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## Year 4 Massachusetts Small Municipal Separate Storm System Permit – Municipal Property Retrofits



Submitted to the Town of Oxford  
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Nitsch #14845

Year 4 Massachusetts Small Municipal Separate Storm System Permit – Municipal  
Property Retrofits  
For the Town of Oxford

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# 1 Municipal Property Retrofits

The MS4 permit requires the Town of Oxford to identify a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs designed to reduce the frequency, volume, and pollutant loads of stormwater discharges to and from its MS4 area. These pollutant loads include both phosphorus and nitrogen for the Town of Oxford. Implementing these BMPs presents an opportunity for the Town to also work towards their reduction requirements for phosphorus and help to reduce nitrogen loads as well as required by their Nitrogen Source Tracking and Lake Phosphorus Control Plan. Nitsch Engineering evaluated 109 town-owned parcels of the total 6,007 parcels in the town for potential retrofit opportunities. The intent is to select 5 sites for potential retrofit opportunities that will be further evaluated for BMP selection and design in subsequent reports.

## 1.1 Methodology

Nitsch Engineering evaluated town-owned parcels against several criteria to prioritize stormwater retrofit locations. Nitsch Engineering gave a score based on how well the criterion would improve success/efficiency of a retrofit on a town-owned parcel. Nitsch Engineering assigned each criteria a score that may have included a range to account for all possible values within that defined criterion. Some criteria were not assigned a score as these were for informational purposes only and may influence further decision making on BMP selection and design. Each of the 109 town-owned parcel's criteria scores were totaled, and the five highest scoring parcels were selected as having the highest probability of a successful stormwater retrofit. The criteria and corresponding source information are listed and described in Appendix A.

The scores for each criterion per location can be found in Appendix B. Note that the phosphorus or nitrogen loading rates are for town parcel watersheds, not just the parcel area. The watershed was found through the "watershed" function, using the MassGIS Lidar DEM as a base for flow direction. Each town parcel watershed was calculated individually and was not clipped to the boundary of the town.

For local decision making, considerations in this screening process can be further supplemented and fine-tuned based on local priorities. For some communities, localized flooding has been an important additional consideration and has been included in the scoring. In other situations, the PVPC has recommended that, where possible, communities add tree canopy analysis in the ranking. This allows investments for improved stormwater pollution control through vegetated systems to also mitigate heat island effects in neighborhoods where there are few trees. The stormwater retrofit prioritization will continue to be updated in future Permit years to adapt to local efforts in pursuit of the MS4 permit.

## 1.2 Priority Stormwater Retrofit Site Selection

After consideration of the criteria listed in Appendix A and score calculation for each parcel (Appendix B), Nitsch Engineering choose the top five (5) parcels (Table 1).



Table 1. Top 5 Oxford, MA BMP Retrofit Locations

LOC_ID	Address	Lake/Pond Watershed	Phosphorus Load lb/yr	Nitrogen Load lb/yr	Score
F_552838_2858456	0 Hardwood St	None	10083	102063	27
F_555766_2862385	0 Lowes St Roadway	None	1328	14032	25
F_556065_2880446	25 Depot Rd	None	11	113	24
F_557338_2873475	450 Main St	Lowes Pond	1	8	24
F_555871_2867501	34 Charlton St	None	98	702	24

The top scoring parcel held a score of 27 and the lowest scoring parcel held a score of 13. The maximum number of points that could have been awarded was 35. This ranking and scoring matrix are to be re-evaluated in the subsequent permit years to select BMP sites that will achieve the goals of the MS4 Permit. See Figure 1 below for the location of the sites.



