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# TOWN OF MCCANDLESS

# Pollutant Reduction Plan
# LITTLE PINE CREEK – PINE CREEK WATERSHED


## *Municipal Separate Storm Sewer System*

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# ACRONYMS

| | |
|---|---|
| BMP | Best Management Practice |
| HUC | Hydraulic Unit Code |
| MCM | Minimum Control Measure |
| MS4 | Municipal Separate Storm Sewer |
| NPDES | National Pollutant Discharge Elimination System |
| PADEP | Pennsylvania Department of Environmental Protection |
| PRP | Pollutant Reduction Plan |
| TP | Total Phosphorus |

# GLOSSARY OF TERMS

**Impaired Waters** - surface waters that fail to attain one or more of its designated uses under 25 Pa. Code Chapter 93 and as listed in Categories 4 and 5 of Pennsylvania's Integrated Water Quality Monitoring and Assessment Report.

**Integrated Water Quality Monitoring and Assessment Report** - the report published every other year by PADEP to report on the conditions of Pennsylvania's surface waters to satisfy sections 305(b) and 303(d) of the CWA.

**Nutrients** – refers to total nitrogen and total phosphorus

**Outfall** - a point source as defined by 40 CFR § 122.2 at the point where a municipal separate storm sewer discharges to surface waters and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other surface waters and are used to convey surface waters. (25 Pa. Code § 92a.32(a) and 40 CFR § 122.26(b)(9))

**Outfall Sewershed** - the land area that drains to an individual MS4 outfall, observation point, or discharge point from within the jurisdiction of the MS4 permittee.

**Parsing** - a process in which land area is removed from a Planning Area in order to calculate the actual or target pollutant loads that are applicable to an MS4. Land area which can be parsed includes areas that do not drain to the MS4's system or land that is already covered by an NPDES permit for control of stormwater.

**Planning Area** – the area used to calculate existing loads and plan load reductions for.

**Sediment** – refers to siltation and suspended solids; all of which are inorganic solids.

**Structural Best Management Practices** - means stormwater storage and management practices including, but not limited to, wet ponds and extended detention outlet structures; filtration practices such as grassed swales, sand filters and filter strips; infiltration practices such as infiltration basins and infiltration trenches; and other BMPs as referenced in Chapter 6 of the Pennsylvania Stormwater BMP Manual (363-0300-002).

**Surface Waters** - perennial and intermittent streams, rivers, lakes, reservoirs, ponds, wetlands, springs, natural seeps and estuaries, excluding water at facilities approved for wastewater treatment such as wastewater treatment impoundments, cooling water ponds and constructed wetlands used as part of a wastewater treatment process. (25 Pa. Code § 92a.2)

**Urbanized Area -** land area comprising one or more places (central place(s)) and the adjacent densely settled surrounding area (urban fringe) that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile, as defined by the United States Bureau of the Census and as determined by the latest available decennial census. The urbanized area outlines the extent of automatically regulated areas.

# Chapter 1. Introduction

## 1.1 Purpose

Municipalities throughout the country are under a federal mandate requiring a stormwater management program for reducing pollution impacts from stormwater runoff. In 2003, the Town of McCandless was issued a Municipal Separate Storm Sewer System (MS4) Permit through the Pennsylvania Department of Environmental Protection (PADEP) and the Environmental Protection Agency. The Town is regulated under PADEP's General NPDES Permit (PAG-136140). Implemented through the Clean Water Act, the permit's numerous requirements are through six Minimum Control Measures (MCMs). In addition, PADEP is requiring MS4s that discharge to an impaired stream prepare a Pollutant Reduction Plan (PRP) for sediment, nitrogen, and/or phosphorus. The goal of the PRP is to reduce pollution caused by sediment and/or nutrients in impaired streams.

## 1.2 Little Pine Creek-Pine Creek Watershed Background

Little Pine Creek-Pine Creek Watershed is considered a Hydrologic Unit Code (HUC) 12 watershed. Within the Southwestern region of Pennsylvania, these HUC12 watersheds are tributaries to either the Ohio, Monongahela, Allegheny, or Youghiogheny Rivers. For the Little Pine Creek-Pine Creek Watershed its tributary is the Allegheny River. On a smaller scale, numerous smaller watersheds serve as tributaries to Little Pine Creek-Pine Creek. Within the Town of McCandless the small watersheds that contribute to the HUC-12 are Little Pine Creek 6611 Watershed and Pine Creek 6506 Watershed.

Every two years, PADEP publishes a report entitled "Pennsylvania Integrated Water Quality Monitoring and Assessment Report" that summarizes the various water quality management programs including water quality standards. The PRP was assigned for each MS4 based on the 2014 report. If a stream was assigned as impaired from siltation, organic enrichment, low dissolved oxygen, or nutrients then a PRP is required. Little Pine Creek-Pine Creek Watershed is primarily impacted by pathogens, however, Little Pine Creek is a tributary to Pine Creek, which is polluted by nutrients and siltation from small residential runoff and land development.

# Chapter 2. Outfall Sewersheds & Planning Areas

Before beginning the calculations of the pollutant loads, outfall sewersheds are identified and delineated within the PRP planning area.

## 2.1 Delineation Procedures

As part of the PRP process, outfall sewersheds were required to be delineated. An outfall sewershed is an area of land in which stormwater flows into a storm sewer system and is discharged into a stream, lake, or waterway. Accurate outfall sewersheds were drawn based on topography (2006), aerial (2013), and streams in ESRI ArcMap. By following these layers and the storm sewer network, all outfalls were assigned a sewershed. The map which will be submitted with the Notice of Intent illustrates the outfall sewersheds. Aside from being a requirement of the PRP, delineation of the outfall sewersheds is useful if any parsing is implemented. Parsing is the term used by PADEP to convey detailed and analysis with the purpose of assigning responsibility.

## 2.2 Planning Area

The planning area is defined as the area used to calculate existing loads and plan load reductions. PADEP offered several options for how to define the planning area for each impaired water. The options varied from using a combination of the storm sewersheds to using watershed boundaries. McCandless plans to utilize the HUC-12 watershed boundary as its planning area with some additional parsing that is described in the next section.

## 2.3 Parsing

Once the preliminary planning area was defined; additional parsing within the area was performed to eliminate spaces that either do not drain to the MS4's system or land that is already covered by an NPDES permit for the control of stormwater. Parsing determines the MS4's area of responsibility and therefore the pollutant loads. McCandless decided to parse out all of Allegheny County owned roadways, PennDOT roads and private land. The private properties which were parsed are McIntyre Square and Duncan Avenue Shopping Plaza. These areas were parsed because the properties have a completely separate storm sewer system. Appendix A illustrates the final planning area for the MS4 by displaying the HUC-12 and small watershed boundaries and the parsed-out areas.

# Chapter 3. Existing Loading without BMPs

PADEP provides several suggested methods that are scientifically-supported for estimating the existing loads. The approved methods for calculating the loads include PADEP Simplified Method land use loading rates, MapShed, or other watershed models that reflect both overland flow and in-stream erosion components. For the purpose of this PRP, MapShed was chosen as the most appropriate method. The loads generated within this PRP were calculated in May 2017.

## 3.1 MapShed Modeling Overview

MapShed is a free and publicly available software developed by Pennsylvania State University that derives the loadings rates from mathematical simulation of pollutant generation and hydrologic processes. The software takes into account hydrology, land cover, soils, weather, topography and other environmental data to calculate sediment and nutrient loads. MapShed utilizes soil and hydrologic equations, well known to hydrologists to model surface runoff and soil erosion.

For modeling surface runoff and streamflow, MapShed uses the National Resources Conservation Service Curve Number (NRCS-CN) combined with daily precipitation and temperature data. Evapotranspiration is calculated using the daily weather data and a land cover dependent factor. To model monthly erosion and sediment loss, the Universal Soil Loss Equation is applied. Nitrogen, phosphorus, and total suspended solids are modeled for each type of land cover using export coefficients for both the dissolved and solid phases. Overall, the software uses geographic data, land use runoff coefficients, daily weather, and the universal soil loss equations to calculate pollutant loads in terms of mass and concentration.

## 3.2 MapShed Modeling Methodology

In order for MapShed to perform these hydrologic calculations, initial data is needed beforehand. There are six required input sources and up to eleven optional sources in MapShed. The required data includes basins, weather stations, streams, soils, land use/cover, and surface elevation. The optional layers, which were included as part of this PRP, consist of urban areas, soil-phosphorus, physiographic provinces and counties. Each data source is described below in more detail.

### *3.2.1 Basin Layer*

The Basins layer in MapSheds serves as the area modeled for the pollutant loads. The small watershed boundaries were used for this layer. The small watershed boundaries were obtained from Pennsylvania Spatial Data Access (PASDA) and are defined as catchment areas for named and unnamed streams. Utilizing the small watershed boundaries as the basin layer adequately accounts for downstream channel impacts. The small watershed boundaries were altered slightly depending on the amount of parsing incorporated into the PRP planning area.

### *3.2.2 Urban Area Layer*

The Urban Area layer is considered optional in MapShed; however, it is required for the PRP in order to properly allocated the loads in which the MS4 is responsible for. MapShed's urban area data that is available is considered the 2010 Urbanized Areas boundaries which is based on the U.S. Census Bureau's database. The Urban Area layer simulated loads that are area weighted for each based upon their land use/cover percent distribution within the basin.

### *3.2.3 Weather Stations Layer*

With MapShed, weather data for the Generalized Watershed Loading Functions-Enhanced (GWLF-E) input file are automatically prepared using daily climate data contained in "csv-formatted" Excel files. These Excel files are connected to a weather station shapefile through the use of a unique station ID number. Statewide weather database contains temperature and precipitation from 78 weather stations throughout the state between 1975 and 1998.

### *3.2.4 Streams Layer*

In order to better estimate erosion, a streams layer is required within the model. The stream segments are derived from the National Hydrography Datasets at a 1:24,000 scale or better. The length of a stream within a basin affects the amount of streambank erosion.

### *3.2.5 Soils Layer*

The soils layer holds information pertaining to various soil properties such as the available water-holding capacity, soil erodibility factor and the dominant hydrologic soil group. These properties are crucial when calculating the loads generated within a basin. Within Little Pine Creek-Pine Creek Watershed, McCandless has soils mostly comprised of Group C; these have moderately high runoff potential when thoroughly wet.

### *3.2.6 Land Use Layer*

The Land Use layer is one of the most critical layers used by MapShed since pollutant loads generated within a watershed are largely influenced by land surface conditions. These surface conditions are correlated to runoff, surface erosion and infiltration, which are directly associated with vegetative cover. MapShed's land use data is obtained from the 2011 National Land Cover Database. There are 16 land use classes that each generate different loading rates.

### *3.2.7 Surface Elevation Layer*

This particular grid layer is used to calculate land slope-related data for use within the model. The 30-meter digital elevation model used is considered a higher resolution grid cell data.

### *3.2.8 County Boundaries Layer*

Having the boundary for each Pennsylvania county loaded into Mapshed will represent geographically estimates of the cropping management and erosion control practice factors for hay/pasture, row crops and wooded land covers.

### *3.2.9 Physiographic Province Layer*

The physiographic province layer covers geographically and seasonally based estimates for the groundwater recession rate and erosivity coefficient values. McCandless is located within the Appalachian Plateaus Province, which has a groundwater recession rate of 0.1, a cool rain factor of 0.08 and a warm rain factor of 0.26.

### *3.2.10 Soil Phosphorus Layer*

The soil phosphorus layer is used to estimate the phosphorus concentrations in sediment transported to nearby streams. For the purpose of the PRP, the layer is depicted as Soil Test P. The soil Test P is an estimate of available soil phosphorus that was measured by standard lab tests.

## 3.3 MapShed Model Results

Each small watershed was analyzed separately in MapShed and the results can be found in Appendix B. The results from MapShed for the existing loads without BMPs are captured as screenshots of the Urban Area Viewer.

### *3.3.1 Little Pine Creek 8065 Small Watershed Results*

Little Pine Creek 8065 Watershed is about 4,371 acres in size, with 1,692 of those total acres being located within McCandless. However, after parsing the total watershed area within the MS4 boundary contains 1,650 acres. Table 3-1 identifies the amount of sediment and phosphorus pollution from land cover and stream bank erosion. Little Pine Creek 8065 watershed is mostly comprised of medium density residential, thus contributing to sizable stream bank erosion loads

*Table 3-1: Existing Pollutant Load Results without BMPs*

| SOURCE | SEDIMENT (lbs/yr) | PHOSPHORUS (lbs/yr) |
|---|---|---|
| **Land Cover** | 136,262.31 | 168.0 |
| **Stream Bank** | 626,848.39 | 41.8 |
| **Groundwater** | 0 | 96.9 |
| **Total** | 763,110.7 | 306.7 |

### *3.3.2 Pine Creek 7960 Small Watershed Results*

Pine Creek 7960 Watershed is about 6,374 acres in size, with 882 of those total acres being located within McCandless. However, after parsing the total watershed area within the MS4 boundary contains 867.5 acres. Table 3-2 identifies the amount of sediment and phosphorus pollution from land cover and stream bank erosion. Pine Creek 7960 watershed is mostly comprised of medium density residential, thus contributing to sizable stream bank erosion loads

*Table 3-2: Existing Pollutant Load Results without BMPs*

| SOURCE | SEDIMENT (lbs/yr) | PHOSPHORUS (lbs/yr) |
|---|---|---|
| **Land Cover** | 63,983.76 | 73.9 |
| **Stream Bank** | 354,665.54 | 19.1 |
| **Groundwater** | 0 | 43.7 |
| **Total** | 418,649.3 | 136.7 |

### *3.3.3 Little Pine Creek-Pine Creek HUC-12 Watershed Results*

The PRP comprised in this report is focused on load reductions on a HUC-12 watershed basis. The small watersheds analyzed are part of the HUC-12 watershed and are thus collectively summed together to obtain the existing load within McCandless. Table 3-3 shows the amount of sediment and phosphorus pollution from land cover and stream bank erosion.

*Table 3-3: HUC-12 Existing Pollutant Load Results without BMPs*

| SOURCE | SEDIMENT (lbs/yr) | PHOSPHORUS (lbs/yr) |
|---|---|---|
| **Land Cover** | 200,246.07 | 241.9 |
| **Stream Bank** | 981,513.93 | 60.9 |
| **Groundwater** | 0 | 140.6 |
| **Total** | 1,181,760 | 443.4 |

# Chapter 4. Existing Structural BMPs

The existing loads calculated in Chapter 3 do not account for any reductions of existing stormwater best management practices (BMPs). PADEP is allowing communities to reduce their existing load by taking credit for only Chapter 102 permitted stormwater BMPs. The locations of the existing permitted BMPs are located on the Planning Area Map in Appendix A.

## 4.1 BMP Performance Calculation Overview

PADEP provides several suggested methods that are scientifically-supported for estimating the pollution reduction potential of BMPs. The recommended approved method for calculating the reductions derived from existing Chapter 102 BMPs is the Expert Panel New Development Performance Standards Report. The method requires knowing the drainage area to the BMP, which can be obtained through permit documents or can be delineated. Additionally, the two year volume increase between the existing and proposed conditions needs to be found through permit documents or calculated. The two year volume increase is also known as the Engineering Parameter.

Once the Engineering Parameter is determined, the next step is to calculate the runoff depth captured per impervious acre. The runoff depth captured is calculated from dividing the Engineering Parameter by the amount of impervious acres in the post drainage area and multiplying the value by 12 to convert it to inches. The runoff depth is then used to determine the phosphorus and sediment percent removals for the BMP based on the performance curves.

These performance curves are built on whether the stormwater BMP is a runoff reduction or stormwater treatment practice. Guidance on how a BMP is classified is further described in the Recommendations of the Expert Panel to Define Removal Rates for New State Stormwater Performance Standards Report. MapShed uses polynomial equations from the performance curve graphs to calculate the percent removals for the applicable BMP.

For calculating the pollutant loads generated within the BMP's drainage area, the simplified approach of analyzing all existing BMPs collectively in MapShed was utilized. The collective approach involves using an average for the runoff depth captured per impervious acres in the BMP Data input editor within the Generalized Watershed Loading Functions-Enhanced (GWLF-E) Model Simulation tool. The retrofits section of the Urban Scenario BMP Editor is used for calculation of existing BMPs. The tool only accounts for load reduction in the urban areas, and therefore does not reduce load from any forest, hay/pasture, cropland, turf grass, or open land areas. The amount of urban area within a BMPs drainage area is accounted for utilizing the Land Cover Distribution tool in MapShed.

