

5.4 Study Area 4 – Hazelwood Area

These findings apply to ALCOSAN Points of Connection M-31 through M-40, which include combined sewer systems in the City of Pittsburgh.

Hazelwood - BMP GIS Features

The SUSTAIN BMP siting tool analysis resulted in identification of a total of 4,342 BMP GIS Features covering 470 acres, which consisted of the following:

Table 5.4-1 - TOTAL SUSTAIN BMP Features Output

SUSTAIN BMP Feature Type	Number of Features	Area of BMP Features (Acres)
Permeable Pavement	1,221	93
Bioretention	967	131
Infiltration Basin/Trenches	590	86
Vegetated Filter Strips	589	103
Grass Swales	906	55
Constructed Wetlands	69	2

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

Hazelwood - Concept Municipal GSI Projects

Based on the BMP features, 188 concept Municipal GSI Projects were identified covering 19 total acres with a corresponding drainage area delineation of 228 total acres and consisted of the following:

Table 5.4-2 - Summary of Identified Concept Municipal GSI Projects

Concept GSI Technology	Number of Projects	GSI Project Area (Acres)	Project Drainage Area (Acres)
Permeable Pavement	50	15	146
Bioretention	115	4	74
Infiltration Basin/Trenches	21	1	7
Vegetated Filter Strips	2	< 1	< 1
Grass Swales	0	0	0
Constructed Wetlands	0	0	0

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 (4).

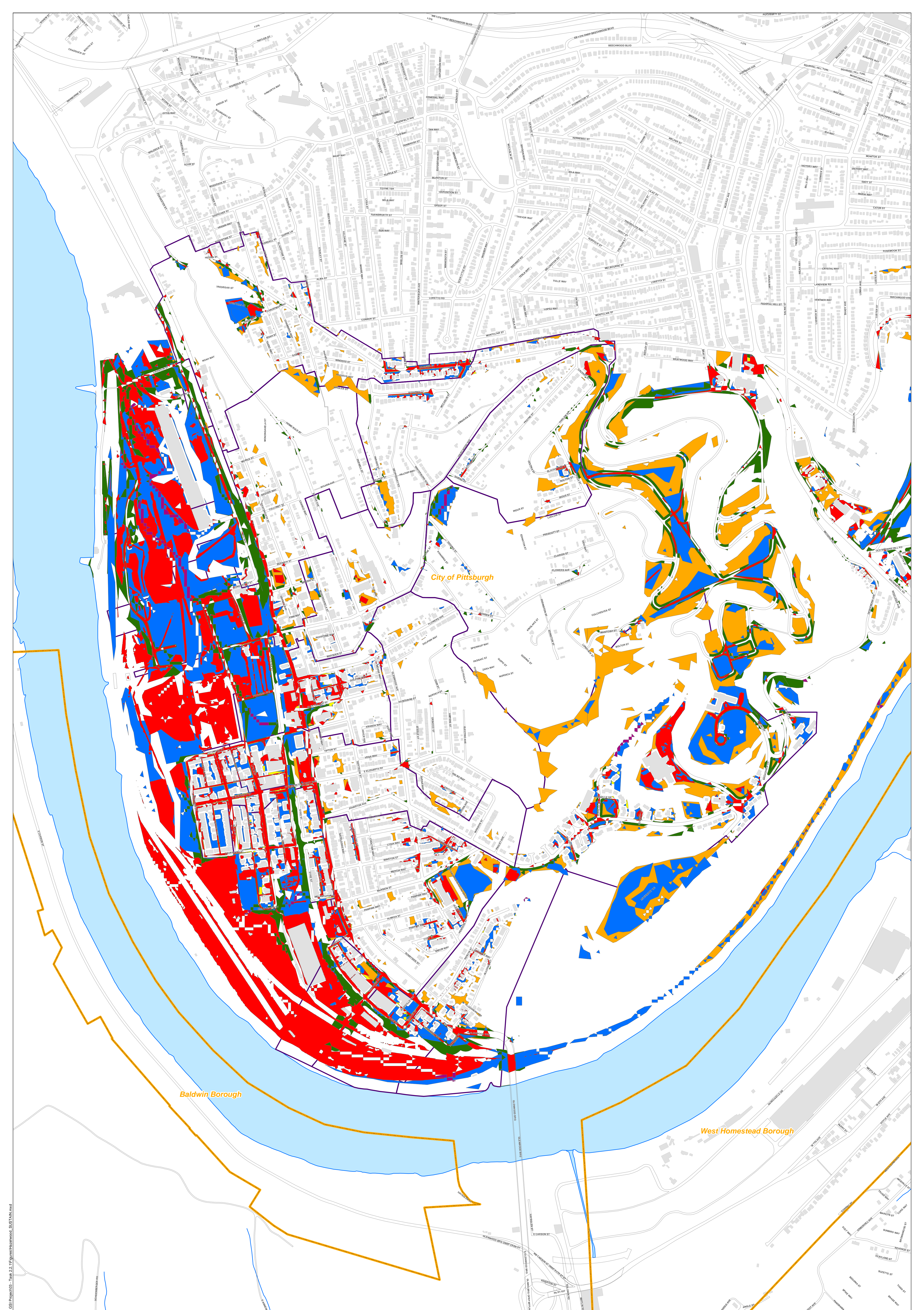
Hazelwood - Concept Commercial/Institutional and Special Case GSI Projects

Based on the BMP features, 61 concept Commercial/Institutional and Special Case GSI Projects were identified covering 22 total acres and consisted of the following:

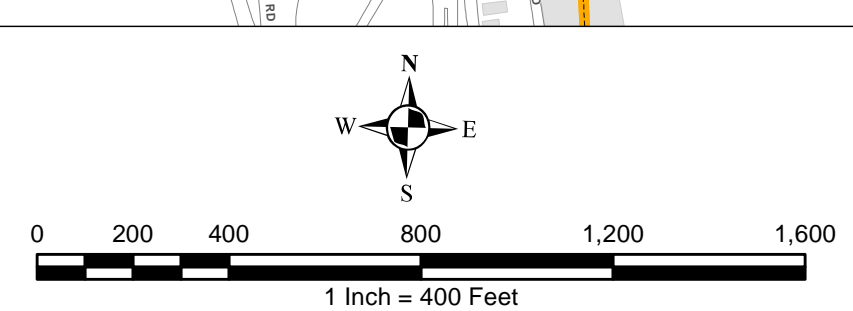
Table 5.4-3 - Summary of Identified Concept Commercial/Institutional and Special Case GSI Projects

Concept GSI Technology or Special Case Project Category	Number of Projects	GSI Project Area (Acres)
Commercial/Institutional Permeable Pavement	22	7
Commercial/Institutional Green Roofs	31	7
State Route Permeable Pavement	8	8
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).



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



ALCOSAN GSI Project
M-31 through M-40
SUSTAIN BMP Features

Hazelwood Concept Municipal Projects: Individual Drainage Areas
March 30, 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 Drainage Area (acres)*
					Area of Municipal Project in Public ROW (acres)	Area of Municipal Project outside of Public ROW (acres)		
M-31-00	M-31-00_S1	HZWD_1	PP	0.081	0.000	0.081	4.465	1.778
M-31-00	M-31-00_S1	HZWD_2	PP	0.209	0.000	0.209	0.399	0.232
M-35-00	M-35/M-36_S1	HZWD_3	PP	0.100	0.000	0.100	4.625	0.735
M-36-00	M-40-00_S2	HZWD_4	PP	0.151	0.000	0.151	0.798	0.459
M-36-00	M-40-00_S2	HZWD_5	PP	0.193	0.193	0.000	11.911	1.129
M-36-00	M-40-00_S2	HZWD_6	PP	0.072	0.070	0.002	1.786	0.206
M-40-00	M-40-00_S2	HZWD_7	PP	0.139	0.054	0.085	1.590	0.256
M-36-00	M-36-00-M2_S3	HZWD_8	PP	0.945	0.032	0.913	8.607	3.105
M-37-00	M-37-00-M1_S1	HZWD_10	PP	0.199	0.029	0.170	3.954	1.938
M-39-00	M-39-00_S1	HZWD_11	PP	0.536	0.009	0.527	4.779	1.479
M-40-00	M-40-00_S1	HZWD_12	PP	0.091	0.000	0.091	0.516	0.203
M-40-00	M-40-00_S1	HZWD_13	PP	0.085	0.000	0.085	0.153	0.103
M-40-00	M-40-00_S1	HZWD_14	PP	0.375	0.000	0.375	3.719	1.492
M-40-00	M-40-00_S1	HZWD_15	PP	0.139	0.052	0.087	0.185	0.127
M-40-00	M-40-00_S1	HZWD_16	PP	0.268	0.000	0.268	1.202	0.626
M-40-00	M-40-00_S1	HZWD_17	PP	0.306	0.000	0.306	4.073	1.706
M-36-00	M-36-00-M2_S1	HZWD_18	PP	0.584	0.000	0.584	2.900	1.365
M-36-00	M-36-00-M2_S2	HZWD_19	PP	0.278	0.000	0.278	1.732	0.932
M-36-00	M-36-00-M2_S2	HZWD_20	PP	0.132	0.000	0.132	0.489	0.287
M-36-00	M-36-00-M2_S1	HZWD_21	PP	0.302	0.036	0.266	1.111	0.514
M-40-00	M-37-00-M1_S1	HZWD_22	PP	2.251	0.008	2.243	8.184	3.794
M-40-00	M-40-00_S2	HZWD_23	PP	0.152	0.009	0.143	0.534	0.236
M-40-00	M-40-00_S2	HZWD_24	PP	0.079	0.010	0.069	24.248	1.437
M-36-00	M-40-00_S2	HZWD_25	PP	0.393	0.393	0.000	1.984	0.517
M-36-00	M-40-00_S2	HZWD_26	PP	0.609	0.372	0.237	3.247	0.953
M-36-00	M-40-00_S2	HZWD_27	PP	0.055	0.054	0.001	0.939	0.167
M-36-00	M-40-00_S2	HZWD_28	PP	0.096	0.096	0.000	6.524	1.576
M-36-00	M-40-00_S2	HZWD_29	PP	0.043	0.043	0.000	0.195	0.048
M-36-00	M-40-00_S2	HZWD_30	PP	0.108	0.000	0.108	2.897	0.196
M-36-00	M-35-00-M1_S2	HZWD_31	PP	0.041	0.000	0.041	1.401	0.538
M-35-00	M-35-00-M1_S1	HZWD_32	PP	0.058	0.011	0.047	0.236	0.037
M-35-00	M-35-00-M1_S2	HZWD_33	PP	0.042	0.000	0.042	0.937	0.219

