

STORMWATER MANAGEMENT FEE STUDY

Prepared For

**NEW SEWICKLEY TOWNSHIP
233 Miller Road
Rochester, PA 15074**

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NEW SEWICKLEY TOWNSHIP STORMWATER MANAGEMENT FEE STUDY

Executive Summary

Purpose

The purpose of this study is to develop an equitable and fair Stormwater Management Fee system to establish a dedicated revenue source for anticipated expenses associated with stormwater management infrastructure improvements and compliance with the Township's regulatory requirements imposed by the MS4 NPDES Permit issued to the Township by PADEP. A reasonable basis by which to establish the user fee system would be on the user's anticipated contribution of stormwater runoff to the MS4 system or surface waters, best measured as the amount of impervious area contained on a property.

Analysis of Property Types

The basis of the user fee was determined according to the present use of the parcel. For analysis, parcels were generally categorized into four groups as follows:

1. Single Family Residential Property (A parcel containing and individual single family dwelling unit with a lot area of ten acres or less)
2. Large Single Family Residential Property (A parcel containing and individual single family dwelling unit with a lot area of more than ten acres)
3. Non Single Family Residential Property (Any developed property that is not a Single Family Residential Property or a Large Single Family Residential Property, including, commercial and office buildings, public industrial and manufacturing buildings, well pads, oil and gas facilities, multi-family dwellings, places of worship, parking lots or garages, schools and other educational facilities, etc. This includes individual units in a condominium association).
4. Vacant Land (Properties with fewer than 600 square feet of impervious area and no dwelling)

Assessment of Fees for Individual Properties

To equitably assess fees for individual properties, an Equivalent Residential Unit (ERU) was established to represent the typical amount of impervious area on a Single-Family Residential Property in the Township. This value was based a statistical sample size of selected parcels. The ERU was determined to be 6,800 square feet. The intent of

analysis of Single-Family Residential Properties was to establish a reasonable, representative value of all such properties for use as the ERU. This ERU is to be used as the fee basis for all Township properties as follows:

1. Single Family Residential Property – 1 ERU
2. Large Single-Family Residential Property – Determined based on actual impervious area proportionate to 1 ERU, rounded to the nearest one-half ERU. For example, a property with 25,000 square feet of impervious area would be assessed at 3.5 ERU.
3. Non Single Family Residential Property - Determined based on actual impervious area rounded to the nearest one-half ERU.
4. Vacant Land – No fee assessment.

Anticipated Expenses

Anticipated expenses were compiled in four categories for determination of revenues needed for the Township Stormwater Management Fund.

Administration	\$16,762
Annual O&M	\$101,436
Capital Improvements	\$100,000
MS4 Permit Compliance	\$100,000
Total Annual Expense	\$318,198

Fee Recommendation

Distribution of anticipated annual expenses among the Township's total 4,508 ERUs when accounting for potential credits results in a monthly per ERU fee of \$5.84. For implementation, a \$6.00/month/ERU fee is recommend. This equates to a \$72.00 annual fee per ERU and an annual gross revenue of \$324,558.00 collected for the Township Stormwater Fund.

NEW SEWICKLEY TOWNSHIP STORMWATER MANAGEMENT FEE STUDY

SECTION 1

INTRODUCTION

Section 1.1 – Background

New Sewickley Township owns and operates a Municipal Separate Storm Sewer System (MS4) consisting primarily of a system of collection and conveyance infrastructure, with facilities providing detention and treatment used to manage stormwater runoff. Infrastructure associated with the Township's MS4 includes, but is not limited to inlets, catch basins, storm drains, conveyance pipes, channels, swales, roadway curbs, culverts, detention basins, infiltration practices, and other post-construction stormwater management (PCSM) Best Management Practices (BMPs). This infrastructure has been installed in accordance with state and federal law and must be maintained to manage impact of stormwater runoff and minimize the potential negative effect of runoff to public and private property for the public good throughout the Township. To this effect, the Township's MS4 should be considered a public utility serving each property owner, or user of the MS4, throughout the Township. Similarly, stormwater quality and the quality, ecology and cleanliness of the streams and lakes throughout the Township (the Waters of the Commonwealth) are components public health safety and must be maintained for drinking water and recreational uses, among others. As such preservation and improvement of stormwater and stream water quality provide benefit to all property owners throughout the Township. A property's impact and therefore the user's contribution of stormwater to the MS4 and the Waters of the Commonwealth can be best evaluated based on the amount of impervious cover present on the property. As development occurs and pre-existing natural land cover is replaced with impervious cover, rates and volumes of runoff increase and as such must be managed by the MS4. Introduction of impervious surfaces also increases the occurrence for contribution of pollutants to the Waters of the Commonwealth, thus diminishing water quality. Funding

for operation, maintenance and improvement of the MS4 has historically been budgeted as part of the Township's General Fund. However, as development progresses, flooding and stormwater quality concerns intensify and federal and state regulations increase, a dedicated funding source similar to that which has been previously established for the sanitary sewer and potable water services, should be established for the required sustainability of the MS4.

