Steve Schleiker
08/07/2026 09:50:58 AM
Doc $0.00 34
Rec $0.00 Pages
El Paso County, CO
226075583

PPR242

PRIVATE DETENTION BASIN / STORMWATER QUALITY BEST MANAGEMENT PRACTICE MAINTENANCE AGREEMENT AND EASEMENT

This PRIVATE DETENTION BASIN / STORMWATER QUALITY BEST MANAGEMENT PRACTICE MAINTENANCE AGREEMENT AND EASEMENT (Agreement) is made by and between EL PASO COUNTY by and through THE BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO (Board or County) and the SECURITY WATER DISTRICT, a Colorado Special District, hereinafter referred to as "District." The above may occasionally be referred to herein singularly as "Party" and collectively as "Parties."

Recitals

A. WHEREAS, District is the owner of certain real estate (the Property) in El Paso County, Colorado, which Property is legally described in Exhibit A attached hereto and incorporated herein by this reference; and

B. WHEREAS, District desires to provide for additional building construction, herein also referred to as land use, on the Property presently referred to as the Security Area Mitigation System (aka SAMS) which provides for treatment of water for use as a potable water supply for the District's constituents; and

C. WHEREAS, the development of this Property will increase the volume of water runoff and will decrease the quality of the stormwater runoff from the Property, and, therefore, it is in the best interest of public health, safety and welfare for the County to condition approval of this construction on the District's promise to construct adequate drainage, water runoff control facilities, and stormwater quality structural Best Management Practices ("BMPs") for the Property; and

D. WHEREAS, Chapter 8, Section 8.4.5 of the El Paso County Land Development Code, as periodically amended, promulgated pursuant to Section 30-28-133(1), Colorado Revised Statutes (C.R.S.), requires the County to condition approval of all building construction on The District's promise to so construct adequate drainage, water runoff control facilities, and BMPs at the Property; and

E. WHEREAS, the Drainage Criteria Manual, Volume 2, as amended by Appendix I of the El Paso County Engineering Criteria Manual (ECM), as each may be periodically amended, promulgated pursuant to the County's Colorado Discharge Permit System General Permit (MS4 Permit) as required by Phase II of the National Pollutant Discharge Elimination System (NPDES), which MS4 Permit requires that the County take measures to protect the quality of stormwater from sediment and other contaminants, requires subdividers, developers, landowners, and owners of facilities located in the County's rights-of-way or easements to provide adequate permanent stormwater quality BMPs with new development or significant redevelopment; and

F. WHEREAS, Section 2.9 of the El Paso County Drainage Criteria Manual provides for the District's promise to maintain the District's drainage facilities in the event the County does not assume such responsibility; and

G. WHEREAS, developers in El Paso County have historically chosen water runoff detention basins as a means to provide adequate drainage and water runoff control in subdivisions, which basins, while effective, are less expensive for developers to construct than other methods of providing drainage and water runoff control; and

H. WHEREAS, District desires to construct one (1) detention basin/stormwater quality BMP(s) ("detention basin/BMP(s)") as the means for providing adequate drainage and stormwater runoff control and to meet requirements of the County's MS4 Permit, and to operate, clean, maintain and repair such detention basin/BMP(s); and

I. WHEREAS, District desires to construct the detention basin/BMP(s) on the Property identified with El Paso County Assessor's Parcel No. 65020-00-138, and as set forth on Exhibit B attached hereto; and

J. WHEREAS, District shall be charged with the duties of constructing, operating, maintaining and repairing the detention basin/BMP(s) on the portion of the Property described in Exhibit B; and

K. WHEREAS, it is the County's experience that subdivision developers and property owners historically have not properly cleaned and otherwise not properly maintained and repaired these detention basins/BMPs, and that these detention basins/BMPs, when not so properly cleaned, maintained, and repaired, threaten the public health, safety and welfare; and

L. WHEREAS, the County, in order to protect the public health, safety and welfare, has historically expended valuable and limited public resources to so properly clean, maintain, and repair these detention basins/BMPs when developers and property owners have failed in their responsibilities, and therefore, the County desires the means to recover its costs incurred in the event the burden falls on the County to so clean, maintain and repair the detention basin/BMP(s) serving this land use due to the District's failure to meet its obligations to do the same; and

M. WHEREAS, the County conditions approval of this land use on the District's promise to so construct the detention basin/BMP(s) and to reimburse the County in the event the burden falls upon the County to so clean, maintain and/or repair the detention basin/BMP(s) serving this Property; and

N. WHEREAS, the County could condition land use approval on the District's promise to construct a different and more expensive drainage, water runoff control system and BMPs than those proposed herein, which more expensive system would not create the possibility of the burden of cleaning, maintenance and repair expenses falling on the County; however, the County is willing to forego such right upon the performance of District's promises contained herein; and

O. WHEREAS, the County, in order to secure performance of the promises contained herein, conditions approval of this land use upon the District's grant herein of a perpetual Easement over a portion of the Property for the purpose of allowing the County to periodically access, inspect, and, when so necessary, to clean, maintain and/or repair the detention basin/BMP(s).

Agreement

NOW, THEREFORE, in consideration of the mutual Promises contained herein, the sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Incorporation of Recitals: The Parties incorporate the Recitals above into this Agreement.

2. Covenants Running with the Land: District agrees that this entire Agreement and the performance thereof shall become a covenant running with the land, which land is legally described in Exhibit A attached hereto, and that this entire Agreement and the performance thereof shall be binding upon itself, its successors and assigns.

3. Construction: District shall construct on that portion of the Property described in Exhibit B attached hereto and incorporated herein by this reference, one (1) detention basin/BMP(s). District shall not commence construction of the detention basin/BMP(s) until the El Paso County Planning and Community Development Services Department (PCD) has approved in writing the plans and specifications for the detention basin/BMP(s) and this Agreement has been signed by all Parties and returned to the PCD. District shall complete construction of the detention basin/BMP(s) in substantial compliance with the County-approved plans and specifications for the detention basin/BMP(s). Failure to meet these requirements shall be a material breach of this Agreement and shall entitle the County to pursue any remedies available to it at law or in equity to enforce the same. Construction of the detention basin/BMP(s) shall be substantially completed within one (1) year (defined as 365 days), which one year period will commence to run on the date the Erosion and Stormwater Quality Control Permit (ESQCP) is issued. Rough grading of the detention basin/BMP(s) must be completed and inspected by the PCD prior to commencing road construction.