Figure 1. Top 5 BMP Retrofit Sites



## Appendix A – GIS Layers for Ranking of Town Owned Parcels

GIS Layers for Ranking of Town Owned Properties			
Evaluation Criteria	Data Source	Description	Score Value for Prioritization
WITHIN 100 FEET OF PRIORITY NATURAL COMMUNITIES AREA	<a href="#">MassGIS: BioMap2   Mass.gov</a>	MassGIS's BioMap2 dataset identifies areas with priority natural communities. Parcels within 100 feet of them were identified as less viable for retrofit locations.	Yes = 0 No = 1
WITHIN 100 FEET OF SPECIES OF CONSERVATION CONCERN AREA	<a href="#">MassGIS: BioMap2   Mass.gov</a>	MassGIS's BioMap2 dataset identifies areas with species of conservation concern. Parcels within 100 feet of them were identified as less viable for retrofit locations.	Yes = 0 No = 1
WITHIN 200 FEET OF A STREAM	<a href="#">MassGIS Data: MassDEP Wetlands (2005)   Mass.gov</a>	MassDEP's Wetland dataset identifies streams as wetland connections as of 2017. Parcels within 200 feet of them were identified as less viable for retrofit locations.	Yes = 0 No = 1
WITHIN 100 FEET OF A WETLAND	<a href="#">MassGIS Data: MassDEP Wetlands (2005)   Mass.gov</a>	MassDEP's Wetland dataset identifies wetland areas as of 2017. Parcels within 100 feet of them were identified as less viable for retrofit locations.	Yes = 0 No = 1
WITHIN 100 FEET OF CERTIFIED VERNAL POOL	<a href="#">MassGIS Data: NHESP Certified Vernal Pools   Mass.gov</a>	Under the Massachusetts Wetland Protection Act, area within 100 ft of a certified vernal pool is protected and subjected to regulations under M.G.L.c. 131 § 40.	Yes = 0 No = 1
WITHIN A 2020 ENVIRONMENTAL JUSTICE POPULATION AREA	<a href="#">MassGIS Data: 2020 Environmental Justice Populations   Mass.gov</a>	To ensure environmental justice and provide healthier environments to all, especially minorities, projects within environmental justice population areas were given a higher score.	Yes = 1 No = 0
DRAINAGE AREA TO PARCEL	<a href="#">MassGIS Data: Lidar Terrain Data   Mass.gov</a>	To calculate the watershed attributing to each parcel to figure out the nitrogen and phosphorus load that a BMP on that parcel would capture.	N/A
NITROGEN LOAD POUNDS PER YEAR	<a href="#">MassGIS Data: 2016 Land Cover/Land Use   Mass.gov</a>  <a href="#">MassGIS Data: Soils SSURGO-Certified NRCS   Mass.gov</a>	Areas with higher nitrogen loading were given a higher score as those are the parcels that should be focused on for BMPs in accordance with the MS4 permit.	>100,000 = 5 >10,000 = 4 >1,000 = 3 >100 = 2 >0 = 1
PHOSPHORUS LOAD POUNDS PER YEAR	<a href="#">MassGIS Data: 2016 Land Cover/Land Use   Mass.gov</a>  <a href="#">MassGIS Data: Soils</a>	Areas with higher phosphorus loading were given a higher score as those are the parcels that we should focus on for	>10,000 = 5 >1,000 = 4 >500 = 3 >100 = 2 >0 = 1

GIS Layers for Ranking of Town Owned Properties			
Evaluation Criteria	Data Source	Description	Score Value for Prioritization
	<a href="#">SSURGO-Certified NRCS   Mass.gov</a>	BMPs in accordance with the MS4 permit.	
WITHIN 15 FEET OF RIGHT OF WAY	<a href="#">MassGIS Data: 2016 Land Cover/Land Use   Mass.gov</a>	This measure ensures that there will be easy access to the parcel for upkeep and maintenance of the BMP.	Yes = 0 No = 1
AVAILABLE SQUARE FOOTAGE FOR RETROFIT WITHIN PARCEL	<a href="#">MassGIS Data: 2016 Land Cover/Land Use   Mass.gov</a>  <a href="#">MassGIS Data: Building Structures (2-D)   Mass.gov</a>	Provides an idea of how much area the Town may have to implement a BMP on the parcel excluding areas of buildings and wetlands. This scoring threshold may need to be re-evaluated if the parcel is selected for retrofit.	>10,000 sf = 1 <10,000 sf = 0
PRIMARY SOIL DRAIN CLASS WITHIN PARCEL	<a href="#">MassGIS Data: Soils SSURGO-Certified NRCS   Mass.gov</a>	This information provides insight on how well the soils may drain and reflects how fast a BMP may drain.	Excessively Drained = 5 Somewhat Excessively Drained = 4 Well Drained = 3 Moderately Well Drained = 2 Poorly Drained = 1 Very Poorly Drained = 0
PRIMARY HYDROLOGIC SOIL GROUP WITHIN PARCEL	<a href="#">MassGIS Data: Soils SSURGO-Certified NRCS   Mass.gov</a>	Hydrologic soil group provides insight on soil characteristics that reflect how well a BMP may perform in that area. This is for informational use as the drain class was used for scoring.	N/A
PRIMARY 2016 LAND USE WITHIN PARCEL	<a href="#">MassGIS Data: 2016 Land Cover/Land Use   Mass.gov</a>	This is an informative layer that may weigh on parcel selection later in the process but was currently not assigned a score.	N/A
PRIMARY 2016 LAND COVER WITHIN PARCEL	<a href="#">MassGIS Data: 2016 Land Cover/Land Use   Mass.gov</a>	Natural and undeveloped land covers were given a score of 0 because those should not be developed.	Impervious = 1 Developed Open Space = 1 Cultivated = 1 Pasture/Hay = 1 Grassland = 0 Deciduous = 0 Evergreen = 0 Shrub/Scrub = 0 Forested Palustrine = 0 Emergent Palustrine = 0 Forested Estuarine = 0 Shrub/Scrub Estuarine = 0 Emergent Estuarine = 0 Shored Unconsolidated = 0 Bare = 0
SQUARE FOOTAGE OF PARCEL IMPERVIOUS AREA	<a href="#">MassGIS Data: 2016 Land Cover/Land Use   Mass.gov</a>	This provides an idea of what kind of BMP can be implemented and will be used later for BMP design if the parcel is selected.	N/A
PERCENT OF PARCEL IMPERVIOUS AREA	<a href="#">MassGIS Data: 2016 Land Cover/Land Use   Mass.gov</a>	This provides an idea of what kind of BMP can be implemented and will be used later for BMP design if the parcel is selected. If the area of impervious is greater than 25% of the parcel than	>25% = 1 <25% = 0