Section 1.2 – Purpose

The purpose of this study is to develop an equitable and fair stormwater user fee system that promotes that users and beneficiaries of the Township's MS4 and the preservation and improvement of water quality throughout the Township pay a proportionate share of the costs of administration, operation, maintenance, repair, replacement and improvement of the MS4. A reasonable basis by which to establish the user fee system would be on the user's anticipated contribution of stormwater runoff to the MS4 system or surface waters. It is also reasonable to establish criteria for credits or reduction in fees for those users who opt to implement Best Management Practices that serve their properties to lessen the impact of same on the Township's MS4.

Section 1.3 – Definitions

DWELLING UNIT – A single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

EQUIVALENT RESIDENTAL UNIT (ERU) - The measure of impervious ground cover for a typical single-family residential Property used in assessing the fees for each parcel of Property, and which has been determined to be 6,800 square feet. Refer to Section 3.3 for additional information of the ERU calculation.

IMPERVIOUS SURFACE - Those hard surface areas that either prevent or impede the entry of water into the soil under natural conditions, pre-existent to development, or which cause water to run off the surface in greater quantities, or at an increased rate of flow than under natural conditions, pre-existent to development, including, without limitation, surfaces such as roof tops, asphalt, concrete, or any other material that has been compacted, engineered and intended for vehicular traffic or parking, including, but not limited to, driveways and parking lots, private streets, or other surfaces which similarly affect the natural infiltration or runoff of natural drainage patterns existing prior to development including, but not limited to, walkways, patio areas and storage areas. Compacted gravel or crushed stone surfaces are considered impervious surfaces for this analysis. In addition, any surface designed to be constructed of permeable, pervious or porous concrete, asphalt, or pavers are also considered to be an impervious surface for this analysis.

LARGE SINGLE FAMILY RESIDENTIAL PROPERTY - An individual property containing one dwelling unit that is designed for occupancy by one family located on one or more individual lots or parcels of land that is equal to or greater than ten acres of total land.

NON-SINGLE-FAMILY RESIDENTIAL PROPERTY - Individual Properties not used as a Large Single Family Residential Property, Single Family Property, Single Family Attached Property or Duplex Property. These may include manufactured homes and mobile home parks, commercial and office buildings, public buildings and structures, industrial and manufacturing buildings, multi-family dwelling containing three or more dwelling units, places of worship, places of assembly, condominium units, parking lots or garages, schools and other educational facilities, storage buildings and storage areas covered with impervious surfaces, research stations, hospitals, convalescent centers, airports, agricultural, water reservoirs, and water and wastewater treatment plants.

OPERATION, MAINTENANCE AND CAPITAL COSTS - The associated costs for facilities, energy, manpower, materials, property acquisition, transportation and other

services and equipment required to collect, convey, detain, pump, treat and/or transport stormwater.

PROPERTY or PROPERTIES - Means each lot, parcel, or portion thereof containing 600 or more square feet of impervious surface. Lots or parcels containing less than 600 square feet of impervious surface shall be considered vacant land.

SINGLE FAMILY RESIDENTIAL PROPERTY - Means an individual property containing one dwelling unit that is designed for occupancy by one or two families located on one or more individual lots or parcels of land, smaller than ten acres in size. This does not include individual units in a condominium association or mobile home community in which the subject lot includes only the extent of the individual condominium unit or mobile home, with adjacent driveways, access roads, and open areas located on common ground.

TOWNHOUSE – A building which contains at least three (3) but no more than eight (8) single family dwelling units, each of which are separated from the adjoining unit or units by a continuous, common wall extending from the basement to the roof, each unit having independent access directly to the outside and having no units above or below. For the purpose of this definition each dwelling unit is located on an independent tax parcel containing no other dwelling units.

SECTION 2

ASSESSMENT OF STORMWATER UTILITY EXPENDITURES

Section 2.1 – Administrative Costs

Administration of the Township MS4 and provision of the stormwater utility service to its users requires effort of many Township departments and staff members and third party services, including the Township Manager, Road Department and administrative/billing/clerical staff and contractors.

