

Bennett Street On-lot GSI

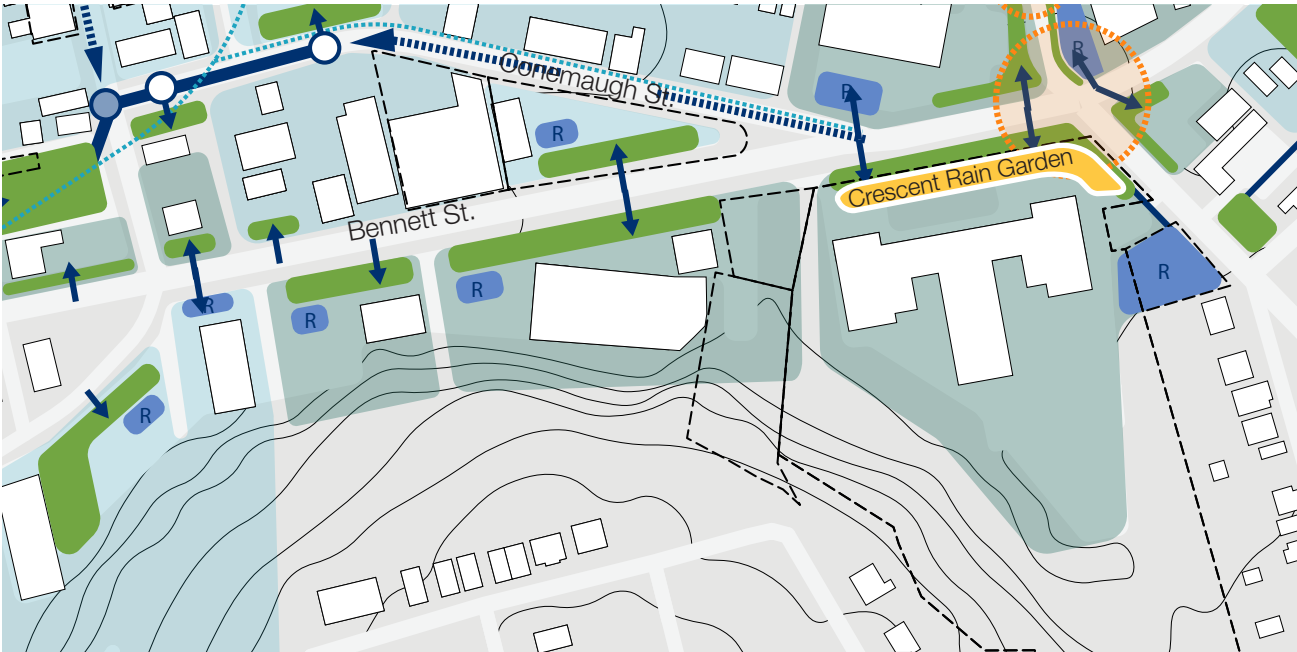
Integrated GSI could improve the visual character of the neighborhood and make it more walkable.

Infrastructure Opportunities

- Water release point
- Water collection point
- Primary water flow
- Secondary water flow
- Priority intersections
- Above ground infrastructure
- Underground infrastructure
- Previous Projects

Base Map

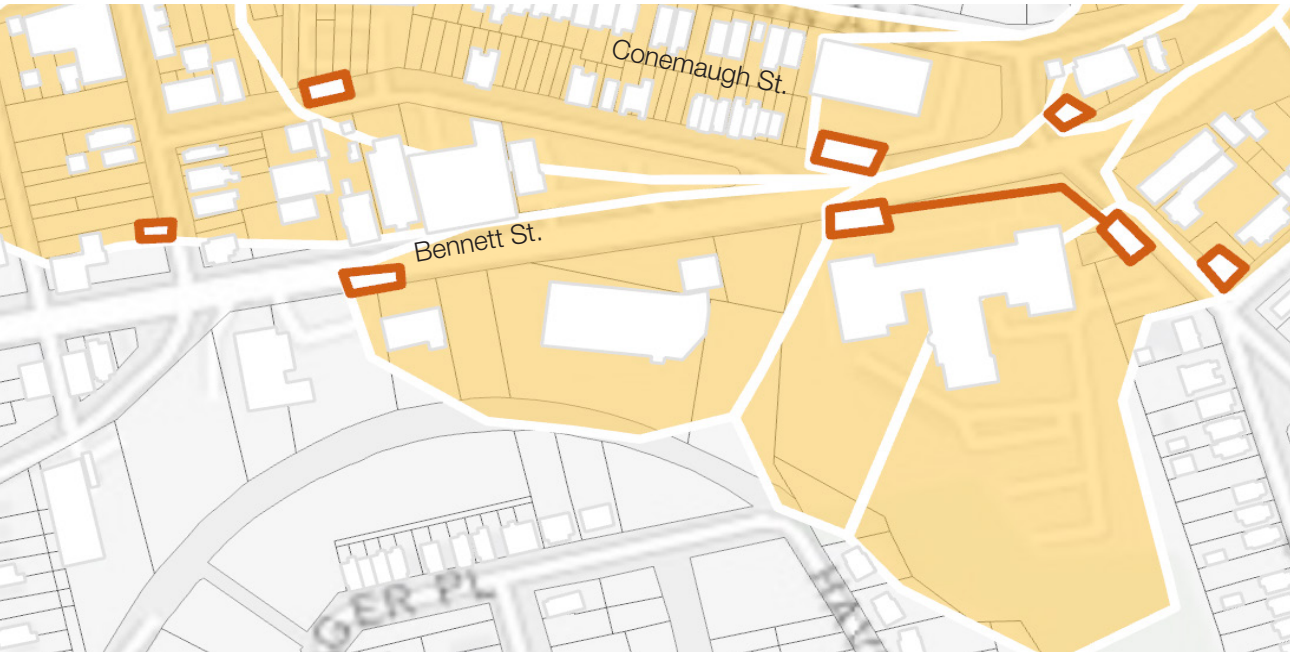
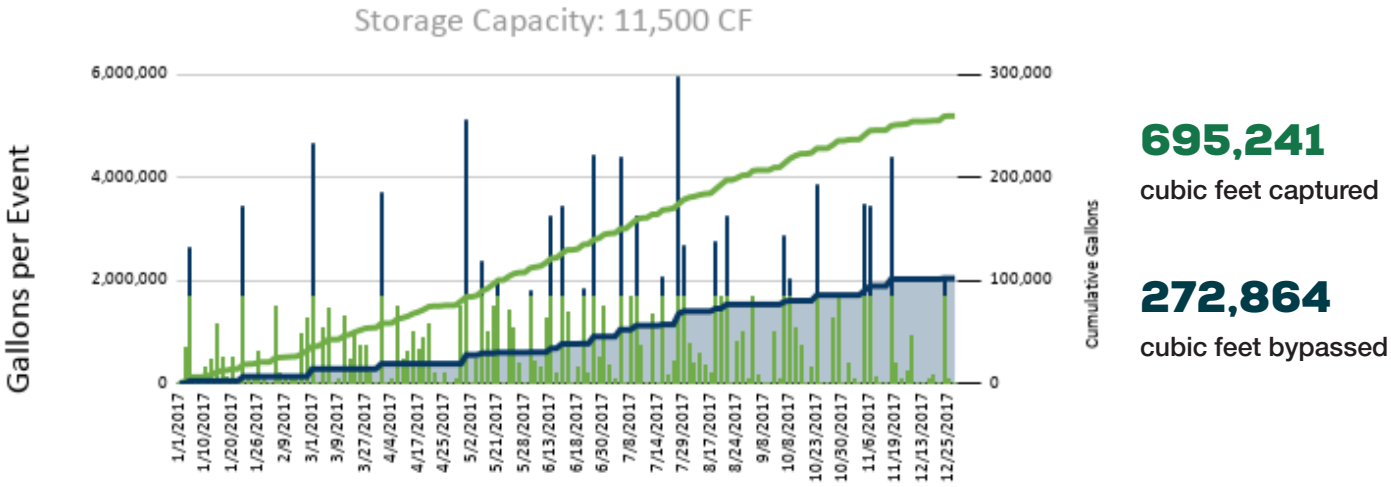
- Building footprint
- Tree canopy
- Contour lines
- Street centerline
- Municipal blocks



Many of the Bennett Street parcels store vehicles and other industrial equipment, some of which appears to be abandoned. Vehicles are often parked on the sidewalk and it is in poor condition, making the area less inviting for walking and driving. The area is attractive to uses relying on low land-values, making costly improvements unlikely without assistance.

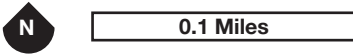
The water could best be managed with on-lot infrastructure. If properties remain in their current use, below-grade tanks could capture water and possibly filter for oils and other contaminants. If the properties change use, below grade storage and above grade GSI could improve the visual character. Public right-of-way improvements are unlikely to succeed with the current uses.

The Crescent School / Faison Annex already has a GSI demonstration project, which could be expanded to capture more of the on-lot area. Curb bump-outs could make the intersection safer for pedestrians and create an entry into the district.



Subshed Structures

- Subshed Structure Area
- Nodes
- Connections



Null outcomes stem from data scarcity or the complete absence of information on the site.

Water Capture Opportunities

within a 5-minute walk of this project

3
Vacant lots
75,344
Impervious area (sqft)
1,176
Streetscape (ft)

0
Parks & open space
0
Parking lots
2
Parcels in Public Ownership

Environmental Justice Considerations

within a 5-minute walk of this project

Null
Employment
Null
Renter/Homeowner
Null
Median Income
Null
of Residents
Null
% of Area Historically Redlined
Null
Cost Burdened



WATER CAPTURE DISTRICT FRANKSTOWN BENNETT

Angoria-Blackadore Street-Stream Pairing



Time Frame
Mid term

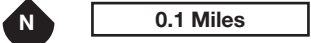
Location
Angoria Way conveyance and storage, capture on Blackadore Ave., and Wheeler St.

GSI Strategy
Public Right-of-Way Improvements, Vacant lot GSI, Private parcel GSI

UpstreamPgh's Role
Advocate, partner

Potential Partners
Adjacent property owners, directly affected property owners, City of Pittsburgh, PGH20, ALCOSAN

Further Investigation
Confirm prevalence of flooding and sewer backup conditions to prioritize investment.



LEFT Street view on Blackadore Avenue (Google Maps)

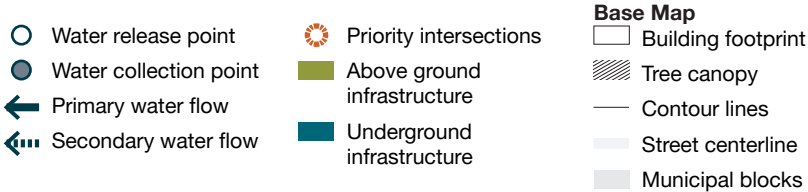
WATER CAPTURE DISTRICT
FRANKSTOWN BENNETT

Angoria-
Blackadore
Street-Stream
Pairing

The area overlays a historic drainage channel and includes a mix of residential and vacant parcels.

Angoria Way is the location of the former stream (Angoria Run) and serves few active properties. Blackadore is a secondary street (compared to Frankstown). Wheeler is a tertiary street with few houses. The area experiences illegal dumping. Blackadore is narrow enough that cars park on the sidewalk and Wheeler’s sidewalks are overgrown or missing, making this an unsafe area for pedestrians. Stormwater infrastructure should be part of a broader renewal strategy.

Infrastructure Opportunities





WATER CAPTURE DISTRICT FRANKSTOWN BENNETT
Conemaugh Street-Stream Pairing

Time Frame mid term	UpstreamPgh's Role lead, partner
Location Conemaugh Street	Potential Partners adjacent property owners, directly affected property owners, City of Pittsburgh, PGH20, ALCOSAN
GSI Strategy Public Right-of-Way Improvements, Vacant Lot GSI, Private parcel GSI	Further Investigation Confirm slope and flow. Confirm prevalence of flooding and backup.



LEFT Streetview from Conemaugh Street looking towards the intersection at Bennett Street (Google Map)

WATER CAPTURE DISTRICT FRANKSTOWN BENNETT

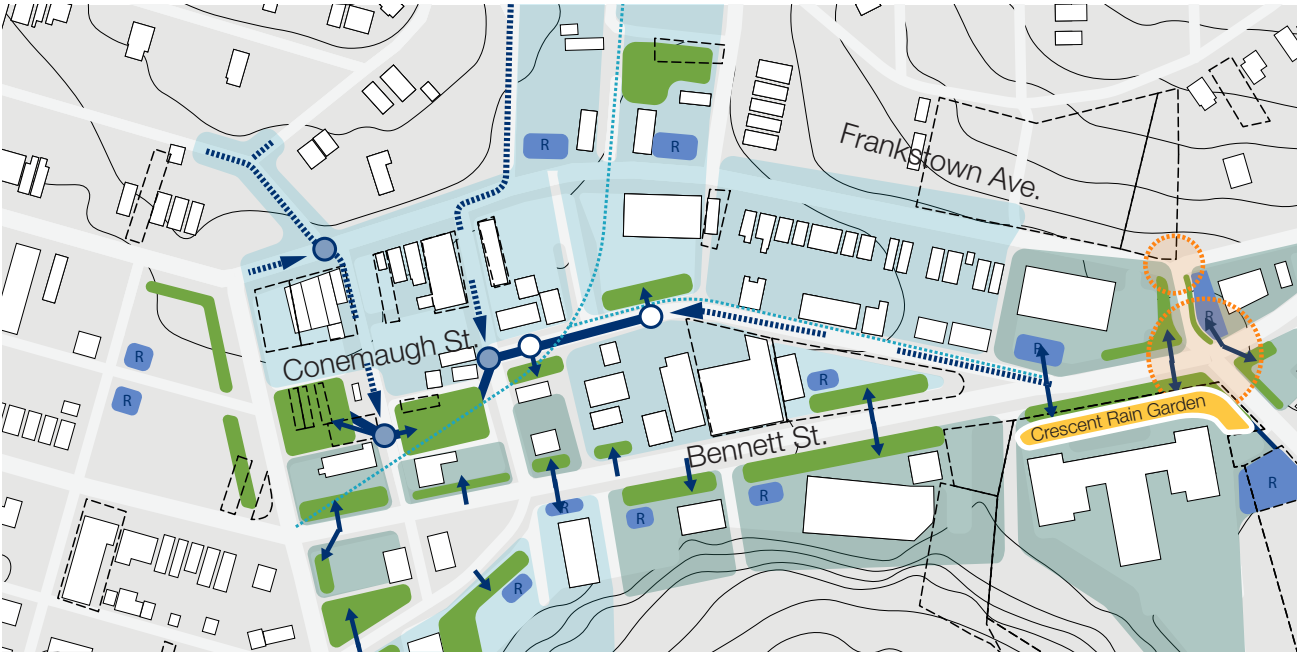
Conemaugh Street-Stream Pairing

The area overlays a historic drainage channel and includes a mix of residential and vacant parcels.

Infrastructure Opportunities

- Water release point
- Water collection point
- Primary water flow
- Secondary water flow
- Priority intersections
- Above ground infrastructure
- Underground infrastructure
- Previous Projects

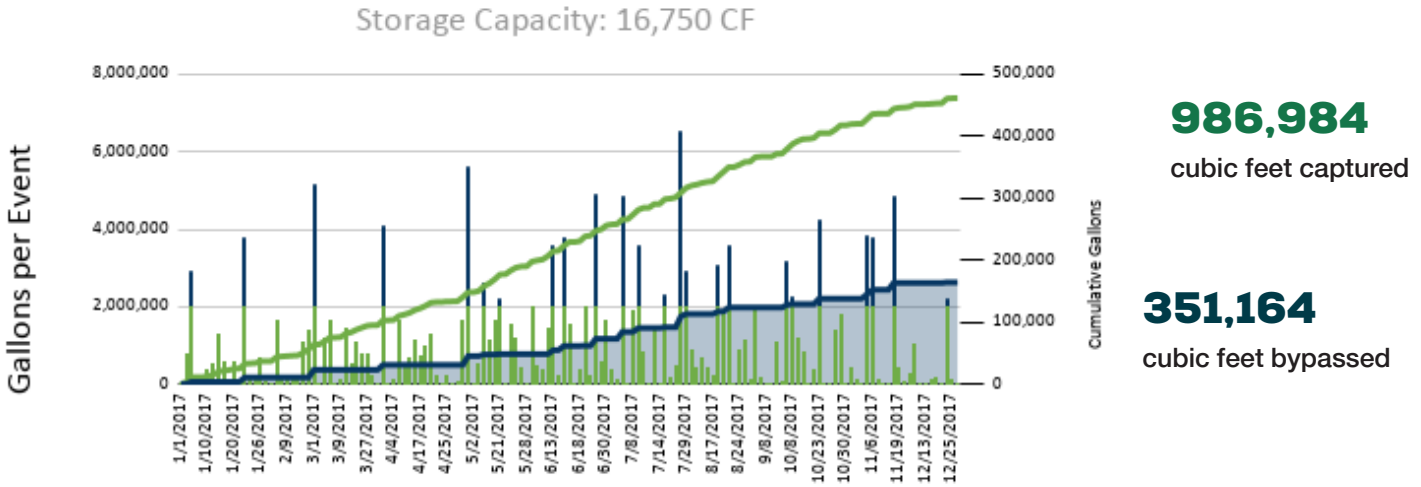
- Base Map
- Building footprint
 - Tree canopy
 - Contour lines
 - Street centerline
 - Municipal blocks



Conemaugh Street follows a historic stream and serves as an alleyway to businesses and homes that front both Bennett St and Frankstown Avenue. Conemaugh is bounded by residential properties with little opportunity for capture, and commercial properties, some of which could capture and store water on site.

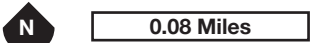
The residential properties to the north of Conemaugh Street are sloped and space-limited, with no catchment areas at the low parts of the properties. These properties, as well as the public ROW, could shed water to a green street retrofit that surface conveys water to a

property at the intersection with Wheeler. The catchment property could serve as a privately owned open space, a shared parking area, or other district facility. This system would be most effective with more properties connected within.



Subshed Structures

- Subshed Structure Area
- Nodes
- Connections



Water Capture Opportunities

within a 5-minute walk of this project

16
Vacant lots
256,097
Impervious area (sqft)
2,273
Streetscape (ft)

0
Parks & open space
0
Parking lots
3
Parcels in Public Ownership

Environmental Justice Considerations

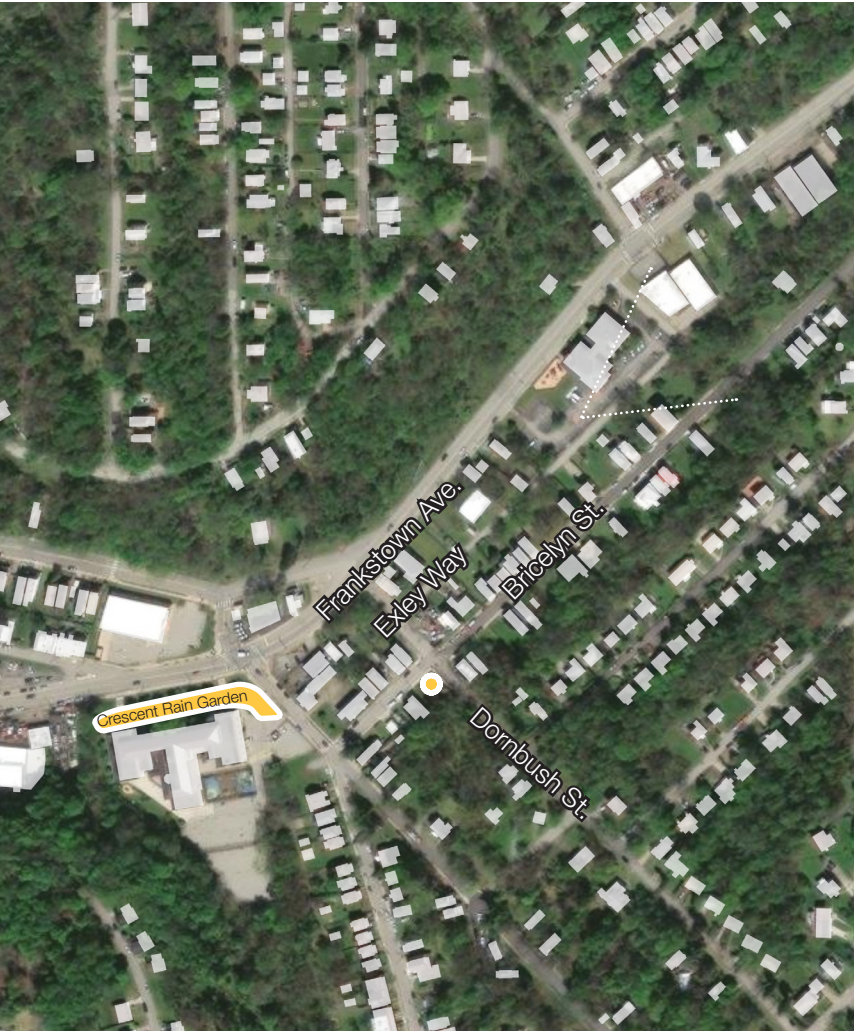
within a 5-minute walk of this project

34.3% % Employed
60.9% % Renters
\$22,500 Median Income
35 # of Residents
100% % of Area Historically Redlined
34.7% % Cost Burdened



WATER CAPTURE DISTRICT FRANKSTOWN BENNETT

Exley Street-Stream Pairing



UpstreamPgh's Role
lead, partner

Time Frame
mid term

Location
Exley Way

GSI Strategy
Public Right-of-Way Improvements, Vacant Lot GSI, Private parcel GSI

Potential Partners
adjacent property owners, directly affected property owners (e.g. A Second Chance), City of Pittsburgh, PGH20, ALCOSAN

Further Investigation
"Modeling will be essential. Likelihood of property owner participation."



