City of Pueblo

Stormwater Facilities
Operation & Maintenance Manual

January 2025

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1.0 Introduction

Proper maintenance and inspection of all stormwater control measures (SCMs) in the City of Pueblo (City) is necessary to ensure facilities continue to function as designed and the City's Municipal Separate Storm Sewer (MS4) permit requirements are met. In addition to maintaining function, regular maintenance and routine inspections reduce the need for significant repairs and improve the overall longevity of the structure.

2.0 Compliance and Enforcement

An Operation and Maintenance (O&M) Manual must be completed and submitted to the City for approval upon construction of an SCM. A separate copy shall be provided to the personnel responsible for ongoing maintenance and inspection of the facility.

The standards in this O&M Manual shall be legally enforceable by the City. It is the facility owner's responsibility to inspect all SCMs and ensure they are maintained as described in this Manual and remain fully functional as originally designed. The City has the right to hold property owners liable for improper maintenance of facilities at the property owner's expense.

3.0 Development of an Operation and Maintenance Manual

3.1 O&M Manual - Main Document

The main body of the O&M Manual should include sections with the following information:

1. General Information

    i. General description of the site where the SCM is located.

    ii. General stormwater management and on-site stormwater management facilities.

2. Facility Inspection and Maintenance Requirements

    The Information Sheet corresponding to the SCM(s) to be maintained shall be included in the O&M Manual. Information sheets for each type of SCM are provided in Section 4.0. The Information Sheet provides information regarding the functional components of each type of SCM and guidance for inspections and maintenance to ensure components are in proper working condition.

3. Annual Reporting Requirements to the City of Pueblo.

The O&M Manual must specify that an annual Inspection Report for the SCM (Appendix F) must be completed and submitted along with the Annual Reporting Form and Photo Log (Appendix G). A copy of these forms shall be included in the O&M Manual, to be filled out and submitted to the City by April 1st of each year in accordance with the Stormwater Facility Maintenance Agreement. If the Inspection report is not completed and submitted to the City by April 1st of any given year, the City will notify the owner that they have 30 days to submit the Inspection Report form.

3.2 O&M Manual - Appendices

Appendices to the O&M Manual should include the following information:

A. **Ownership Information Sheet:** The property owner must fill out this form identifying contact information. This form includes the contact information of the responsible party and shall be updated as ownership changes. A fillable form can be found on the City's Stormwater Utility web page.

B. **Easement:** The property owner must dedicate an easement to the City so that the City may access the facility for inspections and potential maintenance or repair. Refer to the City of Pueblo Drainage Criteria Manual (DCM) for required easement widths for stormwater facilities. A guide and fillable form can be found on the City's Stormwater Utility web page.

    i. DPW 110 - Easement and right of way form to grant the City an easement for the purpose of drainage, stormwater runoff, detention or water quality.

    ii. Legal Description - A legal description of the easement granted to the City. See "Easement and SFMA Information Packet" for further guidance.

    iii. Illustration of Legal Description - An illustration of the legal description for the easement granted to the City. See "Easement and SFMA Information Packet" for further guidance.

C. **Stormwater Facility Maintenance Agreement (SFMA):** The property owner must enter a SFMA with the City to ensure long term and operation of the SCM. A guide and fillable form can be found on the City's Stormwater Utility web page.

D. **Drainage Plan:** A Drainage Plan meeting all of the requirements set forth in Pueblo's DCM identifying all relevant SCMs.

E. **Maintenance Checklist:** A maintenance form for the SCM. This form contains items that are to be completed routinely, such as mowing during the growing season, as well as minor and major improvements to be completed on an as-needed basis.

F. **Inspection Checklist:** An inspection form for the SCM. The form corresponding to the SCM(s) to be maintained shall be included in the O&M Manual.

G. **Reporting Forms:** A reporting form and photo log that verify the inspection and condition of the SCM(s). These need to be submitted annually by April 1st.

4.0 Stormwater Control Measure Guidelines

General guidelines for Extended Detention Basins, Sand Filters, Bioretention (Rain Gardens), and Grass Buffers, Swales, and Vegetation Buffers are provided in the following sections. Each guideline sheet includes a brief description of the SCM type, its functional components, guidance for routine maintenance, and minor and major improvements that may be needed over the lifetime of the facility. The relevant information sheet should be included in the O&M Manual. A more comprehensive discussion regarding each SCM and recommended maintenance can be found in Volume 3 of the MHFD Manual.

4.1 Extended Detention Basins

Extended Detention Basins (EDBs) temporarily store and slowly release stormwater runoff, allowing pollutants to settle out of the water column. While similar to detention basins used only for flood control, EDBs use much smaller outlets to slow the release of the stored runoff and provide a mechanism for pollutant removal. EDBs generally have low to moderate routine maintenance requirements but may require significant maintenance every 15 to 25 years. Maintenance frequency is dependent on several factors, including but not limited to construction activity in the watershed, size of the watershed, and erosion control measures implemented in the watershed.

4.1.1 Functional Description

EDBs have six main components: inflow points (inlets), forebays, trickle channels, embankments, a micropool, and an outlet structure. Each EDB may have multiple inflow points, which are defined by any point where runoff enters.

Forebays are typically constructed below inlets and serve to settle out sediment, trash, and other debris. Trickle channels convey low flows from the forebay to the outlet structure. A micropool is a small area of standing water in front of the outlet structure that provides an environment for biological uptake of pollutants. Micropools are the only location where standing water is acceptable in an EDB. Not all EDBs have micropools; refer to original design drawings to confirm if the EDB was designed with one.

Outlet structures control the rate at which stored runoff is released from the EDB. Outlet structures generally contain several different components (including the well screen, orifice plate, and trash rack). It is essential to maintain these structures to ensure that the entire EDB can function correctly. The last aspect of EDBs is the basin's embankments, which creates an artificial low point for water containment.

4.1.2 Inspection Requirements

EDBs should be inspected at least twice a year for sediment build-up in the forebay and debris obstructing the outlet structure.

4.1.3 Maintenance

4.1.3.1 Routine Maintenance

Debris and trash removal should be completed as required to avoid plugging of the outlet structure.

While grasses are becoming established, typically the first three years, mow only when required to deter weeds. Mow regularly during the growing season to maintain desired vegetation height and control weeds.