Section 2.2 – Operation and Maintenance of Storm Sewer Infrastructure

Continued operation of Township MS4 infrastructure requires routine annual maintenance and repairs. Expenditures associated with operation and maintenance activities primarily consist of labor, material and equipment costs of the Township staff. Annual operation and maintenance activities typically involve cleaning and repair of collection and conveyance facilities, including, but not limited to, removal of debris from inlets, flushing of storm sewer lines, street sweeping, rebuilding deteriorating inlets, repair of roadway curbs and maintenance of collection channels and swales. Significant annual maintenance is also required to ensure proper operation of post-construction stormwater management BMPs owned by the Township, including mowing, debris and sediment removal, maintenance of plantings and vegetation, repair or replacement of the facility's infrastructure and repair of erosion areas.

Section 2.3 – Capital Improvement Projects for Storm Sewer Infrastructure

A long term capital improvement program consisting of replacement and improvement of storm sewer infrastructure is needed for effective provision of the stormwater utility by the Township. Storm sewer infrastructure deteriorates with age increasing potential for failure of the facilities and occurrence of flooding or other stormwater runoff issues.

Similarly, instances of undersized infrastructure lacking capacity throughout the Township contribute to flooding and stormwater runoff issues.

Section 2.4 – NPDES MS4 Permit Compliance

The Township's MS4 is regulated by the Pennsylvania Department of Environmental Protection (PADEP) under the National Pollutant Discharge Elimination System (NPDES) established as part of the federal Clean Water Act administered by the Environmental Protection Agency (EPA). Compliance with the Township's NPDES MS4 Permit, number PAG136280, requires implementation of a Stormwater Management Program (SWMP) designed to reduce the discharge of pollutants from the MS4 and protect water quality. Implementation of the SWMP requires compliance with six Minimum Control Measures, as follows:

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination (IDD&E)
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management (PCSM)
6. Pollution Prevention/Good Housekeeping

In addition, beginning with issuance of the MS4 NPDES permit in March 2018, the Township will have to comply with Pollutant Reductions Plan requirement for the surface waters within the Township that are impaired for sediment or nutrients. Between 2018 and 2023, the Township must implement and perpetually maintain new BMPs to achieve minimum pollutant reductions established by PADEP.

SECTION 3

EVALUATION OF USERS/CONTRIBUTORS OF STORMWATER RUNOFF AND QUANTIFICATION OF FEE BASIS CRITERIA

Section 3.1 – Introduction

As described as part of Section 1.2 – Purpose, the intent of this study is to establish an equitable fee for each user of the Township MS4, based, to the extent practicable, on the user's anticipated contribution of runoff to the Township MS4 or waters of the Commonwealth. In determining the anticipated contribution of runoff to the MS4, the variable most reasonably associated with quantifying the relative contribution of runoff to the MS4 was determined to be impervious area. While land in a natural wooded or meadow state does contribute runoff to the MS4, the magnitude of runoff rate, runoff volume and the introduction of pollutants is greatly increased with the development of impervious surfaces. The basis of the user fee was determined to be based on the present use of the parcel. For analysis, parcels were generally categorized into five groups as follows, and as defined in Section 1.3:

1. Single Family Residential Property
2. Large Single Family Residential Property
3. Non Single Family Residential Property
4. Vacant Land

Appendix A: Parcel Designations provides mapping showing the categorization of each parcel within the Township. Parcel lines provided are based on Beaver County tax parcel data, last updated January 2020. An overview drawing is provided in Appendix A as well as detailed map books overlain on available orthometrics.

Section 3.2 – Analysis of Single-Family Residential Properties

Analysis of land cover conditions was completed using GIS software. The amount of impervious coverage and associated contribution of runoff to the MS4 is not expected to vary significantly between individual Single Family Properties. Because of the apparent relative uniformity of use and magnitude of the number of single family residential parcels located in the Township, establishment of the user fee based on the precise impervious cover on each parcel is not practical or necessary.

The intent of analysis of Single Family Residential Properties was to establish a reasonable, representative value of all such properties for use as the Equivalent Residential Unit (ERU). This ERU is to be used as the fee basis for all Township properties.

To determine a reasonable and equitable impervious cover value for an ERU and evaluate the representativeness of the ERU if applied to all Township Single Family Residential Properties, a random sample of one-hundred (100) parcels was selected for evaluation. Using GIS software, and aerial photography dated February 2019 were traced and calculated for 100 single family residential parcels. Refer to Appendix A for identification of the randomly selected sample parcels.

