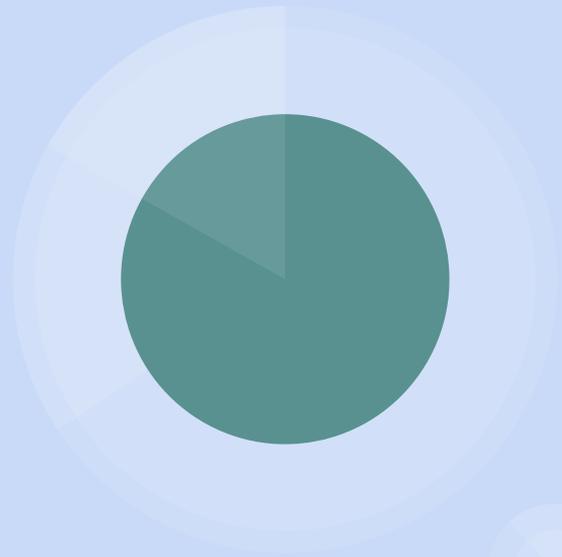


# Engaging Communities to Transform Urban Spaces with Green Stormwater Practices



# Workshop Outline

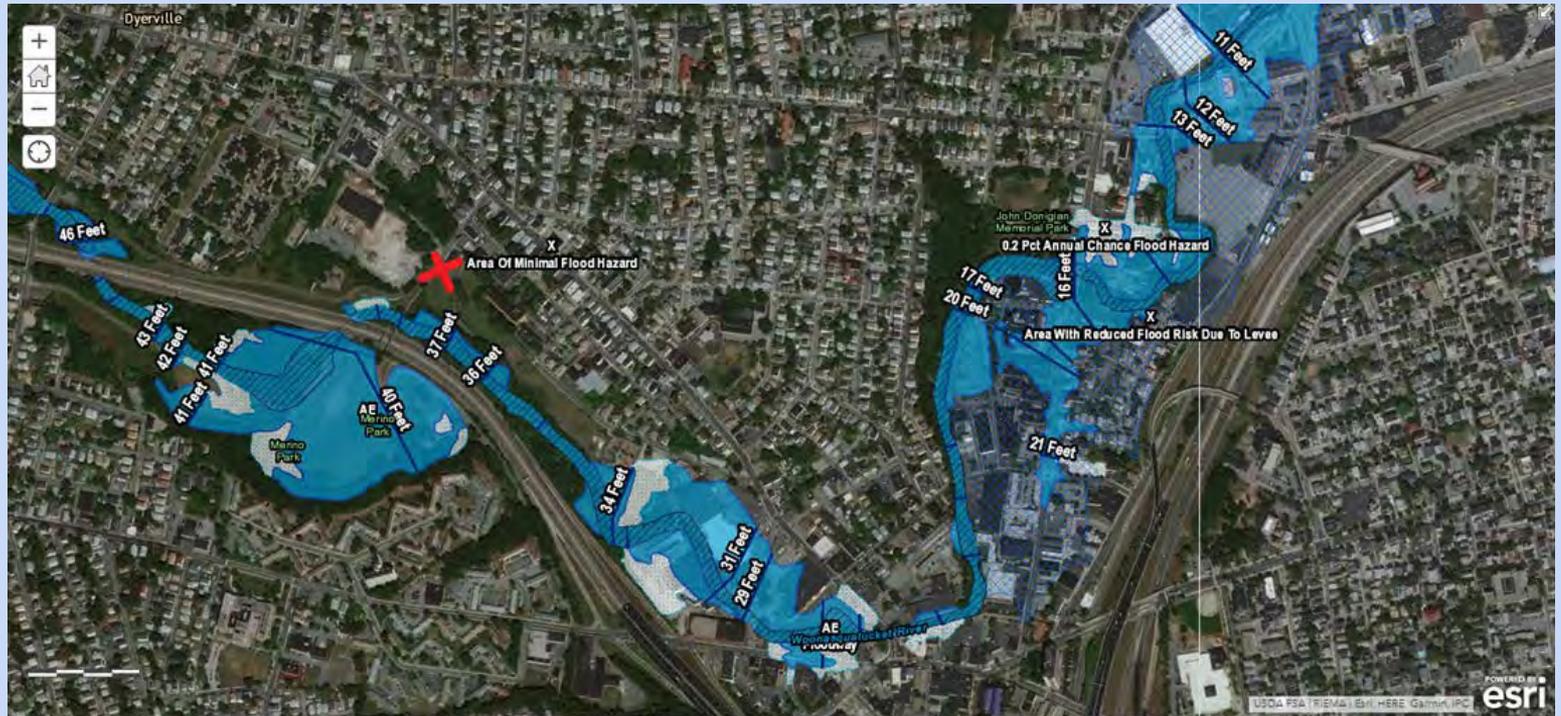
Setting the Context  
Overview of Recent Projects  
Community Engagement Strategies  
Lessons Learned



