

**LITITZ BOROUGH STORMWATER MANAGEMENT FEE**

# **Standards and Policies Manual**

Updated December 21, 2021

## Table of Contents

**1 Introduction**

**2 Definitions**

**3 Standards**

3.1 General Conditions

3.2 Billing and Collections

3.3 Special Conditions

**4 Policies and Processes**

4.1 Parcel re-calculation

4.2 Credits

4.3 Appeals

4.4 Inquiries

### **Appendices**

A Re-calculation Request

B Credit Application

C Transfer/Purchase Credit Application

D Appeal Form

E O&M Agreement

F O&M Verification Form

# 1 Introduction

In November 2019, the Borough of Lititz Final Stormwater Fee Study and Development Report (Report) and accompanying draft ordinance and resolution for adoption by Borough Council were delivered. The ordinance establishes a “Stormwater Management Fee” (or Stormwater Utility Fee) (SWF) for the Borough as outlined within the report. The purpose of the SWF is to provide a practical and dedicated revenue source to overcome current and inadequate funding for maintaining, operating, and improving the stormwater management system in the Borough, adhering to federal and state stormwater management requirements, building resiliency components to protect economic infrastructure and the health and safety of the Borough’s citizens, replacing aging infrastructure, and safeguarding local natural resources and the drinking water supply.

The SWF rate and structure were determined strictly on the basis of the costs of services similar to other utilities. The basic cost-of-services approach to the determination of the SWF rate results in a fiscally conservative rate that matches program costs to revenue. The SWF will be considered funded through a schedule of service charges (fees) upon all properties. Total stormwater run-off is the most significant factor influencing stormwater service requirements and costs, influences to receiving waterways and the regulated system, and lifespans of infrastructure; and therefore, is an appropriate parameter for determining stormwater service charges. A rational nexus exists between runoff and the costs of service for the stormwater program.

Among the various provisions outlined in the Report and during the development of the SWF structure is proposed standards, policies, and processes for the facilitation of the SWF program. The ordinance establishes several of these provisions as follows:

## **Section 109. RECALCULATION OF FEES FOR INDIVIDUAL PROPERTIES**

- A. If a person responsible for paying the fees established in Section 103 questions the correctness of such fees, that person may file a written request and have the determination of the fees recalculated within 30 days of the mailing of the stormwater management fees by submitting the written request to Lititz Borough, and based on the policies and standards adopted by Borough Council by resolution.
- B. When submitting a written request for review and/or recalculation of the stormwater management fee as set forth above, the property owner must include a detailed statement of the basis for the request and documents supporting the owner's assertion that the property should be assigned a different equivalent factor, total stormwater runoff should be calculated for the individual parcel in lieu of the averaged stormwater runoff, or the measurements used to calculate the number of base units for the property are incorrect.

## **Section 110. APPEALS**

- A. A property owner may appeal any decision of the Borough in writing, not later than 30 days after receipt of the response to the property owner's written request for recalculation of fees.
- B. Any person aggrieved by any administrative action of the Borough may appeal to the Lititz Borough Council within 30 days of that action. Any such appeal shall be governed by the procedures of **Article V of the Local Agency Law, 2 Pa. C.S.A. 401 et seq.**
- C. Nothing in this section shall prejudice the right of any party to appeal a decision to Lancaster County Court of Common Pleas in accordance with the Local Agency Law of the Commonwealth of Pennsylvania, within 30 days of that decision.

### **Section 112. STORMWATER MANAGEMENT FEE CREDITS**

A. The Borough may provide a system of credits against stormwater management fees for properties on which a stormwater management/water quality facility substantially mitigates stormwater runoff, provides regional stormwater management, reduces pollution flowing from such properties or substantially decreases the Borough's cost of stormwater management. Borough Council will adopt, by resolution, written policies and standards to implement the credit system.

B. A property owner may appeal the decision regarding the issuance or non-issuance of a credit within 30 days after the decision is provided by the Borough. All such appeals shall be in accordance with Section 110 of this chapter.

Furthermore, Section 115 of the ordinance indicates the Borough will promulgate procedures, written requests, and other forms relating to the interpretation, enforcement, and management of the SWF program in policies and standards adopted by resolution by Borough Council. The Standards and Policies Manual (Manual) serves as the collection of the policies and standards.

## **2 Definitions**

The definitions used in this manual are common and consistent with those used in the *Stormwater Management Fee Ordinance (SWFO)*, the *Stormwater Management Ordinance (SWMO)*, the Borough's *Stormwater Management Program (SWMP)*, and those defined in the Borough's other ordinances or plans related to stormwater management.

## **3 Standards**

Standards, including General Conditions, are established to support the stability of the SWF program, promote equity and fairness among rate payers, and provide reasonable rules and processes for the facilitation of the program. The standards establish criteria and processes for the appropriate and effective adjustment of assigned REFs to a property to account for qualifying activities, practices, and property characteristics that reduce the Borough's cost of services related to stormwater management. This primary policy is based on the following premises:

- Property owners exercise control over factors that affect stormwater runoff quality and quantity.
- Property owners may reduce the Borough's costs of services through development choices, specific property facilities, management practices, and services.
- Stormwater fees and credits provide an incentive for improved watershed management practices.

The Manual has been created to provide information and procedures for property owners to facilitate the above policy and the SWF program as adopted.

### **3.1 General Conditions**

The following conditions are considered baseline rules, considerations, or requirements of the SWF program and structure:

- A. A minimum of one (1) REF will be applied to any property (parcel).

- B. Properties (parcels) with an assignment of one (1) REF (or through previously approved re-calculation or credit applications reducing the assigned REFs to one) are not eligible for credits, re-calculations, or other similar processes that may be implemented by the Borough.
- C. A process to re-calculate run-off from an individual property (parcel) shall be available. A re-calculation will only be conducted upon an application from the property owner.
- D. A process to provide credits (or a reduction in assigned REFs) based on the primary policy for an individual property shall be available. Credits will only be applied upon review and approval of a completed application package from the property owner by the Borough Council.
- E. A process for property (parcel) owners or persons residing and/or working in the Borough to submit questions, inquiries, or other shall be provided.
- F. A process to appeal by a property (parcel) owner to any determination shall be provided.
- G. Applicable waterbodies that may be referenced in a policy or process are those that are identified and listed in the Borough's Stormwater Management Program (SWMP).
- H. The SWF and this Manual are applicable to all properties (parcels) located in the Borough.
- I. A credit represents reduction in a property owner's SWF through a reduction in assigned REFs. The credit is subject to the conditions specified for the credit and the general conditions defined in this Manual. A credit shall not reduce a property's (parcel's) assigned REFs below 1 REF.
- J. A credit is a reduction in assigned REFs based on the estimated or intrinsic contribution value of a variety of stormwater management practices or measures provided and maintained by property owners. Types of credits are limited to those outlined in this Manual but may be changed from time to time by Borough Council.
- K. A completed re-calculation or approved credit application changing the assigned REFs to an individual property (parcel) will be effective ten (10) days after the approval date indicated on the application.
- L. A reasonable fee for processing re-calculation requests or a credit application shall be applied.
- M. REFs will be applied to quarter-acre tiers for properties (parcels) 0 acres to 1 acre in size. REFs assigned to properties (parcels) greater than 1 acre in size shall be determined by the parcel size (in acres) multiplied by the established REFs/acre.
- N. The land use categories for applying REFs shall be residential, residential-complex, commercial/mixed-use/business, industrial/manufacturing, institutional, open space/recreational, and utilities/miscellaneous/transportation. The REFs/acre established and the REFs assigned by categories are as follows:

Land Use	REFs/Acre
Residential	4
Residential-Complex	4.52
Commercial/Mixed-Use/Business	10.32
Industrial/Manufacturing	8.28
Institutional	6.88
Open Space/Recreational	2.48
Utility/Misc./Transportation	9.04

O. REFs will be applied to properties (parcels) based on the following table:

acres	Residential	Residential-Complex	Commercial/Mixed Use/Business	Industrial/Manufacturing	Institutional	Open Space/Recreation	Utility/Micellaneous/Transport.
0-0.25	1.00	1.13	2.58	2.07	1.72	1.00	2.26
0.26-0.50	2.00	2.26	5.16	4.14	3.44	1.24	4.52
0.51-0.75	3.00	3.39	7.74	6.21	5.16	1.86	6.78
0.76-1.00	4.00	4.52	10.32	8.28	6.88	2.48	9.04
>1.00	calculated	calculated	calculated	calculated	calculated	calculated	calculated

P. The Borough's stormwater management program is regulated and monitored by the Pennsylvania Department of Environmental Protection (PADEP) and the United States Environmental Protection Agency (USEPA) under a National Pollution Discharge Elimination System (NPDES) permit (the MS4 permit). The MS4 permit and resulting compliance program constitute most of the program measures and practices to be implemented and maintained by the Borough. These measures and practices referred to as Best Management Practices (BMPs) are focused on and determined by water quality management needs. The Borough therefore intends to provide credits and adjustments consistent with its overall water quality program focus.

Q. Certain property (parcel) owners may apply for multiple credits. Most credits approved will result in a reduction of a percentage of assigned REFs. In turn, the order of precedence for determining credits in situations where multiple credit types may be applied for is:

- a. MS3-Regional Credit
  - i. MS4 Outfall Maintenance
  - ii. Regional Facility Easement
- b. On-site Water Quality Treatment Credit
  - i. Industrial NPDES Stormwater Permit Compliance
  - ii. Green Infrastructure Implementation
  - iii. Existing Facilities Retrofit
  - iv. Stream Buffer
  - v. Stormwater Pollution Prevention "Hot Spots"
- c. On-site Attenuation Credit
  - i. On-site Attenuation

### **3.2 Billing and Collections**

The annual SWF due for individual properties (parcels) shall be provided in four quarterly payments equal or nearly equal in value for each payment. Bills for established accounts will be rendered on the 10<sup>th</sup> day of March, June, September, and December each year. The SWF will be a separate line item on existing water, sewer, and/or trash utility bills. For properties (parcels) that currently do not receive a utility bill, a bill solely for the SWF shall be issued to the property (parcel) owner following the same schedule as the water, sewer, and/or trash utility billings.

If any SWF bill is not paid within 45 days after the billing date, it shall be the duty of the Borough to give the customer (parcel owner) 10 days' notice, in writing, of the fact that such SWF bill is delinquent and that at the end of such ten-day period a penalty will be applied.

### **3.3 Special Conditions**

The following special conditions are included to address conditions that may be encountered on individual properties (parcels) or a collection of properties (parcels):

- A. Individual units within a residential, commercial, or other complex (as reflected in Borough GIS data with a parcel identification number) shall be assigned an applicable REF, and the property (parcel) owner shall be billed accordingly. Home Owner Associations (HOAs), management entities, complex owners, or an applicable other individual/organization shall be billed for all other and remaining areas (including common spaces, parking lots, etc.).
- B. Re-calculation requests and credit applications for an individual property (parcel) will be processed by the Borough within fifteen (15) days of receipt of a completed application package. Recalculation requests must be submitted within thirty (30) days of receipt of a SWF bill. Credit applications may be submitted at any time. Credits will be applied to the parcel that any improvements or credit actions are being proposed on. Credits will not be applied across all parcels that a property owner may own if improvements or credit actions are not proposed on those additional parcels.
- C. Property (parcel) owners may apply for one (1) or more credit types.

## **4 Policies and Processes**

The SWF program policies and processes have been designed with the following set of guidelines:

- Provide methods tailored to the SWF program priorities and needs.
- Provide consistent and uniform policies and processes.
- Minimize administrative effort and costs.
- Provide credit measures that provide a benefit that is greater than the cost to administer the SWF program.
- Maintain the financial integrity and stability of the SWF program.
- Maintain a balance between simplicity, fairness, and effectiveness.

#### **4.1 Parcel Re-calculation**

The assigned REF(s) to individual properties (parcels) was based on averaged conditions determined for land use categories as described in the Report. The primary factors for averaged conditions included an average curve number by land use category, amount of impervious coverage, and stable pervious areas. Individual properties (parcels) may vary from the averaged conditions (e.g. less impervious coverage). In turn, individual property (or parcel) owners may submit a Re-calculation Request Application and associated application fee for the assigned REFs to be reviewed and adjusted as appropriate to reflect the property's (or parcel's) conditions more accurately based on the REF methodology outlined in the Report. A re-calculation may result in the assigned REFs increasing, remain the same, or decreasing. The Re-calculation Request Application can be found in Appendix A.

Worksheet 2 in the United States Department of Agriculture (USDA) Technical Release 55 (TR-55) for Urban Hydrology for Small Watersheds will be used for the re-calculation process. The worksheet will produce a curve number specific to the individual property (or parcel). The curve number will be compared to the REF Ratios Table found in Appendix E of the Report. A ratio between the re-calculated curve number and the established residential curve number will produce an REF/acre. Based on the size of the property, the appropriate REFs will be applied per Section 3.1-M in the general conditions. A copy of the worksheet will be attached to any re-calculation request response by the Borough.

#### **4.2 Credits**

The Borough has made provisions for a variety of approved SWF credit measures. Approved credits may result in a reduction of assigned REFs to an individual property (parcel). Credits may be purchased by other property (parcel) owners.

The selected SWF algorithm as outlined in the Report includes five credit categories. The credit categories (and corresponding credit types) are as follows:

- MS3-Regional Credit
  - MS4 Outfall Maintenance
  - Regional Facility Easement
- On-site Water Quality Treatment Credit
  - Industrial NPDES Stormwater Permit Compliance
  - Green Infrastructure Implementation
  - Existing Facilities Retrofit
  - Stream Buffer
  - Stormwater Pollution Prevention “Hot Spots”
- On-site Attenuation Credit
  - On-site Attenuation
- Third Party Credit
- Transferred/Purchased Credit

Each credit category includes various and specific credits that may qualify for a reduction in assigned REFs.