GIS Layers for Ranking of Town Owned Properties			
Evaluation Criteria	Data Source	Description	Score Value for Prioritization
		a BMP can be implemented on or under the pavement.	
WITHIN URBANIZED AREA (COMBINED 2000 AND 2010)	<a href="#">Layer: Urbanized Areas (ID: 4) (census.gov)</a> <a href="#">Layer: Urbanized Areas (ID: 1) (census.gov)</a>	Since the MS4 regulates urbanized area, parcels were given a higher score for being within it.	Within Urbanized Area = 1 Outside Urbanized Area = 0
WITHIN POND WATERSHED	<a href="#">StreamStats (usgs.gov)</a>	The MS4 is focused on improving certain impaired waterbodies, it is important that the parcel selected for BMP implementation is within one of these watersheds to improve their health.	Within Pond Watershed = 1 Outside Pond Watershed = 0
NUMBER OF PUBLIC WATER SUPPLIES WITHIN PARCEL	<a href="#">MassGIS Data: Public Water Supplies   Mass.gov</a>	It is not preferred to be in a public water supply area and cause disruption or construction within those areas for the quality of the drinking water recharge.	Outside of Area = 1 Within Area = 0
WITHIN INTERIM WELLHEAD PROTECTION AREA	<a href="#">MassGIS Data: MassDEP Wellhead Protection Areas (Zone II, Zone I, IWPA)   Mass.gov</a>	It is not preferred to be in a public water supply area and cause disruption or construction within those areas for the quality of the drinking water recharge.	Outside of Area = 1 Within Area = 0
WITHIN WELLHEAD PROTECTION ZONE II	<a href="#">MassGIS Data: MassDEP Wellhead Protection Areas (Zone II, Zone I, IWPA)   Mass.gov</a>	It is not preferred to be in a public water supply area and cause disruption or construction within those areas for the quality of the drinking water recharge.	Outside of Area = 1 Within Area = 0
WITHIN WELLHEAD PROTECTION ZONE I	<a href="#">MassGIS Data: MassDEP Wellhead Protection Areas (Zone II, Zone I, IWPA)   Mass.gov</a>	It is not preferred to be in a public water supply area and cause disruption or construction within those areas for the quality of the drinking water recharge.	Outside of Area = 1 Within Area = 0
WITHIN SURFACE WATER PROTECTION ZONE A	<a href="#">MassGIS Data: Surface Water Supply Protection Areas (ZONE A, B, C)   Mass.gov</a>	It is not preferred to be in a public water supply area and cause disruption or construction within those areas for the quality of the drinking water recharge.	Outside of Area = 1 Within Area = 0
WITHIN SURFACE WATER PROTECTION ZONE B	<a href="#">MassGIS Data: Surface Water Supply Protection Areas (ZONE A, B, C)   Mass.gov</a>	It is not preferred to be in a public water supply area and cause disruption or construction within those areas for the quality of the drinking water recharge.	Outside of Area = 1 Within Area = 0
WITHIN SURFACE WATER PROTECTION ZONE C	<a href="#">MassGIS Data: Surface Water Supply Protection Areas (ZONE A, B, C)   Mass.gov</a>	It is not preferred to be in a public water supply area and cause disruption or construction within those areas for the quality of the drinking water recharge.	Outside of Area = 1 Within Area = 0

GIS Layers for Ranking of Town Owned Properties			
Evaluation Criteria	Data Source	Description	Score Value for Prioritization
NUMBER OF BUILDINGS WITHIN THE PARCEL	<a href="#">MassGIS Data: Building Structures (2-D)   Mass.gov</a>	This was important to know whether the parcel is accessed by the public so that it may also be used for an educational opportunity.	Buildings on Parcel = 1 None = 0