In the event construction is not substantially completed within the one (1) year period, then the County may exercise its discretion to complete the project and, without the District waiving any of its legal rights, shall have the right to seek reimbursement from the District and its successors and assigns, for its actual costs and expenses incurred in the process of completing construction. The term actual costs and expenses shall be liberally construed in favor of the County, and shall include, but shall not be limited to, labor costs, tool and equipment costs, supply costs, and engineering and design costs, regardless of whether the County uses its own personnel, tools, equipment and supplies, etc. to correct the matter. In the event the County initiates any litigation or engages the services of legal counsel in order to enforce the provisions arising herein and is the prevailing party, the County shall be entitled to its damages and costs, including reasonable attorney fees, regardless of whether the County contracts with outside legal counsel or utilizes in-house legal counsel for the same.

4. Maintenance: The District agrees, for itself and its successors and assigns, that it will regularly and routinely inspect, clean and maintain the detention basin/BMP(s) in compliance with the County-reviewed Operation and Maintenance Manual, attached hereto as Exhibit C and incorporated herein by reference, and otherwise keep the same in good repair, all at its own cost and expense. No trees or shrubs that will impair the structural integrity of the detention basin/BMP(s) shall be planted or allowed to grow on the detention basin/BMP(s).

5. Creation of Easement: District hereby grants the County a non-exclusive perpetual easement upon and across that portion of the Property described in Exhibit B. The purpose of the easement is to allow the County to access, inspect, clean, repair and maintain the detention basin/BMP(s); however,

the creation of the easement does not expressly or implicitly impose on the County a duty to so inspect, clean, repair or maintain the detention basin/BMP(s).

6. County's Rights and Obligations: Any time the County determines, in the sole exercise of its discretion, that the detention basin/BMP(s) is not properly cleaned, maintained and/or otherwise kept in good repair, the County shall give reasonable notice to the District and its successors and assigns, that the detention basin/BMP(s) needs to be cleaned, maintained and/or otherwise repaired. The notice shall provide a reasonable time to correct the problems, but no less than 60 days to correct the problem. Should the responsible parties fail to correct the specified problems, the County may enter upon the Property to so correct the specified problems. Notice shall be effective to the above by the County's deposit of the same into the regular United States mail, postage pre-paid. Notwithstanding the foregoing, this Agreement does not expressly or implicitly impose on the County a duty to so inspect, clean, repair or maintain the detention basin/BMP(s).

7. Reimbursement of County's Costs / Covenant Running with the Land: The District agrees and covenants, for itself, its successors and assigns, that it will reimburse the County for its costs and expenses incurred in the process of completing construction of, cleaning, maintaining, and/or repairing the detention basin/BMP(s) pursuant to the provisions of this Agreement.

The term "actual costs and expenses" shall be liberally construed in favor of the County, and shall include, but shall not be limited to, labor costs, tools and equipment costs, supply costs, and engineering and design costs, regardless of whether the County uses its own personnel, tools, equipment and supplies, etc. to correct the matter. In the event the County initiates any litigation or engages the services of legal counsel in order to enforce the provisions arising herein, the County shall be entitled to its damages and costs, including reasonable attorney's fees, regardless of whether the County contracts with outside legal counsel or utilizes in-house legal counsel for the same.

8. Contingencies of Land Use/Land Disturbance Approval: District's execution of this Agreement is a condition of land use/land disturbance approval.

The County shall have the right, in the sole exercise of its discretion, to approve or disapprove any documentation submitted to it under the conditions of this paragraph, including but not limited to, any separate agreement or amendment, if applicable, identifying any specific maintenance responsibilities not addressed herein. The County's rejection of any documentation submitted hereunder shall mean that the appropriate condition of this Agreement has not been fulfilled.

9. Agreement Monitored by El Paso County Planning and Community Development Department and/or El Paso County Department of Public Works: Any and all actions and decisions to be made hereunder by the County shall be made by the Director of the El Paso County Planning and Community Development Department and/or the Director of the El Paso County Department of Public Works. Accordingly, any and all documents, submissions, plan approvals, inspections, etc. shall be submitted to and shall be made by the Director of the Planning and Community Development Department and/or the Director of the El Paso County Department of Public Works.

10. Indemnification and Hold Harmless: To the extent permitted by law, the District agrees, for itself, its successors and assigns, that it will indemnify, defend, and hold the County harmless from any and all loss, costs, damage, injury, liability, claim, lien, demand, action and causes of action whatsoever, whether at law or in equity, arising from or related to its intentional or negligent acts, errors

or omissions or that of its agents, officers, servants, employees, invitees and licensees in the construction, operation, inspection, cleaning (including analyzing and disposing of any solid or hazardous wastes as defined by State and/or Federal environmental laws and regulations), maintenance, and repair of the detention basin/BMP(s), and such obligation arising under this paragraph shall be joint and several. Nothing in this paragraph shall be deemed to waive or otherwise limit the defense available to the Parties pursuant to the Colorado Governmental Immunity Act, Sections 24-10-101, *et seq*. C.R.S., or as otherwise provided by law.

11. Severability: In the event any Court of competent jurisdiction declares any part of this Agreement to be unenforceable, such declaration shall not affect the enforceability of the remaining parts of this Agreement.

12. Third Parties: This Agreement does not and shall not be deemed to confer upon or grant to any third party any right to claim damages or to bring any lawsuit, action or other proceeding against either the County, the District, or their respective successors and assigns, because of any breach hereof or because of any terms, covenants, agreements or conditions contained herein.

13. Solid Waste or Hazardous Materials: Should any refuse from the detention basin/BMP(s) be suspected or identified as solid waste or petroleum products, hazardous substances or hazardous materials (collectively referred to herein as "hazardous materials"), the District shall take all necessary and proper steps to characterize the solid waste or hazardous materials and properly dispose of it in accordance with applicable State and/or Federal environmental laws and regulations, including, but not limited to, the following: Solid Wastes Disposal Sites and Facilities Acts, §§ 30-20-100.5 – 30-20-119, C.R.S., Colorado Regulations Pertaining to Solid Waste Disposal Sites and Facilities, 6 C.C.R. 1007-2, *et seq*., Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992k, and Federal Solid Waste Regulations 40 CFR Ch. I. The County shall not be responsible or liable for identifying, characterizing, cleaning up, or disposing of such solid waste or hazardous materials. Notwithstanding the previous sentence, should any refuse cleaned up and disposed of by the County be determined to be solid waste or hazardous materials, the District, but not the County, shall be responsible and liable as the owner, generator, and/or transporter of said solid waste or hazardous materials.

14. Applicable Law and Venue: The laws, rules, and regulations of the State of Colorado and El Paso County shall be applicable in the enforcement, interpretation, and execution of this Agreement, except that Federal law may be applicable regarding solid waste or hazardous materials. Venue shall be in the El Paso County District Court.

IN WITNESS WHEREOF, the Parties affix their signatures below.

Executed this 3rd day of June, 2026, by:
Security Water District

By: Roy E. Heald
Roy E. Heald, General Manager

The foregoing instrument was acknowledged before me this 3rd day of June, 2026, by Roy E. Heald, General Manager, Security Water District.

Witness my hand and official seal.