LEFT Street view on Exley Way alleyway behind A Second Chance Inc. (Google Map)

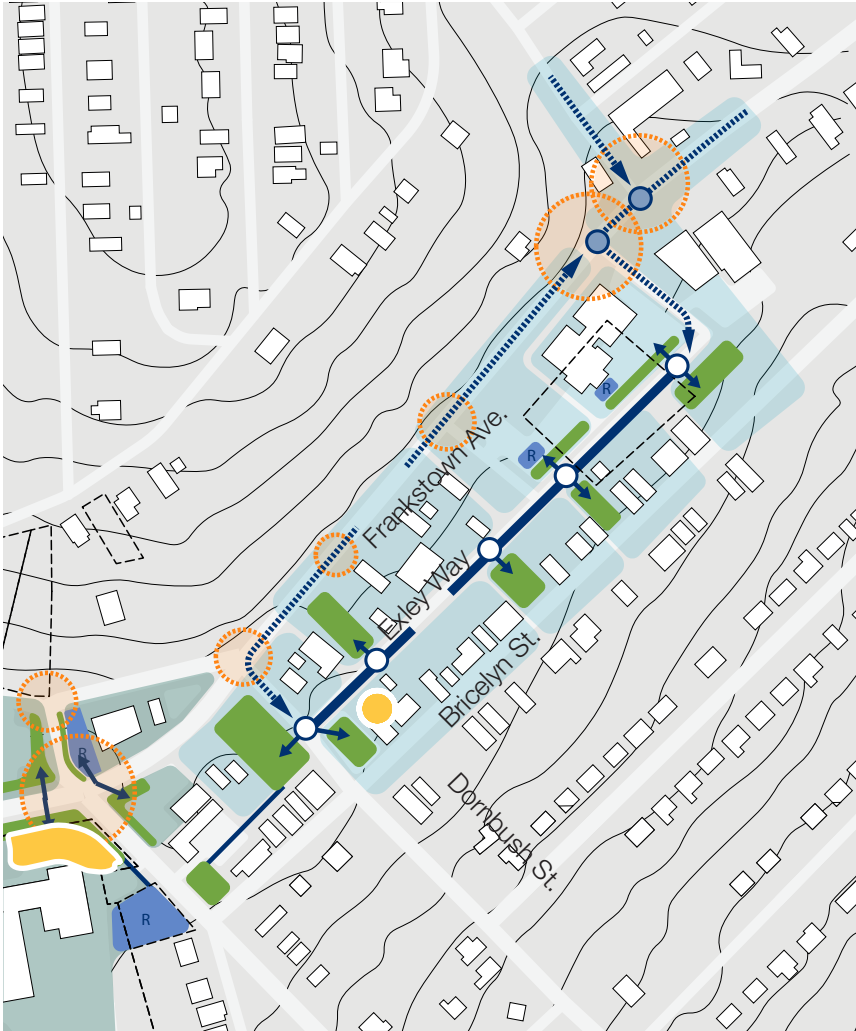
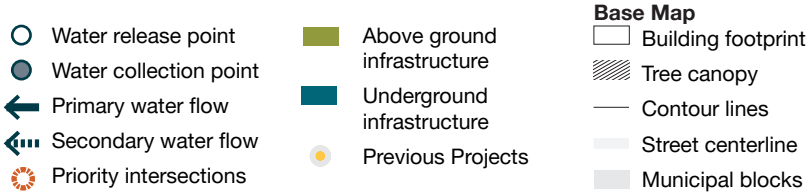
WATER CAPTURE DISTRICT
FRANKSTOWN BENNETT

Exley Street- Stream Pairing

A narrow right-of-way within a residential setting provides a manageable scale for pilot GSI interventions.

Exley Street follows a historic stream and serves as an alleyway to businesses and homes that front Frankstown Avenue and Bricelyn Street. Exley Way is bounded by properties with little opportunity for on-site capture.

Infrastructure Opportunities



There are a few possible strategies with could be staged. The larger systems offer greater opportunities for capture and storage.

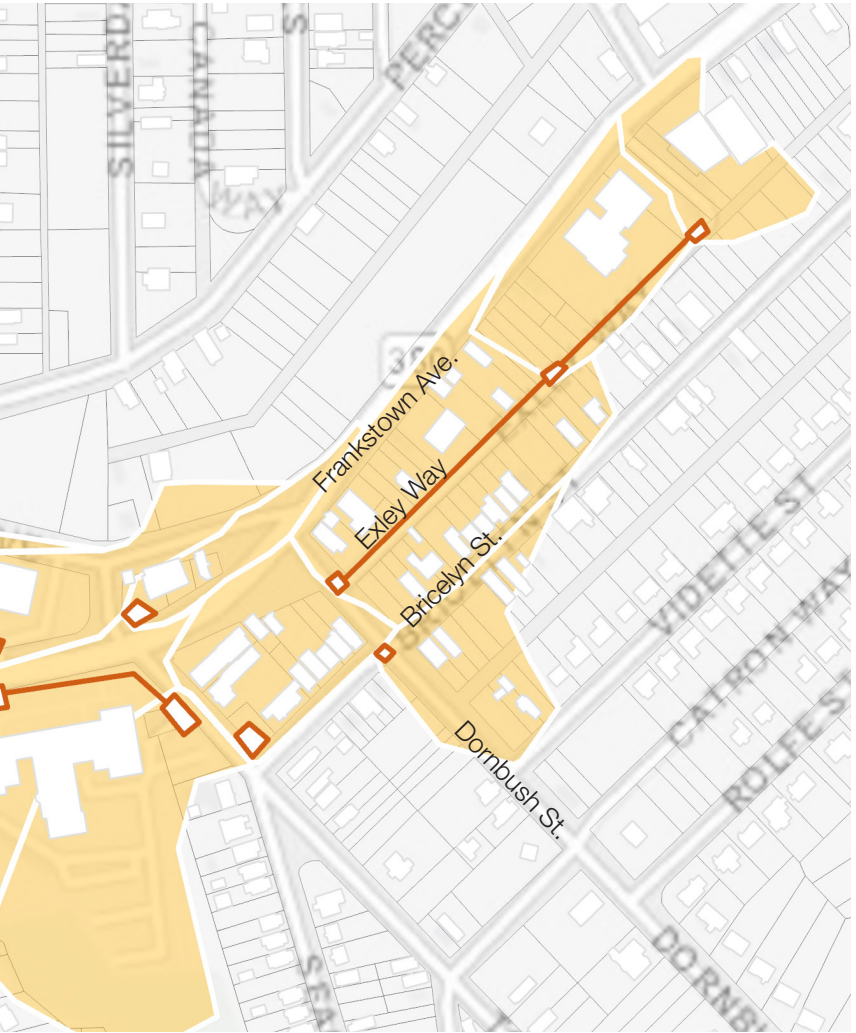
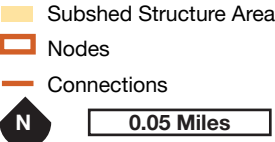
[1] Capture water on a series of non-networked vacant lots. This incremental implementation needs to be managed as a collection of lots. It offers the opportunity to enhance the neighborhood’s sense of place.

[2] Capture water and convey it to a rebuilt Exley Way. Collect water in the tanks below grade or above grade at Dornbush Street.

This capture and conveyance requires significant investment in the public ROW and coordination among property owners, but offers greater storage opportunities.

This system would be most effective with more properties connected to the system. There are opportunities to connect with community uses at the historic school. There are opportunities to connect maintenance and use regimens with the existing GSI at Bricelyn and Dornbush.

Subshed Structures

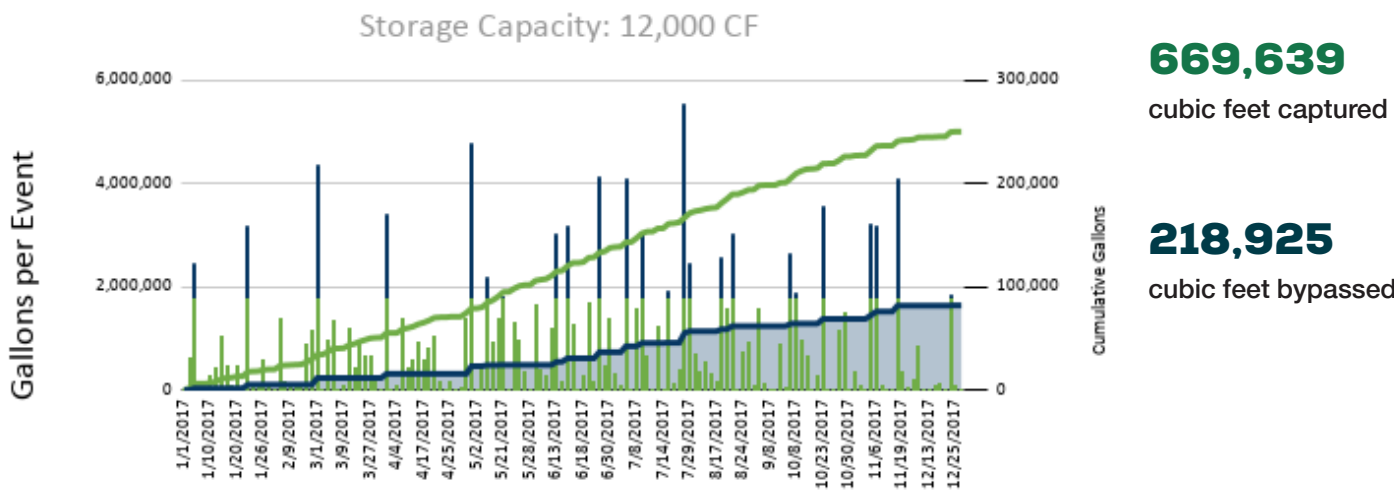


Environmental Justice Considerations
within a 5-minute walk of this project

35.2% % Employed	54 # of Residents
58.8% % Renters	100% % of Area Historically Redlined
\$25,000 Median Income	47.1% % Cost Burdened

Water Capture Opportunities
within a 5-minute walk of this project

29 Vacant lots	0 Parks & open space
155,913 Impervious area (sqft)	0 Parking lots
3,005 Streetscape (ft)	9 Parcels in Public Ownership



Rockwell to Wilkinsburg Water District

What we heard

“It is impossible to bike along Pennwood Ave between South Ave and the Forbes Connector intersection no handicap sidewalk cuts and awful road patching. Cars avoid the potholes by driving in the wrong lane. Rainwater drips down through the train overpass at Rebecca Ave. It s difficult for pedestrians bikes and the handicapped to cross that 5 way intersection. More shade would be nice as well.”

“The sewers on West Street some of them need clean especially on the corner of South and West Street. Glendale avenue seems to be a basin for water”

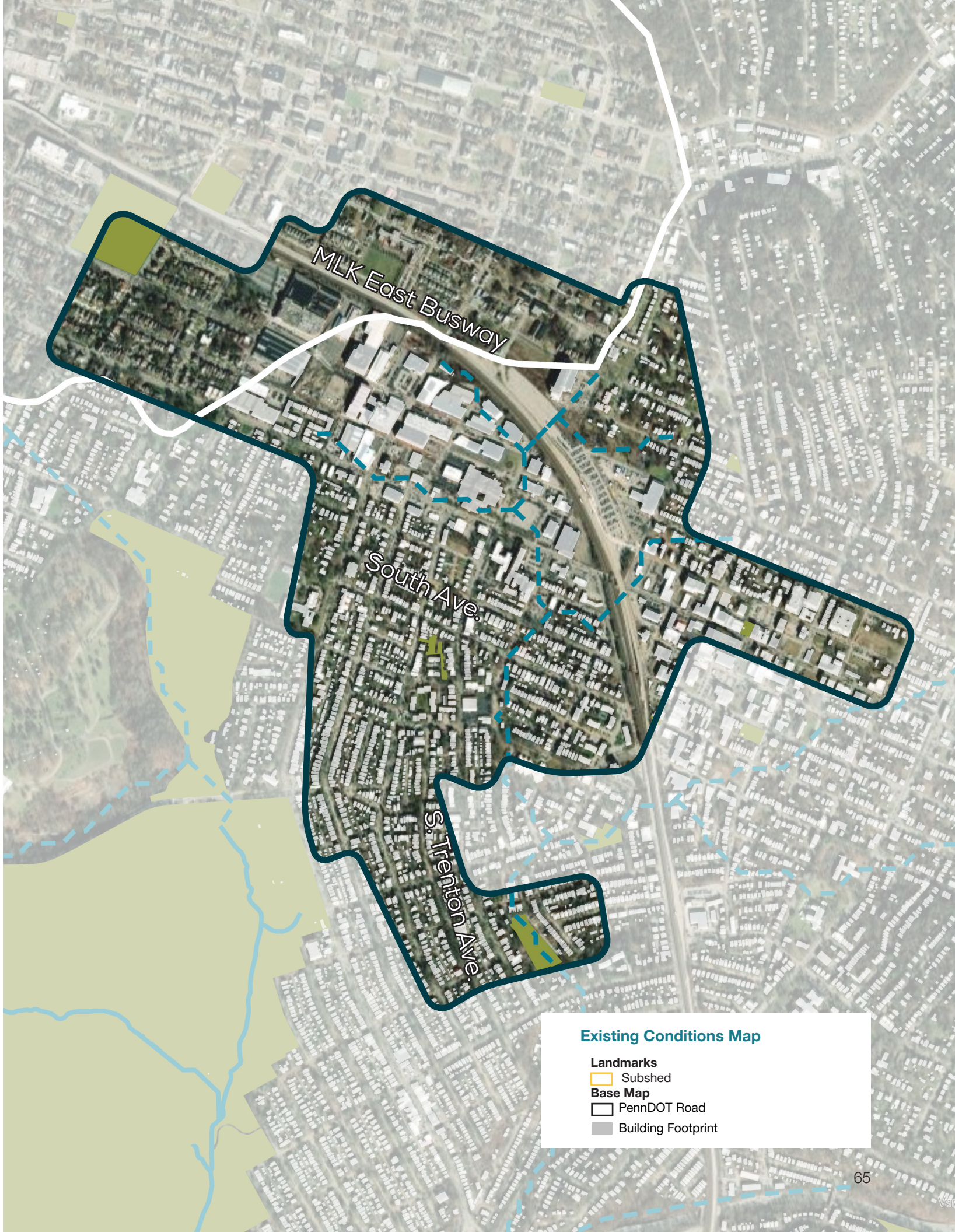
“The promotion of native and adapted edible plants is a key issue area for me that supports climate resilience. Managing water resources (through devices such as rain barrels and composting toilets) to navigate periods of drought and improve water quality is also important.”

“Most of the pollutants and garbage in Nine Mile Run come through this corridor. Consider a capture point that can collect the garbage before it continues down the run.”

“Right now my biggest desire is for the actually waterway of Nine Mile run to continue its restoration journey and become an area of recreation for the residents and a place that native plants and animals can return. The fish that UpstreamPgh has already counted are promising but we need to completely divert all raw sewage from entering this waterway and manage other contamination & refuse that finds its way to the water. I’m also very afraid of the consequences of the Parkway East bridge replacement project on the waterway surrounding woods.”

“The low part of Biddle Avenue where I reside floods with each heavy rain. The drains in the street are ineffective and filled with debris preventing the water from draining properly. My basement has flooded twice 2009 and 2018.”

BELOW Green infrastructure was installed at Wilkinsburg’s municipal parking lot (UpstreamPgh)





ABOVE Wilkinsburg Stormwater Resiliency Project in bloom, completed in 2024 (UpstreamPgh)

The Rockwell-Wilkinsburg Water District includes the recently renovated Rockwell Park complex, the light industrial area south of the Busway, and Wilkinsburg's historic business district. In the past, the three areas functioned independently, but with PRT bus station improvements and other investments, green infrastructure could stitch the area together.

Wilkinsburg Station Area: The Wilkinsburg - Brushton Station Areas will undergo great change if PRT can fund the transformation of the single station and park-and-ride to two stations and a development site. PRT's site partially drains to a bioswale today. In the future, it will have to comply with more strict standards and will likely be below grade technologies or integrated into a more urbanized landscape.

Urban Industrial District: The urban industrial business district south of the busway is mixed use and density. As the area experiences development pressure, parcel-based GSI systems will be installed with redevelopment and ongoing site improvements.

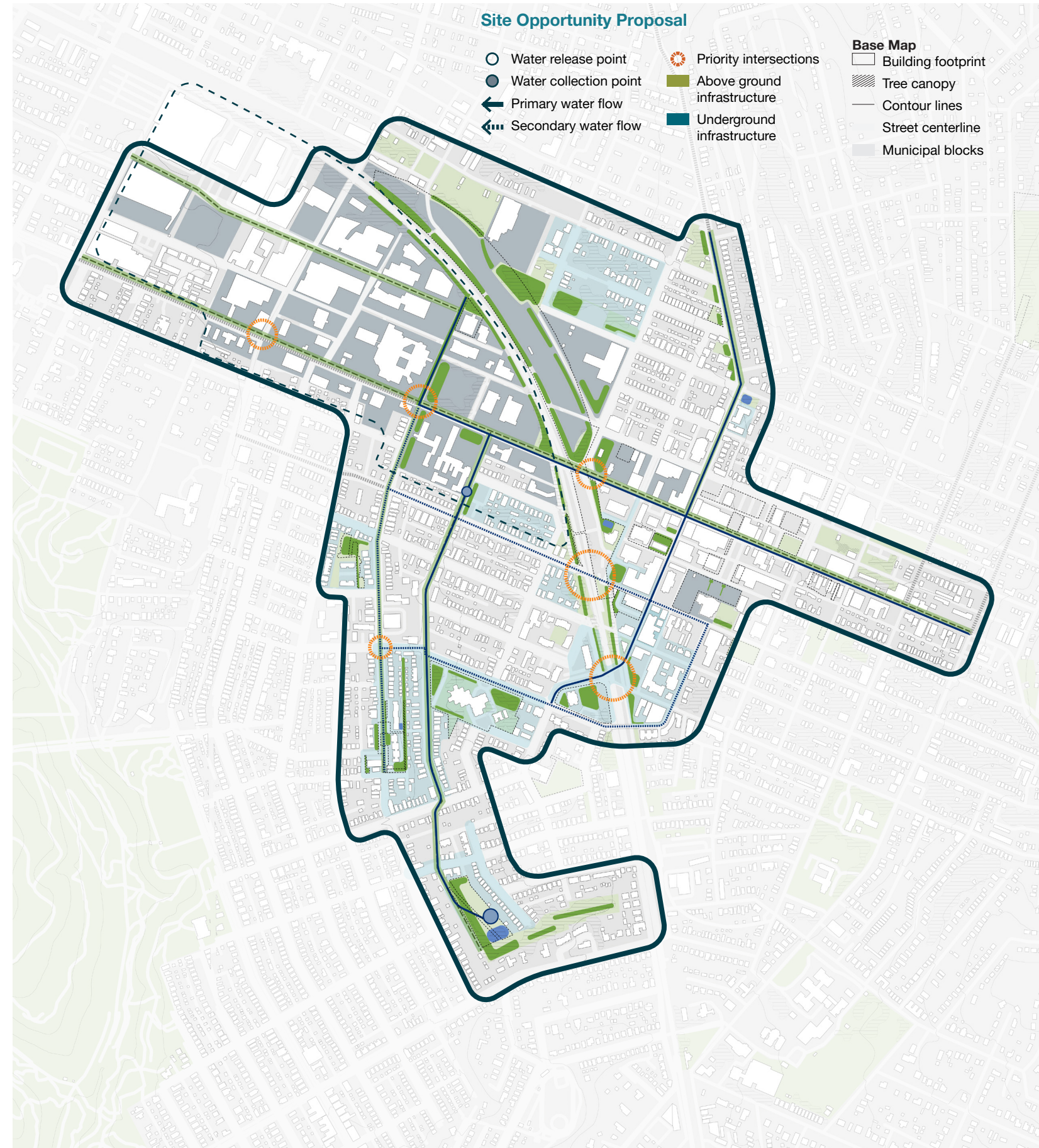
Wilkinsburg's regulations and a stormwater assistance program could require/incentivize private property GSI and be aligned with the City of Pittsburgh's regulations.