#### 4.2.1 MS3-Regional Credit

The types of credits under this category include water quality and/or water quantity improvement approaches or considerations that positively affect an area greater than the immediate property (or parcel) in which a BMP, restoration approach, management techniques, etc. may be located. The credit types will generally improve an entire Municipal Separate Storm Sewershed (MS3) or greater area.

##### A. MS4 Outfall Maintenance

- a. A reduction in assigned REFs will be granted to property (parcel) owners that have an outfall on their property (parcel) along an applicable waterbody in which there are discharges from the MS4; and the property (parcel) owner properly maintains the outfall structure.
  - i. A map of MS4 outfalls can be found in the Borough's SWMP.
- b. Confirmation of proper maintenance of an outfall will be determined by the Borough annually through the required dry weather screening process outlined in the Borough's Illicit Discharge Detection & Elimination (IDD&E) Plan.
  - i. When a determination is made that an outfall is not properly maintained, the property (parcel) owner will have forty-five (45) days to complete corrective actions to maintain the credit.
  - ii. If the property (parcel) owner does not complete corrective actions within the required timeframe, the credit(s) will be removed. Upon completion of the corrective actions, the property (parcel) owner may reapply for a credit(s).
- c. Additional credit requirements and stipulations are as follows:
  - i. The credit is available to any property (parcel) owner in which an MS4 outfall is located on the property (parcel).
  - ii. Credits for MS4 outfall maintenance are non-transferrable.
  - iii. Credits are not retroactive and are valid from the date of an approved Credit Application.
  - iv. Credits are valid for as long as the MS4 outfall is on the property (or parcel), and the conditions of this credit type are continually met.
- d. A reduction of the equivalent of up to five percent (5%) in assigned REFs will be awarded upon an approved Credit Application from a property (parcel) owner for each MS4 Outfall.
- e. Credit applications for MS4 outfall maintenance shall include the numerical outfall name(s) of all outfall(s) on the property, photos of the current condition of the MS4 outfall(s) on the property, and a proposed outfall maintenance plan for review. A meeting with Borough staff to discuss/review the proposed outfall maintenance plan will be required as part of the credit application.

##### B. Regional Facility Easement

- a. A reduction in assigned REFs will be granted to property (parcel) owners where an easement for the construction of a Municipal Bank facility or regional stormwater management improvement is granted to and accepted by the Borough.
- b. The Borough will require that the easement location and ownership and maintenance responsibilities be memorialized in a document recorded at the Office of the Lancaster County Recorder of Deeds.
- c. Credits for granting a regional facility easement are non-transferrable.
- d. A reduction of the equivalent of up to twenty percent (20%) in assigned REFs for the parcel will be awarded upon acceptance of the easement by the borough and recording of the easement. The percent reduction will be based on a number of

factors, including the proportion of the parcel(s) given up for a regional facility easement.

#### 4.2.2 On-site Water Quality Treatment Credit

The types of credits under this category include water quality improvement approaches or considerations that treat stormwater runoff and/or improve the quality of water/runoff through the reduction of pollutants. The applicable BMPs, restoration approaches, management techniques, etc. are generally confined to a site and treat immediate drainage.

- A. Industrial NPDES Stormwater Permit Compliance
  - a. Property facilities that are covered under a valid, compliant NPDES Stormwater Discharge Permit for Industrial Activities are eligible for a reduction is assigned REFs.
  - b. The credit only applies to the property (parcel) covered by the NPDES Industrial Stormwater Permit.
  - c. It is the responsibility of the property (parcel) owner to provide all necessary documentation and certification(s) that the property (parcel) is in compliance. This includes a copy of the current Notice of Intent (NOI), a copy of the current annual report, and a copy of the Stormwater Pollution Prevention Plan (SWPPP) (or equivalent document).
    - i. The credit is valid for only one (1) year and requires a new Credit Application annually and submission of required documents and certifications with each application.
  - d. Additional credit requirements and stipulations are as follows:
    - i. Credits are not retroactive and are valid from the date of an approved Credit Application.
    - ii. Credits are non-transferrable.
    - iii. A Notice of Violation (NOV) or similar document from either PADEP or USEPA will result in a suspension of the credit until the violations are corrected and documentation is provided that confirms the violations have been corrected.
      - 1. The applicable credit will be re-applied from the date of receipt of documentation confirming violations have been corrected.
  - e. A reduction of up to 5% of the assigned REFs to the property (parcel) in which the NPDES Industrial Stormwater Permit applies to will be awarded upon an approved Credit Application from a property (parcel) owner.
- B. Green Infrastructure Implementation
  - a. Green infrastructure includes bioretention facilities (e.g. rain gardens), meadows, bioswales, infiltration gardens, and similar infrastructure that provides water quality treatment and/or infiltration of stormwater runoff.
  - b. These credits are applicable for parcels wherein minimum water quality, water quantity, and discharge limits have already been met and additional improvements above the minimum requirements for water quality have been implemented.
  - c. Properties existing at the time of the SWF adoption are considered to meet minimum water quality, water quantity, and discharge limits with the exception of unapproved property improvements (e.g. building addition, paving expansion, etc.)
  - d. Additional credit requirements and stipulations are as follows:
    - i. Only improvements above and beyond minimum requirements that may be required (e.g. stormwater management ordinance compliance, existing stormwater management facility in compliance with design, post-construction stormwater management required by an NPDES Construction Permit, etc.) will qualify for a credit(s).

- ii. Credits are not retroactive and are valid from the date of an approved Credit Application.
    - 1. The credit is valid for one (1) year. Submission of a valid O&M Verification Form (Appendix F) annually will be considered a valid credit renewal in lieu of requiring the submission of a Credit Application annually.
      - a. The Borough will periodically inspect the facilities for which a credit has been awarded, and to ensure proper maintenance is occurring.
    - 2. In the absence of the submission of a valid O&M Verification Form by the end of the calendar year for which the credit has been awarded, the Borough will require the submission of a Credit Application to renew the credit.
  - iii. Lack of proper maintenance as determined by the Borough will result in suspension of the credit(s). A property (or parcel) owner will be responsible to complete corrective actions in the timeframe provided by the Borough to re-establish the credit(s).
  - iv. Existing facilities as of the date of adoption of the SWF program do not qualify for a credit.
  - e. A property (parcel) owner may elect to categorize green infrastructure implementation as a transferred/purchased credit (see Transferred/Purchased Credit category for more information).
  - f. A reduction of one percent (1%) of assigned REFs for water quality treatment of each one percent (1%) above and beyond the site-specific water quality treatment volume required to a maximum of up to ten percent (10%).
  - g. Credit applications for green infrastructure implementation shall include an existing conditions plan, a proposed conditions plan including details of the proposed green infrastructure, and a report and/or calculations prepared by a registered professional familiar with stormwater design. The report and calculations shall detail the current water quality, water quantity, and discharge limits are currently being met, and the improvements above the minimum requirements that the proposed green infrastructure will provide. This application will also require a basic easement and operation & maintenance agreement to be submitted prior to credit approval.
- C. Existing Facilities Retrofit
- a. Current design and development standards in the Borough in conjunction with the SWMO, have established the standards that all new developments must meet. The new standards were developed and adopted to control and minimize the negative impacts of development on flooding and water quality and to put measures into place that protect watershed resources. These new standards were not retro-active. A number of properties in the Borough were designed and built prior to the new standards.
  - b. A credit is available for retrofitting existing stormwater management facilities and properties to meet the rate and volume requirements specified in the SWMO. Additional water quality treatment BMPs may be required as deemed necessary by the Borough. For special conditions where the requirements of the SWMO cannot be met, modifications of requirements and/or alternate requirements may be considered by the Borough.
  - c. Types of facilities that will generally qualify for this credit include, but are not limited to:
    - i. Dry extended detention basins
    - ii. Drainage swales