Aeration is required for EDBs with manicured grass. This allows the soil to be supplied with air and increases infiltration in the EDB by allowing more water to move into the root zone. Aeration should be done at least 1 time per year when the ground is not frozen and conditions are not extremely hot and dry. Mark sprinkler heads and shallow utilities to prevent property damage.

Although EDBs are designed to minimize mosquito populations, mosquito control may be necessary in residential neighborhoods. Inspections for mosquitos and implementation of mosquito control measures can be performed by a mosquito control service of the property owner's choosing. A section is provided on the Appendix F form to be filled out for mosquito control.

Irrigation should be adjusted throughout the growing season, dependent on observed requirements of vegetation. Less irrigation is typically required in the early summer, with more needed in July and August. If the facility in question is designed around native grasses and other drought tolerant species, it may not require any irrigation after establishment. It is necessary to check for broken sprinkler heads if they are being used on the EDB and to drain any irrigation systems annually before every winter.

Annual sediment removal should be performed from the forebay and trickle channel. In some watersheds where construction or development is ongoing, this may be required more often than annually. The facility should be maintained so there is minimal sediment resuspension during each rain event. Waste sediment may be contaminated with various pollutants and must be disposed of properly.

Fertilizer use should be minimized to the extent possible; once vegetation is established, it may not be necessary.

4.1.4 Minor and Major Improvements

If the EDB contains a micropool, it will require the removal of sediment from the bottom of the micropool once every 1 to 4 years or anytime the depth of the micropool has been reduced to approximately 18 inches. Small micropools may be vacuumed; larger pools may require pumping to remove all sediment entirely.

Sediment removal from the basin bottom is required roughly every 15 to 25 years but may need to occur more frequently in watersheds where construction activities are occurring. Complete basin sediment removal should be performed when accumulated sediment occupies 20 percent of the water quality design volume, or if the buildup of sediment and infiltrated waste particles is impairing infiltration and resulting in poor drainage. Immediate sediment removal is recommended if there is a chance that the EDB soil has been contaminated with high levels of contaminants.

Erosion and structural repairs do not have an attached time frame for maintenance but should be addressed immediately anytime either are noted during an inspection. Do not change the type of structure, size, quality, or species of grass when repairing the facility or addressing erosion.

Table 4-1. Extended Detention Basins: Common Indicators of Required Maintenance

Component	Hazard	Indicator	Solution
Inflow Structure (Inlet)	Debris	Pile of trash mixed with sediment	Shovel out trash and sediment and dispose of properly.
	Undesired Vegetation	Large woody vegetation surrounding the pipe	Chainsaw and root removal should be used to prevent damage to concrete.
	Erosion	Gaps between components or often these gaps will be filled with dirt. Cracking of concrete	Minor repair may require adding energy dissipation techniques such as riprap or concrete patching. Major repairs may require an engineer and heavy equipment.
Forebay	Debris	Ponding of water, visible trash, and noxious smells	Removal of trash and sediment using proper methods.
	Any Vegetation	Any plants or green in the forebay (also a sign that sediment needs to be removed)	Immediate removal of vegetation and sediment.
	Weathering	Cracking of concrete	Concrete patching.
Trickle Channel	Debris	Visible trash or ponding of water along the path of the trickle channel	Immediate removal of debris and restoration of the flow path.
	Undesired Vegetation	Any large vegetation growing near the channel	Chainsaw and root removal should be used to prevent damage to concrete.
	Erosion	The trickle channel is no longer smooth and straight, and there are exposed soils along the length	Replacement of lost soils and concrete fortification of the channel bottom.

Component	Hazard	Indicator	Solution
Micropool	Sedimentation	Vegetation growing in the pool, noxious smells, discoloration	Immediate removal of sediment.
	Mosquitos	Excessive number of bites reported or visibly high numbers	Contact the designated mosquito control service or apply insecticide.
	Oil/Chemical Sheens	Visible sheen on water's surface, gas, or chemical smell	May indicate a possible illicit discharge inside of the watershed. Contact the stormwater authority immediately.
Outlet Structure	Debris	Well screen, orifice plate, and or trash rack are all visibly covered in trash and debris	Cleaning to remove trash.
	Removed or Missing Parts	Any of the designed parts are moved or missing from previous inspections and design drawings	Replace part and securely fasten down access. Repetitive loss resulting from repeated vandalism may require contacting law enforcement.

4.2 Sand Filters

Sand filters are stormwater control measures that remove pollutants from runoff by filtration through specialized filter media, or sand bed. During rainfall, stormwater accumulates in the surcharge zone and gradually infiltrates through the sand bed and into the underlying underdrain. The underdrain then discharges the filtered runoff into the storm drain system.

4.2.1 Functional Description

Sand filters have six main components: 1) inflow points (inlets), 2) energy dissipaters, 3) filter media, 4) underdrain, 5) outlet structure, and 6) containment walls. Water enters the sand filter through an inflow point, often a pipe roof downspout, surface channel, or a curb cut. Energy dissipation devices, typically riprap, are designed to reduce erosion of filter media near the inlet. The specific filter material of the sand bed is part of the sand filter design and should be replaced with the same material, when required. Underdrains prevent stormwater discharge to groundwater by capturing stormwater underneath the filter material and directing it to an outlet structure. Most sand filter facilities have underdrains, although not all. Outlet structures are where excess water that exceeds the storage capacity of the sand filter and water from the underdrain (if present) will discharge to the storm drain system. Containment walls surround the sand media and create an artificial shallow pool for the containment of water.

4.2.2 Inspection Requirements

Sand filters should be inspected twice per year following a precipitation event to ensure they are functioning correctly. In addition to observing for adequate infiltration, the facility should be checked for erosion and repaired if necessary. Sand filters should drain completely within 24 hours of a storm event.

4.2.3 Maintenance

4.2.3.1 Routine Maintenance

Debris and trash removal is required routinely to keep the detention area and overflow structure clear and minimize clogging of the filter media.

Vegetation should not be present inside of sand filters unless explicitly included in the design drawings. Any vegetation noticed on an inspection or during other maintenance work should be fully and completely removed by the roots.

Sediment should be removed from inflow points as needed. This might be a minimal volume of sediment; however, if ignored, it can lead to significant blockage of the inlet and impediment of filter material. Sediment should also be removed from energy dissipation components to prevent similar issues. Waste sediment may be contaminated with various pollutants and must be disposed of properly.