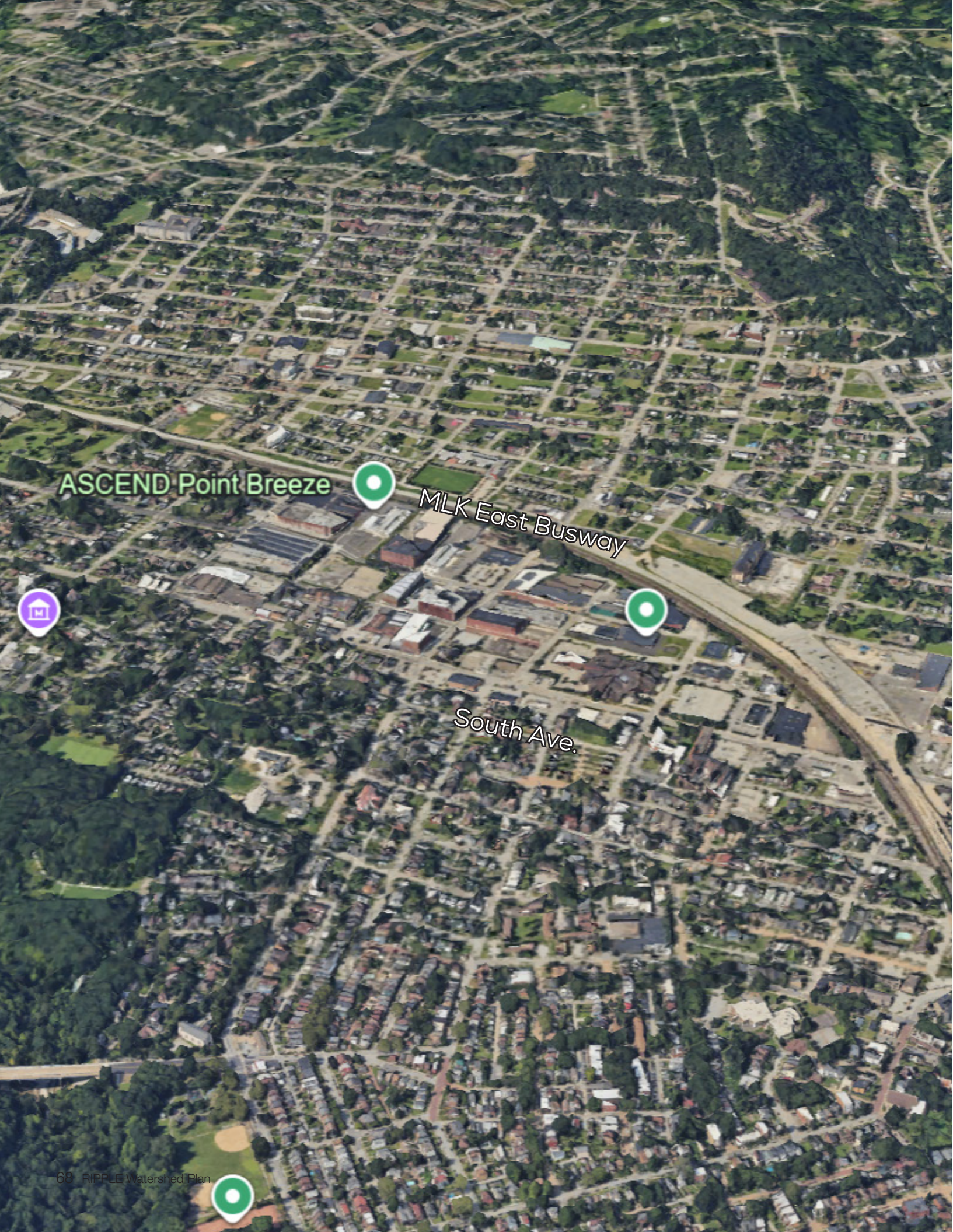
A district plan is needed to identify opportunities for public space/GSI streetscape improvements. Projects could be funded by a TRID.

Historic Business District: Wilkinsburg's historic main street and district has many buildings still intact with a streetscape that has been improved in some areas. There is some development pressure, in the form of renovations. Many parcels do not have open space to capture or store stormwater. There is a high level of impervious surfaces.

Updating Wilkinsburg's regulations and establishing a stormwater assistance program could require/incentivize private property GSI. Many parcels would still benefit from public right-of-way collection and storage as most buildings cover the entire lot area.

A district plan is needed to identify opportunities for public space/GSI streetscape improvements. Projects could be funded by a TRID.





WATER CAPTURE DISTRICT ROCKWELL - WILKINSBURG

Light Industrial District TOD

- Time Frame**
mid term

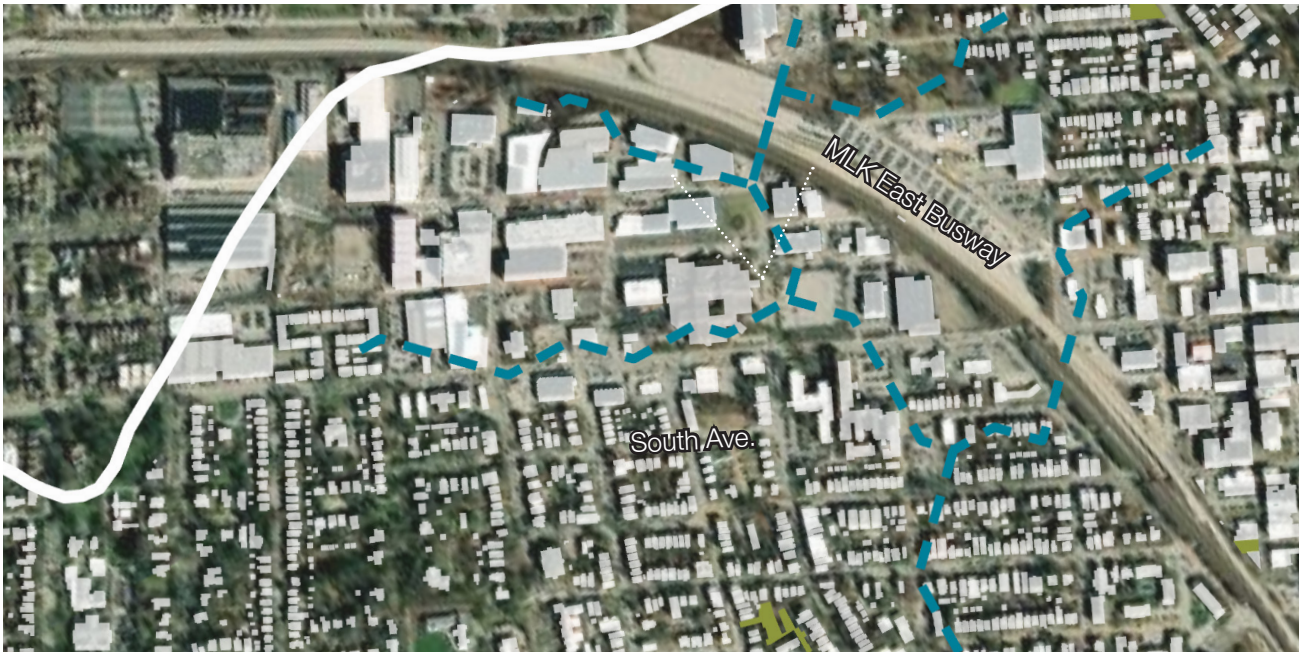
Location
The blocks south of the busway, from Rockwell Park on the western edge, to the railroad and busway underpass to the east.

GSI Strategy
Private parcel GSI, Public Right-of-Way Improvements
- UpstreamPgh's Role**
support, advocate, watchdog

Potential Partners
Business owners, business district group, City of Pittsburgh, Borough of Wilkinsburg, Wilkinsburg-Penn Joint Water Authority (WPJWA), PennDOT, PRT, Railroad, ALCOSAN

Further Investigation
Convene the City of Pittsburgh and the Borough of Wilkinsburg to discuss joint water planning.

N 0.25 miles

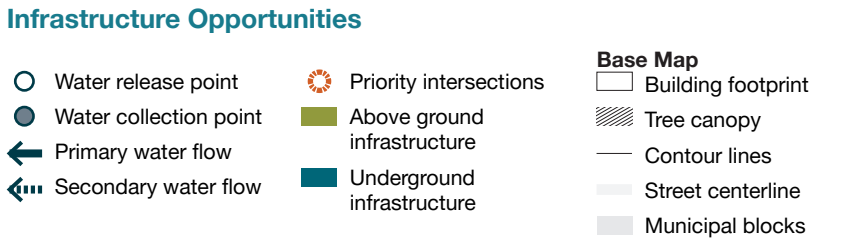


LEFT Trenton Avenue is a connector to the residential areas south of Penn Avenue. PRT has examined the possibility of a below grade crossing of the railroad and busway, which would be at the location of a historic stream.

WATER CAPTURE DISTRICT ROCKWELL - WILKINSBURG

Light Industrial District TOD

Green stormwater infrastructure complements future transit investment and contributing to a multi-municipal transit-oriented district (TOD).



The blocks south of the busway has been home to light industrial and commercial uses but is likely to transition to a transit oriented district (TOD) as PRT builds two new busway stations. Some areas have seen recent reinvestment, including the restoration of the Rockwell industrial buildings as an office park and the addition of an ALDI's grocery store. Other large parcels are likely to change use or undergo redevelopment in the next ten to twenty years.

Developing an open-space network would enhance the district's desirability. This would likely be implemented through a district plan. UpstreamPgh would not lead the plan but would be an expert party to it.

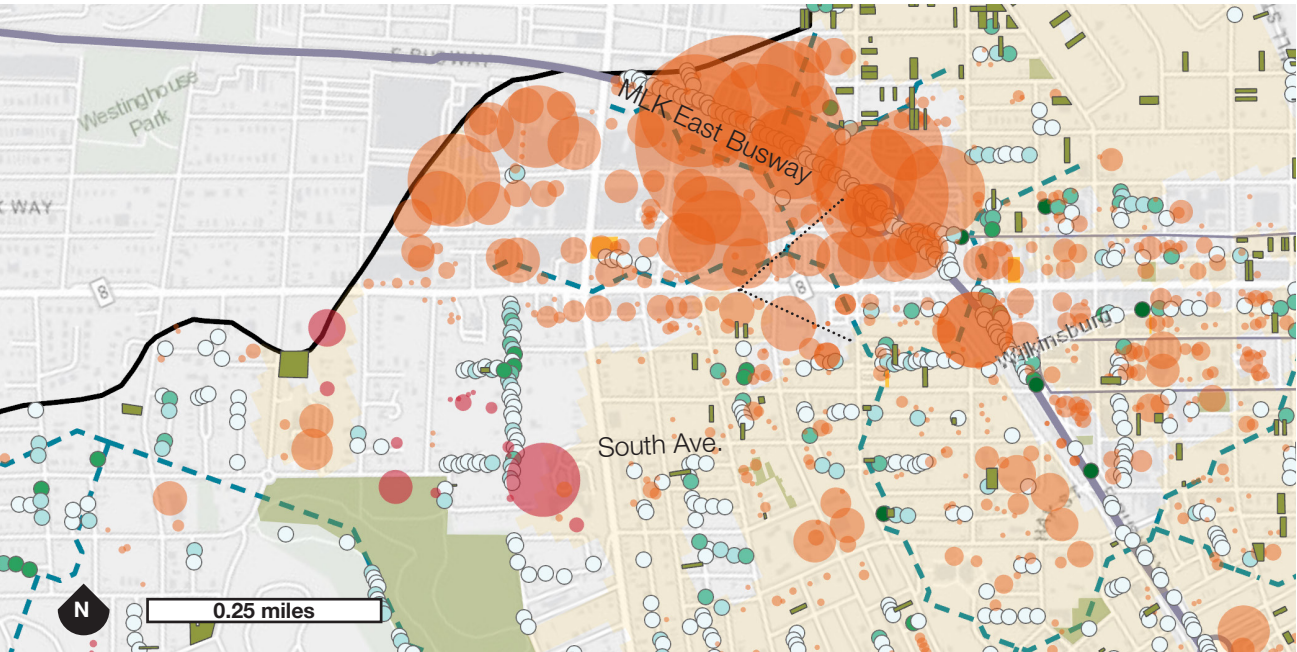
PRT has explored a concept that establishes a possible park/underpass to connect the south-of-the-busway district to PRT's park-and-ride lot and 7800 Susquehanna (Campbell Enterprise Center). This would mark the historic stream paths and create high-quality connections to benefit Homewood and Wilkinsburg. The

project would require funding well beyond what PRT can provide, such as a RAISE/BUILD/TIGER grant, and would require a high-capacity developer to be involved. UpstreamPgh should be actively involved in any application and should remain an advocate.

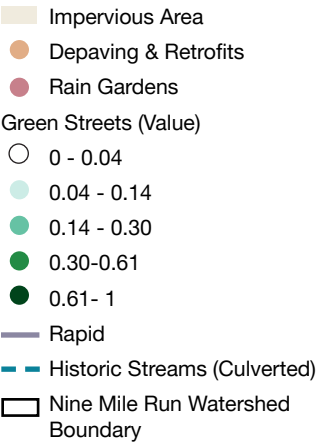
Redevelopment or significant upgrades in these areas will trigger newer, more stringent stormwater capture requirements. If the area were to experience development pressure, this would likely be the most effective way to improve stormwater performance on these properties.



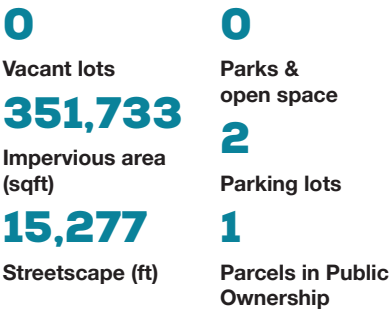
LEFT GSI can be paired with safety improvements to Penn Avenue. Traffic calming and on-lot improvements can collect stormwater and make it more attractive to pedestrians, cyclists, and drivers.



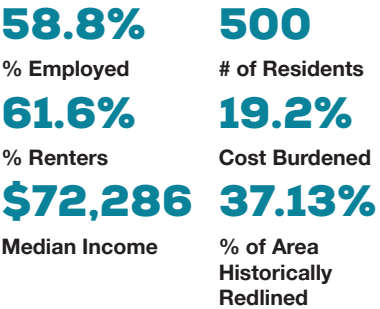
Computational Map



Water Capture Opportunities within a 5-minute walk of this project



Environmental Justice Considerations within a 5-minute walk of this project





Bethany Baptist Church



MLK East Busway

Hill Ave

South Ave.

WATER CAPTURE DISTRICT ROCKWELL - WILKINSBURG Light Industrial District Green Streets



MLK East Busway

Susquehanna St.

Time Frame
mid term

Location
Penn Avenue, Thomas Street/Boulevard,
Trenton Street, West Street

GSI Strategy
Public Right-of-Way Improvements

UpstreamPgh's Role
support, advocate, watchdog

Potential Partners
Business owners, business district group,
City of Pittsburgh, PGH20, Borough of
Wilkesburg, Wilkesburg CDC, WPJWA,
PennDOT, PRT, Railroad, ALCOSAN

Further Investigation
Convene the City of Pittsburgh and the
Borough of Wilkesburg to discuss joint
water planning.



0.1 Miles



LEFT GSI could be incorporated into traffic calming and pedestrian improvements at intersections such as this one at Trenton and Penn Avenues.

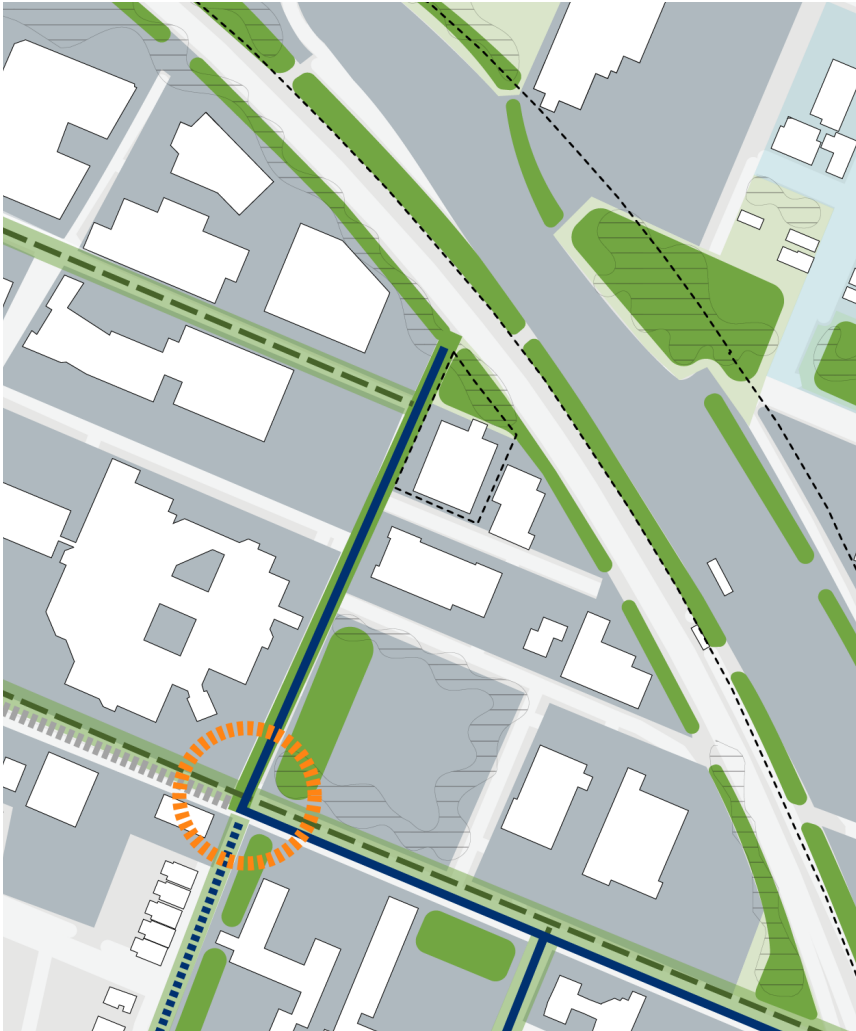
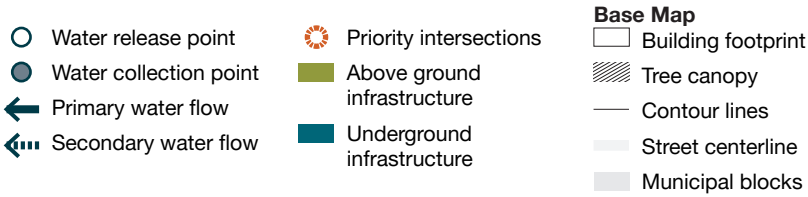
WATER CAPTURE DISTRICT
ROCKWELL - WILKINSBURG

Light Industrial District Green Streets

Green streets could improve multimodal safety, increasing access to adjacent neighborhoods, and create a positive identity for the district.

This emerging commercial district is intersected by a few major thoroughfares including Penn Avenue and Braddock Avenue. As the district continues to reinvent itself, other minor streets could be augmented for increased pedestrian use, including signalized crossings and bike infrastructure at Penn Avenue.

Infrastructure Opportunities



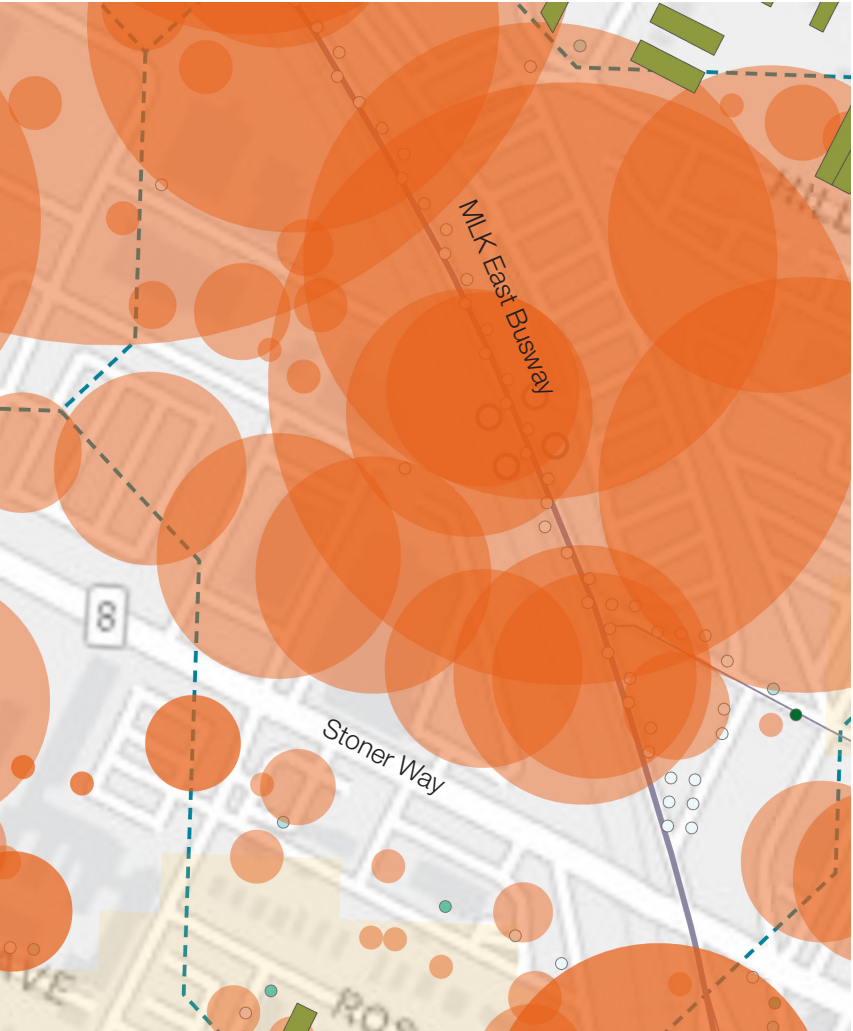
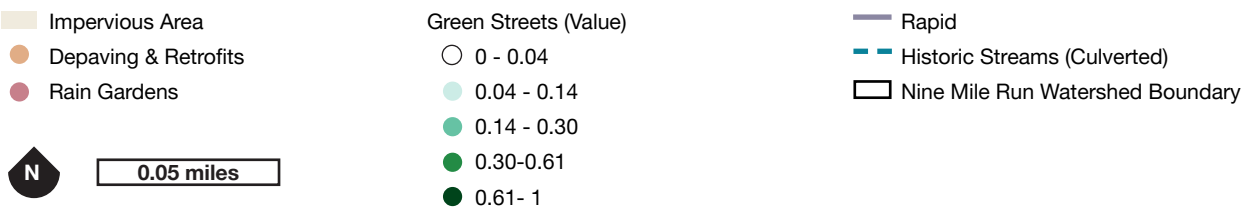
Strategies include GSI integrated with active transportation best practices such as better crosswalks, road diets, public transit stops, and improved signal technology.

PennDOT manages Penn Ave, and the City of Pittsburgh and Wilksburg control the remainder of the streets. The project will need a coordinated district strategy for improvements, well-articulated in a district plan or an active transportation plan. The planning

effort needs to be led jointly by the municipalities, by one or more community development groups. Given the lack of coordination, this might be best led by a yet-to-be-formed or identified district business or development group. UpstreamPgh can be a partner in those efforts.

If done well, streetscape improvements would improve safety, support existing businesses, and attract new ones.

Computational Map



Environmental Justice Considerations

within a 5-minute walk of this project

Null	Null
Employment	# of Residents
Null	Null
Renter/ Homeowner	% of Area Historically Redlined
Null	Null
Median Income	Cost Burdened

Null outcomes stem from data scarcity or the complete absence of information on the site.