The sample parcels selected were those considered as Single Family Residential Properties, properties less than ten acres in size, as defined herein. Those parcels considered as Large Single Family Residential Properties, equal to or greater than 10 acres in size, as defined herein, were not considered during the sample parcel evaluation. The evaluation of sample parcels for residential properties noted that the same assumption of uniformity used for Single Family Residential Properties cannot be made for Large Single Family Residential Properties, as impervious cover for Large Single Family Properties varies more significantly and that establishment of a uniform fee basis for Large Single Family Residential Properties would not be equitable. Analysis of the Large Single Family Residential Properties is described below.

Section 3.3 – Establishment of the ERU

Table B1 of Appendix B provides a summary of average impervious for the single family residential property. Based on this analysis one ERU for the Township recommended to consist of 6,800 square feet of impervious area. Assessment of user fees will be based on this value, with each Single Family Residential Property determined to be one ERU.

Section 3.4 – Analysis of Non-Single Family Residential Properties

Determination of a single ERU value for Single Family Residential, Single Family Attached Residential, and Duplex Residential Properties was based upon the conclusion of sample size analysis that impervious cover and therefore contribution of stormwater runoff to the MS4 does not vary greatly between properties of each type and as such a single uniform fee for each is reasonable. When evaluating the characteristics of Non-Single Family Residential and Large Single Family Residential Properties within the Township, the same conclusion cannot be made. Land use and impervious cover for Non-Single Family Residential and Large Single Family Residential Properties varies significantly for the variety of property uses that fit within this category. Runoff contributions to the MS4 and use of this utility varies significantly and establishment of a uniform fee basis for Non-Single Family Residential and Large Single Family Residential Properties would not be equitable. Accordingly, to determine the contribution of stormwater runoff to the MS4 and establish a fee basis for these properties, the actual approximate existing impervious coverage of each lot was calculated. Impervious coverages were calculated using the same methodology as noted for the sample Single Family Residential Properties. Coverage for each parcel was determined using GIS tools and aerial photography dated February 2019. To determine the contribution of stormwater to the MS4 from each property and subsequently the basis of the assessment of the user fee the actual measured impervious area was converted to its corresponding number of ERU's. Fractional ERUs were rounded to the nearest half number. For example a Non-Single Family Residential Property containing 18,000 square feet of

impervious area would be assessed in the amount of 3 ERUs ($18,000 \text{ sf} \div 6,800 \text{ sf/ERU} = 2.64 \text{ ERUs}$, rounded to 2.5 ERUs).

Section 3.5 – Vacant Land

For purposes of calculating user fees and assessing an equitable distribution among utility users, parcels containing no dwelling units and consisting of less than 600 square feet of impervious area were considered to not be significant contributors to the Township MS4. Those parcels have been categorized as vacant land exempt from the user fee.

SECTION 4

ESTABLISHMENT OF RATE PER ERU

Section 4.1 – Determination of Total ERUs

Analysis of all properties within the Township as described in Section 3 yielded the following summation of ERUs existing as of the date of this study:

- Non-Single Family Residential (221 Properties) – 2,520.5 ERUs
- Single Family Residential (1,947 Properties) – 1,947 ERUs
- Large Single Family Residential (246 Properties) 678 ERUs
- Totals – 5,145.5 ERUs

Totals presented are indicative of conditions as of the date of this report and the land cover conditions as noted above. ERU totals are subject to change with development currently in construction, development pending construction and future land use changes.

Section 4.2 – Determination of Stormwater Expenditures

Anticipated annual expenditures were calculated using information from the Township's anticipated budget expenses and supplementing additional costs for long term replacement and improvement of MS4 infrastructure. An approximation was included to account for the Township's required compliance with the Pollutant Reductions Plan requirements of the 2018 NPDES MS4 Permit. Expenditures were categorized as generally described in Section 2, however, it should be noted that overlap inherently exists among expenditure categories, though tabulation of expenses avoided double-counting of these overlaps. For example, MS4 Permit Compliance requires the effort of many Township staff members throughout each permit year. While labor and other associated costs for these Township employees are not specifically included in the MS4 Permit Compliance value, they are included in the Administration and Annual O&M values, as appropriate, and the tabulation assumes that implicit sharing of expenditures

among noted categories avoids unreasonable inflation of total anticipated annual expenditure.

The following table provides a summary of annual anticipated stormwater expenditures. Refer to Tables C located in Appendix C for a complete breakdown of anticipated expenditures for each category.