My commission expires: 2-26-2027

DIAN D SUKALSKI
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19994005476
MY COMMISSION EXPIRES FEBRUARY 26, 2027

Dian D Sukalski
Notary Public

Executed this 3rd day of June, 2026, by: Roy E. Heald

BOARD OF COUNTY COMMISSIONERS
OF EL PASO COUNTY, COLORADO

By: _____
Christina Prete, P.E., Stormwater Operations & Compliance Manager
Engineering Division, Department of Public Works
Designee of Joshua J. Palmer, P.E., County Engineer
Authorized signatory pursuant to Resolution No. 24-145

The foregoing instrument was acknowledged before me this 30th day of July, 2026, by Christina Prete, Stormwater Operations & Compliance Manager, El Paso County Department of Public Works.

Witness my hand and official seal.

My commission expires: 1/13/2030

Kelly M. Hills
Notary Public

Approved as to Content and Form:

Erika Keech
Assistant County Attorney

Kelly M Hills
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20014033687
MY COMMISSION EXPIRES 01/13/2030

EXHIBIT A – THE PROPERTY

Private Detention Basin/Stormwater Quality Best Management Practice Maintenance Agreement and Easement

Between

El Paso County, Colorado and the Security Water District

Prepared by GMS, Inc. May 20, 2026

A Tract of land located in the Northwest one-quarter and the Northeast one-quarter of the Southeast one-quarter of Section 2, Township 15 South, Range 66 West of the 6th Principal Meridian, El Paso County, Colorado, more particularly described as follows;

Beginning at the northerly corner of Lot 3, Bradley Storage, as recorded at Reception Number 218714088 of the records of El Paso County, Colorado said point being on the westerly right-of-way line of Lincoln Plaza Drive:

Thence N 00°44'00" W, 28.58 feet on a northerly extension of the westerly right-of-way line of Lincoln Plaza Drive as platted in said Bradley Storage; (the bearings in this description are based on the westerly right-of-way line of Lincoln Plaza Drive, as shown on the plat of Bradley Storage recorded under Reception No. 218714088 of the records of said County, having a bearing of N 00°44'00" W, said bearing being relative to the Colorado State Plane Coordinate System, Central Zone, NAD83, modified to ground coordinates.)

Thence S 89°16'00" W, 113.06 feet;
Thence N 72°02'13" W, 155.27 feet;
Thence N 00°44'00" W, 79.25 feet;
Thence N 89°16'00" E, 57.67 feet;
Thence S 00°44'00" E, 42.19 feet;
Thence N 89°16'00" E, 211.10 feet;
Thence N 00°13'10" W, 352.45 feet;
Thence N 89°59'03" E, 229.15 feet;
Thence S 51°30'31" E, 66.21 feet;
Thence S 00°01'11" E, 144.53 feet, more or less, to a point on the northwesterly line of Lot 1 of said Bradley Storage;

Thence S 61°49'00" W, 190.04 feet along said northwesterly line of Lot 1,
Thence S 38°28'29" W, 97.14 feet along said northwesterly line of Lot 1,
Thence S 38°28'36" W, 94.90 feet, more or less, to the Point of Beginning of the Tract herein described.

The above-described Tract of Land contains approximately 2.27 acres of land, more or less, and is subject to any rights-of-way or other easements as granted or reserved by instruments of record or as now existing across the above-described parcel of land.

G:\SECURITY\2023-053\130 - SDP\Maintenance Agreement and Easement\Exhibit A.dwg, 8.5x11, 7/1/2026 3:01:33 PM, jms

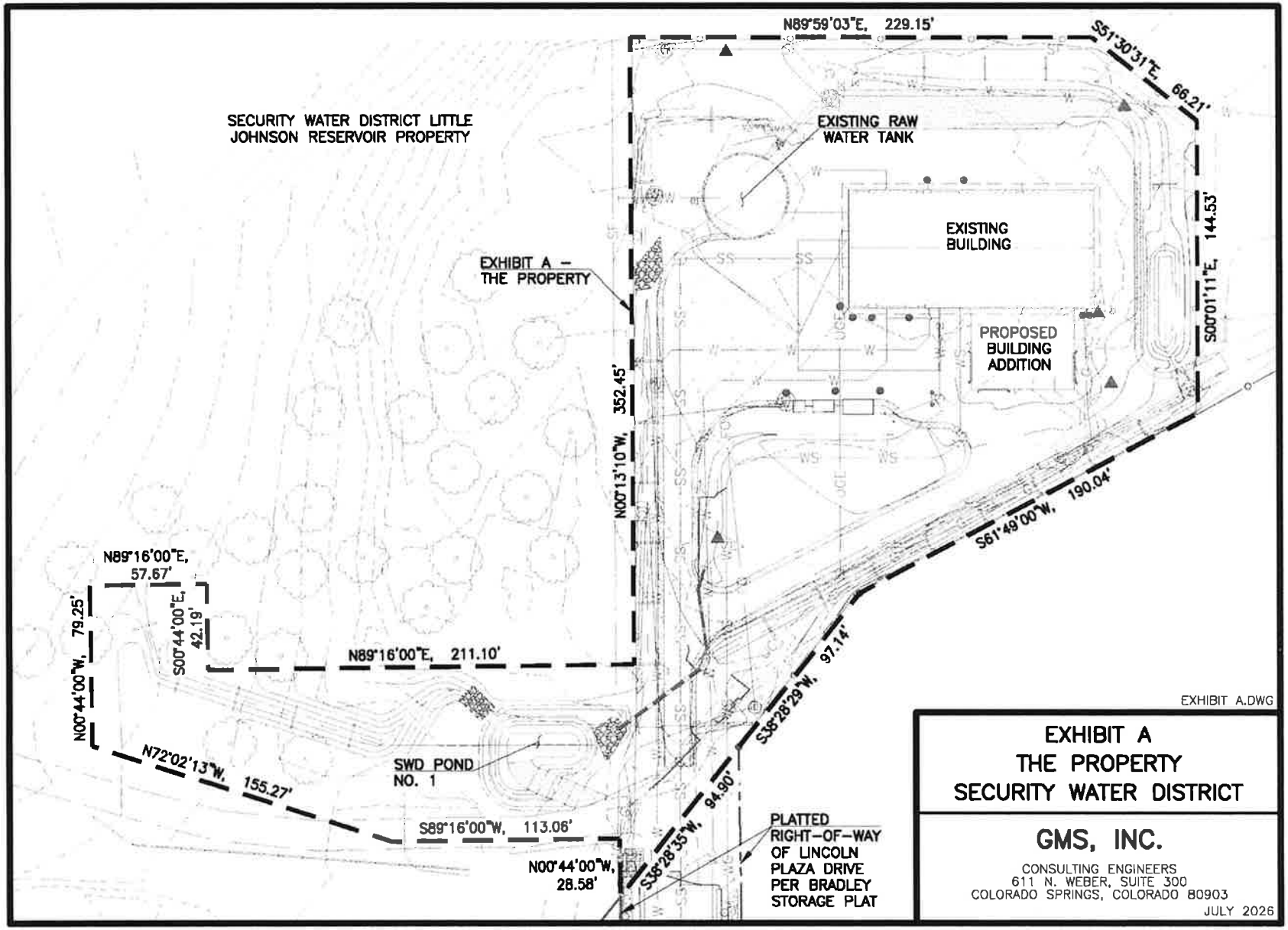


EXHIBIT B

Private Detention Basin/Stormwater Quality Best Management Practice Maintenance Agreement and Easement