Water Capture Opportunities

within a 5-minute walk of this project

0	0
Vacant lots	Parks & open space
18,766	0
Impervious area (sqft)	Parking lots
2,994	1
Streetscape (ft)	Parcels in Public Ownership

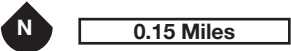


LEFT Street view of Rockwell Park and Satellite University Offices on Thomas Boulevard looking towards North Lexington Street (Google Maps)



WATER CAPTURE DISTRICT ROCKWELL - WILKINSBURG
Park-and-Ride Renewal @ Rosedale

Time Frame long term	UpstreamPgh's Role support, advocate, watchdog
Location Commercial and residential areas north of the busway, including residential parcels, commercial parcels, and PRT's Park-and-Ride	Potential Partners Business owners, business district group residents in Pittsburgh and Wilkinsburg, City of Pittsburgh, PGH20, Borough of Wilkinsburg, WPJWA, Wilkinsburg CDC, Operation Better Block, PennDOT, PRT, Railroad, ALCOSAN
GSI Strategy Public Right-of-Way Improvements, Private parcel GSI, Public Parcel Integrated GSI, Vacant Lot GSI	Further Investigation Convene Pittsburgh and Wilkinsburg to discuss joint water planning. Investigate the nature of stormwater issues in the residential fabric, while investigating mobility issues to tie the two together. Gauge interest of Bridgeway Capital for possible below-grade connection to see if they would lead on the project.



LEFT Green infrastructure will be incorporated into PRT's station area improvements. It will be a good opportunity to extend previous GSI projects in Homewood, such as this project by Operation Better Block.

WATER CAPTURE DISTRICT ROCKWELL - WILKINSBURG

Park-and-Ride Renewal @ Rosedale

Stormwater infrastructure can connect people to history and, more importantly, to transit options and amenities.

Infrastructure Opportunities

- Water release point

●

Water collection point

←

Primary water flow

↔

Secondary water flow
- ⊗

Priority intersections

■

Above ground infrastructure

■

Underground infrastructure
- Base Map

□

Building footprint

▨

Tree canopy

—

Contour lines

—

Street centerline

■

Municipal blocks



This area has distinct uses such as a large parking lot, large light industrial buildings, and single family homes, each with their own strategies. It is relatively disconnected from main thoroughfares and has much lower development pressure than south of the busway.

Redevelopment or significant upgrades in this area will trigger newer, more stringent stormwater capture requirements. If the area were to experience development pressure, this would likely be the most effective way to improve stormwater performance on large parcels.

PRT's property will be subject to Wilkinsburg's stormwater requirements, which are less stringent than Pittsburgh's. All

municipalities in the project area should adopt the most stringent code in the cohort. On the PRT parcel, GSI can be part of an open space strategy and incorporated into the station design and the TOD development area. This includes a bike-ped trail parallel to the busway and last-mile connections to the neighborhood.

PRT's current GSI location could become a park that serves as a below-grade RR crossing and,

Computational Map

- Impervious Area
- Depaving & Retrofits
- Rain Gardens
- Green Streets (Value)
- 0 - 0.04
- 0.04 - 0.14
- 0.14 - 0.30
- 0.30-0.61
- 0.61- 1
- Rapid
- Historic Streams (Culverted)
- Nine Mile Run Watershed Boundary

⬆

N

0.15 Miles

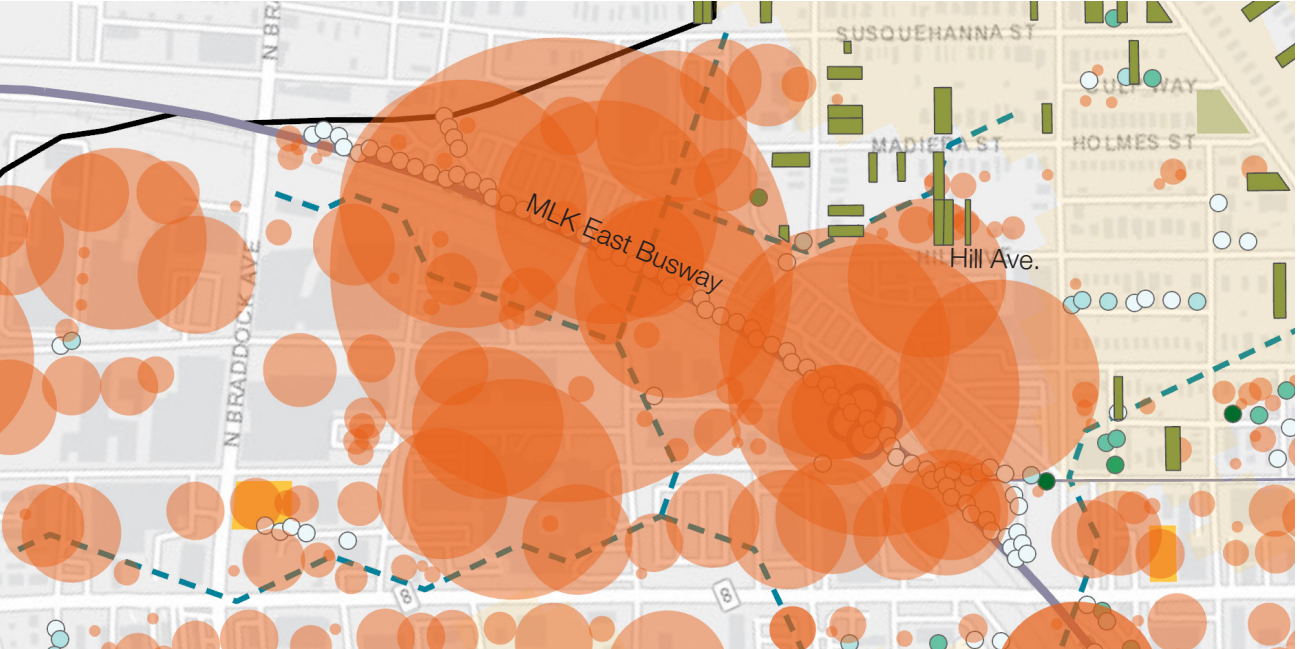
Water Capture Opportunities within a 5-minute walk of this project

19	0
Vacant lots	Parks & open space
236,313	1
Impervious area (sqft)	Parking lots
7,470	3
Streetscape (ft)	Parcels in Public Ownership

Null outcomes stem from data scarcity or the complete absence of information on the site.

Environmental Justice Considerations within a 5-minute walk of this project

Null	Null
%Employment	# of Residents
Null	9.2%
% Renter	% of Area Historically Redlined
Null	Null
Median Income	Cost Burdened



although this has been explored by PRT in the past, its scope would exceed what PRT could do alone. Advocate for this crossing as a ped-stormwater crossing and assist in aligning partners. This crossing could connect to a new Trenton Street parklet and serve as an essential link for the community to reach the growing amenities in the district south of the busway. This is a large, multi-million-dollar project that cannot be justified solely by

stormwater but must be part of an accessibility strategy.

GSI should be included in PRT's station areas and PRT-owned properties. There is a PRT precedent for GSI near Homewood Station. GSI is included in PRT's Landscape Design Guidelines, which can guide UpstreamPgh's advocacy.

Public ROW improvements might include improved crosswalks

that capture rainwater, address pedestrian safety, and create safe multimodal routes to transit. The area near 7800 Susquehanna could host an entrance to a trail network that redirects water from the parking lot. Additional public right-of-way improvements are needed. Coordinate with UpstreamPgh's street tree pits. Consider road safety and the integration of intersection improvements.



WATER CAPTURE DISTRICT ROCKWELL - WILKINSBURG
Wilkinsburg Business District

- Time Frame**
mid term

Location
This area includes the Penn Avenue main street district, as well as sidestreets to the south of Penn Avenue. The Penn Avenue infrastructure can extend east to Ardmore Boulevard, but the district core should be the focus.

GSI Strategy
Private parcel GSI, Public Right-of-Way Improvements, Public Parcel Integrated GSI, Vacant Lot GSI
- UpstreamPgh’s Role**
support, advocate, watchdog, partner, lead

Potential Partners
Business owners, business district group, Borough of Wilkinsburg, WPJWA, Wilkinsburg CDC, PennDOT, PRT, Railroad, ALCOSAN

Further Investigation
Understand redevelopment strategy emerging from the Comprehensive Plan process



LEFT Green infrastructure can be incorporated into business district streetscape renewal and safety improvements. Individual property owners, like the one on the right, are planning for stormwater improvements.

WATER CAPTURE DISTRICT ROCKWELL - WILKINSBURG

Wilkinsburg Business District

Green stormwater infrastructure can become a signature element of Wilkinsburg’s renewed business district identity.

Infrastructure Opportunities

- Water release point
- Water collection point
- Primary water flow
- Secondary water flow
- ⊙

Priority intersections
- Above ground infrastructure
- Underground infrastructure
- Previous Projects

□

Base Map

□

Building footprint

▨

Tree canopy

—

Contour lines

—

Street centerline

□

Municipal blocks

The blocks east of the busway are home to a traditional main street district with historic buildings and a grid of gently sloped streets. GSI networks could inform a more comprehensive open space strategy that creates destinations throughout the district.

Developing an open-space network would enhance the district’s desirability. This would likely be implemented through a district plan. UpstreamPgh would not lead the plan but would be an expert party to it.

Redevelopment or significant upgrades in these areas will trigger newer, more stringent stormwater capture requirements, but given the amount of historic properties, the opportunities are more limited than in other areas. GSI could help create beloved spaces at historic properties such as vacant churches or the grounds of the train station and the adjacent Hay Street.

The Borough has limited funds for infrastructure investment and limited project management capacity. Their capacity will need to

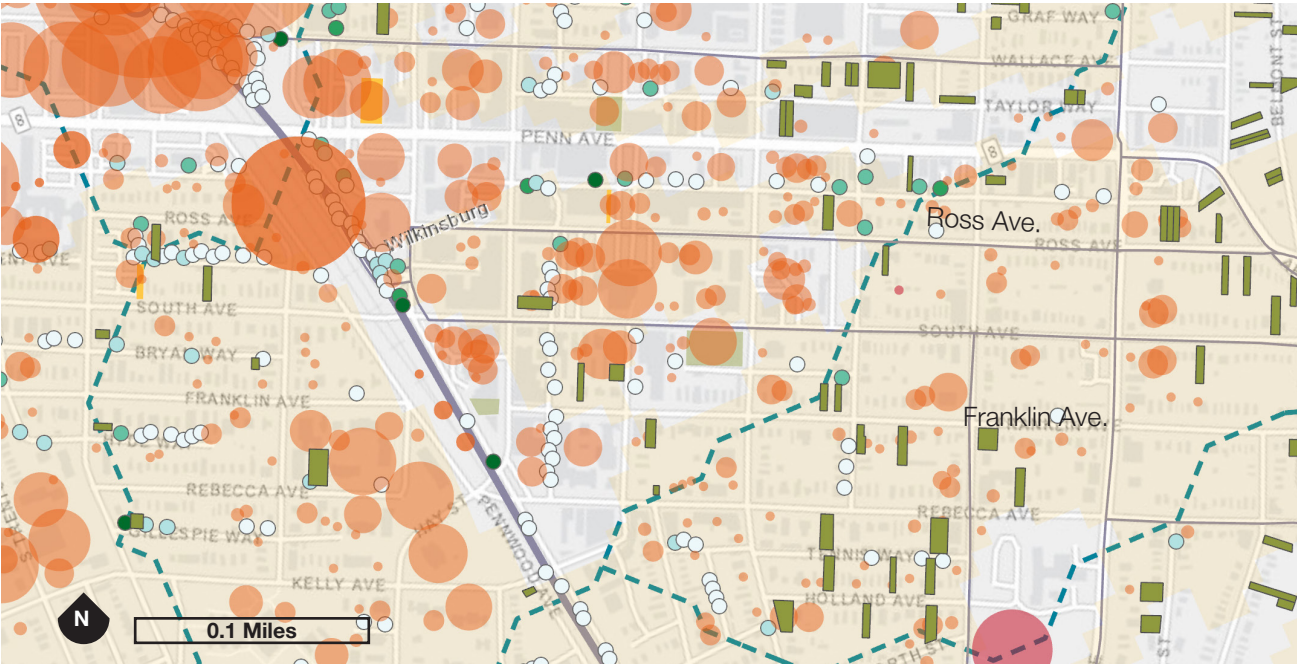
be augmented to create a plan and see it implemented over a number of years.

Augmenting Wilkinsburg’s stormwater code would help guide best practices, but it will add costs to projects with already-weak proformas. UpstreamPgh could be essential in finding funding and bringing these projects to fruition.

Green alleys may be a solution. Align with future Active Transportation implementation projects.



LEFT The construction of the railroad truncated the historic stream, yet stormwater still flows across large paved areas. Stormwater can be incorporated into intersection improvements. The adjacent property sits at a natural low spot and could also serve a stormwater function.



Computational Map

- Impervious Area
- Depaving & Retrofits
- Rain Gardens
- Green Streets (Value)
- 0 - 0.04
- 0.04 - 0.14
- 0.14 - 0.30
- 0.30-0.61
- 0.61 - 1
- Rapid
- Historic Streams (Culverted)
- Nine Mile Run Watershed Boundary

Water Capture Opportunities

within a 5-minute walk of this project

13	3
Vacant lots	Parks & open space
394,589	1
Impervious area (sqft)	Parking lots
18,105	18
Streetscape (ft)	Parcels in Public Ownership

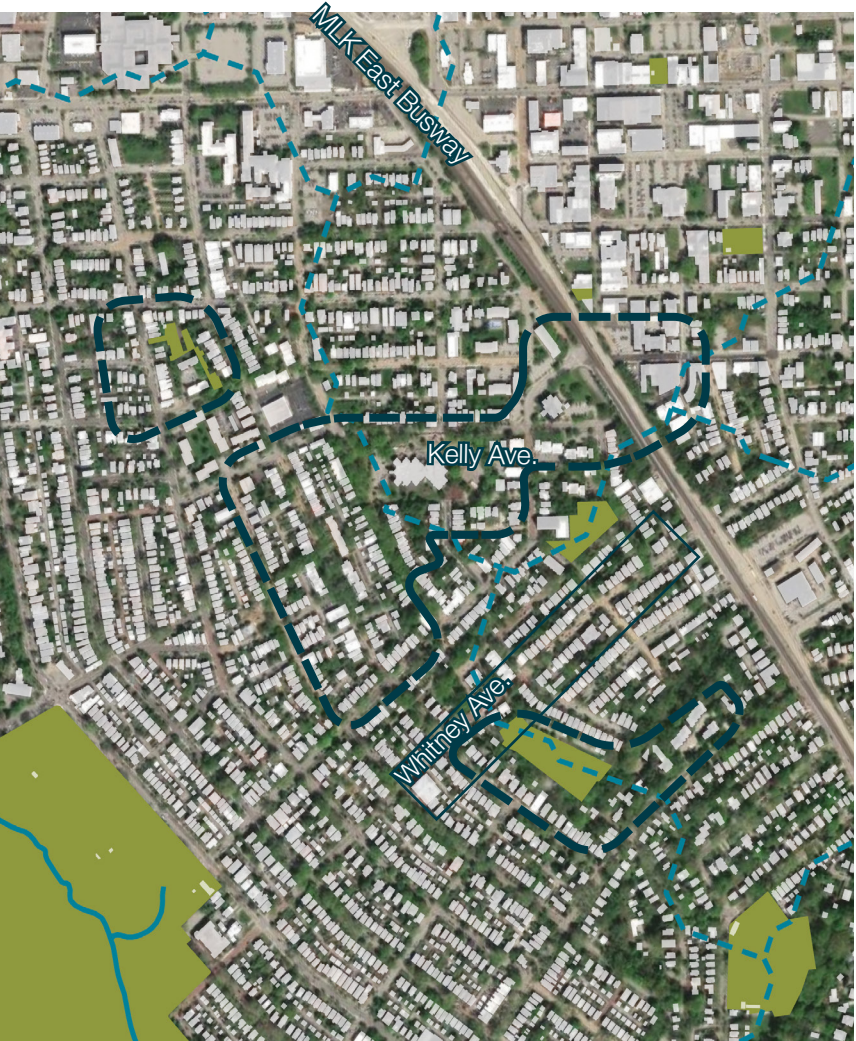
Environmental Justice Considerations

within a 5-minute walk of this project

51.3%	119
% Employment	# of Residents
91%	95.5%
% Renters	% of Area Historically Redlined
\$40,000	24.4%
Median Income	Cost Burdened



WATER CAPTURE DISTRICT
ROCKWELL - WILKINSBURG
**Whitney Park
and Kelly School
Micronetworks**



Time Frame
short term

Location
Two micro-networks that direct water to the publicly owned properties at Whitney Park and the Kelly Elementary School

GSI Strategy
Private parcel GSI, Public Right-of-Way Improvements, Public Parcel Integrated GSI

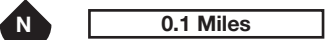
UpstreamPgh's Role
support, advocate, partner

Potential Partners
Residents and the general community, Borough of Wilkinsburg, WPJWA, ALCOSAN"

Further Investigation
Water modeling (eventually)

Existing Conditions Map

- Landmarks**
- Subshed
- Base Map**
- PennDOT Road
 - Building Footprint



LEFT While not within environmental justice areas, low lying greenspaces and paved areas throughout the neighborhood can be an amenity and store stormwater, like this parking area near Whitney Park.

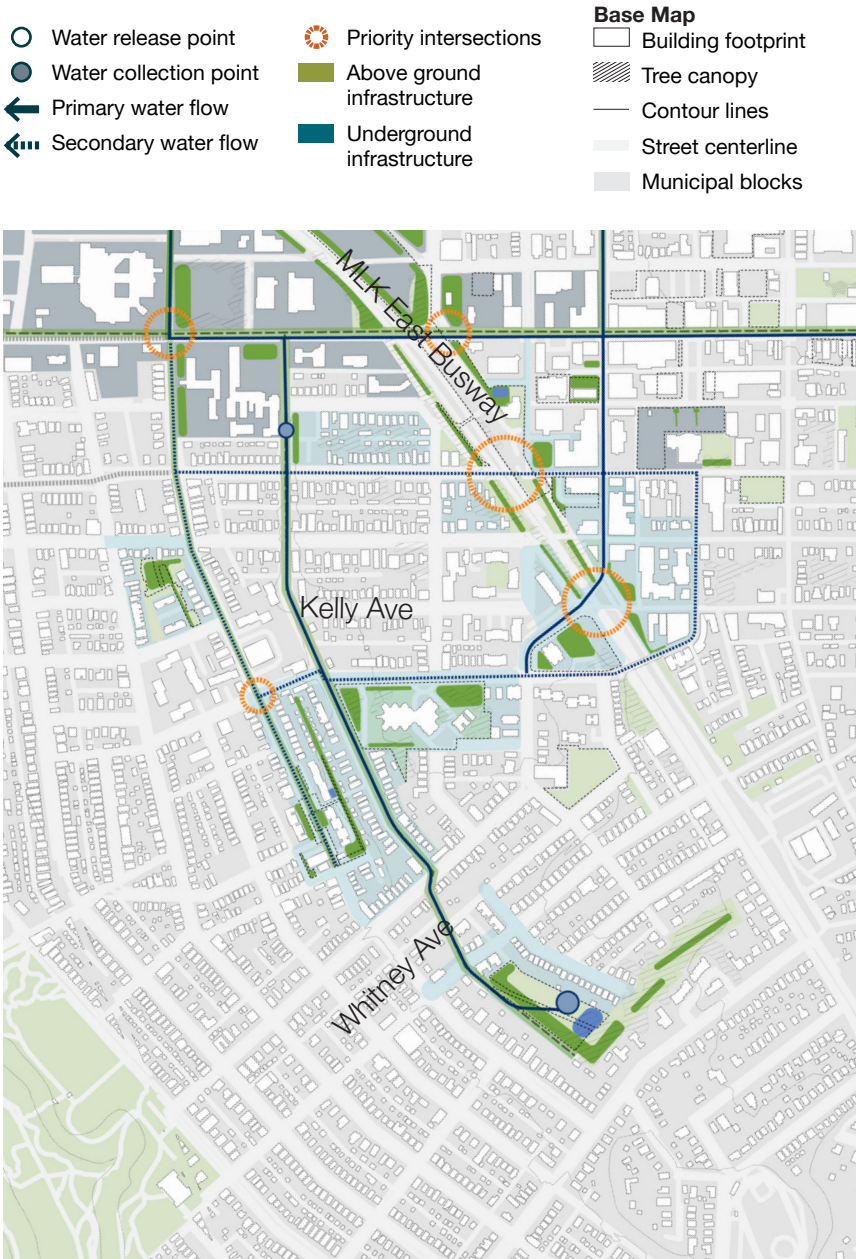
WATER CAPTURE DISTRICT
ROCKWELL - WILKINSBURG

Whitney Park and Kelly School Micronetworks

While not within the study’s Environmental Justice focus areas, publicly owned properties present opportunities for GSI that benefit the community in general.

Several publicly owned properties could anchor a green street network extending toward Penn Avenue. The catchment area consists primarily of small-lot single-family homes, with stormwater contributed largely from the public right-of-way.