## Appendix B – Site Selection Scoring Matrix

LOC_ID	Within 100' of Priority Natural Communities Area	Within 100' of Species of Conservation Concern Area	Within 200' of Stream	Within 100' of Wetland Area	Within Env Justice Groups 2020	Number of Buildings in Parcel	Within Surface Water Protection Zone A	Within Surface Water Protection Zone B	Within Surface Water Protection Zone C	Number of Public Water Supplies (Well)	Name of Pond Watershed Within	Within Urbanized Area (2000/2010)	% of Town Parcel Impervious	Area of Town Parcel Impervious (SF)	Within Wetland Protection Zone I	Within Wetland Protection Zone II	Interim Wetland Protection Area (IWWA)	Primary 2016 Land Cover	Primary 2016 Land Use	Primary Hydrologic Soil Group	Primary Drain Class	Within 100' of Certified Vernal Pool	Available Area for Retrofit (SF) (No buildings or wetland)	Within 15' of Right of Way	Drainage Area to Parcel (Acres)	Nitrogen Load lb/yr	Phosphorus Load lb/yr
F_543700_2892754	0	0	0	7	5	0	0	0	0	0	0 Texas Pond	1	0	0	0	0	0	0 Deciduous Forest	Open land	D	Very poorly drained	0	325460.6499	6	261.544413	664.071442	63.23807094
F_546353_2893567	0	0	0	0	0	0	0	0	0	0	0 Texas Pond	1	3.579443218	2396.928198	0	0	1 Developed Open Space	Tax exempt	C/D	Moderately well drained	0	66963.74006	3	7.767620761	0.66265886		
F_548132_2893013	0	0	0	0	0	0	0	0	0	0	0 Texas Pond	1	0	0	0	0	0 Deciduous Forest	Open land	C	Well drained	2	0.661307222	0	0.723498124	0.037595953		
F_553152_2888448	0	0	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0 Deciduous Forest	Open land	A	Somewhat excessively drained	1	3.95280.2858	1	3.925980547	11.11885306	1.097010547	
F_548642_2887754	0	0	0	2	1	0	0	0	0	0	0 Texas Pond	1	0	0	0	0	0 Deciduous Forest	Open land	B	Well drained	3	44818.35326	3	35.26880409	75.6782282	8.865689823	
F_554366_2887180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Developed Open Space	Open land	C/D	Moderately well drained	0	1.445317621	0	0.637215027	0.127839216		
F_551517_2884993	0	0	0	0	0	0	0	0	0	0	0	1	32.71462335	1386.720548	0	0	0 Developed Open Space	Open land	A	Somewhat excessively drained	3	0.402722725	1	1.417825856	0.186565486		
F_549575_2883907	0	0	0	2	1	0	1	0	0	0	0	0	0.00076734	2.16696323	0	0	0 Deciduous Forest	Open land	C	Well drained	0	262388.7153	3	11.54725218	43.64908831	3.850322704	
F_549149_2884522	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0 Evergreen Forest	Open land	C	Well drained	2	14284.25767	2	17.11341017	1.772765328		
F_549728_2886376	0	0	0	1	1	0	0	0	0	0	0	1	33.42075296	2050.854734	0	0	0 Developed Open Space	Open land	B	Well drained	2	6136.465836	2	79.44656072	317.8808972	36.9611418	
F_550128_2884054	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Open land	B	Well drained	0	8789.893548	0	1.189219774	0.145313891		
F_546350_2882310	0	0	0	0	0	0	0	0	0	0	0	0	0.008027637	2.214366808	0	0	0 Grassland	Well drained	B	Well drained	3	27561.40035	0	0.12653916	0.12653916		
F_545206_2885862	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Open land	B	Well drained	0	144509.198	0	12.870071527	103.9421548	6.850502357	
F_546606_2881208	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Open land	C	Well drained	1	22962.21349	0	12.97898059	6.09142938	0.62142938	
F_546799_2882186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Open land	C/D	Moderately well drained	2	45051.71844	2	198.4384717	614.1852399	64.1080232	
F_546886_2882208	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Open land	C/D	Moderately well drained	3	26393.84586	3	196.6882484	63.88062922	63.88062922	
F_547120_2882480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Evergreen Forest	Open land	C	Well drained	2	51577.83373	0	194.7543006	603.5704069	63.43817215	
F_547385_2882600	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0 Palustrine Forested Wetland	Open land	C	Well drained	0	4434.722569	0	3.43466635	0.133968598		
F_547446_2882808	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0 Palustrine Forested Wetland	Open land	C/D	Moderately well drained	0	66356.7353	2	178.9345199	552.2535882	59.41914479	
F_547435_2883064	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0 Palustrine Forested Wetland	Open land	C/D	Moderately well drained	0	17038.47951	2	111.254947	189.5677779	19.12517465	
F_548199_2882752	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Open land	C	Well drained	0	3743.038545	0	3.917181101	0.462614215		
F_548209_2882747	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Open land	C	Well drained	0	13091.35648	0	0.526926584	0.526926584		
F_552514_2881752	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Open land	A	Somewhat excessively drained	2	5010.299382	0	0.16849481	0.030107938		
F_552508_2883166	0	0	0	1	2	0	5	0	0	0	0	1	26.33814535	102320.0095	0	0	0 Developed Open Space	Tax exempt	B	Well drained	4	373100.5481	4	45.10429954	134.3038408	12.01988366	