Between

El Paso County, Colorado and the Security Water District

Prepared by GMS, Inc. May 12, 2026

A non-exclusive perpetual Access Easement lying over, under, and across a portion of that Tract of land, as deposited in Book DPST of Land Survey Plats at Page 65020, Deposit No. 219900011, of the records of El Paso County Colorado, said Tract of land being located in Section 2, Township 15 South, Range 66 West of the Sixth Principal Meridian, said Easement being more particularly described as follows:

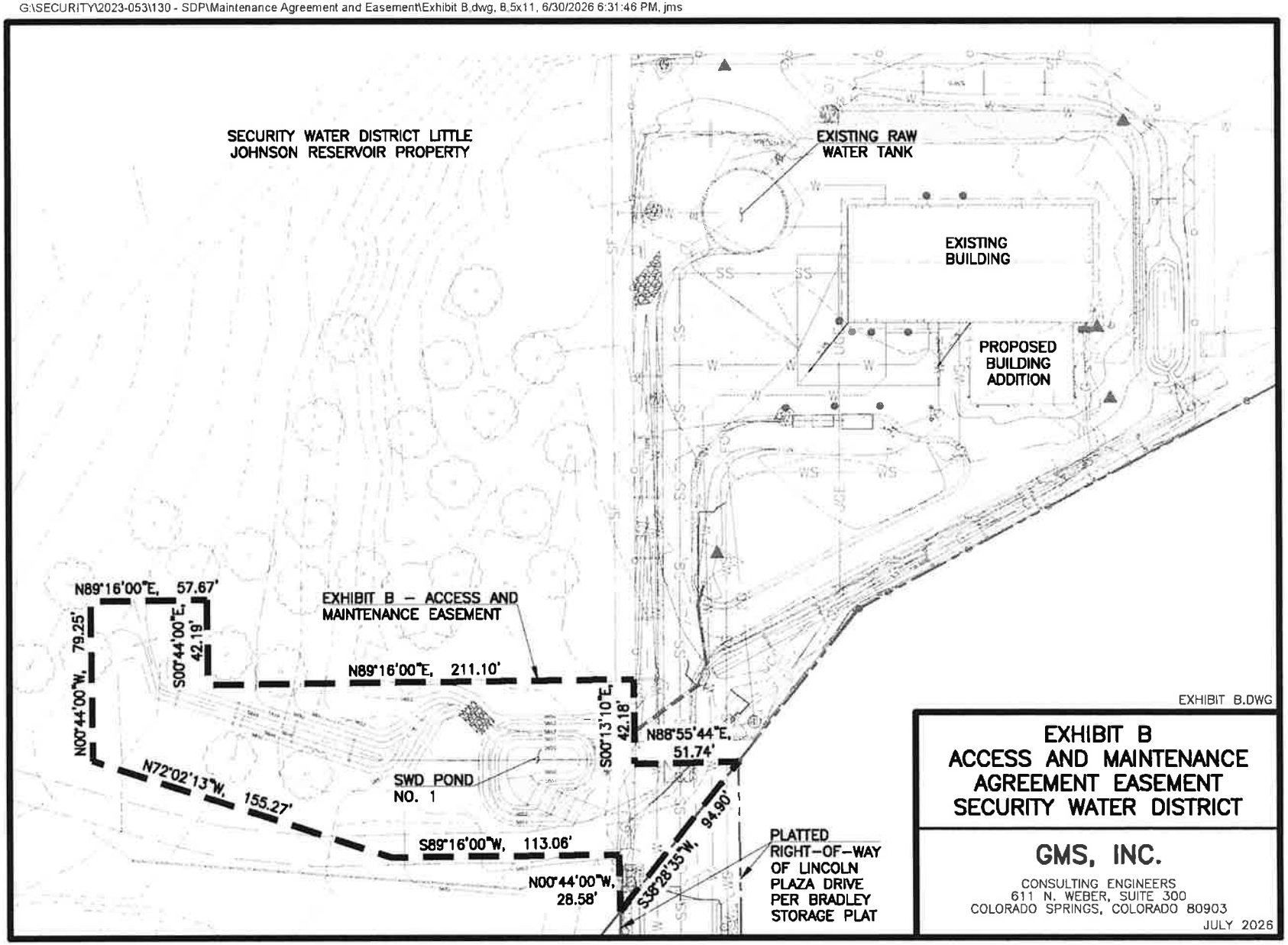
Beginning at the northerly corner of Lot 3, Bradley Storage, as recorded under Reception No. 218714088 of the records of El Paso County, Colorado, said point being on the westerly right-of-way line of Lincoln Plaza Drive;

Thence N 00°44'00" W, 28.58 feet on a northerly extension of the westerly right-of-way line of said Lincoln Plaza Drive; (the bearings in this description are based on the westerly right-of-way line of Lincoln Plaza Drive, as shown on the plat of Bradley Storage recorded under Reception No. 218714088 of the records of said County, having a bearing of N 00°44'00" W, said bearing being relative to the Colorado State Plane Coordinate System, Central Zone, NAD83, modified to ground coordinates.)

thence S 89°16'00" W, 113.06 feet;
thence N 72°02'13" W, 155.27 feet;
thence N 00°44'00" W, 79.25 feet;
thence N 89°16'00" E, 57.67 feet;
thence S 00°44'00" E, 42.19 feet;
thence N 89°16'00" E, 211.10 feet;
thence S 00°13'10" E, 42.18 feet;
thence N 88°55'44" E, 51.74 feet; more or less, to a point on the northwesterly boundary of said Bradley Storage, said point being the point of intersection of the easterly right-of-way line of Lincoln Plaza Drive as platted in said Bradley Storage and the northwesterly boundary line of said Bradley Storage;
thence S 38°28'35" W, 94.91 feet, more or less, to the Point of Beginning of the Tract herein described.

The above-described perpetual Access Easement contains approximately 0.546 acres of land, more or less, and is subject to any rights-of-way or other easements as granted or reserved by instruments of record or as now existing across the above-described parcel of land.