Cost Summary

Administration	\$16,762
Annual O&M	\$101,436
Capital Improvements	\$100,000
MS4 Permit Compliance	\$100,000
Total Annual Expense	\$318,198

Section 4.3 – Establishment of Fee Reduction Credits

In assigning a user fee and developing an equitable distribution of stormwater utility costs, individual property owners, or users, should be given the opportunity to implement on-site post construction stormwater management best management practices (PCSM BMPs) to reduce the rate of runoff generated by the impervious area on their property. To receive credit, all PCSM BMPs must be designed, operated and maintained to control the peak rate of runoff, up to the 100-year design storm, from the developed property. PCSM BMPs that have not been maintained in accordance with their original design and operation and maintenance plan or the PADEP BMP manual will not be considered to be eligible for credit. Properties with such PCSM BMPs shall be eligible, upon review of the Township, to receive up to a 50% reduction of the property's base fee. For example, a property calculated to contain 100 ERUs, as determined using the methodology noted in Section 3.4, shall be assessed a fee at the rate of 50 ERUs, if the PCSM was designed to serve the entire property. If the PCSM BMP was designed to serve only a portion of the

property and its impervious area, the credit shall be prorated for that portion of the billed ERUs only.

Public Education and Involvement Credit may also be considered for users that have the capability to conduct, organize and implement public education or public involvement activities related to stormwater management or stormwater quality. This credit is based upon public participation and involvement requirements of Minimum Control Measures (MCM) No. 1 and No. 2 as part of the Township's MS4 Permit. Groups and/or organizations that assist the Township in completing its goals for MCM 1 and MCM 2 will be eligible for credit up to 10% of the annual fee, at the discretion of the Township, based upon the proposed education or involvement. Eligibility for credit requires a minimum annual documented participation of 20 participant manhours associated with educational or involvement activities sponsored by the applicant. All activities must be approved for credit eligibility in advance. For receipt of credit, the applicant must provide written copies of educational curriculum or materials and/or written agendas and descriptions for involvement activities. Subsequent to completion of the educational activity the applicant must furnish to the Township documentation of completed activities, to include, at a minimum, a written summary of the planning, implementation and results of the activity or event, a sign in sheet or roster identifying the participants and photographic documentation of the activity. This credit must be applied for, reviewed, and approved annually.

Section 4.4 – Determination of Fee per ERU

Anticipated expenditures calculated as part of Section 4.2 are based on present and projected future stormwater expenditures based on current conditions throughout the Township. This includes the presence of existing PCSM BMPs throughout the Township, and as such, anticipated fee credits must be incorporated in establishment of the base fee rate. If PCSM BMPs have been properly maintained, the property's impact on stormwater utility expenses are lesser than that of other uncontrolled, developed properties and accordingly these property owners or users will be immediately eligible

for the fee reduction credit. Conversely, developed sites without PCSM BMPs, or with PCSM BMPs that have not been maintained to ensure proper operation have a greater contribution to the utility costs and should be expected to receive a higher distribution of the user fee costs. Base calculations as noted in Section 4.1 indicate 5,145.5 total ERUs. With anticipated credits, 4,507.75 total ERUs are expected.

Distribution of anticipated annual expenses noted in Section 4.2 among 4,507.75 ERUs results in a monthly per ERU fee of \$5.84. For implementation, a \$6.00/month/ERU fee is recommend. This equates to a \$72.00 annual fee per ERU and an annual gross revenue of \$324,558.00 collected for the Township Stormwater Fund when accounting for potential credits.

