

## 5.14 Study Area 14 – Upper Southside Area

These findings apply to ALCOSAN Points of Connection M-23 through M-28, which include combined sewer systems in the City of Pittsburgh.

### Upper Southside - BMP GIS Features

The SUSTAIN BMP siting tool analysis resulted in identification of a total of 1,096 BMP GIS Features covering 158 acres, which consisted of the following:

**Table 5.14-1 - TOTAL SUSTAIN BMP Features Output**

<b>SUSTAIN BMP Feature Type</b>	<b>Number of Features</b>	<b>Area of BMP Features (Acres)</b>
Permeable Pavement	345	42
Bioretention	261	47
Infiltration Basin/Trenches	83	11
Vegetated Filter Strips	113	32
Grass Swales	271	25
Constructed Wetlands	23	< 1

Locations of all identified BMP GIS features are presented on the SUSTAIN BMP Features Figure.

## Upper Southside - Concept Municipal GSI Projects

Based on the BMP features, 78 concept Municipal GSI Projects were identified covering 9 total acres with a corresponding drainage area delineation of 75 total acres and consisted of the following:

**Table 5.14-2 - Summary of Identified Concept Municipal GSI Projects**

<b>Concept GSI Technology</b>	<b>Number of Projects</b>	<b>GSI Project Area (Acres)</b>	<b>Project Drainage Area (Acres)</b>
Permeable Pavement	22	6	49
Bioretention	43	2	13
Infiltration Basin/Trenches	7	< 1	8
Vegetated Filter Strips	5	< 1	2
Grass Swales	0	0	0
Constructed Wetlands	1	< 1	2

Project statistics including ALCOSAN POC, model subcatchment, BMP type, project area, area of project inside and outside of the public right-of-way, tributary drainage area, and tributary impervious drainage area are provided in the Concept Municipal Projects Table. Locations of all identified Concept Municipal GSI projects are presented in the Concept Municipal GSI Projects Figure (1) and the corresponding delineated tributary drainage areas are presented by BMP in the Individual Project Drainage Area Figures (5).

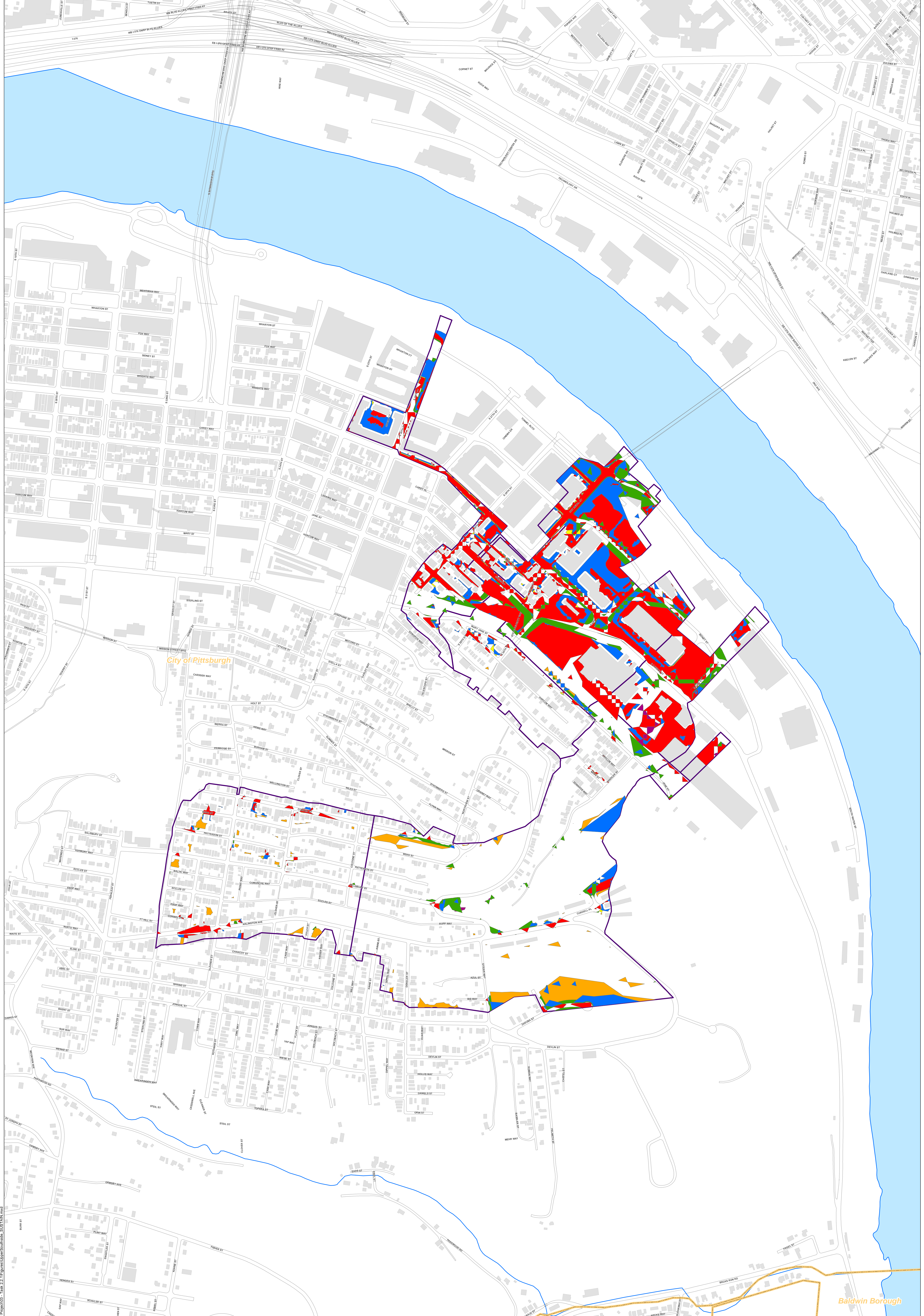
Upper Southside - Concept Commercial/Institutional and Special Case GSI Projects