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 Drainage Area (acres)*
					Area of Municipal Project in Public ROW (acres)	Area of Municipal Project outside of Public ROW (acres)		
M-36-00	M-40-00_S2	HZWD_34	PP	0.097	0.096	0.001	0.516	0.208
M-35-00	M-35-00-M1_S1	HZWD_35	PP	0.058	0.000	0.058	0.159	0.078
M-31-00	M-31-00_S1	HZWD_36	PP	0.032	0.002	0.030	0.303	0.165
M-31-00	M-31-00_S1	HZWD_37	PP	0.155	0.000	0.155	2.720	0.706
M-35-00	M-35-00-M1_S3	HZWD_38	PP	0.223	0.000	0.223	1.912	0.598
M-31-00	M-31-00_S1	HZWD_39	PP	0.087	0.000	0.087	0.222	0.075
M-35-00	M-35/M-36_S1	HZWD_40	PP	0.176	0.003	0.173	0.414	0.170
M-35-00	M-35-00-M1_S2	HZWD_41	PP	0.177	0.000	0.177	1.500	0.589
M-36-00	M-36-00-M2_S1	HZWD_42	PP	0.126	0.000	0.126	0.579	0.250
M-36-00	M-36-00-M2_S2	HZWD_43	PP	0.045	0.000	0.045	0.282	0.167
M-37-00	M-36-00-M2_S1	HZWD_44	PP	0.027	0.001	0.026	0.585	0.240
M-37-00	M-37-00-M1_S1	HZWD_45	PP	0.194	0.043	0.151	1.355	0.502
M-36-00	M-36-00-M2_S2	HZWD_46	PP	1.058	0.138	0.920	1.740	0.877
M-36-00	M-36-00-M2_S1	HZWD_47	PP	1.792	0.081	1.711	9.935	4.068
M-40-00	M-40-00_S1	HZWD_52	PP	0.310	0.001	0.309	0.954	0.480
M-40-00	M-40-00_S2	HZWD_53	PP	0.240	0.014	0.226	1.140	0.377
M-38-00	M-38-00_S1	HZWD_54	PP	0.677	0.012	0.665	5.297	2.675
M-40-00	M-40-00_S2	HZWD_55	PP	0.145	0.000	0.145	6.432	1.239
M-31-00	M-31-00_S1	HZWD_1001	BR	0.007	0.002	0.005	0.017	0.001
M-31-00	M-31-00_S1	HZWD_1002	BR	0.145	0.087	0.058	4.489	1.745
M-31-00	M-31-00_S1	HZWD_1006	BR	0.036	0.012	0.024	0.190	0.061
M-31-00	M-31-00_S1	HZWD_1007	BR	0.061	0.046	0.015	0.074	0.000
M-31-00	M-31-00_S1	HZWD_1008	BR	0.017	0.013	0.004	0.028	0.000
M-31-00	M-31-00_S1	HZWD_1009	BR	0.006	0.000	0.006	0.511	0.102
M-31-00	M-31-00_S1	HZWD_1010	BR	0.007	0.000	0.007	0.045	0.019
M-31-00	M-31-00_S1	HZWD_1011	BR	0.011	0.001	0.010	0.017	0.003
M-35-00	M-35-00-M1_S3	HZWD_1012	BR	0.003	0.000	0.003	0.004	0.000
M-35-00	M-35-00-M1_S1	HZWD_1015	BR	0.007	0.005	0.002	0.042	0.000
M-35-00	M-35-00-M1_S1	HZWD_1016	BR	0.009	0.002	0.007	0.020	0.001
M-35-00	M-35-00-M1_S1	HZWD_1017	BR	0.011	0.000	0.011	0.656	0.196
M-35-00	M-35-00-M1_S1	HZWD_1020	BR	0.004	0.004	0.000	0.021	0.021
M-35-00	M-35-00-M1_S1	HZWD_1021	BR	0.010	0.006	0.004	0.017	0.000
M-35-00	M-35-00-M1_S1	HZWD_1022	BR	0.006	0.000	0.006	0.012	0.001
M-35-00	M-35-00-M1_S2	HZWD_1023	BR	0.061	0.032	0.029	0.145	0.003
M-35-00	M-35-00-M1_S1	HZWD_1024	BR	0.048	0.019	0.029	1.541	0.203
M-35-00	M-31-00_S1	HZWD_1025	BR	0.019	0.008	0.011	0.055	0.004
M-35-00	M-35/M-36_S1	HZWD_1026	BR	0.010	0.004	0.006	0.022	0.001
M-35-00	M-35-00-M1_S2	HZWD_1029	BR	0.011	0.006	0.005	0.087	0.044