## 100 Year Flood Zone

“What used to be, say, a 1,000 year event (like [Superstorm] Sandy or perhaps Harvey) is now, say, a 30 year event, and will eventually become an event we see every few years if we continue on the course that we’re on,”

Huffington Post Article – August 2017





# Flooding



Flood of March 2010

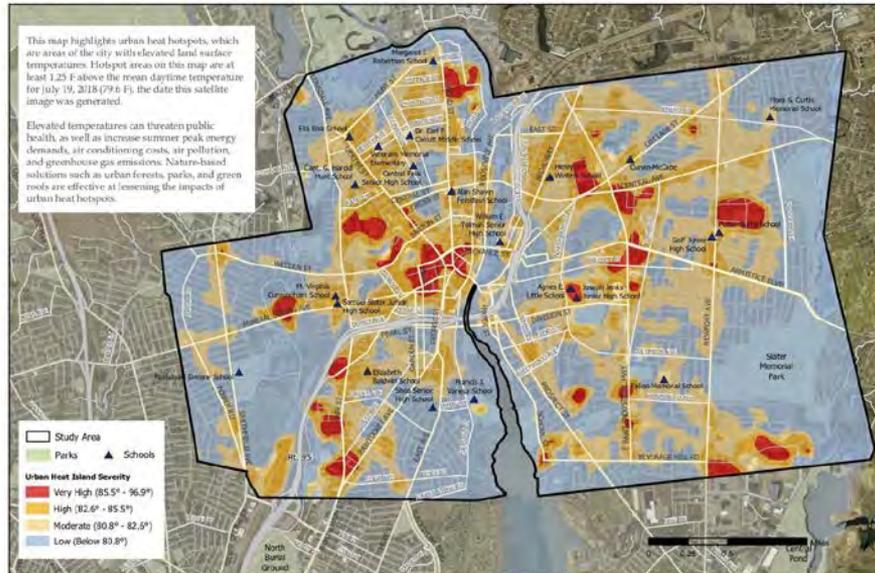
# Urban Heat Islands

Pawtucket/Central Falls

Olneyville

## Urban Heat Hotspots

Pawtucket - Central Falls Health Equity Zone

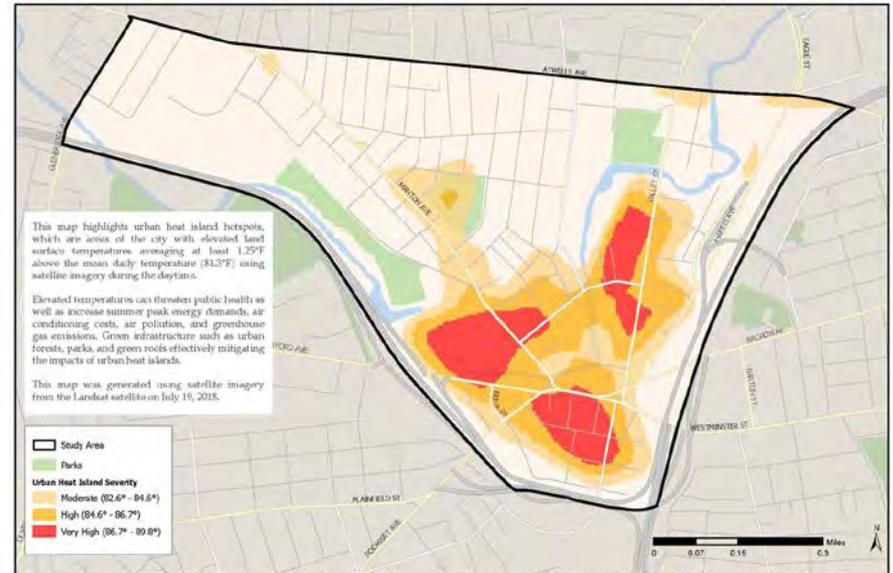


This map was created by CGD Analytics (cgdanalytics.com) for the Rhode Island Department of Health in conjunction with The Trust for Public Land (www.tpl.org). Information on this map is provided for visualization and discussion purposes only. For more information, please contact the Rhode Island Department of Health. February 2019