Based on the BMP features, 48 concept Commercial/Institutional and Special Case GSI Projects were identified covering 30 total acres and consisted of the following:

**Table 5.14-3 - Summary of Identified Concept Commercial/Institutional and Special Case GSI Projects**

<b>Concept GSI Technology or Special Case Project Category</b>	<b>Number of Projects</b>	<b>GSI Project Area (Acres)</b>
Commercial/Institutional Permeable Pavement	28	16
Commercial/Institutional Green Roofs	12	9
State Route Permeable Pavement	8	4
Busway Permeable Pavement	0	0
Busway Bioretention	0	0

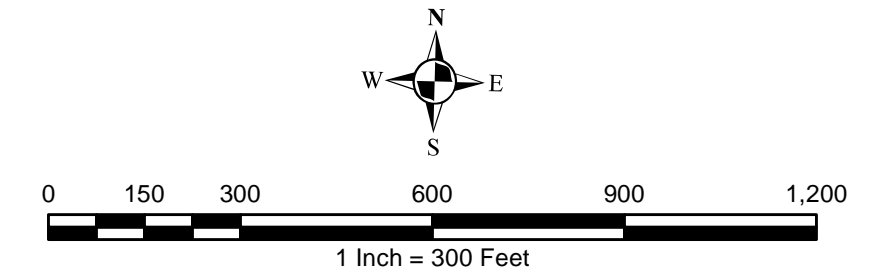
Project statistics including ALCOSAN POC, model subcatchment, BMP type, project area, area of project taxable, exempt, provisionally exempt and in the public right-of-way are provided in Concept Commercial / Institutional GSI Projects Table. Locations of all identified Concept Commercial / Institutional GSI projects are presented in the Concept Commercial / Institutional GSI Projects Figure (1).



City of Pittsburgh

Baldwin Borough

- Permeable Pavement
- Vegetated Filter Strips
- Combined Sewer Subcatchment
- Bioretention Basin
- Grass Swales
- Municipal Boundaries
- Infiltration Basin / Trench
- Constructed Wetlands



**ALCOSAN GSI Project**  
**M-23 through M-28**  
**SUSTAIN BMP Features**

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## Upper Southside Concept Municipal Projects