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					Area of Municipal Project in Public ROW (acres)	Area of Municipal Project outside of Public ROW (acres)		
M-35-00	M-35-00-M1_S1	HZWD_1030	BR	0.006	0.000	0.006	0.007	0.000
M-35-00	M-35-00-M1_S2	HZWD_1031	BR	0.017	0.004	0.013	0.247	0.090
M-35-00	M-35/M-36_S1	HZWD_1032	BR	0.011	0.001	0.010	1.101	0.404
M-35-00	M-35-00-M1_S3	HZWD_1033	BR	0.007	0.000	0.007	0.011	0.004
M-35-00	M-35/M-36_S1	HZWD_1034	BR	0.013	0.000	0.013	0.030	0.004
M-35-00	M-35-00-M1_S1	HZWD_1035	BR	0.069	0.058	0.011	2.853	0.565
M-35-00	M-35-00-M1_S1	HZWD_1036	BR	0.031	0.000	0.031	0.086	0.019
M-35-00	M-35-00-M1_S1	HZWD_1037	BR	0.006	0.002	0.004	0.055	0.003
M-35-00	M-35-00-M1_S2	HZWD_1038	BR	0.018	0.018	0.000	0.038	0.000
M-35-00	M-35-00-M1_S2	HZWD_1039	BR	0.009	0.002	0.007	3.256	0.844
M-35-00	M-35-00-M1_S2	HZWD_1040	BR	0.008	0.001	0.007	0.029	0.016
M-35-00	M-35-00-M1_S2	HZWD_1041	BR	0.033	0.028	0.005	0.057	0.016
M-36-00	M-36-00-M2_S5	HZWD_1042	BR	0.012	0.011	0.001	0.089	0.022
M-36-00	M-36-00-M2_S3	HZWD_1043	BR	0.012	0.001	0.011	0.541	0.017
M-36-00	M-36-00-M2_S5	HZWD_1044	BR	0.009	0.000	0.009	0.014	0.002
M-36-00	M-36-00-M2_S5	HZWD_1045	BR	0.023	0.003	0.020	0.027	0.005
M-36-00	M-36-00-M2_S5	HZWD_1046	BR	0.055	0.041	0.014	16.190	2.286
M-36-00	M-36-00-M2_S5	HZWD_1047	BR	0.009	0.005	0.004	0.204	0.022
M-36-00	M-36-00-M2_S3	HZWD_1048	BR	0.004	0.000	0.004	0.191	0.092
M-36-00	M-36-00-M2_S2	HZWD_1050	BR	0.019	0.000	0.019	0.165	0.075
M-36-00	M-36-00-M2_S1	HZWD_1051	BR	0.022	0.010	0.012	0.141	0.003
M-36-00	M-36-00-M2_S5	HZWD_1052	BR	0.049	0.024	0.025	7.640	1.522
M-36-00	M-36-00-M2_S5	HZWD_1053	BR	0.023	0.011	0.012	0.027	0.004
M-36-00	M-36-00-M2_S5	HZWD_1054	BR	0.011	0.004	0.007	0.461	0.037
M-36-00	M-36-00-M2_S5	HZWD_1055	BR	0.009	0.006	0.003	0.232	0.016
M-36-00	M-36-00-M2_S3	HZWD_1056	BR	0.025	0.022	0.003	0.119	0.015
M-36-00	M-35-00-M1_S2	HZWD_1057	BR	0.059	0.042	0.017	0.152	0.012
M-36-00	M-36-00-M2_S3	HZWD_1058	BR	0.008	0.003	0.005	0.075	0.001
M-36-00	M-36-00-M2_S3	HZWD_1059	BR	0.018	0.014	0.004	0.383	0.146
M-36-00	M-36-00-M2_S2	HZWD_1060	BR	0.156	0.144	0.012	0.348	0.090
M-36-00	M-36-00-M2_S2	HZWD_1061	BR	0.033	0.033	0.000	0.053	0.000
M-36-00	M-36-00-M2_S1	HZWD_1062	BR	0.025	0.005	0.020	0.134	0.001
M-36-00	M-36-00-M2_S2	HZWD_1063	BR	0.007	0.004	0.003	0.008	0.000
M-36-00	M-36-00-M2_S4	HZWD_1064	BR	0.007	0.000	0.007	0.011	0.003
M-37-00	M-37-00-M1_S1	HZWD_1065	BR	0.007	0.002	0.005	0.022	0.000
M-37-00	M-37-00-M1_S1	HZWD_1066	BR	0.022	0.008	0.014	1.344	0.651
M-37-00	M-37-00-M1_S1	HZWD_1067	BR	0.036	0.011	0.025	0.169	0.044
M-37-00	M-37-00-M1_S1	HZWD_1068	BR	0.043	0.009	0.034	0.118	0.044