G:\SECURITY\2023-053\130 - SDP\Maintenance Agreement and Easement\Exhibit B.dwg, 8.5x11, 6/30/2026 6:31:46 PM, jms



Accepted for File
By: Daniel Torres, P.E.
Engineering Manager
Date: 07/15/2026 8:36:38 AM
El Paso County Department of Public Works
Development Services

EXHIBIT C To:

PRIVATE DETENTION BASIN / STORMWATER QUALITY BEST MANAGEMENT PRACTICE MAINTENANCE AGREEMENT AND EASEMENT

STANDARD OPERATION PROCEDURES

for

INSPECTION AND MAINTENANCE OF BIORETENTION SYSTEM (BR)

OWNER:

SECURITY WATER DISTRICT

GMS, Inc.
Consulting Engineers

EXHIBIT C To:

PRIVATE DETENTION BASIN / STORMWATER QUALITY BEST MANAGEMENT PRACTICE MAINTENANCE AGREEMENT AND EASEMENT

STANDARD OPERATION PROCEDURES

FOR

INSPECTION AND MAINTENANCE OF BIORETENTION SYSTEM (BR)

PROJECT NO. 2023-053.130

MAY 2026

OWNER:

SECURITY WATER DISTRICT
231 SECURITY BOULEVARD
COLORADO SPRINGS, CO 80911

PREPARED BY:

GMS, INC.
CONSULTING ENGINEERS
611 NORTH WEBER, SUITE 300
COLORADO SPRINGS, CO 80903

TELEPHONE: (719) 475-2935
TELEFAX: (719) 475-2938

© 2026 GMS, Inc.

1. INTRODUCTION

This plan addresses operation and maintenance of the bioretention system constructed as part of the Security Water District Water Treatment Plant (WTP) Building Addition project located north of the Bradley Road and Lincoln Plaza Drive intersection in El Paso County, Colorado (EPC Project No. PPR262). The bioretention stormwater management system is located on the District's property presently assigned El Paso County Assessor's parcel number 65020-000-138.

The Security Water District WTP site consists of approximately 1.7 acres and is located within the District's larger 70-acre ownership. The bioretention pond was designed to provide Water Quality Capture Volume (WQCV) treatment for runoff generated from within the secured WTP site, including building expansion and associated site paving improvements. The facility functions as a runoff reduction post-construction measure intended to improve stormwater quality through temporary storage, filtration, infiltration, and controlled underdrain discharge. All runoff is directed towards the District's larger property where it will be retained.

2. BACKGROUND

The State of Colorado Department of Public Health and Environment, Water Quality Control Division (CDPHE), has implemented federal regulations within the State of Colorado through permitting, and has included El Paso County as one of numerous Municipal Separate Storm Sewer Systems (MS4s) required to be permitted in compliance with National Pollutant Discharge Elimination System (NPDES) Phase 2 Regulations, as defined within Colorado's Phase 2 Municipal Guidance.

NPDES Phase 2 MS4s stormwater discharges are covered under a general permit under the Colorado Discharge Permit System (CDPS) under Regulation 61, and as a minimum require the MS4's operator (e.g., El Paso County) to develop, implement, and enforce a stormwater management program to reduce the discharge of pollutants to the maximum extent practicable to protect water quality in compliance with the Colorado Water Quality Control Act, Colorado Code of Regulations [CCR] 61.8(11)(a)(i)).

This Stormwater Facilities Operation and Maintenance Plan (O&M Plan) is for the bioretention system constructed as part of the water treatment plant improvement project referenced above. The bioretention pond was designed in accordance with El Paso County drainage criteria and applicable Mile High Flood District Urban Storm Drainage Criteria Manual guidance. The facility improves stormwater quality through temporary storage, filtration through engineered media, biological uptake by native vegetation, and controlled underdrain discharge.

3. ASSOCIATED AGREEMENTS

Operation and maintenance of the bioretention pond is governed by the Private Detention Basin / Stormwater Quality Best Management Practice Maintenance Agreement and Easement executed between El Paso County, Colorado, by and through the Board of County Commissioners, and Security Water District. This agreement establishes the District's ongoing responsibility to inspect, operate, maintain, repair, and, when necessary, reconstruct the stormwater quality best management practice in accordance with this Operation and Maintenance Manual, all at the District's sole cost and expense.

The agreement further establishes a perpetual non-exclusive easement granting El Paso County the right to access and inspect the facility and, if deficiencies are not corrected by the District within the time specified by County notice, to perform necessary maintenance or repairs and recover associated costs from the District. The obligations set forth in the agreement constitute covenants running with the land and are binding upon the District and its successors and assigns. The agreement also requires the District to indemnify and hold harmless El Paso County from claims, damages, or liabilities arising from the construction, operation, inspection, maintenance, or repair of the bioretention facility.

4. FUNDING FOR AND ORGANIZIATION OF FACILITY OPERATION AND MAINTENANCE

Security Water District will be responsible for the operations and maintenance of the bioretention system upon acceptance of the facilities from the constructor.

5. SITE AND FACILITIES DESCRIPTION

5.1. Pond Location

The bioretention pond is located just outside the WTP fenced site, which is located on the southeast portion of the District's larger 70-acre property. The facility is situated near the southwest extent of the secured WTP site and is positioned to receive runoff generated from the newly constructed building addition, asphalt paving improvements, and adjacent drainage swales.

5.2. Site Access

Access to the bioretention facility is provided via a gravel road next to the WTP entrance from Lincoln Plaza Drive. The facility is located within the stormwater drainage tract and is subject to the drainage and maintenance easements established under the recorded Private Detention Basin / Stormwater Quality Best Management Practice Maintenance Agreement and Easement. Facility design is documented within the approved drainage report, grading and drainage plans, and associated construction drawings for the Security Water District Water Treatment Plant Building Addition project.

5.3. Emergency Spillway

An overflow spillway is provided as the primary emergency overflow control feature for the bioretention facility. The spillway is located along the northwest berm of the facility and is designed to safely convey flows that exceed the WQCV and exceed the capacity of the underdrain system. During larger storm events, runoff that exceeds the storage and infiltration capacity of the bioretention media is directed to the overflow spillway, where it is safely conveyed in a controlled manner into the site's downstream swale system.

The spillway functions as a bypass structure to prevent overtopping and erosion of the bioretention basin during high-intensity rainfall events. Overflow discharge is routed from the spillway into the adjacent vegetated swales. Runoff remaining as surface flow flows westerly across the District's ownership. The runoff that is not infiltrated will be

retained on the District's property with regard to current topographic conditions. The spillway is designed to remain stable under 100-year storm conditions and provides a protected, non-erosive flow path to prevent damage to the bioretention media, underdrain system, and surrounding grading improvements. Routine inspection shall include checking for sediment accumulation, erosion at the spillway entrance and exit points, and any displacement or deterioration of erosion control materials.