June 4, 2014

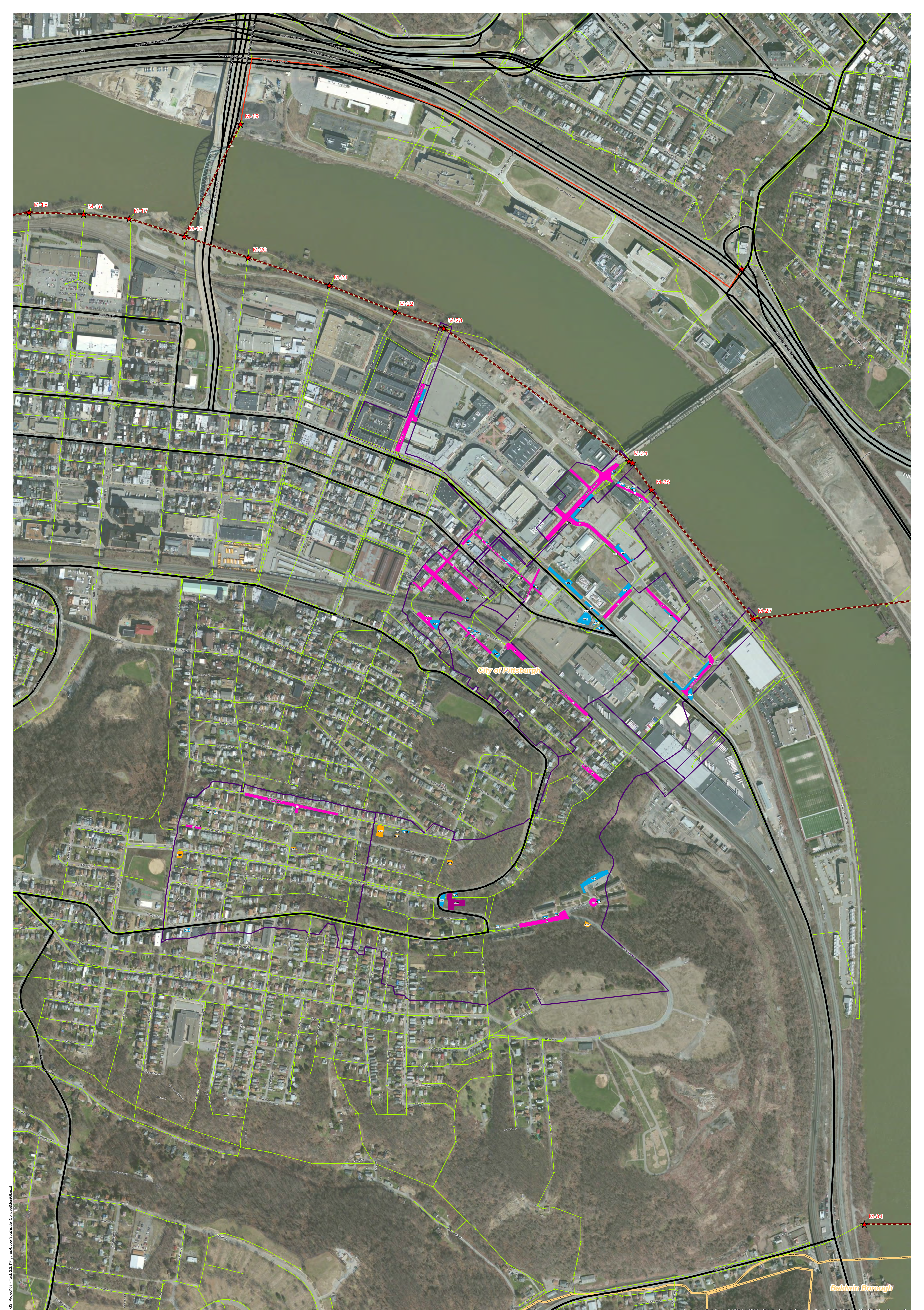
Revised October 7, 2014

\*Note: The drainage area presented in this table is representative of the individual drainage area tributary to each concept municipal project without any revisions to account for overlap, without engineering judgment revisions applied, and without the drainage areas being clipped to their corresponding model subcatchments.

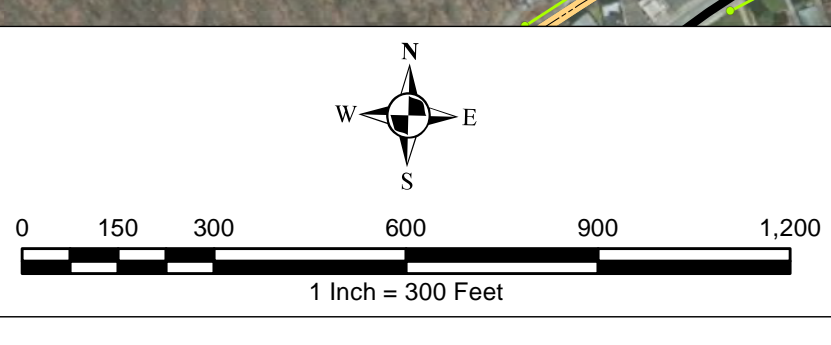
ALCOSAN POC	Model Subcatchment	Concept Municipal Project UID	BMP Type	Concept Municipal Project Area (acres)	Public ROW or Parcel		Concept Municipal Project Individual Drainage Area (acres)*	Concept Municipal Project Individual Project Impervious Drainage Area (acres)*
					Area of Municipal Project in Public ROW (acres)	Area of Municipal Project outside of Public ROW (acres)		
M-23-00	M-23-C-1	UPSS_1	PP	0.503	0.503	0.000	2.134	1.842
M-23-00	M-23-C-1	UPSS_2	PP	0.060	0.044	0.016	1.034	0.973
M-23-00	M-23-C-1	UPSS_3	PP	0.132	0.132	0.000	0.905	0.628
M-23-00	M-23-C-1	UPSS_4	PP	0.268	0.268	0.000	1.622	0.815
M-23-00	M-23-C-1	UPSS_5	PP	0.317	0.317	0.000	1.518	0.450
M-23-00	M-23-C-1	UPSS_6	PP	0.114	0.114	0.000	1.291	0.412
M-23-00	M-23-C-1	UPSS_7	PP	0.157	0.157	0.000	1.331	0.594
M-24-00	M-24-C-1	UPSS_8	PP	1.053	1.017	0.036	2.773	1.795
M-26-00	M-26-C-1-C	UPSS_9	PP	0.168	0.166	0.002	3.077	1.584
M-27-00	M-26-C-1-C	UPSS_10	PP	0.165	0.165	0.000	2.251	0.634
M-26-00	M-26-C-1-A	UPSS_11	PP	0.152	0.000	0.152	0.469	0.208
M-26-00	M-26-C-1-A	UPSS_12	PP	0.401	0.011	0.390	4.080	2.413
M-26-00	M-26-C-1-A	UPSS_13	PP	0.206	0.000	0.206	1.139	0.629
M-26-00	M-26-C-1-A	UPSS_14	PP	0.207	0.000	0.207	0.756	0.492
M-26-00	M-26-C-1-A	UPSS_15	PP	0.317	0.191	0.126	1.632	1.555
M-27-00	M-27-C-1-B	UPSS_17	PP	0.348	0.348	0.000	10.752	1.063
M-27-00	M-27-C-1-B	UPSS_18	PP	0.142	0.142	0.000	2.896	0.663
M-27-00	M-27-C-1-A	UPSS_20	PP	0.249	0.000	0.249	1.400	1.202
M-27-00	M-27-C-1-C	UPSS_22	PP	0.412	0.404	0.008	1.318	0.668
M-27-00	M-27-C-1-B	UPSS_23	PP	0.081	0.081	0.000	0.836	0.244
M-27-00	M-27-C-1-C	UPSS_24	PP	0.055	0.055	0.000	0.329	0.099
M-26-00	M-26-C-1-C	UPSS_25	PP	0.165	0.114	0.051	5.641	2.033
M-23-00	M-23-C-1	UPSS_1001	BR	0.028	0.016	0.012	0.041	0.041
M-26-00	M-26-C-1-A	UPSS_1002	BR	0.169	0.049	0.120	0.887	0.618
M-26-00	M-26-C-1-A	UPSS_1003	BR	0.046	0.046	0.000	0.107	0.056