F_556065_2880446	0	0	0	0	0	0	2	0	0	0	0	1	35.45301857	134180.0519	0	0	0 Developed Open Space	Tax exempt	A	Somewhat excessively drained	3	32496.5461	3	37.09197356	112.56347	10.54477962	
F_565783_2881200	0	0	0	2	2	1	0	0	0	0	0	0	0.072476535	527.6419006	0	0	0 Pasture/Hay	Open land	C	Well drained	0	728017.3015	4	26.450909	8.474891662		
F_566163_2881609	0	0	0	0	0	0	0	0	0	0	0	0	0.475198883	879.9041137	0	0	0 Grassland	Open land	C	Well drained	4	13.9616.8955	4	44.97297026	4.979452989		
F_567246_2881296	0	0	0	0	1	0	0	0	0	0	0	0	0.000274724	3.719576919	0	0	0 Deciduous Forest	Open land	C	Well drained	0	86.6931764	0	6.127813238	6.127813238		
F_568395_2876151	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0 Deciduous Forest	Open land	A	Somewhat excessively drained	3	142958.82421	3	10.2855329	37.53702191	3.055838268	
F_556208_2878888	0	1	0	0	0	0	0	0	0	0	0	1	0.019198369	1.952137888	0	1	0 Deciduous Forest	Residential - single family	A	Somewhat excessively drained	0	10168.24736	2	66.9844789	240.0499399	33.94827268	
F_556637_2880397	0	0	0	0	0	0	0	0	0	0	0	1	58.07226828	6682.884392	0	1	0 Impervious	Open land	A	Somewhat excessively drained	0	11503.46182	3	0.39475685	2.614813982	0.309680879	
F_548880_2876071	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0 Evergreen Forest	Open land	A	Somewhat excessively drained	0	150208.7323	0	6.341374292	5.841688853	0.962596657	
F_555740_2876253	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0 Evergreen Forest	Open land	A	Somewhat excessively drained	0	13861.34236	0	7.716230701	2.670241883		
F_551532_2878223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Open land	B	Well drained	0	463082.2092	0	10.8018018	23.15385175	1.424823634	
F_547943_2873480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 Deciduous Forest	Well drained	B	Well drained	0	195789.4883	0	8.89595859	16.06997012	1.151742617	
F_553906_2874229	1	1	1	1	4	0	1	0	0	0	0	1	0.10375619	1033.742504	0	0	0 Deciduous Forest	Open land	A	Somewhat excessively drained	0	996293.5578	0	671.1836929	1164.212744	165.1949146	
F_556091_2874903	0	0	0	0	1	0	0	0	0	0	0	1	0.855680724	471.003827	0	0	0 Evergreen Forest	Unknown	A	Somewhat excessively drained	0	55044.41164	0	23.89927276	88.8267298	11.55779201	
F_556989_2873996	0	0	0	1	0	0	0	0	0	0	0	1	0.314388592	257.2106413	0	1	0 Deciduous Forest	Open land	A	Somewhat excessively drained	0	81812.99988	3	19.96644557	77.52567391	11.08400426	
F_555729_2875887	0	1	0	0	0	0	3	0	0	0	0	1	13.32144872	14508.2913	0	0	0 Developed Open Space	Tax exempt	A	Somewhat excessively drained	0	1081219.481	2	25.2372168	54.81762103	7.310037213	
F_554542_2875677	0	0	0	0	0	0	1	0	0	0	0	1	41.35366122	20073.95446	0	1	0 Developed Open Space	Tax exempt	A	Somewhat excessively drained	0	37125.77541	2	1.85394099	8.035801207	0.993931645	
F_555478_2875043	0	1	0	0	2	0	8	0	0	0	0	1	31.26009609	357525.8949	0	0	0 Developed Open Space	Open land	A	Somewhat excessively drained	3	996972.698	3	97.36808381	302.6365647	39.93040481	
F_554692_2875377	1	1	1	1	2	0	1	0	0	0	0	1	9.967452804	79330.34228	0	1	0 Evergreen Forest	Tax exempt	A	Excessively drained	2	769114.2664	0	1711.231249	199.5875026		
F_554319_2874873	1	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0 Deciduous Forest	Tax exempt	B/D	Very poorly drained	0	11387.12724	0	1555.734807	42163.1489	419.1359005	
F_556526_2876215	0	0	0	0	0	0	0	0	0	0	0	1	26.73219191	36058.61428	0	1	0 Developed Open Space	Tax exempt	A	Somewhat excessively drained	0	67413.00839	2	29.51597149	3.51597149		
F_556526_2876215	0	1	1	1	0	0	0	0	0	0	0	1	26.73219191	36058.61428	0	1	0 Developed Open Space	Tax exempt	A	Somewhat excessively drained	2	67413.00839	2	5.715190105	29.51596136	3.915975149	
F_558665_2873361	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0 Palustrine Forested Wetland	Open land	C/D	Moderately well drained	0	197740.4133	3	64.00001782	212.208527	17.0721926	
F_560867_2873230	0	0	0	1	0	0	1	0	0	0	0	0	3.092833455	265.483012	0	0	0 Deciduous Forest	Open land	C/D	Moderately well drained	0	8585.166285	0	0.510546169	0.510546169		
F_560550_2873156	0	0	0	0	0	1	0	0	0	0	0	0	7.014040177	184.0265139	0	0	0 Developed Open Space	Open land	C	Well drained	0	2623.015814	0	0.597388775	2.497388775	0.25857826	
F_554781_2871780	0	0	0	1	4	0	0	0	0	0	0	1	0	0	0	1	0 Palustrine Scrub/Shrub	Open land	B/D	Very poorly drained	4	546304.9871	4	49.28936428	17.47313679	11.25162187	
F_557338_2873475	0	0	0	0	0	0	1	0	0	0	0	1	43.59110939	16770.9036	0	0	0 Developed Open Space	Tax exempt	A	Somewhat excessively drained	0	33643.06611	3	1.341475737	7.782733407	1.011129363	
F_556201_2871585	0	0	0	4	3	0	0	0	0	0	0	0	0.069624043	564.123089	0	1	0 Water	Open land	Unknown	Unknown	0	24.60111527	5	2.576071809	2.576071809		
F_555424_2871384	0	0	0	1	2	0	0	0	0	0	0	1	1.016809672	238.5629646	0	0	0 Evergreen Forest	Open land	B/D	Very poorly drained	4	8.86390462	0	23.61664887	3.209		

