



Appendix E-7 – Municipality and Stakeholder Outreach

G-1 -Municipality/Stakeholder Suggested Green Stormwater Infrastructure Project Sites

G-2 – Summaries of Meetings with Municipalities and Stakeholders

G-3 – Green Stormwater Infrastructure Reports Developed by Municipalities and Stakeholders



Appendix E-7-1
Municipality/Stakeholder Suggested Green Stormwater
Infrastructure Project Sites



Starting at the Source:
 How Our Region Can Work Together for Clean Water
 Appendix G - Municipality and Stakeholder Outreach

Project ID	Municipality/Authority/ Stakeholder	Suggested Project Location
1	Braddock	Community Plaza at former UPMC hospital site
2	Braddock	Braddock Ave at the intersections of 4 th , 5 th and 6 th Streets
3	Braddock	Future Redevelopment at Braddock Ave and Quarry St (site of former bakery)
4	Braddock	Vacant Lots
5	PWSA - Hazelwood	4800 Block of 2nd Ave
6	PWSA - Hazelwood	Hazelwood Carnegie Library Second Avenue and Tecumseh
7	PWSA - Hazelwood	ALMONO Development
8	PWSA - Squirrel Hill	Business District - along Forbes Avenue business district (between Murray Ave and Shady Ave)
9	PWSA - Squirrel Hill	Near O'Connor's Corner (Murray Ave and Phillips Ave)
10	PWSA - Squirrel Hill	Squirrel Hill Post Office
11	PWSA - Southside	S. 21 st Street from Southside Park to the riverfront trail
12	PWSA - Saw Mill Run Watershed	Projects TBD
13	Project 15206 - Morningside	Heth's Run, Chislett St & Vetter St
14	PWSA - Beechview	Broadway Ave Streetscape
15	PWSA - Carrick	Brownsville Road Streetscape
16	PWSA - Strip District	Smallman Street - Road reconfiguration and resurfacing between 16 th and 21 st streets
17	PWSA - Chateau	Beaver Ave - Road reconfiguration
18	PWSA - Lawrenceville	43 rd Street Overlook
19	PWSA - Highland Park	Heth's Run - Pittsburgh Zoo Parking Lot
20	PWSA - Hill District	Hill District Master Plan
21	Bakery Square Redevelopment	Bakery Square 2.0
22	PWSA - McDonough's Run	McDonough's Run GSI Evaluation
23	PWSA - Nine Mile Run	Nine Mile Run GSI Evaluation
24	PWSA - McNeilly Run	McNeilly Road Concept Projects
25	PWSA - Point Breeze	Frick Park Area Concept Projects
26	PWSA - Swisshelm Park	Swishhelm Park Concept Projects
27	PWSA - Brookline	Brookline Area Concept Projects
28	PWSA - Southside	Birmingham Bridge Grassy Areas (Southside End)
29	PWSA - Point Breeze	Forbes Ave between Beechwood Blvd and Braddock Ave
30	PWSA - Regent Square	Frick Park playground area at intersection of Forbes Ave and Braddock Ave
31	PWSA - Hill District	Lower Hill District, Cliffside Park
32	PWSA - Allegheny West	W North Ave near Allegheny Commons Park
33	PWSA - South Oakland	Bates Street Corridor in conjunction with removal of invasive species
34	PWSA - Lawrenceville	(A-29/A-29Z) Site 037+222 - Lawrenceville Shop n' Save
35	PWSA - Lawrenceville	(A-29/29Z) Site 0870 - Inlet at 48 th and Harrison Street
36	PWSA - Lawrenceville	(A-29/29Z) Site 208+838 - In front of Allegheny Cemetery along Butler St between 46 th and 47 th St
37	PWSA - Lawrenceville	(A-29/29Z) Site 328+735+800 - Stanton Avenue between McCabe Street and McCandless Ave
38	PWSA - Lawrenceville	(A-34) Site 0033 - Butler Street between 55 th and 56 th Street, river side ROW.
39	McKees Rocks	Chartiers Ave Renovations
40	McKees Rocks	Third Street Park
41	McKees Rocks	Etna and Sefler Street area
42	McKees Rocks	Miller Street
43	McKees Rocks	Furnace St parking lot
44	McKees Rocks	P&LE Complex "McKees Rocks Flats"
45	PWSA - Hill District	Energy Innovation Center
46	PWSA - Hill District	Duquesne University
47	PWSA - Hill District	Former Civic Arena Site, within ROW of new roads.
48	PWSA - Hill District	Hill House
49	PWSA - Crafton Heights	Clearview Ave
50	PWSA	Green Alleyways throughout District 2



Project ID	Municipality/Authority/ Stakeholder	Suggested Project Location
51	Parkway Center Mall Redevelopment	Projects TBD
52	Wilmerding	Patton Street
53	Wilmerding	Airbrake Ave Walking Trails
54	Wilmerding	Ice Plant Hill Road, Westinghouse Ave and YMCA Parking Lot
55	Aspinwall	Business District
56	PWSA - Garfield	Hillcrest Street
57	Homestead	Renovation of Hazel Way between McClure and West Street to incorporate stormwater collection pipe and redirect stormwater flow into a bioretention pond between railroad tracks in vicinity of E 6 th Ave and McClure Street.
58	Homestead	Municipal Parking Lot at West Street and 9 th Ave
59	Homestead	Bumpouts along Ann Street
60	Homestead	Bumpouts along West Street
61	Homestead	Parking lot next to Citizen's Bank at 8 th Ave and McClure St
62	Homestead	Triangular grass island property between Sarah and West Street, near 15 th Ave
63	Homestead	Property at Glenn and 13 th Street
64	Homestead	Small parking area at Hazel Way and McClure Street
65	Homestead	Tree wells with curb cutouts along Amity Street
66	Homestead	11 th Avenue side of Frick Park between Ann St and Amity Street
67	Homestead	Playground at Sarah and 12 th Street
68	Homestead	Parklet at site of Harry's Suit Shop along 8 th Ave (210 E 8 th Ave)
69	Homestead	Allegheny County Department of Human Services Homestead Complex
70	Homestead	Townhouse development along Amity Street
71	West Homestead	Redevelopment of former Keystone Plumbing site for rehabilitation center
72	Homestead	Voodoo Brewing redevelopment of former municipal building at Amity and 9 th Avenue
73	Homestead	Stormwater ponding issues: Runoff from West St collects on 8th Ave; Runoff from Ann and McClure St collects on 6th Ave
74	Carnegie	Carnegie Library and Music Hall
75	Carnegie	Municipal Parking lot 10
76	PWSA - Oakland	Schenley Park - Panther Hollow Watershed Restoration
77	PWSA - Hill District	Hill District Master Plan
78	East Pittsburgh	Bioretention with community park near the vicinity of Grandview Ave and Christina Alley
79	PWSA - Downtown	Grass Triangle areas along Commonwealth Place and Liberty Avenue near the off-ramp from the Fort Pitt Bridge.
80	Millvale	Girty's Run GSI Evaluation
81	Millvale	Investigate CSO Impacts
82	West View	Girty's Run GSI Evaluation
83	PWSA - McKinley Park	McKinley Park - Perimeter roads Delmont Ave, Michigan Street, and Eldora Place.
84	PWSA - Hill District	Lower Hill District, Cliffside Park - Driveway
85	PWSA - Squirrel Hill	Schenley Park – Beacon Street
86	PWSA - Squirrel Hill	Schenley Park – Bob O'Connor Golf Course
87	PWSA - Squirrel Hill	Schenley Park – Westinghouse Memorial
88	PWSA - Squirrel Hill	Frick Park – Environmental Center at Frick Park
89	PWSA - Squirrel Hill	Schenley Park – Schenley Drive
90	PWSA - Highland Park	Highland Park – Heth's Run Stream Daylighting
91	PWSA - Hill District	MLK Field off of Kirkpatrick Street (Warren K Branch Park)
92	PWSA - Lawrenceville	Arsenal Park
93	PWSA - Oakland	Schenley Park – Panther Hollow Lake Restoration
94	PWSA - Oakland	Schenley Park – Daylighting Panther Hollow Lake Outfall
95	Stowe	Preston Park Area (Ohio Street and Center Street in Stowe Twp)



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96	Stowe	Parking lot and triangular traffic island at the intersection of Nicol Ave and Graham St
97	Stowe	Corner of Main St and Hillcrest
98	Stowe	Corner of Fleming and Davis Ave
99	Etna	Butler St & Bridge St - 060
100	Etna	Butler St & Bridge St - 374
101	Etna	Butler St & Bridge St - 234
102	Etna	Butler St & Bridge St - 047
103	Etna	Butler St & Freeport St - 196
104	Etna	Bridge St - 057
105	Shaler/Etna	James St - 209
106	Etna	Walnut St & High St - 225
107	Etna	Union Alley, Bridge & Freeport - 056
108	Etna	Union Alley, Bridge & Freeport - 056a
109	Etna	Butler St - 067
110	Etna	Butler St - 372
111	Etna	Maplewood & Pine St - 243
112	Etna	Maplewood & Pine St - 238
113	Etna	Dewey St - 163
114	Etna	Dewey St - 164
115	Etna	Dewey St - 168
116	Etna	Vilsack St - 173
117	Etna	Church St & Wilson St - 011
118	Etna	Weible St & Angle Alley - 014
119	Etna	Highland St & Angle Alley - 014a
120	Etna	East side of Grant Ave - 099
121	Etna	West side of Grant Ave - 172
122	PWSA - Spring Garden	Spring Garden Ave - 1
123	PWSA - Spring Garden	Romanhoff St & South Side Ave - 2
124	PWSA - Spring Garden	Spring Garden Ave - 3
125	PWSA - Spring Garden	Damas St - 4
126	PWSA - Spring Garden	Phineas St, Perata St, Troy Hill Rd - 5
127	PWSA - Spring Garden	Tripoli St, Suismon St, Turtle Way - 6
128	PWSA - Spring Garden	Heinz St - 7
129	PWSA - Spring Garden	River Ave - 8
130	PWSA - Spring Garden	River Ave - 9
131	McKees Rocks	Sproul Street
132	Carnegie	Borough Building Entryway and Parking Lot
133	Carnegie	Seventh Avenue Park
134	PWSA - Brighton Heights	McClure Ave at Woods Run
135	PWSA - Brighton Heights	Marmaduke Parklet and surrounding area to Jack's Run
136	PWSA - Garfield/Bloomfield	Penn Avenue between Mathilda St and Evaline St (Phase 1)
137	PWSA - West End	Main at Alexander, PPA lot
138	PWSA - Lincoln-Lemington and Larimer	Entire length of Lincoln Avenue
139	PWSA - Larimer	Larimer Ave on either side of E Liberty Boulevard
140	PWSA - Bloomfield	S. Winebiddle St. - Waldorf School of Pittsburgh
141	PWSA - Mt. Washington	Chatham Village
142	PWSA - Summer Hill	Zane Ave (north tip of Summer Hill)
143	PWSA - North Shore	River Ave from Heinz Lofts to Washington's Landing
144	PWSA - Squirrel Hill	Douglas/Phillips parking lot
145	PWSA - Larimer	Living Waters of Larimer will partner with current development or existing projects
146	PWSA - Larimer	Larimer Community Garden at the Village Green, Larimer Ave/Mayflower St
147	PWSA - Homewood	Rosedale area near Susquehanna - above culvert of NMR