ALCOSAN POC	Model Subcatchment	Concept Municipal Project UID	BMP Type	Concept Municipal Project Area (acres)	Public ROW or Parcel		Concept Municipal Project Individual Drainage Area (acres)*	Concept Municipal Project Impervious Drainage Area (acres)*
					Area of Municipal Project in Public ROW (acres)	Area of Municipal Project outside of Public ROW (acres)		
M-23-00	M-23-C-1	UPSS_1006	BR	0.022	0.009	0.013	0.142	0.031
M-23-00	M-23-C-1	UPSS_1007	BR	0.093	0.057	0.036	0.840	0.296
M-26-00	M-26-C-1-C	UPSS_1008	BR	0.025	0.018	0.007	0.047	0.047
M-26-00	M-26-C-1-C	UPSS_1009	BR	0.021	0.021	0.000	0.048	0.048
M-26-00	M-26-C-1-C	UPSS_1010	BR	0.015	0.000	0.015	0.073	0.062
M-26-00	M-26-C-1-C	UPSS_1011	BR	0.056	0.017	0.039	0.073	0.073
M-26-00	M-26-C-1-A	UPSS_1013	BR	0.030	0.000	0.030	0.244	0.101
M-26-00	M-26-C-1-A	UPSS_1014	BR	0.029	0.000	0.029	0.045	0.016
M-26-00	M-26-C-1-A	UPSS_1015	BR	0.044	0.001	0.043	0.177	0.177
M-27-00	M-27-C-1-B	UPSS_1016	BR	0.243	0.000	0.243	1.024	0.417
M-27-00	M-27-C-1-B	UPSS_1017	BR	0.016	0.012	0.004	0.858	0.221
M-27-00	M-27-C-1-B	UPSS_1020	BR	0.025	0.014	0.011	0.089	0.014
M-27-00	M-27-C-1-B	UPSS_1021	BR	0.027	0.019	0.008	0.162	0.089
M-27-00	M-27-C-1-B	UPSS_1022	BR	0.026	0.005	0.021	0.077	0.027
M-27-00	M-27-C-1-B	UPSS_1023	BR	0.073	0.022	0.051	0.587	0.120
M-27-00	M-27-C-1-B	UPSS_1024	BR	0.013	0.005	0.008	0.020	0.007
M-27-00	M-27-C-1-A	UPSS_1025	BR	0.102	0.003	0.099	0.148	0.148
M-27-00	M-27-C-1-A	UPSS_1026	BR	0.139	0.000	0.139	1.385	1.312
M-27-00	M-27-C-1-A	UPSS_1028	BR	0.068	0.000	0.068	0.174	0.090
M-27-00	M-27-C-1-B	UPSS_1030	BR	0.009	0.007	0.002	0.055	0.025
M-27-00	M-27-C-1-C	UPSS_1031	BR	0.008	0.001	0.007	0.014	0.003
M-27-00	M-27-C-1-C	UPSS_1032	BR	0.007	0.000	0.007	0.015	0.005
M-27-00	M-27-C-1-C	UPSS_1033	BR	0.005	0.003	0.002	0.007	0.000
M-27-00	M-27-C-1-C	UPSS_1034	BR	0.029	0.009	0.020	0.266	0.126
M-26-00	M-26-C-1-A	UPSS_1035	BR	0.038	0.000	0.038	0.103	0.103
M-26-00	M-26-C-1-A	UPSS_1036	BR	0.108	0.001	0.107	0.275	0.038
M-26-00	M-26-C-1-B	UPSS_1037	BR	0.172	0.079	0.093	1.369	0.887
M-26-00	M-26-C-1-A	UPSS_1038	BR	0.003	0.000	0.003	0.019	0.000
M-26-00	M-26-C-1-A	UPSS_1039	BR	0.013	0.000	0.013	0.051	0.015
M-26-00	M-26-C-1-A	UPSS_1040	BR	0.008	0.000	0.008	0.071	0.035
M-26-00	M-26-C-1-A	UPSS_1041	BR	0.116	0.000	0.116	0.212	0.114

