MOUNTAIN VALLEY PIPELINE

Snow Creek Mitigation Plan

Permittee Responsible Solution for the MVP Southgate Amendment Project

Burns & McDonnell Project No. 186472

Revision 1

August 8, 2025

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1. Mitigation Site Description

The Snow Creek Mitigation Site (Mitigation Site) is approximately 12 acres of an approximately 34-acre property (Property) located 5 miles southwest of Progress, off Airport Road in Franklin County, Virginia, also known as Franklin County Tax Lot 1090002401, owned by Charles D. and Lynora A. Mitchell (Property Owner), as shown in Appendix A. The project zip code is 24137.

The Mitigation Sponsor (Sponsor) for the project is Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell), an engineering, architecture, and environmental consulting firm based in Kansas City, Missouri, with offices throughout Virginia, and across the world. Burns & McDonnell self-performs mitigation projects Nationwide. Burns & McDonnell has secured the rights from the Property Owner to develop the Mitigation Site on the Property.

The Project Applicant is Mountain Valley Pipeline, LLC (MVP). MVP has engaged the Sponsor to implement (i.e. secure property, perform due diligence activities, design, construct, maintain and monitor) the Mitigation Project in support of the MVP Southgate Amendment Project (Amendment Project).

The Sponsor's primary point of contact for this Mitigation Project is:

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The Project Applicant's primary point of contact is:
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2. Objectives

The Mitigation Site is being developed as Permittee-Responsible Mitigation (PRM) solution to satisfy the compensatory mitigation required to offset wetland impacts associated with the development of the MVP Amendment Project. Compensatory wetland mitigation at the Mitigation Site will be achieved through the restoration and creation of self-sustaining wetlands, as detailed in this Snow Creek Mitigation Plan (Mitigation Plan). These wetlands will be developed through the removal of agricultural drain tiles and ditching. The creation and expansion of depressional areas will intercept the seasonal high-water table supporting the existing wetlands at the site. The project will generate approximately 7 wetland mitigation credits through approximately 3.5 acres of wetland restoration, approximately 2.9 acres of wetland creation, and approximately 3.1 acres of upland buffer preservation.

3. Site Selection

The Mitigation Site was selected because of its regional location and site-specific characteristics.

The Mitigation Site is located in the Roanoke River Watershed, HUC 03010101, adjacent to the Amendment Project impacts which are located in the Bannister and Upper Dan watersheds, HUCs 03010105 and 03010103 respectively. Both the impact and mitigation sites are located in the Roanoke Watershed, HUC 030101. The Mitigation Site is within a Tier 1 Area as defined by the Virginia Aquatic Resource Trust Fund's Conservation Planning Framework, near the Turkeycock Wildlife Management Area. The Site is currently heavily grazed by cattle with unrestricted access to existing wetlands, which are a tributary to the adjacent Snow Creek. This reach of Snow Creek is classified as impaired by the Virginia Department of Environmental Quality's Impaired Waters 2024 report for Escherichia coli (*E. coli*) and is subject to the Snow Creek Total Maximum Daily Load (TMDL) which was approved by the US EPA in 2006. Restoring and enhancing wetlands on the Mitigation site will provide specific benefits to wetlands on site and downstream waters within the region.

The site selection criteria form and narrative are included in Appendix B.

4. Site Protection Instrument

The Mitigation Site will be protected by a Conservation Easement (CE). There will be an access easement across the Property for access to the Mitigation Site, as shown in the Project Plan Set.

Upon approval of this Mitigation Plan, a CE and associated site map shall be submitted to Franklin County for recordation to provide protection over the Mitigation Site in perpetuity. A draft CE is included in Appendix C.

5. Baseline Information

This section provides baseline information for both the Mitigation Site and the Amendment Project site.

A. Snow Creek Mitigation Site

The proposed Mitigation Site is located on the east side of Airport Road, north of Flanders Road and on the west side of Snow Creek in Franklin County, VA. The proposed Mitigation Site is located in Upper Roanoke HUC 8, 03010101. The proposed Mitigation Site is part of an existing wetland mosaic system within the floodplain of Snow Creek. The Mitigation Site and surrounding areas have been historically utilized for hay production and grazing pasture. There are drain tiles within the Mitigation Site, and an earthen drainage ditch has been maintained to drain excess water into Snow Creek. A wetland delineation of the Mitigation Site is included in Appendix D.

According to the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) digital data, the study area is underlain by Comus-Maggodee-Elsinboro complex, Colescreek-Dalanco complex, Minnieville loam, and Wintergreen loam. Soil textures observed within the study area consisted of clay loam and sandy clay loam within the existing wetland resources while upland areas consisted of loam and sandy loam textures. Site specific investigations show the soils at the proposed Mitigation Site are appropriate for wetland restoration and creation, and the ground water table appears to be at consistent elevation within the proposed project footprint. Anticipated excavation depths may range from one to two feet in various locations across the site.

B. Amendment Project Site

A description of the Amendment Project functions and values assessment were included with the April 11 2025 MVP Joint Permit Application (JPA) (as amended) submitted to the U.S. Army Corps of Engineers (USACE) and Virginia Department of Environmental Quality (VDEQ). The MVP JPA is incorporated herein by reference. The portions of the Amendment Project located in HUCs 03010105 and 03010103 will rely on the Snow Creek Mitigation Site for wetland offsets.