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167	PWSA - McKinley Park	McKinley Park - Perimeter roads Zelda Way, Bernd St
168	Project 15206 - Highland Park	Hampton to Heths Park - 15206
169	Project 15206 - Highland Park	Bryant King to Lower Heths Park
170	Project 15206 - East Liberty	Penn Circle West
171	Project 15206 - Highland Park	Negley Run North
172	Project 15206 - Lincoln Lemington	Highland Dr & Lemington Ave
173	Project 15206 - Larimer	PAT_01 Parking
174	Project 15206 - Larimer	PAT_02 Parking
175	Project 15206 - Larimer	Washington Blvd Chatham Entry Bus Shelter
176	Project 15206 - Larimer	Rainbow St Chatham Parking & PAT property
177	Western PA Conservancy - Southside	Josephine & Greeley
178	Western PA Conservancy - Terrace Village	Centre & Herron
179	Western PA Conservancy - Greenfield	Greenfield & Irvine
180	3RWW – Swisshelm Park	Project located within the 1300 block of Windermere Dr. in Swisshelm - Permeable Parking
181	3RWW – Swisshelm Park	Project located within the 1300 block of Windermere Dr. in Swisshelm - Bioretention
182	3RWW – Swisshelm Park	Project located within the 1200 block of Windermere Dr. in Swisshelm - Bioretention #1
183	3RWW – Swisshelm Park	Project located within the 1200 block of Windermere Dr. in Swisshelm - Bioretention #2
184	3RWW – Swisshelm Park	Project located within the 1200 block of Windermere Dr. in Swisshelm - Bioretention #3
185	3RWW – Swisshelm Park	Project located within the 1100 block of Windermere Dr. in Swisshelm - Permeable Parking
186	3RWW - Point Breeze	Frick Museum - Private parking lot - Bioretention
187	3RWW - Point Breeze	Frick Museum - Private parking lot - Permeable Parking
188	3RWW - Point Breeze	S. Homewood Ave - Bioretention
189	3RWW - Point Breeze	S. Homewood Ave - Traffic Island Bioretention
190	3RWW - Point Breeze	Le Roi Road - Bioretention
191	3RWW - Point Breeze	Le Roi Road - Permeable Parking
192	3RWW - Point Breeze	Osage Lane - Permeable Alley
193	3RWW - Point Breeze	Roycrest Place - Permeable Parking
194	3RWW - Point Breeze	Card Lane - Permeable Parking
195	3RWW - Point Breeze	Lang Court - Permeable Parking
196	3RWW - Brookline	Sussex Ave North of Sageman Ave
197	3RWW - Brookline	Sussex Ave South of Sageman Ave
198	PennDOT - Northside	East Ohio Street between East and Chestnut
199	PennDOT - Downtown	Forbes Ave Between Smithfield St & Grant
200	Nine Mile Run Watershed Association - Crescent Elementary	Bennett Street and Tokay Street in City of Pittsburgh
201	Nine Mile Run Watershed Association - Oakwood & Batavia Streets	Oakwood and Batavia Streets in City of Pittsburgh
202	Nine Mile Run Watershed Association - Frankstown & Wheeler Streets	Frankstown & Wheeler Streets in City of Pittsburgh
203	PWSA - East Liberty	Samoan Way
204	PWSA - Squirrel Hill	Forbes Avenue & Wightman Street
205	PWSA - Squirrel Hill	Beacon Street & Murray Avenue
206	PWSA - Squirrel Hill	Wightman School Community Building
207	PWSA - Downtown	East of Municipal Courts Drive and the First Ave Parking Garage



Appendix E-7-2
Summaries of Meetings with Municipalities
and Stakeholders



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Municipality	Community Priorities/Concerns	Follow Up Required	Potential Partners Identified	Opportunities
Braddock				
5/15/2013 – Tim Prevost (TP), Borough Mayor, and Stakeholders	Presentation developed by Landscape Architecture firm for the development of a Green Master Plan for the borough. Municipality could redevelop industrial parcels south of Braddock Avenue. The redevelopment would serve as a catalyst for municipal improvement.	Set up meeting with borough as SCS gets developed	Borough	TBD
10/21/2013 – TP, Joe Day (JD), Josh Jedlicka (JJ), Beth Dutton (BD), Manager, Engineer, and Council Members	Act 47 Community, Funding, flooding on Braddock Ave and 4th, 5th, and 6th Streets. Braddock is very interested in GSI and appears to be in favor of regionalization of trunk sewers.	Mon Valley Initiative and Trek Development. Check in with Design Center to discuss Community Plaza design? Vacant property information from the municipality. Schedule a meeting in winter 2013 when we have more information to share with them.	Mon Valley Initiative; Trek Development; Design Center of Pittsburgh	Vacant lots, new development along Braddock Ave, trees for industrial site buffers
1/7/2014 TP and BD met with Patrick Shattuck and the Braddock Steering Committees - Zoning and Map, and Civic Plaza Design	Pat Morgan from Braddock noted that they are starting a shade tree commission and pursuing opportunities for trees through Treevitalize. Borough is adopting an official map for properties the municipality wants to acquire. They are also developing a zoning ordinance. They want to try to bring some of ALCOSAN's goals into the map, e.g. address the stormwater problem areas. TP asked the group to provide ALCOSAN with information on where GSI can be implemented. Encourage GSI in redevelopment projects, including the Community Plaza. David Soboslay from Delta Development Group attended the meeting. TP asked him to keep GSI opportunities in mind for the other communities where DD works.	Check to see who was awarded Community Design Plaza project and what GSI will be incorporated		
Homestead				
6/6/2013 – Jan Oliver (JO), TP, Manager Ian McMeans (IM), Steel Valley COG Ex. Director An Lewis	Homestead is looking to encourage business development on Eighth Avenue. Major obstacle is Hazel Way, an alley behind the businesses on Eighth Avenue. Maintenance on the alley is poor, contributes to flooding in certain businesses, and cannot support necessary traffic to promote businesses. Borough is looking for a multi-municipal solution, with West Homestead and Munhall, to address stormwater and road integrity. Project would replace the road and drainage pipes with stormwater conveyed to property currently owned by SVCOG.	Project not fully defined and partners are still looking into their roles in the project.	Homestead, Munhall, West Homestead, Steel Valley COG	Some potential for a significant amount of stormwater removal from the CSS, but project scope needs better definition.
7/3/2013 - TP, JJ, Ed Kluitenburg, and Ian McMeans	Stopped by Homestead municipal building prior to a walkthrough of potential GSI areas in Homestead. Ian joined us and showed us the Hazel Way project area. The road is in poor condition. Hazel Way project is essentially a sewer separation with the stormwater being conveyed to a Bioswale on SVCOG property between CSX and Norfolk Southern railroads in Munhall. Shared concerns about the location of Bioswale and logistics with Ian.	Continue coordination with boroughs to identify potential municipal GSI projects within Homestead Study Area.		
10/30/2013 - TP, JD, municipal representatives from Homestead, West Homestead, Munhall, and SVCOG	ALCOSAN shared results of the SCS to the meeting attendees showing potential GSI municipal projects within the Homestead Study Area (M-45 sewershed). Hazel Way project was still in development phase. A concern over an apparent jurisdictional disagreement arose between Homestead and Munhall Sanitary Sewer Municipal Authority. Unsure if Hazel Way is a viable project as initially identified by Homestead.	Continue coordination with boroughs to identify potential demonstration projects within Homestead Study Area.		