## Mitigating Urban Heat Islands

Olneyville Health Equity Zone



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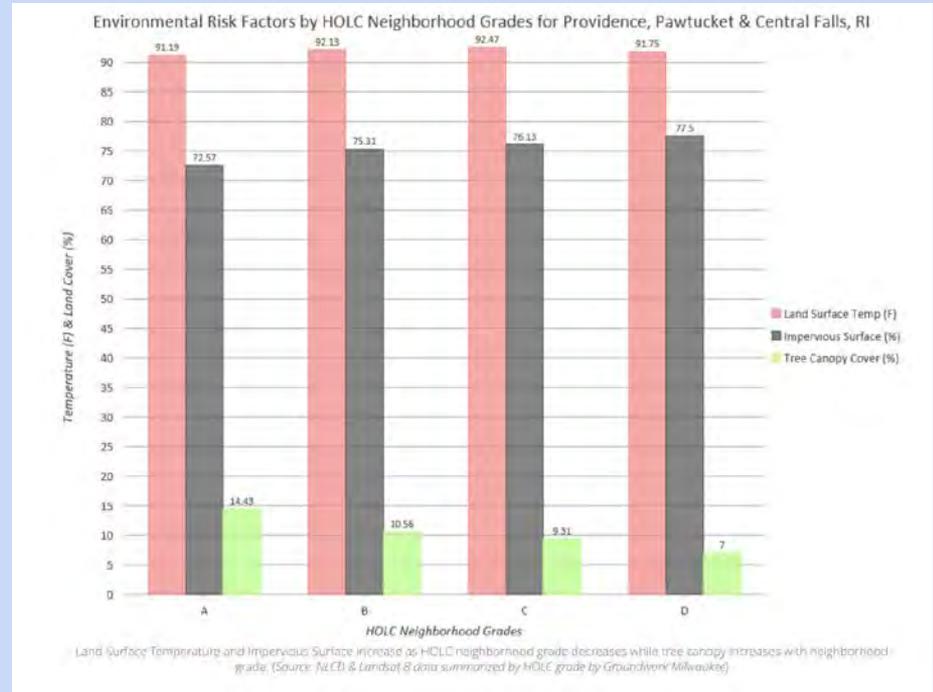