- d. Additional credit requirements and stipulations are as follows:
    - i. Credits are not retroactive and are valid from the date of an approved Credit Application.
      - 1. The credit is valid for one (1) year. Submission of a valid O&M Verification Form annually will be considered a valid credit renewal in lieu of requiring the submission of a Credit Application annually.
        - a. The Borough will periodically inspect the facilities for which a credit has been awarded, and to ensure proper maintenance is occurring.
      - 2. In the absence of the submission of a valid O&M Verification Form by the end of the calendar year for which the credit has been awarded will require the submission of a Credit Application to renew the credit.
    - ii. Lack of proper maintenance as determined by the Borough will result in suspension of the credit(s). A property (parcel) owner will be responsible to complete corrective actions in the timeframe provided by the Borough to re-establish the credit(s).
    - iii. Credits are transferrable.
  - e. A reduction to a maximum of up to twenty percent (20%) of assigned REFs to the property (parcel) owner will be awarded upon an approved Credit Application from the property (parcel) owner.
    - i. An additional reduction of one percent (1%) of assigned REFs for water quality treatment of each one percent (1%) above and beyond the site-specific water quality treatment volume required and to significant infiltration areas to a maximum of up to five additional percent (5%) is available.
  - f. Credit applications for existing facilities retrofits shall include an existing conditions plan, a proposed conditions plan, and applicable details showing the changes to the existing facility(ies). A stormwater design analysis and a hydrologic/hydraulic report with calculations in accordance with the SWMO prepared and sealed by a Pennsylvania licensed professional engineer is to be submitted with the Credit Application. This application will also require a basic easement and operation & maintenance agreement to be submitted prior to credit approval.
  - g. All required materials shall be prepared by a registered professional familiar with BMP retrofits.
  - h. Credit award will be based on a Borough review which may include the following factors; current condition of an existing facility, amount of area treated, size of facility, and proposed changes to a facility.
- D. Riparian Corridor
- a. A credit is available for properties (parcels) for which stormwater runoff from impervious surfaces is effectively treated by a riparian buffer. Riparian buffers must meet the minimum current standards stipulated in the Riparian Corridors section (Section 306) of the SWMO. Riparian Corridor plans (outlining length, width, and proposed plantings at a minimum) will be reviewed and approved by the Borough.
  - b. Additional credit requirements and stipulations are as follows:
    - i. Credits are not retroactive and are valid from the date of an approved Credit Application.
      - 1. The credit is valid for one (1) year. Submission of a valid O&M Verification Form annually will be considered a valid credit renewal in lieu of requiring the submission of a Credit Application annually.

- a. The Borough will periodically inspect the facilities for which a credit has been awarded, and to ensure proper maintenance is occurring.
  - 2. In the absence of the submission of a valid O&M Verification Form by the end of the calendar year for which the credit has been awarded will require the submission of a Credit Application to renew the credit.
    - ii. Lack of proper maintenance as determined by the Borough will result in suspension of the credit(s). A property (parcel) owner will be responsible to complete corrective actions in the timeframe provided by the Borough to re-establish the credit(s).
    - iii. Credits are transferrable.
    - iv. Re-establishing an existing stream buffer area that meets the minimum current standards stipulated by the SWMO are eligible for this credit.
  - c. A reduction of up to ten percent (10%) of assigned REFs to the property (parcel) will be awarded upon an approved Credit Application from the property (parcel) owner. The amount of reduction percentage will be based on the amount of buffer installed on the total percentage of streambank that is owned. Buffer must meet riparian buffer standards as outlined in the Riparian Corridors section (Section 306) of the SWMO.
  - d. Credit applications shall include a proposed conditions plan including the length, width, specified plantings in the proposed riparian corridor, and operation & maintenance plan for the riparian corridor. Plans shall be prepared by a registered professional familiar with riparian plantings. This application will also require a basic easement and operation & maintenance agreement to be submitted prior to credit approval.
- E. Stormwater Pollution Prevention “Hot Spots”
  - a. A credit is available for water quality treatment of stormwater runoff from “hot spots” identified as land areas that often produce higher concentrations of pollutants, particularly hydrocarbons and heavy metals. Hot spots of concern for the Borough are:
    - i. Gas/fueling stations
    - ii. Commercial vehicle maintenance areas/garages
    - iii. Commercial vehicle washing facilities
    - iv. Outdoor vehicle storage areas
    - v. Outdoor material storage areas
    - vi. Loading/Transfer Areas (including waste management dumpsters)
    - vii. Agricultural operations
  - b. These facilities may be subject to an NPDES Industrial Stormwater permit, and therefore are not eligible for this credit type if the credit under 4.2.2-A has been awarded. A property (or parcel) that does not apply for the NPDES Industrial Stormwater permit compliance credit is eligible for this credit type.
  - c. To qualify for this credit, at least two (2) of the following controls must be implemented:
    - i. Water Pollution Control Plan
    - ii. Install and maintain outdoor inlet treatment devices (e.g. hydrodynamic separators)
    - iii. Install and maintain oil/water separators (or similar devices) including documentation of annual pumping and disposal activities.
    - iv. Agricultural Nutrient Management Plan and/or Conservation Plan including 3<sup>rd</sup> party verification of implementation and current compliance.

- v. Conservation Reserve Enhancement Program (CREP)
- d. Additional credit requirements and stipulations are as follows:
  - i. Only one Credit Application per property (or parcel)
  - ii. Credits are not retroactive and are valid from the date of an approved Credit Application.
    - 1. An exception is applied to Nutrient Management Plans, Conservation Plans, and CREP. Retroactive implementation is observed for these items. However, credits are only valid from the date of an approved Credit Application.
  - iii. Credits are non-transferrable.
  - iv. Credits are valid for one (1) year.
    - 1. Submission of a valid O&M Verification Form annually will be considered a valid credit renewal for outdoor inlet treatment devices and oil/water separators in lieu of requiring the submission of a Credit Application annually.
    - 2. Submission of documentation and certifications annually for an implemented and valid Water Pollution Control Plan will be considered a valid credit renewal in lieu of requiring the submission of a Credit Application annually.
    - 3. Submission of a signed statement annually indicating a Nutrient Management Plan, Conservation Plan, or implemented CREP is still valid and implemented will be considered a valid credit renewal in lieu of requiring the submission of a Credit Application annually.
- e. A reduction of up to fifteen percent (15%) of assigned REFs to the property (parcel) will be awarded upon an approved Credit Application from the property (parcel) owner.
  - i. Water Pollution Control Plan: up to 5%
  - ii. Install and maintain outdoor inlet treatment devices (e.g. hydrodynamic separators): up to 5%
  - iii. Install and maintain oil/water separators (or similar devices) including documentation of annual pumping and disposal activities: up to 5%
  - iv. Agricultural Nutrient Management Plan and/or Conservation Plan including 3<sup>rd</sup> party verification of implementation and current compliance: up to 5%
  - v. Conservation Reserve Enhancement Program (CREP): up to 5%
- f. Prior to submitting a credit application for remediation of a pollution prevention “hot spot”, applicant shall request a meeting with Borough Staff to discuss potential options on site. Based on the type of hot spot prevention determined to work best for the site, the required materials to be submitted with the credit application will be determined after a pre-application meeting.