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Homestead (cont'd)				
4/1/2014 - TP, JF, JD, municipal representatives from Homestead, and WPC	Homestead is starting a "Green Scan" through WPC, which will identify areas in the community and give Homestead a toolbox of recommendations for how and where to implement green infrastructure and green space within the town. Meeting focused on targeted areas for stormwater controls. These controls could be located on vacant, blighted and abandoned property in the Borough.		WPC	Several opportunities for bioretention cells along the lateral streets.
6/2/2014 – Joe Fedor, Josh Jedlicka, Beth Dutton, Ian McMeans, and Lloyd Cunningham	Meeting to discuss locations for potential GSI projects. Ian said that Homestead’s goal is to be the greenest municipality in Allegheny County. Highest priority project for borough is collector line on Hazel Way. Ordinance now requires onsite treatment of stormwater for any development. WPC has been doing Greenscan with Homestead. CMU is doing study to convert 210 E. 8 th Ave (former Harry’s Clothes Shop) to a parklet. Lloyd said Homestead, W. Homestead, and Munhall work together, share services. Ian thought impervious surface stormwater fee would be helpful to provide funding for stormwater management in borough. An Lewis has infiltration test data for area proposed for bioswale between RR tracks. 60% of Homestead homes are rentals, so residential rain gardens would not be a good option.	Many sites identified. ALCOSAN will map and determine stormwater drainage. Prioritize sites. Contact An Lewis for vacant lot GIS data.	8 th Avenue Place - Keith Kaufold. They have grant funding for youth to do lawn services. Amity Garden Group – maintains Amity Harvest Garden. Ellie Gumlock is POC. YoungLife-youth paint houses, cut grass. Propel Charter School K-12 - has done some community work. Lloyd said President for Fruit Tree Association (Jim) lives in Squirrel Hill and is very knowledgeable about trees. Zero Fossil - in Munhall.	Hazel Way, any municipal parking lot, vacant lots. See potential GSI projects list. Ian suggested tree/bioswales along streets as you go up hills in Homestead. This will help deal with unmaintained grass strips.
7/9/2014 – TP, JF, Ian McMeans, Art Gazdik, Judy Wagner, Jeff Bergman, and Mike Knoop	Meeting to discuss the Homestead Greenscan with the Western Pennsylvania Conservancy. Ian was interested in having the WPC's new tree pit design tested in Homestead's Frick Park. Discussions on how to effectively modify catch basins so they could capture salty snowmelt in the winter and not impact the GSI. Loading ratios were discussed. Discussions moved to other potential locations for GSI in Homestead. Identified a need to come up with innovative ideas to monitor small GSI. Project would be bid by WPC, not Homestead for construction in the fall of 2014.		WPC	West and 15th Street parcel 9th and Amity



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Four Mile Run				
10/7/2013 - TP, DWB, municipal representatives from PWSA, COP, and others	Meeting was held to discuss the scope of PWSA flood control study for Saline Street. Pittsburgh Parks Conservancy requested ALCOSAN include the Four Mile Run area in the SCS.	Assign FMR to Study Area list.	PWSA PPC Councilman O'Connor	
11/04/2013 - TP, JD, JJ, Councilman O'Connor, and neighborhood stakeholders walk through of Squirrel Hill Business District	Residents along Forbes Avenue business district (between Murray Ave and Shady Ave) have regular basement flooding and other water table basement seepage concerns. Goal of walk through is to identify a small GSI demonstration within public ROW, with funding by COP. Squirrel Hill Urban Coalition is leading ongoing tree replacement efforts in Squirrel Hill business district. The SHUC is replacing 5 trees in the next year and working to incorporate street trees near O'Connor's Corner (Murray Ave and Phillips Ave) and also near the Squirrel Hill Post Office (Murray and Darlington Road). In addition, local business owner Charles Spiegel attended to describe history of Forbes Ave business district basement flooding issues.	Marty of Squirrel Hill Urban Coalition will contact ALCOSAN with locations of future tree relocations. JJ will share ideas with SCS team and we will share ideas with O'Connor and SHUC for potential demonstrations.	Squirrel Hill Urban Coalition	Forbes Ave Business District in the immediate term. Potential for O'Connor Corner and Squirrel Hill Post Office as well if desired.
Southside				
10/22/2013 - Meeting with Dan Sentz, City of Pittsburgh Planning Department.	Met with Dan Sentz of City of Pittsburgh Planning Department. Discussion was focused on the proposed Green Street along 21st Street from E. Carson to near railroad tracks. Street would incorporate GSI features to meet CoP redevelopment ordinance and offer a connection to Southside Park. Eventual idea is to extend Green Street in opposite direction to connect to riverfront trail. Overview of ALCOSAN SCS was given to Dan and potential for expanding GSI in residential areas of Southside was discussed.	No specific action. Continued communication as project concept advances and potential ALCOSAN participation in GIN charrette in the winter.	City of Pittsburgh Planning Department	
5/5/2014 – TP, JD, Council President Bruce Kraus	TP reviewed SUSTAIN and Municipal Projects mapping. Provided the Council President with LID Handbook identifying the types of GSI BMPs and how that could be used in his district. Discussed the results of the GIN Charrette for South 21 st Street and noted that type of project could open discussion for more GSI in Southside. Communicated opportunities and impediments for implementing GSI in his district with PennDOT.	Coordinate with PennDOT, PWSA, and DPW. Keep Council President apprised of progress periodically.	PennDOT PWSA DPW	East Carson Street Neighborhood between M-15 and M-22.
Hazelwood				
10/25/2013 – TP, JD, and Councilman O'Connor	Second Avenue could present some challenges, as it is a state road. The neighborhood surrounding Blair Street has many vacant lots and blighted. The City owns the field at the southern end of this neighborhood, and it could be a good location for GSI; Former Gladstone Middle School for a green roof; PennDOT discharges a lot of stormwater from the Parkway into the neighborhoods in Hazelwood; Panther Hollow Project; Field in Swisshelm Park near NMR; Chair of Representative Dan Frankel's group. This group wants to do a study on options to manage stormwater in Hazelwood. Do a demonstration project.	Follow up with Councilman O'Connor to get the maps of properties that URA owns in Hazelwood.	ACTION-Housing	ACTION-Housing area is in early stages of development; ALMONO Site; Phase 3 of Summerset; GSI demonstration project in Squirrel Hill business district, Forbes and Murray Aves.



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PWSA				
12/12/2013 - Meeting with James Stitt and John Maslanik, PWSA	James thinks that the ALCOSAN study will help PWSA narrow where to locate GSI. PWSA wants performance data to demonstrate the benefit of GSI to ratepayers and regulatory agencies. PWSA is greening the Developer's Guide, and city codes and ordinances. PWSA is also developing standardized policies for partnering with agencies. The channels of communication need to be better between City departments and authorities, for example, to coordinate implementing GSI in projects. We need leadership in the region to help GSI get implemented.	ALCOSAN will identify key projects in the PWSA service area. ALCOSAN asked PWSA to provide feedback on wet weather problem areas in the city. ALCOSAN wants to know how PWSA thinks we can make this a true cooperative effort. John said that if ALCOSAN can provide PWSA with shape files for municipal BMP projects, they can do planning (e.g. so they don't miss street reconstruction opportunities) and outreach on where to implement GSI. James Stitt suggested that ALCOSAN create standardized projects to be easily implemented in other neighborhoods	URA, Housing Authority	Review ARCADIS' study results for failed dye test properties?
5/29/2014 - TP, JD, JJ, and BD met with James Stitt, Kathleen Camp, Bob Hutton, and John Maslanik	Bob Hutton identified some city parks which he thinks could benefit with GSI. They are McKinley Park and Marmaduke Park. SCS team requested a list of potential projects identified by PWSA for inclusion in the SCS. SMR Study was developing an RFP to be released in July to perform a WQ assessment which will serve as the basis of the GSI assessment.			
8/25/2014 - TP, BD, James Stitt, Kathleen Camp, Barton Kirk, Damon Weiss, Jeannie Van Briesen, John Buck, Tony Igwe, Bob Hutton, and others	Meeting was facilitated by PWSA to discuss the development of PWSA's GSI monitoring plan. The plan will lay out all the protocols to be used with all PWSA GSI projects. The plan could potentially be used through the region. PWSA is looking to affordably monitor GSI with a focus on lifecycle costs. John Buck mentioned he had data on rain gardens and green roofs. Tony Igwe inquired whether or not there would be "societal" monitoring to try and quantify the non-stormwater impacts of GSI. Dr. Van Briesen is interested in how GSI can help facilitate the removal of nitrogen and phosphorus from the stormwater.	Goals of the effort: Support adaptive management within integrated watershed plan Verification for stormwater utility Compliance monitoring Partnership development		
9/16/2014 - TP, BD, Jim Good, James Stitt, Kathleen Camp, John Schombert, John Maslanik	PWSA is looking to issue a RFP for GSI. 3RWW requested a meeting to ensure the PWSA RFP does not duplicate efforts from the ALCOSAN SCS.	Goals of the effort: Support adaptive management within integrated watershed plan Verification for stormwater utility Compliance monitoring Partnership development		
9/23/2014 - TP, James Stitt, Kathleen Camp	Meeting to go over potential sites identified by PWSA. Most of the sites were included in Katherine Camp's email from earlier in the summer. PWSA is looking to partner with Pgh Parking Authority to install GSI in the West End Parking lot along Main and Alexander.		Pittsburgh Parking Authority	



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East Pittsburgh				
1/21/2014 – TP and JD met with Borough Council at monthly meeting	East Pittsburgh is a community which has limited resources to implement GSI or other source controls on their own. There are opportunities along some streets to enact GSI. ALCOSAN offered to assist East Pittsburgh with identifying potential sources of funding for GSI demonstration project. East Pittsburgh identified a potential project which might have dual purposing of GSI and recreation.	ALCOSAN staff will go out in the field with East Pittsburgh personnel to identify good GSI candidate projects.	East Pittsburgh Borough	Playground on Grant
McKees Rocks				
1/22/2014 - TP, JD, BD, JJ Meeting with McKees Rocks Borough Tricia Levander, Doug Evans , Dick Naughton and Robert DiCicco	Sediment needs to be removed from Chartiers Creek. Furnace Street, River Avenue, part of the bottoms, and Creek Road all flood. DE noted erosion problems on Miller St that's causing the bluff to erode and impacting the homes below. RD noted new homes being built above and causing a lot of sw runoff. 2/19/2014 - TL will prepare a list of vacant properties that the borough owns and email it to BD. Council will discuss what roads it wants to fix at March 10th meeting	Meeting with Design Center on March 7 to see if GSI can be included in streetscape. Josh to visit borough in spring or summer to identify areas with high sw flow. Ask Doug for road reconstruction/overlay plans currently under development (DE called on 3/12 and said that Council has met for the past two nights and they haven't come to a decision yet about the paving schedule. He'll keep us posted.) On 2/25/2014 Tricia Levander provided list of vacant properties. BD sent to EK, JJ, and TP.	Community Design Center of Pittsburgh	Vacant lots for GSI Streetscape project. Furnace St parking lot underground sw detention.
10/3/2014 - TP, JJ met with McKees Rocks Borough engineer Doug Evans	McKees Rocks moved ahead with GSI project on Sproul Street in conjunction with street paving program. McKees Rocks is hoping ALCOSAN might be able to provide some reimbursement funding of the project at some future time. The project was an alternative to installing three catch basins on the street and tying them into the McKees Rocks combined sewer system tributary to O-06.			
District 2 – City of Pittsburgh (Chartiers, Corliss, and SMR Study Areas)				
2/3/2014 - Meeting with Theresa Kail-Smith and Kimberly Salinetto from Dist 2 CoP Council	TKS expressed an interest in green alleyways and stormwater fee program. Discuss who at City would apply for grants, green alleyways.	ALCOSAN to set up a meeting with TKS to review Clearview Ave site for GSI opportunities. ALCOSAN to set up at meeting with Guy Costa and Mike Gable to discuss GSI funding, installation, and maintenance.	Kossmann Development Company - will be developing Parkway Center Mall	Parkway Center Mall, green alleyways, Clearview Ave.
Crafton				
2/5/2014 – TP, JD, Manager Robert Callen, Rick Minsterman	TP reviewed SUSTAIN and Municipal Projects mapping. TP provided the manager with LID Handbook identifying the types of GSI BMPs, which his borough could implement. Discussed the potential for cost savings with Crafton's MFS by implementing GSI in areas where Crafton identified gray solutions. Crafton identified several locations where there may be potential for GSI projects.	Share results of Chartiers Creek Study Area for Task 3 when available. Note: Robert Callen resigned as Borough Manager in April. TP initiated conversation with interim Manager Jamie Beechey on May 12.	Crafton PennDOT	Clearview Avenue Thomas St Dinsmore Noble and Bradford Chartiers and Woodlawn