6. Determination of Credits

The number of potential credits for wetland compensatory mitigation was determined using the current methodology in use by the USACE and the VDEQ (jointly referred to as the Regulatory Agencies). Each acre of land area within the Mitigation Site is designated below as to which type of landform, as classified by the Cowardin System, shall be restored, created, or enhanced. Credit ratios were then applied to each wetland acreage or wetland mitigation type to derive the amount of wetland mitigation credits for the site. Table 1 summarizes the estimated Credit generation of the Mitigation Site and Table 2 summarizes the Credit Need for the Amendment Project. The final as-builts will document final Mitigation Site credit generation. A narrative elaborating on the proposed mitigation actions and associated ratios is also provided.

Table 1: Mitigation Site Estimated Credit Generation Analysis

Snow Creek Wetland Mitigation Summary			
Type	Area	Ratio	Credits
Wetland Restoration	3.5	1:1	3.5
Wetland Creation	2.9	1:1	2.9
Upland Buffer	3.1	10:1	0.3
Conservation Easement (5%)			0.3
Total			**7.0**

Table 2: Southgate Credit Need

Amendment Project Wetland Mitigation Need			
Wetland Type	Area	Ratio	Credits
PFO	5.35	1:1	5.35
PSS	0.96	1:1	0.96
Total			**6.31**

A. Credit Generation Actions

- **Wetland restoration** actions proposed in the marginal emergent wetland are calculated to generate wetland credits at a 1:1 ratio. The current condition of the wetland is poor due to deforestation of the upland buffer, continuous cattle grazing, and dewatering efforts spanning decades to increase hay production. Restoration activities will include removing drain tile and plugging ditches to restore hydrology. Minor grading will be performed to establish hummocks, deeper areas and connection with the wetland creation areas. Once restoration activities have been completed, a forest wetland community will be restored.
- **Wetland creation** actions proposed within upland cattle pasture are calculated to generate wetland credits at a 1:1 ratio. Wetland creation activities will involve converting a system of uplands that has been severely degraded through years of impacts from grazing by cattle, to a forested wetland community.
- **Upland buffer reforestation** is proposed to include an approximate 50-foot buffer surrounding the wetland restoration and creation areas has also been severely degraded by cattle grazing and will be restored to a forested condition, generating wetland credits at a 10:1 ratio.
- **Conservation Easement** associated with the mitigation efforts will result in an additional 5% “bump” in wetland credits has been added to the total wetland credits generated at the Mitigation Site due to the protection of the Mitigation Site via a CE.

7. Mitigation Work Plan

This section will discuss the proposed work plan for establishing the Mitigation Site.

A. Wetland Design Narrative

The Mitigation Site has historically been heavily grazed, used for hay production, and drained via drain tiles and ditches. Preliminary groundwater investigations appear to show water elevations generally consistent throughout the Mitigation Site. As such, wetland restoration will focus on pulling drain tile, grading and blocking the drainage ditch and other areas within the site to capture surface drainage and seepage from the western hillside. These actions would raise the groundwater elevation to approximate historic elevations and allow water to be retained for longer durations during the growing season. Surface grading within the restoration area will be finished with microtopography and supplemental planting of native seeds, shrubs, and trees would convert the PEM wetland areas to Palustrine Forested (PFO) wetlands.

The proposed wetland creation strategy consists of grading areas adjacent to the restoration area to create a continuous, gently sloping surface with microtopography to retain water, and expand the footprint of wetlands on the site. The grading plan will facilitate a connection to the existing toe-slope seeps that support the surrounding wetlands. Furthermore, these shallow inversions of topography will allow surface water inputs form the contributing watersheds, direct precipitation, and occasional overbank flows from Snow Creek to accumulate and reside for longer periods of time, thereby supporting the proposed native wetland vegetative community without the need for berms and outlet structures. The creation area will also involve a combination of invasive species management and supplemental planting of native seeds, shrubs, and trees with the goal of expanding the PFO footprint. This wetland creation strategy will mimic the existing wetlands in the region by providing a storage area for surface water rather than a topographic high area.

An upland buffer of approximately 50 feet is proposed around the wetland restoration and creation areas. The upland buffer areas will be treated for invasive species and planted with supplemental shrubs and trees. The goal of the overall project is to develop a high-functioning PFO wetland community.

It is anticipated that construction activities will be completed in a singular effort and the work will not be phased apart from planting during the seasonally appropriate window. Additional details (i.e. grading, erosion and sediment control, and planting plans) will be provided to the Regulatory Agencies prior to starting construction.

B. Invasive Species Management Plan

The following Invasive Species Management Plan was developed to provide guidance on invasive treatments as necessary throughout the lifecycle of the Mitigation Site.