## 4.2 Existing Loadings from Stormwater BMPs

For the Little Pine Creek-Pine Creek Watershed, 23 existing permitted BMPs were utilized to reduce the existing load. The BMPs were collectively analyzed in MapShed as a Stormwater Treatment practice. The total area treated from all the BMPs include 21.7 hectares Medium Density Residential, 36.5 hectares High Density Residential, 6.8 hectares Low Density Mixed, 63.5 hectares Medium Density Mixed, and 120.9 hectares High Density Mixed. Based on a runoff depth of 5.97 cm, the calculated reduction efficiencies are 62% Total Phosphorus and 78% Total Sediment. All permitted BMPs that were used as credit to reduce the existing loading estimates continue to function as they were originally designed for. The BMPs are also regularly inspected by the Town's stormwater engineer to ensure appropriate operation and maintenance is being implemented by the owner. Each BMP has its own operation and maintenance plan that closely follows the applicable structural BMP located in the PADEP Stormwater BMP Manual. Information on the geographic location, type of BMP, drainage area, permit number, and the installation date can be found in Appendix D.

## 4.3 Final Existing Loading and Required Reductions

After incorporating all the permitted existing BMPs, the final existing load for sediment and phosphorus within the PRP planning area was determined and is illustrated in Table 4-1. The required reduction is based on a 10% reduction for sediment and 5% for phosphorus. In accordance with PADEP guidance, the MS4 plans to take a presumption approach that a 10% reduction of sediment will also accomplish a 5% phosphorus reduction

*Table 4-1 Final Existing Loads and Required Reductions*

| POLLUTANT | FINAL EXISTING LOAD (lbs/yr) | REQUIRED REDUCTION (lbs/yr) |
|---|---|---|
| **Sediment** | 1,077,840.5 | 107,784.05 |
| **Phosphorus** | 415.9 | 20.8 |

# Chapter 5. Achieving Load Reductions

## *DETERMINATION OF POTENTIAL BMPS*

Based on the PRP requirements, the final existing load calculated in Chapter 4 needs to be reduced by implementing proposed structural and non-structural BMPs. PADEP is leaving it up to the MS4 on how they will plan to reduce the required pollution reduction. However, their proposed structural BMPs must be developed to the point that they can be located on a map and estimate their specific load reductions. The MS4 may briefly describe other BMPs that cannot yet be located as a possibility, but may not count them as planned load reductions. As a result, these BMPs are proposed at a planning level; once additional analysis based on engineering design and cost feasibility is performed, the BMPs may be altered or eliminated. PADEP is permitting MS4's to update their PRPs between March 2018 and March 2023 to account for these changes in proposed BMPs.

One such opportunity which McCandless cannot apply to this September 2017 submission is taking credit for its stricter stormwater management ordinance. McCandless' stormwater ordinance goes above and beyond the Chapter 102 NPDES permit requirements for stormwater associated with construction activities. The Town is also proposing to update its stormwtaer ordinance to incorporate low impact development, such as requiring permeable pavement in sidewalks. As a result, the MS4 can take credit for those pollution reductions that will occur from exceeding PADEP regulatory requirements.

McCandless considers this plan to be a living document. It may update this plan in the future based on opportunities with various conservation and environmental groups, such as the Town's Environmental Advisory Committee and Northern Area Environmental Council. These types of organizations are dedicated to reducing pollution through outreach and small BMP installation to accomplish their goals. Another opportunity that the Town will explore is partnering with the North Hills Council of Governments for funding and constructing stormwater BMPs on a regional level. The Town recognizes these opportunities and will continue to promote outreach to such organizations.

An additional opportunity that McCandless will investigate as a way to comply with its sediment reduction requirement is its Stormwater BMP Maintenance Program. The program was initiated in order to sustain the performance of stormwater detention facilities within the Town. The program mainly focuses on enhancing performance in facilities designed for flood control; McCandless intends to plan to integrate sediment and phosphorus removal as well into its maintenance program.

The Town of McCandless has three additional impaired HUC-12 watersheds within its municipal boundaries; Girtys Run, Lowries Run and Pine Creek - North Park Lake. For this PRP submission, the Town is proposing to address all four HUC-12 watersheds collectively by reducing the total sediment load by 10%. At the time of this submission, McCandless is

proposing structural BMPs that include new retrofit BMPs and stream restoration projects throughout the PRP planning area. Appendix E entails maps of the proposed BMP locations and associated drainage areas. There are various methods used to determine the removal rates of each type of BMP. These approved methods are discussed in further detail below.

Aside from retrofitting existing BMPs through its BMP Maintenance Program, McCandless is also planning to propose load reductions through new retrofit BMPs. These types of BMPs are still considered retrofits because the drainage area in which the new BMP will be installed is not being developed or changed. PADEP provides several methods that are scientifically-supported for estimating the pollution reduction potential of new retrofit BMPs. These approved methods for calculating the reductions are the PADEP BMP Effectiveness Values Table and the Expert Panel Removal Rates for Urban Stormwater Retrofit Projects. McCandless plans to calculate the efficiency of the new retrofit BMPs through the Expert Panel Removal Rates for Urban Stormwater Retrofit Projects.

The Town of McCandless is planning to initiate a tree planting program. The tree planting initiative will encourage residential and commercial property owners to report the planting of trees on their property. This will serve as an outreach and educational mechanism as well.

The program would allow for more tree canopy cover throughout the Town that will help reduce stormwater runoff. Trees are beneficial for reducing stormwater pollution by taking up nutrients and various pollutants through their root systems. Though tree planting is not a requirement to residents and businesses, the Town will tabulate the number of trees planted within this 5-year cycle and add the result to the amount of sediment removed, which will be determined based on guidance from PADEP. The Town also intends to ask the Environmental Advisory Committee to incorporate a tree canopy investigation as part of its green space inventory.

### *METHODOLOGY OF POTENTIAL BMPS*

For determining the percent removals from new retrofit BMPs, the process involves calculating the inches of runoff treated per impervious acre, which is dividing the runoff storage volume in acre-feet by the impervious acres and multiplying by 12 as a conversion factor from feet to inches. In order to determine the amount of runoff treated, the BMP's storage volume and the amount of impervious area within the drainage boundary needs to be known. The runoff storage volume of a BMP is determined based on the design. When the amount of runoff treated is known, the phosphorus and sediment percent removals for the BMP can be determined from the performance curves. The spreadsheet that will be used to calculate the percent removals for each new retrofit BMP are based on the polynomial equations obtained from the performance curves.

For calculating the pollutant loads generated within the BMP's drainage area, the simplified approach of analyzing all proposed structural BMPs collectively in MapShed is utilized. The collective approach involves using an average for the amount of runoff treated per impervious

acres in the BMP Data input editor within the Generalized Watershed Loading Functions-Enhanced (GWLF-E) Model Simulation tool. The retrofits section of the Urban Scenario BMP Editor is used for calculation of the proposed structural BMPs. The tool only accounts for load reduction in the urban areas, and therefore does not reduce load from any forest, hay/pasture, cropland, turf grass, or open land areas. Appendix F depicts the proposed stormwater BMPs and associated reductions for each small watershed analyzed.

Though stream restoration projects are classified as structural BMPs, the procedure used to calculate their reduction efficiency is slightly different then the previously discussed methods. For simplicity purposes, a default effectiveness rate of 115 lb/ft/yr for sediment load will be used for each proposed stream restoration project. To obtain the phosphorus loading rate, a default value of 1.05 pounds of phosphorus per ton of sediment is used.

### *OPERATION AND MAINTENANCE OF POTENTIAL BMPS*

Each situation for which a potential BMP is considered will be evaluated based on merits (listed in no particular order) such as documented areas of historical flooding, portions of watersheds in floodplains, estimated degradation of a stream greater than or equal to 10% of sediment in the stream where the BMP is proposed, areas of general streambank erosion, the type of BMP/retrofit proposed, and portions of watersheds without stormwater management BMPs. The Town may assume maintenance responsibility for BMPs that detain or retain stormwater with the approval of Town Council. All other situations will remain the responsibility of the private property owner. Operation and maintenance for all BMPs on Town property are the responsibility of the Town.

### *FUNDING OF POTENTIAL BMPS*

Potential BMPs have been identified for permitting purposes in Section 5.1 Potential Structural BMPs By Watershed. The approval of and funding for each BMP is subject to the Town's budgeting process. Grant opportunities (public and private) will be researched and pursued to buttress local funding.

## 5.1 Potential Structural BMPs By Watershed

### *5.1.1 Lowries Run HUC-12 Watershed BMPs*

#### *Lowries Run Stream Restoration (P01)*

- *Location*: Start: N40° 34' 22.68", W80° 02' 56.59"
  End: N40° 34' 05.83", W80° 02' 57.83"
- *Description*: Approximately 1,846 LF of Lowries Run would be rehabilitated near Highland Road. The actual start and end of the stream segment may be changed depending on the condition of the stream banks. Streams that have highly eroded banks will be given priority for streambank restoration.
- *Estimated Reductions:* The potential project can reduce 212,290 lbs/year of sediment from the Lowries Run HUC-12 Watershed.

- *Operation & Maintenance*: Property owners will be responsible for maintenance such as debris removal, mowing, and possible pruning at property owner's discretion. No or low maintenance plant species would be used.
- *Funding*: Town's Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: Access to project area and PADEP General Permit(s)

***Wall Park Lowries Run Stream Restoration (P02)***

- *Location*: Start: N40° 33' 55.42856511", W80° 03' 334.54662494"
  End: N40° 33' 49.41352375", W80° 03' 35.63092861"
- *Description*: Approximately 641 LF of Lowries Run on Town Park property would be rehabilitated. The actual start and end of the stream segment may be changed depending on the condition of the stream banks. Streams that have highly eroded banks will be given priority for streambank restoration.
- *Estimated Reductions:* The potential project can reduce 73,715 lbs/year of sediment from the Lowries Run HUC-12 Watershed.
- *Operation & Maintenance*: Operation and maintenance of the restored stream will be performed by the Town in accordance with the approved permit.
- *Funding*: Town's Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: PADEP General Permit(s)

***David Councill Park Rain Garden (P03)***

- *Location*: N40° 34' 55.66755595", W80° 03' 48.46720608"
- *Description*: The Town's park will be retrofit with a rain garden to treat existing impervious surface at the intersection of West Ingomar Road and Ingomar Heights Road. The treated drainage area is 11.7 acres and includes primarily developed medium intensity.
- *Estimated Reductions:* The potential project can reduce 5,695 lbs/year of sediment from the Lowries Run HUC-12 Watershed.
- *Operation & Maintenance*: Operation and maintenance of the stormwater facility will be performed by the Town in accordance with the PA Stormwater BMP Manual for the applicable type of BMP.
- *Funding*: Town's Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: Joint venture between Town and Ingomar Garden Club.

### *5.1.2 Pine Creek - North Park Lake HUC-12 Watershed BMPs*

***McCandless Public Works Rain Garden (P87A)***

- *Location*: N40° 35' 24.08882314", W80° 01' 17.69007477”
- *Description*: The Public Works facility at the Town Hall will be retrofit with a rain garden to treat existing impervious surface. The treated drainage area is 0.5 acres and includes primarily developed medium intensity.
- *Estimated Reductions:* The proposed project can reduce 708 lbs/year of sediment from the Pine Creek - North Park Lake HUC-12 Watershed.
- *Operation & Maintenance*: Operation and maintenance of the stormwater facility will be performed by the Town in accordance with the PA Stormwater BMP Manual for the applicable type of BMP.
- *Funding*: Town’s Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: None

***McCandless Public Works Rain Garden (P87B)***

- *Location*: N40° 35' 24.60762962", W80° 01' 15.06505711”
- *Description*: The Public Works facility at the Town Hall will be retrofit with a rain garden to treat existing impervious surface. The treated drainage area is 1.37 acres and includes primarily developed medium intensity.
- *Estimated Reductions:* The proposed project can reduce 1,315 lbs/year of sediment from the Pine Creek - North Park Lake HUC-12 Watershed.
- *Operation & Maintenance*: Operation and maintenance of the stormwater facility will be performed by the Town in accordance with the PA Stormwater BMP Manual for the applicable type of BMP.
- *Funding*: Town’s Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: None

***Rinaman Run Stream Restoration (P04)***

- *Location*: Start: N40° 35' 18.28397953", W80° 02' 12.50538592”
  End: N40° 35' 16.41071255", W80° 02' 13.64798020"
  Start: N40° 35' 12.35", W80° 02' 16.17”
  End: N40° 35' 10.29", W80° 02' 15.49"
- *Description*: Approximately 264 LF of Rinaman Run would be rehabilitated near the intersection of Willow Drive and Rinaman Road and a second segment of approximately 246 LF located south of Rinaman Road. The actual start and end of the stream segments may be changed depending on the condition of the stream banks. Streams that have highly eroded banks will be given priority for streambank restoration.

- *Estimated Reductions:* The potential project can reduce 58,650 lbs/year of sediment from the Pine Creek - North Park Lake HUC-12 Watershed.
- *Operation & Maintenance*: Property owner will be responsible for maintenance such as debris removal, mowing, and possible pruning at property owner's discretion. No or low maintenance plant species would be used.
- *Funding*: Town's Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: Access to project area and PADEP General Permit(s)

***Pine Creek Water Quality Filter Inserts (P05)***

- *Location*: Various inlets on Town owned roads.
- *Description*: Approximately 25 water quality filter inserts would be installed. Location will be dependent on areas prone to sediment inflow.
- *Estimated Reductions:* The potential project can reduce 10,520 lbs/year of sediment from the Pine Creek - North Park Lake HUC-12 Watershed.
- *Operation & Maintenance*: Operation and maintenance of the water quality filter inserts will be performed by the Town in accordance with the manufacturer.
- *Funding*: Town's Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: None

***Wexford Run Water Quality Filter Inserts (P06)***

- *Location*: Various inlets on Town owned roads.
- *Description*: Approximately 25 water quality filter inserts would be installed. Location will be dependent on areas prone to sediment inflow.
- *Estimated Reductions:* The potential project can reduce 10,520 lbs/year of sediment from the Pine Creek - North Park Lake HUC-12 Watershed.
- *Operation & Maintenance*: Operation and maintenance of the water quality filter inserts will be performed by the Town in accordance with the manufacturer.
- *Funding*: Town's Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: None

***Rinaman Run Water Quality Filter Inserts (P07)***

- *Location*: Various inlets on Town owned roads.
- *Description*: Approximately 25 water quality filter inserts would be installed. Location will be dependent on areas prone to sediment inflow.
- *Estimated Reductions:* The potential project can reduce 10,520 lbs/year of sediment from the Pine Creek - North Park Lake HUC-12 Watershed.

- *Operation & Maintenance*: Operation and maintenance of the water quality filter inserts will be performed by the Town in accordance with the manufacturer.
- *Funding*: Town's Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: None

### *5.1.3 Girtys Run HUC-12 Watershed BMPs*

***Slovak Savings Bank Infiltration Facility (P91)***

- *Location*: N40° 33' 46.83417235", W80° 02' 17.83980821"
- *Description*: An infiltration bed will be constructed as part of a small development project within the Town at Prescott Drive and Perry Highway (US Route 19). The treated drainage area is 0.9 acre and includes primarily medium density residential.
- *Estimated Reductions:* The potential project can reduce 1,440 lbs/year of sediment from the Girtys Run Watershed.
- *Operation & Maintenance*: Operation and maintenance of the stormwater facility will be performed by the owner in accordance with the PA Stormwater BMP Manual for the applicable type of BMP.
- *Funding*: The owner will be responsible for the costs associated with the project.
- *Project Requirements*: Inspection of stormwater facility by Town.

