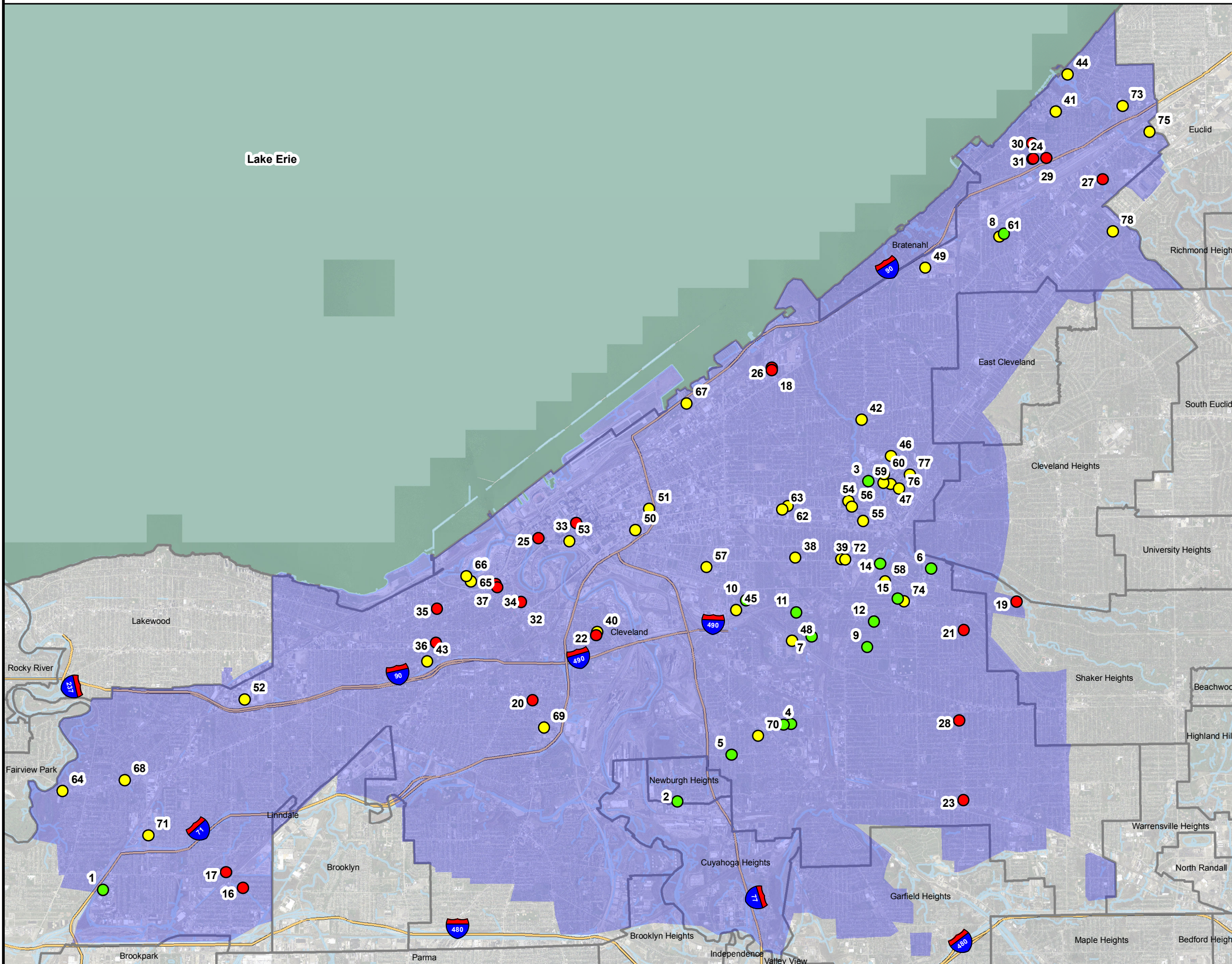
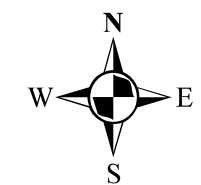