Site Opportunity Proposal

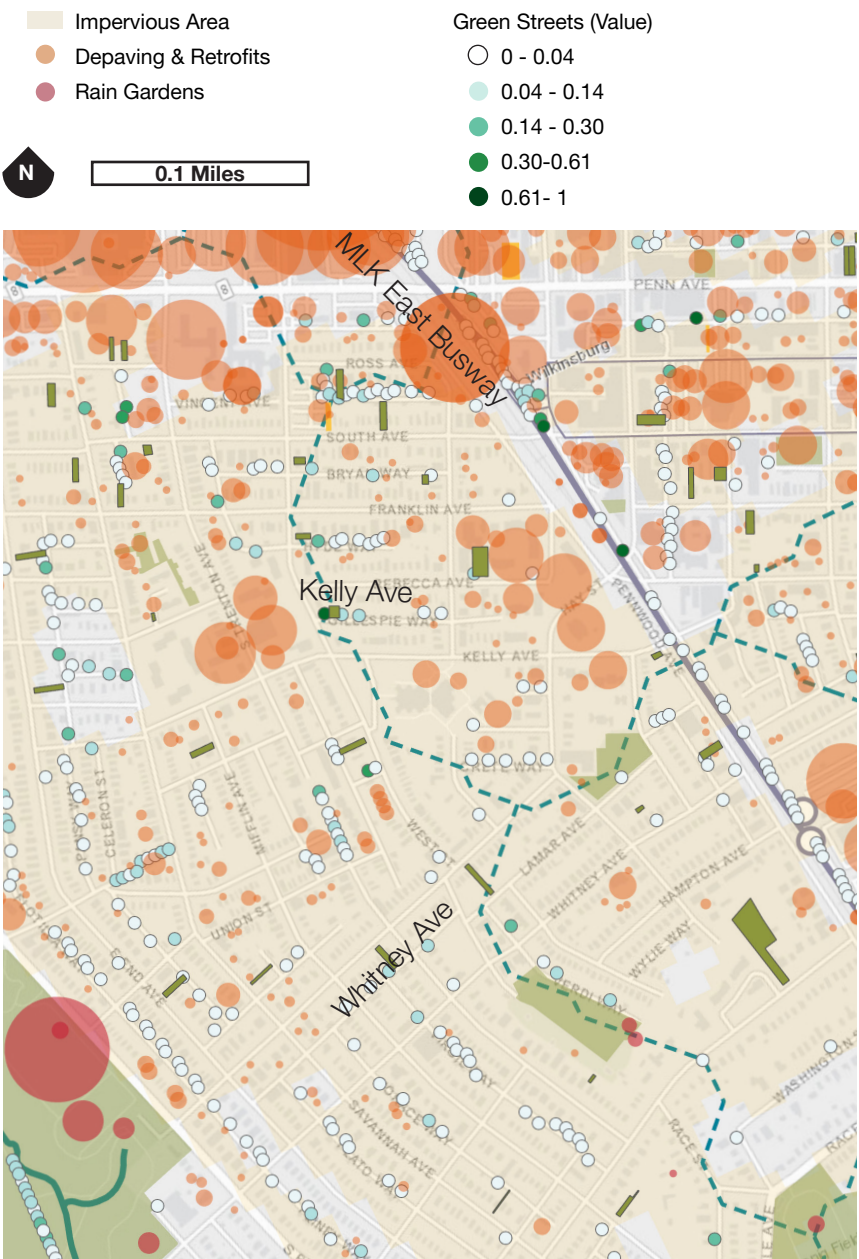


These projects mirror the park initiatives further upslope, though at a smaller scale. Park improvements can enhance on-site stormwater management through planted conveyance and both above- and below-grade storage. Research shows that combining below-grade storage with a bioswale in the same area—can increase the effectiveness and longevity of both systems.

In addition to managing on-site runoff, parks can receive water from the public right-of-way and adjacent parcels. Storage and retention infrastructure should be constructed first, followed by streetscape improvements to capture and convey runoff into the system.

As functional infrastructure, these systems require maintenance routines that differ from those the municipality currently performs.

Computational Map



The Borough already faces challenges in maintaining existing infrastructure, so design alone is only the first step. Long-term care and maintenance of community-integrated GSI must be built into any project that moves forward. These projects are likely to attract the most community interest and engagement, even though their contribution to overall stormwater retention may be relatively modest.

The Borough will soon undertake a comprehensive review and planning study of all its parks. Participating in and supporting this effort will provide an important opportunity to explore stormwater management possibilities within these parks in greater detail. UpstreamPgh could be exceptionally valuable if it could tap GSI funding sources for the improvement projects.

Environmental Justice
Considerations

within a 5-minute walk of this project

69.1%	858
% Employed	# of Residents
85.9%	80.3%
% Renter	% of Area Historically Redlined
\$52,196	16.2%
Median Income	Cost Burdened

Water Capture Opportunities

within a 5-minute walk of this project

13	3
Vacant lots	Parks & open space
6,979	1
Impervious area (sqft)	Parking lots
11,727	12
Streetscape (ft)	Parcels in Public Ownership

VALLEY PARK PROJECTS

Many of the area’s neighborhood parks are targeted for reinvestment and are ideal places for green stormwater infrastructure.

Many of the parks in the upper watershed were created in low valleys where development was less desirable. In some places, historic waterways still move through the buried sewer system, and the sound of flowing water can sometimes be heard underground—evidence that inflow and infiltration remain an issue.

These valley parks offer good opportunities for stormwater management. Some parks naturally receive runoff from surrounding areas and can store water during storms. In other cases, water from nearby streets and neighborhoods could be directed to the parks where it can be captured and managed.

Most of these parks need reinvestment to meet current standards. Maintenance has often been limited, and some facilities have been abandoned, raising questions about long-term care. At the same time, the low level of disturbance has allowed strong ecological communities to grow, though invasive species are common.

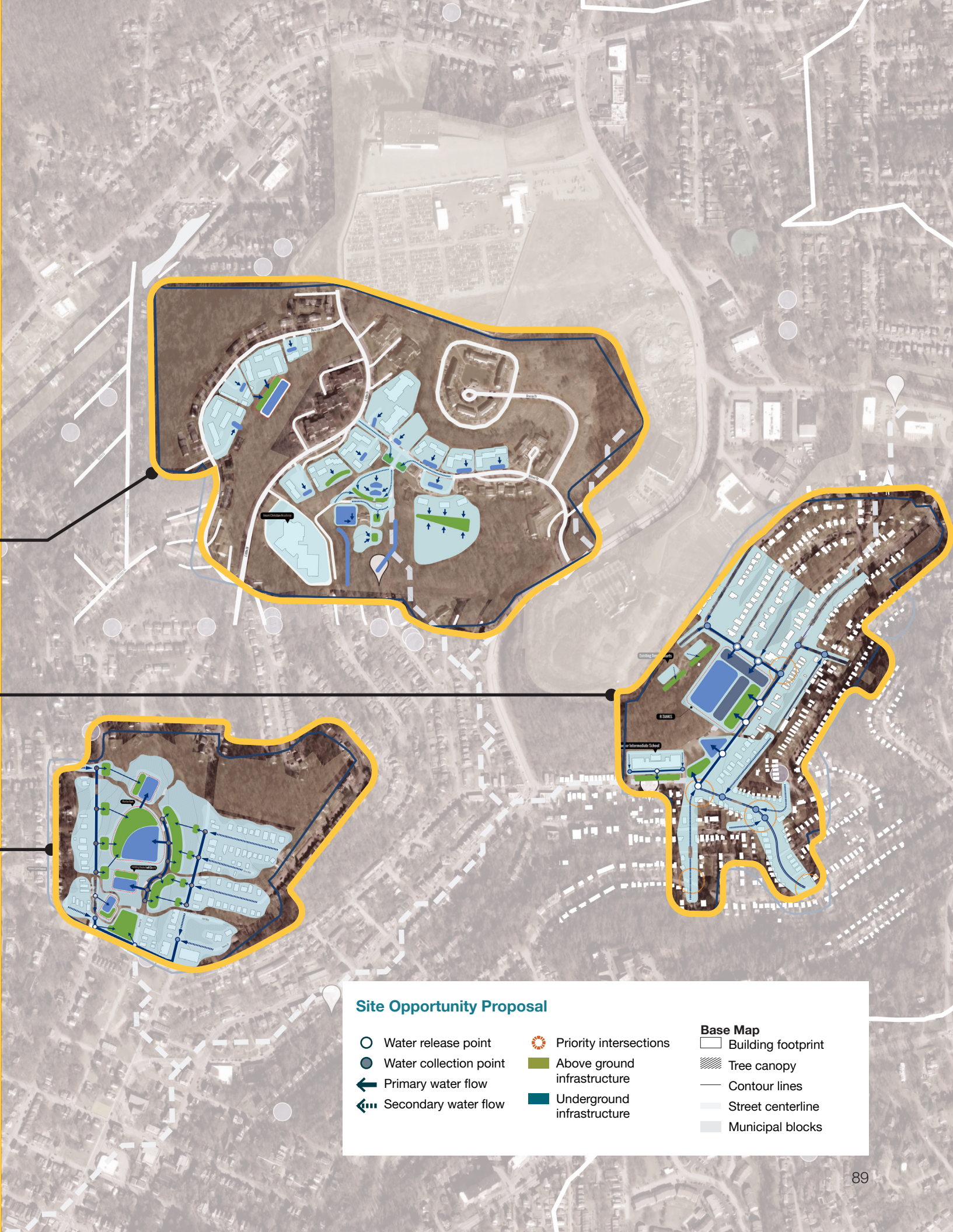
With thoughtful investment, these parks could provide significant benefits for both water management and neighborhood life.



East Hills Park and Park Hill Drive

Turner Intermediate School

Hunter Park



Site Opportunity Proposal

○ Water release point	⊗ Priority intersections	Base Map
● Water collection point	■ Above ground infrastructure	□ Building footprint
➡ Primary water flow	■ Underground infrastructure	▨ Tree canopy
⚡ Secondary water flow		— Contour lines
		— Street centerline
		■ Municipal blocks

Valley Park Projects

Select Community Feedback

[Hunter Park] Many of the community members engaged were not concerned about flooding near and around Hunter Park, although there were a few homes experiencing issues. The primary concern people shared were the abandoned homes in the area and pests like raccoons. There are also opportunities to connect with local efforts to build a nature trail through alleyways in the area. Wilkinsburg Borough is planning to make updates to the park, which could be an opportunity to integrate green infrastructure with those changes.

[Turner] “Please visit our area (Laketon Montier Clark Wright intersection) and see for yourself what a heavy rain looks like at the corner. No one seems to care about this Ward.”

“The intersection of Montier and Wright streets. Water floods down from that area onto our curbs unto yards and driveways constantly. Maybe the sewer system isn’t working at Clark and Wright therefore water streams and floods us! This has happened for years and is getting much worse. Rocks and sediment live our sidewalks and driveways after each rain.”

[East Hills] The Department of Public Works (DPW), in partnership with Ethos Collaborative and the East Hills community, is planning comprehensive upgrades to East Hills Park. Improvements include a new playground and picnic area, repairs to the basketball courts, pavilion, spray park, and athletic field, plus better accessibility,

lighting, circulation, and stormwater management. Community feedback from the public survey and community meetings included prioritized safety, new amenities such as benches and tables, enhanced athletic facilities, and the addition of necessary bathrooms and water features (slip-and-slide, pool, and water park).

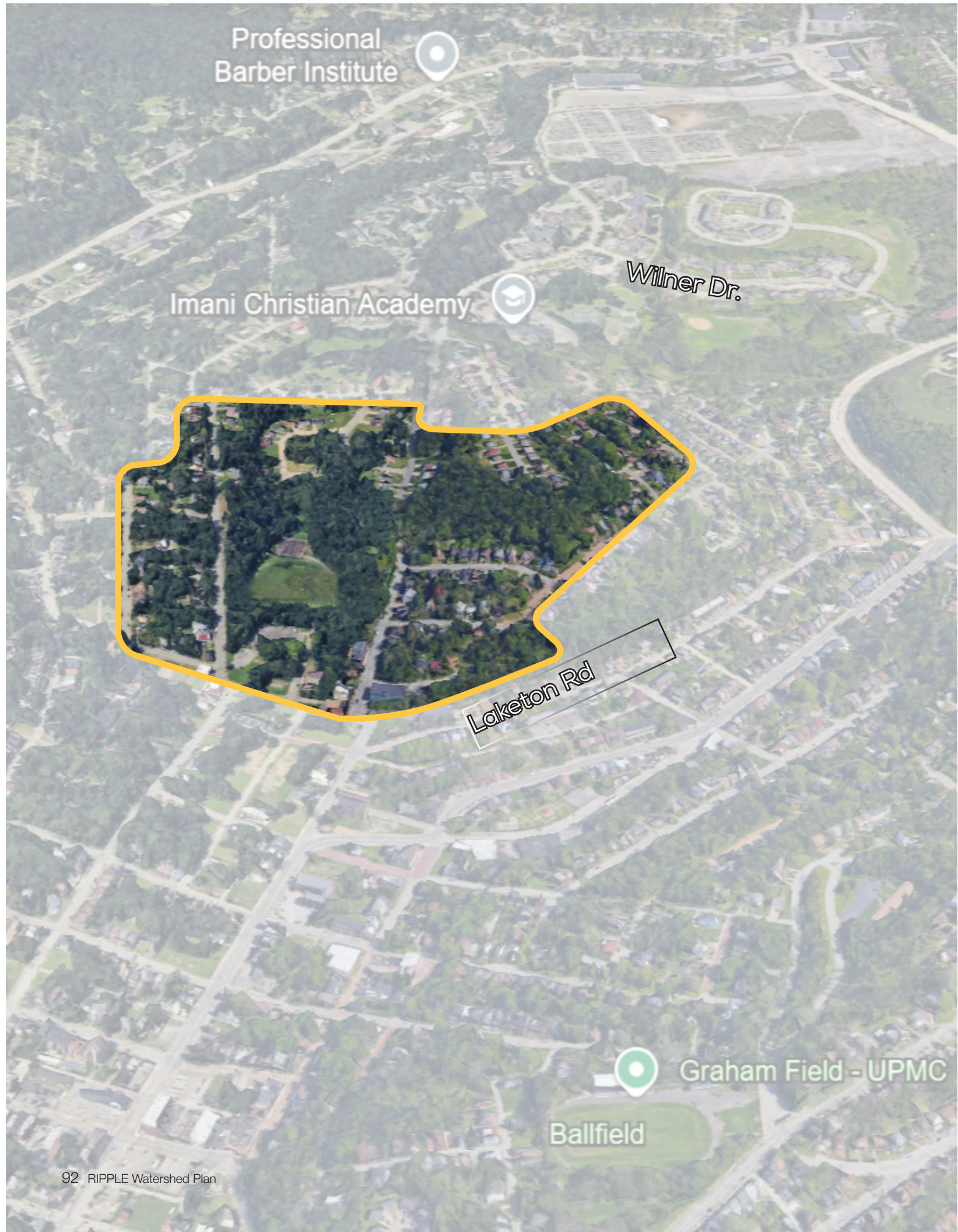
[Nine Mile Run] “too many abandoned residential and industrial properties or with absentee landlords and or owners who live out of state or are not nationals. Too few local rehab contractors with awareness of available sustainable resources.”

“Brick streets such as LaClair and Macon and Trevanian which are pitched toward Frick Park but do not divert much stormwater away from the combined sewer drains and into the park.

Hillsides with dead or dying trees such as Green Ash Black Locust that easily topple over in warm winter storms and do not effectively stabilize the hillsides from landslides.

Street tree pits in residential and business districts that do not effectively capture storm water. For example there are approximately 20 tree pits along Braddock avenue with low curbs (due to roadway build up) that do not retain storm water but allow it to run over and across them washing dirt and mulch onto the sidewalk.”





VALLEY PARK PROJECTS

Hunter Park



Time Frame
Mid term

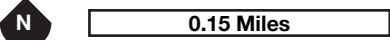
Location
A micro network that direct water to the municipally-owned Hunter Park from on-site and the adjacent streets

GSI Strategy
Private parcel GSI, Public Right-of-Way Improvements, Public Parcel Integrated GSI

UpstreamPgh's Role
Support, advocate, partner

Potential Partners
Residents and the general community, Borough of Wilkinsburg, WPJWA, ALCOSAN

Further Investigation
Water modeling (eventually)



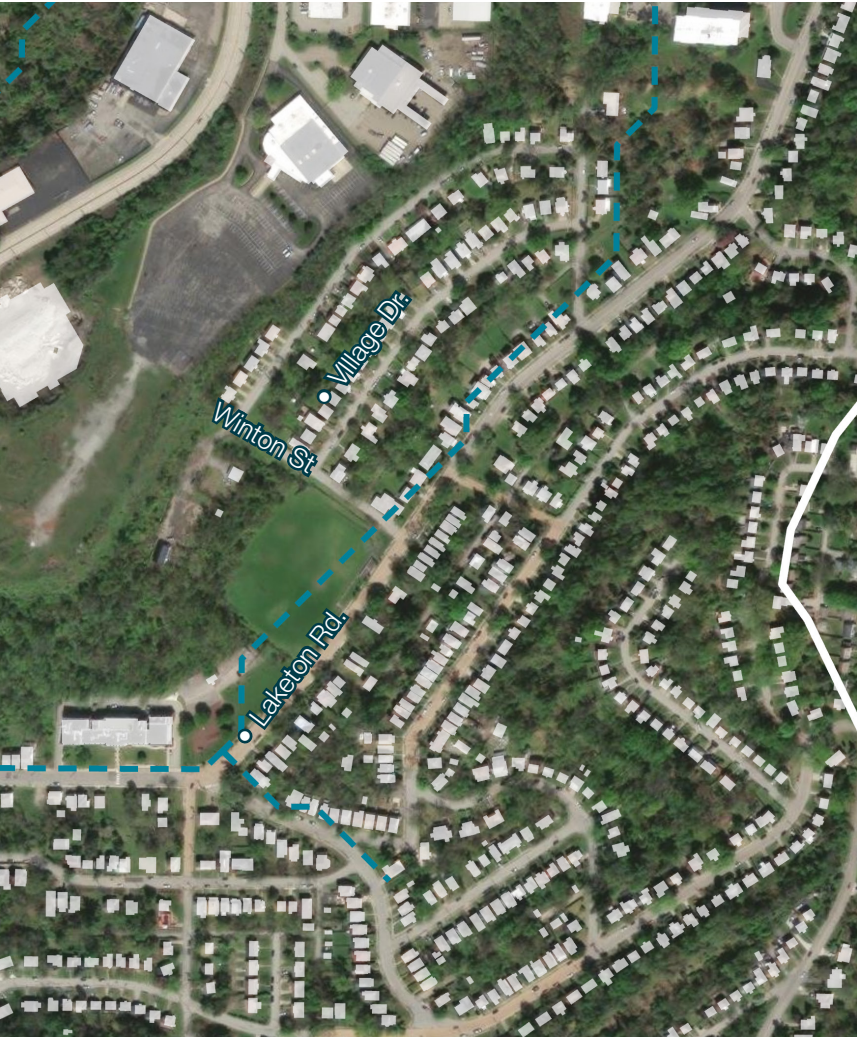
FAR LEFT Aerial photo of Hunter Park (UpstreamPgh)

LEFT Aerial photo of Site (UpstreamPgh)



VALLEY PARK PROJECTS

Turner
Intermediate
School



Time Frame
mid term

Location
a micro network that direct water to the publicly-owned Turner School and adjacent park from on-site and the nearby streets

GSI Strategy
Private parcel GSI, Public Right-of-Way Improvements, Public Parcel Integrated GSI

UpstreamPgh's Role
support, advocate, partner

Potential Partners
Residents and the general community, Borough of Wilkinsburg, Wilkinsburg School District, WPJWA, ALCOSAN

Further Investigation
Water modeling (eventually)



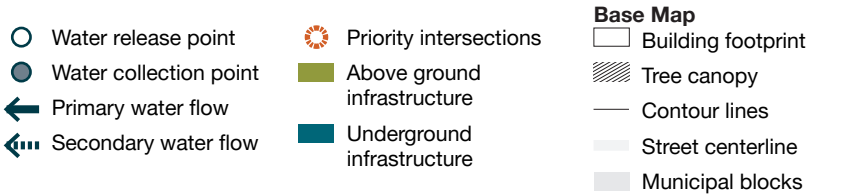
LEFT PAGE Aerial photo over the fields at Turner Intermediate School (Homes.com)
FAR LEFT UpstreamPgh spreads awareness of Green stormwater infrastructure during a City in the Streets community event in East Hills (UpstreamPgh)

Turner Intermediate School

A hands on learning environment for students and community members, linking stormwater education to everyday experience.

The school is a valued community asset, and recent upgrades have improved both the building and its grounds. Turner School occupies a low-lying valley at the confluence of two former streams—land that was difficult to develop for housing or other uses.

Site Opportunity Proposal



underway, though no GSI was incorporated. This is only one of a handful of intersections identified within the micro network, so additional opportunities exist.

The park would benefit from a comprehensive master plan to coordinate these efforts, integrate GSI enhancements, align capital investments, and establish a long-term maintenance framework.

Park improvements can enhance on-site stormwater management through planted conveyance and both above- and below-grade storage. Research indicates that combining technologies—such

as pairing below-grade storage with a bioswale—improves overall system performance and longevity. In addition to managing on-site runoff, parks can receive water from the public right-of-way and adjacent parcels. Storage and retention elements should be constructed first, followed by streetscape improvements to capture and convey runoff into the system. Investment in streetscape and right-of-way improvements will be needed to maximize capture capacity.