#### 4.2.3 On-site Attenuation Credit

The types of credits under this category include water quantity improvement approaches or considerations that attenuate and/or control stormwater runoff rate and/or volume.

##### A. On-site Attenuation

- a. Current design and development standards in the Borough in conjunction with the SWMO, have established the standards that all new developments must meet. The new standards were developed and adopted to control and minimize the negative impacts of development on flooding and water quality and to put measures into place that protect watershed resources. These new standards were not retro-active. A

- number of properties in the Borough were designed and built prior to the new standards or built to no stormwater management standards.
- b. A credit is available for retrofitting existing stormwater management facilities and properties to meet water quantity treatment standards, or to add stormwater management facilities, at a minimum.
  - c. Additional credit requirements and stipulations are as follows:
    - i. Credits are not retroactive and are valid from the date of an approved Credit Application.
      1. The credit is valid for one (1) year. Submission of a valid O&M Verification Form annually will be considered a valid credit renewal in lieu of requiring the submission of a Credit Application annually.
        - a. The Borough will periodically inspect the facilities for which a credit has been awarded, and to ensure proper maintenance is occurring.
      2. In the absence of the submission of a valid O&M Verification Form by the end of the calendar year for which the credit has been awarded will require the submission of a Credit Application to renew the credit.
    - ii. Lack of proper maintenance as determined by the Borough will result in suspension of the credit(s). A property (or parcel) owner will be responsible to complete corrective actions in the timeframe provided by the Borough to re-establish the credit(s).
    - iii. Credits by default are non-transferrable.
      1. If additional attenuation can reasonably be determined as providing a regional benefit (at the sole discretion of the Borough Engineer), then a portion of the awarded reduction in assigned REFs (up to 50% of the awarded reduction) as a result of the additional attenuation may be transferrable.
    - iv. A stormwater design analysis and a hydrologic/hydraulic report with calculations in accordance with the SWMO prepared and sealed by a Pennsylvania licensed professional engineer is to be submitted with the Credit Application.
  - d. A reduction of one percent (1%) of assigned REFs for each one percent (1%) above and beyond the site-specific stormwater attenuation required to a maximum of up to twenty percent (20%).
  - e. Prior to submitting a credit application for on-site attenuation, applicant shall request a meeting with Borough Staff to discuss potential options on site. Based on the type of attenuation and/or modification of facilities is determined to work best for the site, the materials submitted with the credit application will be determined after a pre-application meeting.

#### 4.2.4 *Third Party Credit*

These credits will be available for Borough property owners that implement on-site improvements (“small projects”) and require stormwater management controls. Credits will be generated through the proposed Municipal Bank facilities in the Lititz Run watershed. Credits may be purchased to provide a reduction in assigned REFs, or credits may be purchased to meet stormwater management requirements per the Stormwater Management Ordinance (SWMO).

A. Municipal Bank Credits

- a. Municipal Banks are Regional Stormwater Management Facilities implemented by the Borough. These facilities are intended to provide water quality improvements, increased infiltration, and controls for rate and volume.
- b. At locations approved by the Borough, credits will be available for projects that do not require a National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Stormwater Associated with Construction Activities (PAG-02) (or an Individual Permit) to meet stormwater management requirements as outlined in the Lititz Borough Stormwater Management Ordinance (SWMO).
- c. Available types, amounts, and the cost of credits for either a reduction in assigned REFs for a property or for a property owner to meet stormwater management requirements for a “small project” will be outlined in a separate document generated during the design and permitting phase or existing facility conversion phase for a Municipal Bank facility.
  - i. It is intended that certain small projects below a threshold of required stormwater management controls and as approved by the Borough can be awarded credits at no cost. A determination of a threshold (if any) will be completed during the design and permitting phase for a Municipal Bank facility.
- d. Credits from a Municipal Bank facility will be limited to hydrologically defined catchments in the Lititz Run watershed.
- e. Currently proposed Municipal Bank facilities include:
  - i. New facilities:
    - 1. LititzRec Municipal Bank Facility
  - ii. Conversion facilities:
    - 1. New Street Park
    - 2. Butterfly Acres

4.2.5 *Transferred/Purchased Credit*

These credits are generated under the On-site Water Quality Treatment and On-site Attenuation credit categories where credit conditions indicate a credit may be or is transferrable.

- A. A property (or parcel) owner that implements a water quality treatment BMP or provides additional on-site attenuation that results in an awarded reduction in assigned REFs for the parcel may:
  - a. Transfer all or a portion of the awarded reduction in REFs to another property (or parcel) in the Borough at:
    - i. No cost, or
    - ii. Purchased for a fee negotiated between the property (or parcel) owners.
- B. The value of the reduction of REFs will be based on the property (or parcel) where the on-site water quality treatment or on-site attenuation has been implemented.
- C. If a property (or parcel) owner is already subject to the minimum assigned REF requirement (one (1) REF) for their property, and the property (or parcel) owner implements a water quality treatment BMP or provides additional on-site attenuation, the property (or parcel) owner will not be awarded a reduction in assigned REFs.
  - a. However, the property (or parcel) owner may transfer or make available for purchase the reduction in assigned REFs for the property (or parcel) where the improvement has been implemented.
- D. Rain barrels do not qualify as on-site attenuation.
- E. All credit requirements and stipulations outlined for each credit remain in effect.

- F. A Transfer/Purchase Credit Application must be submitted and approved by the Borough prior to transfer of credits.

A Credit Application for all credit categories and types can be found in Appendix B. The Transfer/Purchase Credit Application can be found in Appendix C.

#### **4.3 Appeals**

A property (or parcel) owner may appeal any decision of the Borough in writing, not later than 30 days after receipt of a response from the Borough to an owner's Re-calculation Request Application, Credit Application, or any other administrative action as it relates to the SWF program. The appeal in writing should accompany the Appeal Form found in Appendix D.