LOC_ID	Within 100' of Priority Natural Communities Area	Within 100' of Species of Conservation Concern Area	Within 200' of Stream	Within 100' of Wetland Area	Within Env Justice Groups 2020	Buildings in Parcel	Within Surface Water Protection Zone A	Within Surface Water Protection Zone B	Within Surface Water Protection Zone C	Number of Public Water Supplies (Well)	Within a Pond Watershed	Within Urbanized Area (2000/2010)	% Town Parcel Impervious	Within Wellhead Protection Zone I	Within Wellhead Protection Zone II	Interim Wellhead Protection Area (IWPA)	Primary 2016 Land Cover	Primary Drain Class	Within 100' of Certified Vernal Pool	Available Area for Retrofit (No buildings or wetland)	Within 15' of Right of Way	Nitrogen Load	Phosphorus Load	Totals
F_552838_2858456	1	0	0	1	0	0	1	1	1	1	0	1	0	1	0	1	0	5	1	1	1	5	5	27
F_555766_2862385	1	1	0	0	0	0	1	1	1	1	0	1	0	1	0	1	0	5	1	1	1	4	4	25
F_556065_2880446	1	1	1	1	0	1	1	1	1	1	0	1	1	1	0	1	1	4	1	1	1	2	1	24
F_557338_2873475	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	4	1	1	1	1	1	24
F_555871_2867501	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	4	1	1	1	2	1	24
F_557101_2868431	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	4	1	1	1	1	1	24
F_557059_2868110	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	4	1	1	1	1	1	24
F_556452_2875677	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	4	1	1	1	1	1	23
F_555478_2875043	1	0	1	0	0	1	1	1	1	1	0	1	1	1	1	1	1	4	1	1	1	2	1	23
F_555694_2867399	1	1	1	1	1	0	1	1	1	1	0	1	0	1	0	1	1	4	1	1	1	2	1	23
F_556901_2867471	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	4	1	0	1	1	1	23
F_556403_2869246	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	4	1	1	1	2	1	23
F_557509_2869588	1	1	1	1	1	0	1	1	1	1	1	1	0	1	0	1	1	4	1	1	1	1	1	23
F_556895_2868222	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	4	1	1	1	1	1	23
F_556456_2863446	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	4	1	1	1	1	1	23
F_551517_2884993	1	1	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1	4	1	0	1	1	1	22
F_552508_2883166	1	1	0	0	0	1	1	1	1	1	0	1	1	1	1	1	1	3	1	1	1	2	1	22
F_556637_2880397	1	1	1	1	1	0	0	1	1	1	0	1	1	1	0	1	1	4	1	1	1	1	1	22
F_555002_2866202	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	4	1	0	1	1	1	22
F_556732_2869373	1	1	1	1	1	0	1	1	1	1	0	1	0	1	0	1	1	4	1	1	1	1	1	22
F_556896_2868055	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	4	1	1	0	1	1	22
F_568315_2864979	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	3	1	1	1	1	1	22
F_565320_2865488	1	1	0	0	1	0	1	1	1	1	1	1	0	1	1	1	0	2	1	1	1	3	2	22
F_561959_2861234	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	0	3	1	1	1	1	1	22
F_553226_2862615	1	0	1	1	1	0	0	1	1	1	0	1	1	1	0	1	1	4	1	1	1	2	1	22
F_552851_2858184	1	1	1	1	1	0	0	1	1	1	0	1	1	1	0	1	0	5	1	1	1	1	1	22
F_560550_2873156	1	1	1	1	1	1	0	1	1	1	1	0	0	1	1	1	1	3	1	0	1	1	1	21
F_557458_2869400	1	1	1	1	1	0	0	1	1	1	1	1	0	1	0	1	0	4	1	1	1	1	1	21
F_565810_2863996	1	1	1	1	0	1	0	1	1	1	1	1	0	1	1	1	0	3	1	1	0	2	1	21
F_555750_2863438	1	1	0	0	0	1	1	1	1	1	0	1	0	1	0	1	1	5	1	1	1	1	1	21