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Wilmerding				
2/24/2014 - Meeting with Mayor and Council members	Flooding and debris problems on Ice Plant Hill Road, Westinghouse Ave, and YMCA parking lot. Manhole surcharge problem along Patton Street. Evaluate opportunity for bioswales adjacent to walking trail along Airbrake Ave. Follow up on sale of Castle and Middle School to evaluate opportunities for downspout disconnection.	Councilman Thomas and Bob Zischkau to walk through the Borough and identify potential green stormwater infrastructure projects. Determine the connectivity to see if it's impacting the combined sewer system. Contact Mayor Wright to visit Wilmerding in the spring or summer with public works to observe sw flow	North Versailles, East McKeesport, Allegheny County, Monroeville	Ice Plant Hill Rd, Patton St, Walking Trail, Castle and Middle School DS disconnection
District 4 – City of Pittsburgh (SMR Study Area)				
April 3, 2014 – TP, JD, Councilwoman Natalia Rudiak (NR)	TP reviewed SUSTAIN and Municipal Projects mapping. TP provided NR a copy of the LID Handbook identifying the types of GSI BMPs, which her district could use. Discussed locations of potential GSI projects within District 4.	Further investigation required.		McKinley Park
April 9, 2014 - Councilwoman Natalia Rudiak, Jamil Bey and Eric Ford (Beltzhoover community representatives), PPC rep	McKinley Park has potential drainage into the CSS tributary to S-29. Project would coincide with Park rehabilitation plans led by community leaders from Beltzhoover neighborhood.	Further investigation required.		Bio Retention?
District 8 – City of Pittsburgh (4MR, 9MR, Shadyside/Friendship, and Highland Park Study Areas)				
3/25/2014 – TP and JD met with Dan Gilman, Pittsburgh City Council District 8 and Erika Straussburger, Chief of Staff to Councilman Gilman	TP reviewed SUSTAIN and Municipal Projects mapping. TP provided the council member with LID Handbook identifying the types of GSI BMPs, which his district could implement. Councilman Gillman identified several areas in Shadyside where he knows of street flooding problems.			Winchester Thurston School Intersection of Maryland Ave and Holden St Fifth Ave and Wilkins Ave
Millvale				
3/26/2014 - TP and BD met with Amy Rockwell, Brian Wolovich, Matt Graham, Greg Scott and Jen Slagle	Millvale is submitting funding request to ACCD for grant to determine the impact of GSI on five CSO locations in Millvale.	If funded, Millvale will invite ALCOSAN to kick off meeting and TP requested specific locations of GSI		
Turtle Creek				
4/15/2014 – TP, JD and BD met with Julie Pantalone (Administrator) and Max Spencer (Council Member)	GSI maintenance may be an issue as Turtle Creek only has two street workers that are full time. Many properties in the borough are rentals, and so maintenance might be an issue. The property owners often do not comply with ordinances.	Julie will talk with Bob Zischkau, the Borough engineer, about potential GSI opportunities. She will also check with Council member and engineer Ted Czekaj to see if he knows of any areas in the borough that has	Turtle Creek Valley COG (land banking, vacant property); Mon Valley Initiative; Turtle Creek Rotary	



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Stowe				
4/28/2014 – TP and BD met with Stowe Commissioners Kelly Cropper Hall, Raymond Puskar, Stanley Papst and Stowe Engineers from RVB	TP reviewed SUSTAIN and Municipal Projects mapping. TP provided the council member with LID Handbook identifying the types of GSI BMPs, which the Township could implement. Township officials were very receptive to the concept of GSI and quickly identified several locations where they could implement GSI.	Township plans on following up with ALCOSAN with potential sites for evaluation.		Presston West Park Fleming Park
8/4/2014 with Stowe Commissioner Ray Puskar, Tarun Sonkhya Mike Meyer, Tim Prevost, Milton Lenhart, Josh Jedlicka	Visited sites identified by Stowe Township green committee. The best site selected was along Fleming Ave which ALCOSAN will investigate further as a potential project.	ALCOSAN to develop concept for Fleming Ave site.		Fleming Ave GSI site
Sharpsburg and Aspinwall				
5/9/2014 – TP, JD and BD met with Jan Barbus, Sharpsburg Manager, Melissa Lang, Aspinwall Manager, and Bob Zischau, Engineer for both municipalities	TP reviewed SUSTAIN and Municipal Projects mapping. TP provided the Managers with LID Handbooks identifying the types of GSI BMPs, which the municipalities could implement. Both municipalities noted they had many areas identified for GSI. This was due to the relative low slope of the towns south of Route 28. Sharpsburg shared information related to their recently passed Green Overlay Ordinance. The ordinance intention is to enhance the riverfront and maintain this natural asset for the public good. Aspinwall also has ideas for implementing GSI within their borough. Aspinwall mentioned Delafield Avenue as a potential project. TP noted the recent meeting with PennDOT and their potential role as a partner to implement GSI.	Boroughs plan on following up with ALCOSAN with potential sites for evaluation.		Sharpsburg Kennedy Park 16th and Freeport Aspinwall Ballfields Delafield Avenue
Mount Oliver				
5/16/2014 – TP, JD, JJ and BD met with Councilwoman Billie Michener, Project Manager Rick Hopkinson, and Kurt Todd, Engineer for municipality	This meeting was set up at the request of Mount Oliver Borough Council. TP reviewed SUSTAIN and Municipal Projects mapping process. TP provided the Managers with LID Handbooks identifying the types of GSI BMPs, which the municipalities could implement. However, TP noted that Mount Oliver was a sanitary community and not identified for analysis. Councilwoman Billie Michener pointed out that though technically true; a portion of the borough drains stormwater to PWSA's combined sewer system. The group walked around the portion of the borough tributary to Saw Mill Run. During the field visit, the borough representatives identified several potential projects. ALCOSAN asked Mount Oliver to keep the team apprised of any projects they identify.	Boroughs plan on following up with ALCOSAN with potential sites for evaluation.		
West Homestead				
5/22/2014 – TP and JD met with Manager Kyle Thauvette and Engineer Mark Brashear	TP reviewed SUSTAIN and Municipal Projects mapping. TP provided the manager with LID Handbook identifying the types of GSI BMPs, which the borough could implement. Manager indicated the combined portion of borough could be separated. An old WHEMCO parking lot could be used for GSI with municipal coordination. Women's rehabilitation facility could implement GSI on the borough's sidewalk. Borough is working with an individual to install green roof on building near municipal building.	Boroughs plan on following up with ALCOSAN with potential sites for evaluation.	Michael Mecca Program for Offenders Site	WHEMCO Parking lot Women's facility Michael Mecca building
6/23/2014 – TP met with Manager Kyle Thauvette	TP was taken to facility on 7th Avenue where a private company is constructing a rehabilitation center. The developer was present at the site to show where there might be the best potential for GSI in the facility.			



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District 7 – City of Pittsburgh (Strip District, Shadyside/Friendship, Lawrenceville, and Highland Park Study Areas)				
5/29/2014 – TP and JD met with Deb Gross Pittsburgh City Council District 8	TP reviewed SUSTAIN and Municipal Projects mapping. TP provided the council member with LID Handbook identifying the types of GSI BMPs, which her district could implement. Councilwoman Gross identified several areas in her district where she feels GSI could be useful. TP share some preliminary results of GSI investigations using LBS assessment tools.			Duncan Park McCandless Park Heth's Run area 1100Smallman development Zoo expansion Arsenal Park
Etna				
5/30/2014 - Tim Prevost and Mary Ellen Ramage	Site visit to discuss GSI in the borough. Etna was in the middle of a streetscape project which utilizes GSI to disconnect the roof drainage from the combined system. Walked around getting a good perspective of the existing project and potential future projects.	Borough to send copy of Green Master Plan		Many sites identified in Green plan.
City of Pittsburgh, Department of Public Works				
7/25/2014 – Mike Gable Public Works Director, Tim Prevost, Joe Day, Josh Jedlicka, Beth Dutton.	<p>Mike said DPW has been doing sw mgmt projects for years – EECO Center, Saline St, three retention areas in Bartlett Playground, new GSI on Beacon St, wetlands in lower Frick park, naturalizing the landscaping on Washington Blvd., realigning the stream (Phipps Run) and building detention ponds. DPW is open to innovative planning for GSI.</p> <p>For many years the City has been trying to finalize a cooperative agreement with PWSA. The agreement should include PWSA's maintenance of the pipes in parks, or DPW will need to be provided with the funding to maintain.</p> <p>ALCOSAN should use Brandon Forbes in the Mayor's Office as point of contact for GSI grant applications.</p> <p>Mike said DPW will accept GSI if PennDOT constructs it and wishes to turn it over for maintenance. DPW will need to be involved from the beginning on the design.</p> <p>McKinley Park – Mine water on hillside.</p> <p>McKinley Park – Manhole above track wall has constant flow of water. Channels under field and to Bausman then Rt 51. A lot of water seeps onto the track as well. Stanley States tested and found fluoride. PA American (it's their area) tested and they didn't. Mike thinks there's something going on here. Tim asked if this flow is making its way to the combined sewer system. Tim thinks the area between the tennis and basketball courts might have potential. Tim suggested routing stormwater from Michigan, Eldora and Delmont to the park.</p> <p>Riverview Park has potential for GSI</p>	<p>Meet with SEA (Doug Strahley) about GSI in Lower Hill project.</p> <p>Meet with pat Hassett about coordinating GSI project with road reconstruction schedule.</p> <p>Schedule meeting with PennDOT and DPW</p> <p>GSI Training</p>		McKinley park