### *5.1.4 Little Pine Creek – Pine Creek HUC-12 Watershed BMPs*

***Little Pine Creek Stream Restoration (P08)***

- *Location*: Start: N40° 33' 35.81252490", W80° 00' 35.19225672"
  End: N40° 33' 24.57762973", W80° 00' 24.65129039"
- *Description*: Approximately 1,477 LF of Little Pine Creek would be rehabilitated from Hazlett Road south to the McCandless/Ross boundary line. The actual start and end of the stream segment may be changed depending on the condition of the stream banks. Streams that have highly eroded banks will be given priority for streambank restoration.
- *Estimated Reductions:* The potential project can reduce 169,855 lbs/year of sediment from the Little Pine Creek – Pine Creek HUC-12 Watershed.
- *Operation & Maintenance*: Property owners will be responsible for maintenance such as debris removal, mowing, and possible pruning at property owner's discretion. No or low maintenance plant species would be used.
- *Funding*: Town's Capital Budget, EPA Growing Greener Grant, and other watershed based funding opportunities.
- *Project Requirements*: Access to project area and PADEP General Permit(s)

## 5.2 Summary of Potential BMPs

After incorporating all the potential BMPs, the existing and final pollutant loads for sediment and phosphorus within the entire PRP planning area were determined and are illustrated in Table 5-1. The MS4 has achieved its load reduction requirement for all four HUC-12 watersheds through the implementation of potential BMPs.

*Table 5-1: Expected Load Reductions from Potential BMPs*

| POLLUTANT | EXISTING LOAD (lbs/yr) | REQUIRED REDUCTION (lbs/yr) | ACHIEVED REDUCTION (lbs/yr) | FINAL LOAD w/ BMPS (lbs/yr) |
|---|---|---|---|---|
| **Sediment** | 2,595,267 | 259,527 | **555,228** | 2,040,039 |
| **Phosphorus** | 1,072.1 | 53.61 | N/A* | N/A* |

** In accordance with PADEP guidance, the MS4 plans to take a presumption approach that a 10% reduction of sediment will also accomplish a 5% phosphorus reduction.*

# Chapter 6 Public Participation

The Town of McCandless advertised its PRPs on July 17, 2017 in the Pittsburgh Post-Gazette. The plan was made available to the public at the Town Hall and on their website from July 24, 2017 to August 25, 2017. Comments from the public were accepted at a public meeting on July 24, 2017. A copy of the advertisement and the record of consideration for comments received during the comment period are located in Appendix G.

# Appendix A – Planning Area Map

# Town of McCandless

## Planning Area Map - Little Pine Creek

Date: July 14, 2017
Job No. C-35472-0039
Scale: 1" = 650'

N E S W

**Little Pine Creek-Pine Creek**

**Pine Creek-North Park Lake**

**Girtys Run**

**Lowries Run**

MONTOUR RUN
NORTH FORK PINE CREEK
PINE CREEK
LITTLE PINE CREEK
RINAMAN RUN
GIRTYS RUN
LOWRIES RUN
HARTS RUN
McKNIGHT RUN (MOSTLY UNDERGROUND)

35A 44 43 86 27 4B 4A 23A 23B 18 9B 9A 2 26 7A 7B 37 32 34C 33 22 45A 45B 38 8D 8C 8B 8A 89 30 3B 3A 3C 11 74 41 88C 88A 88B 76 47

## Map Features

- Outfall
- Inlet
- Manhole
- Headwall
- Pipes
- L. Pine Ck. HUC 12 Watershed
- Other HUC-12 Watersheds
- Chapter 93 Streams
- MS4 Urbanized Areas
- Storm BMPs
- Parced Area
- Parcels
- Small Watersheds
- Municipal Boundary

100 McMorris Road
Pittsburgh, PA 15205
Phone: 855-634-9284
Fax 412-921-9960

GATEWAY
On Call. On Time. On Target.

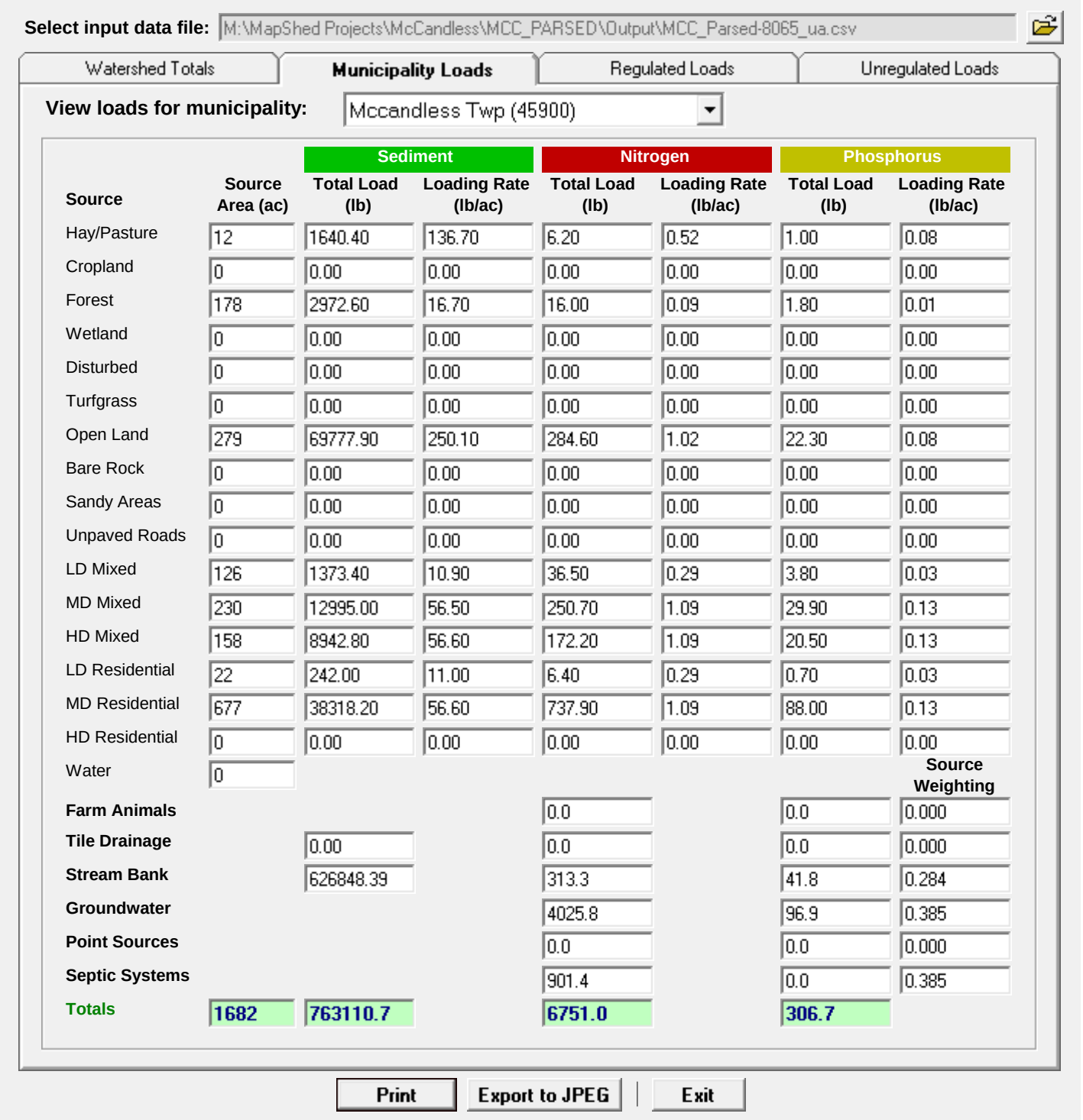
Path: D:\GIS\McCandless\Planning_Area_Maps\Little_Pine_Creek_Planning_Area_Map.mxd

# Appendix B – Existing Loads without BMPs

# APPENDIX B1

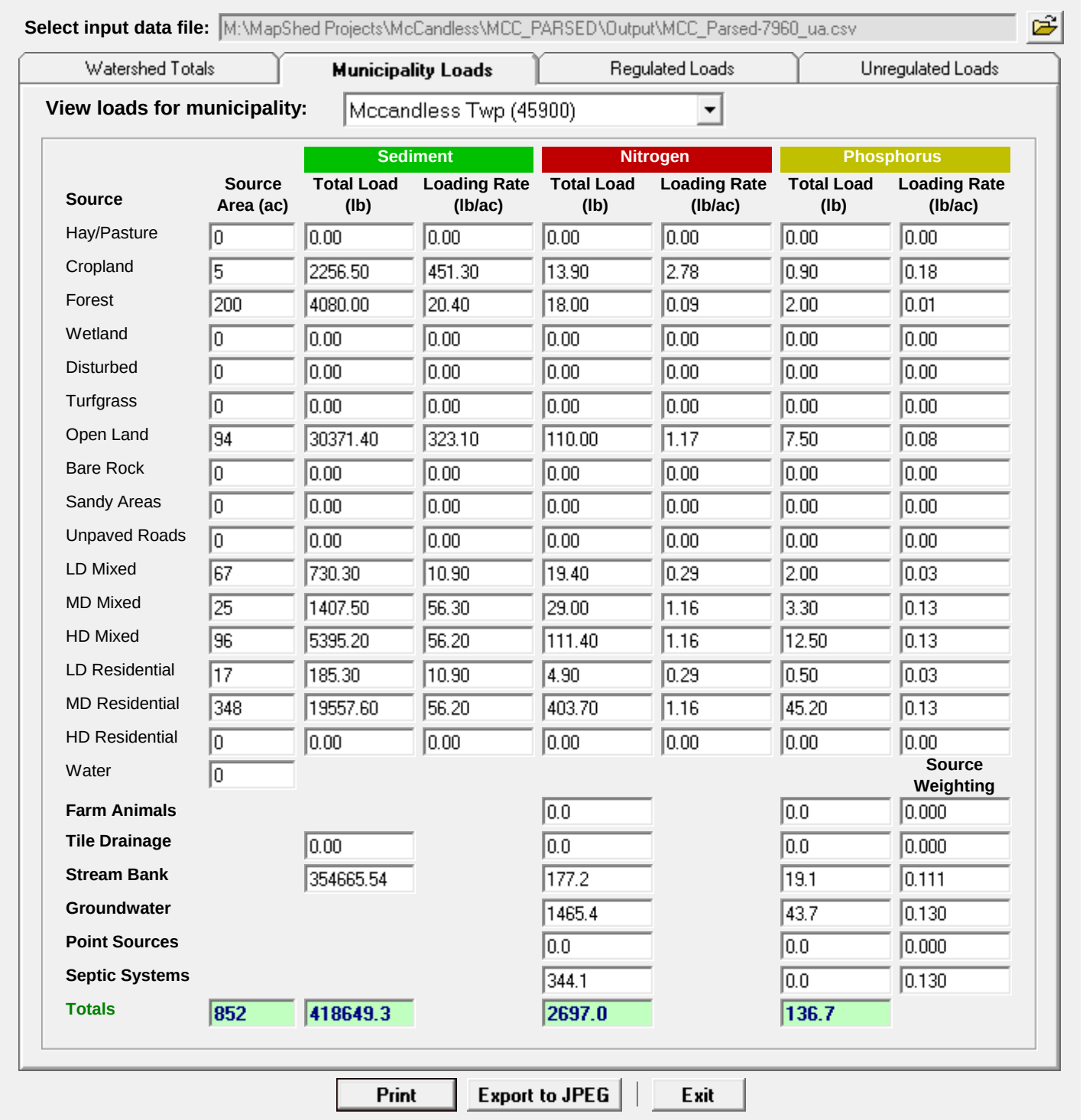
## TOWN OF McCANDLESS LOADING SUMMARY - WITHOUT EXISTING BMP'S

| SUBAREA | Stream Name | Total Area (Acres) | Area in McCandless (Acres) | Urban Area (Acres) | % of Total Area | Total Sediment (lbs.) | Streambank Sediment (lbs.) | Phosphorus (lbs.) |
|---|---|---|---|---|---|---|---|---|
| **7748** | **North Fork Pine Creek** | 6407 | 1048 | 75 | 1.17% | 24,048.30 | 18,593.79 | 13.7 |
| **7832** | **Pine Creek** | 4480 | 2620 | 2,620 | 58.48% | 710,842.00 | 559,081.97 | 285.6 |
| **7852** | **Wexford Run** | 1413 | 504 | 504 | 35.67% | 90,407.10 | 49,546.43 | 61.5 |
| **7909** | **Rinaman Run** | 1001 | 716 | 716 | 71.53% | 98,152.20 | 65,195.97 | 70.1 |
| **7960** | **Pine Creek** | 6566 | 852 | 852 | 12.98% | 418,649.30 | 354,665.54 | 136.7 |
| **7970** | **Pine Creek** | 835 | 835 | 241 | 28.86% | 27,954.00 | 10,523.30 | 31.8 |
| **8029** | **Lowries Run** | 6694 | 1818 | 1,818 | 27.16% | 579,920.20 | 475,243.35 | 184.7 |
| **8065** | **Little Pine Creek** | 4366 | 1682 | 1,682 | 38.52% | 763,110.70 | 626,848.39 | 306.7 |
| **8108** | **Girty's Run** | 5553 | 322 | 322 | 5.80% | 118,710.40 | 105,095.61 | 44.8 |
| **8124** | **McKnight Run** | 1001 | 109 | 109 | 10.89% | 8,474.00 | 2,343.78 | 19.1 |
| **TOTALS** | | | | **8,939** | | **2,840,268** | **2,267,138** | **1,154.7** |