F_553560_2862781	1	1	1	1	1	0	0	1	1	1	0	1	1	1	0	1	1	4	1	0	1	1	1	21
F_555650_2856051	1	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	5	1	1	1	1	1	21
F_546353_2893567	1	1	1	1	1	0	0	1	1	1	1	1	0	1	1	0	1	2	1	1	1	1	1	20
F_548132_2893013	1	1	1	1	1	0	0	1	1	1	1	1	0	1	1	1	0	3	1	0	1	1	1	20
F_549728_2886376	1	1	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	3	1	0	1	2	1	20
F_546350_2882310	1	1	1	1	1	0	0	1	1	1	1	0	0	1	1	1	0	3	1	1	1	1	1	20
F_546668_2881308	1	1	1	1	1	0	0	1	1	1	1	0	0	1	1	1	0	3	1	1	1	1	1	20
F_566145_2881669	1	1	1	1	1	1	0	1	1	1	0	0	0	1	1	1	0	3	1	1	1	1	1	20
F_558395_2876151	1	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	4	1	1	1	1	1	20
F_556208_2878888	1	0	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	4	1	1	1	2	1	20
F_553906_2874229	0	0	0	0	0	0	1	1	1	1	0	1	0	1	1	1	0	4	1	1	0	3	2	20
F_555729_2875887	1	0	1	0	0	1	1	1	1	1	0	1	0	1	0	1	1	4	1	1	1	1	1	20
F_556526_2876215	1	0	0	1	0	0	0	1	1	1	0	1	1	1	0	1	1	4	1	1	1	1	1	20
F_556526_2876215	1	0	0	1	1	0	0	1	1	1	0	1	1	1	0	1	1	4	1	1	1	1	1	20
F_569076_2869401	1	1	0	0	1	0	0	1	1	1	1	0	0	1	1	1	0	3	1	1	1	2	1	20
F_556358_2861578	1	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	5	1	0	1	1	1	20
F_546907_2860190	1	1	1	1	0	0	0	1	1	1	1	1	0	1	1	1	0	3	1	1	1	1	1	20
F_555058_2861222	1	1	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	0	1	1	1	4	4	20
F_558185_2857434	1	1	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	3	1	1	1	3	2	20
F_559045_2856647	1	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	3	1	1	1	1	1	20
F_555812_2855749	1	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	4	1	1	1	1	1	20
F_555786_2855189	1	1	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	4	1	1	1	1	1	20
F_560363_2865494	1	1	0	0	1	0	1	1	1	1	1	1	0	1	0	1	0	0	1	1	1	3	3	20
F_553152_2888848	1	1	0	0	0	0	0	1	1	1	0	1	0	1	1	1	0	4	1	1	1	1	1	19
F_548642_2887754	1	1	0	0	0	0	0	1	1	1	1	1	0	1	1	1	0	3	1	1	1	1	1	19
F_546798_2882186	1	1	0	1	0	0	0	1	1	1	1	0	0	1	1	1	0	2	1	1	1	2	1	19
F_547120_2882400	1	1	0	0	0	0	0	1	1	1	1	0	0	1	1	1	0	3	1	1	1	2	1	19
F_548299_2882747	1	1	1	1	1	0	0	1	1	1	1	0	0	1	1	1	0	3	1	1	0	1	1	19
F_565783_2881200	1	1	0	0	1	0	0	1	1	1	0	0	0	1	1	1	1	3	1	1	1	1	1	19
F_556091_2874903	1	1	1	1	0	0	0	1	1	1	0	1	0	1	1	1	0	4	1	1	0	1	1	19
F_556989_2873986	1	1	0	1	0	0	0	1	1	1	0	1	0	1	0	1	0	4	1	1	1	1	1	19
F_554692_2875377	0	0	0	0	0	0	1	1	1	1	0	1	0	1	0	1	0	5	0	1	0	3	2	19
F_554319_2874873	0	0	1	0	0	0	0	1	1	1	0	1	0	1	1	1	0	0	1	1	0	4	4	19
F_559665_2873361	1	1	0	0	1	0	1	1	1	1	1	0	0	1	1	1	0	2	1	1	1	2	1	19
F_553938_2870622	1	0	1	0	0	0	1	1	1	1	0	1	0	1	1	1	0	0	1	1	1	3	2	19
F_555896_2864398	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	0	1	1	1	1	1	19
F_558789_2862247	1	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	3	1	0	1	1	1	19
F_558724_2862110	1	1	1	1	1	0	0	1	1	1	0	1	0	1	1	1	0	3	1	0	1	1	1	19
F_561646_2859847	1	1	1	1	1	0	0	0	1	1	0	1	0	1	1	1	0	3	1	0	1	1	1	19
F_561280_2859548	1	1	1	0	0	0	0	1	1	1	0	1	0	1	1	1	0	3	1	1	1	1	1	19
F_565904_2859557	1	0	1	0	1	0	0	1	1	1	1	1	0	1	1	1	0	3	1	1	0			