# Green Infrastructure Projects within NEORSD Combined Sewer Service Area



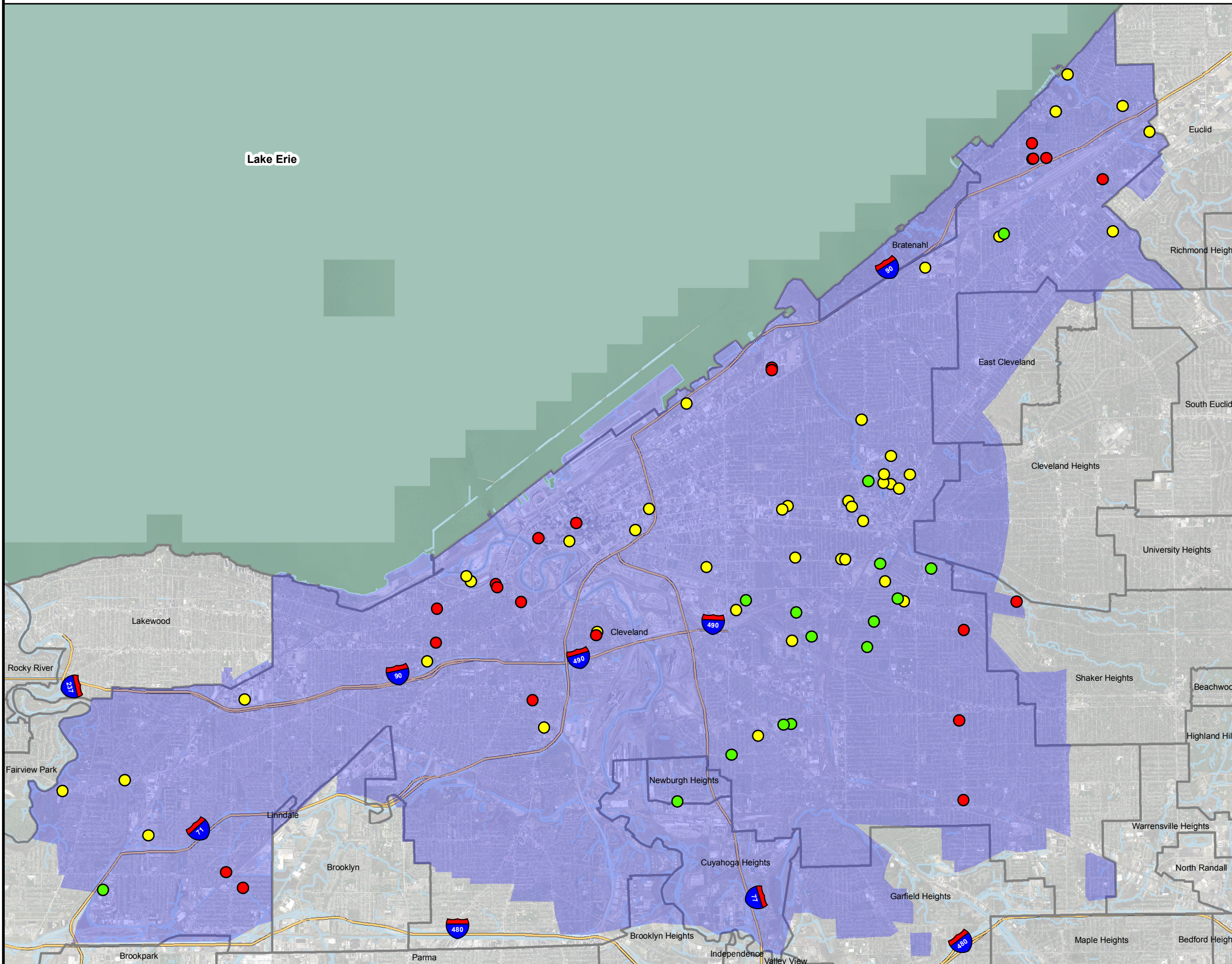
- Legend**
- NEORSD CSO Green Infrastructure Projects (Consent Decree Appendix 3)
  - NEORSD Stormwater Green Infrastructure Projects (Small Scale Demonstration Grants)
  - Non-NEORSD Green Infrastructure Projects
  - Combined Sewer Service Area Boundary