APPENDIX A

PARCEL MAP OVERVIEW
AND MAP BOOK

APPENDIX B

RESIDENTIAL SAMPLE PARCEL SUMMARY

**NEW SEWICKLEY TOWNSHIP
STORMWATER MANAGEMENT FEE STUDY**

**TABLE B1
RESIDENTIAL SAMPLE PARCEL SUMMARY
SINGLE FAMILY DETACHED HOMES**

Sample Parcel	Parcel ID	Property Address	Impervious Area (sf)	Sample Parcel	Parcel ID	Property Address	Impervious Area (sf)
1	690020200P00	139 MONTROSE DR	12,614	51	691440124000	445 TAFFY RUN RD	4,061
2	690030407000	402 LAKEVIEW DR	3,040	52	691440140012	123 BIG KNOB RD	13,686
3	690050114000	736 ROUTE 68	4,758	53	691440151000	1008 ROUTE 68	7,228
4	690060208000	1714 PINE RUN RD	4,416	54	691440208000	1037 DEER LANE EXT	1,582
5	690080200000	596 BIG KNOB RD	4,297	55	691450108000	125 GLEN RAPE RD	3,860
6	690080215000	157 WALL ST	3,133	56	691450124003	181 ZEIGLER RD	8,201
7	690090206000	188 MILLER RD	4,086	57	691450125013	284 ZEIGLER RD	11,454
8	690100100001	1024 ROUTE 989	5,996	58	691350188006	286 TEETS RD	8,256
9	690100309000	1078 ROUTE 989	3,891	59	691450130007	455 GLEN EDEN RD	4,863
10	690110102000	149 LYNN DR	9,490	60	691450144000	201 BRUNNER RD	5,920
11	690110404000	1841 LOVI RD	4,012	61	691450164001	302 HARKINS MILL RD	16,580
12	690130102000	1710 9TH STREET EXT	4,218	62	691450211004	121 HARKINS MILL RD	8,701
13	690140800000	1306 ELM ST	4,450	63	691450219004	259 GLEN EDEN RD	3,886
14	690150223000	1030 ROBINSON ST	3,898	64	691450231000	148 SNYDER DR	4,416
15	690150418000	1029 APPLE ST	3,297	65	690280118000	751 FEZELL RD	6,146
16	690170202000	581 RIVERVIEW RD	5,585	66	691540109003	488 BIG KNOB RD	1,967
17	690180302000	41 BARTON DR	3,689	67	691540121000	301 BREWER RD	4,215
18	690210103000	446 ZEIGLER RD	4,936	68	691540124003	220 BREWER RD	12,553
19	690220106000	134 SPADE RD	8,221	69	691540143002	657 FEZELL RD	10,343
20	690270115024	376 BREWER RD	9,642	70	691540213000	998 PINE RUN RD	6,761
21	690290102000	269 VARGO LN	5,288	71	691540224000	1065 RENO STREET EXT	13,137
22	690300100000	570 ZEIGLER RD	7,580	72	691550107001	363 KLEIN RD	6,081
23	690320107000	50 OAK RD	7,349	73	691550109005	240 HOFFMAN RD	5,437
24	690340114004	117 HOFFMAN RD	5,962	74	691550122003	203 CLIMO LN	6,013
25	690360112001	653 LANDIS RD	3,980	75	691550135001	2080 LOVI RD	11,041
26	690390103006	124 STEINBACH RD	15,033	76	691550158002	129 GRAHAM DR	9,864
27	691340102000	1178 ROUTE 68	5,191	77	691550161002	954 ROUTE 989	4,763
28	691340128002	255 DRUSCHEL RD	3,036	78	691550177000	108 KLEIN RD	14,786
29	691340137000	151 ROTHART DR	6,237	79	691550188006	185 ROCHESTER RD	6,522
30	691340160011	241 POWELL RD	4,544	80	691640103009	504 ORCHARD LN	10,586
31	691340164001	153 MELLON RD	10,787	81	691640112002	317 WOLFE RUN RD	3,919
32	691340171007	549 BRUSH CREEK RD	9,324	82	691640113001	341 WOLFE RUN RD	6,328
33	691340173005	104 POWELL RD	5,346	83	691640117002	390 BLACKSWOODS RD	7,266
34	691340173019	376 MELLON RD	7,189	84	691640123002	0 LOVI ROAD	7,876
35	691340176003	122 WINDY LN	6,580	85	691640132001	1246 LOVI RD	3,762
36	691340179001	342 TULIP DR	5,887	86	691640160000	599 FREEDOM CRIDER RD	2,279
37	691340186000	375 BRUSH CREEK RD	11,425	87	691640146000	220 FREEDOM CRIDER RD	2,510
38	691350141001	209 MUNTZ RD	4,523	88	691640194003	465 SPRINGER RD	6,104
39	691350146001	232 IFFT RD	5,206	89	691640261005	310 HIGHVIEW CIR	2,435
40	691350147004	422 WILLOUGHBY RUN RD	5,397	90	690330103000	360 LOCUST LN	8,205
41	691350157000	742 HARTZELL SCHOOL RD	9,692	91	691650100005	507 BAKER RD	5,687
42	691350163000	1710 ROUTE 68	6,318	92	691650125008	938 MCELHANEY ROAD	5,351
43	691350166000	203 PFLUG RD	6,306	93	691650126016	124 KAITLIN PL	8,584
44	691350175000	155 BURNS RD	7,109	94	691650127009	112 MEEDER LN	5,027
45	691350193001	148 BOYD LN	7,892	95	691650141008	1064 FREEDOM CRIDER RD	10,631
46	691350204007	1573 ROUTE 68	5,766	96	691650149001	1153 FREEDOM CRIDER RD	4,174
47	691350206008	1666 ROUTE 68	6,606	97	691650157000	2361 LOVI RD	6,269
48	691440103000	285 TAFFY RUN RD	5,206	98	691650161002	106 DAVIS LN	8,289
49	691440116003	162 BONZO RD	11,211	99	691650171001	2163 LOVI RD	10,536
50	691440118004	196 WHITES HILL RD	4,530	100	691650178006	119 DARLINGTON RD	9,985