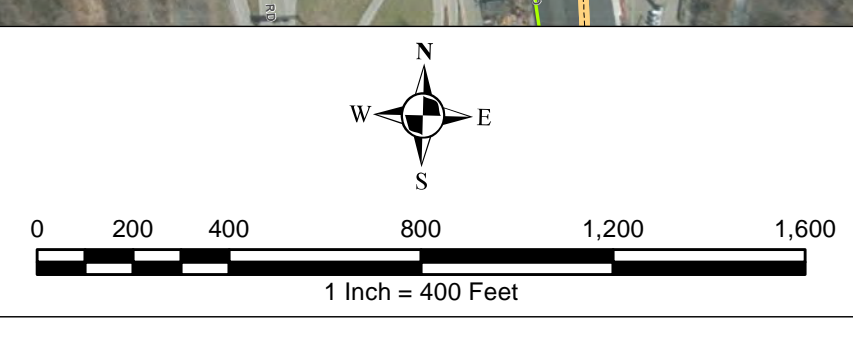
ALCOSAN POC	Model Subcatchment	Concept Municipal Project UID	BMP Type	Concept Municipal Project Area (acres)	Public ROW or Parcel		Concept Municipal Project Individual Drainage Area (acres)*	Concept Municipal Project Individual Drainage Area (acres)*
					Area of Municipal Project in Public ROW (acres)	Area of Municipal Project outside of Public ROW (acres)		
M-37-00	M-36-00-M2_S1	HZWD_1069	BR	0.008	0.001	0.007	0.016	0.000
M-37-00	M-37-00-M1_S1	HZWD_1070	BR	0.005	0.000	0.005	0.012	0.009
M-37-00	M-37-00-M1_S1	HZWD_1071	BR	0.043	0.000	0.043	0.395	0.001
M-37-00	M-37-00-M1_S1	HZWD_1072	BR	0.009	0.002	0.007	0.051	0.007
M-37-00	M-37-00-M1_S1	HZWD_1073	BR	0.016	0.000	0.016	0.025	0.001
M-37-00	M-37-00-M1_S1	HZWD_1074	BR	0.010	0.000	0.010	0.021	0.021
M-37-00	M-37-00-M1_S1	HZWD_1075	BR	0.013	0.006	0.007	0.047	0.000
M-37-00	M-37-00-M1_S1	HZWD_1076	BR	0.007	0.001	0.006	0.011	0.001
M-38-00	M-38-00_S1	HZWD_1077	BR	0.050	0.049	0.001	0.685	0.212
M-38-00	M-38-00_S1	HZWD_1079	BR	0.069	0.062	0.007	0.470	0.212
M-38-00	M-40-00_S1	HZWD_1080	BR	0.071	0.038	0.033	0.736	0.257
M-39-00	M-39-00_S1	HZWD_1081	BR	0.023	0.000	0.023	0.040	0.016
M-39-00	M-39-00_S1	HZWD_1082	BR	0.104	0.104	0.000	0.173	0.007
M-39-00	M-39-00_S1	HZWD_1083	BR	0.027	0.002	0.025	0.039	0.009
M-40-00	M-40-00_S2	HZWD_1086	BR	0.021	0.008	0.013	0.048	0.026
M-40-00	M-40-00_S2	HZWD_1089	BR	0.016	0.015	0.001	0.085	0.006
M-40-00	M-40-00_S2	HZWD_1091	BR	0.021	0.021	0.000	3.850	0.321
M-40-00	M-40-00_S2	HZWD_1092	BR	0.007	0.007	0.000	0.011	0.000
M-40-00	M-40-00_S2	HZWD_1093	BR	0.126	0.126	0.000	8.929	0.892
M-40-00	M-40-00_S2	HZWD_1095	BR	0.114	0.114	0.000	0.272	0.014
M-40-00	M-40-00_S2	HZWD_1096	BR	0.087	0.087	0.000	0.329	0.076
M-40-00	M-40-00_S2	HZWD_1097	BR	0.134	0.004	0.130	0.147	0.020
M-40-00	M-40-00_S2	HZWD_1099	BR	0.025	0.018	0.007	0.172	0.035
M-40-00	M-40-00_S2	HZWD_1100	BR	0.019	0.019	0.000	0.569	0.204
M-40-00	M-40-00_S1	HZWD_1101	BR	0.045	0.019	0.026	0.612	0.276
M-40-00	M-40-00_S1	HZWD_1102	BR	0.019	0.012	0.007	0.650	0.242
M-40-00	M-40-00_S1	HZWD_1103	BR	0.016	0.015	0.001	0.050	0.015
M-40-00	M-40-00_S1	HZWD_1104	BR	0.011	0.006	0.005	0.101	0.044
M-40-00	M-40-00_S1	HZWD_1105	BR	0.014	0.007	0.007	0.049	0.019
M-40-00	M-40-00_S1	HZWD_1106	BR	0.016	0.011	0.005	0.889	0.422
M-40-00	M-40-00_S1	HZWD_1107	BR	0.025	0.021	0.004	2.871	0.612
M-40-00	M-40-00_S1	HZWD_1108	BR	0.016	0.013	0.003	0.020	0.000
M-40-00	M-40-00_S1	HZWD_1109	BR	0.021	0.000	0.021	0.026	0.013
M-40-00	M-40-00_S1	HZWD_1110	BR	0.124	0.124	0.000	0.216	0.043
M-40-00	M-40-00_S1	HZWD_1111	BR	0.052	0.018	0.034	0.729	0.124
M-40-00	M-40-00_S2	HZWD_1112	BR	0.091	0.084	0.007	0.118	0.002
M-40-00	M-40-00_S2	HZWD_1113	BR	0.024	0.024	0.000	0.030	0.000
M-40-00	M-40-00_S2	HZWD_1114	BR	0.026	0.026	0.000	0.061	0.000