# Climate Safe Neighborhoods

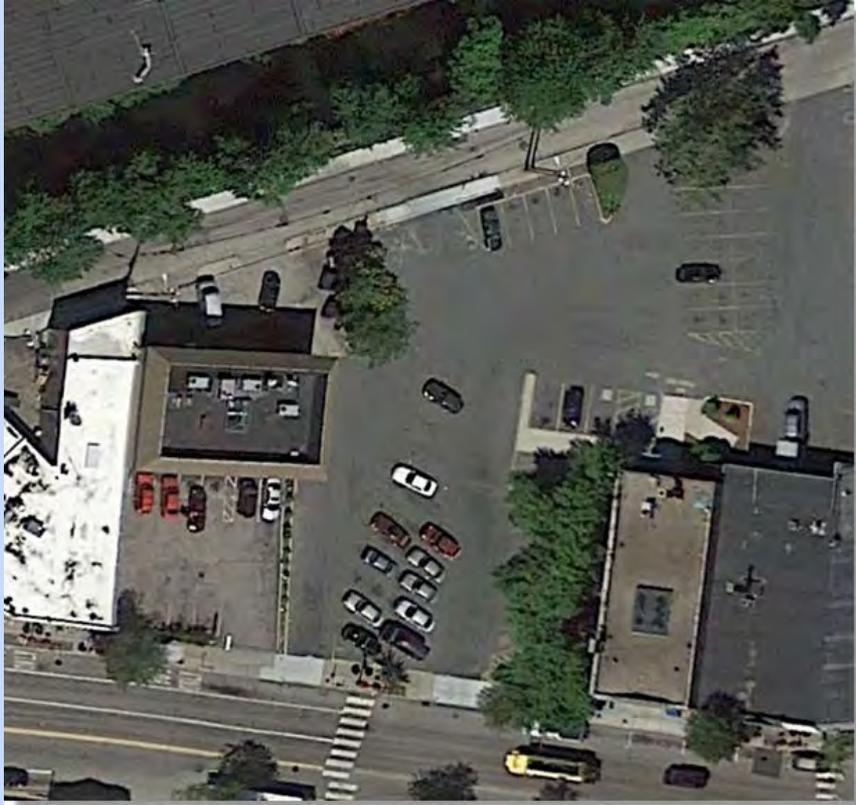


Housing Discrimination and Climate Resilience in Pawtucket and Central Falls

Focus on Extreme Heat and Flooding



# Recent Projects



W R W C - Parking Lot Retrofit -  
Before

**90% Impervious**

**42 Parking Spaces**

**Entrances & Exits**

*- Westminster Street (x1)*

*- San Souci Drive (x2)*

**Catch Basin**

# WRWC Parking Lot Retrofit - Plan



**6,000 SF of impervious surface removed**

**38 Parking Spaces**

**Entrances & Exits**

*- Westminster Street (x1)*

*- San Souci Drive (x1)*

**Bioretention Basin**

# WRWC - Olneyville Parking Lot - After

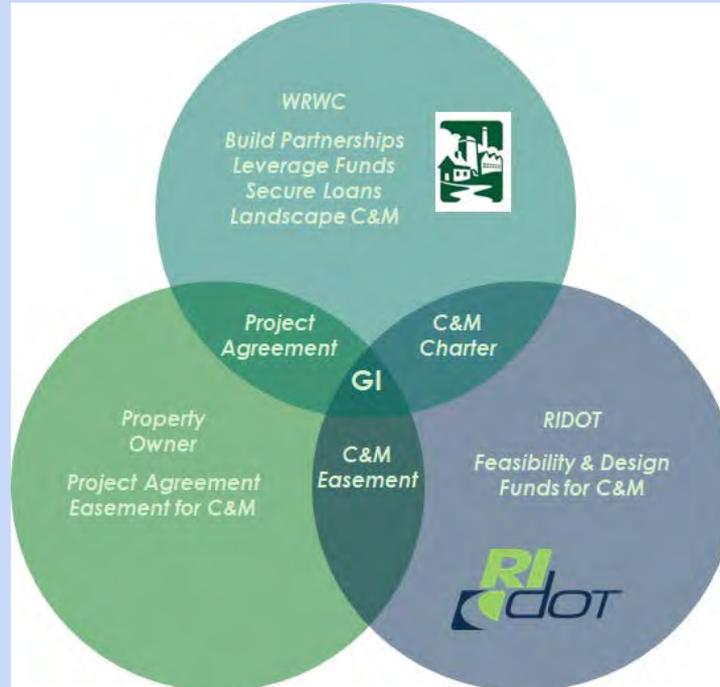


# WRWC River Rangers Install





# Community Partnership



# Community Engagement Strategies: Job Training and Employment Programs



## FREE Job Training Program!

### Certifications Include:

- OSHA 10 hour
- OSHA 40 hour (HAZWOPER)
- Lead Renovation, Repair & Painting (RRP) 8 hour
- Asbestos Supervisor 40 hour—Initial
- Introductions to Wastewater Treatment and Indoor Air Quality

PLUS get hands-on work experience in stormwater management, green infrastructure, depaving, site analysis and design, managing native, exotic & invasive plants and more!



Any Rhode Island resident can apply. Must be over 18 years old and be physically able to perform work duties.

### Training Dates:

**September 11th-November 3rd**

Training runs Monday—Friday 9am—5pm

Program runs for 8 consecutive weeks

**Location: PHA Education & Training Center**

144 Dodge St. Providence, RI 02907 —  
off Cranston St. in Codding Court

Apply online at

<https://goo.gl/KagTUY>

Contact Amelia at

401-559-2204 or

[arose@groundworkri.org](mailto:arose@groundworkri.org)

for more info

**GroundCorp**  
Groundwork RI's  
landscape design-build  
and maintenance service.



## GWRI Job Training Program

- OSHA 10 Construction Site Safety
- OSHA 40 HAZWOPER
- Confined Space Entry
- First Aid/CPR
- Lead RRP 8 hour
- Asbestos Supervisor Initial
- Introduction to Weatherization and Energy Efficiency
- Introduction to Wastewater Treatment
- Introduction to Indoor Air Quality/Mold/Vapor Intrusion