4.2.3.2 Minor and Major Improvements

The top 2 inches of the sand filter should be scarified to maintain an adequate infiltration rate, which typically is necessary once every two to five years or as needed. Once this has been performed two or three times, replenish the top layers up to the original design depth with new clean filter material. If, after replacing with clean filter material, the sand filter is still failing to fully drain within 24 hours, a complete replacement of sand filter material may be required or a repair to the underdrain system, if present, may be necessary, if present. A minimum depth of 12 inches of media should be maintained at all times.

Erosion and structural repairs do not have an attached time frame for maintenance but should be addressed immediately anytime either are noted during an inspection. Do not change the type of structure, size, quality, or species of vegetation when repairing the facility or addressing erosion.

Table 4-2. Sand Filters: Common Indicators of Required Maintenance

Component	Hazard	Indicator	Solution
Inflow Structure (Inlet)	Debris	Pile of trash mixed with sediment	Shovel out trash and sediment and dispose of properly.
	Undesired Vegetation	Large woody vegetation surrounding the pipe	Chainsaw and root removal should be used to prevent damage to concrete.
	Erosion	Gaps between components or often these gaps will be filled with dirt. Cracked concrete	Minor repair may require adding energy dissipation techniques such as riprap or concrete patching. Major repairs may require an engineer and heavy equipment.
	Blockage	Sediment or filter media above the level of the inlet that impedes flow. Ponding of water outside of the inlet	Immediate removal of the sediment and filter media that is impeding the flow.
Energy Dissipater	Debris and Sediment	Ponding of water, visible trash, and noxious smells	Removal of trash and sediment using proper methods.
	Any Vegetation	Any vegetation in the energy dissipation components (also a sign that sediment may need to be removed)	Immediate removal of vegetation and sediment if necessary.
	Weathering	Cracking of concrete	Concrete patching.
	Riprap Migration	Riprap stones are found elsewhere in the sand trap beyond the original design area. Riprap stones are missing	Movement of the displaced riprap back to the original location of riprap. If this is a repeated issue, it is recommended that the current riprap is replaced with larger D50 riprap.

Component	Hazard	Indicator	Solution
Filter Media	Debris	Visible trash	Immediate removal of trash and restoration of any damaged media.
	Vegetation	Any vegetation growing in the filter media. This may also be a sign that the filter media needs attention	Complete plant removal of all vegetation, including roots. If this is a significant issue or the filter media seems to be draining poorly, it is recommended that the sand media is raked at a minimum.
	Erosion and Grading	Sand media is no longer smooth and flat and now possesses grooves or drainage channels	Replacement of lost filter media and likely maintenance of the inlet and energy dissipaters is required. For grading issues, simple raking might be sufficient.
	Caking	A thick layer of obvious sediment built up over the top of the filter media. Often this allows vegetation to grow in the sediment and may produce noxious smells	Complete removal of the top two inches of filter media. Potentially more if it is noticed the cake layer is deeper than two inches or roots have proceeded deeper.
	Snow Storage	Snow storage evidence present in the winter and spring	Contact snow removal companies or the City and instruct them to no longer store snow there.
	Oil/Chemical Sheens	Visible sheen on filter or water surface, gas, or chemical smell	May indicate a possible illicit discharge inside of the watershed. Contact the stormwater authority immediately.
Underdrain	Sediment Buildup or Blockage	Sand filter no longer drains fully in the 24 hours after a storm, no matter the amount of filter material replacement that happens	Immediate removal of sediment to access the underdrain and then replacement of the underdrain. New filter media should be used after the underdrain is replaced.

Component	Hazard	Indicator	Solution
Outlet Structure	Debris	Well screen, orifice plate, and or trash rack are all visibly covered in trash and debris	Cleaning to remove trash.
	Removed or Missing parts	Any of the designed parts are moved or missing from previous inspections and design drawings	Replace part and securely fasten down access. Repetitive loss resulting from repeated vandalism may require contacting law enforcement.

4.3 Bioretention (Rain Gardens)

Bioretention, also referred to as a rain garden or porous landscape detention, utilizes soil, plants, and microbes to treat stormwater runoff before it is either infiltrated or discharged. Bioretention facilities filter stormwater in an aesthetically pleasing manner. For most storms, water should fully drain out of a bioretention facility in 12 hours to 24 hours.

4.3.1 Functional Description

Rain gardens have six main components: inflow points (inlets), energy dissipaters, filter (or growing) media, underdrain, outlet structure, and containment walls. Inflow points are any point where water enters the rain garden, often through a pipe roof downspout, surface channel, or a curb cut. Energy dissipation devices, typically riprap, are designed to reduce erosion of filter media near the inlet.

Growing media removes pollutants as stormwater filters through the particle void space and is designed to support the growth of selected plants that filter water and provide a more pleasing aesthetic. The growing media inside a rain garden must comply with the specifications as described in MHFD BMP Fact Sheet T-3, *Bioretention*, and care should be taken to adhere to the same specifications when replacement of the media is required. The time required for water discharging into a rain garden to being fully absorbed and filtered will typically take no more than 12 hours. If the drain time exceeds 24 hours, the facility should be inspected for clogging.

Underdrains prevent stormwater runoff from discharging to groundwater by capturing stormwater underneath the filter material and directing it to the outlet structure. Not all rain garden facilities have underdrains. Outlet structures discharge excess water that exceeds the storage capacity of the rain garden and water from the underdrain (if present) into the storm drain system. Containment walls surrounding the sand media create an artificial shallow pool for the containment of water.

4.3.2 Inspection Requirements

Rain gardens should be inspected at least twice per year following a precipitation event. If standing water remains for more than 24 hours after a precipitation event, clogging may be an issue. The site should also be checked for the potential movement of riprap (if present), erosion at either the inlet or outlet, sediment buildup that blocks or impairs the inlet, and buildup of debris and trash at the outlet structure. Vegetation should also be inspected to ensure proper growth and health of the plants and to check for any undesired weeds growing in the filter material.

4.3.3 Maintenance

4.3.3.1 Routine Maintenance

Debris and trash removal should be completed regularly and should be removed from the inlet, surrounding vegetation, and the outlet structures.

Only vegetation specified in the original design drawings of the facility should be in the rain garden. All other vegetation should be considered weeds and removed immediately if noticed during an inspection or other maintenance. Weeding should be performed as often as necessary. Grasses should be allowed to establish before mowing, or mowing should be accomplished with hand-held string trimmers.