Because GSI systems function as active infrastructure, they require maintenance routines that differ

1,639,515
cubic feet managed
329,473
cubic feet bypassed

Environmental Justice Considerations

within a 5-minute walk of this project

64.8% Employment	635 # of Residents
49.2% % Renter	0% % of Area Historically Redlined
\$55,190 Median Income	15% Cost Burdened

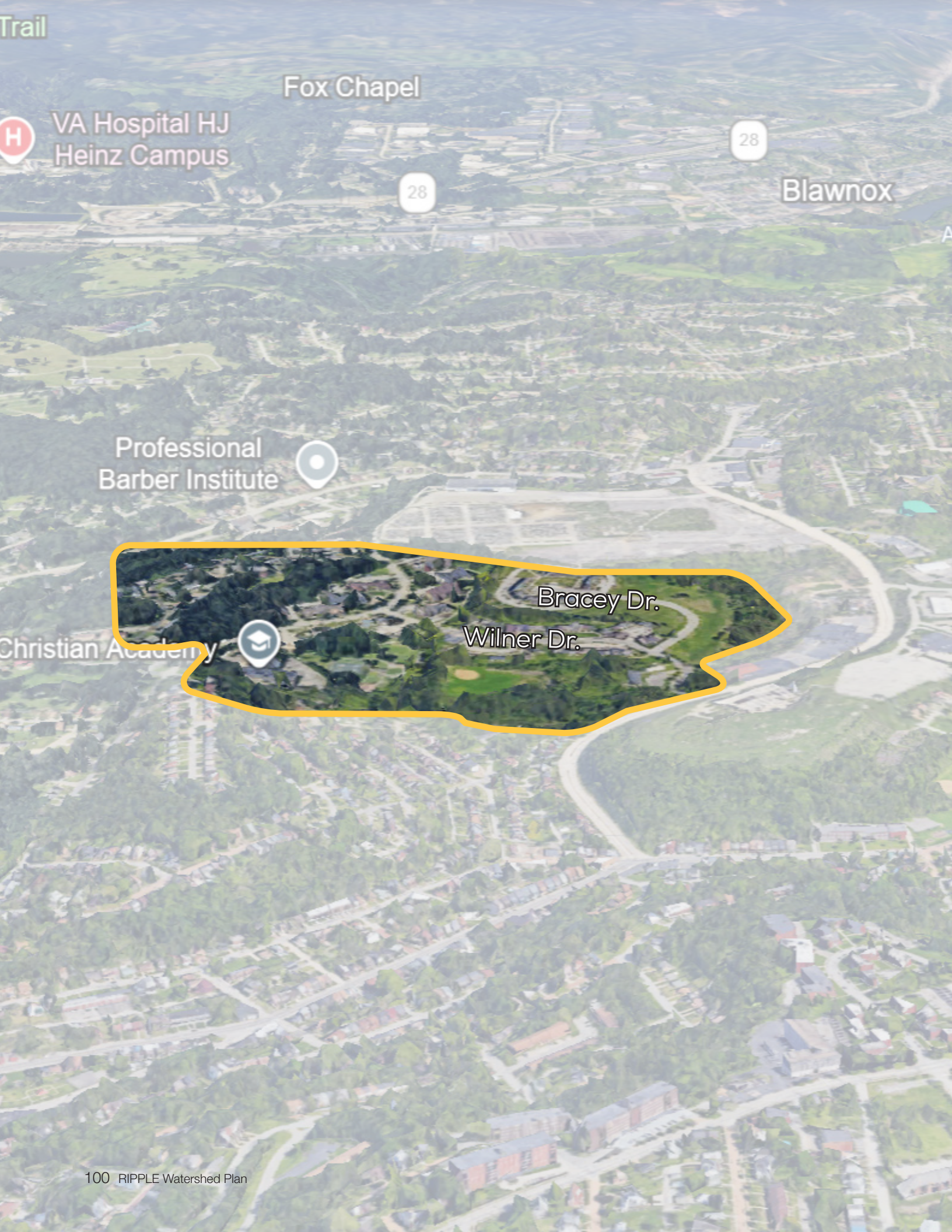
Water Capture Opportunities

within a 5-minute walk of this project

8 Vacant lots	0 Parks & open space
370,227 Impervious area (sqft)	0 Parking lots
5,562 Streetscape (ft)	0 Parcels in Public Ownership

from those currently performed by the municipality. The Borough already struggles to maintain existing assets, so long-term care and maintenance planning must accompany any approved GSI design.

The Borough's forthcoming borough-wide parks masterplan offers an important opportunity to explore stormwater strategies in greater depth. UpstreamPgh could play a valuable role by helping the Borough leverage GSI funding sources to support these improvement projects.



VALLEY PARK PROJECTS

East Hills Park and Park Hill Drive

Time Frame

short term

Location

a micro network that direct water to the municipally-owned East Hills Park from on-site and the adjacent streets

GSI Strategy

Private parcel GSI, Public Right-of-Way Improvements, Public Parcel Integrated GSI

UpstreamPgh's Role

support, advocate, partner, watchdog

Potential Partners

Residents and the general community, City of Pittsburgh, PGH20, ALCOSAN



FAR LEFT Aerial photo of Site Facing Neighborhood (UpstreamPgh)
LEFT Aerial photo of Site Facing Park (UpstreamPgh)

VALLEY PARK PROJECTS

East Hills Park and Park Hill Drive

A park redesign is an ideal opportunity for GSI and to encourage adjacent parcels to manage water similarly.

Site Opportunity Proposal

- Water release point
- Water collection point
- ←

Primary water flow
- ⚡

Secondary water flow
- ⦿

Priority intersections
- Above ground infrastructure
- Underground infrastructure

- Base Map
- Building footprint
- ▨

Tree canopy
- Contour lines
- Street centerline
- Municipal blocks



East Hills Park is an active community amenity and is currently undergoing a park redesign. The site’s upslope catchment area is large, but the adjacent properties are owned and maintained by a single entity that appears to manage its drainage infrastructure adequately. Even so, opportunities exist to improve stormwater management within and around the park.

- The park’s GSI can be structured with on-site storage and as a micro network that captures water from off-site. Distinct receiving areas across the park and adjacent housing sites provide varying capacities for stormwater management, reflecting differences in topography, land use, and infrastructure.
- Residential parking: on-site capture and storage
 - Park entry: PROW capture and storage
 - Amphitheater: onsite capture and storage
 - Walkways: onsite capture and storage
 - Field: onsite capture and storage
 - Spray park: onsite capture and storage
 - Court: onsite capture and below-grade storage
 - Abandoned play area: onsite capture and storage
 - East Hills housing: onsite capture and storage
 - Valley: potential bioswale / open channel
- PROW investment will be needed to maximize capture volume. The community identified the need for another entry and the desirability of coming off Robinson Boulevard to increase the park’s visibility and public presence.

Subshed Structures

- Subshed Structure Area
- Nodes
- Connections
- N
- 0.1 Miles

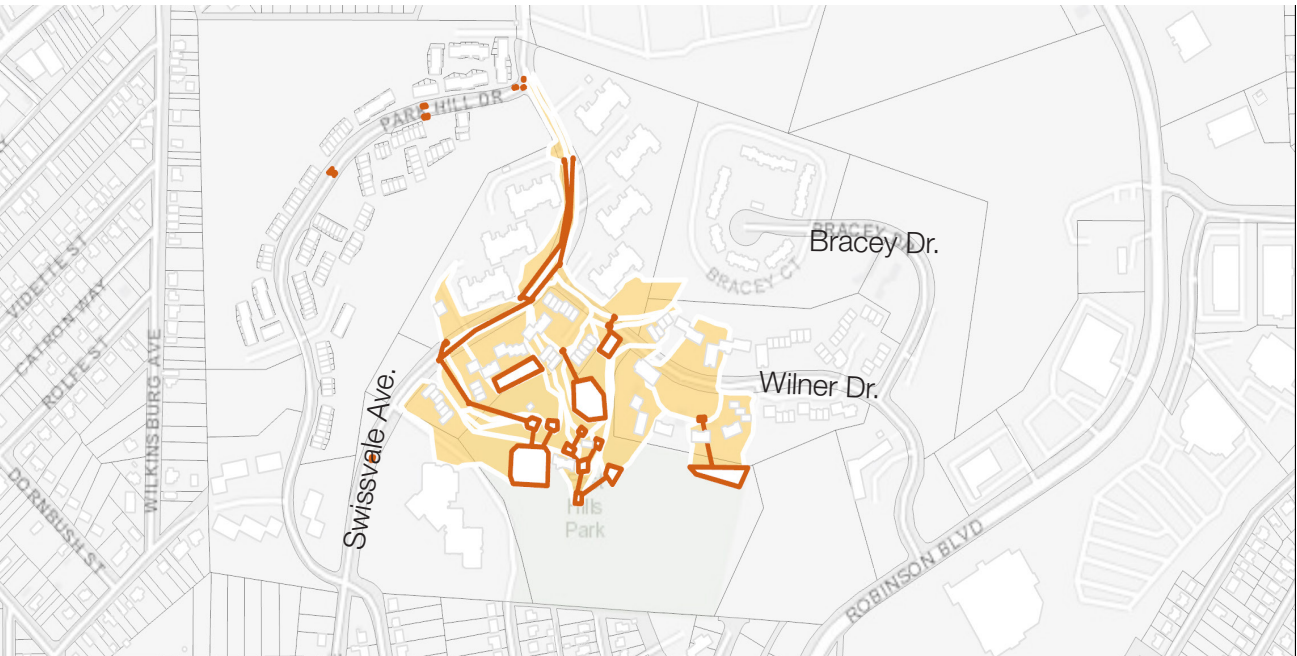
565,473 cubic feet captured
161,487 cubic feet bypassed

Water Capture Opportunities within a 5-minute walk of this project

11 Vacant lots	1 Parks
613,631 Impervious area (sqft)	0 Parking lots
5,976 Streetscape (ft)	4 Parcels in Public Ownership

Environmental Justice Considerations within a 5-minute walk of this project

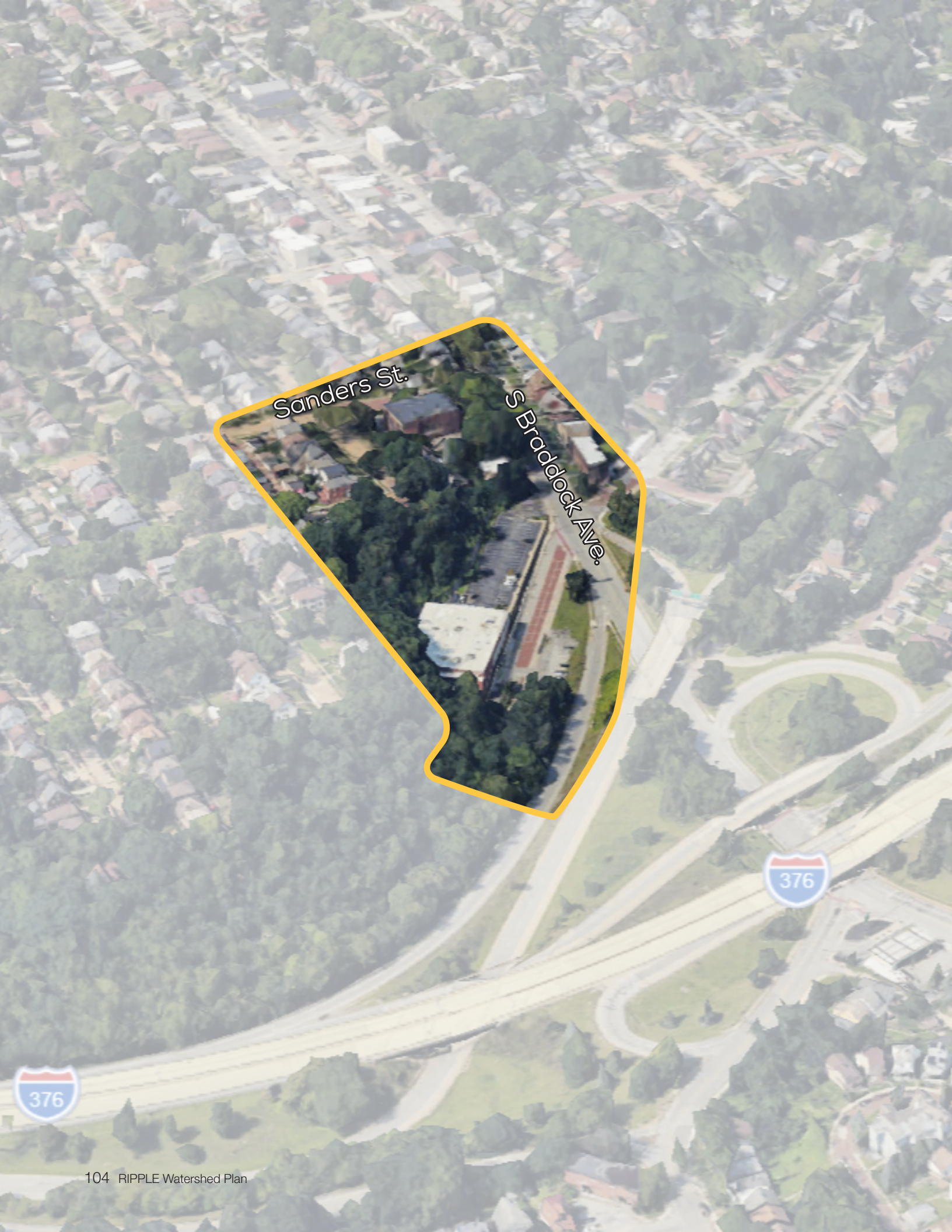
23% % Employed	2,079 # of Residents
65.8% % Renter	4.9% % of Area Historically Redlined
\$13,771 Median Income	31.9% Cost Burdened



Imani Christian Academy is a strong candidate for stormwater improvements due to its sloped topography and extensive impervious surfaces. On-site capture and storage should be prioritized before directing runoff to the adjacent park. The former playground area could be repurposed as a community learning space—receiving both stormwater and students—and used to demonstrate stormwater management practices in an educational setting.

Integrating green stormwater infrastructure (GSI) into the public right-of-way—such as along streets and intersections—can improve safety, system performance, and neighborhood character. In this location, traffic volumes are extremely low, consisting primarily of local circulation, which reduces the need for large-scale infrastructure improvements. The site’s geometry also limits opportunities to capture runoff from surrounding areas, making off-site water management impractical. As

a result, on-site stormwater capture and storage were the primary focus. The park is maintained by the City of Pittsburgh’s Department of Public Works (DPW). Implementing GSI will require new maintenance practices that differ from DPW’s current routines. Because the City already faces challenges in maintaining existing infrastructure, long-term operations and maintenance planning must be built into any approved GSI design.



VALLEY PARK PROJECTS

Nine Mile Run Outflow



Time Frame
long term

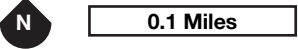
Location
The properties and streets are near the entrance of the highway and where the stream emerges from the culvert.

GSI Strategy
Private parcel GSI, Public Right-of-Way Improvements

UpstreamPgh's Role
watchdog, advocate, support, partner

Potential Partners
PennDOT, City of Pittsburgh, Borough of Wilkinsburg, DOMI, Edgewood, Swissvale, PGH20, adjacent property owners, Regent Square CBOs, ALCOSAN

Further Investigation
What is PennDOT's role in the channel degradation? Need modeling in this area.



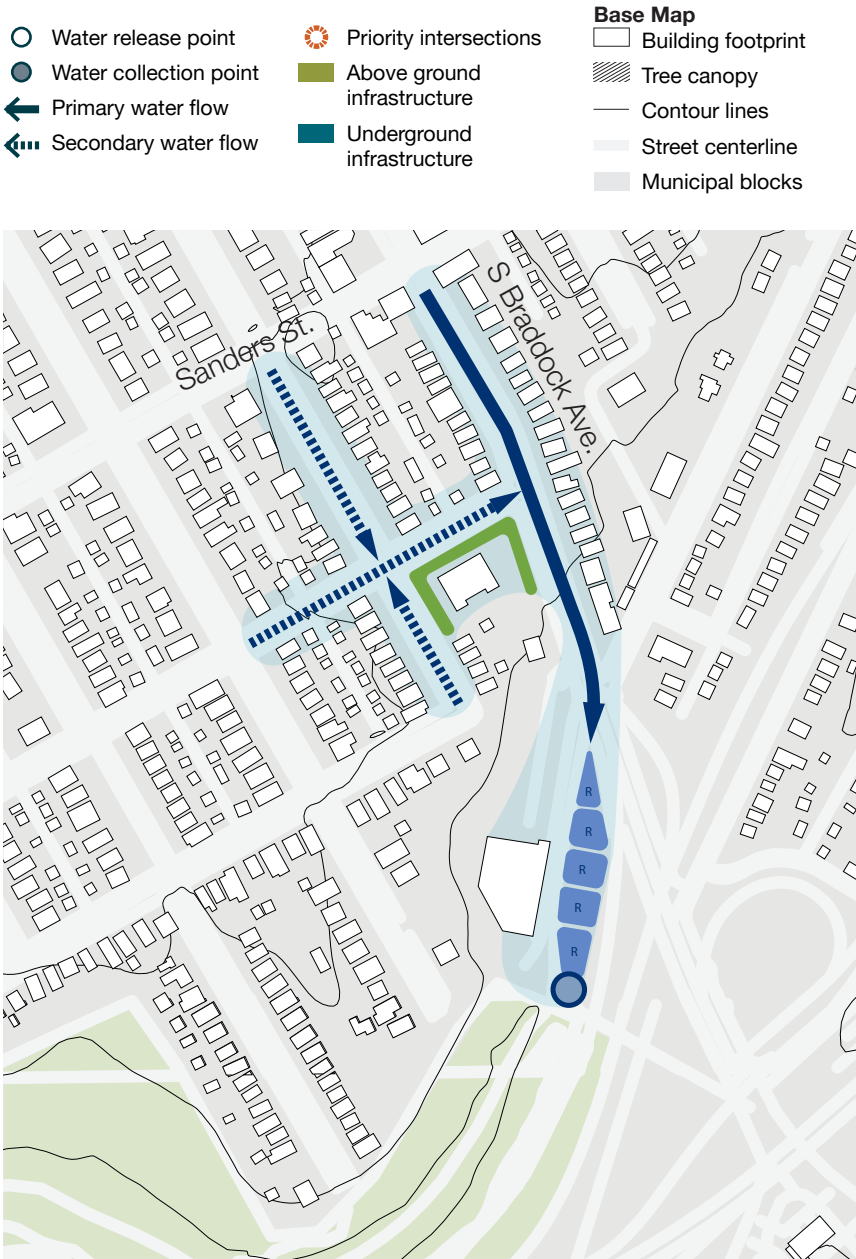
LEFT Aerial photo of the CLASS Building at the headwaters of Nine Mile Run and the trailhead of Braddock Trail (UpstreamPgh)

Nine Mile Run Outflow

This forgotten entrance to Frick Park has long been a focus for UpstreamPgh but municipal boundaries and the culvert outflow make it one of the most complex project in the shed.

The project was featured in the original 1999 Re-Evaluating Stormwater Plan and hosts many acute issues, including (from the low point upward): high velocity exiting of the water from the culvert and downstream slope destabilization, surface flow with erosion along the roads and across the parking area, clogged sewers, parcel runoff.

Site Opportunity Proposal

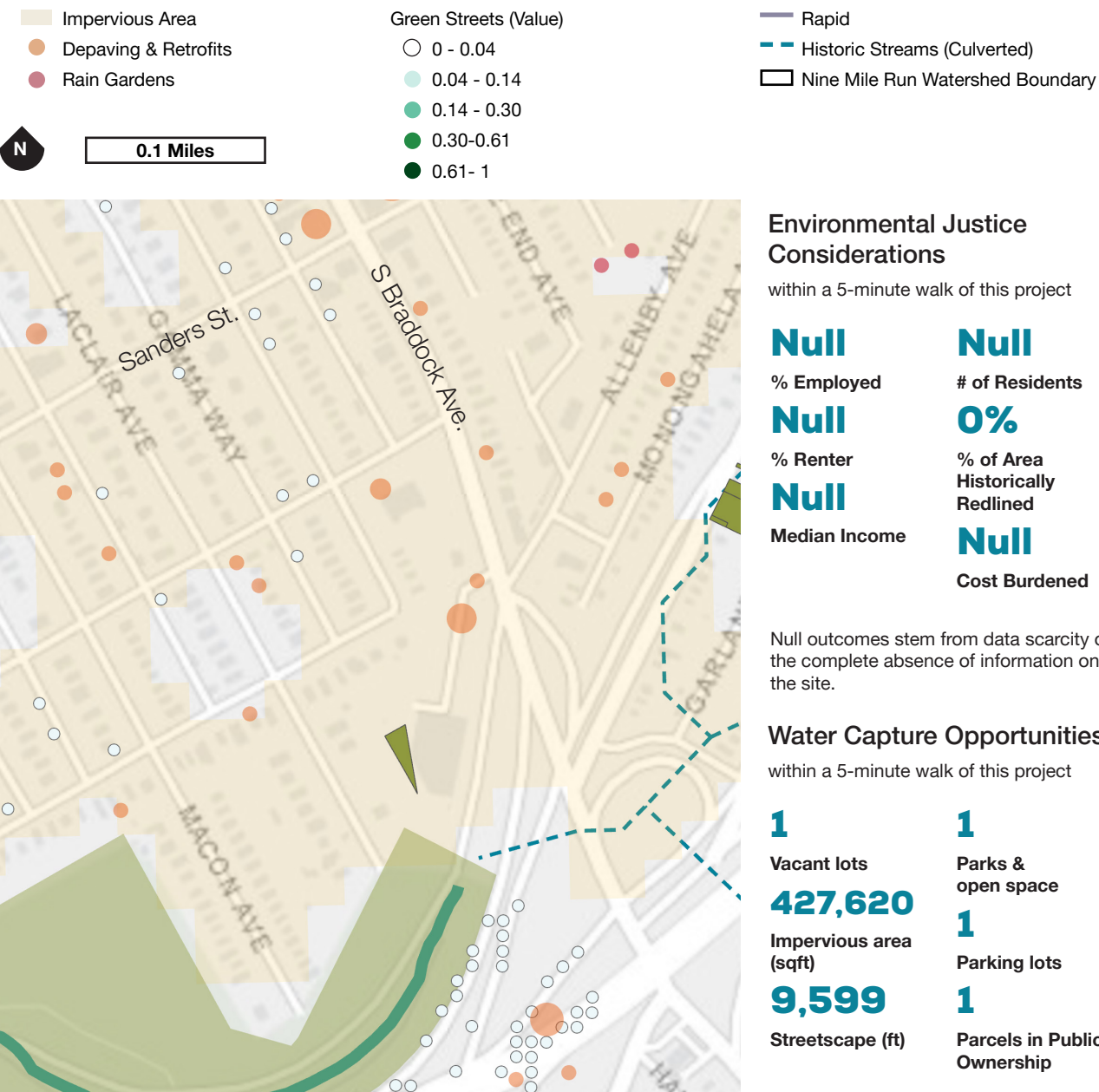


This area has two areas of concern: In the Nine Mile Run channel and culvert area, there is continued degradation of the channel immediately below the outflow and the integrity of the culvert itself is continuing to degrade. In the upslope neighborhood, the surface runoff from private property and in the public right-of-way can overwhelm the lower commercial property and cause surface flooding.