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 Drainage Area (acres)*
					Area of Municipal Project in Public ROW (acres)	Area of Municipal Project outside of Public ROW (acres)		
M-40-00	M-40-00_S2	HZWD_1115	BR	0.004	0.000	0.004	0.006	0.000
M-40-00	M-40-00_S2	HZWD_1116	BR	0.083	0.071	0.012	0.129	0.001
M-40-00	M-40-00_S2	HZWD_1117	BR	0.059	0.039	0.020	0.904	0.126
M-40-00	M-40-00_S2	HZWD_1118	BR	0.030	0.000	0.030	0.116	0.000
M-40-00	M-40-00_S1	HZWD_1119	BR	0.012	0.005	0.007	0.490	0.064
M-40-00	M-40-00_S2	HZWD_1120	BR	0.098	0.098	0.000	0.725	0.047
M-40-00	M-40-00_S2	HZWD_1121	BR	0.004	0.002	0.002	0.286	0.093
M-40-00	M-40-00_S2	HZWD_1122	BR	0.005	0.005	0.000	0.026	0.005
M-40-00	M-40-00_S2	HZWD_1123	BR	0.011	0.009	0.002	1.774	0.191
M-40-00	M-40-00_S2	HZWD_1124	BR	0.013	0.001	0.012	0.024	0.000
M-40-00	M-40-00_S2	HZWD_1125	BR	0.006	0.002	0.004	0.022	0.006
M-40-00	M-40-00_S2	HZWD_1126	BR	0.068	0.068	0.000	0.077	0.000
M-40-00	M-40-00_S2	HZWD_1127	BR	0.018	0.018	0.000	0.020	0.000
M-40-00	M-40-00_S2	HZWD_1128	BR	0.009	0.009	0.000	0.012	0.000
M-40-00	M-40-00_S2	HZWD_1129	BR	0.015	0.015	0.000	0.020	0.000
M-40-00	M-40-00_S2	HZWD_1130	BR	0.005	0.005	0.000	0.357	0.232
M-40-00	M-40-00_S2	HZWD_1133	BR	0.073	0.073	0.000	1.022	0.119
M-40-00	M-40-00_S2	HZWD_1134	BR	0.072	0.072	0.000	0.075	0.000
M-39-00	M-39-00_S1	HZWD_1135	BR	0.092	0.014	0.078	0.105	0.023
M-40-00	M-40-00_S2	HZWD_2002	IB	0.144	0.024	0.120	0.178	0.010
M-40-00	M-40-00_S2	HZWD_2004	IB	0.053	0.048	0.005	0.165	0.043
M-40-00	M-40-00_S1	HZWD_2013	IB	0.041	0.030	0.011	2.244	0.641
M-36-00	M-36-00-M2_S2	HZWD_2019	IB	0.018	0.018	0.000	0.636	0.257
M-40-00	M-40-00_S1	HZWD_2022	IB	0.044	0.044	0.000	0.651	0.080
M-40-00	M-40-00_S2	HZWD_2039	IB	0.026	0.026	0.000	0.059	0.048
M-40-00	M-40-00_S2	HZWD_2046	IB	0.033	0.033	0.000	0.087	0.023
M-36-00	M-36-00-M2_S2	HZWD_2049	IB	0.017	0.017	0.000	0.191	0.051
M-36-00	M-36-00-M2_S3	HZWD_2053	IB	0.037	0.010	0.027	0.407	0.124
M-35-00	M-35-00-M1_S2	HZWD_2058	IB	0.056	0.042	0.014	0.245	0.020
M-35-00	M-35-00-M1_S1	HZWD_2059	IB	0.030	0.030	0.000	0.185	0.098
M-35-00	M-35-00-M1_S1	HZWD_2065	IB	0.015	0.015	0.000	0.239	0.027
M-35-00	M-35-00-M1_S1	HZWD_2067	IB	0.026	0.026	0.000	0.038	0.000
M-35-00	M-35-00-M1_S1	HZWD_2068	IB	0.023	0.023	0.000	0.149	0.015
M-35-00	M-35-00-M1_S2	HZWD_2070	IB	0.025	0.025	0.000	0.043	0.006
M-35-00	M-35-00-M1_S1	HZWD_2071	IB	0.031	0.008	0.023	0.474	0.119
M-35-00	M-35-00-M1_S3	HZWD_2075	IB	0.003	0.003	0.000	0.010	0.000
M-35-00	M-35-00-M1_S1	HZWD_2078	IB	0.045	0.041	0.004	0.113	0.001
M-35-00	M-35-00-M1_S1	HZWD_2082	IB	0.026	0.023	0.003	1.047	0.106

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-31-00	M-31-00_S1	HZWD_2087	IB	0.008	0.008	0.000	0.012	0.000
M-35-00	M-35-00-M1_S3	HZWD_2093	IB	0.035	0.022	0.013	0.065	0.000
M-39-00	M-39-00_S1	HZWD_4001	VF	0.052	0.010	0.042	0.062	0.001
M-35-00	M-35-00-M1_S1	HZWD_4002	VF	0.010	0.010	0.000	0.020	0.000



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



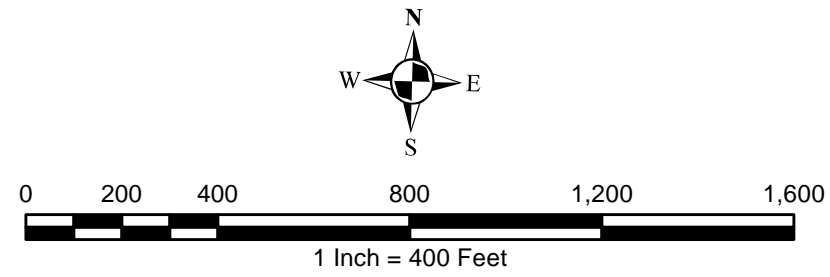
ALCOSAN GSI Project
M-31 through M-40
Concept Municipal GSI Projects

Source: Esri, DeLorme, USGS, NAVI, AeroGRID, IGN, Swayze, Swire, GEBCO, Esri, SVP, and the GIS User Community

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- ★ ALCOSAN Structures
- ALCOSAN Shallow-Cut Interceptor
- ALCOSAN Deep Tunnel Interceptor
- One Overall Manholes
- One Overall Sewerlines
- Permeable Pavement Municipal Project
- Permeable Pavement Drainage Area
- State Roads
- Combined Sewer Subcatchment
- Municipal Boundaries



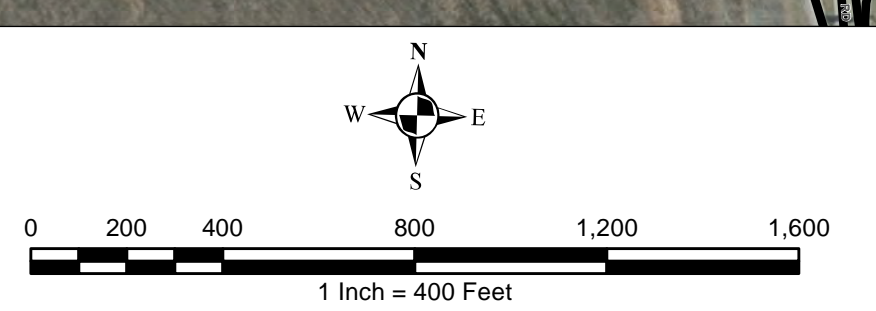
ALCOSAN GSI Project
 Hazelwood (M-31 thru M-40)
 Concept Municipal Permeable Pavement GSI Projects
 Individual Project Drainage Areas

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Source: Esri, DeLorme, USGS, NAVI, AeroGRID, IGN, SVP, and the GIS User Community