Irrigation may be required throughout the growing season to maintain healthy vegetation. This may be performed as necessary and may not be needed on native grasses and drought-tolerant vegetation. If using an irrigation system, inspect sprinkler heads for damage and repair them as required. Irrigation systems need to be drained during the winter months.

Sediment should be removed from inlets periodically. While this may be a minimal volume of sediment, if ignored, it can lead to significant blockage of the inlet and impede the filter material. Sediment should also be removed from energy dissipation components to prevent similar issues. Waste sediment may be contaminated with various pollutants and must be disposed of properly.

If the rain garden contains wood mulch, the mulch should only be replaced as needed to maintain a maximum depth of approximately 3 inches. Excess mulch will reduce the volume available for storage and may impede inlets and outlets. Fertilizer should be applied minimally, if at all; once vegetation is established, it may not be necessary.

4.3.3.2 Minor and Major Improvements

Maintenance activities to repair rain garden sediment and filtration media will vary with the facility’s nature and design. If clogging is primarily related to sediment accumulation on the surface of the filter media, it may be as simple as raking the media or scraping off the top layer of clogged sediment. If the clogging is more significant, it may require the partial or complete removal and replacement of the growing media. Plants should be preserved if possible in order to speed up recovery times. If the issue involves the underdrain system, the growing media and vegetation may need to be replaced along with the underdrain. Erosion and structural repairs do not have a specified frequency for maintenance but should be addressed immediately anytime either are noted during an inspection.

Table 4-3. Bioretention and Rain Gardens: Common Indicators of Required Maintenance

Component	Hazard	Indicator	Solution
Inflow Structure (Inlet)	Debris	Pile of trash mixed with sediment	Shovel out trash and sediment and dispose of properly.
	Undesired Vegetation	Large woody vegetation surrounding the pipe	Chainsaw and root removal should be used to prevent damage to concrete.
	Erosion	Gaps between components or often these gaps will be filled with dirt. Cracked concrete	Minor repair may require adding energy dissipation techniques such as riprap or concrete patching. Major repairs may require an engineer and heavy equipment.
	Blockage	Sediment or filter media above the level of the inlet that impedes flow. Ponding of water outside of the inlet	Immediate removal of the sediment and filter media that is impeding the flow.
Energy Dissipater	Debris and sediment	Ponding of water, visible trash, and noxious smells	Removal of trash and sediment using proper methods.
	Any Vegetation	Any vegetation in the energy dissipation components (also a sign that sediment may need to be removed)	Immediate removal of vegetation and sediment if necessary.
	Weathering	Cracking of concrete	Concrete patching.
	Riprap migration	Riprap stones found elsewhere in the sand trap beyond the original design area. Riprap stones are missing.	Movement of the displaced riprap back to the original location of riprap. If this is a repeated issue, it is recommended that the current riprap is replaced with larger D50 riprap.

Component	Hazard	Indicator	Solution
Filter Media	Debris	Visible trash	Immediate removal of trash and restoration of any damaged media.
	Weeds	Unwanted vegetation that does not match original plants or resembles a weed	Complete plant removal of weeds, including roots.
	Erosion and grading	Rain garden media is no longer smooth and flat and now possesses grooves or drainage channels	Replacement of lost filter media and likely maintenance of the inlet and energy dissipaters is required. For grading issues, simple raking might be sufficient.
	Snow storage	Snow storage evidence present in the winter and spring	Contact snow removal companies or the City and instruct them to no longer store snow there.
	Oil/Chemical Sheens	Visible sheen on filter or water surface, gas, or chemical smell	May indicate a possible illicit discharge inside of the watershed. Contact the stormwater authority immediately.
Underdrain	Sediment buildup or blockage	Rain garden no longer drains fully in the 24-hour period after a storm, no matter the amount of filter material replacement that happens	Recommend removing sediment to access the underdrain and then replacing the underdrain. New filter media should be used after the underdrain is replaced.
Outlet Structure	Debris	Well screen, orifice plate, and or trash rack are all visibly covered in trash and debris	Cleaning to remove trash.
	Removed or missing parts	Any of the designed parts are moved or missing from previous inspections and design drawings	Replace part and securely fasten down access. Repetitive loss resulting from repeated vandalism may require contacting law enforcement.

4.4 Grass Buffers, Swales, and Vegetative Filter Strips

Grass buffers and vegetative filter strips are common stormwater management measures that are typically composed of a strip of grass over a porous subsoil medium. They are often located next to roads or adjacent to waterways to prevent stormwater runoff from flowing directly into a water body. A swale is a long, vegetated depression often used to convey stormwater away from homes and critical infrastructure.

4.4.1 Functional Description

Grass buffers are typically grass over porous subsoil. They can be configured in different shapes and be used in different locations. Swales are similarly simple; however, they are often specifically shaped and graded to channel stormwater away from structures.

4.4.2 Inspection Requirements

Inspect vegetation twice annually. The standard procedure is to inspect at the beginning of the growing season (May) and then inspect again toward the end of the growing season (August/September). During these inspections, check for trash and sediment accumulation, observe the overall condition of vegetation, and monitor for the formation of any rills or gullies.

4.4.3 Maintenance

4.4.3.1 Routine Maintenance

Routine maintenance involves the removal of trash and debris and should be completed at least twice yearly.

While grasses are becoming established, mow only when required to deter weeds. After this initial period, mowing should be done as frequently as necessary to maintain healthy turf (refer to CSU Extension Recommendations for Mowing Manicured Turf).

Occasional aeration is required for buffers and swales with manicured grass. This allows the soil to be supplied with air and increases infiltration by allowing more water into the root zone. Aeration should not be done when the ground is frozen or when conditions are extremely hot and dry. Mark sprinkler heads and shallow utilities to prevent property damage.

Irrigation should be adjusted throughout the growing season, dependent on observed requirements of vegetation. Less irrigation is typically required in the early summer, with more needed in July, August, and September. If the facility in question is designed for native grasses and other drought tolerant species, it may not require irrigation after establishment. It is necessary to check for broken sprinkler heads and to drain any irrigation systems annually before winter.

Fertilizer use should be minimized to the extent possible; once vegetation is established, it may not be necessary.