# GroundCorp Landscape



<https://vimeo.com/307570834>

# GWRI Right of Way Bioswales

Dexter Street -  
first design



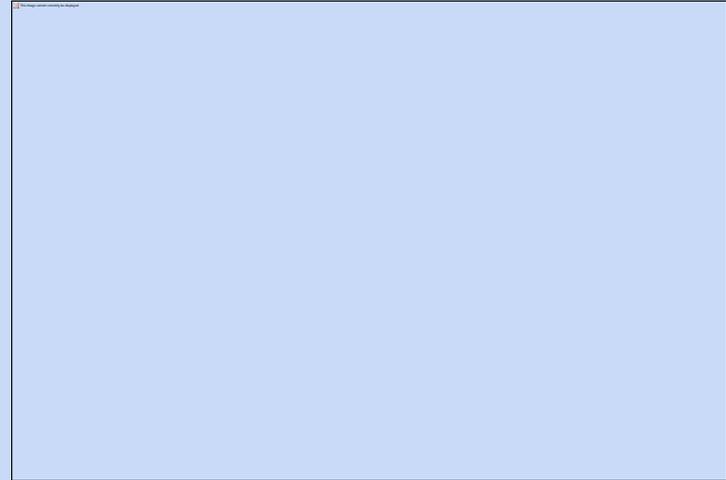
Allens Avenue -  
updated design



## GroundCorp Jobs on Private Property



Job Training Residential  
Backyard Depave Project



The Nature Conservancy Right  
of Way Depave

# Maintenance of Green Infrastructure



# GWRI Green Team Youth Employment



Resident Outreach and  
Interest Identification



Project Construction



Project Installation

Green Home Assessments

# Pawtucket Central Falls Resiliency Planning

## Who Created the survey?



### 178 Surveys Collected

122 in English

56 in Spanish

- Email campaign
- In person interviews

Physical interviews were collected from BVCAP and Progreso Latino

**Flooding:** 116 somewhat-extremely concerned 23 not concerned

**Lack of Parks and Open space:** 130 somewhat to extremely concerned 38 not concerned

**Limited Access to Healthy Food:** 137 Somewhat-Extremely Concerned 32 not concerned

**Lack of Trees:** 144 Somewhat-Extremely Concerned 25 not concerned

## When asked what climate resiliency strategies people would like to see in your city?

**84** High priority : More opportunities to grow your own food/buy locally grown food

**107** High Priority: More plants, trees

**116** High Priority: Increase opportunities to reduce waste, prevent litter, recycle, compost

# Olneyville Health Equity Zone Video



[https://vimeo.com/359888817/6c75fdddfefbclid=lwAR3jdSAkxodmMOafzGqU1oWUBH9caipose5wYT71G7sGX72OX72crqKx4Wo&mc\\_cid=92c08db8a6&mc\\_eid=761d977642](https://vimeo.com/359888817/6c75fdddfefbclid=lwAR3jdSAkxodmMOafzGqU1oWUBH9caipose5wYT71G7sGX72OX72crqKx4Wo&mc_cid=92c08db8a6&mc_eid=761d977642)



# Community Engagement Strategies: Education and Tours



Pleasant Valley Residential  
Driveway Depave Project

Trash Skimmer Education



Manton Avenue GI Tour  
with GIC

# Community Engagement Strategies: Educational Signage

**Nature at Work**

## Nature is at work here!

[www.greeninfrastructureri.org](http://www.greeninfrastructureri.org)