ALCOSAN POC	Model Subcatchment	Concept Municipal Project UID	BMP Type	Concept Municipal Project Area (acres)	Public ROW or Parcel		Concept Municipal Project Individual Drainage Area (acres)*	Concept Municipal Project Impervious Drainage Area (acres)*
					Area of Municipal Project in Public ROW (acres)	Area of Municipal Project outside of Public ROW (acres)		
M-26-00	M-26-C-1-A	UPSS_1042	BR	0.255	0.000	0.255	1.301	0.696
M-26-00	M-26-C-1-A	UPSS_1043	BR	0.066	0.000	0.066	0.257	0.088
M-26-00	M-26-C-1-A	UPSS_1044	BR	0.023	0.023	0.000	0.141	0.058
M-26-00	M-26-C-1-A	UPSS_1045	BR	0.015	0.001	0.014	0.077	0.077
M-26-00	M-26-C-1-A	UPSS_1046	BR	0.007	0.004	0.003	0.514	0.510
M-24-00	M-24-C-1	UPSS_1047	BR	0.018	0.012	0.006	0.059	0.005
M-26-00	M-26-C-1-A	UPSS_1048	BR	0.005	0.000	0.005	0.874	0.532
M-23-00	M-23-C-1	UPSS_1049	BR	0.010	0.000	0.010	0.096	0.055
M-23-00	M-23-C-1	UPSS_1052	BR	0.115	0.078	0.037	0.297	0.061
M-27-00	M-27-C-1-C	UPSS_2001	IB	0.059	0.018	0.041	0.207	0.071
M-27-00	M-27-C-1-B	UPSS_2003	IB	0.039	0.024	0.015	0.042	0.002
M-27-00	M-27-C-1-B	UPSS_2005	IB	0.114	0.015	0.099	0.219	0.048
M-27-00	M-27-C-1-B	UPSS_2008	IB	0.035	0.018	0.017	6.710	0.614
M-27-00	M-27-C-1-B	UPSS_2009	IB	0.007	0.000	0.007	0.008	0.000
M-27-00	M-27-C-1-B	UPSS_2010	IB	0.013	0.000	0.013	0.041	0.000
M-27-00	M-27-C-1-C	UPSS_2011	IB	0.021	0.004	0.017	1.049	0.393
M-23-00	M-23-C-1	UPSS_4003	VF	0.016	0.016	0.000	0.954	0.311
M-23-00	M-23-C-1	UPSS_4005	VF	0.009	0.000	0.009	0.061	0.000
M-26-00	M-26-C-1-A	UPSS_4007	VF	0.006	0.006	0.000	0.492	0.443
M-26-00	M-26-C-1-A	UPSS_4009	VF	0.009	0.000	0.009	0.081	0.026
M-26-00	M-26-C-1-A	UPSS_4010	VF	0.044	0.000	0.044	0.628	0.062
M-27-00	M-27-C-1-B	UPSS_5001	CW	0.248	0.026	0.222	2.378	0.409



- ★ ALCOSAN Structures
  - ALCOSAN Shallow-Cut Interceptor
  - ALCOSAN Deep Tunnel Interceptor
  - One Overall Manholes
  - One Overall Sewerlines
- Municipal Projects**
- Infiltration Basin
  - Vegetated Filter Strips
  - Bioretention
  - Constructed Wetlands
  - Permeable Pavement
- State Roads
- Combined Sewer Subcatchment
  - Municipal Boundaries