Nine Mile Run channel and culvert flow. Advocate for maintaining or reconstructing the culvert, given its orphan status among municipalities. Consider who will be the most affected. Confirm that the culvert is being monitored for structural integrity and function.

Open Channel Risk. The City will have to deal with slope failure if the erosion continues. PennDOT's edge is hardened, but the highway is not without risk if a slope failure occurs on the city side.

Computational Map



Culvert Risk. A culvert failure would affect all upslope municipalities -- they would all suffer if the major water artery to the river is clogged.

Upslope neighborhood surface runoff. Rain events can quickly overwhelm the system; thus, more upslope retain-age is recommended. However, many of the adjacent properties have small, sloped lots. The amount of retained water, ongoing maintenance of small, distributed systems, and issues such as slope stability

will pose challenges. Modeling and further investigation into slope stability should be done before recommending a blanket application of GSI systems.

The lower lot area receives water from the upslope streets. Maintaining the catch basins will prevent surface flooding but will not reduce the volume of water reaching the culvert, and thus will not limit CSO mixing or the destructive force of the water in the open channel.

Previous plans showed linked bioswales in the green area adjacent to the highway (assumed PennDOT). This can slow the water and fully contain small rain events with a properly sized network. The current flow would likely overwhelm the system in large events, requiring an overflow area.

It is possible that a culvert rebuild would enable a more extensive green-grey system in the lower lot. Manage investment in this area, with a view to a future rebuild.

HILLTOP “SENDING” PROPERTIES

major contributors to run off
on site source control
private property

Most properties in this area have significant amounts of paving, in a variety of conditions. While detaining some portion of the water at the top of the system would delay stress on the lower part of the system, detaining a significant amount of the water removes a significant portion from the outfall Technologies include above ground/below ground detention, on site networked or non-networked systems

There is a low quality of place and many of the properties are low value. Improvements can strengthen sense of place. Not many people will experience the improvements directly. Downstream will experience improvements indirectly.

There is a low quality of place and many of the properties are low value. Improvements can strengthen sense of place. Businesses/institutions locate here for affordability and will be financially challenges to add expense. Dumping and blight is an issue for many properties and in the area. More partners are required to address the myriad of issues, such as environmental remediation. In areas with high development pressure, municipal regulations can require GSI adoption with improvements. In areas with low development pressure, grants will be needed to incentive adoption.

BELOW UpstreamPgh leads a canvassing effort, in partnership with Neighborhood Leaders, to gain feedback on the issues and opportunities around stormwater management across the community. (UpstreamPgh)

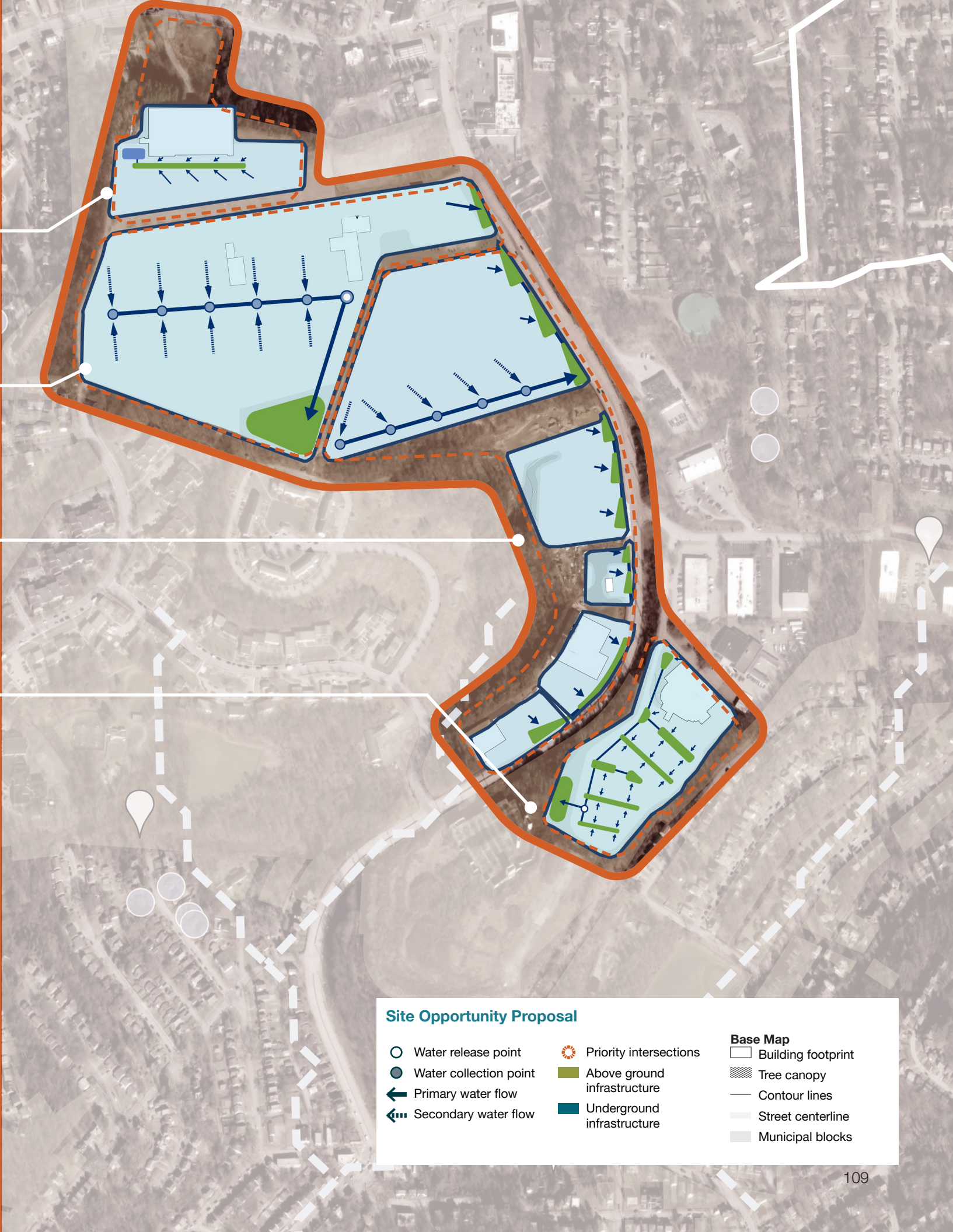


Petra Ministries
Parking Lot

U-Pull Car Storage
Site

Robinson Boulevard
Properties

Covenant Church
Parking Lot



Site Opportunity Proposal

- Water release point
- Water collection point
- ← Primary water flow
- ↔ Secondary water flow
- ⊗ Priority intersections
- Above ground infrastructure
- Underground infrastructure

- Base Map
- Building footprint
 - ▨ Tree canopy
 - Contour lines
 - Street centerline
 - Municipal blocks

Hilltop “Sending” Properties

Select Community Feedback

The strategic goal for these sites is to “shave the hydrograph” by capturing, slowing, and storing stormwater runoff using approaches like bio-swales, green infrastructure, and below-grade storage. Specific sites identified include Petra Ministries, U-Pull, Robinson Boulevard parcels, and Covenant Church. The proposed strategies aim to hold water on-site to reduce peak flow and include greening improvements like planting trees.

Implementation Factors include using incentives to encourage participation from private owners and acknowledging that while the direct public benefit is limited compared to public parks, managing water at these headwater locations is critical for reducing overall watershed impact. The projects are viewed as complex, with a long-term (10-20 year) timeline possibly required for engagement or new regulations. Site constraints, such as the immobile vehicles at the U-Pull site, also pose challenges.



TOP LEFT Aerial photo Visual of U-Pull Site (UpstreamPgh)
TOP RIGHT Aerial photo Visual of U-Pull Site facing Southeast (UpstreamPgh)
BOTTOM Aerial photo Visual of Petra Site (UpstreamPgh)



HILLTOP PROPERTIES

Petra Ministries Parking Lot

Large surface parking lots contribute significant volumes of untreated stormwater into the rivers and streams.

The majority of properties in this district consist of large lots, ranging from 78,631 to 1,170,266 square feet, and are primarily used for short- or long-term vehicle storage. Short-term storage areas include church parking lots that fill according to worship schedules, while the largest parcel functions as a long-term vehicle storage yard, where parts are salvaged from inoperable cars.

UpstreamPgh's Role
support, advocate, partner, watchdog

Time Frame
short term

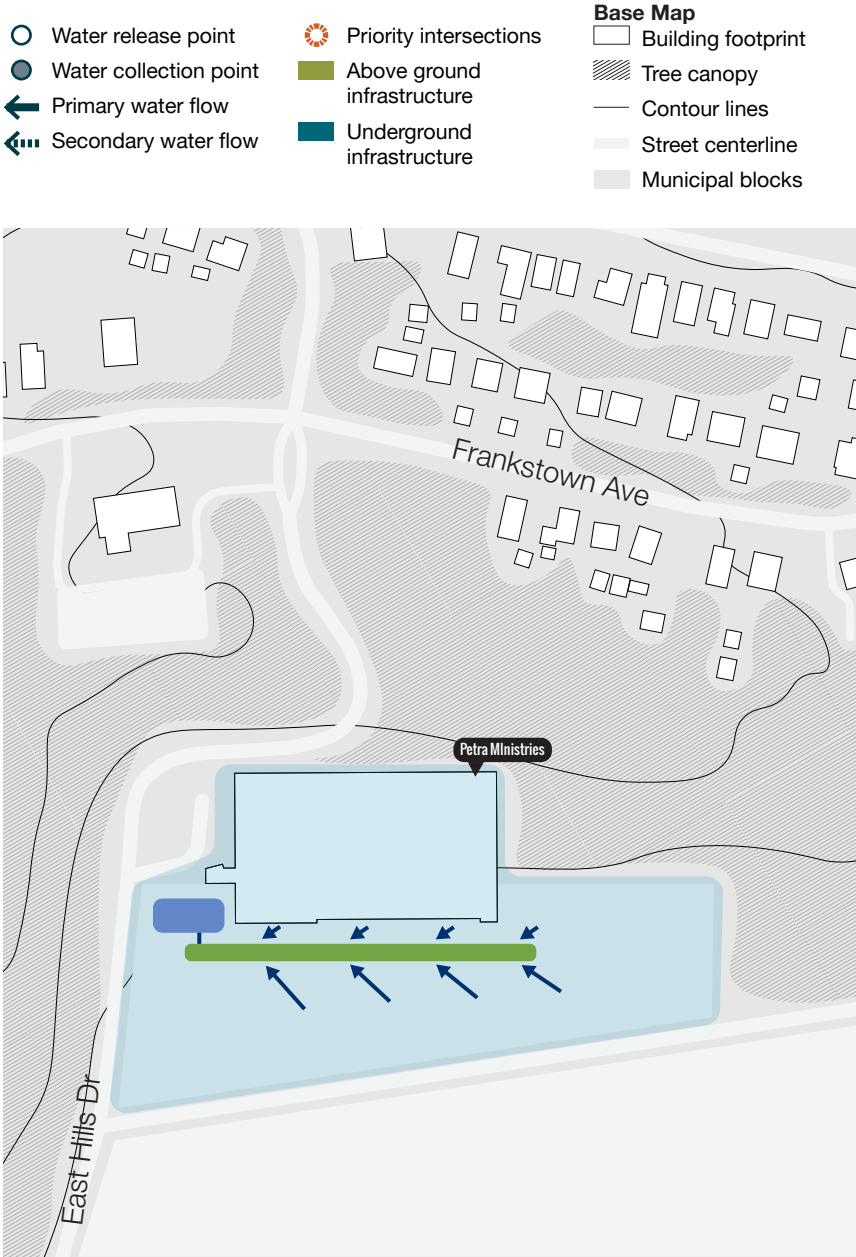
Location
Properties occupy the highest points in the watershed (hilltop) and along Robinson Boulevard.

GSI Strategy
Private parcel GSI, Vacant Lot GSI

Potential Partners
Residents and the general community, City of Pittsburgh, PGH20, ALCOSAN, Petra Miniseries, East Hills Consensus Group, Penn Hills

Further Investigation
Water modeling (eventually)

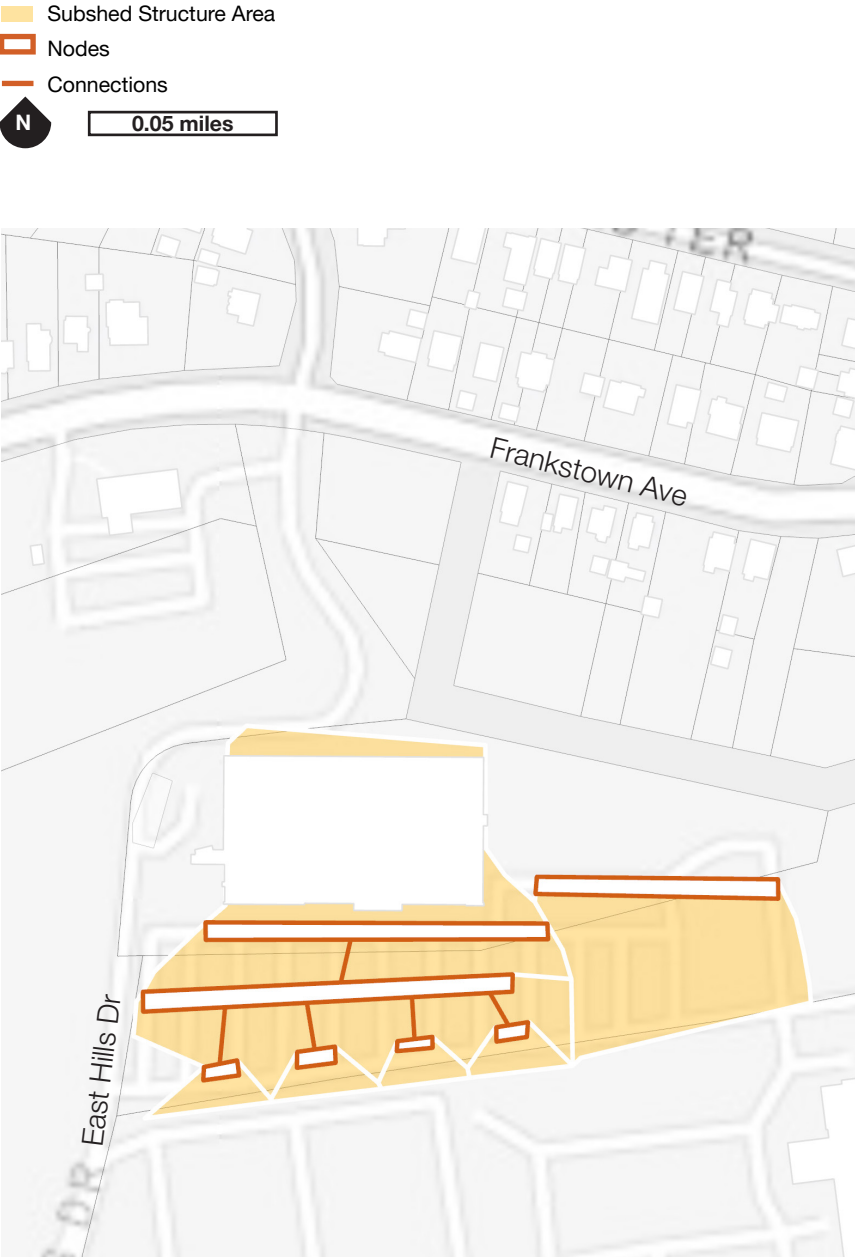
Site Opportunity Proposal



Petra Ministries Parking Lot

- Large parking lot appears to have been designed to more recent stormwater standards.
- Paving condition needs to be confirmed. Bioswales could be networked or non-networked.
- Below grade storage would be needed to get to higher levels of removal.

Subshed Structures

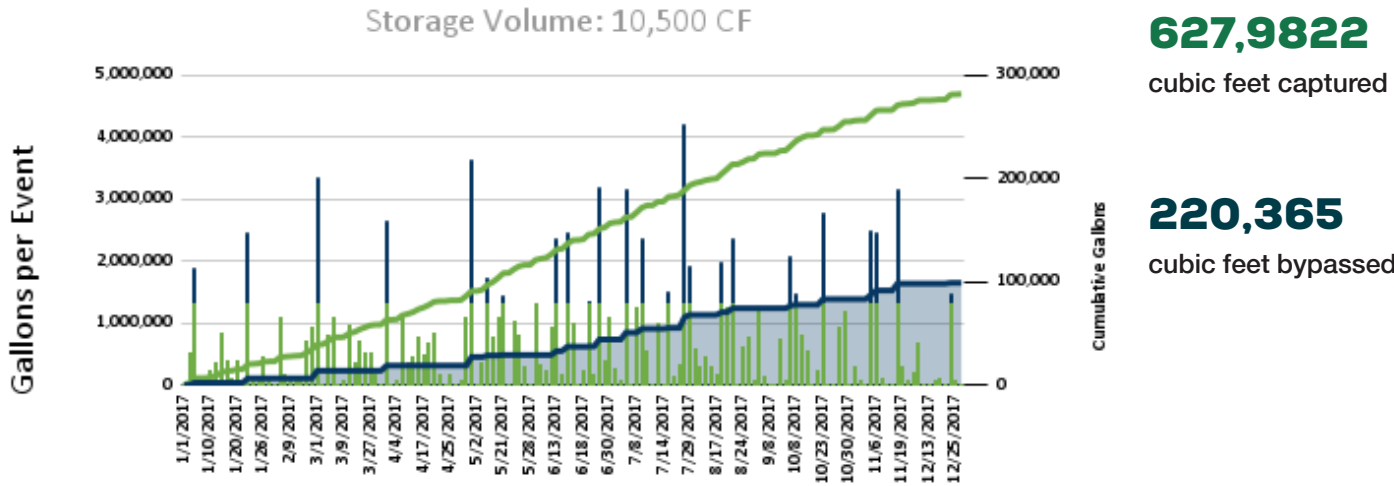


Environmental Justice Considerations
within a 5-minute walk of this project

47.1% % Employed	34 # of Residents
30% % Renters	0% % of Area Historically Redlined
\$52,500 Median Income	30% Cost Burdened

Water Capture Opportunities
within a 5-minute walk of this project

2 Vacant lots	0 Parks & open space
128,131 Impervious area (sqft)	0 Parking lots
1,782 Streetscape (ft)	0 Parcels in Public Ownership



HILLTOP PROPERTIES

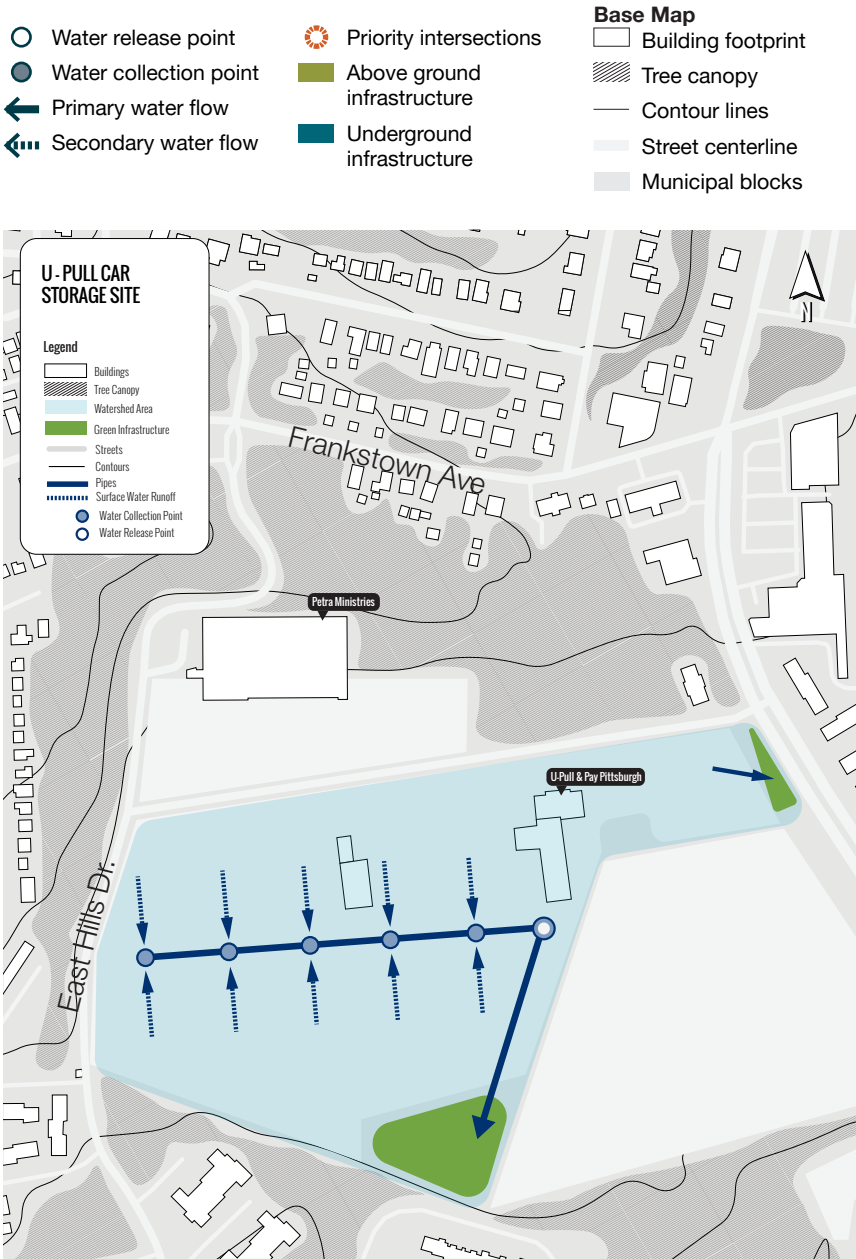
U-Pull Car Storage Site

Large surface parking lots contribute significant volumes of untreated stormwater into the rivers and streams.