- ★ ALCOSAN Structures
- ALCOSAN Shallow-Cut Interceptor
- ALCOSAN Deep Tunnel Interceptor
- One Overall Manholes
- One Overall Sewerlines
- Bioretention Municipal Project
- Bioretention Drainage Area
- State Roads
- Combined Sewer Subcatchment
- Municipal Boundaries



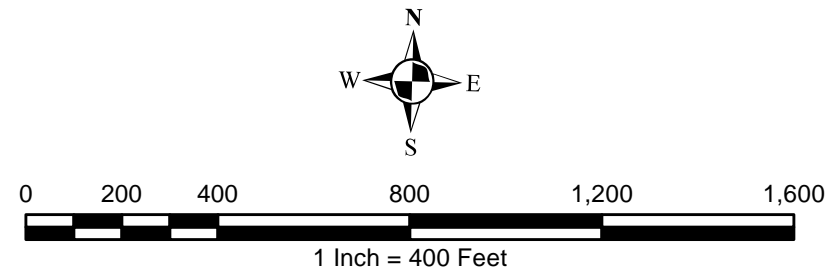
ALCOSAN GSI Project
 Hazelwood (M-31 thru M-40)
 Concept Municipal Bioretention GSI Projects
 Individual Project Drainage Areas

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Source: Esri, DigitalGlobe, GeoEye, IGN, Aerotech, AeroGRID, IGN, SVP, and the GIS User Community



- ★ ALCOSAN Structures
- ALCOSAN Shallow-Cut Interceptor
- ALCOSAN Deep Tunnel Interceptor
- One Overall Manholes
- One Overall Sewerlines
- Infiltration Basin Municipal Project
- Infiltration Basin Drainage Area
- State Roads
- Combined Sewer Subcatchment
- Municipal Boundaries

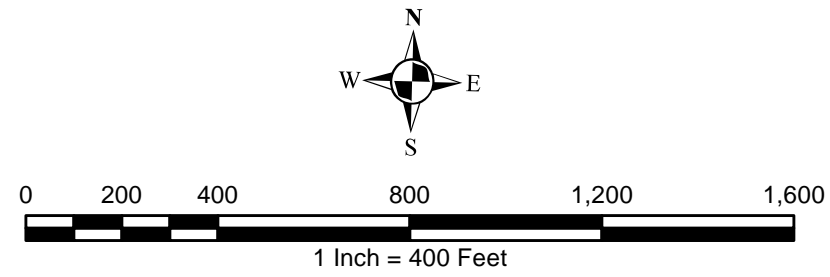


ALCOSAN GSI Project
 Hazelwood (M-31 thru M-40)
 Concept Municipal Infiltration Basin GSI Projects
 Individual Project Drainage Areas

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- ★ ALCOSAN Structures
- ALCOSAN Shallow-Cut Interceptor
- ALCOSAN Deep Tunnel Interceptor
- One Overall Manholes
- One Overall Sewerlines
- Vegetated Filter Strips Municipal Project
- Vegetated Filter Strips Drainage Area
- State Roads
- Combined Sewer Subcatchment
- Municipal Boundaries



ALCOSAN GSI Project
Hazelwood (M-31 thru M-40)
Concept Municipal Vegetated Filter Strips GSI Projects
Individual Project Drainage Areas

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Source: Esri, DeLorme, USGS, NAVI, AeroGRID, IGN, Swayze, Swire, GEBCO, Esri, SVP, and the GIS User Community

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

December 27, 2013
Revised October 10, 2014

ALCOSAN POC	Model Subcatchment	Concept Comm / Inst Project UID	BMP Type	Concept Municipal Project Area (acres)	Taxable (acres)	Exempt (acres)	Provisionally Exempt (acres)	Public ROW (acres)
M-31	M-31-00_S1	HZWD_6002	CPP	0.295	0.000	0.102	0.000	0.193
M-35	M-35/M-36_S1	HZWD_6003	CPP	0.215	0.000	0.215	0.000	0.000
M-35	M-35/M-36_S1	HZWD_6004	CPP	0.255	0.000	0.255	0.000	0.000
M-36	M-36-00-M2_S3	HZWD_6006	CPP	0.167	0.164	0.000	0.000	0.003
M-36	M-36-00-M2_S2	HZWD_6007	CPP	0.205	0.000	0.205	0.000	0.000
M-36	M-40-00_S2	HZWD_6008	CPP	0.243	0.000	0.243	0.000	0.000
M-36	M-36-00-M2_S3	HZWD_6013	CPP	0.048	0.048	0.000	0.000	0.000
M-36	M-36-00-M2_S3	HZWD_6014	CPP	0.488	0.474	0.000	0.000	0.014
M-36	M-36-00-M2_S2	HZWD_6016	CPP	0.683	0.249	0.425	0.000	0.009
M-37	M-37-00-M1_S1	HZWD_6021	CPP	0.041	0.023	0.000	0.000	0.018
M-38	M-38-00_S1	HZWD_6023	CPP	0.263	0.261	0.002	0.000	0.000
M-39	M-39-00_S1	HZWD_6024	CPP	0.264	0.264	0.000	0.000	0.000
M-40	M-40-00_S1	HZWD_6025	CPP	0.366	0.000	0.366	0.000	0.000
M-36	M-40-00_S2	HZWD_6026	CPP	1.802	0.006	1.796	0.000	0.000
M-36	M-36-00-M2_S3	HZWD_6027	CPP	0.190	0.185	0.000	0.000	0.005
M-40	M-40-00_S1	HZWD_6028	CPP	0.078	0.000	0.059	0.000	0.019
M-40	M-40-00_S1	HZWD_6029	CPP	0.069	0.004	0.065	0.000	0.000
M-35	M-35-00-M1_S2	HZWD_6030	CPP	0.264	0.000	0.264	0.000	0.000
M-40	M-40-00_S2	HZWD_6033	CPP	0.250	0.000	0.250	0.000	0.000
M-40	M-40-00_S2	HZWD_6034	CPP	0.416	0.000	0.416	0.000	0.000
M-40	M-40-00_S2	HZWD_6037	CPP	0.124	0.000	0.124	0.000	0.000
M-36	M-40-00_S2	HZWD_6038	CPP	0.359	0.000	0.359	0.000	0.000
M-35	M-35-00-M1_S2	HZWD_7001	GR	0.287	0.000	0.287	0.000	0.000
M-35	M-35-00-M1_S2	HZWD_7002	GR	0.236	0.000	0.236	0.000	0.000
M-35	M-35-00-M1_S2	HZWD_7003	GR	0.458	0.000	0.458	0.000	0.000