**Clean**  
Uses plants and soils to filter out pollution.

**Protect**  
Absorbs rain and reduces flooding.

**Economy**  
Reduces utility bills and creates local jobs and training opportunities.

**Cool**  
Replaces hard surfaces that hold heat.

**Wellness**  
Cleans our air and creates welcoming spaces.

**Habitat**  
Attracts animals like butterflies, turtles and frogs.

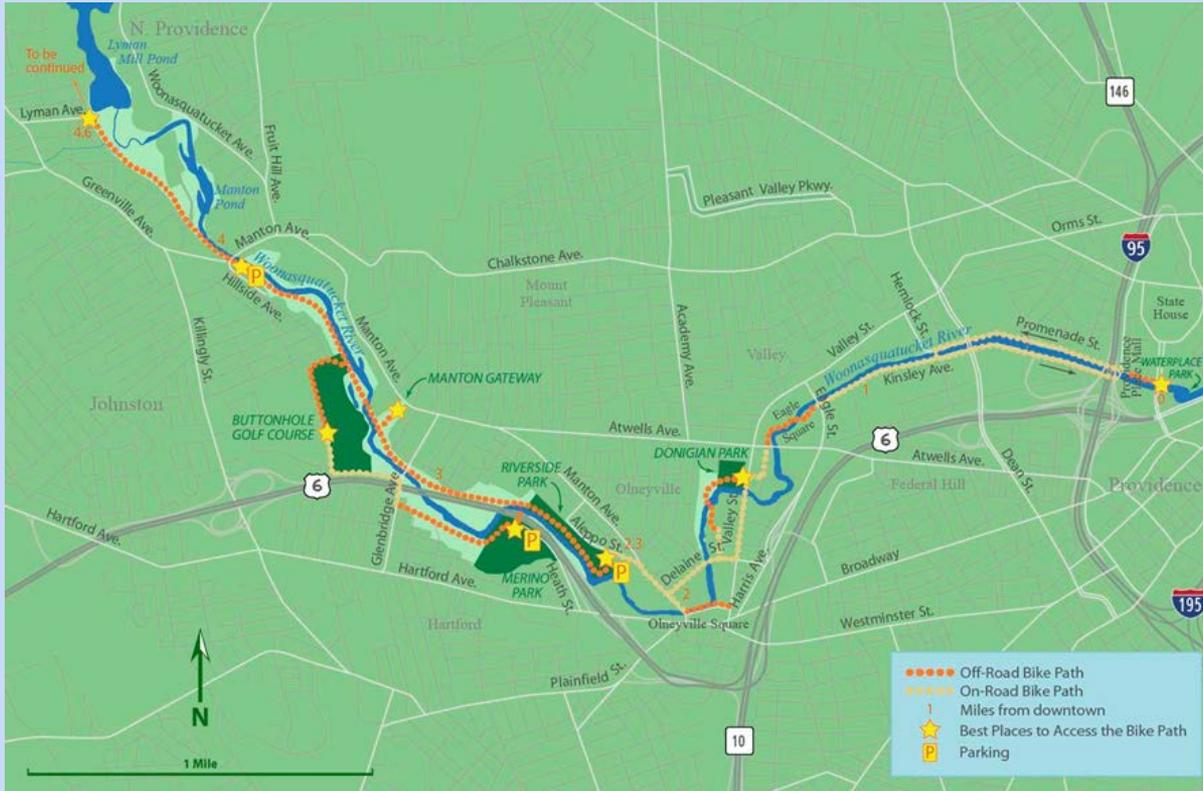
**Dexter Street Curb Cuts**

Curb cuts allow stormwater to flow directly into a tree pit and get absorbed by a special mix of soil, rocks, plants, and trees. That means less polluted stormwater going into our storm drains and less flooding in our neighborhood streets. Community members participating in Groundwork Rhode Island's environmental job training program installed these tree pits and curb cuts in spring and fall of 2017.

If you have questions about this project please contact Groundwork Rhode Island at [info@groundworkri.org](mailto:info@groundworkri.org) or call (401) 395-7174.

CLEAN WATER ACTION  
 UNIVERSITY CENTER FOR PUBLIC INNOVATION  
 westelmwood  
 GREENSPACE Rhode Island  
 The Steel Yard  
 RHODE ISLAND GREEN INFRASTRUCTURE COUNCIL