#### **4.4 Inquiries**

Any property (or parcel) owner, resident, or individual working in the Borough may submit a written inquiry regarding any aspect of the SWF program to the Borough. The Borough will respond to written inquiries within fifteen (15) days of receipt of the inquiry. An inquiry may include, but is not limited to:

- General questions regarding the SWF program.
- Suggestions for improving the SWF program, improving watershed conditions, or improving SWMP compliance activities.
- Potential outcome of a REF re-calculation for a property (or parcel).
- Potential of a practice, management approach, property change that may warrant a type of credit not listed on the approved credits list.
- Available credits for meeting some or all stormwater management requirements for a potential development/re-development project.
- Response to a response from the Borough for an administrative action associated with a Re-calculation Request Application or Credit Application with the intent to pursue a good faith effort to establish a solution without enacting the appeal process.

**Appendix A**  
**Recalculation Request Application**

# STORMWATER MANAGEMENT FEE - RE-CALCULATION REQUEST APPLICATION

Lititz Borough

## 1 General Information

Name of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Email: \_\_\_\_\_

Subject Property Address: \_\_\_\_\_

Purpose of Application: Stormwater Management Fee re-calculation request

## 2 Application Fee

The application fee for a Stormwater Management Fee re-calculation is \$. This fee covers the compensation for staff, professional services, and administrative processing connected to the re-calculation. **Fee is due upon application submission.**

## 3 Criteria and Basis for the Request

The following criteria are set forth in the Lititz Borough Stormwater Management Fee Standards and Policies Manual for parcel re-calculation:

- A minimum of one (1) REF will be applied to any property (or parcel).
- A completed re-calculation request changing the assigned REFs to a property (or parcel) will be effective ten (10) days after the approval date indicated on the application.
- Re-calculation requests will be processed within fifteen (15) days of receipt of an application, provided no additional information is required.

Statement of the basis for the re-calculation request

Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_

## 4 Borough Use Only

Received Date: \_\_\_\_\_

Received By: \_\_\_\_\_

Fee Paid: \$ \_\_\_\_\_

Assigned REFs: \_\_\_\_\_

LU Category: \_\_\_\_\_

Checked By: \_\_\_\_\_

New REFs: \_\_\_\_\_

LU Category: \_\_\_\_\_

Approval Date: \_\_\_\_\_

**Appendix C**  
**Transfer/Purchase Credit Application**

# STORMWATER MANAGEMENT FEE - CREDIT APPLICATION

Lititz Borough

## 1 General Information

Name of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Email: \_\_\_\_\_

Subject Property Address: \_\_\_\_\_

Purpose of Application: \_\_\_\_\_ Credit Application

## 2 Application Fee

The application fee is \$50 per acre, max 500\$. This fee covers the compensation for staff, professional services, and administrative processing connected to the application. **Fee is due upon application submission.**

## 3 Credits

Check all credit types that apply

- MS4 Outfall Maintenance
- Industrial NPDES Stormwater Permit
- Green Infrastructure Implementation
- Existing Facilities Retrofit
- Stream Buffer
- Stormwater "Hot Spots"
- On-site Attenuation

Attach a description of the basis for the proposed credit, any supporting information, and any required documents or information required for a credit as outlined in the Standards and Policies Manual.

Check this box if information is attached.

Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_

## 4 Borough Use Only

Received Date: _____
Received By: _____
Fee Paid: \$ _____

Assigned REFs: _____
LU Category: _____
Checked By: _____

Approved or Denied
By: _____
Date: _____

**Appendix B**  
**Credit Application**

# STORMWATER MANAGEMENT FEE - TRANSFER/PURCHASE CREDIT

Lititz Borough

## 1 General Information

Name of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Email: \_\_\_\_\_

Subject Property Address: \_\_\_\_\_

Purpose of Application: Transfer/Purchase Credit

## 2 Application Fee

The application fee for is \$100. This fee covers the compensation for staff, professional services, and administrative processing connected to the application. **Fee is due upon application submission.**

## 3 Credit Transfer/Purchase

Proposed transfer of credit at no cost

Proposed transfer of purchased credit

Purchase Amount: \$ \_\_\_\_\_

Indicate (as a percent) the amount of the awarded/calculated credit to be transferred: \_\_\_\_\_ %

Credit Receiver Information:

Name: \_\_\_\_\_ Telephone No.: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Property Address (where credits will be transferred to)

\_\_\_\_\_

Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_  
*Owner of credit(s)*

Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_  
*Receiver of credit(s)*

## 4 Borough Use Only

Received Date: _____
Received By: _____
Fee Paid: \$ _____

Assigned REFs: _____
LU Category: _____
Checked By: _____

Approved or Denied
By: _____
Date: _____

**Appendix D**  
**Appeal Form**

# STORMWATER MANAGEMENT FEE - APPEAL FORM

Lititz Borough

## 1 General Information

Name of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Email: \_\_\_\_\_

Subject Property Address: \_\_\_\_\_

Purpose of Application: \_\_\_\_\_ Appeal \_\_\_\_\_

## 2 Basis of Appeal

Provide basis of appeal in the below box. Attach any supporting information to this form.

Signature: \_\_\_\_\_ Printed Name: \_\_\_\_\_

## 4 Borough Use Only

Received Date: _____
Received By: _____
Fee Paid: \$ _____

Assigned REFs: _____
LU Category: _____
Checked By: _____

Notes
-------

**Appendix E**  
**O&M Agreement**

**STORMWATER FEE CREDITABLE BMP**  
**OPERATIONS AND MAINTENANCE AGREEMENT**  
**Lititz Borough**

1. Maintenance activities shall begin immediately upon completion of the BMP. Only after Lititz Borough receives all applicable credit materials and approves the stormwater fee credit request will the BMP installation be eligible for a reduction in the stormwater fee.
2. The installed BMPs will not adversely affect any property, septic systems, or drinking water wells on this or any other property.
3. The applicant acknowledges that the proposed BMPs will be a permanent fixture of the property that cannot be altered or removed without approval by Lititz Borough. If the BMP is removed, any previously approved stormwater fee credit will be immediately revoked.
4. The Best Management Practices (BMPs) shall be constructed by the Landowners in accordance with the plans and specifications received in the stormwater fee credit application.
5. The Landowner shall operate and maintain the BMPs in good working order acceptable to the Borough and in accordance with the specifications maintenance requirements and attached hereto as Appendix A.
6. The Landowner hereby grants permission to the Borough, its authorized agents and employees to enter upon the property, at reasonable times and upon presentation of proper identification, to inspect the BMPs whenever it deems necessary. Whenever possible the Borough shall notify the Landowner prior to entering the property.
7. In the event the Landowner fails to operate and maintain the BMPs in good working order acceptable to the Borough, the Borough will revoke any stormwater fee credit which was previously given.
8. The intent and purpose of the Agreement is to ensure the proper maintenance of the onsite BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create or effect any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
9. The Landowner, its executors, administrators, assigns, and other successors in interests, shall release the Borough's employees and designated representatives from all damages, accidents, casualties, occurrences or claims which might arise or be asserted against said employees and representatives from presence, existence, or inspection of the BMPs by the Landowner or the Borough. In the event that a claim is asserted against the Borough, its designated representatives or employees, the Borough shall promptly notify the Landowner and the Landowner shall defend at his own expense any suit based on the claim. If any

judgment or claims against the Borough's employees or designated representatives shall be allowed, the Landowner shall pay all costs and expenses regarding said judgment or claim.