LITTLE PINE CREEK (8065) WATERSHED

APPENDIX B2




PINE CREEK (7960) WATERSHED

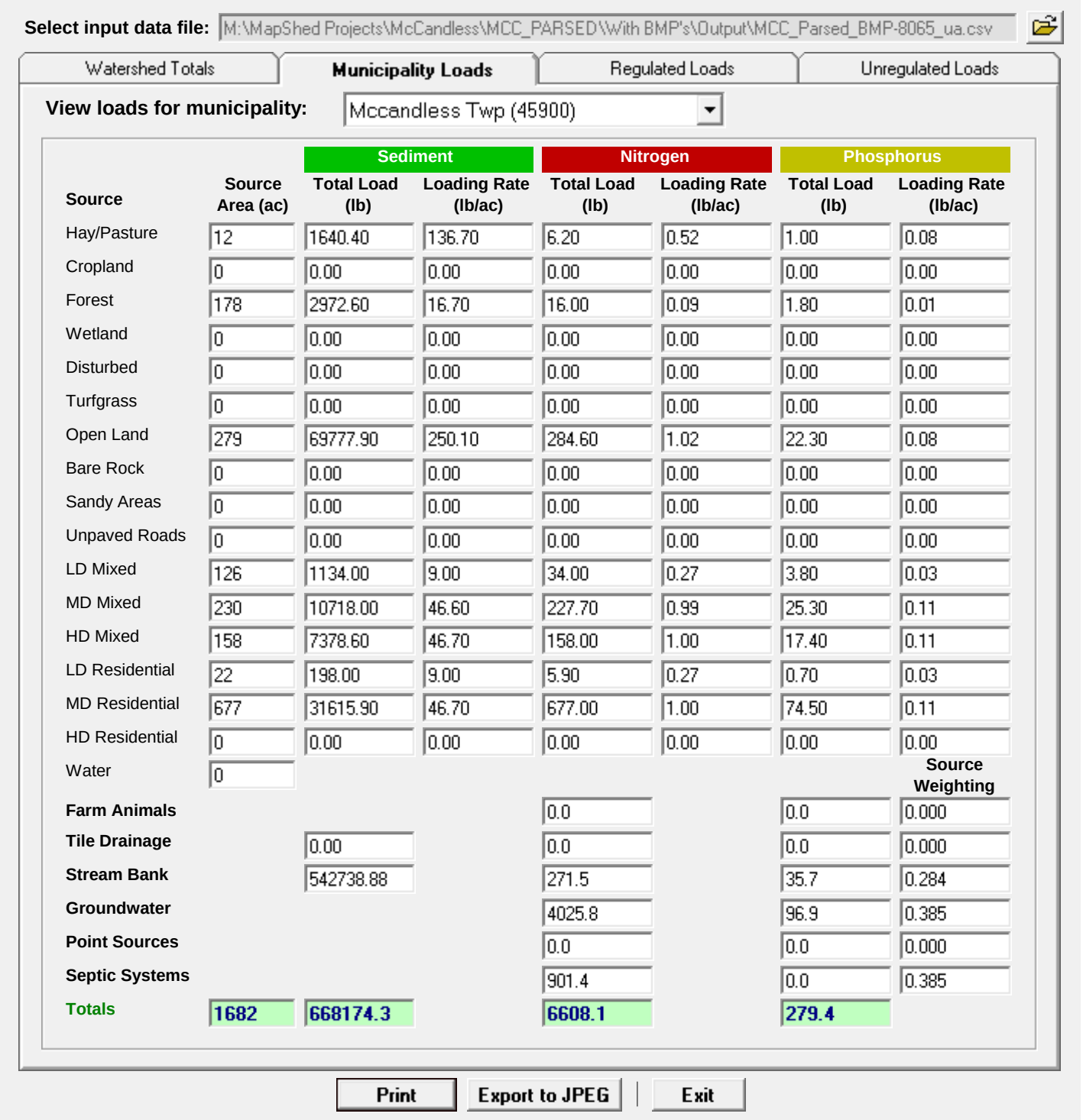
APPENDIX B2

# Appendix C – Existing Loads with BMPs

# APPENDIX C1

## TOWN OF McCANDLESS LOADING SUMMARY - WITH EXISTING BMP's

| SUBAREA | Stream Name | Total Area (Acres) | Area in McCandless (Acres) | Urban Area (Acres) | % of Total Area | Total Sediment (lbs.) | Streambank Sediment (lbs.) | Phosphorus (lbs.) |
|---|---|---|---|---|---|---|---|---|
| **7748** | **North Fork Pine Creek** | 6407 | 1048 | 75 | 1.17% | 24,038.80 | 18,584.97 | 13.7 |
| **7832** | **Pine Creek** | 4480 | 2620 | 2,620 | 58.48% | 635,936.90 | 493,416.11 | 256.4 |
| **7852** | **Wexford Run** | 1413 | 504 | 504 | 35.67% | 70,631.00 | 34,549.69 | 51.4 |
| **7909** | **Rinaman Run** | 1001 | 716 | 716 | 71.53% | 73,062.00 | 46,152.74 | 57.4 |
| **7960** | **Pine Creek** | 6566 | 852 | 852 | 12.98% | 409,666.20 | 346,560.99 | 136.5 |
| **7970** | **Pine Creek** | 835 | 835 | 241 | 28.86% | 27,072.50 | 10,130.09 | 30.7 |
| **8029** | **Lowries Run** | 6694 | 1818 | 1,818 | 27.16% | 559,545.20 | 456,694.18 | 182.7 |
| **8065** | **Little Pine Creek** | 4366 | 1682 | 1,682 | 38.52% | 668,174.30 | 542,738.88 | 279.4 |
| **8108** | **Girty's Run** | 5553 | 322 | 322 | 5.80% | 118,710.40 | 105,095.61 | 44.8 |
| **8124** | **McKnight Run** | 1001 | 109 | 109 | 10.89% | 8,429.30 | 2,327.57 | 19.1 |
| **TOTALS** | | | | **8,939** | | **2,595,267** | **2,056,251** | **1,072.1** |




LITTLE PINE CREEK (8065) WATERSHED

APPENDIX C2

Select input data file: M:\MapShed Projects\McCandless\MCC_PARSED\With BMP's\Output\MCC_Parsed_BMP-7960_ua.csv

Watershed Totals | **Municipality Loads** | Regulated Loads | Unregulated Loads

**View loads for municipality:** Mccandless Twp (45900)

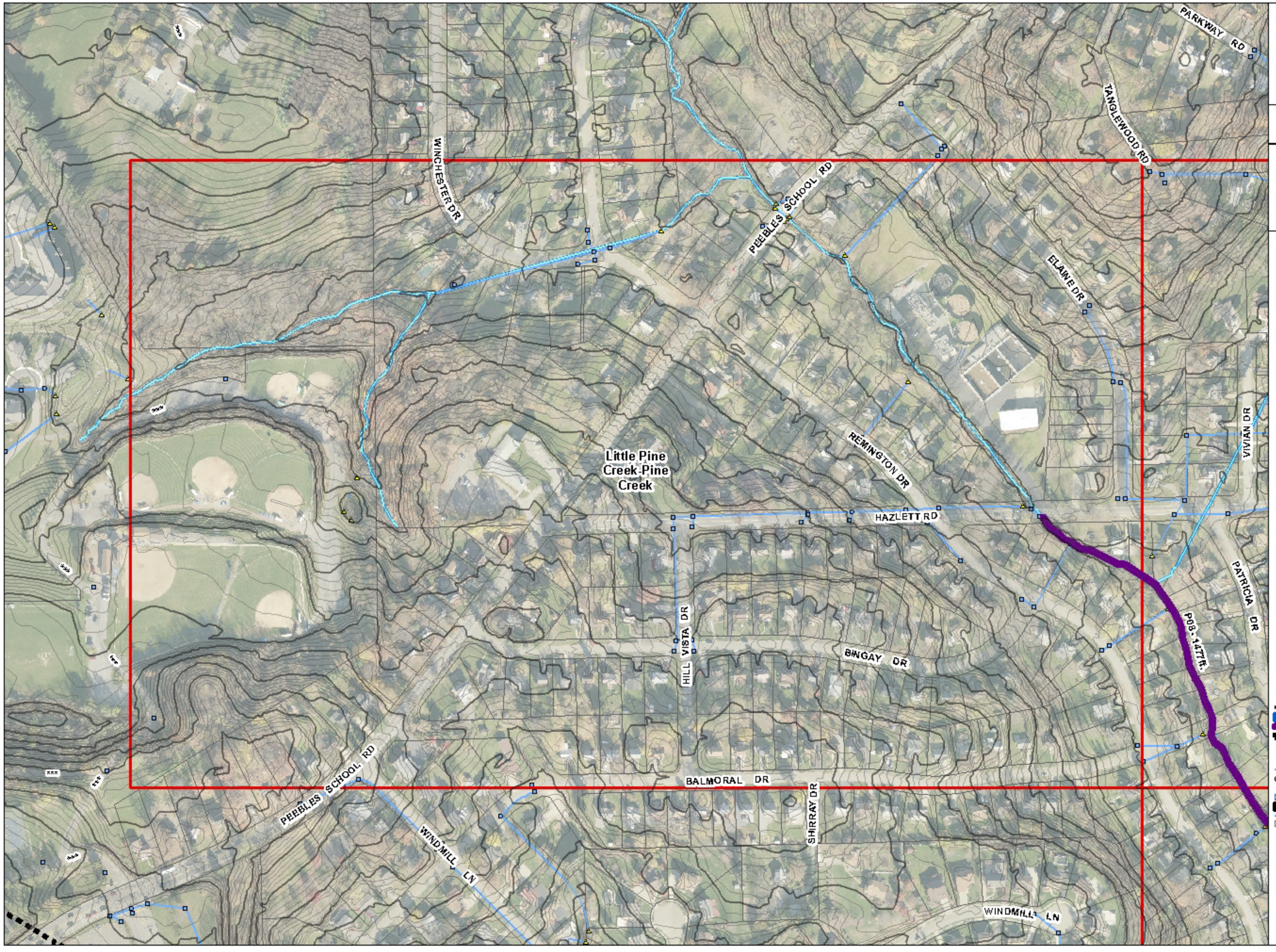
| Source | Source Area (ac) | Sediment Total Load (lb) | Sediment Loading Rate (lb/ac) | Nitrogen Total Load (lb) | Nitrogen Loading Rate (lb/ac) | Phosphorus Total Load (lb) | Phosphorus Loading Rate (lb/ac) |
|---|---|---|---|---|---|---|---|
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 5 | 2256.50 | 451.30 | 13.90 | 2.78 | 0.90 | 0.18 |
| Forest | 200 | 4080.00 | 20.40 | 18.00 | 0.09 | 2.00 | 0.01 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 94 | 30371.40 | 323.10 | 110.00 | 1.17 | 7.50 | 0.08 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 67 | 703.50 | 10.50 | 19.40 | 0.29 | 2.00 | 0.03 |
| MD Mixed | 25 | 1360.00 | 54.40 | 28.50 | 1.14 | 3.30 | 0.13 |
| HD Mixed | 96 | 5222.40 | 54.40 | 109.40 | 1.14 | 12.50 | 0.13 |
| LD Residential | 17 | 180.20 | 10.60 | 4.90 | 0.29 | 0.50 | 0.03 |
| MD Residential | 348 | 18931.20 | 54.40 | 396.70 | 1.14 | 45.20 | 0.13 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| | | | | | | | Source Weighting |
| **Farm Animals** | | | | 0.0 | | 0.0 | 0.000 |
| **Tile Drainage** | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| **Stream Bank** | | 346560.99 | | 173.2 | | 18.9 | 0.111 |
| **Groundwater** | | | | 1465.4 | | 43.7 | 0.130 |
| **Point Sources** | | | | 0.0 | | 0.0 | 0.000 |
| **Septic Systems** | | | | 344.1 | | 0.0 | 0.130 |
| **Totals** | 852 | 409666.2 | | 2683.5 | | 136.5 | |

Print | Export to JPEG | Exit

# Appendix D – Existing Permitted BMPs Table

| BMP ID | Site Name | BMP Type | Latitude | Longitude | Drainage Area (acres) | Permit Number | Installation Year |
|---|---|---|---|---|---|---|---|
| 30 | Bennington Woods | Surface Detention; Earth Embankment | 40.55671371460 | -79.99915218940 | 2.6 | NA | |
| 38 | Cumberland Road | Surface Detention; Earth Embankment | 40.57148303220 | -80.00302054590 | 16.7 | NA | |
| 41 | Duncan Avenue | Surface Detention; Earth Embankment | 40.56859587970 | -80.02729054660 | 134 | D02-118 | 2009 |
| 89 | INPAX Office | Underground | 40.5690000000 | -80.0170000000 | 3 | PAG02000210023-1 | 2016 |
| 8C | LaRoche Athletic | Surface Detention; Earth Embankment | 40.5676460000 | -80.0109290000 | 5.3 | NA | 2016 |
| 8D | LaRoche Athletic | Surface Detention; Earth Embankment | 40.5683720000 | -80.0088320000 | 1.8 | NA | 2016 |
| 8B | LaRoche East | Surface Detention; Earth Embankment | 40.5677238353 | -80.0113417511 | 131 | D02-104 | |
| 8A | LaRoche West | Surface Detention; Earth Embankment | 40.5673008612 | -80.0158360226 | 148 | D02-074 | |
| 74 | Lowe's | Underground | 40.5694040000 | -80.0263330000 | 16.4 | NA | 2010 |
| 43 | Manor Plan | Surface Detention; Earth Embankment | 40.58623121120 | -80.00985619540 | 18.8 | NA | 2005 |
| 88A | McCandless Crossing | Underground | 40.56398091450 | -80.02606929990 | 6.5 | PAG2000208073-1 | 2014 |
| 88B | McCandless Crossing | Underground | 40.56538931940 | -80.02723582630 | 6.2 | PAG02000210023 | 2014 |
| 88C | McCandless Crossing | Grassed Channel | 40.56672625660 | -80.02565846440 | 1.2 | PAG02000210023-1 | 2014 |
| 22 | Meadow Oaks | Surface Detention; Earth Embankment | 40.56782656280 | -79.99703582230 | 20.2 | NA | |
| 45A | Oak Wilde I | Surface Detention; Earth Embankment | 40.5679000994 | -79.9984554929 | 2.65 | NA | 2014 |
| 45B | Oak Wilde II | Surface Detention; Earth Embankment | 40.5682606345 | -80.0009822301 | 3 | NA | 2014 |
| 44 | Park Ridge | Surface Detention; Earth Embankment | 40.58640363380 | -80.00159832690 | 8.1 | PAG02000210015R | 2014 |
| 3A | Pine Run I | Surface Detention; Earth Embankment | 40.5556544650 | -80.0008564650 | 12 | NA | |
| 3B | Pine Run II | Surface Detention; Earth Embankment | 40.5570671764 | -80.0008526087 | 5 | NA | |
| 3C | Pine Run III | Surface Detention; Earth Embankment | 40.5564168451 | -80.0018926532 | 2.5 | NA | |
| 47 | St. John's Church | Surface Detention; Earth Embankment | 40.5723340000 | -80.0329480000 | 2.5 | PAG2000204067 | 2008 |
| 35A | Villas of North Park | Surface Detention; Earth Embankment | 40.6046834679 | -79.9912963133 | 48.69 | NA | |
| 11 | Windmill Acres | Surface Detention; Earth Embankment | 40.55568863540 | -80.01155136440 | 20.4 | NA | |

# Appendix E – Potential Structural BMPs Maps




Date: July 14, 2017
Job No. C-35419-0019
Scale: 1" = 200'

**Page: M6**

# Town of McCandless

Little Pine Creek - Pine Creek Watershed
Potential Structural BMP Mapbook

Map Features
- Proposed BMP Drainage Area
- Proposed Stream Restoration
- HUC-12 Watersheds
- Storm Inlets
- Storm Discharge Points
- Storm Manholes
- Storm Sewer Pipes
- Storm Network Structures
- Storm Clean Outs
- Storm Detention Areas
- Municipal Boundary
- Streams
- Parcels

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Pittsburgh, PA 15205
Phone: 855-634-9284
Fax 412-921-9960

GATEWAY

PARKWAY RD
TANGLEWOOD RD
ELAINE DR
VIVIAN DR
HAZLETT RD
Little Pine Creek-Pine Creek
GIBSON RD
THOMPSON RUN RD
GUYTON RD
PATRICIA DR
DORMAR DR
BRAMBLE LN
REMINGTON DR
P08 - 1477ft.
BALMORAL DR
BRITTANY PL
BRITTANY CT
DORMAR CT
WINDMILL LN
THOMPSON RUN RD

N
W
E
S

Date: July 14, 2017
Job No. C-35419-0019
Scale: 1" = 200'

**Page: M7**

# Town of McCandless

Little Pine Creek - Pine Creek Watershed
Potential Structural BMP Mapbook

Map Features
- Proposed BMP Drainage Area
- Proposed Stream Restoration
- HUC-12 Watersheds
- Storm Inlets
- Storm Discharge Points
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- Parcels

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Pittsburgh, PA 15205
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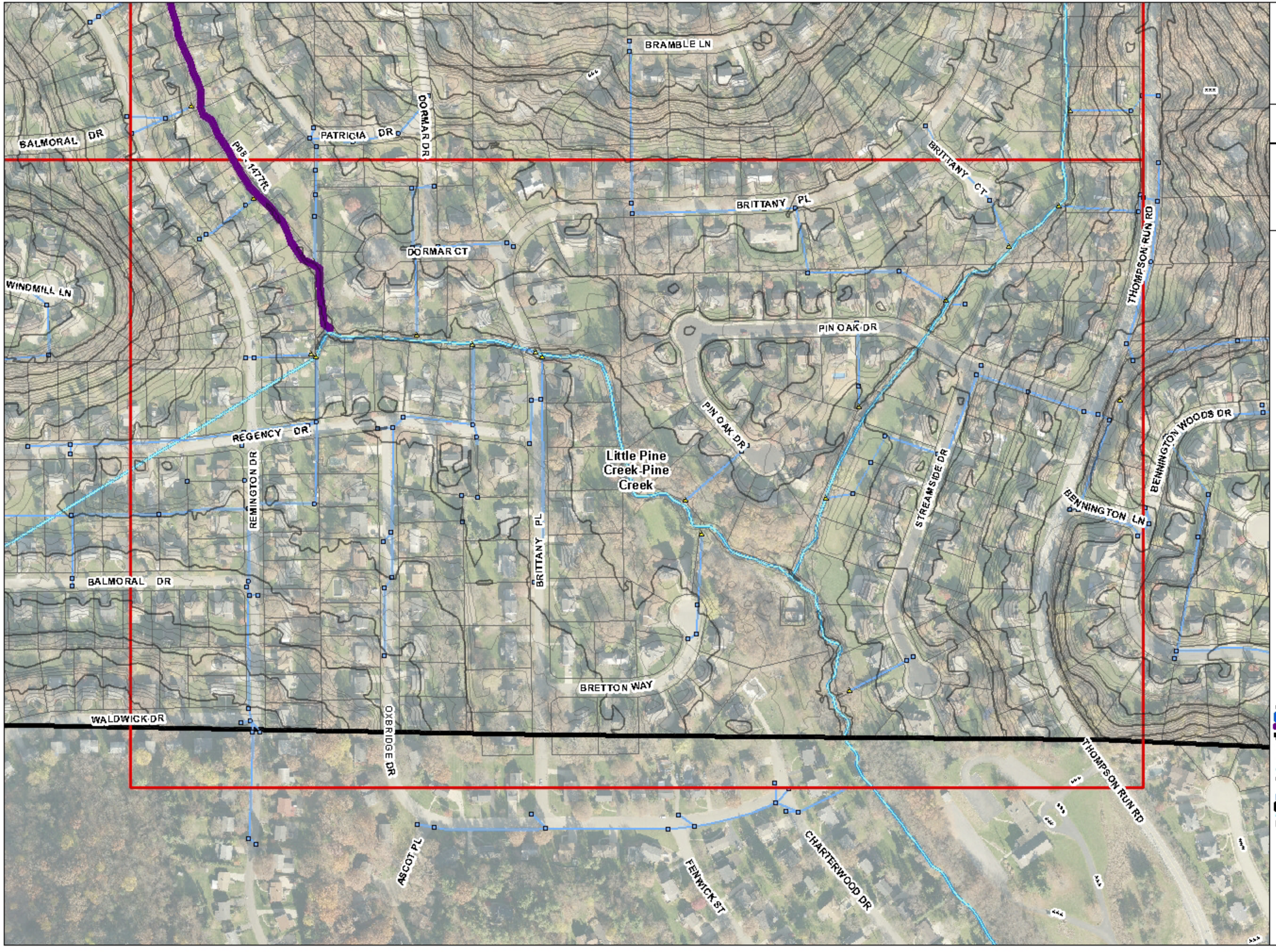
Fax 412-921-9960