Monitor for sediment build-up along swales and between buffers and the neighboring impervious areas. Remove sediment and replace vegetation as required. Monitor health of vegetation and reseed bare patches as needed. Waste sediment may be contaminated with various pollutants and must be disposed of properly.

4.4.3.2 Minor or Major Improvements

Revegetation may be required at the interface of the vegetation buffer and impervious area every 10 to 20 years. If erosion has damaged the grass buffer or swale, it should be regraded and revegetated. This can often be done simply with a shovel unless the damage is significant, which may require small heavy equipment.

Table 4-4. Grass Buffers, Swales, and Vegetative Strips: Common Indicators of Required Maintenance

Component	Hazard	Indicator	Solution
Grass and subsoil	Debris	Pile of trash mixed with sediment on top of the grass	Remove trash and sediment and dispose of properly.
	Undesired Vegetation	Large woody vegetation or undesired weeds	Weeding by hand may be sufficient. In cases where it is not, more frequent mowing may be required, or an herbicide might be necessary.
	Erosion	Bare patches of soil and or channeling of subsoil	Minor repair may involve simply shoveling the eroded subsoil back in and replanting. In extreme cases, the use of heavy equipment may be needed.

5.0 References

Stormwater Management Facility Operation and Maintenance (O&M) Manual: Appendix E – Maintenance Forms. 2017. Southeast Metro Stormwater Authority (SEMSWA).

Appendices

Appendix A: Ownership Information Sheet

Ownership Information Sheet

Property Description (i.e., Lot, Block, Subdivision plat name and filing number, or metes and bounds description.)

_____

_____

_____

_____

Owner Name(s): (Should appear exactly as given on deed by which property was acquired by owner)

_____

_____

Owner's Address:

_____

_____

Type of business: (i.e., corporation, partnership, Limited liability co., etc.)

_____

_____

Contact person:

Name_____Phone # _____

Email _____

EASEMENT AND RIGHT OF WAY

(Facilities To Be Installed And Maintained By Grantor)

THIS EASEMENT, granted this_____day of_____, _____, by _____, Grantor, to Pueblo, a Municipal Corporation, Grantee:

WITNESSETH:

THAT IN CONSIDERATION of the sum of One Dollar ($1.00) and other good and valuable consideration, paid by the Grantee, receipt of which is hereby acknowledged, Grantor hereby grants to Grantee, its successors and assigns, an easement and right of way for the purpose of_____, in, through, over, under and across Grantor's property situated in Pueblo County, Colorado described in the attached Exhibit "A" (the "Property").

Grantor shall install _____ (the "Facilities") in the Property in accordance with plans and specifications therefore approved by, and on file with Grantee, and, thereafter, Grantor shall maintain the Facilities in good working order and condition, and repair and replace the Facilities.

Grantee shall have the right at its option (but not the obligation) to inspect, control, maintain, repair and replace the Facilities and recover all costs and expenses thereof plus an administrative charge of 15% from the Grantor. For such purposes, Grantee is granted the right to enter upon the Property and adjoining property of Grantor. Failure of Grantee to inspect, control, maintain, repair or replace the Facilities shall not subject the Grantee to any liability for such failure.

Grantor reserves the right to use and occupy the Property for any purpose not inconsistent with the privilege above granted and which will not interfere with or endanger any equipment or facilities therein or use thereof. Such reservation by the Grantor shall in no event include the right to locate or erect or cause to be located or erected on the Property any building or any other structure or manufactured or mobile home or trailer unit.

Grantor warrants to Grantee that Grantor (a) has good and sufficient right and title in and to the Property and full power to grant this easement and right-of-way, and (b) will defend Grantee's quiet and peaceful possession of the Property and easement and right-of-way against all persons who may lawfully claim title to the Property.

"Grantee" shall include the plural and the feminine. This Easement and Right of Way shall be binding upon, and shall inure to the benefit of the heirs, personal representatives, successors and assigns of the Grantor and Grantee.

SIGNED this_____day of_____, _____.

GRANTOR:

By: _____

ACKNOWLEDGEMENT
(For an individual acting in his or her own right)

State of_____)
)ss
County of_____)

The foregoing instrument was acknowledged before me this___day of_____, 201____by _____
_____.

[seal]

_____
Notary Public
My Commission Expires:
_____

ACKNOWLEDGEMENT

(For a Corporation)

State of_____)
)ss
County of_____)

The foregoing instrument was acknowledged before me this__day of_____, 201___by _____
_____of_____, a _____
corporation, on behalf of the corporation.

[seal]

_____
Notary Public
My Commission Expires:

_____

ACKNOWLEDGEMENT

(For a limited liability company)

STATE OF_____)
) ss.
COUNTY OF_____)

The foregoing instrument was acknowledged before me this_____by_____(name of manager(s)) as manager(s) of_____(name of limited liability company) a _____(state of organization), limited liability company.

Witness my hand and official seal.
My commission expires: _____

(SEAL) _____
Notary Public (or official title)

ACKNOWLEDGEMENT
(For a partnership)

State of_____)
)ss
County of_____)

The foregoing instrument was acknowledged before me this__day of_____, 201___by _____ _____, as_____on behalf of _____ _____, a partnership.

[seal]

_____
Notary Public
My Commission Expires:
_____

DPW 110
12/03/98

ACKNOWLEDGEMENT

(For an individual acting as principal by an attorney in fact)

State of _____)
_____)ss
County of _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 201___ by _____ _____ as attorney in fact on behalf of _____.

[seal]

_____
Notary Public
My Commission Expires:
_____

DPW 110
12/03/98

ACKNOWLEDGMENT
(By any public officer, trustee, or personal representative)

State of _____)
_____)ss
County of _____)

The foregoing instrument was acknowledged before me this___day of_____, 201____by _____ _____as_____for the Owner, _____ _____.

[seal]

_____
Notary Public
My Commission Expires:
_____

STORMWATER FACILITY MAINTENANCE AGREEMENT

This Stormwater Maintenance Agreement is entered into this _____ day of _____, 20___, by and between Pueblo, a municipal corporation ("the City") and _____ _____ (the "Owner"), and collectively referred to as the "Parties".