Project: NEORSD GI Projects-  
Sources: Parcels, Cuyahoga Co, 2011;  
Orthos, Cuyahoga Co, 2013;  
CAMA data, Cuyahoga Co, 2011



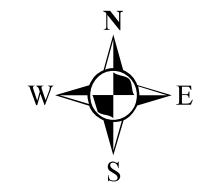


# Green Infrastructure Projects within NEORSD Combined Sewer Service Area



- Legend**
- NEORSD CSO Green Infrastructure Projects (Consent Decree Appendix 3)
  - NEORSD Stormwater Green Infrastructure Projects (Small Scale Demonstration Grants)
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Project: NEORSD GI Projects-  
Sources: Parcels, Cuyahoga Co, 2011;  
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CAMA data, Cuyahoga Co, 2011





**GREEN INFRASTRUCTURE PROJECTS WITHIN NEORSD COMBINED SEWER SERVICE AREA**

January 17, 2014

<b>NEORSD GREEN INFRASTRUCTURE PROJECTS</b>		
<b>CSO Appendix 3 GI Projects</b>		
<b>Project ID</b>	<b>NEORSD Project Title</b>	<b>Project Location</b>
1	Industrial Corridor Green Infrastructure	Puritas-Longmead (W. 160TH)
2	Industrial Corridor Green Infrastructure	Harvard Avenue (Newburgh Heights)
3	Courtyard by Marriott	University Circle (Euclid and Mayfield)
4	Slavic Village Demonstration Projects	Slavic Village (E. 75th, E. 78th and Morgana Run Trail)
5	Fleet Avenue Green Infrastructure	Fleet Avenue between E. 49th and E. 65th
6	Fairhill-MLK	Fairhill/MLK in Ambler Park
7	Urban Agriculture Innovation Zone	E. 80th to E. 84th off Kinsman
8	Aspinwall Green Infrastructure	E. 140th and Aspinwall
9	Woodland Hills Green Infrastructure	Woodland Hills neighborhood
10	Kingsbury Run Green Infrastructure	Woodland/Central
11	Kingsbury Run Green Infrastructure	Holton Avenue between E. 75th and E. 78th
12	Union/Buckeye Green Infrastructure	Slavic Village at Union Avenue
13	Union/Buckeye Green Infrastructure (Giddings Zone 2)	Buckeye Road at Shaker Blvd.
14	Doan Valley Green Infrastructure (Giddings Zone 1)	Baldwin Reservoir
15	Doan Valley Green Infrastructure (Giddings Zone 3)	Quincy and Woodhill
<b>Small-Scale Stormwater Demonstration Projects</b>		
<b>Project ID</b>	<b>Organization</b>	<b>Project Description/Location</b>
16	Bellaire-Puritas Development Corporation	Improvement of the riparian zone, stream bank stabilization and floodplain enhancement.
17	Bellaire-Puritas Development Corporation	A vacant property adjacent to the Chevy Branch of the Big Creek is regraded and planted to manage stormwater that drains onto the sidewalk from the street and sidewalk. Neighbor reports no basement flooding since project completion.
18	Blue Pike Farm	Redirect stormwater from the roof of an adjacent industrial building and provide irrigation for the farm
19	Doan Brook Watershed Partnership	Bioswale that serves to reduce standing water and localized street flooding.
20	EarthDay Coalition	A campus demonstration project that captures water from a steep slope and reduces standing water and flooding.
21	Buckeye Area Development Corporation	The rain garden is located in a popular neighborhood park. This garden site is near a storm drain and tends to stay saturated. The rain garden is value added in a very visible area.
22	Tremont West Development Corporation	The bioretention cells will be part of a project to redesign the parking area at the library.
23	Union-Miles Development Corporation	The CDC has increased partnership participation improving the project to neighborhood park with stormwater demonstration sites
24	Northeast Shores Development Corporation	A part of the Waterloo Road Streetscape; part of a plan to create an overall reduction of stormwater (100 yr/24 hr) for the area by installing bioswales, pervious pavement and an infiltration basin for the parking lot.
25	Warehouse District Development Corporation	The water harvesting system will capture runoff from two commercial rooftop into cisterns. The water will be used by the Downtown Cleveland Alliance to water plants, powerwashing, and other cleaning and safety activities.