GATEWAY

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W E

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Date: July 14, 2017
Job No. C-35419-0019
Scale: 1" = 200'

**Page: N7**

# Town of McCandless

Little Pine Creek - Pine Creek Watershed
Potential Structural BMP Mapbook

Map Features
- Proposed BMP Drainage Area
- Proposed Stream Restoration
- HUC-12 Watersheds
- Storm Inlets
- Storm Discharge Points
- Storm Manholes
- Storm Sewer Pipes
- Storm Network Structures
- Storm Clean Outs
- Storm Detention Areas
- Municipal Boundary
- Streams
- Parcels

100 McMorris Road
Pittsburgh, PA 15205
Phone: 855-634-9284
Fax 412-921-9960

GATEWAY

# Appendix F – Potential Stormwater BMPs Reductions Table

**APPENDIX F1**

**TOWN OF McCANDLESS - POTENTIAL BMP'S FOR 2018-2023 PERMIT CYCLE**

| | LOCATION | WATERSHED | STREAM NAME | BMP TYPE | POINT LOCATION | START LOCATION | END LOCATION | AMOUNT INSTALLED | ESTIMATED REMOVAL (lbs/yr) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rinaman Road | Pine Creek-North Park Lake | Rinaman Run | Streambank Restoration | | N40° 35' 18.28397953", W80° 02' 12.50538592" | N40° 35' 16.41071255", W80° 02' 13.64798020" | 264 L.F. | 30,360 |
| 2 | Rinaman Road | Pine Creek-North Park Lake | Rinaman Run | Streambank Restoration | | N40° 35' 12.35", W80° 02' 16.17" | N40° 35' 10.29", W80° 02' 15.49" | 246 L.F. | 28,290 |
| 3 | Public Works | Pine Creek-North Park Lake | Pine Creek | Raingarden | N40° 35' 24.08882314", W80° 01' 17.69007477" | | | 1 | 708 |
| 4 | Public Works | Pine Creek-North Park Lake | Pine Creek | Raingarden | N40° 35' 24.60762962", W80° 01' 15.06505711" | | | 1 | 1,315 |
| 5 | Patricia Drive | Little Pine Creek-Pine Creek | Little Pine Creek | Streambank Restoration | | N40° 33' 35.81252490", W80° 00' 35.19225672" | N40° 33' 24.57762973", W80° 00' 24.65129039" | 1477 L.F. | 169,855 |
| 6 | Highland Road Valley | Lowries Run | Lowries Run | Stream and Streambank Restoration | | N40° 34' 22.68", W80° 02' 56.59" | N40° 34' 05.83", W80° 02' 57.83" | 1846 L.F. | 212,290 |
| 7 | Slovak Savings Bank | Girty's Run | Girty's Run | Infiltration | N40° 33' 46.83417235", W80° 02' 17.83980821" | | | 0.9 ac | 1,440 |
| 8 | Wall Park | Lowries Run | Lowries Run | Streambank Restoration | | N40° 33' 55.42856511", W80° 03' 34.54662494" | N40° 33' 49.41352375", W80° 03' 35.63092861" | 641 L.F. | 73,715 |
| 9 | Various | Little Pine Creek-Pine Creek | Pine Creek | Inlet Filter Inserts | Selected Inlets | | | 25 | 10,520 |
| 10 | Various | Pine Creek-North Park Lake | Wexford Run | Inlet Filter Inserts | Selected Inlets | | | 25 | 10,520 |
| 11 | Various | Pine Creek-North Park Lake | Rinaman Run | Inlet Filter Inserts | Selected Inlets | | | 25 | 10,520 |
| 12 | David Councill Park | Lowries Run | Lowries Run | Raingarden | N40° 34' 55.66755595", W80° 03' 48.46720608" | | | 11.7 ac | 5,695 |
| | | | | | | | **ESTIMATED TOTAL REMOVAL** | | **555,228** |

# APPENDIX F2

## 2018 - 2022 POTENTIAL BMP's REDUCTION PER STREAM

| SUBAREA | Stream Name | Impaired in Municipality | TSS Loading Baseline (lb/yr) | New BMP's in Stream Area | New BMP Reductions (lb/yr) | Streambank Reductions (lb/yr) | Amount Removed (lb/yr) |
|---|---|---|---|---|---|---|---|
| **7748** | **North Fork Pine Creek** | Y | 24,038.8 | 0 | 0 | 0 | 0 |
| **7832** | **Pine Creek** | Y | 635,936.9 | 3 | 12,543 | 0 | 12,543 |
| **7852** | **Wexford Run** | Y | 70,631.0 | 1 | 10,520 | 0 | 10,520 |
| **7909** | **Rinaman Run** | Y | 73,062.0 | 3 | 10,520 | 58,650 | 69,170 |
| **7960** | **Pine Creek** | Y | 409,666.2 | 0 | 0 | 0 | 0 |
| **7970** | **Pine Creek** | Y | 27,072.5 | 0 | 0 | 0 | 0 |
| **8029** | **Lowries Run** | N | 559,545.2 | 3 | 5,695 | 286,005 | 291,700 |
| **8065** | **Little Pine Creek** | Y | 668,174.3 | 1 | 0 | 169,855 | 169,855 |
| **8108** | **Girty's Run** | Y | 118,710.4 | 1 | 1,440 | 0 | 1,440 |
| **8124** | **McKnight Run** | Y | 8,429.3 | 0 | 0 | 0 | 0 |
| **TOTALS** | | | **2,595,266.6** | **12** | **40,718** | **514,510** | **555,228** |

**APPENDIX F3**

**TOWN OF McCANDLESS - ESTIMATED POTENTIAL BMP COSTS FOR 2018-2023 PERMIT CYCLE**

| | LOCATION | WATERSHED | STREAM NAME | BMP TYPE | AMOUNT INSTALLED | UNIT | ESTIMATED COST PER | ESTIMATED TOTAL COST |
|---|---|---|---|---|---|---|---|---|
| 1 | Rinaman Road | Pine Creek-North Park Lake | Rinaman Run | Streambank Restoration | 264 | L.F. | $ 40.00 | $ 10,560.00 |
| 2 | Rinaman Road | Pine Creek-North Park Lake | Rinaman Run | Streambank Restoration | 246 | L.F. | $ 40.00 | $ 9,840.00 |
| 3 | Public Works | Pine Creek-North Park Lake | Pine Creek | Raingarden | 1 | EACH | $ 5,000.00 | $ 5,000.00 |
| 4 | Public Works | Pine Creek-North Park Lake | Pine Creek | Raingarden | 1 | EACH | $ 5,000.00 | $ 5,000.00 |
| 5 | Patricia Drive | Little Pine Creek-Pine Creek | Little Pine Creek | Streambank Restoration | 1477 | L.F. | $ 60.00 | $ 88,620.00 |
| 6 | Highland Road Valley | Lowries Run | Lowries Run | Stream and Streambank | 1846 | N/A | $ 40.00 | $ 73,840.00 |
| 7 | Slovak Savings Bank | Girty's Run | Girty's Run | Infiltration | 0.9 ac | EACH | $ - | $ - |
| 8 | Wall Park | Lowries Run | Lowries Run | Streambank Restoration | 641 | L.F. | $ 40.00 | $ 25,640.00 |
| 9 | Various | Little Pine Creek-Pine Creek | Pine Creek | Inlet Filter Inserts | 25 | EACH | $ 995.00 | $ 24,875.00 |
| 10 | Various | Pine Creek-North Park Lake | Wexford Run | Inlet Filter Inserts | 25 | EACH | $ 995.00 | $ 24,875.00 |
| 11 | Various | Pine Creek-North Park Lake | Rinaman Run | Inlet Filter Inserts | 25 | EACH | $ 995.00 | $ 24,875.00 |
| 12 | David Councill Park | Lowries Run | Lowries Run | Raingarden | 11.7 | EACH | $ 15,000.00 | $ 15,000.00 |
| | | | | | | | ESTIMATED TOTAL COST | $ 308,125.00 |

# Appendix G – Public Participation

No._____ Term,_____

# Proof of Publication of Notice in Pittsburgh Post-Gazette

Under Act No 587, Approved May 16, 1929, PL 1784, as last amended by Act No 409 of September 29, 1951

Commonwealth of Pennsylvania, County of Allegheny, ss K. Flaherty, being duly sworn, deposes and says that the Pittsburgh Post-Gazette, a newspaper of general circulation published in the City of Pittsburgh, County and Commonwealth aforesaid, was established in 1993 by the merging of the Pittsburgh Post-Gazette and Sun-Telegraph and The Pittsburgh Press and the Pittsburgh Post-Gazette and Sun-Telegraph was established in 1960 and the Pittsburgh Post-Gazette was established in 1927 by the merging of the Pittsburgh Gazette established in 1786 and the Pittsburgh Post, established in 1842, since which date the said Pittsburgh Post-Gazette has been regularly issued in said County and that a copy of said printed notice or publication is attached hereto exactly as the same was printed and published in the Local Xtra editions and issues of the said Pittsburgh Post-Gazette a newspaper of general circulation on the following dates, viz:

**14 of July, 2017**

Affiant further deposes that he/she is an agent for the PG Publishing Company, a corporation and publisher of the Pittsburgh Post-Gazette, that, as such agent, affiant is duly authorized to verify the foregoing statement under oath, that affiant is not interested in the subject matter of the afore said notice or publication, and that all allegations in the foregoing statement as to time, place and character of publication are true.

K. Flaherty

PG Publishing Company

Sworn to and subscribed before me this day of:
July 14, 2017

Linda M. Gaertner

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Linda M. Gaertner, Notary Public
Findlay Twp., Allegheny County
My Commission Expires Jan. 31, 2019
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

**COPY OF NOTICE OR PUBLICATION**

TOWN OF McCANDLESS
NOTICE OF PUBLIC REVIEW FOR POLLUTANT REDUCTION PLAN

The Town of McCandless has prepared a pollutant reduction plan (PRP) for each Town watershed to comply with a new PADEP requirement for the upcoming 2018 to 2023 Municipal Separate Storm Sewer System (MS4) permit. The PRPs outline potential actions and projects that reduce pollution caused by sediment and/or nutrients in watershed streams. The plans will be on display during the Town's Open House on July 24, 2017 from 6:30pm to 8:30pm at Town Hall. A presentation on the PRPs will be made at approximately 7:00 pm. The PRPs will be available for review and written comments will be accepted in person or by mail at Town Hall from 9am to 5pm, Mon-Fri, July 24 through August 25, 2017, at Administration, 9955 Grubbs Road, Wexford, PA 15090 or by email at administration@townofmccandless.org. Please indicate in the subject line "Town of McCandless PRP Comments."

**STATEMENT OF ADVERTISING COSTS**

TOWN OF MCCANDLESS
REGIS
9957 GRUBBS ROAD
WEXFORD PA 15090

To PG Publishing Company

Total ---------- $53.20

## Publisher's Receipt for Advertising Costs

PG PUBLISHING COMPANY, publisher of the Pittsburgh Post-Gazette, a newspaper of general circulation, hereby acknowledges receipt of the aforsaid advertising and publication costs and certifies that the same have been fully paid.

Office
2201 Sweeney Drive
CLINTON, PA 15026
Phone 412-263-1338

PG Publishing Company, a Corporation, Publisher of
Pittsburgh Post-Gazette, a Newspaper of General Circulation

By _____

I hereby certify that the foregoing is the original Proof of Publication and receipt for the Advertising costs in the subject matter of said notice.

_____

Attorney For

**From:** M K [mailto:madeline.kalinowski@gmail.com]
**Sent:** Thursday, August 17, 2017 4:44 PM
**To:** Administration
**Subject:** Town of McCandless PRP comments

I have lived in McCandless many years and never really had a problem with the water or taste of it but for the last few weeks I have noticed a metallic taste whenever I drink a glass. Has something different been done to it?

Madeline Kalinowski
madeline.kalinowski@gmail.com

---

-----Original Message-----
From: Robert Casey [mailto:jcaseyatbat@gmail.com]
Sent: Sunday, July 30, 2017 10:50 AM
To: Public Works <public.works@townofmccandless.org>
Subject: "Town of McCandless PRP Comments."

To whom it may concern.

Every morning I walk my dog and it's not that uncommon to find fertilizer all over the sidewalks. Most quality lawn companies like Naturelawn use a leaf blower to clean up residual material. However many don't and therefore when it rains it goes directly into the storm sewers with out a chance to dissipate into the soil. Not to mention that it may be absorbed but pets paws. Therefore you may want to consider passing an ordinance requiring clean up after lawn fertilization.

Thanks,

Robert (Jack) Casey
10030 Timbarra Ct
McCandless PA 15090
724-936-6539

---

To: Ward 1 <Ward1@townofmccandless.org>
Cc: barb oswald <isisshadowkittycat@gmail.com>; jackie nichols <jcnichols1224@gmail.com>; Debe Masters <dbm654@msn.com>; JANET mike desko <jmdesko1@comcast.net>; sallee carr <waynec1971@comcast.net>; marcia brennan <brennan724@yahoo.com>
Subject: David Councill Memorial Park

To: Kim Zachary Council Member Ward 1
From: Ann Ferguson
Date: August 22, 2017
Subject: David Councill Memorial Park - Green Space Lands in the Town of McCandless

Dear Kim Zachary,

I approached you at Garden In The Park at North Park on August 19th about the David Council Memorial park, which seems to be MC4 on the map that was handed out. Our garden club, Ingomar Garden Club, has been taking care of this property for many years.

Marcia Brennan will send you information about the history of this park.

Jackie Nichols has been the chairwoman for many years in charge of coordinating the yearly planting and weekly care with her committee. Jackie has or will contact the council about the drainage issue and other concerns she might have.

Barb Oswald is our awards chairwoman who is looking into placing a Blue Star Marker on this property to better note this as a memorial park. She has or will contact the council about placing the marker.

One of the issues with this land is the wet area that runs through the middle of it to the drain, but does not drain well and the mowing tractor got stuck in the area and had to be pulled out.

The rest of the names listed are the officers and historian for the garden club.

If I can be of more help please email or call 412-443-6799.

Sincerely,

Ann Ferguson
Ingomar Garden Club president

PENNSYLVANIA'S FINEST
CERTIFIED FARM MARKET
RETAIL FARM MARKET DIVISION, PFA

EICHNER'S FARM
285 Richard Road
Wexford, PA 15090

Please keep this one page

Dear Mr Aufman,

There are 4 copies of my comments. One for yourself, Andy B. and whoever else. If you need more copies please let me know

Sincerely
Ron Eichner

PENNSYLVANIA'S FINEST
CERTIFIED FARM MARKET
RETAIL FARM MARKET DIVISION PFA

EICHNER'S FARM
285 Richard Road
Wexford, PA 15090

Aug 21, 2017

All Concerned,

As a lifelong resident in the Town of McCandless and the last full time farm, I welcome the opportunity to make comments toward the MS4-Plan. It has been almost 40 years for the original Forest Oaks PRD plan and it has been a journey.