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Economic Development South (EDS)				
9/27/2013 – TP, JD, Greg Jones, and Darla Cravotta	EDS is looking to develop a comprehensive stormwater management plan for the Saw Mill Run watershed. GI could be an integral part of the overall plan.	Provide EDS with copies of SUSTAIN output and municipal project maps.	EDS PWSA SMR munis	TBD based on PWSA GI program.
2/6/2014 – TP, Greg Jones, Darla Cravotta, RuthAnn Omer, Rick Minsterman, Jim Good	TP provided update on progress related to the Saw Mill Run Study Area. EDS plan's to assume several roles over the organization's lifetime including project implementation and project maintenance. EDS is looking to evolve into a watershed association. Meeting focused on PWSA GI study in SMR. Jim Good noted PWSA will distribute \$9M for GI in the SMR watershed. To fund these projects, PWSA is looking for the creation of a stormwater utility. Jim suggested EDS submit a proposal to PWSA ASAP.		Councilwoman Rudiak	
Western PA Conservancy				
10/9/2013 – Judy Wagner and Jeff Bergman	WPC was looking to share information with ALCOSAN regarding their Tree Vitalize program.	Continued coordination with ALCOSAN progress on the SCS and WPC's future projects as they become available.		WPC is looking to find grants where WPC could retrofit GI into existing flower gardens around the region.
1/22/2014 – Judy Wagner and Jeff Bergman	WPC talked about the projects they were implementing. They also wanted to see whether or not ALCOSAN might be a partner in their future projects.			Liberty Islands downtown Pittsburgh
Carnegie-Mellon University				
10/30/2013 – Dr. Volker Hatkopf	Meeting intended to share information on energy recovery systems in green buildings. The cooling agent utilized is wastewater. Demonstration of this technology took place using government buildings in Germany as test cases.		CMU PWSA	Dr. Hatkopf mentioned CMU could be a testing ground for Pittsburgh application.
Swissvale				
7/17/2014 - TP, BD, Clyde Wilhelm, Marty Busch, Darrell Rapp, and Bob Zischkau	<p>Clyde noted downspout removals in Swissvale have created a lot of wet basement problems. He said that the Fire Department does the building inspections, and with downspout removals residents are now installing french drains with sump pumps, and stormwater just goes right back into the system. If the borough implements GSI, we need to make sure that we don't create additional costs for residents. Clyde asked if there has been a study to see cost benefit of gray vs green to the community? He doesn't want Swissvale to jump on the band wagon if it will cost more. Bob is not in favor of porous paving on and public streets. He also doesn't think pavers would be cost effective. Marty noted that there aren't many green (pervious) areas in Swissvale to infiltrate stormwater.</p> <p>Area at bottom of Les Getz Memorial Park that drains into M-48 would be a prime site for a detention basin or vegetated swale. Tim said that a more cost-effective fix might be a new stormwater pipe under the railroad tracks that ties back into the line near Carrie Furnace site. Clyde also thinks they should look at also separating the sewer lines in the areas near the Park to bring more stormwater to the feature.</p>	Randy Zischkau to send Tim the GIS file with the areas of combined sewers. Darrell suggested that they visit the Memorial Park site in wet weather. Marty said that the group will discuss this with Council.	RR for permission to run storm line under tracks.	Les Getz Memorial Park Stormwater pipe under the railroad tracks that ties back into the line near Carrie Furnace site.



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Heinz Endowments				
1/16/2014 - TP, BD, JWS and Bobby Vagt, Rob Stephany, and Phil Johnson	Heinz is currently doing a house-to-house survey in Hazelwood to see what their needs and wants are for the community. Then, Heinz will prepare an RFP for teams to respond. Heinz will indicate the integration of the 3RWW proposal for Green Streetscape into the overall comprehensive planning for Hazelwood. Heinz currently has 3 projects in Hazelwood - Library with ACTION-Housing (they are interested in bioswales and educational signage and other stormwater education at the library); Community Center; St Stephen's School Propel Schools. Heinz wants to include public art to celebrate water in sw projects.	Heinz wants to continue to talk to ALCOSAN about potentially providing funding to communities to help offset the cost of GSI.	Heinz Endowment Councilman O'Connor	Library parking lot (3RWW/PM design)
Allegheny Land Trust				
1/28/2014 - TP, JJ, Joe Fedor, JWS, BD, Chris Beichner, Roy Kraynyk and Steve Quick from Allegheny Land Trust, and Ken LaSota	ALT requested a meeting with ALCOSAN and the SCS team to discuss what ALT could do to promote "urban greening" and how that could fit into the ALCOSAN SCS. ALT is looking into land banking to encourage urban greening and land stewardship.		ALT	TBD
Pittsburgh Green Innovators				
1/31/2014 - Meeting with Tom Bartnik and Christine Graziano from Pittsburgh Green Innovators	TP reviewed SUSTAIN and Mun Projects mapping. PGI reviewed "Greenprint" for the Hill District. Where do both overlap? Used WebMap and RainWays to trace flows, see amt sw captured by site. PGI can be helpful in identifying sites for GSI in the Hill. PGI to coordinate with ALCOSAN on potential monitoring of the underground sw retention at Energy Innovation Center.	PGI to provide Tim with a list of proposed GSI projects and sizes in the Hill District. ALCOSAN wants to do infiltration tests at these sites.	Sports and Exhibition Authority Dan Gilman, City Council - Complete Streets initiative	Hill House Duquesne University Former Civic Arena site
4/2/2014 - TP, JF, and Tom Bartnik from Pittsburgh Green Innovators	PGI requested the meeting to discuss ALCOSAN providing short-term monitoring assistance at the Energy Innovation Center on Bedford Avenue. The EIC will have a significant GI system for stormwater. The monitoring effort could assess its effectiveness.	EIC site is not ready for monitoring. We will return when the EIC site is ready.		
8/19/2014 - TP met with Christine Graziano from Pittsburgh Green Innovators	PGI requested the meeting to discuss ALCOSAN's involvement with their ACCD GreenLab series. The labs will work with students from Milliones University HS in the Hill District to work on rain gardens and how GI could have an impact on their neighborhoods as well as teach the students about careers related to water resources.			MLK Ballfield Hill House
Urban Redevelopment Authority				
2/21/2014 TP, JJ and BD met with Emily Gaspich, Project Development Specialist	Emily Gaspich discussed URA projects that are in early stages and not fully funded. The streetscapes include the neighborhoods of Beechview, Carrick, Hazelwood, and Strip, Hill District, and Larimer.	EG will compile a list of projects/sites with GSI potential; EG will coordinate with Univ MD re SW utility implementation in Pgh;		Potentially use Allegheny Commons Park to capture stormwater along North Ave from uphill neighborhoods



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Garfield Action United				
3/13/2014 – TP and JF met with Bill Bartlett and Robin McCann with GAU	Robin McCann requested a meeting with ALCOSAN to inquire about the SCS. GAU also wanted to know how it might influence a specific area of the Garfield neighborhood. Met RM and BB and toured the neighborhood. The street name is Hillcrest Street. The neighborhood is looking to remove old trees that are a safety issue and replace them with appropriate street trees. GAU inquired if there was GI incorporated into the project, whether or not ALCOSAN would be interested in funding assistance.	Look into the potential for overflow reduction if incorporating GI in the neighborhood.		Hillcrest Street
Northside Leadership Conference				
3/14/2014 – TP and JD met with Mark Fatla, Executive Director of NLC	NLC is a CDC that comprises 15 community groups north of the Allegheny River in the City of Pittsburgh. TP reviewed SUSTAIN and Municipal Projects mapping. TP provided the MF with LID Handbook identifying the types of GI BMPs, which the Northside could implement. MF asked many questions about how ALCOSAN planned to implement GI throughout the ALCOSAN Service Area. Since the area to be discussed comprised seven Study Areas, the discussion was focused on areas MF felt might benefit from GI, and the associated funding. MF identified some locations of street flooding.		Community Alliance of East Deutchtown Diana Bucco, Buhl Foundation	East Deutchtown Brightwood Brighton Heights Brightridge Street Melrose Avenue Spring Hill Spring
PennDOT District 11-0				
4/22/2014 – TP and BD met with Cheryl Moon-Sirianni, Assistant District Executive – Design and Michele Acitelli Civil Engineer/Permits	PennDOT thinks that there may be some opportunities, but the City will need to take ownership and operation of GSI. ALCOSAN/3RWW should meet with the City/PWSA/Attorneys. Maybe also Pat Hassett, Guy Costa and Mike Gable to get them to buy in. CMS will include GSI evaluation in future RFPs for projects. But with in-house design, PennDOT will need assistance with designing GSI. Can we assist? Need standard designs. ROW and maintenance are two big issues PennDOT has concerns about with GSI.	CMS provided letting schedule on 4/24/2014. TP reviewed and requested additional information from PennDOT on potential projects.		-Homestead Rt 837 -Carson St -Birmingham Bridge area (need GSI design asap) -East Ohio Street -Rt 28 at Highland Park bridge.
9/23/2014 – TP, JJ and BD met with Cheryl Moon-Sirianni, Assistant District Executive – Design and Michele Acitelli Civil Engineer/ Permits, Mike Gable Pgh DPW, James Stitt and Katherine Camp PWSA	ALCOSAN facilitated this meeting as a follow-up to meetings held individually with PennDOT, DPW, and PWSA. The purpose of this meeting was to share initial thoughts of how to work together in the future to incorporate green infrastructure into transportation projects and discuss future opportunities based on the Pennsylvania Department of Transportation (PennDOT) letting schedule. The group discussed existing institutional arrangements in terms of ownership and maintenance of stormwater drainage infrastructure. The group discussed a topics related to existing organizational practices that may be evaluated as the region continues to pursue future green infrastructure projects. <ul style="list-style-type: none"> How existing tap-in policies can be altered to accommodate road reconstruction projects that incorporate new drainage due to green infrastructure Whether it would be possible to develop a standard list of material/labor needs for maintenance to help establish a better understanding of costs How to best involve dedicated volunteer groups to GI site maintenance and getting a standard maintenance agreement guarantee to ensure GI will perform as designed. Cheryl offered to send an example PennDOT maintenance agreement to the group to illustrate how they guarantee maintenance of their projects. <p>There are possible projects along the I-279 corridor GI projects within planned multi-modal and streetscape projects.</p>	Cheryl shared with the group that the newest TIP schedule will be in effect on 10/1 on the Southwestern PA Planning Commission website. There may be opportunities to integrate		Projects ALCOSAN identified on the letting schedule. Highlights of the projects discussed: East Ohio Street between East Street and Chestnut Street; Forbes Avenue from Smithfield Street to Grant Street ; West Ohio Street between Merchant Ave and Ridge Ave; Highland Park Bridge exit on PA-28.,