Summary	
Average Area (sf)	6,723
Proposed ERU (sf)	6,800

APPENDIX C

BREAKDOWN OF ANTICIPATED EXPENDITURES

**NEW SEWICKLEY TOWNSHIP
STORMWATER MANAGEMENT FEE STUDY**

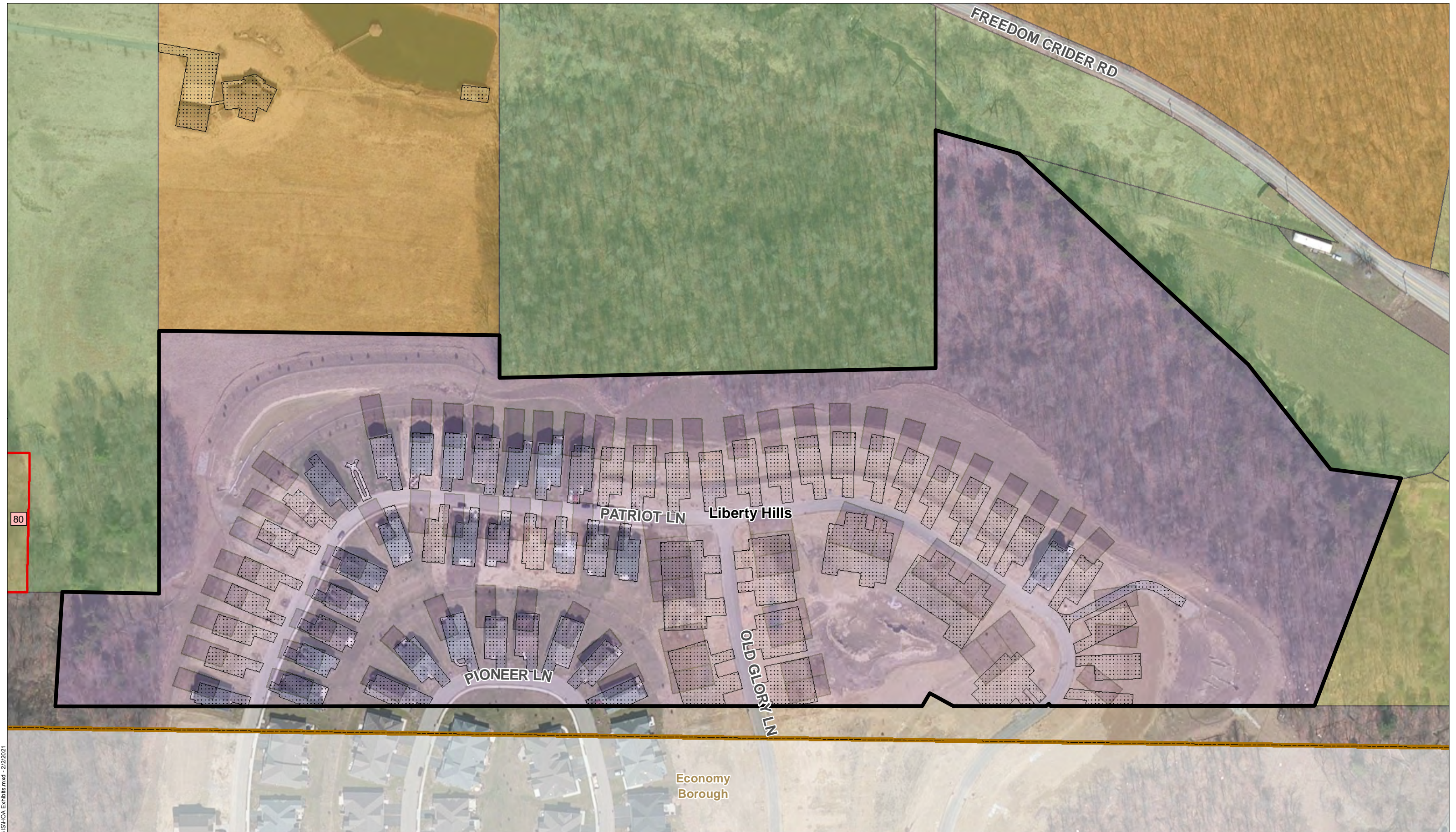
**TABLE C
ANTICIPATED ANNUAL EXPENDITURES**