There has been several revisions to both Forest Oaks and North Meadows plans and each review, eroded our farm properties protection. As a impacted farm property owner these series of reviews enhanced the developers profits and increased risks to our property. For the future of our farm, we need full cooperation with everyone involved.

I have enclosed a copy of "The Timeline History of Forest Oaks PRD, which is like connecting the dots. The Timeline is accurate, narrative, with the purpose to give everyone a understanding of what has occurred and how the developers benefited at our families expense. We have had to spend $30,000.00 plus over the last 35 years for our own self-preservation. Since the Town has had no interest in our property rights. The developers and their engineers have doubted the Town and staff every step of the way. A number of the reviews that where approved are in violation of not only the

Town of McCandless stormwater ordinances but the Pine Creek Watershed Plan also

Cypress Engineering, Inc did a complete review of the last Forest Oaks stormwater reviews and enclosed is a copy of the March 3, 2005 letter to Jim Venture. The report spells out a number of concerns and interestingly the report has never been responded too by Jim Venture or the Town of McCandless to date!!

First and most importantly, the only solution to the problems and concerns is to fully implement the original Forest Oaks PRD final approval which had sequenced the phases of development.

Second, review the enclosed copy of the Forest Oaks History of Stormwater Pond #2. There are needed modifications to the flawed approval. Keep in mind the last review was completed and approved without myself or my family knowing anything of the reviews! Pond #2 was to discharge the stormwater and overflow into the 30" diversion pipe that carries the stormwater and overflow to Pond #3. However the error has been to discharge Pond #2 into the overloaded 24" pipe, that was solely for the upper two properties, North Meadows and 16 acres in Pine Hop. Then remove the illegal spillway from Pond #2 because there is no conveyance to carry the overflow stormwater thru our farm. This is a violation of Town stormwater ordinances and the Pine Creek Watershed Plan!

Then re-address the flawed approval of down sizing the 42" diversion pipe to undersized 30" pipe. & Installing a second much needed diversion pipe to pickup the overflow water from Pond #2 and safely piping the stormwater to Pond #3 & You can not release stormwater onto a property if there is no conveyance to safely handle the stormwater! Again this is a violation of the Town's stormwater Ordinance & the Pine Creek Watershed Plan.

Third, revisit and enforce the Pine Creek Watershed release percentage and come in compliance with the 75% release rate for the Subarea #15. The stormwater discharge from Pond #3 has severely eroded the small stream over the last 35 years. The original stormwater approval had the first step of developement piping the stream with 270 feet of 48" concrete pipe because of the increased sustain stormwater discharge for Surge Pond #3. This is the only solution to safely convey the discharge water from two watersheds to carry the stormwater to Fish Run Creek through our farm property.

Fourth, due to the creation of two of three stormwater ponds north or above our farm property, and the collection & winter maintenance pollution of sodium and chloride, has contaminated our farm well and spring water. The increased pollution of the well water is effecting our livestock and the spring water is off the charts with pollution levels!

There are solutions to the water pollution, again we have to set down and addresse the problems and work toward a solution.

Fifth, with the purpose of the MS4 Plan, approach Pine Twp. to stabilize and correct the compound, excellerated erosion that has deposited tons of sediment into Fish Run Creek, AKA Wexford Run Creek from Fountain Hill Stormwater Pond. There has been errors in area creek identification for over 20 years. The now known Wexford Run Creek is in fact Fish Run Creek. Wexford Run Creek runs along Wexford Run Road in Marshall Twp!

Again the developers have benefited with the past approvals of the reviewed stormwater plans for their developements. Unlike the developers moving to another project. Our farm property has been impacted in negitive ways and burdens our future to safely farm our propoty. I don't want to go to the media or use the courts for a solution. However it appears the Town of McCandless has double standards and these practices have to end!

As the last full time farm, we would like our property rights fully protected, now and into the future. Since alot of the concerns and problems to our property was caused by closed door negotiations and we not contacted, leaves me to say I am open to discuss and work to correct all the violations!

Sincerely

Ron Eckine

# ***The Timeline History of Forest Oaks PRD***

October 4, 1978 – The Pennsylvania Storm Water Management Act #167 became law and Forest Oaks PRD was developed and approved in accordance with Act #167.

October 22, 1979 – The date of the final approval of Forest Oaks PRD. The approval was contingent upon the first step of the developer to install the off-site storm water piping (270 feet of 48-inch pipe and 200 feet of 60-inch pipe) and the *installation of a 6-foot chain-linked fence* between the properties, prior to construction of units, in each of the three phases of construction.

October 27, 1983 -- Shoup Engineering, Inc., the engineers for Eichner Farm, said that there are many issues with the revised storm water plan for Forest Oaks PRD (by Murray and Associates). "One of the drawings provided to me (Shoup) showed a complete piping from Pond #3, through Eichner Farm and under Richard Road…is the best solution to the storm water problem."

November 15, 1983 -- Don Partridge of Chester Engineers, the Town Engineer, responded to Shoup Engineering's Oct. 27, 1983, report which was requested by Bill Nolan, Town Zoning Officer, on November 1, 1983. In summary Don Partridge's response was, "In conclusion, the results of my inspections suggest that the original plan (Forest Oaks PRD) of piping the stream across the Eichner property is the best solution to the problem!"

March 26, 1984 -- Town Council approved the revised storm water plan for Forest Oaks PRD even though Don Partridge didn't agree that the revision was the best solution. Partridge felt the best storm water plan was the original 1979 approved storm water plan of the Forest Oaks PRD.

May 15, 1984 -- We received, per our request, a copy of Don Partridge's report dated November 15, 1983. Why was there a seven-month delay?

March 6, 1986 – The Pine Creek Watershed Plan was accepted by DER on this date. Each municipality in the Pine Creek Watershed had six months to adopt the land use and development ordinances to implement the plan (Section 11).

May 20, 1986 -- Toby Cordek, Town Manager, called Ron Eichner and stated that the approved and revised storm water plan for Forest Oaks PRD didn't have enough flow capacity in the diversion 30-inch pipe, which was downsized from the original diversion pipe size of 42 inches. The diversion pipe carries all the storm water from the northern end of Eichner Farm, around to Pond #3 and along Richard Road. I suggested having the developers install a second 30-inch diversion pipe and Cordek said, "the developers couldn't afford it!" Cordek said that we have a better plan which gives Eichner Farm 10 times the protection over the original plans which was not true!

October 27, 1986 -- An agreement was presented to Eichners between North Meadows, Inc., First Service Corporation (Forest Oaks PRD) and Town of McCandless to install 270 feet of 48-inch concrete pipe along Richard Road and through Eichner Farm from Forest Oaks Pond #3 to Richard Road. Along with a 15-foot easement to install [illegible] feet of 15-inch [illegible] Forest Oaks Pond [illegible] Richard Road [illegible]

The agreement was signed by Tobias Cordek and Robert J. Powers. The agreement didn't give us the 10 times protection that the previous storm water plan did, but it did give Eichner Farm 3 percent less protection. Thus an untruthful plan as presented and Eichners didn't sign the agreement!

December 16, 1986 -- Don Partridge cited, "The facilities in both revisions would be equipped with an emergency overflow spillway which would discharge thru the "Eichner Valley" from the north. This opinion is in violation of the Town's Storm Water Ordinance!

March 19, 1987 -- Don Partridge cited, "Since the new storm water proposal provides for the maximum flow use of the 30-inch diversion storm sewer, installed by Austin Contracting, the 48-inch concrete pipe along Richard Road, between the Forest Oaks Surge Pond #3 and Richard Road culvert, should be installed as provided for in the one-facility concept which was cited in the October 27, 1986, agreement that was refused because the one-facility concept didn't give us 10 times protection like Cordek stated. Instead the pond design gives Eichner Farm 3 percent less protection than the design of the three storm water pond design of Forest Oaks Pond #2, North Meadows Pond and the Pine Township Storm Water Pond.

March 27, 1987 – Once again Don Partridge cited, "The 48-inch diameter culvert along Richard Road must be constructed as discussed previously!"

November 12, 1991 -- David P. Johnston, Town of McCandless Planning Administrator, stated in a letter, "The purpose of this letter is to notify you that the off-site drainage concerns will have to be addressed when the undeveloped portions of the Forest Oaks Development (Phase II and II) are developed!" Why did the Town of McCandless officials and Town Engineer forget about the off-site drainage concerns from 1999 through the 2003 storm water plan approval?

May 5, 1992 -- Don Partridge cited to Toby Cordek that his review of the Forest Oaks files, dated August 11, 1983, showed approximately 320 feet of 48-inch concrete pipe and 200 feet of 60-inch concrete pipe to be installed!

## ***Ten Years Elapse!!!***

July 9, 2002 -- Letter from Jim Venture, Town Engineer, to Bruce Betty, "The revised (Forest Oaks/North Meadows) plan and supporting information provided has addressed all our previous review comments and appears to be in compliance with the Town Storm Water Management Ordinance. What were all of the previous review comments?

I am using one word several times that the Town Engineer used, "appears," in my supportive sentences. It appears the Town Officials, nor the Town Engineer, has had any conversation with Ron Eichner from the early 1990s through July 2002! It appears that with the changes to the approved Forest Oaks PRD, the latest revision of the Forest Oaks Storm Water Plan again, along with changes to the building setbacks which put the building lines 20-plus feet closer to the property line, it appears that the Town Officials Cordek and Betty can do all the revisions without public hearings! Why weren't public hearings held?

Bruce Betty forgot to explain the comment to Zokiates. It also appears that there are some double standards of how the Town of McCandless Officials handles issues like these which appear to be a violation of a lot of rules, laws or ordinances! You can see that using the word appear gives the Town Engineer and Offficials the right to take or make black and white language, such as Town Ordinance, and make it gray!

January 30, 2003 -- Jim Venture used the sentence, "The plan appears to remain in compliance with the Town Storm Water Management Ordinance." It appears we have a very grave concern to the whole storm water plan that the Town Engineer and Town of McCandless Officials have reviewed and approved! Again approval didn't have a public hearing to review all of the changes!

February 20, 2003 -- Prior to 1930, the wet weather stream above our 30-inch driveway pipe that runs up the creek bed along Richard Road towards Forest Oaks Drive was a non-maintained McCandless Township Road prior to 1930. It was the only way for my ancestors to get up to Route 19. The reason in this letter from Toby Cordek to me had a sentence stating, "We do not believe it is necessary to determine Richard Road's location prior to 1930." The reason Cordek doesn't want to recognize the location of Richard Road prior to 1930 is that it would prove once and for all the Forest Oaks pre-development engineering of 1978, 1983 and 2003 was flawed and invalid. The pre-development calculation reflected a high storm water release rate that was never accurate to the true facts but our driveway's 30-inch pipe was the true accurate device to calculate the true flows for over 50 years.

June 2003 -- Almost a year later, which was an oversight of Cordek and Betty, I received a copy of a Public Notice, Preliminary Opinion, which Betty, Cordek and Powers forgot to mention in three separate phone conversations back in June 2002 when the Town wanted to "update the Forest Oaks file." I have enclosed a copy of the Preliminary Opinion, review item #8, and as stated in item #8 it appears "the developer, nor the Town Officials meet with Ron Eichner prior to construction." Again it appear that Public Hearings were

If the Town Officials Cordek and Betty would have contacted me, Ron Eichner, over the four-year period from 1999 to 2002, we would not be in this mess we are in today!

Since as the Town Officials always state, "they are protecting Eichner Farm," we had to hire John Cenkner of Cenkner Engineering and do a complete report to address all the problems and errors that were made by the developers, developer's engineers, town officials and the town engineer back in 2003.

November 2, 2003 -- Cenkner Engineering sent a complete report to Town of McCandless which explained all the issues and concerns. Jim Venture, the town engineer, followed with a lame response to Cenkner's report.

October 22, 2004 -- Cenkner Engineering sent a letter to Jim Venture and asked questions about issues of the Forest Oaks storm water report, in relation to the Town of McCandless Storm Water Ordinances!

December 3, 2004 -- Jim Venture responded to Toby Cordek in regard to the October 22, 2004, Cenkner letter. It appears Jim Venture didn't understand the simple questions and didn't answer the letter.

March 3, 2005 -- It appears that a response to the six-page response of Cenkner Engineering to Jim Venture's engineer done ... Did the Town Officials not want Jim Venture to respond? Why has it taken almost three years and there still hasn't been a response? I have enclosed a copy of the six-page letter dated May 3, 2005, by Cenkner Engineering for your review.

Can we request a Public Hearing for all the changes that have been made since 1999 to the Forest Oaks and North Meadow plans? Are there truly double standards of how the Town of McCandless governs and enforces their Storm Ordinances? How can the footprints of an approved PRD plan be changed without a Public Hearing? Will the Town Officials respond to the Cenkner Engineering, March 3, 2005, letter?

Mr. Aufman, you are the only Town of McCandless Official that has taken the time to visit numerous times after different major rain events before Forest Oaks PRD was even started in 1984 and you continued your visits right up until Hurricane Ivan in September 2004. In addition, Mr. Aufman, you are the only council member that digested the true history of our 30-plus year history and have commented numerous times to me, "Do you trust the developer's engineers that calculate storm water in theory?" My answer is no! Just like the Town Engineer's calculation of pre-development storm water flows or release rate amounts for Forest Oaks PRD, they are subjective and not factual. The true factual pre-developed storm water flows from the north (Forest Oaks and North Meadows) by our witness and our engineer after 100-, 150- and 175-year storm events, has been immeasurable! Therefore, like the Town Engineer's calculation, how can you trust subjective findings? The watershed along Richard Road and Storm Water Pond #3 has been approved with subjective engineering from 1978, 1979, 1983 through and along with the latest 2003 reviews of the Town Engineers. It is a fact that the watershed along Richard Road is not a washout flood plan like the Town of McCandless and other engineers have described for over 30 years. The records state that for 78 years the 30-inch pipe under our driveway only handles 32 CFS. How can the Town of McCandless permit the engineered post-developed release rate of Jim Venture, which is a subjective 110 CFS, which [illegible] release number? This doesn't make sense. It increases the watershed release rate along Richard Road by 400 percent and would be in violation of the black and white language of Act #167, Pine Creak Watershed Plan and the Town of McCandless Storm Water Ordinance. The bottom line is that there are two watersheds with over-developed designs that have no access to a running stream without coming through the Eichner Farm property

I am going to send this information to Allegheny County and each municipality from the borders of the Town of McCandless through Hampton Township, Shaler Township and the Borough of Etna.

Landowners for [illegible] revised subjective storm water engineering and the increasing threat of storm water release that increases the fact that we now have a man-made flood plan through the Eichner Farm property. Really this is not a sentence.

After you have read "*The Timeline History of Forest Oaks PRD*" one has to ask, "Can the Town of McCandless officials and the Town Engineer enforce the Pine Creek Watershed Plan? My family and I no longer have anyone to trust when it comes to protecting the welfare of our family farm. Our farm is now in a man-made flood plan with no way to insure (do you mean insure with insurance?) the property from the overflows of the storm water ponds and the damages that will occur through our property.

For the last 25 years my family and I have spent tens of thousands of dollars on attorney and engineering fees to protect our farm. If the Town of McCandless would have enforced the Town's own Storm Water Ordinances, we would not have had to spend a penny. This issue has taken me away from working my farm and has involved many long days and many hours of time.

Proper actions or the lack of actions will impact the whole Pine Creek Watershed and the residences one way or another. I hope that since there is a breakdown in the local government's enforcement of storm water management that Allegheny County, Commonwealth of Pennsylvania or even our Federal Government would step up and enforce the Pine Creek Watershed Plan.