ALCOSAN POC	Model Subcatchment	Concept Comm / Inst Project UID	BMP Type	Concept Municipal Project Area (acres)	Taxable (acres)	Exempt (acres)	Provisionally Exempt (acres)	Public ROW (acres)
M-35	M-35-00-M1_S1	HZWD_7004	GR	0.185	0.000	0.185	0.000	0.000
M-35	M-35/M-36_S1	HZWD_7005	GR	0.145	0.000	0.145	0.000	0.000
M-35	M-35/M-36_S1	HZWD_7006	GR	0.114	0.000	0.114	0.000	0.000
M-36	M-40-00_S2	HZWD_7007	GR	1.128	0.000	0.928	0.000	0.200
M-36	M-40-00_S2	HZWD_7008	GR	0.143	0.000	0.143	0.000	0.000
M-36	M-36-00-M2_S3	HZWD_7009	GR	0.197	0.196	0.000	0.000	0.001
M-36	M-36-00-M2_S3	HZWD_7010	GR	0.076	0.076	0.000	0.000	0.000
M-36	M-36-00-M2_S3	HZWD_7011	GR	0.087	0.000	0.085	0.000	0.002
M-36	M-36-00-M2_S3	HZWD_7012	GR	0.284	0.284	0.000	0.000	0.000
M-36	M-36-00-M2_S3	HZWD_7013	GR	0.087	0.000	0.087	0.000	0.000
M-36	M-36-00-M2_S2	HZWD_7014	GR	0.033	0.033	0.000	0.000	0.000
M-36	M-36-00-M2_S2	HZWD_7015	GR	0.155	0.000	0.155	0.000	0.000
M-36	M-36-00-M2_S2	HZWD_7016	GR	0.220	0.000	0.220	0.000	0.000
M-36	M-36-00-M2_S2	HZWD_7017	GR	0.197	0.185	0.000	0.000	0.012
M-36	M-36-00-M2_S3	HZWD_7018	GR	0.105	0.000	0.102	0.000	0.003
M-36	M-36-00-M2_S3	HZWD_7019	GR	0.060	0.060	0.000	0.000	0.000
M-36	M-40-00_S2	HZWD_7020	GR	0.326	0.000	0.326	0.000	0.000
M-36	M-36-00-M2_S2	HZWD_7022	GR	0.187	0.178	0.000	0.000	0.009
M-36	M-36-00-M2_S2	HZWD_7023	GR	0.289	0.283	0.000	0.000	0.006
M-36	M-36-00-M2_S2	HZWD_7024	GR	0.308	0.308	0.000	0.000	0.000
M-37	M-37-00-M1_S1	HZWD_7025	GR	0.090	0.090	0.000	0.000	0.000
M-37	M-37-00-M1_S1	HZWD_7026	GR	0.110	0.110	0.000	0.000	0.000
M-37	M-37-00-M1_S1	HZWD_7027	GR	0.104	0.095	0.000	0.000	0.009
M-40	M-40-00_S1	HZWD_7031	GR	0.127	0.000	0.127	0.000	0.000
M-40	M-40-00_S1	HZWD_7033	GR	0.583	0.000	0.583	0.000	0.000
M-40	M-40-00_S1	HZWD_7034	GR	0.088	0.000	0.088	0.000	0.000
M-36	M-36-00-M2_S3	HZWD_7036	GR	0.104	0.092	0.000	0.000	0.012
M-36	M-36-00-M2_S3	HZWD_7037	GR	0.229	0.219	0.000	0.000	0.010
M-36-00	M-36-00-M2_S2	HZWD_8001	SRPP	1.069	0.000	0.000	0.000	1.069
M-40-00	M-40-00_S2	HZWD_8002	SRPP	0.976	0.000	0.108	0.000	0.868

ALCOSAN POC	Model Subcatchment	Concept Comm / Inst Project UID	BMP Type	Concept Municipal Project Area (acres)	Taxable (acres)	Exempt (acres)	Provisionally Exempt (acres)	Public ROW (acres)
M-35-00	M-35-00-M1_S1	HZWD_8003	SRPP	1.529	0.000	0.000	0.000	1.529
M-40-00	M-40-00_S2	HZWD_8004	SRPP	0.461	0.004	0.009	0.000	0.448
M-31-00	M-31-00_S1	HZWD_8005	SRPP	0.345	0.000	0.000	0.000	0.345
M-40-00	M-40-00_S1	HZWD_8006	SRPP	2.282	0.022	0.000	0.000	2.260
M-36-00	M-36-00-M2_S3	HZWD_8007	SRPP	0.798	0.000	0.000	0.000	0.798
M-35-00	M-35-00-M1_S2	HZWD_8008	SRPP	0.251	0.000	0.000	0.000	0.251