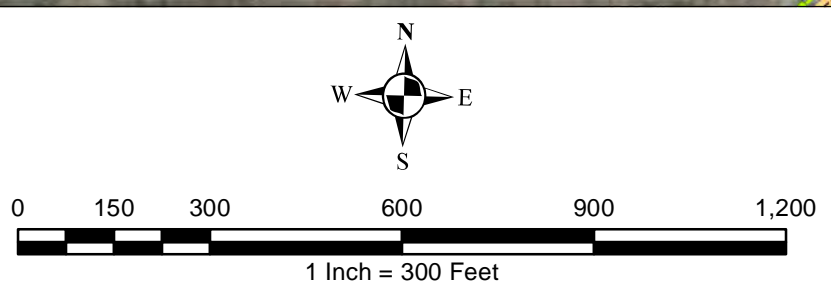
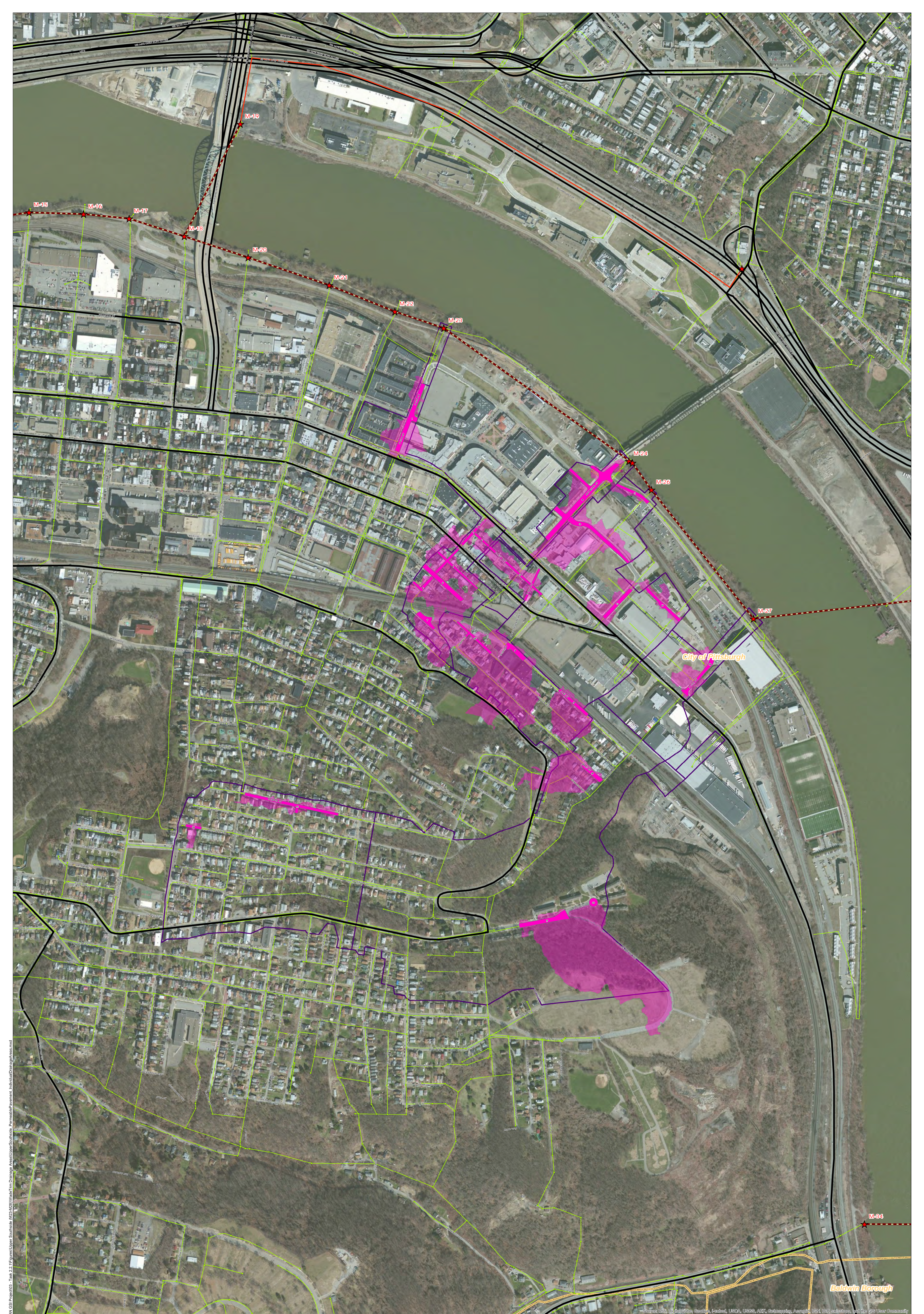


Source: Esri, DeLorme, UTM, USGS, Airx, GeoEye, AeroGRID, IGN, SPP, and the GIS User Community

**ALCOSAN GSI Project**  
**M-23 through M-28**  
**Concept Municipal GSI Projects**

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**ALCOSAN GSI Project**  
 Upper Southside (M-23 thru M-28)  
 Concept Municipal Permeable Pavement GSI Projects  
 Individual Project Drainage Areas

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Source: ESRI, DigitalGlobe, GeoEye, Earthstar (USA), CNES, IGN, Swire, GeoEye, AeroGRID, IGN, SIA, Airphoto, IGN, 1991-2009, Esri, and the GIS User Community