Sincerely

Ron Eichner

724-935-2131

Eichner's Farm

285 Richard Road

Wexford PA 15090

Cynthia N. Potter
Town of McCandless
Ward 1
9955 Grubbs Road
Wexford, PA 15090

Roger H. Krey
Town of McCandless
Ward 3
9955 Grubbs Road
Wexford, PA 15090

Robert J. Powers
Town of McCandless
Ward 4
9955 Grubbs Road
Wexford, PA 15090

D. Lamar Oliver, III
Town of McCandless
Ward 5
9955 Grubbs Road
Wexford, PA 15090

Ralph J. LeDonne
Town of McCandless
Ward 6
9955 Grubbs Road
Wexford, PA 15090

William C. Ries
Town of McCandless
Ward 7
9955 Grubbs Road
Wexford, PA 15090

J. Howard Womsley
Town of McCandless Solicitor
9955 Grubbs Road
Wexford, PA 15090

Congressman Jason Altmire
U. S. House of Representatives
1419 Longworth House Office Building
Washington, DC 20515

Jane Clare Orie
Pennsylvania State Senator
La Casa Blanca Building
Suite 105
9400 McKnight Road
Pittsburgh, PA 15237

Michael Turzai
PA State Representative
28th District
125 Hillvue Lane, 1st Floor
Pittsburgh, PA 15237

Randy Vulakovich
PA State Representatives
30th District
1407 Mt. Royal Blvd.
Glenshaw, PA 15116

Kathleen A. McGinty
Secretary
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17015

Dan Onorato
Allegheny County Chief Executive
Courthouse
436 Grant Street
Room 101
Pittsburgh, PA 15219

Jan Rae
Allegheny County Council
District 2
Courthouse
436 Grant Street
Room 119
Pittsburgh, PA 15219

Hampton Township

Shaler Township

Borough of Etna

Wayne Roller
Director of North Hills Council of Governments
300 Wetzel Road
Suite 201
Glenshaw, PA 15116

Marty Griffin
KDKA
Investigative Reporter
One Gateway Center
Pittsburgh, PA 15222

# FOREST OAKS' HISTORY OF STORMWATER POND #2

| Time Line for Pond #2 | Cubic Feet (cu. ft.) Storage Capacity | Pond #2 Discharge or Release Flow (C.F.S.) | Pond #2 Discharge Pipe Size | Flow Capacity of Pipe Size | Overflow Spillway |
|---|---|---|---|---|---|
| 1979 -- as approved | 114,896 cu. ft. | 55 C.F.S. | 42" pipe – on paper! | 110 C.F.S. | None |
| 1983 – 1st Revision by Murray Associates | 240,000 cu. ft. | 22 C.F.S. | 30" pipe – installed! | 40 C.F.S. | None |
| 1999-2002 – No Public Hearing on Revisions | 252,000 cu. ft. [1] | 6.2 C.F.S. [2] | 24" pipe – Pond #2 was to discharge into 30" pipe [3] | 20 C.F.S. [4] | Yes [5] |

* The latest revision and approval of the Forest Oaks II and III developments have rear driveways and access. This revision means that the square footage of paved surfaces in II and III total more than the combined driveways and private road surfaces through Forest Oaks I.

1 The storage capacity of Pond #2 was only increased 8 percent from 240,000 cu. ft. to 252,000 cu. ft. This is not sufficient to handle the increase in potential stormwater runoff for the revised paved surface areas of Forest Oaks II and Forest Oaks III.

2 The Discharge or Release Flow decreased 350 percent from 22 C.F.S. to 6.2 C.F.S. This puts Eichner Farm at a higher risk of flooding and erosion from stormwater runoff onto the farm property.

3 The 1983 revision which downsized the 42 inch pipe to a 30 inch pipe has a decreased diversion flow of 200 percent.

4 The discharge pipe size of 42 inches should not have been downsized in 1983 to a 30-inch pipe. In 1986 Toby Cordek said that the Town Engineer said there wasn't enough capacity in a 30-inch pipe to handle all the potential stormwater runoff.

5 Since there WAS NO MEASURABLE stormwater flow in the predeveloped state, it is illegal to have an overflow discharge or spillway from Pond #2 to the Eichner Farm property.

# CENKNER ENGINEERING, INC.

CONSULTING ENGINEERS & LAND SURVEYORS (SINCE 1976)

RR #1 BOX 283-H
ACME, PA 15610
PHONE: (724) 424-3800
FAX: (724) 424-3811

LAND SURVEYS
ENVIRONMENTAL PERMITTING
MUNICIPAL ENGINEERING
SITE DEVELOPMENT
GLOBAL POSITIONING SERVICES

3 March 2005

Mr. Jim Venture
Partridge Venture Engineering, PC
Nine Frontier Drive, Suite A
Gibsonia, Pennsylvania 15044

Project 03-125

**Request for Information and Answers to Questions**
**For the Eichner's Farm Inc. Tract**
**Town of McCandless, Allegheny County, Pennsylvania**

Dear Jim:

Upon review of your 3 December 2004, I have the following comments. First the correct spelling of my last name is **Cenkner**, please in the future have the courtesy to get that [illegible] Second, either you have actually missed the requests to provide information listed in various places in my 22 October 2004 letter or were instructed not to answer. It appears that you have taken the majority of critical information from my 22 October 2004 letter, chose to be irresponsible and not answer the items of concern. If you would read that document again you would see where it is very clear on where I was requesting a response and information. **Therefore, allow this letter and once more spell out the locations and the request for answers to the following concerns previously stated in my 22 October 2004 letter. A subsequent response letter addressing your 3 December 2004 letter will also be prepared.**

There are a number of items that are a source of concern for the owners of Eichner's Farm Inc. located directly to the south of and adjacent to the Forest Oaks Development. These concerns deal mainly with the Forest Oaks project's compliance with the Town of McCandless Ordinances and historical storm water management planning for development in the watershed upstream of Eichner's Farm Inc.

1. The Forest Oaks Phases II and III development leaves an approximately forty (40) foot high earthen embankment with a 14-foot wide emergency spillway discharging to the Eichner's Farm Inc. property with no conveyance system to carry any flow from the emergency spillway safely through the farm property. This appears to be a violation of the Town of McCandless ordinances. **Please answer why your firm (as the reviewing firm) and the Town of McCandless allowed the potential discharge through an emergency spillway to discharge through private property toward a business without providing a right-of-way and storm water conveyance directly to a stream?**

2. The Town of McCandless Storm Water Ordinance appears to defer to the requirements of the Pine Creek Watershed Study as stated in Section 1375.01(a). Therefore the developer's storm water management report should have used the 100-yr 24-hour storm design rainfall of 5.72 inches instead of 4.59 inches.



* The last page of this report sums it all up
- We have never got a response from Jim Venture or Town of McCandless with this letter

**In your 3 December 2004 letter, you have chosen to answer this statement when no question was asked. Why have you chose not to answer my 22 October 2004 letter where requests for information and responses were asked?**

3. Historical storm water management planning recommended by the Town Engineer contained in letters dated 16 December 1986 and 19 March 1987 **(See attached letters pages 27 through 38)** show that the Forest Oaks Development previously known as the Austin Development was to connect its storm water discharge to Manhole #4 which is the beginning of the 30" RCP pipe run to Surge Pond #3. The data contained in this letter also recommends the installation of the 48" CMP pipe to be installed parallel to Richard Road in front of the Eichner's Farm Inc. business for further protection of the farm property. The implementation of the 1986 planning has never occurred.

The 1986 planning to handle the storm water runoff from development upstream of the Eichner Tract was the agreed upon solution. **Why has your firm (as the reviewing firm) and the Town of McCandless has allowed the change in previously approved design concept to handle the storm water runoff from future development up stream of the Eichner Tract?**

**To whose benefit was this change made for?**

**How does this change afford more protection to the Eichner Farm property?**

4. The Forest Oaks development storm water management plan does not address or consider the effects of its discharge on the existing drainage system downstream through the Eichner's Farm Inc. property to a natural stream channel in conjunction with proposed storm water runoff from future developments per the 1986 recommended Town Engineer letter.

**Why has your firm chosen not to follow the 1986 recommendations previously made by your firm?**

5. The Forest Oaks plan collects and diverts uncontrolled storm water runoff from the western side of the development to a level spreader and discharges it through the Ronald H. Eichner property without a right-of-way or drainage easement. This again appears to be a violation of Section 1375.04 (c) (5).

**Why has your firm approved an apparent violation of the Town of McCandless storm water management ordinance?**

**Why have you allowed a new point discharge to be created and flow across Ron Eichner's private property?**

6. Eichner's Farm Inc. requests to review the maintenance agreement for the Forest Oaks project to insure it complies with Section 1375.04 (c) (7) (A, B, & C). Based on a review of the maintenance plan submitted with the copy of the development storm water management plan we received, a number of items including financial guarantees are missing.

**Please provide the following information in accordance with the above referenced section of the Town of McCandless storm water management ordinance for the Forest Oaks Phase II and III development upstream of the Eichner Farm Inc. property: Name of proposed ownership identity, the approved storm water control facility maintenance program, identification of the method of financing the continued operation and maintenance or if the facility is to be owned by the Town of McCandless?**

7. To our knowledge, an as-built survey of the Forest Oaks detention pond certifying the storage capacity of this facility has not been completed or not made available to the Town. **Without this information, all calculations are suspect until verification of the storage capacity of the detention pond is completed.**

**Please provide the as-built survey in an electronic format compatible with AutoCAD 2000 of the existing storm water management pond and outlet structure located above the Eichner Farm, Inc. property.**

8. Eichner's Farm Inc. request to review comments from the County Planning and Town Engineer Reviews of the Forest Oaks Storm Water Management Report for this project. **Please provide this information.**

**As you are the reviewing firm, please send me copies all review comments for all phases of the Forest Oaks storm water review.**

9. Section 1375.06 of the Town Storm Water Management Ordinance requires a re-submission of the storm water management plan to verify that no condition has changed within the watershed that would affect the feasibility or effectiveness of the previously approved storm water management controls. Referring to pages 5A and 32 attached to this letter, it appears that the construction of the 48" RCP off site storm sewer line from the north side of Richard Road to Surge Pond #3 was the approved sequence of construction of Erosion Controls and Storm Water Management for the Forest Oaks Development in 1979 and recommended again by the Town Engineer in 1986. The storm water revision of 1983 that was approved by Town Council in March of 1984 was to eliminate the 48" RCP offsite piping. Based on my understanding of the watershed development, no significant changes were made in the development of the watershed upstream of the Forest Oaks development from 1986 to 2002, yet the Town has approved a storm water management plan that has reduced the effectiveness and feasibility of previously approved and recommended storm water management controls and planning for handling the storm water from future development upstream of the Eichner Farm, Inc. property. This seems contradictory to the intent of the Town of McCandless Storm Water Management Ordinances.

**Why does your firm appear to have taken the position to have approved a significant change to previously approved storm water management controls recommended by your firm in 1986 for the Forest Oaks Development?**

**How are you following Section 1375.06 of the Town of McCandless Storm water Management Ordinance?**

**To whose benefit was this change made for?**

**How does this change that does not comply with the Town Ordinance offer more protection to the Eichner Farm Inc. property?**

**Where is the approval of the re-submission of the storm water management plan to verify that no condition has changed within the watershed that would effect the feasibility or effectiveness of the previously approved 1986 storm water management controls?**

**Section 1375.04 (c) (5) – Easements, rights-of-way, deed restrictions** - No documents have been supplied with the Forest Oaks storm water management report that define drainage rights-of-way through the Ronald H. Eichner tract for uncontrolled drainage flowing from the western side of the Forest Oaks development.

There is also no drainage right-of-way or conveyance system established to handle potential flow over the detention pond emergency spillway and through the Eichner's Farm, Inc. property.

**Why has your firm approved a storm water management plan for the Forest Oaks development that contains no provisions to handle the conveyance of storm water runoff from the emergency spillway through private property to a stream?**

**Section 1375.05 (b) (3) – Review by County Planning. - The Allegheny County Planning Department or the Allegheny County Department of Economic Development has provided no evidence or comments from a review of the Forest Oaks storm water management. A copy of the report of findings regarding this review is requested.**

**We are requesting a copy of the report of findings referenced above for this project. Please provide this information to me.**

**Section 1375.05 (b) (5) – Town Engineer Review. -** It is my opinion that the Town Engineer did not take into account certain sections of the requirements of the Town ordinances, plus the standards and criteria of the Watershed Storm water Management Plan. A copy of the Town Engineer's report to the Town Planning Commission regarding the approval of the Forest Oaks storm water management plan is requested.

**We are requesting a copy of the above referenced Town Engineer's report regarding the approval of the Forest Oaks storm water management plan. Please provide a copy of this report to me.**

**Section 1375.08 (b) – General Performance Standards -**

(1) **A & B** - These particular sections of the Town of McCandless storm water ordinance deal with managing the quantity, velocity and direction of storm water runoff in a manner that adequately protects health and property from possible injury. The Forest Oaks Development has constructed a storm water detention pond that has an emergency spillway directed at the Eichner's Farm Inc. tract with no conveyance system or right-of-way to handle potential overflows of this spillway through the downstream property. Due to this situation, Eichner's Farm Inc. has tried to procure flood insurance to protect its property and existing buildings essential to the operation of its business subsequent to the upstream development of the Forest Oaks project.

**Why has your firm approved a storm water management plan for development upstream of the Eichner Farm, Inc. tract that places downstream property owner at a safety disadvantage?**

**What benefit of protection does Eichner Farm, Inc. gain as a result of your approval of the Forest Oaks development?**

**Who has benefited from your action?**

**Why was the safety issue not addressed regarding the lack of conveyance system from the emergency spillway through the Eichner Farm, Inc. tract?**

**Why was water collected, concentrated, directed and released from the western side of the Forest Oaks development toward the Ronald Eichner tract with no means of conveyance or right-of-way to Wexford Run through the Ronald Eichner property?**

**Why has your firm approved such a plan?**

**Who has benefited from the approval of such a plan?**

**How have the Ronald Eichner and Eichner Farm, Inc. property benefited from storm water management ordinance protection as a result of your approval?**

**Please provide the compaction testing records compiled during the construction of the Forest Oaks detention pond earthen embankment. This information is requested to determine if compliance with the Town of McCandless grading ordinance was met.**

Carefully review the following paragraphs regarding the insurance situation the Town of McCandless and your firm has placed Eichner Farm, Inc.

Based on the Town of McCandless current approvals of the Forest Oaks Development that do not follow the original storm water design concepts originally approved in 1979 for the Eichner Valley, Eichner's Farm Inc. is left with an approximately 40-foot high earthen structure adjacent to its northern property line with an emergency spillway that will allow storm water to flow uncontrolled through its farm property. Eichner's Farm Inc. is also forced to purchase Federal Flood Insurance that was never required prior to the construction of the Forest Oaks Development.

Based on further research into the flood insurance situation by Eichner's Farm Inc., it was discovered that damage caused by erosion of water overtopping the Forest Oaks Development Pond and flowing through the Eichner's Farm tract would not be covered by flood insurance. This means that any damage to ground, buildings, parking areas, roads and pond by erosion is not covered by farm or flood insurance. Therefore Eichner's Farm Inc. will be responsible for the financial burden of making the necessary repairs to their property because of upstream man-made development with no legal conveyance system downstream of the development to the nearest stream (a direct violation of the Town of McCandless development ordinances).

**I trust that you will be able to find and answer the questions asked in this letter. I now realize that my 22 October 2004 letter may have contained too much information for you to digest and be able to locate the requests for information. I apologize for that and if you have any questions, please call me.**

Please review and respond to the items that require answers within fifteen (15) days of receipt of this letter report or the owner will be forced to take further action against the Town of McCandless and its storm water engineer.

Sincerely,
Cenkner Engineering, Inc.

John J. Cenkner, Jr. PE, PLS

1. Inlet Filter Inserts - These are expensive and need to be carefully maintained to ensure that they function properly. With the intense rainstorms we've been having, I am concerned that using these BMPs will lead to flooding in some areas if ~~water~~ runoff water can't make it into the inlet quickly enough.

Rather than using these, can these sites be physically modified, including adding vegetation, to reduce sediment entering the inlets. You could also suggest homeowners pave their gravel driveways. Would more frequent street sweeping in some areas help?

2. Is McCandless doing some other less expensive initiatives to reduce stormwater runoff and improve its quality? These include:

- Doing a tree canopy study to see where we need to improve tree cover.

- Encouraging homeowners to do soil test before they apply fertilizer, or ~~use fertilizer~~ not use fertilizer (mulch clippings instead)

- Encouraging homeowners to naturalize properties to replace some lawn with shrubs and trees →

- Encouraging homeowners to install riparian buffers, and the municipality installing them where streams are on public property

3. These intense precipitation events appear to be the new normal. Are you ensuring that you oversize the BMPs?

1. How do you decide which project receives priority?

2. Are ordinances in place to make sure that developers follow guidelines? or are these put in place by DEP & then who inspects?

3. There are older properties that may not be directly part of these areas but need evaluation for runoff caused by construction.