ITEM NO.	POTENTIAL BUDGET ACCOUNT	QUANTITY	UNIT	UNIT COST	ITEM COST
Administration					
1	Executive/Admin	2020 Township Budget - Typical Year Expenditure (5% Employee Expense)			\$12,887
2	General Engineering	2020 Township Budget - Typical Year Expenditure (20% Employee Expense)			\$3,100
3	Law - Solicitor Fees	2020 Township Budget - Typical Year Expenditure (5% Employee Expense)			\$775
Administration Total					\$16,762
Annual Operations and Maintenance					
1	Public Works Staff	2020 Township Budget - Typical Year Expenditure (15% Employee Expense)			\$76,436
2	Storm Sewer Materials	2020 Township Budget - Typical Year Expenditure			\$25,000
		Operation and Maintenance Total			\$101,436
Capital Improvements					
1	Capital Improvements	1	LS	\$100,000.00	\$100,000
Capital Improvements Total					\$100,000.00
MS4 Permit Compliance					
1	Annual Tasks - Miscellaneous Expenditures - Training Seminars, Publications, Postage, Advertisements, Public Events, etc.	Anticipated Annual Costs for 2018 Permit			\$10,000
2	Annual Tasks - Engineering Support	Anticipated Annual Costs for 2018 Permit			\$15,000
3	PRP Plan Implementation	Anticipated Annual Costs for 2018 Permit			\$75,000
MS4 Permit Compliance Total					\$100,000

Anticipated Annual Stormwater Expenditures	\$318,198
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APPENDIX D

HOMEOWNERS ASSOCIATION EXHIBITS



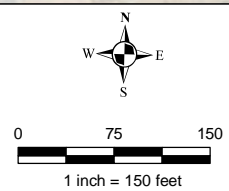
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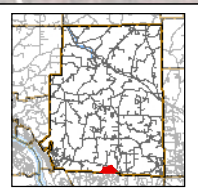
LSSE
Civil Engineers and Surveyors

546 4th Avenue
Carnegie, Pennsylvania 15106
Phone: 412-264-4400
Fax: 412-264-1200
email: info@lsse.com

- Parcel Designations**
 - Single Family Residential
 - Large Single Family Residential
 - HOA
- HOA Unit
 - Non-Single Family Residential
 - Vacant Land
- SFD Sample Parcel
 - Impervious Surface
 - County Boundary
 - Municipal Boundary



Liberty Hills
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Stormwater Fee Analysis
Home Owner's Associations
New Sewickley Township
233 Miller Road
Rochester, PA 15074

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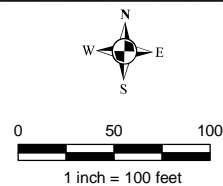


Parcel Designations

- Single Family Residential
- Large Single Family Residential
- HOA

- HOA Unit
- Non-Single Family Residential
- Vacant Land

- SFD Sample Parcel
- Impervious Surface
- County Boundary
- Municipal Boundary



AMJAM47 LLC
Page 2 of 5



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Rochester, PA 15074



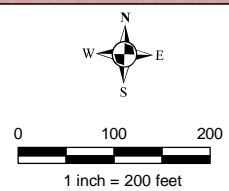
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**LSSE**
Civil Engineers and Surveyors

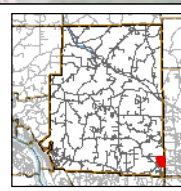
546 4th Avenue
Cranberry, Pennsylvania 15108
Phone: 412-264-4400
Fax: 412-264-1200
email: info@lsse.com

- Parcel Designations**

 - Single Family Residential
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 - HOA
- HOA Unit
 - Non-Single Family Residential
 - Vacant Land
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 - Municipal Boundary



Danbury Farms
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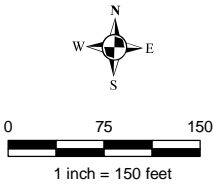


**Stormwater Fee Analysis
Home Owner's Associations**
New Sewickley Township
233 Miller Road
Rochester, PA 15074

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- | Parcel Designations | |
|---------------------------------|-------------------------------|
| Single Family Residential | HOA Unit |
| Large Single Family Residential | Non-Single Family Residential |
| HOA | Vacant Land |
| SFD Sample Parcel | Impervious Surface |
| County Boundary | Municipal Boundary |



Freedom Crossing Northeast
Page 4 of 5



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Home Owner's Associations**
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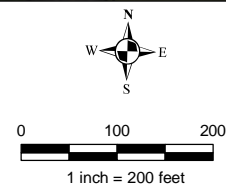


Parcel Designations

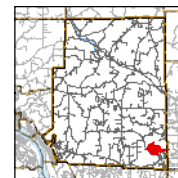
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- HOA

- HOA Unit
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- Vacant Land

- SFD Sample Parcel
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Freedom Crossing
Page 5 of 5



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