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PennDOT District 11-0				
12/2/2014 – TP, BD, Patrick Hassett, Assistant Director, Bureau of Transportation and Engineering, Department of Public Works, City of Pittsburgh, Melody Rocco (Streets Project Mgr), Lisa Ceoffe (Forester, City of Pittsburgh), Jason Zang (PennDOT), John Lepri (HDR)	<p>Discussed three concerns he has about PennDOT’s proposed rain garden to capture one acre of stormwater from the Liberty Bridge in a rain garden to the east of Municipal Courts Drive and the First Avenue Parking Garage.</p> <ol style="list-style-type: none"> Maintenance – This project will shift the burden of responsibility for this stormwater from PWSA to the City. Viability – is there sufficient infiltration and sunlight at this site for a rain garden? Will the salt and other pollutants in the bridge runoff be a problem? Capacity – If the rain garden can’t handle the volume can PennDOT enter into an agreement with the City and have a backup plan if this project fails to manage the sw? <p>Pat thought this was an interesting proposal and Lisa agreed that this is a good idea and she would like to see stormwater managed by rain gardens in many more locations in the city.</p>	Lisa will arrange for a 2ft x 2 ft section of concrete to be removed asap for ALCOSAN to perform double ring infiltration test. This area will be covered by a metal plate to allow soil sampling for potential contaminants. John did a Design One Call – no utility conflicts were identified	<p>Planning and construction- City of Pittsburgh DPW, Pittsburgh Parking, ALCOSAN, 3RWW</p> <p>Riverlife, TreeVitalize could also be potential partners for planting and maintenance.</p> <p>Pittsburgh Parking Authority</p>	Signage, public education. Sustainable stormwater management partnership between the City of Pittsburgh and PennDOT could be a significant milestone resulting from this project.
Project 15206				
2/7/2014 Kickoff Meeting	The Penn State Center and PCSI will jointly assume overall management of Project 15206. As such, they will coordinate initiatives and between government agencies, community stakeholders, corporate and philanthropic partners, and other non-profit stakeholders.		Sen. Ferlo Penn St	Project is committed to implementing GI
3/12/2014 TP, JF, met with 15206 members	ALCOSAN is committing monitoring resources to the project. Meeting was to assist in identifying potential locations for GI installations. Once identified, ALCOSAN can assess the monitoring needs for pre and post GI install.			
4/16/2014 JF met with 15206 members	LandBase Systems identified ten locations where GI is potentially cost effective. ALCOSAN is still committed to providing monitoring assistance.			
9/12/2014 TP and JF met with 15206 members	Field visit to review potential GI sites related to Project 15206. The group visited Negley Run and sites in Highland Park. Pgh DPW is constructing the Negley Run bioswale.			Heths Playground



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UPMC				
4/28/2014 – TP, Jan Oliver, JD and James Stitt from PWSA met with Allison Robinson and Water Management Committee from UPMC	Meeting was intended to provide UPMC with some insight on regional wastewater issues and how that may affect UPMC.			<ul style="list-style-type: none"> Oakland portion of Four Mile Run South 21st Street
Pittsburgh Foundation				
5/6/2014 – TP, BD, and JWS met with Jane Downing, Senior Program Officer	The intention of the meeting was to provide the Foundation with a status of the development of the SCS and future work to be completed.	Anticipate future meetings with PF as a Regional Improvement stakeholder.		
Pittsburgh Parks Conservancy				
5/23/2014 – TP, JF, and JJ, met with Erin Copeland, Heather Sage, and Susan Rademacher	PPC wanted to discuss how they might be involved in the implementation of GI within the bounds of Pittsburgh Parks beyond their existing purview of the RAD parks. Wherever PPC is involved with a project, they will assume some level of O&M for the project. However, this arrangement is not permanent.			McKinley park Cliffside park
6/18/2014 – TP attended a meeting with several stakeholders (18) regarding McKinley Park.	PPC is interested in reengaging McKinley Park as an important conduit for their Greenway concept. PPC could get more money from foundations and grants if they can identify more stakeholder money. City planning indicated the McKinley master plan would look at the park as a whole to account for the needs of the community. Dr. Jamil Bey discussed his summer outreach program with the kids of Beltzhoover. Greg Jones from EDS informed the group he submitted a grant application looking for \$2.1 M with a \$200K earmark for McKinley park.	Site visit to be scheduled (took place on 7/7/14)		Perimeter Streets East side of park
8/13/2014 – TP attended a meeting with several stakeholders (18) regarding McKinley Park.	PPC organized the meeting to keep momentum going on McKinley Park. The focus of the meeting was on the deteriorating retaining wall next to the ball fields. The group identified this as an obvious safety concern. PA American water main was assumed to be broken (later confirmed) which was causing the constant groundwater exfiltration. Jim Good offered up the services of PWSA's lab to confirm the water source (potable or AMD). Greg Jones suggested the group apply for a CITF grant to clean up the park before commencing on any study.			
10/1/2014 – TP and JJ met with Erin Copeland of PPC	PPC wanted to visit some additional parks which could have GI components.			Arsenal Park MLK Ballfields Heth's Run
10/15/2015 – TP and JJ met with Heather Sage and Meg Cheever of PPC	Discussion of options for integrating GSI into Allegheny Commons. Potential to implement projects in 2015		Buhl Foundation	Allegheny Commons Master Plan



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Squirrel Hill Urban Coalition				
7/10/2014 – TP and JD met with Rick St. John and Chris Zurawsky	SHUC wanted to have a meeting with ALCOSAN to go over the GI assessment in Squirrel Hill.	Anticipate future meetings with stakeholder as SCS is developed.		Squirrel Hill business district
Buhl Foundation				
8/29/2014 – TP and Twila Walker-Simmons met with Fred Thieman and Diane Bucco	ALCOSAN requested the meeting with the Buhl Foundation to share the results of the GI assessment along the Northside neighborhoods. Buhl also wanted to meet with ALCOSAN’s Scholastic Outreach department to see how they could develop a program where the foundation could provide part-time employment to 16-18 year olds. Buhl identified two main projects they wanted to work on where GI could be useful. Allegheny Commons and a North Shore water feature between The Carnegie Science Center and the Rivers Casino.	Allegheny Commons with Diane; North Shore with Fred		Allegheny Commons; North Shore water feature
9/25/2014 – TP met with Fred Thieman of the Buhl Foundation, and Lisa Schroeder, Jay Sukerne, and Addy Smith-Reiman of RiverLife	Meeting was facilitated by the Buhl Foundation to introduce ALCOSAN to Riverlife and how ALCOSAN could be a stakeholder on the Headwaters of the Ohio River project. The project was inspired by other cities like Washington DC and Toronto to utilize captured stormwater and use the water to charge the water feature.	Allegheny Commons with Diane; North Shore with Fred		Allegheny Commons; North Shore water feature