**GREEN INFRASTRUCTURE PROJECTS WITHIN NEORS D COMBINED SEWER SERVICE AREA**

January 17, 2014

26	Blue Pike Farm	The project will assist in funding a stormwater collection system and infrastructure for an urban farm that will redirect rainwater for high tunnel hoop house and fruit trees, brambles and beneficial pollinator habitat.
27	Hospice of the Western Reserve	Several stormwater management techniques would be implemented at the site to reduce impervious surface and stormwater runoff
28	Mt. Pleasant Community Zone	Curb extension bioretention cells with provide biofiltration by re-directing stormflows through this green infrastructure element.
29	Northeast Shores Development Corporation	The funding will support the additional bioretention area and plant material, drainage modification to the existing lot and a deep gravel infiltration to create an overall reduction of stormwater (100 yr/24, hr) for both parking areas.
30	Northeast Shores Development Corporation	The grant will fund the additional bioretention area and plant material, drainage modification to the existing lot and a deep gravel infiltration to create an overall reduction of stormwater (100 yr/24 hr) for the parking area.
31	Northeast Shores Development Corporation	Retrofit of the existing landscape island into an infiltration basin. This basin will capture water naturally draining towards the area and capture water from the building roof.
32	P and M Ohio City, LLC	Redirecting flow from the 7,800 sq. ft. roof to a 10,000 gallon underground cistern. Gray water to be used for toilets, urinal, dishwashing, and plantings. Initial estimate of 630 gal/day usage.
33	Neighborhood Solutions, Inc.	A vacant lot reuse project to develop an innovative growing facility that stores water that falls on the structure in an internal 2000 gallon cistern with overflow to an adjacent rain garden.
34	Striebinger Block, LLC	Collect rain water from a 10,000 sq. ft. drainage area that includes building roof and adjacent courtyard in 4-500 gallon cisterns. Water will be used for hanging wall gardens and landscaping.
35	Kent State University	To provide a high profile, ultra-urban stormwater control measure of vegetated roof. The project will capture and slow the rain water on the 320 sq. ft. roof area of the bike boxes.
36	Detroit Shoreway Community Development Corporation	Installation of a 300 sq. ft. rain garden to attenuate the poor grading and drainage at this very visible site.
37	Fred and Laura Ruth Bidwell Foundation	A new pocket park adjacent to the building will capture rain water from a 2,600 sq. ft. roof area and route it through a series of bioswales and rain gardens.