A seepage cutoff wall constructed of concrete is incorporated at the emergency spillway to enhance structural stability and reduce the potential for subsurface erosion or piping beneath the spillway section. This feature functions to maintain the integrity of the spillway invert by limiting seepage flow paths through or under the structure, thereby reducing the risk of undermining during prolonged or high-volume overflow events. On the downstream side of the spillway, a riprap apron is provided to dissipate energy and prevent erosion by reducing flow velocities and protecting the receiving swale and adjacent soils from scour during overflow events.

5.4. Stormwater Infrastructure Components

The proposed drainage system includes a series of vegetated swales designed to collect and convey runoff from the secured WTP site to the bioretention pond. These swales receive runoff from the proposed asphalt drives, the expanded WTP building and adjacent disturbed areas and route flows to the stormwater quality facility for treatment. The swales were designed in accordance with El Paso County and Mile High Flood District (MHFD) criteria utilizing Manning's equation, with grass-lined channels generally designed at a minimum longitudinal slope of 0.5 percent and side slopes generally not exceeding 4:1 except where approved by variance due to site constraints. The swale network also includes a concrete cross-pan overflow section located along the east pond to safely convey overflow runoff during events exceeding water quality storage capacity.

The site drainage system incorporates two existing corrugated steel pipe (CSP) culverts that convey runoff beneath internal access drives within the secured WTP site. The smaller culvert consists of an existing 12-inch CSP approximately 30 feet in length with a longitudinal slope of approximately 2.0 percent. This culvert will be extended approximately 10 feet as part of the proposed improvements to accommodate revised pavement grading and discharge at the inlet of the site's second culvert. This culvert

consists of an existing 18-inch CSP approximately 50 feet in length with a longitudinal slope of approximately 1.1 percent. This 18-inch culvert discharges into the newly developed bioretention pond.

At the discharge of the existing 18-inch culvert and the site's westerly grass swale, rock riprap energy dissipation has been provided to reduce outlet velocities and prevent erosion of downstream soils. A forebay is provided using Type M riprap with a D50 of approximately 6 inches, sized in accordance with El Paso County Engineering Criteria Manual and Mile High Flood District guidance for inlet protection and channel stabilization. The riprap is placed to create a stable, non-erodible transition zone that reduces scour potential and promotes deposition of suspended solids prior to entry into the treatment area. Routine inspection of this riprap protection is required to identify displacement, settlement, sediment accumulation, or evidence of erosion, and maintenance shall include replacement or regrading of riprap as necessary to preserve hydraulic performance and downstream stability.

All the swales and culverts convey runoff into the newly developed bioretention pond. The facility consists of approximately 18 inches of engineered bioretention media underlain by 6 inches of filter sand, a No. 8 aggregate drainage layer, and a 4-inch factory slotted underdrain pipe installed at 0.5 percent slope. The bioretention surface will be vegetated with native, drought-tolerant grasses and plant species selected to promote infiltration, pollutant removal, and long-term stabilization of the media surface. These plantings will be established to provide soil reinforcement, reduce erosion, and enhance overall treatment performance of the facility. The underdrain system includes a 3/4-inch orifice at the daylight discharge to maintain adequate residence time in the bioretention pond. A cleanout assembly at the upstream end of the pond will facilitate inspection and maintenance flushing. Discharge from the underdrain is conveyed to the downstream site drainage system and remains entirely within Security Water District property.

The bioretention facility is designed solely as a WQCV treatment control measure and is not intended to provide extended detention for peak rate attenuation beyond water quality storm events. Based on the approved drainage analysis, the proposed site improvements do not increase off-site peak runoff rates or adversely impact downstream drainage conditions. As a result, an outlet structure designed to replicate historic

discharge rates for larger storm events is not required for flood control purposes. Instead, the facility is sized to fully capture and treat the required WQCV, with stormwater quality flows discharged through the underdrain system at a controlled rate consistent with MHFD and El Paso County criteria. Storm events that exceed the WQCV storage capacity are safely conveyed through the emergency overflow spillway and into the downstream vegetated swale network. These swales are designed to route excess runoff across the secured District property and ultimately to the existing downstream system located entirely within the District's larger 70-acre parcel.

6. BIORETETENTION (BR) SYSTEM DESCRIPTION

The subsections below describe general BR system operations and maintenance.

6.1. GENERAL BIORETENTION SYSTEM CONCEPT

Bioretention facilities are a common permanent stormwater control measure utilized within the Front Range of Colorado. A bioretention facility is a shallow, vegetated filtration and infiltration system designed to capture the required WQCV, temporarily store runoff, and treat stormwater through filtration media, biological uptake, and controlled underdrain discharge. Unlike extended detention basins, bioretention facilities are not designed for extended surface ponding or flood detention; instead, they are designed to drain the WQCV within approximately 12 to 40 hours through a combination of infiltration and underdrain release, depending on soil conditions and design parameters.

The system is considered "drained" between storm events, with no intended permanent pool. The primary treatment process occurs through engineered bioretention media underlain by filter sand, aggregate layers, and a perforated underdrain system. Excess runoff from storm events exceeding the WQCV is safely conveyed via a stabilized emergency overflow spillway and downstream swale network.

The bioretention facility shall meet the following performance criteria to ensure proper function and compliance with El Paso County and MHFD requirements:

- The WQCV shall fully drain within 12 to 40 hours following a storm event.
- The facility is designed to achieve a drawdown time of approximately 13 hours.

- Standing water exceeding 40 hours shall be considered a maintenance concern and trigger inspection of the media and underdrain system.
- The system shall maintain positive drainage between storm events with no permanent pool.

6.2. INSPECTING BIORETENTION SYSTEMS

6.2.1. Access and Easements

Inspection and maintenance personnel may utilize the recorded drainage easements and access agreements, including the Private Detention Basin / Stormwater Quality Best Management Practice Maintenance Agreement and Easement, to access the bioretention facility. Access is typically provided via secured internal drives within the District's property.

6.2.2. Facility Location

Inspection and maintenance personnel shall refer to the attached stormwater facility map located in the back of this manual for the location of the BR system within this development.

6.2.3. Bioretention System Features

Bioretention facilities include several interconnected components that function together to achieve water quality treatment and controlled discharge. The performance of the system depends on proper function of all elements, including inflow distribution, filtration media, underdrain systems, and overflow conveyance features.