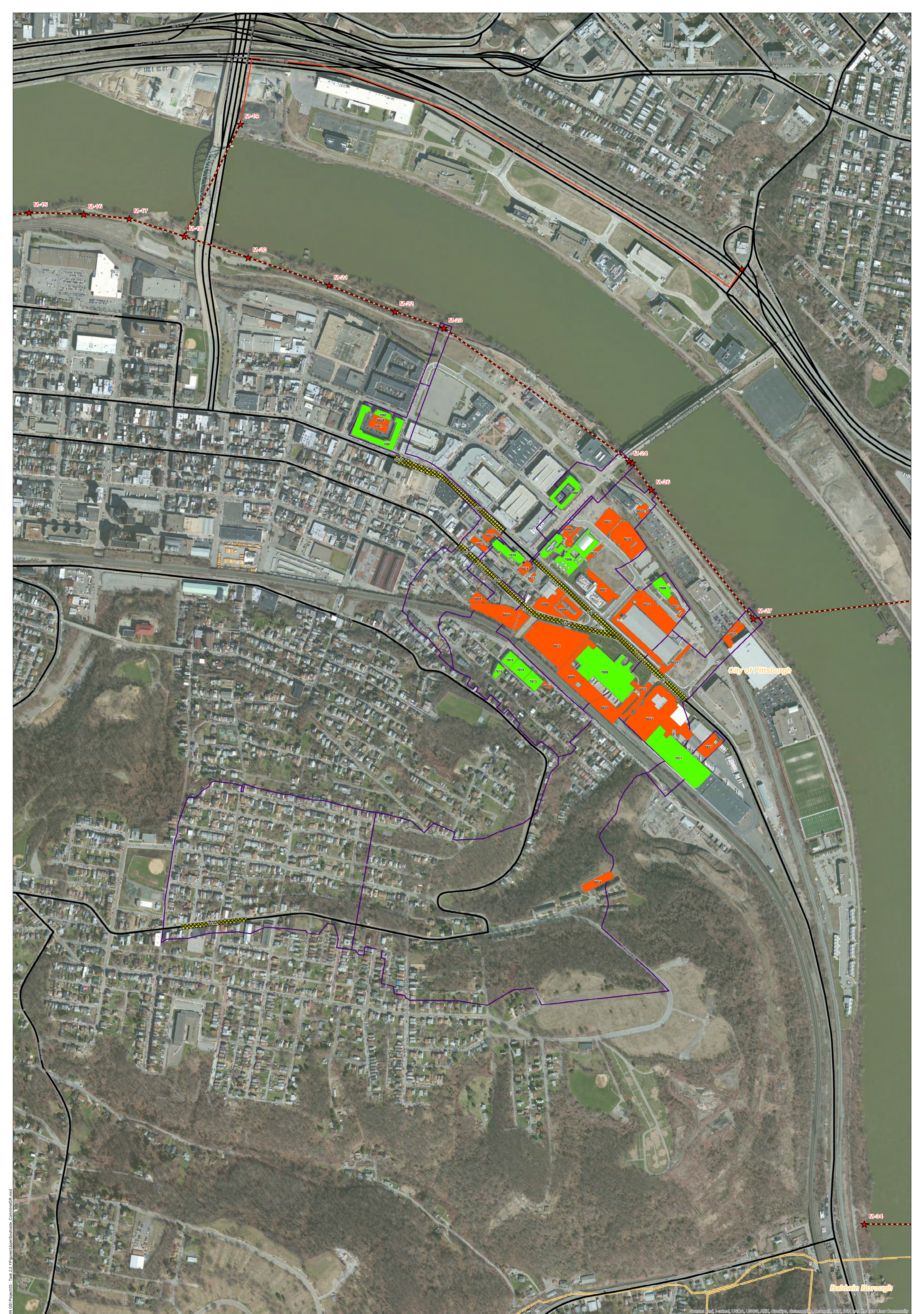


**Upper Southside Concept Commercial / Institutional Permeable Pavement, Green Roof, and Special Case GSI Projects:  
Summary Table**

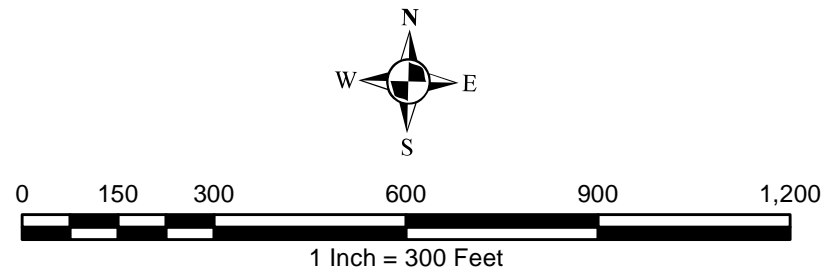
February 21, 2014  
Revised October 10, 2014