**GREEN INFRASTRUCTURE PROJECTS WITHIN NEORS D COMBINED SEWER SERVICE AREA**

January 17, 2014

<b>NON-NEORS D GREEN INFRASTRUCTURE PROJECTS</b>		
<b>Project ID</b>	<b>Organization</b>	<b>Project Description/Location</b>
38	Cleveland Clinic Langston Hughes Center	East 79th Street and Quincy Avenue- bioretention
39	Cuyahoga County	BMPs associated with the County building at Quincy and 93rd
40	City of Cleveland	Professor Street rehabilitation in Tremont – full street length redone with right-of-way bioretention
41	City of Cleveland	Collinwood Recreation Center - bioretention in parking lot
42	Famicos	Doan Classroom Apartments at 1350 East 105th street - bioretention in parking lot
43	City of Cleveland	Zone Recreation Center - bioretention in parking lot
44	State of Ohio	Wildwood State Park - bioretention in parking lot
45	Green City Growers	Green City Growers at Grand Avenue and Kinsman Road - retention and water reusing
46	Private developer	Hazel Apartments on Hazel Drive in University Cittle - infiltration
47	CWRU	CWRU Tinkham Veale Student Center on East Blvd
48	CWRU	CMHA Heritage View Eastates on Kinsman Road and East 77th street - distributed bioretention
49	City of Cleveland	Water Pollution Contol's Headquarters Office on Kirby Avenue - pervious pavement
50	RTA	RTA Stephanie Tubbs Jones Transit Center - E. 21st and Prospect Avenue - permeable pavers
51	CSU	Cleveland State Recreation Center - 2420 Chester Avenue - green roof
52	American Tank and Fabrication	American Tank and Fabrication - 12501 Elmwood Avenue - infiltration trench
53	USA Parking Systems	Casino Welcome Center - 2105 Ontario Street - sand filter
54	CMM, Inc.	Chester Parking Lot - 1945 E. 97th Street - infiltration trench
55	Cleveland Clinic	Cleveland Clinic New Lab Building - 10300 Carnegie Avenue - pervious pavement
56	Cleveland Clinic	Cleveland Clinic Parking Lot Expansion - 9701 Euclid Ave - manufactured system
57	Cuyahoga Metropolitan Housing Authority	CMHA Outhwaite Bldg. #3 - 2452 E. 43rd Street - bioretention
58	Cuyahoga Metropolitan Housing Authority	CMHA Woodhill - 2488 Morris Black - bioretention
59	Cleveland Museum of Art	Cleveland Museum of Art - 11150 East Boulevard - bioretention
60	Cleveland Museum of Art	Cleveland Museum of Art, Phase 2 - 11150 East Boulevard - bioretention
61	Cleveland Metropolitan School District	East Clark New K-8 School - 885 E. 146th Street - bioretention
62	Emerald Alliance V, LP	Emerald Alliance V - 7515 Euclid Avenue - infiltration trench
63	Euclid Corridor Senior Housing	Euclid Court Senior Housing - 7338-7350 Euclid Avenue - sand filter
64	Fairview Hospital	Fairview Hospital N. Lorain Parking Lot - 18200 Lorain Road - enhanced bioswale
65	City of Cleveland Public Utilities - Water	Garrett Morgan Water Works #119 - 1245 W. 45th Street - pervious pavement
66	Great Lakes Towing Company	Great Lakes Towing Company - 4500 Division Avenue - bioretention
67	City of Cleveland Public Utilities - Water	Kirtland Pump Station - 4901 S. Marginal Road - pervious pavement
68	Lakepark Congregation	Lakepark Congregation Kingdom Hall - 15600 Lorain Road - bioretention
69	Metrohealth System	Metrohealth Drive Entrance - 2500 Metrohealth Drive - bioretention, tree box
70	City of Cleveland	Morgana Athletic Complex - 6619 Baxter - infiltration trench
71	Greater Cleveland Regional Transit	Puritas W. 150th RTA - 4200 W. 150th Street - bioretention, pervious pavement
72	Vocon Partners, LLC	Quincy Parking Lot - 9409 Quincy Avenue - sand filter
73	Slovene Home for the Aged	Slovene Home for the Aged - 18621 Neff Road - bioretention
74	STL Development	St. Luke's ManorPhase 1 - 18621 Neff Road - bioretention
75	City of Cleveland Public Utilities - Water	Technology & Security - 1230 Chardon Road - bioswale
76	Royal Landscape, Inc.	University Hospital Urban Park - 11224 Euclid Avenue - infiltration basin
77	MRN Limited C/O Holiday Inn Express	Uptown Project - 11451, 11452 Euclid Avenue - pervious pavement
78	Village Green Elderly, LLC	Village Green Elderly Apartments - 18235 Euclid Avenue - bioswale