I (we) \_\_\_\_\_, hereby certify and acknowledge that I (we) understand the above Operations and Maintenance provisions and agree to assume full responsibility for the implementation, construction, operation, and maintenance of the proposed stormwater management facilities. Furthermore, I (we) also acknowledge that the steps, assumptions, and guidelines provided in this submission, including but not limited to the Lititz Borough Stormwater Fee Standards Manual will be adhered to.

This Agreement shall be recorded at the Office of the Recorder of Deeds of Lancaster County, Pennsylvania, and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Landowner, his administrators, executors, assigns, heirs, and any other successors in interests, in perpetuity.

ATTEST:

WITNESS the following signatures and seals:

(SEAL)

For the Borough:

\_\_\_\_\_

For the Landowner:

\_\_\_\_\_

ATTEST:

\_\_\_\_\_ (Borough)

County of \_\_\_\_\_, Pennsylvania

I, \_\_\_\_\_, a Notary Public in and for the county and state aforesaid, whose commission expires on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, do hereby certify that \_\_\_\_\_ whose name(s) is/are signed to the foregoing Agreement bearing date of the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, has acknowledged the same before me in my said county and state.

GIVEN UNDER MY HAND THIS \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

\_\_\_\_\_  
(SEAL)

## **APPENDIX A**

### **MAINTENANCE OF BMPS FOR STORMWATER FEE CREDIT BMPS**

Refer to the *Homeowner's Guide for Best Management Practices Operations and Maintenance* by the Lancaster County Clean Water Consortium (can be found on the Borough website at [www.lititzborough.org](http://www.lititzborough.org)) for more detailed information, picture guides, and related information.

#### **Vegetated Swales/Filter Strips/Buffers**

1. The flow path for runoff from impervious areas shall be vegetated and maintained in a stable non-erosive condition. Erosion shall be repaired and vegetation re-established in a timely manner.
2. Vehicles shall not park or drive on the infiltration area and care shall be taken to avoid excess compaction by mowers or other equipment.
3. The area shall remain graded to promote sheet flow of the runoff and infiltration of the rainfall.
4. Trash and sediment shall be removed and disposed of properly and in a timely manner.

#### **Tree Plantings**

1. Trees shall be maintained in a healthy, vigorous growing condition.
2. Care shall be taken to not overly compact the ground above the tree root system.
3. Dead trees shall be replaced by the property owner within 6 months.
4. Replacement trees shall be a minimum 1 inch caliper deciduous tree or a minimum 5 foot tall evergreen tree.

#### **Underground Infiltration Trenches, Beds or Pits/ Dry Wells/ Seepage Pits**

1. Roof gutters, downspouts, roof leaders, inlets, and overflows shall be regularly inspected for leaves, trash, debris and sediment and cleaned out as necessary to maintain the system in good condition.
2. The surface vegetation shall be maintained in good condition.
3. Vehicles shall not park or drive on the infiltration area and care shall be taken to avoid excess compaction by mowers or other equipment.
4. Regularly inspect after heavy rainfall events to make sure water is being infiltrated into the soil.

#### **Surface Retention Basins/Infiltration Basins or Berms/Rain Gardens**

1. Regularly inspect the basin after heavy rainfall events to make sure the water collected drains down within approximately 3 days.
2. The flow path for runoff from impervious areas to the basin shall be maintained in a stable non-erosive condition.

3. Roof gutters, downspouts, roof leaders, inlets, and overflows shall be regularly inspected for leaves, trash, debris and sediment and cleaned out as necessary to maintain the system in good condition.
4. The vegetation on the surface of the basin shall be maintained in healthy, vigorous growing condition. Dead plant material shall be replaced within 6 months.
5. Vehicles shall not park or drive on the infiltration area and care shall be taken to avoid excess compaction by mowers or other equipment.
6. Trash and sediment shall be removed and disposed of properly and in a timely manner.
7. The berm and overflow pipe shall be maintained in good working condition.
8. Mulch cover is to be maintained, re-spread and replaced as needed to prevent erosion, reduce weed growth, and assist with plant survival, without restricting the infiltration of water.

### **Rain Barrels**

1. The storage facility shall be routinely emptied to allow for storage of additional rainwater/subsequent rainfall events.
2. Roof gutters, downspouts, roof leaders, inlets, and overflows shall be regularly inspected for leaves, trash, debris and sediment and cleaned out as necessary to maintain the system in good condition
3. Overflow outlets shall be kept free and clear of debris.

### **Pervious Pavers**

1. Pavers shall be maintained in accordance with specific manufacture recommendations to permit required infiltration.
2. Surface shall be maintained clear of debris, sediment, and unwanted vegetation.
3. Sand, grit and other similar type snow removal material shall not be utilized in snow removal process.
4. Infiltration stone between pavers shall be kept up to proper surface elevation.
5. Areas that have differentially settled shall be reset to grade.

**Appendix F**  
**O&M Verification Form**



**PRIVATE TREATMENT CONTROL BMP  
OPERATION AND MAINTENANCE VERIFICATION FORM  
DETENTION BASINS-SIDE 2**

These larger-scale facilities remove pollutants by detaining runoff in a settling pool long enough for some of the particulates to settle to the bottom. The following list of typical maintenance indicators and maintenance activities for detention basins is included for your reference. **This guide sheet provides general indicators for maintenance only and for a wide array of treatment control BMPs. Your developer prepared maintenance plans specifically for your treatment control BMP as an appendix to the Stormwater Management Plan. Also, if you have a manufactured structure, please refer to the manufacturer's maintenance instructions.**

Typical Maintenance Indicators	Typical Maintenance Actions
Poor vegetation establishment	Re-seed, re-establish vegetation.
Overgrown vegetation and invasive plants, or presence of woody plants or vegetation over 12 inches in height	Mow or trim as appropriate and remove invasive plants.
Signs of dumping (grease, grass clippings, etc.)	Contact Lititz Borough to report a potential illicit discharge/illegal dumping.
Erosion due to concentrated stormwater runoff flow (gullies formed on berms, basin bottom, etc.)	Repair/re-seed eroded areas and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or re-grading where necessary.
Signs of rodents/animals (e.g. Gopher holes)	Repair/re-seed holes and make appropriate corrective measures to prevent rodent activity.
Accumulation of sediment (generally 10% of design capacity), litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation. Dredge accumulated sediment. This may be required every five to 15 years, and more frequently if there are excess sources of sediment (as may occur on newly constructed sites where soils are not yet stabilized). Dredging is usually a major project requiring mechanized equipment. The work will include an initial survey of depths and elevations; sediment sampling and testing; removal, transport, and disposal of accumulated sediment, and reestablishment of original design grades and sections. Permits may be required.
Standing water (BMP not draining) If mosquito larvae are present and persistent, contact the PADEP. Mosquito larvicides should be applied only when absolutely necessary and then only by a licensed individual or contractor.	Abate by filling holes in the ground in and around the basin and by insuring that there are no areas where water stands longer than 72 hours following a storm. Filling and grading may require re-seeding or re-vegetation.
Obstructed inlet or outlet structure	Clear obstructions.
Damage to structural components such as weirs, inlet, or outlet structures	Remove any debris or sediment that could plug the outlets. Identify and correct any sources of sediment and debris. Check rocks or other armoring and replace as necessary.
General obstructions (trampolines, sheds, picnic tables, etc.)	Basins should be free of any general obstructions.