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Developer	Meeting Notes	Follow Up Required
Trek Development		
11/19/2013 BD spoke to Bill Gatti, President Trek Development	Community Plaza is at the beginning of the planning process. Braddock owns the land.	
11/27/13 BD and TP met with representatives from Trek, Mistick and Rothschild Doyno at the Team's progress meeting.	Design team said restoring vacant lots is a big priority for Braddock. (look into "Rain Parks"). Connection to neighborhoods is important for project. Residential part of project is done. They have connected roof leaders to sw mgmt tank, percolates to gravel bed with OF to sewer. Plaza options - maybe include a streetscape for road through park? Braddock's goal is to get truck traffic off Braddock Ave onto Talbot or Washington. (consider Braddock Ave. for green streetscapes).	
Mon Valley Initiative		
11/19/2013 Discussions with Patrick Shattuck Real Estate Director Mon Valley Initiative	BD spoke to Patrick Shattuck. MVI and the Design Center are partners for the Civic Plaza project in Braddock. They have discussed using GSI at this site. They are going to draft an RFP and interview firms in January. MVI is funding a new Zoning Ordinance and official municipal map for Braddock. This is an opportunity for the community to take the lead and ownership. They could, for example, consider setting aside greenspace for future GSI. This steering committee has a wide range of members from elected officials to residents, with a range of GSI knowledge from none to a lot of knowledge.	
1/8/2013 TP and BD met with Patrick Shattuck, David Soboslay of Delta Development Group and the Braddock Steering Committees - Zoning and Map, and Civic Plaza Design	Pat Morgan from Braddock noted that they are starting a shade tree commission and pursuing opportunities for trees through Treevitalize. Borough is adopting an official map for properties the municipality wants to acquire. They are also developing a zoning ordinance. They want to try to bring some of ALCOSAN's goals into the map, e.g. address the stormwater problem areas. TP asked the group to provide ALCOSAN with information on where GSI can be implemented. Encourage GSI in redevelopment projects, including the Community Plaza. David Soboslay from Delta Development Group attended the meeting. TP asked him to keep GSI opportunities in mind for the other communities where DD works.	1/8/2013 TP and BD met with Patrick Shattuck, David Soboslay of Delta Development Group and the Braddock Steering Committees - Zoning and Map, and Civic Plaza Design
Hazelwood		
On 12/23/2013 BD, TP and JWS met with Lena Andrews of ACTION Housing.	Showed SUSTAIN and municipal projects maps, TP provided study overview. Lena said AH mainly involved in developing affordable housing, now getting involved more in community development. In Hazelwood they want to link the Almono project with redevelopment in Hazelwood. Former Hazelwood Presbyterian Church will become a Carnegie Library. AH wants to use a gravel parking lot to increase permeability and worked with landscaping consultant (GTECH) to select plantings around the library to help manage stormwater. D'Imperio's will become a nonprofit grocery store by the Food Bank. Doing a structural analysis now to see if they can have a green roof to grow food. Second Ave site will have renovated Spahr Building. Lena said this site (the 4800 block) looks like a good place to start to evaluate opportunities for GSI as planning hasn't started yet.	
Kossmann Development Company		
2/20/2014 BD spoke to Al Corona	Councilwoman Kail-Smith suggested ALCOSAN contact Kossmann about green opportunities for the Parkway Center Mall redevelopment. Currently no plans to start anything at Parkway Center in the near future. He said they do pervious pavers, etc. at some of their other locations.	
Design Center Pittsburgh		
2/19/2014 BD spoke to Thor Erickson, Programs Manager	Thor would like to have new Interim Director, Chris Koch meet with ALCOSAN to talk about partnering opportunities. McKees Rocks Streetscape - still in the early stages. DC hasn't spoken much about integrating stormwater mgmt, mainly façade improvements. But would definitely consider surface level capture and tree pits.	



Starting at the Source:
How Our Region Can Work Together for Clean Water
Appendix G - Municipality and Stakeholder Outreach

Appendix E-7-3
Green Stormwater Infrastructure Reports Developed
by Municipalities and Stakeholders



GREEN INFRASTRUCTURE ANALYSES IN ALCOSAN SERVICE AREA

In addition to the ALCOSAN Source Controls Study, individual municipalities and stakeholder groups have produced reports, or are in the process of developing GSI studies, within specific areas of ALCOSAN's combined sewer service area. During meetings with municipalities and stakeholders, ALCOSAN worked with the owners of these reports to include their recommendations and concept designs for potential GSI projects within the Source Control Study. Some of the reports are available publically online and others have been included with Appendix G with permission from project officials.

G-3.1 Green Infrastructure Feasibility Assessment for the Spring Garden Watershed

Separate from the Source Control Study, ALCOSAN examined the potential for GSI projects to be implemented in the area surrounding the Spring Garden neighborhood of Pittsburgh. The goal of this effort was to examine an entire sewershed for GSI project opportunities that could be implemented by local municipalities to serve as a guide for future efforts. Nine GSI project recommendations are proposed for the sewershed, along with cost and performance estimates.



Spring Garden Green Infrastructure Concept Design



G-3.2 Pittsburgh Water and Sewer Authority Wet Weather Feasibility Study Section 9: Adaptive Management, Green Infrastructure, and Integrated Watershed Planning

In July of 2013, the Pittsburgh Water and Sewer Authority (PWSA) submitted its municipal feasibility study with a recommendation to examine the feasibility of replacing certain previously planned grey infrastructure improvements intended to address the Combined Sewer Overflow (CSO) problem with potential GSI installations. Some of the ideas presented in the feasibility study were based on recommendations of the PWSA-led Greening the Pittsburgh Wet Weather Plan Charrette project of 2013. More information on that effort can be found at: [http://apps.pittsburghpa.gov/pwsa/PWSA-Greening the Pittsburgh Wet Weather Plan.pdf](http://apps.pittsburghpa.gov/pwsa/PWSA-Greening%20the%20Pittsburgh%20Wet%20Weather%20Plan.pdf)

One of the projects included in the PWSA Study and Adaptive Management Implementation Plan is the Integrated Watershed Management (IWM) demonstration project in the Saw Mill Run sewershed. As ALCOSAN advances beyond the Source Control Study, close coordination with PWSA will continue to optimize the right balance between GSI and proposed grey within Saw Mill Run.

G-3.3 Etna Green Infrastructure Master Plan Demonstration Projects

The Etna Green Infrastructure Master Plan (Etna Plan), completed in June of 2014, was authored by the Borough of Etna and financed in part through a grant administered by the Pennsylvania Environmental Council. The objective of the Etna Plan was to assess the feasibility of reducing or eliminating the use of previously proposed gray infrastructure through the implementation of green stormwater infrastructure solutions in Etna.



Etna Borough Green Infrastructure Installation at Walnut and School Street

The Etna Plan included 23 projects that manage a total drainage area of 33.6 acres, of which 13.4 acres are impervious area. The Etna Plan generally prioritizes projects into phases with respect to stormwater runoff reduction potential, benefits in meeting compliance goals such as CSO reduction, and their relationship to ongoing programs such as Green Streetscape. A number of projects under the Etna Plan which make up Phase I of

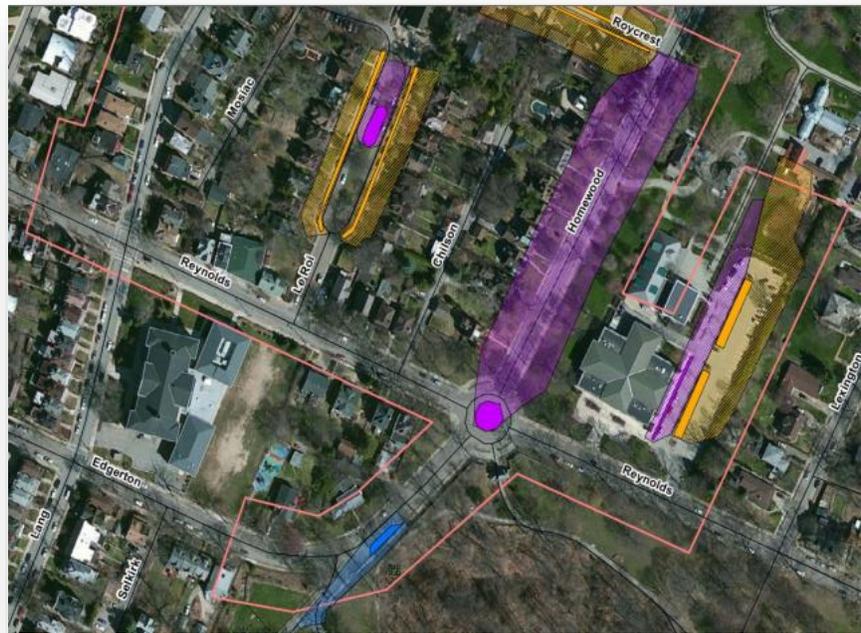
Green Streetscape were implemented in the Summer of 2014. Etna is within the Pine Creek Sewershed, and as mentioned in both the Pine Creek Sewershed Joint Municipal Feasibility Study and the Etna Borough Municipal Feasibility Study, the Borough will continue to pursue GSI and other measures to prevent stormwater from entering the



combined sewer system in parallel to meeting CSO control objectives, but are not directly committing to include these projects within their proposed implementation schedule. Details of the Etna Plan can be found here: <http://www.etnaborough.org/files/Etna-GI-Masterplan-COMLETE-REPORT.pdf>

G-3.4 3RWW Conceptual GSI Design in the Brookline, Point Breeze and Swisshelm Park, Neighborhoods of Pittsburgh

Using the USEPA's System for Urban Stormwater Treatment and Analysis Integration (SUSTAIN) best management practice (BMP) siting tool as well its own RainWays® tool, 3RWW conducted a study assessing the feasibility of using GSI within the City of Pittsburgh. Potential projects for the Brookline, Point Breeze and Swisshelm Park neighborhoods of Pittsburgh were developed as GSI conceptual design sites as part of the 2012 EPA Green Infrastructure Community Partners Program and is the subject of three separate reports. Drafts of each report were released in October of 2013.



Layout of Conceptual GSI Projects in Frick Museum Area, Point Breeze
Source:

<http://www.3riverswetweather.org/sites/default/files/GI%20Neighborhood%20Design%20Report-Point%20Breeze.pdf>

These reports provide concept designs of GSI in specific areas of these neighborhoods, report on the potential usefulness of GSI in these areas to reduce combined sewer overflows and provide other additional co-benefits. All reports can be downloaded and viewed here: <http://www.3riverswetweather.org/stormwater-green-solutions/green-infrastructure-resources>



G-3.5 Southside Green Infrastructure Charrette

Over a three day period from April 10 to April 12, 2014, a number of stakeholders, hosted by the Pittsburgh Green Infrastructure Network, convened to draft a design for a demonstration district for green infrastructure along 21st Street in the City of Pittsburgh's South Side.

The goal was to create a green street that would serve as a community link between the Three Rivers Heritage Trail along the Monongahela River and South Side Park along the



Conceptual Rendering of 21st in Pittsburgh's Southside
Source: Southside Green Infrastructure Charrette, <http://www.southsidegreen.com/>

Southside "slopes" area. This meeting of designers intent on developing a plan, known as a charrette, brought together attendees from environmental groups, engineering firms, academic institutions and governmental agencies and included representatives from ALCOSAN, PWSA, 3RWW and the University of Pittsburgh, among other stakeholder groups and volunteers. 21st Street would be redesigned to be used as a demonstration project for GSI that can reliably remove stormwater while also serving a multi-modal transportation options and create a new community aesthetic.

Detailed sketches showing the locations of the GSI as well as conceptual renderings of photos of the renovated areas were also a part of each design package and provided a comprehensive vision of what the designers hoped to achieve. All designs can be found at: <http://www.southsidegreen.com/>

G-3.6 Carnegie Borough Green Scan Report

Carnegie Borough, along with the Western Pennsylvania Conservancy (WPC), developed a Green Scan Report of its community in 2013. The Green Scan is a process developed by WPC to help communities identify the best options for supporting community revitalization through incorporating more green spaces within the Borough.