<b>ALCOSAN POC</b>	<b>Model Subcatchment</b>	<b>Concept Comm / Inst Project UID</b>	<b>BMP Type</b>	<b>Concept Municipal Project Area (acres)</b>	<b>Taxable (acres)</b>	<b>Exempt (acres)</b>	<b>Provisionally Exempt (acres)</b>	<b>Public ROW (acres)</b>
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_6001	CPP	0.208	0.208	0.000	0.000	0.000
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_6002	CPP	0.171	0.161	0.000	0.000	0.010
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_6003	CPP	0.162	0.000	0.026	0.000	0.136
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_6004	CPP	0.178	0.000	0.000	0.177	0.001
M-26-00	M-26-DWF-1/M-26-C-1-C	UPSS_6005	CPP	0.070	0.056	0.000	0.000	0.014
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6006	CPP	0.263	0.247	0.016	0.000	0.000
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6007	CPP	0.502	0.000	0.019	0.000	0.483
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6008	CPP	0.637	0.600	0.000	0.000	0.037
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6008	CPP	0.394	0.394	0.000	0.000	0.000
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6009	CPP	1.231	1.220	0.009	0.000	0.002
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6011	CPP	2.305	0.000	2.305	0.000	0.000
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6013	CPP	0.199	0.199	0.000	0.000	0.000
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6014	CPP	0.158	0.157	0.000	0.000	0.001
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6015	CPP	0.057	0.025	0.000	0.000	0.032
M-26-00	M-26-DWF-1/M-26-C-1-B	UPSS_6016	CPP	1.155	0.000	1.082	0.025	0.048
M-27-00	M-27-DWF-1/M-27-C-1-B	UPSS_6018	CPP	0.366	0.000	0.366	0.000	0.000
M-26-00	M-27-DWF-1/M-27-C-1-A	UPSS_6020	CPP	0.814	0.813	0.000	0.000	0.001
M-27-00	M-27-DWF-1/M-27-C-1-A	UPSS_6022	CPP	0.405	0.009	0.000	0.000	0.396
M-27-00	M-27-DWF-1/M-27-C-1-A	UPSS_6023	CPP	2.396	2.393	0.000	0.000	0.003
M-27-00	M-27-DWF-1/M-27-C-1-A	UPSS_6024	CPP	0.215	0.195	0.020	0.000	0.000
M-27-00	M-27-DWF-1/M-27-C-1-A	UPSS_6025	CPP	0.309	0.309	0.000	0.000	0.000
M-28-00	M-28-DWF-1/M-28-C-1-A	UPSS_6027	CPP	0.394	0.394	0.000	0.000	0.000
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6030	CPP	1.045	1.005	0.001	0.000	0.039
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6031	CPP	0.548	0.000	0.051	0.000	0.497
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6032	CPP	0.112	0.112	0.000	0.000	0.000

<b>ALCOSAN POC</b>	<b>Model Subcatchment</b>	<b>Concept Comm / Inst Project UID</b>	<b>BMP Type</b>	<b>Concept Municipal Project Area (acres)</b>	<b>Taxable (acres)</b>	<b>Exempt (acres)</b>	<b>Provisionally Exempt (acres)</b>	<b>Public ROW (acres)</b>
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6033	CPP	1.792	0.001	0.029	0.000	1.762
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_6034	CPP	0.122	0.121	0.000	0.000	0.001
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_6035	CPP	0.168	0.160	0.008	0.000	0.000
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_7001	GR	0.889	0.889	0.000	0.000	0.000
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_7002	GR	0.138	0.138	0.000	0.000	0.000
M-24-00	M-24-DWF-1/M-24-C-1	UPSS_7004	GR	0.483	0.470	0.000	0.000	0.013
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_7006	GR	1.060	1.047	0.009	0.000	0.004
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_7008	GR	0.294	0.294	0.000	0.000	0.000
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_7009	GR	2.437	2.435	0.000	0.000	0.002
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_7010	GR	0.397	0.397	0.000	0.000	0.000
M-27-00	M-27-DWF-1/M-27-C-1-A	UPSS_7011	GR	2.209	2.206	0.000	0.000	0.003
M-26-00	M-26-DWF-1/M-26-C-1-C	UPSS_7013	GR	0.314	0.301	0.000	0.000	0.013
M-26-00	M-26-DWF-1/M-26-C-1-C	UPSS_7014	GR	0.347	0.001	0.000	0.000	0.346
M-26-00	M-26-DWF-1/M-26-C-1-C	UPSS_7015	GR	0.213	0.200	0.000	0.000	0.013
M-26-00	M-26-DWF-1/M-26-C-1-C	UPSS_7016	GR	0.137	0.131	0.000	0.000	0.006
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_8001	SRPP	0.198	0.000	0.000	0.000	0.198
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_8002	SRPP	0.538	0.000	0.035	0.000	0.503
M-23-00	M-23-DWF-1/M-23-C-1	UPSS_8003	SRPP	0.527	0.000	0.000	0.000	0.527
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_8004	SRPP	1.088	0.062	0.006	0.000	1.020
M-26-00	M-26-DWF-1/M-26-C-1-B	UPSS_8005	SRPP	0.470	0.000	0.000	0.000	0.470
M-27-00	M-27-DWF-1/M-27-C-1-A	UPSS_8006	SRPP	0.518	0.008	0.000	0.000	0.510
M-27-00	M-27-DWF-1/M-27-C-1-C	UPSS_8007	SRPP	0.408	0.000	0.000	0.000	0.408
M-26-00	M-26-DWF-1/M-26-C-1-A	UPSS_8008	SRPP	0.663	0.000	0.000	0.000	0.663



- ★ ALCOSAN Structures
- ALCOSAN Shallow-Cut Interceptor
- ALCOSAN Deep Tunnel Interceptor
- ▨ Special Case
- Concept Commercial / Institutional Permeable Pavement Projects
- Concept Green Roof Projects
- State Roads
- Combined Sewer Subcatchment
- Municipal Boundaries



**ALCOSAN GSI Project**  
 Upper Southside (M-23 thru M-28)  
 Concept Commercial / Institutional,  
 Green Roof, and Special Case GSI Projects

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Source: Esri, DeLorme, UTM, USGS, Air, GeoEye, IGN, Aeriac, IGN, GSP, and the GIS User Community