(over)

Rita Martin
412-848-5745 or ritadelmar1@gmail.com

4. Upper Gubb Rd. "floods" during heavy rains & there is much ponding — cars swerve to slow down & not lose control

**Marie Haller**

**From:** gg325@verizon.net
**Sent:** Thursday, August 24, 2017 9:31 AM
**To:** Administration
**Subject:** Town of McCandles PRP Comments

Gentlemen:
My wife and I have lived in The Town of McCandless since 1980.
Our home is located 20 feet off the edge of Pine Creek at 8097 Brittany Place.
Let me address the many issues with flooding we have experiencied over the years.
First:
In late 80's and early 90's I conducted a test for sediment accumulation change in the Creek section flowing past our property. As an engineer, I started observing the base of the creek changing after the sever storms were over.
The EARTH side walls would erode away due to the velocity of the water flow during storms. The velocity actually equated to standing at THE POINT in Pittsburgh during any good storm. Thus, I installed 2 measuring metal scales about 12 feet apart in the creek and mounted sturdy (not to move or come loose).
I found in 5 to just over 6 years, the bottem of the creek ROSE 8" to 10". This evidence told me the real answer to solving flooding on our property was to **DREDGE THE CREEK BOTTOM.**
So now , almost 20 years later under the Municipal Separate Storm Sewer System Program, you finally see the true resolvement to our flooding.
Second:
Over 5 years ago, a team headed by Mr. Cordek walked a long length of Pine Creek to see first hand the debris that was causing Clogs. They asked residents along the banks to help clean out small items and put at street for Borough Pick-Up.
The larger items were documented on clip boards to be addressed. Well, the small items were picked up. No one ever came to move the large tree trunks or slabs of concrete.
Third:
I contacted Gateway Engineers (actually visited the office) about a Drainage Pipe Inspection left the elbow pipe off the end to direct flow down stream, instead of into the main Pine Creek Flow. This lack of pipe elbow causes main stream
flow to go over the bank into my yard. Mr. Dan Deiseroth has the pictures to verify ,there was an elbow on the pipe in question before the serve was done. Please have Mr. Cordek put this on a meeting agenda with Dan D. very soon.
Finally, Mr. Banfield should visit Pine Creek next to my yard and view (plus measure) the white drain pipe (4"Dia.)
That pipe in 1980 stuck out off the side wall of the creek only 4". Now you see 24 inches plus,illustrating the amount of soil lost by side walls of the creek to cause present sediment increase.
Thank you for your follow up,

John & Judy Andra

From the desk of:
Lawrence R. Steckel
8159 Patricia Drive
Pittsburgh, Pa. 15237
412-364-1519—Home
412-736-9503----Cell
lorenzoscribe@hotmail.com

August 22, 2017

To: Administration...Town of McCandless
Public Works...Town of McCandless

Subject: Town of McCandless PRP Comments

I moved into my home at 8159 Patricia Drive, on May 31, 1972. I became a proponent of a remediation of Little Pine Creek about three weeks later, when the remnants of Hurricane Hazel blew through Pittsburgh on June 23-24, 1972. That storm turned my brand new back yard into a boiling mass of wild, brown water that damaged a shed that was at the back of the property, drowned a developing peach tree, threatened the stability of an above ground swimming pool that I inherited from the previous owner and of course ate into the bank of the creek.

Since that episode, I along with just about every resident of Patricia Drive have tried a multitude of different methods to stabilize the banks of the creek with various degrees of success. In my case, the McCandless Township Sanitary Authority had installed a corrugated steel wall at the creek bank to protect their terra cotta sewer line. It worked, but they didn't install enough linear feet of it and numerous high water events removed enough soil to expose the terra cotta line downstream of that wall. The Sanitary Authority later installed a second section of wall, but joined the two sections in such a haphazard manner that it caused high water to scour more soil from my property because of the turbulence it caused in the water flow.

As development upstream, such as Windmill Acres, the expansion of the NAI complex, the expansion of LaRoche College, emptied more and more water into Little Pine Creek, it became evident that the stream was overwhelmed by any large storm that was no where near hurricane levels.

In 1989, myself and several neighbors managed to convince the Pennsylvania DER to do a Flood Protection Survey of Little Pine Creek. That survey identified numerous choke points in McCandless, Ross and Shaler that if improved would have reduced restrictions and improved the flow of the stream during high water conditions. Nothing was ever done concerning the recommendations of that study.

Hurricane Ivan in September 2004 sent flood waters to the highest point I have ever seen on this street. My house which has been thankfully spared all these years saw water rise to within 20 feet of my garage door. Every other house downstream of mine suffered basement flooding. Please remember that this event happened many years before McCandless Crossing was a dream in the developers eye.

The improvement of the surface water outflow from Vivian Drive works fine when water levels in Little Pine Creek are low. However the outflow enters Pine Creek at an almost 90 degree angle. When the water from Pine Creek is running high and fast, Vivian Drive water doesn't mix well with Little Pine Creek, it churns up out of its culvert and adds to the water levels in our yards. Probably works great for Vivian Drive residents. Not so much for Patricia Drive.

The creation of McCandless Crossing has added a significant additional water load to Little Pine Creek. I understand that the new "front yard" retention pond at LaRoche is supposed to be the savior of us all, but I also understand that at some point additional development will add enough additional gallons of run off to overwhelm that pond. Add a hurricane like Ivan to the mix and even the houses at my end of Patricia Drive will see flooding.

Given this history, if stream bank restoration will help Little Pine Creek flow more efficiently and scour less sediment from our yards, I am definitely in favor of the project. I do have several cautions however:

First: When the McCandless Sanitary Authority relocated the return line from the pumping station on Brittany Place to the Hazlett treatment plant, they abandoned in place the old steel return pipe which can be seen in places in the bed of the stream. That will probably have to be removed, and I'm sure there is still sewage sitting in that pipe.

Second: More recently the Sanitary Authority installed new plastic outflow piping in the yards of Patricia Drive. In doing so, they abandoned in place the old terra cotta lines that are just back from the stream bank. Another pollution risk.

Lastly, at the 1989 meeting of the watershed communities, I stated that I grew up in Etna Boro. My dad was a volunteer firemen. I can vividly recall standing on the May West Bend, watching my dad, clad in chest waders, assist his fellow fireman pushing a row boat down Dewey Street to rescue families off their front porches. Little Pine Creek empties in the main channel of Pine Creek behind the Etna ball field. High water flow in our area results in major flooding on Dewey and Wilson Streets in Etna. It is not our right to do that.

Do I want relief from the flooding and loss of property. Absolutely. That said, I repeat that the communities of the North Hills do not have the right to flood Shaler and Etna with their storm water. If this project is done, there has to be some way to store storm water runoff at some point and meter the flow of that water to minimize damage downstream.

Respectfully,

Lawrence R. Steckel

## Marie Haller

**From:** Toby Cordek
**Sent:** Friday, August 18, 2017 6:39 PM
**To:** Marie Haller
**Cc:** Bruce Betty
**Subject:** FW: Town of McCandless PRP Comments
**Attachments:** 2011_DSC_1483.JPG; 2016_0412_133408.jpg; 2017_Jan21.JPG; 2017_june15.JPG

Please print pictures. Tx.

Bruce, we should go over the comments here and there. Tx.

**From:** Administration
**Sent:** Thursday, August 17, 2017 4:28 PM
**To:** Toby Cordek <mccmgr@townofmccandless.org>; Bruce Betty <bbetty@townofmccandless.org>
**Cc:** John Bojarski <jbojarski@townofmccandless.org>
**Subject:** FW: Town of McCandless PRP Comments

FYI

**Marie A. Haller, Administrative Assistant**
**Manager's Office | Town of McCandless**
9955 Grubbs Road; Wexford, PA 15090-9644
t: (412) 364-0616 x120 | f: (412) 364-5066 | e: mhaller@townofmccandless.org

**From:** Krissy Guttendorf [mailto:thesugarpixie@gmail.com]
**Sent:** Thursday, August 17, 2017 3:39 PM
**To:** Administration
**Subject:** Town of McCandless PRP Comments

Good Afternoon!

My name is Krissy, and my husband Dave and I live at 8187 Streamside in Pine Run. We live on Little Pine Run just two or so houses up from the McCandless / Ross line. I was really excited to see the plans for Little Pine Run in the PRP.

We've lived here since July 2011, and have seen quite a few changes to our section of the stream. We wanted to maintain our section of the stream, but with each raging storm we lose just a bit more. Since the plans were announced I have tried to go through photos I have taken, but not sure it really grasps what we're dealing with. Each bout of severely heavy rains turns Little Pine into a raging river. The water moves with a fierce force, and we've seen railroad ties, trees, and oh so many balls (basket, kick, giant kickballs etc.) float by. We've tried to retrieve and remove what we can, but along with debris there's been trash (doggy doo bags.....)

I've reached out to Pine Creek Watershed Coalition, but they weren't much help and then I realized it was probably better to not do anything. I've let our neighbors know the township is working on a plan and to take a look at it, as many of our neighbors have been here much longer than us and can attest to many other changes. (Trees planted several feet from the stream edge that are now, almost falling in.)

Our family really wants to preserve our section of the stream and look forward to these projects moving forward. We invite anyone out to come see our little section!

We very much look forward to this potential project, and are following it with extreme interest!
See attached photos with dates. Included one from June 15, 2017, but have several others like it from past years.

Thank you,
Krissy and Dave Guttendorf
--
www.thesugarpixie.net
*Misadventures and fun in the kitchen, garden, and beyond!*

# Response to Public Comments on the Pollutant Reduction Plan

***Beth Dutton on 7/24/2017***

1. We agree that some inlet filter inserts are expensive in the context of maintenance; however. McCandless currently uses state of the art filters that have long life expectancy (5+ years). They require periodic cleaning; we clean ours quarterly at a minimum, depending on weather conditions. The filter inserts that McCandless is utilizing have a high bypass for extreme storm events to prevent flooding.

   Adding vegetation has been and will continue to be encouraged.

   The Town does not foresee requiring homeowners to pave their gravel driveways, but plans to advise those with gravel driveways or roads to keep them rolled, clean up accumulations and create a catchment area where gravel can be retrieved. McCandless requires, at a minimum a paved driveway apron.

   PADEP has provided guidance on using street sweeping; McCandless sweeps each paved Town road one time per year and attempts to perform a 2nd sweeping depending on weather and working conditions. McCandless believes it is infeasible and inefficient to implement a more frequent street sweeping program in order to take credit for the minimum of 25 times per year per street for the PRP.

2. The Town greatly appreciates when residents get involved in installing storm water best management practices such as trees and rain gardens. To this end, the Town plans to embark on a tree planting initiative, encouraging residential and commercial property owners to report the planting of trees on their property.

3. We intend to ask the Town's Environmental Advisory Committee to make a tree canopy study as part of their green space inventory in progress. Educational materials available to residents including how to construct a rain garden and other green infrastructure practices that date back to 1987. The Town will plan to educate landscaping businesses and home owners on the harmful effects of chemical fertilizers. The Town has routinely instructed residents to mulch and compost grass clippings and utilize organic fertilizers. In regard to riparian buffers, the Town will continue to instruct homeowners to install riparian stream bank enhancements. In addition, the Town has a riparian buffer program and will continue to monitor the program for this 5-year plan.

4. The Town's stormwater management ordinance goes above and beyond PADEP's stormwater design requirements to ensure adequate capacity of stormwater BMPs during certain types of storm events.

   We thank you for your comments.

***Rita Martin on 7/24/2017***

1. Projects will be prioritized according to the section titled "Operation and Maintenance of Potential BMPs" on page 16 of the PRP report. Funding will be determined as part of the Town's budgetary process. Small maintenance projects will fall under the operating budget. New or larger permanent projects will be part of the Town's capital budget.

2. The Town's stormwater ordinance provides strict guidelines when designing stormwater facilities. These guidelines go above and beyond PADEP's minimum requirements for stormwater facilities. Pre-construction meetings precede commencement of work. Regular inspections take place during construction to ensure adherence to the approved plans. Some inspections are performed in conjunction with the Allegheny County Conservation District. Development's post construction requires as built plans and inspections that ensure that the plan is in compliance with the stormwater management ordinance such as testing what was built against the plan's stormwater calculations to ensure peak flow and volume capacity compliance. These routines meet or exceed PADEP stormwater management requirements.

3. McCandless is aware of areas that have little to no stormwater management. These areas are considered a priority when selecting the PRP projects.

4. The Town has made note that you reported flooding on Upper Grubbs Road during heavy rainfall events. We are aware of the topography on the road; most of the Town's pre-1978 drainage systems and road drains have the capacity to handle a storm that has a 4% chance of occurring (previously termed a 25 year storm).

   We thank you for your comments.

***John and Judy Andra on 8/24/2017***

1. Dredging a stream is not an effective solution for the flooding and sediment accumulation problem. In addition, PADEP does not typically permit dredging activity of stream beds. According to FEMA, dredging frequently results in the following:
   - Increased flooding downstream
   - Upstream bank erosion
   - Increased gravel bar formations
   - Stream bank erosion
   - Destruction of stream habitat.

   Please note that your property is within a FEMA delineated floodplain. Based on our analysis it appears that your property's close proximity to the stream precludes stream bank restoration project in the future. We are concentrating our efforts of stream bank restoration upstream of Pine Creek in this five-year plan which would help remove sediment from downstream. In regard to cleaning debris from the stream; the Town typically asks that the property owners remove obstructions from their property.

We thank you for your comments.

***Lawrence R. Steckel on 8/22/2017***

1. Patricia Drive is a targeted area for a stream bank restoration project. Through the North Hills Council of Governments, we have been coordinating and plan to continue to coordinate many of our projects with our downstream and upstream neighboring communities. We are glad to have the opportunity to help under PADEP regulations.

   We thank you for your comments.

***Krissy and Dave Guttendorf on 8/17/2017***

1. We are glad to be able to address area this under the new PADEP permitting program. Your particular segment of the stream is a small tributary and not designated by PADEP and federal regulations as a defined bed and bank stream.

   We thank you for your comment.

***Madeline Kalinowski on 8/17/2017***

1. The Pollutant Reduction Plan is proposed to improve the water quality of receiving waters due to stormwater runoff. We have forwarded your comment to the West View Water Authority, the provider of drinking water.

   We thank you for your comment.

***Robert Casey on 7/30/2017***

1. The Town has routinely provided information in its various media to residents about the appropriate use of fertilizers and pet waste control. It would be difficult to routinely enforce an ordinance to this effect, so the Town will continue to sustain its education program. In extreme cases of fertilizer pollution, the Town will act on the situation appropriately and likely turn the matter over to the PADEP.

   We thank you for your comment.

***Ann Ferguson on 8/22/2017***

1. The Town has reviewed David Councill Memorial Park and is considering the area as a candidate to contain a rain garden.

   We thank you for your comment.

***Ron Eichner on 8/21/2017***

1. The stormwater plans submitted by the developers of land above the Eichner farm were reviewed and approved by the Town. The plans started in 1978. There were attempts to negotiate piping through the Eichner property which were ultimately rejected by the Eichners. Regarding the "sodium and chlorides" reportedly polluting Eichner wells and springs, the Town plans to test the soils where sodium chloride may accumulate and infiltrate into the wells and springs, namely the stormwater detention facilities at Forest Oaks and North Meadows. If the amount of sodium chloride found in the analysis exceeds the applicable water quality standards we will explore steps to remediate the problem. The Town along with PADEP, Allegheny County Conservation District, EPA and several other state agencies have inspected the property and not found evidence of misguided or errant stormwater approvals or practices. The Town found increased nitrogen and phosphorus levels in the downstream area of Wexford Run. We have received your extensive comments and determined that each have been previously investigated.

We thank you for your comments.

***Tree Planting Initiative Program***

The Town of McCandless is planning to initiate a tree planting program. The tree planting initiative will encourage residential and commercial property owners to report the planting of trees on their property. This will serve as an outreach and educational mechanism as well.

The program would allow for more tree canopy cover throughout the Town that will help reduce stormwater runoff. Trees are beneficial for reducing stormwater pollution by taking up nutrients and various pollutants through their root systems. Though tree planting is not a requirement to residents and businesses, the Town tabulate the number of trees planted within this 5-year cycle and add the result to the amount of sediment removed, one pound for each tree planted . The Town also intends to ask the Environmental Advisory Committee to incorporate a tree canopy investigation as part of their green space inventory.