RECITALS

WHEREAS, Owner owns certain real property located in the City of Pueblo legally described as follows:

;

and more commonly known as _____ (the "Property"); and

WHEREAS, a Drainage Report and Plan ("Plan") for the Property has been approved by the City subject to and conditioned upon faithful performance by Owner of all duties created by this Agreement; and

WHEREAS, said Plan provides for stormwater management facilities including such facilities intended to reduce, detain, convey, and manage stormwater runoff and also water quality facilities (collectively referred to as "Facilities"); and

WHEREAS, the Facilities shown on the Plan shall be constructed and adequately maintained by the Owner; and

WHEREAS, the City requires that the Owners submit an Operation and Maintenance Manual ("O & M Manual") as specified by the City.

NOW, THEREFORE, in consideration of the foregoing and mutual covenants contained herein, the sufficiency of which is mutually acknowledged, the Parties agree as follows:

AGREEMENT

1. The Owner shall maintain the Facilities as described in the Plan to ensure that such Facilities are and will remain in proper working condition in accordance with the approved O & M Manual and other applicable legal requirements. Maintenance shall include, but not be limited to, routine landscaping, sediment removal, repair, reconstruction, or replacement of the Facilities as necessary to meet the requirements of this Agreement.

2. The maintenance of the Facilities shall be performed in accordance with the O & M Manual for the Facilities.

3. The Owner shall cause the inspections of the Facilities to be conducted as follows:

   a. The Owner agrees to cause inspections of the Facilities, at the Owner's expense at least once every calendar year.

   b. An inspection report for the facilities shall be submitted in writing to the City for each calendar year by no later than April 1st of the following year. The inspection report shall be in accordance with the requirement set forth in the O & M Manual.

   c. The Owner agrees to perform promptly all needed maintenance and repairs and report such activity to the City pursuant to the O & M Manual.

4. The Owner, hereby, grants, bargains and conveys to the City, officers, agents, and employees an easement over the Property for access from public rights-of-way, abutting private roadways, and/or private driveways, to the Facilities for the purpose of inspecting, operating, installing, constructing, reconstructing, maintaining, repairing or replacing the Facilities to the extent that the Owner fails to do so and as necessary to ensure their proper working condition as provided in paragraphs one and two above.

5. In the event the Owner fails to inspect, report, or properly maintain the Facilities within thirty (30) days after written notice by the City of such deficiencies to the Owner, the City may enter upon the Property and take whatever steps it deems necessary to maintain or repair the Facilities and bill the owner for such expense plus an administrative charge of 15%. However, if the Owner's failure to properly maintain the facilities could cause damage to property, loss of life or violation of a NPDES MS-4 Permit, the City may take immediate action, without notice to the Owner, to maintain or repair the Facilities. It is expressly understood and agreed that the City is under no obligation to maintain or repair the Facilities, and in no event shall this Agreement be considered to impose any such obligation on the City.

6. The Owner agrees that it will not at any time dedicate the Facilities to the public, to public use or to the City without the City's written consent, nor will it subdivide or convey the Property without a covenant providing that a proportional share of the cost of maintenance and other costs associated with any other of the obligations and duties contained herein runs with each subdivided or conveyed part of the original Property.

7. In an event of emergency involving the Facilities, the City, its officers, agents, and employees may enter immediately upon the Property and take whatever reasonable steps it deems necessary to meet the emergency. The City shall notify the Owner of such emergency and entry as soon as possible but in no event later than twenty-four (24) hours after such entry. Alternatively, the City may notify the Owner by phone to take whatever reasonable action is necessary within a specified time period. Should the Owner fail to respond, or should the Owner inform the City that it intends to not respond within the specified period of time, the City, its officers, agents, and employees may enter immediately upon the emergency.

8. The City shall not pay any compensation at any time for its use of the Property in any way necessary for the inspections and maintenance of the Facilities, including access to the Facilities.

9. In the event the City, pursuant to this Agreement, performs work or expends any funds reasonably necessary for the maintenance or repair of the Facilities, including labor, equipment, supplies and materials, the Owner agrees to reimburse the City within thirty (30) days after the City gives the Owner written notice of such expense. If the Owner or its successors or assigns fail to make timely payment as required herein, interest on such payment shall accrue at the rate of 1.5% per month until paid in full.

10. Any amount owed to the City and not paid within thirty (30) days of notification shall be the joint and several obligation of any owner of record of the Property or any portions thereof served by the Facilities and any successors in interest to such owner on the date such maintenance or repair was performed.

11. The Owner, its successors, and assigns shall indemnify and hold harmless the City, its officers, agents, and employees for any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against the City arising out of or resulting from the construction, presence, existence of maintenance or use of the Facilities. The Owner shall notify the City when the Owner transfers its interest in the Property or any portion thereof. The Owner shall provide the City with a copy of any such deed.

12. The responsibilities and obligations of the Owner shall constitute a covenant running with the land, and shall be binding upon all present and subsequent owners, their administrators, executors, assigns, heirs, and any other successors in interest so long as they own an interest in the Property or any portion thereof served by the Facilities.

13. The Owner acknowledges that any future site plan, master plan, drainage plan or other process determined by the City to be a final plan, shall include the following language (or similar language approved in writing by the City): "The property owner, its successors, and assigns shall be responsible for maintenance of the Stormwater Facilities pursuant to the Operations and Maintenance (O & M) Manual and all permanent Best Management Practices (BMPs). Requirements include, but are not limited to, installing the specified BMPs contained in the Drainage Report and Plan and maintaining the Facilities as shown in the O & M Manual as approved by the City. If the Facilities are not properly maintained, the City may provide necessary maintenance and assess the cost to the Owner of the property in accordance with the Stormwater Facility Maintenance Agreement approved by the City and recorded at the Pueblo County Clerk and Recorder's Office."

14. This Agreement shall be recorded at the Pueblo County Clerk and Recorder's Office.

15. In the event either of the Parties hereto files a lawsuit to enforce the terms of the Agreement, the prevailing party shall be entitled to its reasonable costs and attorney fees.

[Remainder of this page left intentionally blank]

IN WITNESS WHEREOF, the City and the Owner have executed this Agreement on the date set forth above.

CITY:

By: _____
Director of Stormwater, City of Pueblo, Colorado (§16-12-10(d), P.M.C.)

Approved as to Form:

_____
City Attorney, City of Pueblo, Colorado

OWNER:

_____ , a _____ (corp/llc, indicate)

By: _____
, as

Or (if non corporate entity)

_____

(The Acknowledgement (notarization) will vary for Owner depending on if Owner is an individual, corporation, partnership, etc. Also, where there is a mortgage on the property, the mortgage holder must sign the Subordination section of this Agreement) An Affidavit of Authority/Incumbency to execute shall be supplied for any entity.