Therefore, it is critical that each feature of the BR is properly inspected and maintained to ensure long-term functionality and performance. Below is a list and description of the most common features within the BR and the corresponding maintenance inspection items that can be anticipated:

TABLE BR-1

TYPICAL INSPECTION & MAINTENANCE REQUIREMENTS MATRIX

Bioretention System Features	Sediment Removal	Mowing / Weed Control	Trash & Debris Removal	Erosion Repair	Vegetation Management	Standing Water / Drainage Issues	Structure / System Repair
Inflow Points (swale / outfall)	X	X	X	X	X		X
Forebays (riprap)	X		X	X	X		X
Bioretention Surface (Media)	X	X	X	X	X	X	
Underdrain System	X		X			X	X
Overflow Spillway			X	X	X		X
Downstream Swales	X	X	X	X			X
Site Grading / Berms		X		X	X		X

6.2.3.1 Inflow Points (Swales / Culvert Outfall)

Inflow swales convey runoff from impervious surfaces into the bioretention facility. These areas must maintain stable grades and vegetative cover to ensure uniform sheet flow distribution. Routine inspection shall identify erosion, sediment deposition, and obstructions that may cause bypassing of the treatment area. Any concentrated flow erosion shall be immediately stabilized to prevent further degradation of the inflow system. Typical maintenance considerations include:

- Erosion at inflow transitions: Repair and stabilize areas where concentrated flow causes erosion or channelization.
- Sediment accumulation: Remove sediment buildup that may reduce inflow capacity or cause bypassing of the treatment area.
- Vegetation management: Maintain dense vegetative cover to promote uniform flow distribution and pollutant filtration.
- Blockages/debris: Remove debris that may obstruct flow entering the facility.

6.2.3.2 Forebay / Inflow Energy Dissipation Area

A forebay or energy dissipation zone is provided at the primary inflow points to the bioretention facility to reduce incoming flow velocities, dissipate energy, and capture coarse sediment prior to entry into the bioretention media. Energy dissipation will be achieved using Type M riprap with a d_{50} of 6-inches. This area functions as the first stage of treatment and is critical to protecting downstream infiltration capacity and maintaining long-term performance of the bioretention system. Sediment removal within the forebay shall be performed when sediment accumulation reaches approximately 50 percent of the available storage depth, or when sediment begins to migrate into the downstream bioretention media area.

Typical maintenance considerations include:

- Sediment accumulation: Sediment deposition within the forebay is expected and shall be removed regularly to maintain storage volume and prevent migration into the bioretention media.
- Riprap displacement: Type M riprap may shift due to repeated hydraulic loading. Any displacement, settlement, or exposure of underlying subgrade shall be corrected to maintain full energy dissipation performance.
- Erosion at transition zones: Erosion occurring adjacent to or beneath riprap indicates loss of hydraulic stability and shall be repaired immediately using properly graded riprap and geotextile where applicable.
- Debris accumulation: Trash or organic debris shall be removed to prevent blockage and localized ponding.
- Vegetation encroachment: Woody vegetation shall be controlled to prevent disruption of flow patterns and loss of hydraulic capacity.

6.2.3.3 Bioretention Surface and Filter Media Area

The bioretention surface provides primary stormwater treatment through filtration, adsorption, and biological uptake. The system relies on healthy vegetative cover and uncompacted, well-draining engineered media. Inspection shall focus on sediment accumulation, surface sealing, vegetation health, and evidence of reduced infiltration. Standing water exceeding the design drawdown period shall trigger investigation of media clogging or underdrain restriction. Typical maintenance considerations include:

- Sediment accumulation: Remove excess sediment that reduces infiltration capacity.
- Surface sealing or crusting: Scarify or replace upper media if infiltration is reduced.
- Vegetation health: Maintain healthy native vegetation to support evapotranspiration and pollutant uptake.
- Animal burrows or voids: Inspect and repair any subsurface disturbance that compromises media performance. Consult EPC Environmental Division if this becomes an issue.
- Standing water exceeding design drawdown time: Investigate underdrain or media clogging if prolonged ponding occurs beyond design intent.

The engineered bioretention media is critical to system performance and shall be monitored regularly. Media rehabilitation or replacement may be required under the following conditions:

- Standing water persists longer than 48 hours on a consistent basis
- Surface sealing, crusting, or reduced infiltration is observed
- Sediment accumulation exceeds approximately 2 to 3 inches
- Vegetation decline attributable to poor soil/media conditions

Maintenance activities may include removal of sediment, scarification of the surface layer, or partial/full replacement of media to restore proper function.

6.2.3.4 Underdrain System (Outlet Works Equivalent)

The underdrain system conveys treated stormwater from the bioretention media to the downstream drainage network at a controlled rate. Inspection shall include verification of positive drainage, cleanout accessibility, and absence of sediment blockage. Reduced discharge, prolonged ponding, or backup conditions indicate potential clogging and shall require flushing or mechanical cleaning of the underdrain system. An upstream cleanout will be provided for inspection and flushing. Typical maintenance considerations include:

- Clogging of perforations or cleanouts: Flush underdrain system as needed to restore flow capacity.
- Sediment intrusion: Investigate filter media migration into underdrain if flow is reduced.
- Structural damage: Repair cracked or collapsed piping or damaged cleanout assemblies.
- Reduced discharge performance: Verify that drawdown time remains within the design range of 12 to 40 hours in accordance with MHFD WQCV criteria

6.2.3.5 Emergency Overflow Spillway

The emergency overflow spillway provides a safe conveyance path for storm events exceeding the Water Quality Capture Volume. The spillway is typically constructed as a stabilized concrete or armored flow path designed to prevent erosion and protect the integrity of the bioretention system. The spillway shall remain clear of obstructions and maintain stable erosion protection at all times.

Overflow from the spillway is conveyed to downstream vegetated swales for infiltration and ultimately to the District's downstream 70-acre property, where flows are safely routed to the existing infiltration/detention system. Typical maintenance considerations include:

- Erosion or scour at spillway entrance/exit: Repair and stabilize as needed.
- Displacement of riprap or hard armor protection: Replace or reset displaced materials.
- Obstruction by debris or sediment: Remove material to maintain full conveyance capacity.
- Vegetation encroachment: Maintain clear flow path to preserve hydraulic capacity.
- Seepage cutoff wall integrity: Inspect for evidence of settlement, or void formation. Repair immediately to maintain structural stability and prevent loss of foundation support.

6.2.3.6 Swale Conveyance System (Downstream Routing)

Downstream swales convey overflow and treated discharge from the bioretention facility to the larger site infiltration and drainage system. These swales are designed as vegetated channels providing both conveyance and secondary water quality treatment. Typical maintenance considerations include:

- Sediment buildup reducing conveyance capacity
- Erosion in concentrated flow areas
- Overgrown vegetation reducing hydraulic capacity
- Blockages preventing positive drainage to downstream systems

6.2.3.7 Site Grading

Site grading and berms define the hydraulic boundaries of the bioretention facility and control overland flow routing into and around the

treatment area. These features are essential for maintaining design ponding limits, ensuring positive drainage toward the facility, and preventing uncontrolled bypass of untreated runoff.