# Watershed Approach to Community Engagement



WRWC Greening the Greenway

# WRWC Greening the Greenway



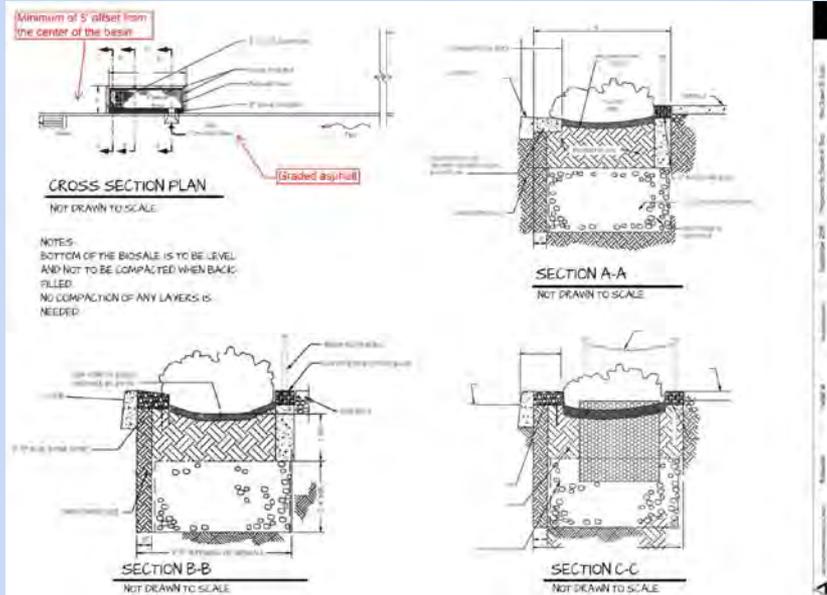
# Project Prioritization



Woonasquatucket River Watershed Plan Matrix																									
Greening the Greenway Opportunities																									
Opportunity	Description	Location	City	Owner	Contact		Status	CSO Area	Drainage System			Visibility/Priority	WRWC Partnership			Education Opp.		RIDOT SW Credit Potential		Additional Benefits		Site Restrictions	Total		
					Email	Phone			(Yes/No)	Drains from:	To River?		Points (3-25)	Existing Partnership?	Grant Opportunity?	Opportunity Agreement?	Points (0-20)	Points (0-15)	Potential SW Credits	Points (0-25)	Notes			Bonus Points (0-5)	Notes
Citizen's Bank	Parking Lot Retrofit	1917 Westminster St	Providence	Citizen's Bank	N/A	N/A	Completed	No	Private Property (3)	Yes (10)	13	20	Existing (10)	Can Work With Existing Grant (2)	Yes (5)	20	5	1.5 ac (20)	20	Adjacent to greenway. Goal achieved without impact to landowner.	5	None	0	83	
Pleasant Valley Parkway	Tree Planters	Pleasant Valley Parkway and Moorland Ave	Providence	City of Providence	N/A	N/A	Completed	No	Local City/Town (3)	Yes (10)	13	5	Existing (10)	Can Work With Existing Grant (2)	Yes (5)	17	5	1.3 ac (20)	20	None	0	limited benefit to RIDOT	0	55	
Greenville Ave Outfall	Streambank Restoration	Greenville Ave & Greenway	Johnston	RIDOT	alicia.richardson@dot.ri.gov	401-479-1227	In Progress	No	State Road (1.5) Local City/Town	Yes (10)	25	20	Existing (10)	Multiple Grant Potential (3)	Yes (5)	20	3	+0.25 ac (5)	5	None	0	None	0	75	
Manton Ave	Tree Planters	between Tanyard	Providence	City of Providence	N/A	N/A	In Progress	No	Local City/Town (3)	Yes (10)	13	20	Existing (10)	Can Work With Existing Grant (2)	Yes (5)	17	5	0.25-0.5 ac (10)	10	Meets WRWC goal to green Manton Ave.	5	None	0	70	
Farm Fresh RI Food Hub	Parking Lot & Green Spaces	498 Kinship Ave	Providence	Farm Fresh RI	rhob@farmfreshri.org	401-312-4250 x306	In Progress	No	Private Property (3)	Yes (10)	13	20	Existing (10)	Can Work With Existing Grant (2)	Yes (5)	17	9	0.25-0.5 ac (10)	10	None	0	None	0	69	
Greystone Social Club	Parking Lot Retrofit	3 Greystone Ave	North Providence	Robert Varin	rvarin@cloud.com	401-251-9724 401-525-0133	In Progress	No	Private Property (3)	Yes (10)	13	20	Existing (10)	Can Work With Existing Grant (2)	Yes (5)	17	5	0.25-0.5 ac (10)	10	None	0	None	0	65	
Cathedral Art Metal Co	Parking Lot Retrofit	25 Manton Ave	Providence	Lisa Tracey	ltrace@capri.com	401-273-7200 x1219	Potential	No	Private Property (3)	Yes (10)	13	20	Existing (10)	Multiple Grant Potential (5)	Yes (5)	20	5	0.5-1 ac (15)	15	Adjacent to greenway. Expand upon work on San Souci	5	None	0	78	
Atlantic Milk / Wolfe Myrow	Parking Lot Retrofit	115 Manton Ave 100 Manton Ave 46 Aleppo St	Providence	Wolfe Myrow Despot Anthony & Tobin	rajg.plum@igmail.com Unknown awol@emynow.com	401-274-0060 Unknown Unknown	Potential	No	Private Property (3)	Yes (10)	13	20	No relationship (3)	Multiple Grant Potential (5)	Yes (5)	13	9	0.5-1 ac (15)	15	Connection to Manton Ave project. Adjacent to Greenway	5	None	0	75	
Streambank Stabilization (Manton Ave Dam to Mazon Ave)	Streambank Restoration	Manton Ave Dam to Mazon Ave	Johnston	Public ROW	N/A	N/A	Potential	No	State Road (1.5)	Yes (10)	25	20	Existing (10)	Multiple Grant Potential (5)	Yes (5)	20	5	+0.25 ac (5)	5	None	0	None	0	75	