ACKNOWLEDGEMENT

(For an individual acting in his or her own right)

State of_____)
)ss
County of_____)

The foregoing instrument was acknowledged before me this___day of_____, 20_____by _____
_____.

[seal]

_____
Notary Public
My Commission Expires:
_____

ACKNOWLEDGEMENT

(For a Corporation)

State of_____)
)ss
County of_____)

The foregoing instrument was acknowledged before me this___day of_____, 20_____by _____ _____as_____of the_____ _____, a_____corporation, on behalf of the corporation.

[seal]

_____
Notary Public
My Commission Expires:

_____

ACKNOWLEDGEMENT

(For a limited liability company)

STATE OF_____)
) ss.
COUNTY OF_____)

The foregoing instrument was acknowledged before me this_____by (name of manager(s)) as manager(s) of _____(name of limited liability company) a _____(state of organization), limited liability company.

Witness my hand and official seal.
My commission expires: _____

(SEAL) _____
Notary Public (or official title)

ACKNOWLEDGEMENT
(For a partnership)

State of_____)
)ss
County of_____)

The foregoing instrument was acknowledged before me this__day of_____, 20____by _____ _____, as_____on behalf of _____ _____, a partnership.

[seal]

_____
Notary Public
My Commission Expires:
_____

ACKNOWLEDGEMENT

(For an individual acting as principal by an attorney in fact)

State of _____)
_____)ss
County of _____)

The foregoing instrument was acknowledged before me this___day of_____, 20____by _____
_____as attorney in fact on behalf of_____.

[seal]

_____
Notary Public
My Commission Expires:
_____

ACKNOWLEDGMENT
(By any public officer, trustee, or personal representative)

State of _____)
_____)ss
County of _____)

The foregoing instrument was acknowledged before me this___day of_____, 20____by _____ _____as_____for the Owner, _____ _____.

[seal]

_____
Notary Public
My Commission Expires:
_____

SUBORDINATION

, as holder of a mortgage or other lien or interest upon the parcel of land under reception number _____ dated .

1. known as:

Lot , block , Subdivision, Parcel Number , Subdivision , Filing No. , County of Pueblo, State of Colorado:

Or

2. legally described as:

Hereby intentionally and unconditionally subordinates that mortgage or other lien or interest in favor of this Stormwater Maintenance Agreement.

By:_____this____day of_____, 20____

State of_____)
)ss
County of_____)

The foregoing Subordination was acknowledged before me this_____day of_____, 20____by _____ _____as Authorized Agent of _____ on behalf of_____.

[seal]

_____
Notary Public
My commission expires _____

Appendix D: Drainage Plan

Insert Drainage Plan meeting requirements set forth in the DCM.

Appendix E: Maintenance Form

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. "D" Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Maintenance Form for Stormwater Control Measures (SCMs)			
SCM Owner:			
SCM Address:			
Type of SCM:			
Maintenance Provided By:			
Date:			
Type of Maintenance (circle all that apply):	Routine	Minor	Major

Maintenance Activity	Maintenance Performed ☐	Additional Information
Routine Work		
Mowing		
Aeration (manicured grass)		
Trash/debris removal		
Outlet works cleaning		
Weed control (indicate if herbicide used)		
Mosquito treatment		
Algae treatment		
Minor Work		**Indicate Component Repaired or Maintained (See List of Common Structures Below)**
Sediment removal		
Erosion repair		
Vegetation removal/tree thinning		
Revegetation		
Jet-vac/clearing drains		

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. "D" Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Maintenance Activity	Maintenance Performed ☐	Additional Information
Major Work		**Indicate Component Repaired or Maintained (See List of Common Structures Below)**
Sediment removal (dredging)		
Erosion repair		
Structural repair		
Other		

Additional Comments:

Common SCM Components Requiring Maintenance:

EDBs	Sand Filters	Bioretention	GBGS
Inflow points (inlets)	Inflow points (inlets)	Inflow points (inlets)	Inflow points
Forebay	Energy dissipater (riprap)	Energy dissipater (riprap)	Swale bottom
Trickle channel	Filter media	Media (filter or growth)	Side slopes
Embankment	Underdrain	Underdrain	Underdrain
Micropool	Outlet structure	Outlet structure	Buffer strip
Outlet structure (well screen, orifice plate, trash rack)	Containment walls	Containment walls	Grade control/level spreader
Upper/bottom stage	Sedimentation chamber	Bottom stage	
Spillway	Emergency overflow		

Appendix F: Inspection Forms

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. "D" Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Inspection Form for Extended Detention Basins	
Inspector:	Date:
Date of Last Inspection:	Date of Last Sediment Cleanout:
Inspection Type (circle one): Scheduled Post-flood	
If Post-flood Inspection, was Emergency Spillway Overtopped (circle one): Yes No N/A	

Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Inflow Structure (Inlet)			
Clear of debris?			
Free from erosion?			
Free of undesirable vegetation growth?			
Other Notes			
Forebay			
Clear of debris?			
Free of undesirable vegetation growth?			
Sediment level is less than 1 foot? Indicate what volume or depth of sediment was removed during inspection.			
Concrete in good condition? (i.e., no cracking or settling, etc.)			
Other Notes			
Trickle Channel (Upper Stage)			
Clear of debris?			
Free from erosion and sedimentation?			

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. “D” Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Free of excessive or woody vegetation growth?			
Other Notes			
Micropool (Lower Stage)			
Sediment level is less than 1 foot? Indicate what volume or depth of sediment was removed during inspection.			
Free of standing water?			
Free of undesirable vegetation growth?			
Free of visible pollution?			
Other Notes			
Riser or Other Outlet Structure & Principal Spillway			
Perforated riser pipe in good condition?			
Gravel filter present?			
Trash rack present and clear of debris?			
Concrete/masonry in good condition?			
Other Notes			
Storm Drain Outlet Protection			
Pipe – All designed parts are in place (screen, orifice plate, etc.)			
Pipe – Free of trash & debris			
Outlet apron in good condition?			