# SWM/PCSM FACILITY-BMP O&M - FIELD INSPECTION CHECKLIST

Cover Sheet

## GENERAL INFORMATION

Facility/BMP Name		ID#	
Location		MS3 ID	
Facility/BMP Owner/Operator			
Inspector's Name			
Inspector's Title			
Signature			
Date of Inspection			
Inspection Type (check all applicable)	<input type="checkbox"/> Regular schedule inspection <input type="checkbox"/> Follow-up inspection <input type="checkbox"/> Complaint-driven <input type="checkbox"/> Other: _____		
Weather			

## FACILITY/BMP INFORMATION

Facility/BMP Type(s)	
Other notes	

## MAINTENANCE SCORE REFERENCE

N/A - indication a component may not exist in a facility/BMP.

0 No deficiencies identified.

**1 Monitor** – Although maintenance may not be required at this time, a potential problem exists that will most likely need to be addressed in the future. This can include items like minor erosion, concrete cracks/spalling, or minor sediment accumulation. This item should be revisited at the next inspection.

**2 Routine Maintenance Required** – Some inspection items can be addressed through the routine maintenance program. This can include items like vegetation management or debris/trash removal.

**3 Immediate Repair Necessary** – This item needs immediate attention because failure is imminent or has already occurred, or facility is not functioning as designed. This could include items such as structural failure of a feature (outlet, weir, manhole, etc.), significant erosion, or significant sediment accumulation. This score should be given to an item that can significantly affect the function of the facility.

# DETENTION BASIN

## INSPECTION AND MAINTENANCE CHECKLIST

Facility/BMP Name: \_\_\_\_\_

Facility Score: \_\_\_\_\_

DEFECT	CONDITIONS WHEN MAINTENANCE IS NEEDED	SCORE	COMMENTS	RESULTS EXPECTED
<b>General</b>				
Trash & Debris	Trash and debris accumulated in basin. Visual evidence of dumping.			Trash and debris cleared from site and disposed of properly.
Invasive/ poisonous vegetation, noxious weeds	Poisonous or nuisance vegetation (including noxious weeds) (e.g. English ivy, Japanese knotweed, mugwort, purple loosestrife, or poison ivy/oak)			Use integrated pest management techniques or similar to control weeds or invasive species.
Contaminants	Any evidence of oil, gasoline, or other hazardous materials and contaminants.			No signs of contaminants or pollutants present.
Rodent Holes	Any evidence of rodent holes, or any evidence of water piping through dam or berm via rodent holes.			The design specifications are not compromised by holes. Any rodent control activities are in accordance with applicable laws.
Tree/Brush Growth, Hazard Trees	Growth does not allow maintenance access or interferes with maintenance. Dead, diseased, or dying trees.			Trees/brush do not hinder access or maintenance activities.
General Vegetation	Overgrown or lack of appropriate vegetation is observed.			Established vegetation is in accordance with the design specifications.

DEFECT	CONDITIONS WHEN MAINTENANCE IS NEEDED	SCORE	COMMENTS	RESULTS EXPECTED
Outfall Structure	Debris, silt, or sediment build-up obstructs the outfall structure.			Remove debris, silt, and/or sediment build-up and dispose of properly.
Drainage time	Standing water remains in the basin more than five days.			Restore drainage to design condition. If the problem cannot be corrected, mosquito control techniques should be implemented.
<b>Side Slopes</b>				
Erosion	Rill or gully erosion over 2" deep is observed or where there is potential for erosion (e.g. lack of appropriate vegetation)			Side slopes or berm are restored to design specifications.
<b>Storage Area</b>				
Sediment	Accumulated sediment >10% of designed basin depth is observed or affects inletting/outletting condition of the facility.			Sediment or silt cleaned out to designed basin shape and depth; basin storage area re-seeded if necessary to control erosion. Sediment is disposed of properly.
Liner (if applicable)	Liner is visible and/or multiple holes in the liner are observed.			Liner repaired or replaced. Liner is fully covered.
<b>Emergency Overflow/Spillway and Berms</b>				
Settlement/ Subsidence	Evident berm settlement is >4" lower than design elevation, or subsidence has occurred.			Dike is built back or repaired back to design elevation.

DEFECT	CONDITIONS WHEN MAINTENANCE IS NEEDED	SCORE	COMMENTS	RESULTS EXPECTED
Tree/Brush Growth or Debris	Tree growth, brush, or similar on berms or emergency spillway >4' in height or covering >10% of spillway. Debris (e.g. dumped grass clippings) are evident on berms or in the spillway.			Trees/brush and debris should be removed. Root systems should be removed. However, small (<4") root systems may be left in place. An engineer should be consulted for proper berm/spillway restoration.
Emergency Overflow/ Spillway	Rock is missing and soil is exposed at top of spillway or adjacent slopes; or spillway profile has been altered.			Rocks and pad and/or profile are restored back to design standards.
<b>Inlet Pipe/Opening</b>				
Trash and Debris	Opening is plugged with trash and/or debris.			Trash is removed and disposed of properly.
Debris Barrier (e.g. Trash Rack (if applicable))	Barrier is not attached; bars are loose, missing, or bent.			Bars or barrier are repaired or replaced to allow proper function.
<b>Outlet Pipe/Opening</b>				
Trash and Debris	Opening is plugged with trash and/or debris.			Trash is removed and disposed of properly.
Debris Barrier (e.g. Trash Rack (if applicable))	Barrier is not attached; bars are loose, missing, or bent.			Bars or barrier are repaired or replaced to allow proper function.
Flow Duration Control (risers, orifices, and screens)	Any debris or clogging. Loose or missing orifice plate.			Restore unobstructed flow through discharge structure(s); to meet original design standards; dispose of debris properly.

DEFECT	CONDITIONS WHEN MAINTENANCE IS NEEDED	SCORE	COMMENTS	RESULTS EXPECTED
<b>Fences and Gates</b>				
Missing or broken parts	Any defect in or damage to the fence or gate that permits easy entry to facility. Structural integrity is compromised.			Fencing and gate are restored to meet minimum design standards.
Deteriorating Paint or Protective Coating	Significant rust, scaling, or similar condition has affected structural integrity.			Paint, protective coating is sufficient to protect components (replacement may need to be considered).
<b>Miscellaneous* (Any condition or component not covered above that needs attention-list item(s))</b>				
				Meets design standards.
				Meets design standards.

\* Possible miscellaneous items for review and/or comment:

- Concrete structures (e.g. retaining wall, headwall, etc.) including comments regarding structural integrity.
- Adjacent conditions that may be affecting performance and/or impacting functionality.
- More specific notes and/or comments related to observed deficiencies associated with specific features (e.g. forebay).

**Other Notes**