The Carnegie Green Scan resulted in the recommendation of targeting several areas of interest with respect to stormwater management with three separate GSI projects at the Carnegie Free Public Library Grounds, Carnegie Borough Municipal Parking Lot 10 and Carnegie's Seventh Avenue Park.



G-3.7 Project 15206 Green Infrastructure Evaluation

In 2014, The Penn State Center partnered with Landbase Systems to develop the Project 15206 Initiative, a stormwater mitigation project for neighborhoods within the City of Pittsburgh. This effort involved an analysis of the potential installation of green infrastructure to reduce stormwater runoff at locations in Morningside, Highland Park, Lincoln-Lemington, East Liberty and Larimer. More information on this initiative and project implementation can be found at: <http://www.project15206.org>.

G-3.8 Living Waters of Larimer

In 2011, many organizations and individuals came together to create The Living Waters of Larimer: A Fresh Infrastructure. This effort is an artist-led collaboration between the Larimer community, the Larimer Green Team, the Larimer Consensus Group, the Kingsley Association and evolveEA. The project aims to create demonstration projects encouraging efforts to shape Larimer's redevelopment process.

The Living Waters creates a plan to reinvent the community's water infrastructure by integrating green infrastructure technologies into urban spaces, cultural life and local economics.

Information regarding this plan can be found at: <https://www.codaworx.com/project/living-waters-of-larimer-a-fresh-infrastructure-the-larimer-community>

G-3.9 Western PA Conservancy Analysis of Garden Sites

In 2014, Western Pennsylvania Conservancy (WPC) partnered with Landbase Systems to complete an analysis for surface water management projects in neighborhoods within the City of Pittsburgh. This effort involved an analysis of the potential installation of green infrastructure to reduce stormwater runoff at locations in Oakland, Greenfield, and the Southside. ALCOSAN is currently pursuing options for partnering with WPC to implement projects within this analysis.

G-3.10 The Hill – A Village in the Woods

In 2010, The Hill House Association, along with the Pittsburgh Parks Conservancy, developed The Greenprint project in an effort to re-connect the Hill District with the surrounding neighborhoods in the area. The Greenprint project establishes a plan for urban development incorporating green technologies and identifies economic opportunities in an attempt to revitalize the Hill District.

The project seeks to enhance development within the Hill District by linking open spaces and housing as well as finding opportunities to improve pedestrian access and stormwater conveyance facilities. The plan has two major objectives:



- Effective integration of Greenprint concepts into the Master Plan for the Hill District, and
- Develop specific projects utilizing the proposed landscape concepts as part of the implementation of the Greenprint.

Information regarding this plan can be found at:

<http://www.pittsburghparks.org/userdocs/greenprint-conceptual-designs.pdf>

G-3.11 Allegheny Riverfront Vision Plan

The Allegheny Riverfront Vision Plan was a cooperative effort of the Urban Redevelopment Authority of Pittsburgh, City of Pittsburgh, and Riverlife, released in 2010. The vision laid out in this report is currently in progress as part of the Allegheny Riverfront Green Boulevard effort. The plan covers the Allegheny riverfront area from Pittsburgh's Strip District to Highland Park neighborhoods.

The Vision Plan addresses a wide range of issues related to riverfront development and redevelopment, and addresses a larger set of ecological principles within planning of stormwater management including GSI. Among the stormwater management strategies discussed in the report were:

- Consideration of requirements for new development to include GSI;
- Granting credits to existing properties that implement GSI;
- Narrowing all impervious surfaces where possible
- Constructing all parking spaces and driveways with pervious systems; and
- Encouraging the disconnection of downspouts and allowing clean roof drainage to discharge directly into the rivers.

Current information on the development of this plan can be found at:

<http://www.greenboulevardpgh.com/>

G-3.12 Millvale Ecodistrict

In 2013, the Borough of Millvale, in partnership with EvolveEA, developed the PIVOT Project which aims to rejuvenate and rehabilitate the community. The project outlines a sustainable Ecodistricts planning model that builds community resiliency by connecting food, water and energy networks to create resource-efficient neighborhoods. The implementation of this model will bring major change and revitalization to Millvale.

As part of this plan, Millvale is working to:

- Identify opportunities to implement green infrastructure and technologies to decrease the negative impact of water-related issues.



- Identify programs to support food and energy sufficiency and long-term supplies.
- Use the analyses and recommendations for development of community identified projects.

Information on the Millvale PIVOT Project can be found at:

<http://www.evolveea.com/work/pivot-millvale>

G-3.13 3 Rivers Wet Weather Report for Assessment of Green Infrastructure

In 2013, 3 Rivers Wet Weather (3RWW) completed a report on the assessment of green infrastructure in pilot sewersheds within the ALCOSAN service area, specifically Nine Mile Run, Girty's Run and McNeilly Run.

The combined sewered areas of these three pilot sheds were analyzed to develop the process for evaluating sites for potential GI projects. Nine Mile Run, Girty's Run and McNeilly Run were identified as having significant potential to be beneficially impacted by GI projects based upon their relative sizes, extent of combined sewers and the number of overflow structures. This study addresses a comprehensive source flow reduction alternative to typical grey infrastructure solutions. This assessment describes a planning level evaluation of prospective GI projects for municipal and/or commercial/institutional implementation.

The methodology of the analysis was founded on technical information and data developed by and available from various public/government sources and was performed using:

- U.S. Environmental Protection Agency's (EPA) System for Urban Stormwater Treatment and Analysis Integration (SUSTAIN) best management practices siting tool module to identify locations of potential GI BMP features within a given sewershed, and
- 3 Rivers Wet Weather's (3RWW) Rainways tool to analyze sizing, flow reduction effectiveness and implementation cost elements.

SUSTAIN was designed to evaluate 14 specific GI BMPs including trenches, swales, ponds, infiltration basins, rain gardens and porous pavement. Once the GI features have been identified within the combined areas, concept projects are developed. Once the concepts were identified, further analysis was performed using 3RWW's Rainways application. Rainways analyzes GI concepts via GIS procedures on a sub-catchment basis to:

- Identify the surface drainage areas tributary to each GI project,
- Size the concept for each BMP type based on design sizing criteria,
- Evaluate effectiveness in reducing runoff, and



- Develop capital and operating cost estimates

As a result of this study, the placement of GI can be accomplished in numerous locations within these three pilot sheds. A copy of this report can be found at the 3RWW website: <http://www.3riverswetweather.org/stormwater-green-solutions/green-infrastructure-resources>

G-3.14 Nine Mile Run Watershed Association

The Nine Mile Run Watershed is an urban watershed located in Pittsburgh's East End. The watershed covers approximately 6.5 square miles and is home to numerous initiatives, including the largest urban stream restoration project in the United States.

The Nine Mile Run Watershed Association (NMRWA), incorporated in 2001, spearheads an effort to develop a variety of innovative urban ecology projects designed to involve the community in helping to improve the health of the watershed. These programs include watershed tours, educational workshops and support of the construction of community gardens and street tree plantings.

Some green infrastructure projects developed by NMRWA include:

- Rosedale Runoff Reduction Project – A stormwater project which targeted priority locations for GSI projects in the Homewood neighborhood of the city of Pittsburgh. The stated project goal is to remove 25 million gallons of overflow that enters Nine Mile Run. The first phase of this project intends to construct 3 GSI facilities, 40 stormwater management tree pits, 200 Hydra rain containers and 10 rain gardens.
- Rain Garden Pilot Project – in 2010, NMRWA designed and installed eight demonstration rain gardens throughout the watershed at little or no cost to the municipality or homeowner.
- Wilkinsburg High School Rain Garden – in 2011, NMRWA engaged students at Wilkinsburg High School to develop a green space in a vacant lot next to the high school. The project included tree plantings, outdoor classroom opportunities, seating areas and a rain garden that manages stormwater runoff from the school parking lot.
- In 2005, NMRWA, 3RWW and ALCOSAN partnered in investigating the impact of disconnecting residential roof leaders within the sewershed. Rain barrels were installed at selected residences within the Nine Mile Run sewershed to demonstrate the impacts that removing runoff from rooftops has on the downstream sewage system and wet weather flow management in combined and sanitary sewer areas.

In 2013, NMRWA developed a 3-year strategic plan with the goal of reducing stormwater and sewage flow into Nine Mile Run. The goals of the plan are to work with municipal leaders to achieve the runoff mitigation goal, partner to implement and maintain restoration projects and sell green infrastructure products and services. The complete



strategic plan along with information about other NMRWA initiatives can be found at:
<http://ninemilerun.org>

G-3.15 Athens Alley Stormwater Improvements Project

In June 2013, Dormont Borough completed an analysis of the existing conditions and evaluation of potential stormwater improvements to alleviate flooding issues along Athens Alley. The analysis included approximately 1,800 linear feet of pipe. The contributing watershed area is approximately 32 acres consisting of predominantly urbanized area including commercial and residential uses. The inlets in the contributing watershed along with opportunities for the implementation of green infrastructure were studied as part of this analysis.

Based upon the results of the existing conditions analysis, four “grey” alternatives for alleviating street flooding along Athens Alley were evaluated. In addition to these four alternatives, opportunities to implement GI throughout the tributary watershed area were assessed. Field visits were conducted to better understand the study area and identify locations. Sixty-one GI opportunities were identified within the watershed. Seven (7) BMP types emerged as potential candidates for implementation of GI. Each opportunity was evaluated and grouped into a priority ranking system. However, a full hydrologic and hydraulic analysis of the potential BMP sites was not completed because it was outside of the original scope of work. The full report can be accessed at:

[http://www.boro.dormont.pa.us/vertical/sites/%7B14ACE961-E8A0-477D-9CC5-33FADC320FCE%7D/uploads/Athens Alley SW Improvements Final Report.pdf](http://www.boro.dormont.pa.us/vertical/sites/%7B14ACE961-E8A0-477D-9CC5-33FADC320FCE%7D/uploads/Athens_Alley_SW_Improvements_Final_Report.pdf)