Streambank Stabilization (Delaine St to Rising Sun)	Streambank Restoration	1481 166 Valley St	Providence	Public ROW	N/A	N/A	Potential	No	State Road (1.5)	Yes (10)	25	15	Existing (10)	Multiple Grant Potential (5)	Yes (5)	20	3	0.25-0.5 ac (10)	10	None	0	None	0	73	
O'Reilly Auto Parts/old Price Rite	Retrofit & Potential	80 Manton Ave	Providence	Grass Management	Unknown	Unknown	Potential	No	Private Property (3)	Yes (10)	13	20	No relationship (3)	Multiple Grant Potential (5)	No (0)	8	7	0.25-0.5 ac (10)	10	Potential to add Greenway segment	5	None	0	63	
Lyman Ave Greenway Entrance	Streambank Restoration	Lyman Ave where Greenway ends	North Providence	Public ROW	N/A	N/A	Potential	No	Local City/Town (3)	Yes (10)	13	20	Existing (10)	Can Work With Existing Grant (2)	Yes (3)	17	5	+0.25 ac (5)	5	None	0	None	0	60	
Preferred Equipment Resource	Parking Lot Retrofit	1 Goldsmith St	Johnston	Tom Berc	Unknown	401-354-6600	Potential	No	Private Property (3)	Yes (10)	13	10	Existing (10)	Multiple Grant Potential (3)	Yes (5)	20	1	0.5-1 ac (15)	15	Close to Greenway	5	Somewhat hidden	5	59	
Stop & Shop	Parking Lot Retrofit	850 Manton Ave	Providence	Cali Realty Co Inc	Unknown	Unknown	Potential	No	Private Property (3)	Yes (10)	13	20	No relationship (3)	Can Work With Existing Grant (2)	No (0)	5	6	0.25-0.5 ac (10)	10	None	0	None	0	54	
Puerta de Refugio	Parking Lot Retrofit & Potential	274 Valley St	Providence	Door of Refuge Pentecostal Church	Unknown	Unknown	Potential	No	Private Property (3)	Yes (10)	13	17	3	No relationship (3)	Can Work With Existing Grant (2)	Yes (5)	10	5	+0.25 ac (5)	5	Opportunity to pursue a grant and reduce impervious cover.	5	None	0	50
Centech Medical	Parking Lot Retrofit & Potential	59 Cranford Ave	Providence	Raymond Symon? Inc	Unknown	Unknown	Potential	No	Private Property (3)	Yes (10)	13	10	No relationship (3)	Can Work With Existing Grant (2)	No (0)	5	5	+0.25 ac (5)	5	Potential to add Greenway segment	5	None	0	43	
Providence Journal Bulletin	Parking Lot Retrofit	212 Cansley Ave	Providence	Rhode Island Holdings Inc	Unknown	Unknown	Potential	Yes	Drains from:	To River?			Existing Partnership?	Grant Opportunity?	Opportunity Agreement?			Potential Acres?		None	0	Further	0	0	
Bath St property	Parking Lot Retrofit	973 Protonsides St	Providence	Williams Communicatio no inc	Unknown	Unknown	Potential	Yes	Drains from:	To River?			Existing Partnership?	Grant Opportunity?	Opportunity Agreement?			Potential Acres?		None	0	Further	0	0	

# Community Engagement Strategies: Working with Municipalities

## Providence DPW Review of Bioswale Design Plans



PVD Parks/W RW C Tree Filters





# Lessons Learned

Paying people vs having volunteers

Iterate designs to improve project impact

Has to look good and be maintained to gain community support

Know the context of your project location, who will be maintaining GI, public or private land

Aggregate resources to bring to municipalities, businesses, and residents

In lieu of stormwater utility engage individual property owners based on interest (and ability to pay)



# Thank you!

Alicia Lehrer, Woonasquatucket River Watershed Council, [alehrer@wrwc.org](mailto:alehrer@wrwc.org)

Amelia Rose, Groundwork Rhode Island, [arose@groundworkri.org](mailto:arose@groundworkri.org)

<http://www.greeninfrastructureri.org/>