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. “D” Street
Pueblo, CO 81003
Phone (719) 553-2899
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Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Channel – riprap in place			
Channel – free of trash & debris			
Channel – functioning and stable (not eroding)			
Other Notes			
Emergency Spillway & Dam Embankment			
Vegetation healthy?			
Free of erosion?			
Clear of obstructions?			
Free from seepage?			
Other Notes			
Landscaping Features			
Describe vegetation condition (trees, shrubs, grasses)			
Sprinkler system functioning			

Inspector Comments:

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. “D” Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Overall Condition of Facility (circle one): **Acceptable** **Maintenance Required**

Maintenance Action Needed	Due Date

Inspector Signature: **Date:**

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. "D" Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Inspection Form for Sand Filters	
Inspector:	Date:
Date of Last Inspection:	Date of Last Sediment Cleanout:
Inspection Type (circle one): Scheduled Post-flood	
If Post-flood Inspection, was Emergency Spillway Overtopped (circle one): Yes No N/A	

Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Inflow Structure (Inlet)			
Clear of debris and blockages?			
Free from erosion?			
Free of undesirable vegetation growth?			
Flow is entering and not bypassing facility?			
Other Notes			
Energy Dissipater			
Clear of debris?			
Free of undesirable vegetation growth?			
Riprap stable?			
Concrete in good condition? (i.e., no cracking or settling, etc.)			
Other Notes			

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. “D” Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Filter Media			
Clear of debris?			
Free of erosion? Surface of media is smooth and no channels have formed?			
Free of excessive or woody vegetation growth?			
Free of excessive sediment deposits and caking?			
Free from oil/chemical sheens and noticeable odor?			
Other Notes			
Underdrain			
Free from blockages and able to flow freely?			
Other Notes			
Outlet Structure			
All designed parts are in place? Grates in good condition?			
Clear of debris?			
Other Notes			
Landscaping Features			
Describe vegetation condition (trees, shrubs, grasses)			
Sprinkler system functioning?			

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. “D” Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Inspector Comments:

Overall Condition of Facility (circle one): **Acceptable** **Maintenance Required**

Maintenance Action Needed	Due Date

Inspector Signature: **Date:**

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. "D" Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Inspection Form for Bioretention	
Inspector:	Date:
Date of Last Inspection:	Date of Last Sediment Cleanout:
Inspection Type (circle one): Scheduled Post-flood	
If Post-flood Inspection, was Emergency Spillway Overtopped (circle one): Yes No N/A	

Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Inflow Structure (Inlet)			
Clear of debris and blockages?			
Free from erosion?			
Free of undesirable vegetation growth?			
Flow is entering and not bypassing facility?			
Other Notes			
Energy Dissipater			
Clear of debris?			
Free of undesirable vegetation growth?			
Riprap stable?			
Concrete in good condition? (i.e., no cracking or settling, etc.)			
Other Notes			

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. “D” Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Filter Media			
Clear of debris?			
Free of erosion? Surface of media is smooth and no channels have formed?			
Free of excessive sediment deposits and caking?			
Free from oil/chemical sheens and noticeable odor?			
Water drains in 24 hours or less after a storm event?			
Other Notes			
Vegetation			
Species composition matches approved plans?			
Free from invasives/weeds?			
Adequate vegetation cover (no exposed soil)?			
Grass height 6 inches or less?			
Plant height at least the designed ponding depth?			
Other Notes			
Underdrain			
Free from blockages and able to flow freely?			

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. “D” Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Other Notes			
Outlet Structure			
All designed parts are in place? Grates in good condition?			
Clear of debris and other blockages?			
Other Notes			

Inspector Comments:

Overall Condition of Facility (circle one): **Acceptable** **Maintenance Required**

Maintenance Action Needed	Due Date

Inspector Signature: **Date:**

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. "D" Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Inspection Form for Grass Buffers, Swales, & Vegetative Filter Strips	
Inspector:	Date:
Date of Last Inspection:	Date of Last Sediment Cleanout:
Inspection Type (circle one): Scheduled Post-flood	
If Post-flood Inspection, was Emergency Spillway Overtopped (circle one): Yes No N/A	

Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Inflow Structure (Inlet)			
Clear of debris and blockages?			
Free from erosion?			
Free of undesirable vegetation growth?			
Flow is entering and not bypassing facility?			
Other Notes			
Filter Media			
Clear of debris?			
Free of erosion? Surface of media is smooth, and no channels have formed?			
Free of excessive or woody vegetation growth?			
Free of excessive sediment deposits and caking?			
Free from oil/chemical sheens and noticeable odor?			

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. “D” Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Feature	Checked (Y, N, N/A)	Maintenance Required (Y, N, N/A)	Comments/Action Required
Other Notes			
Underdrain			
Free from blockages and able to flow freely?			
Other Notes			
Outlet Structure			
All designed parts are in place? Grates in good condition?			
Clear of debris?			
Other Notes			
Landscaping Features			
Describe vegetation condition (trees, shrubs, grasses)			
Sprinkler system functioning?			

Inspector Comments:

CITY OF PUEBLO

STORMWATER UTILITY

City of Pueblo
211 E. “D” Street
Pueblo, CO 81003
Phone (719) 553-2899
Fax (719) 553-2294

Overall Condition of Facility (circle one): Acceptable Maintenance Required

Maintenance Action Needed	Due Date

Inspector Signature: **Date:**

Appendix G: Reporting Forms

211 E "D" Street
Pueblo, CO 81003

Phone: (719)-553-2899
Fax: (719)-553-2294

Annual Reporting Form

For Stormwater Facilities

Date: _____

Property Information: _____

Property Address: _____

Contact Information: _____

I verify that the required stormwater facility inspections and required maintenance have been completed in accordance with the Stormwater Facilities Maintenance Agreement and the Operations and Maintenance Manual associated with the above referenced property.

The required Stormwater Facility Inspection and Maintenance forms are hereby provided.

_____ _____

Name of Responsible Party for Maintenance | Property Owner

_____ _____

Signature | Signature

	City of Pueblo **Stormwater Utility**	Operation and Inspection Photolog

Inspector:	Address:

Photo No. 1	Date:	
Description:		
Photo No. 2	Date:	
Description:		

	City of Pueblo **Stormwater Utility**	Operation and Inspection Photolog

Inspector:	Address:

Photo No. 3	Date:	
Description:		
Photo No. 4	Date:	
Description:		

	City of Pueblo **Stormwater Utility**	Operation and Inspection Photolog

Inspector:	Address:

Photo No. 5	Date:	
Description:		
Photo No. 6	Date:	
Description:		