F_553269_2858272	1	0	0	0	0	1	1	1	1	1	0	0	0	1	0	1	0	5	1	1	1	1	18
F_553394_2858037	1	0	1	0	0	0	1	1	1	1	0	0	0	1	0	1	0	5	1	1	1	1	18
F_543700_2892754	1	1	0	0	0	0	1	1	1	1	1	1	0	1	1	1	0	0	1	1	2	1	17
F_554366_2887180	1	1	0	1	0	0	1	1	1	1	0	1	0	1	1	1	1	2	1	0	0	1	17
F_549149_2884522	1	1	0	0	0	0	1	1	1	1	0	0	0	1	1	1	0	3	1	1	1	1	17
F_550328_2884054	1	1	0	1	0	0	1	1	1	1	0	1	0	1	1	1	0	3	1	0	0	1	17
F_547385_2882680	1	1	1	0	0	0	1	1	1	1	1	0	0	1	1	1	0	3	1	0	0	1	17
F_552514_2881752	1	0	0	0	0	0	1	1	1	1	0	1	0	1	1	1	0	4	1	0	1	1	17
F_568219_2870806	1	1	0	0	1	0	1	1	1	1	1	0	0	1	1	1	0	0	1	1	1	2	17
F_568454_2867256	1	1	0	0	1	1	1	1	1	1	1	0	0	1	1	1	0	0	1	1	0	2	17
F_560703_2856914	1	1	0	0	0	0	1	1	1	1	0	1	0	1	1	1	0	3	1	1	0	1	17
F_557924_2856405	1	1	0	0	0	0	1	1	1	1	0	1	0	1	1	0	0	3	1	1	1	1	17
F_559279_2869453	1	1	1	0	1	0	1	1	1	1	1	0	0	1	0	1	0	0	1	1	1	1	16
F_546452_2860635	1	1	0	0	0	0	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	16
F_554781_2871780	1	1	0	0	0	0	1	1	1	1	1	1	0	1	0	1	0	0	1	1	1	1	15
F_556201_2871585	1	1	0	0	0	0	1	1	1	1	1	1	0	1	0	1	0	0	1	1	1	1	15
F_555424_2871384	1	1	0	0	0	0	1	1	1	1	1	1	0	1	0	1	0	0	1	1	1	1	15
F_553923_2870021	1	0	1	0	0	1	1	1	1	1	0	1	0	1	1	1	0	0	1	1	0	1	15
F_555399_2861526	1	1	0	0	0	0	1	1	1	1	0	1	0	1	0	1	0	0	1	1	1	2	15
F_552208_2853863	1	0	0	0	0	0	1	1	1	1	0	0	0	1	0	1	0	3	1	1	1	1	15
F_554355_2865207	1	1	1	1	0	0	1	1	1	1	0	1	0	1	0	1	0	0	1	0	0	1	14
F_553025_2861553	1	0	0	0	0	0	1	1	1	1	0	1	0	1	0	1	0	0	1	1	0	2	13
F_554000_2858187	1	0	1	0	0	0	1	1	1	1	0	1	0	1	0	1	0	0	1	1	0	1	13
F_551920_2858411	1	0	1	0	0	0	1	1	1	1	0	1	0	1	0	1	0	0	1	0	1	1	13