The majority of properties in this district consist of large lots, ranging from 78,631 to 1,170,266 square feet, and are primarily used for short- or long-term vehicle storage. Short-term storage areas include church parking lots that fill according to worship schedules, while the largest parcel functions as a long-term vehicle storage yard, where parts are salvaged from inoperable cars.

- UpstreamPgh's Role**
support, advocate, partner, watchdog
- Time Frame**
short term
- Location**
Properties occupy the highest points in the watershed (hilltop) and along Robinson Boulevard.
- GSI Strategy**
Private parcel GSI, Vacant Lot GSI
- Potential Partners**
Residents and the general community, City of Pittsburgh, PGH20, ALCOSAN
- Further Investigation**
Water modeling (eventually)

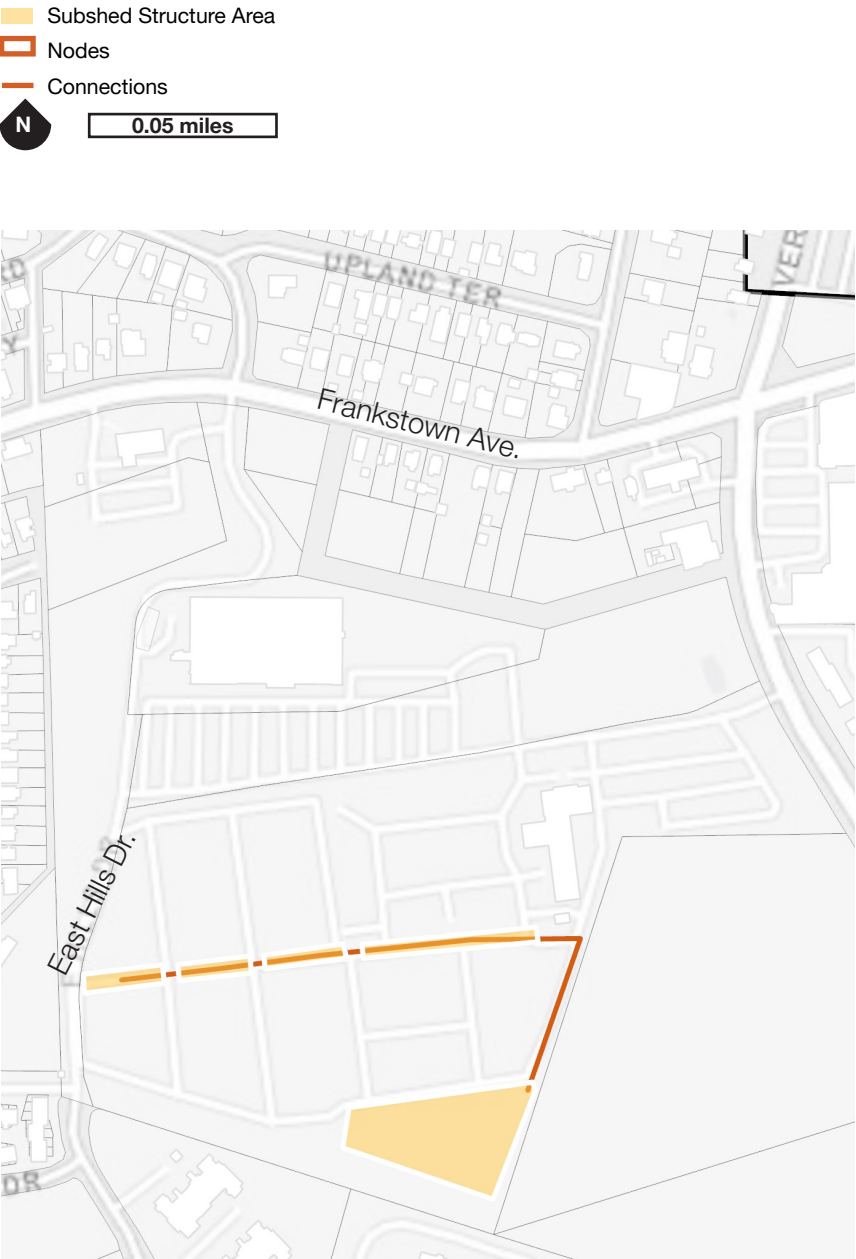
Site Opportunity Proposal



U-Pull Car Storage Site

- Large parking lot appears to have been designed to more recent stormwater standards.
- Paving condition needs to be confirmed. Bioswales could be networked or non-networked.
- Below grade storage would be needed to get to higher levels of removal.

Subshed Structures



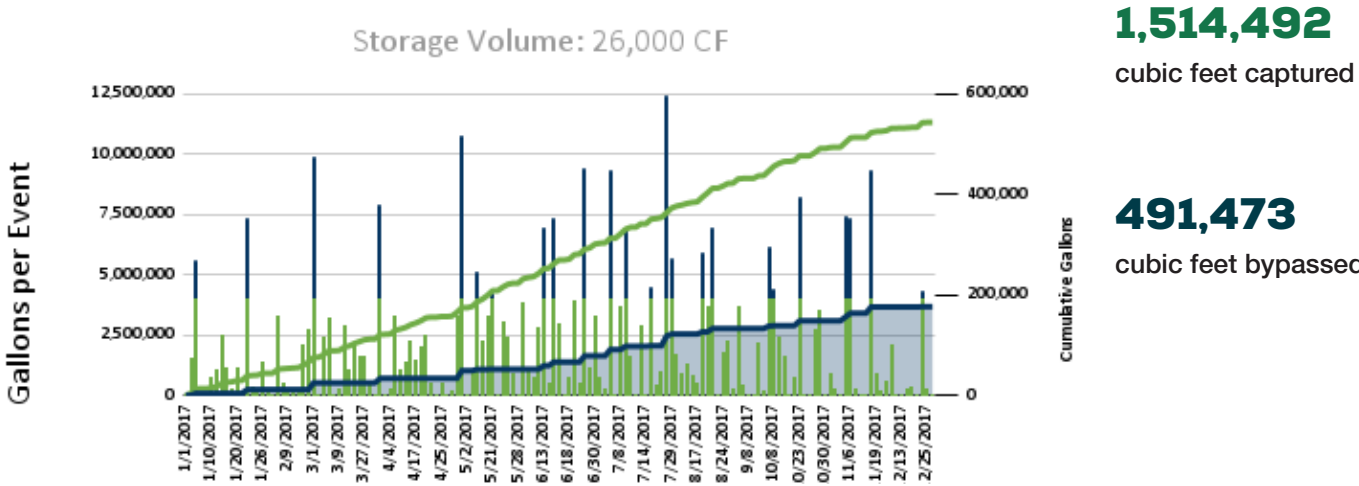
Environmental Justice Considerations	
within a 5-minute walk of this project	
Null % Employed	Null # of Residents
Null % Renters	0% % of Area Historically Redlined
Null Median Income	Null Cost Burdened

Null outcomes stem from data scarcity or the complete absence of information on the site.

Water Capture Opportunities

within a 5-minute walk of this project

2 Vacant lots	0 Parks & open space
12,131 Impervious area (sqft)	0 Parking lots
1,782 Streetscape (ft)	0 Parcels in Public Ownership



HILLTOP PROPERTIES

Robinson Boulevard Properties

Large surface parking lots contribute significant volumes of untreated stormwater into the rivers and streams.

The majority of properties in this district consist of large lots, ranging from 78,631 to 1,170,266 square feet, and are primarily used for short- or long-term vehicle storage. Short-term storage areas include church parking lots that fill according to worship schedules, while the largest parcel functions as a long-term vehicle storage yard, where parts are salvaged from inoperable cars.

UpstreamPgh's Role
support, advocate, partner, watchdog

Time Frame
short term

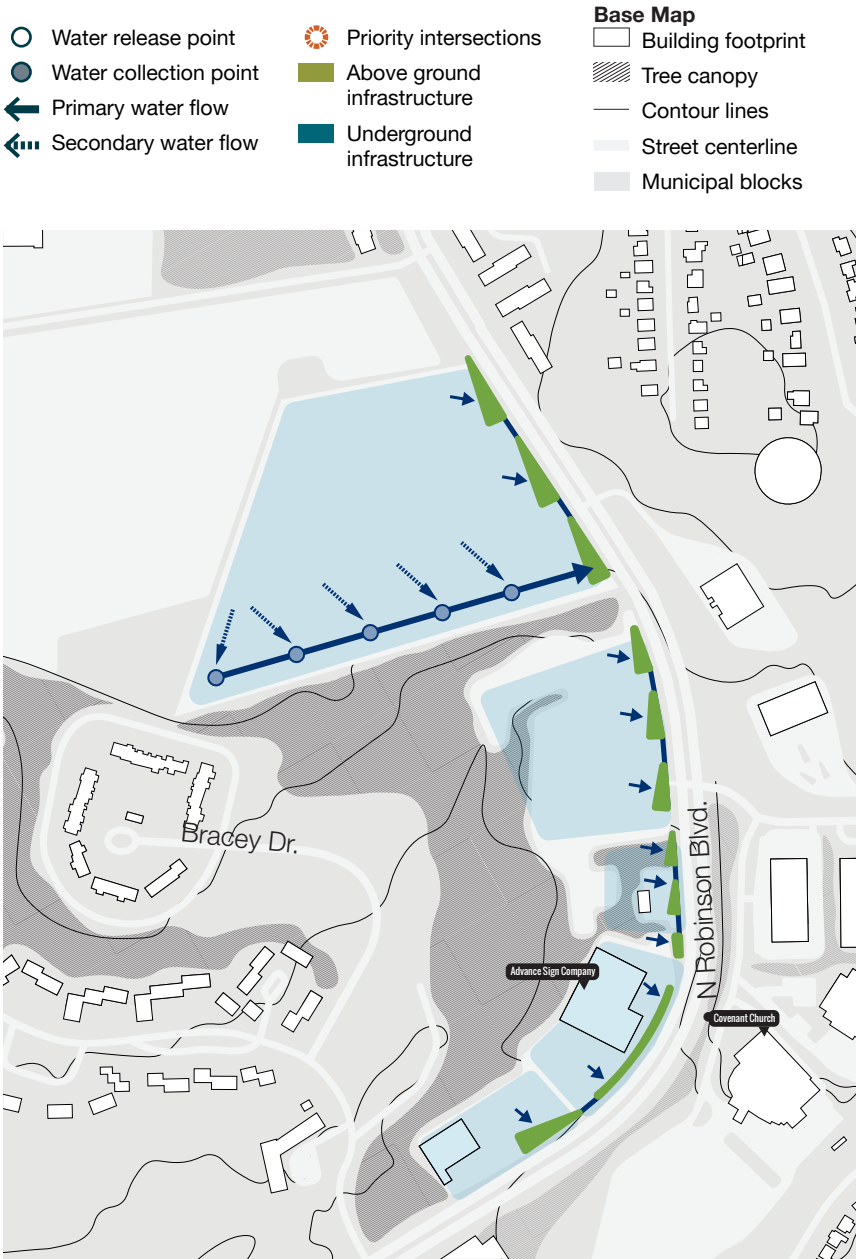
Location
Properties occupy the highest points in the watershed (hilltop) and along Robinson Boulevard.

GSI Strategy
Private parcel GSI, Vacant Lot GSI

Potential Partners
Residents and the general community, Borough of Wilkinsburg, ALCOSAN

Further Investigation
Water modeling (eventually)

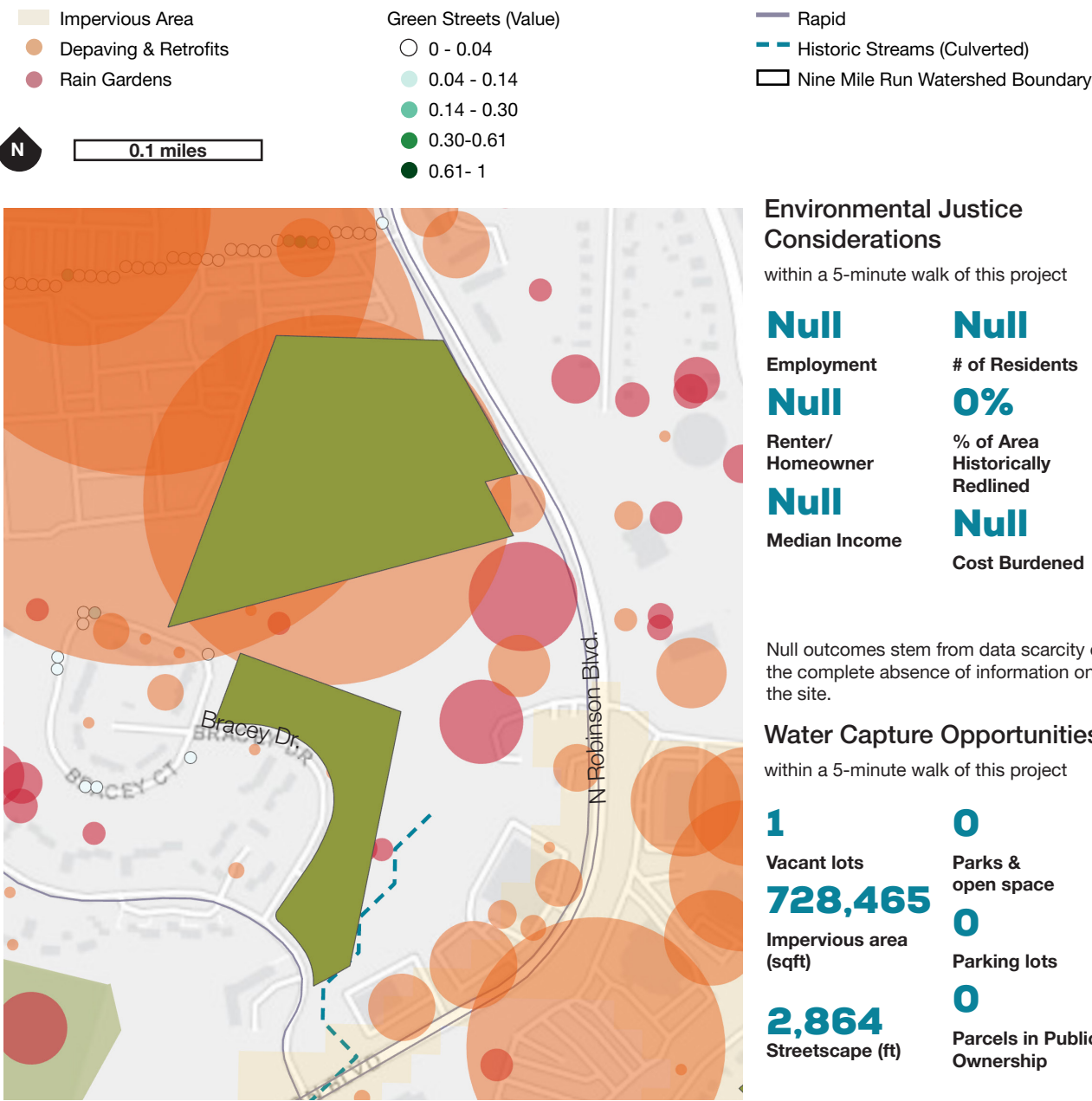
Site Opportunity Proposal



Robinson Boulevard Properties

- Parking lots for current businesses and vacant lots have similar opportunities for drainage along road
- Bioswales are limited in effectiveness but would create a buffer
- Below grade storage would add significant capacity
- Networking between properties to a centralized facility might enable the most storage

Computational Map



FAR LEFT Aerial photo Photo facing Bracy Drive (UpstreamPgh)
LEFT Aerial photo facing Robinson Boulevard (UpstreamPgh)

HILLTOP PROPERTIES

Covenant Church Parking Lot

Large surface parking lots contribute significant volumes of untreated stormwater into the rivers and streams.

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UpstreamPgh's Role
support, advocate, partner, watchdog

Time Frame
short term

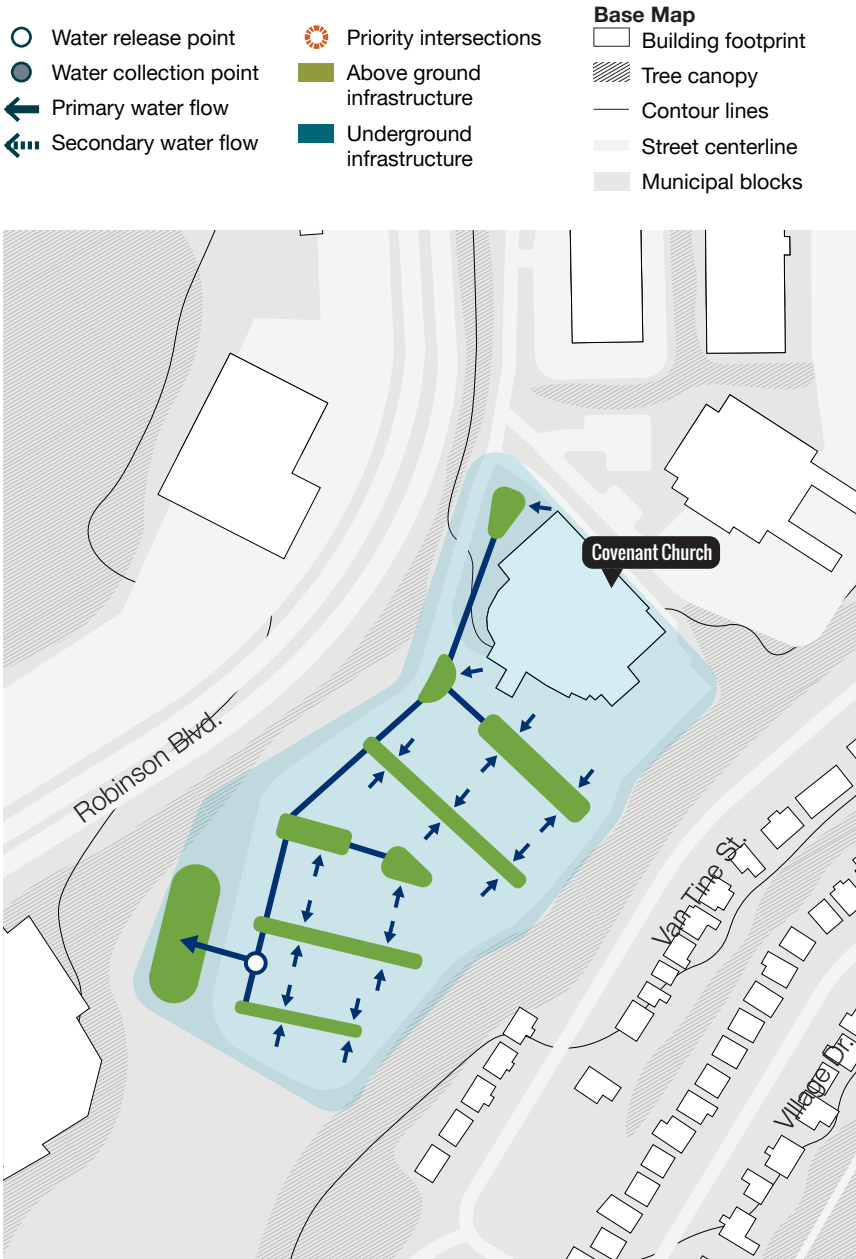
Location
Properties occupy the highest points in the watershed (hilltop) and along Robinson Boulevard.

GSI Strategy
Private parcel GSI, Vacant Lot GSI

Potential Partners
Residents and the general community, Borough of Wilkinsburg, PGH20, ALCOSAN, Covenant Church

Further Investigation
Water modeling (eventually)

Site Opportunity Proposal



Covenant Church Parking Lot

- Large parking lot appears to have been designed to more recent stormwater standards.
- Paving condition needs to be confirmed.
- Bioswales could be networked bioswales or non-networked.
- Striping will have to be redesigned. May result in a net loss of spaces.
- Above or below grade storage could be below grade or on adjacent site.

Subshed Structures



Environmental Justice Considerations

within a 5-minute walk of this project

Null	Null
% Employed	# of Residents
Null	0%
% Renters	% of Area Historically Redlined
Null	Null
Median Income	Cost Burdened

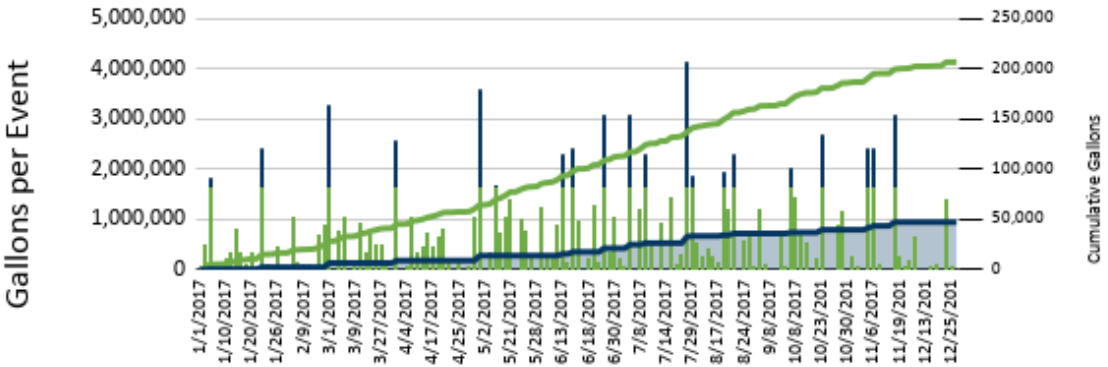
Null outcomes stem from data scarcity or the complete absence of information on the site.

Water Capture Opportunities

within a 5-minute walk of this project

0	0
Vacant lots	Parks & open space
4,078	0
Impervious area (sqft)	Parking lots
1000	0
Streetscape (ft)	Parcels in Public Ownership

Storage Volume: 10,900 CF



553,482
cubic feet captured

126,494
cubic feet bypassed