Berms are typically constructed of compacted soil and are vegetated to provide long-term erosion resistance and stabilization. Proper grading ensures that runoff is directed into designated inflow swales and that overflow is conveyed only through the designed spillway and downstream swale system. Typical maintenance considerations include:

- Erosion of berm slopes: Repair any rills, gullies, or slope failures to maintain structural integrity and prevent breaching.
- Settlement or differential grading: Regrade low areas that may cause unintended ponding or flow concentration.
- Vegetation loss or thinning: Re-establish native vegetation to maintain erosion resistance and hydraulic stability.
- Animal burrows or voids: Inspect and repair any subsurface disturbance that could compromise berm integrity. Consult EPC Environmental Division if this becomes an issue.
- Encroachment or grading modifications: Ensure no unauthorized grading, landscaping, or construction alters approved flow paths or reduces designed storage, ponding and infiltration areas.

6.2.3.8 Vegetation

Healthy vegetation is essential to the performance of the bioretention facility. During the initial establishment period (typically the first two growing seasons):

- Temporary irrigation shall be provided until vegetation is fully established
- A minimum of 70 percent vegetative cover shall be achieved

- Bare or dead areas shall be reseeded or replanted with healthy sod or root bunches promptly
- Noxious weeds and invasive species shall be removed and controlled

Long-term vegetation management shall maintain dense cover to promote filtration, reduce erosion, and enhance pollutant removal.

6.2.3.9 Miscellaneous

There are a variety of inspection/maintenance issues that may not be attributed to a single feature within the BR. This category on the inspection form is for maintenance items that are commonly found in the BR but may not be attributed to an individual feature. Additional considerations include:

- Illicit Discharges: If evidence of contamination is observed:
  - Identify and isolate the source of the discharge if possible
  - Notify El Paso County Stormwater staff
  - Remove and properly dispose of contaminated soils or media as directed
  - Restore affected areas to maintain system performance
- Graffiti/Vandalism: Damage to the BR infrastructure can be caused by vandals. If criminal mischief is evident, the inspector should forward this information to the local Sheriff's Office.
- Public Hazards: Public hazards include items such as vertical drops of greater than 4-feet, containers of unknown/suspicious substances, exposed metal/jagged concrete on structures. If any hazard is found within the facility area that poses an immediate threat to public safety, contact the Sheriff at 911 immediately.

7. MAINTAINING BIORETENTION (BR) SYSTEMS

7.1. Maintenance Personnel

Maintenance personnel must be qualified to properly maintain BR systems. Inadequately trained personnel can cause additional problems resulting in additional maintenance costs.

7.2. Equipment

It is imperative that the appropriate equipment and tools are taken to the field with the operations crew. The types of equipment/tools will vary depending on the task at hand. Below is a list of tools, equipment, and material(s) that may be necessary to perform maintenance on an BR:

- Loppers/Tree Trimming Tools
- Mowing Tractors
- Trimmers (extra string)
- Shovels
- Rakes
- All Surface Vehicle (ASVs)
- Skid Steer
- Backhoe
- Track Hoe/Long Reach Excavator
- Dump Truck
- Jet-Vac Machine
- Engineer's Level (laser)
- Riprap (Minimum - Type M)
- Geotextile
- Erosion Control Blanket(s)
- Seed Mix (Native)
- Illicit Discharge Cleanup Kits
- Trash Bags

- Tools (wrenches, screw drivers, hammers, etc.)
- Chain Saw
- Approved Stormwater Facility Operation and Maintenance Manual

Some of the items identified above may not be needed for every maintenance operation; however, this equipment should be available to the maintenance operations crews should the need arise.

7.3. Safety

Vertical drops may be encountered in areas located within and around the facility. Avoid walking on top of retaining walls or other structures that have a significant vertical drop.

7.4. Winter Operations

Winter conditions may affect the function of the bioretention system. Maintenance considerations include:

- Avoid installing anti-skid aggregate on surfaces upstream to prevent sediment clogging
- Inspect underdrain outlets for ice blockage
- Monitor for snowmelt-related sediment transport
- Perform spring inspections to remove accumulated debris and sediment

Freeze-thaw cycles may also impact vegetation and slopes and shall be evaluated during routine inspections.

7.5. Maintenance Categories and Activities

A typical BR Maintenance Program will consist of three broad categories of work: routine, minor, and major maintenance activities. Within each category of work, a variety of maintenance activities can be performed on a BR. A maintenance activity can be specific to each feature within the BR, or general to the overall facility. The maintenance activities range in magnitude from routine trash pickup to the

reconstruction of drainage infrastructure. The following three sub-sections explain each of the categories and briefly describes the typical maintenance activities for a BR system, including the objectives and frequency of actions.

7.6. Routine Maintenance Activities

The majority of this work consists of regularly scheduled mowing and trash and debris pickups for stormwater management facilities during the growing season. This includes items such as the removal of debris/material that may be clogging the culverts, underdrains, weed control, etc. These activities will normally be performed numerous times during the year. These items can be completed without any prior correspondence with the EPC Stormwater; however, completed inspection and maintenance forms shall be retained for each inspection and maintenance activity.

The Maintenance Activities are summarized below, and further described in the following sub-sections.

TABLE BR-2

SUMMARY OF ROUTINE MAINTENANCE ACTIVITIES

MAINTENANCE ACTIVITY	MINIMUM FREQUENCY	LOOK FOR	MAINTENANCE ACTION
Mowing	Twice annually	Excessive grass height/aesthetics	Mow grass to a height of 4" to 6"
Trash/Debris Removal	Twice annually	Trash & debris in BR	Remove and dispose of trash and debris
Outlet Works Cleaning	As needed – after significant rain events – twice annually at a minimum	Clogged culverts and underdrains ponding water	Remove and dispose of debris/trash/sediment to allow outlet to function properly
Weed control	Minimum twice annually	Noxious weeds; Unwanted vegetation	Treat w/ herbicide or hand pull; Consult the local weed specialist

7.6.1. Mowing

Occasional mowing is necessary to limit unwanted vegetation and to improve the overall appearance of the BR. Native vegetation should be mowed to a height of 4-to-6 inches tall. Grass clippings should be collected and disposed of properly.

Frequency: Minimum of twice annually or depending on aesthetics

7.6.2. Trash / Debris Removal

Trash and debris must be removed from the entire BR area to minimize outlet clogging and to improve aesthetics. This activity must be performed prior to mowing operations.

Frequency: Minimum of twice annually or depending on aesthetics

7.6.3. Outlet Works Cleaning

Debris and other materials can clog culverts, underdrain slots, and the orifice plate. This activity must be performed anytime other maintenance activities are conducted to ensure proper operation.

Frequency: After significant rainfall event or concurrently with other maintenance activities.

7.6.4. Weed Control

Noxious weeds and other unwanted vegetation must be treated as needed throughout the BR. This activity can be performed either through mechanical means (mowing/pulling) or with herbicide. Consultation with the EPC Environmental Division at 719-520-7878 is highly recommended prior to the use of herbicide.

Frequency: As needed based on inspections.