Invasive species that are likely to be present on the Mitigation Site include Ailanthus altissima (tree of heaven), Ligustrum sinense (Chinese privet), and Rosa multiflora (multiflora rose), Lonicera japonica (Japanese honeysuckle) and Persicaria perfoliata (mile-a-minute). Invasive species to be managed on the Mitigation Site are identified on the Virginia Department of Conservation and Recreation's Invasive Plant Species List (VA Invasive Species), included as Appendix E. However, Microstegium vimineum (Japanese stiltgrass) and Arthraxon hispidus var. hispidus (carpet grass) will be excluded from the list of invasive species that require active treatment and will not count towards percentage of invasive species cover.

These invasive species will be observed within the Mitigation Site and treated prior to construction using the appropriate herbicide. The Mitigation Site will continue to receive seasonally appropriate herbicide applications throughout the monitoring period as detailed in Section 8.A. below.

i. Treatment Methods

For this project's site conditions and proximity to aquatic habitat, the use of aquatic safe herbicides is recommended. Appropriate herbicides may include:

- RoundUp Custom (active ingredient – Glyphosate)
- Clearcast (active ingredient – Imazamox)
- Vastlan (active ingredient – Triclophyr)

The products listed above may be used, along with others as deemed appropriate by the Sponsor. All products used on the Mitigation Site shall be applied in accordance with the product labels and will be approved by the EPA and registered for use in the State of Virginia. All treatments will be applied by a trained and certified applicator.

Specific techniques and treatments detailed below may be utilized, among others as deemed appropriate by the Sponsor and the certified applicator.

Foliar Treatments

Foliar applications involve spraying the leaves of target species with a low concentration mixture of herbicide in accordance with label instructions. Foliar treatments will be done during the active growing season, after full leaf expansion in spring and before seeds are produced in fall. It may be necessary to re-treat the affected area if the invasive biomass is dense. This technique is not ideal in areas that have a dense population of desirable vegetation. The use of a non-ionic surfactant with all foliar spray herbicides will be utilized. Surfactants increase the effectiveness of the herbicide by reducing surface tension and ensuring complete foliar coverage and increasing rate of absorption.

Cut Stem Treatments

The cut-stem or cut-stump treatment combines physical removal of the above-ground portions of the target species with chemical control of the roots. The method starts with cutting down the targeted vine or shrub and removing surface debris (sawdust, etc). Herbicide is then immediately applied to the fresh cut.

For all chemical application methods:

- An EPA-approved blue marker dye (not food coloring) will be added to all herbicide solutions to keep track of which plants have been treated.
- The lowest concentration that proves effective will be utilized.
- Herbicides will be used in accordance with specific label instructions, which include personal protective equipment and storage requirements.

ii. Native & Invasive Species Cover Requirement

No more than 10% aerial cover dominated by any one VA Invasive Species may be present on the Mitigation Site at year 10 of monitoring. In the monitoring years preceding year 10, no VA Invasive species observed on the Mitigation Site will remain untreated. The goal is to suppress the VA Invasive Species to less than 10%

cover to maintain the Mitigation Site's overall species richness without negative impacts to beneficial native species. The Sponsor will focus on an integrated approach to managing the VA Invasive Species.

C. Construction Schedule

This section addresses the construction schedule for both the Mitigation Site and the Amendment Project.

i. Snow Creek Mitigation Site

Construction will commence at the Mitigation Site within two years of permit approval or when required by the Regulatory Agencies, whichever is sooner. The construction duration is anticipated to be approximately four months. Planting will be completed during the seasonally appropriate period. As-Builts will be submitted to the Regulatory Agencies within 90 days of construction completion. Year-1 monitoring will occur within the first growing season following the completion of planting and the first annual monitoring report will be submitted by January 31 of the following year.

ii. Amendment Project

The impacts detailed in the JPA associated with the Amendment Project are anticipated to commence in late 2026 or early 2027. The Mitigation Site will provide the required 6.31 credits of compensatory wetland mitigation needed to offset impacts.

8. Maintenance Plan

A. Invasive Vegetation Control

During the 10-year monitoring period, the Sponsor shall manage invasive vegetation within the Mitigation Site per the guidelines described in Section 7.B. Invasive Species Management Plan.

Once the Mitigation Site meets the performance standards identified in Section 9, the designated Long-Term Manager shall be responsible for overseeing invasive species management per the guidelines set forth in the Long Term Management Plan (LTMP), included as Appendix F.

B. Supplemental Tree and Shrub Planting

If the PFO wetland and upland buffer areas of the Mitigation Site do not meet the outlined performance standard metric in any given year of monitoring, supplemental planting of trees and shrubs may occur as deemed appropriate by the Sponsor.

9. Performance Standards

All final and approved Performance Standards, and any deviation in Performance Standards, must be approved by the Regulatory Agencies prior to implementing the Performance Standards. Any decision whether or not a project meets the Performance Standards is within the sole discretion of the Regulatory Agencies, applicable Board, official, or court, and shall not be subject to appeal.

The following standards will be used to assess project performance:

A. Wetland Performance Standards

Below are the performance standards for the created and restored wetland areas within the Mitigation Site.

i. Wetland Hydrology

The Mitigation Site will be inundated (flooded or ponded) or the water table is ≤12 inches below the soil surface for ≥14 consecutive days during the growing season.

ii. Wetland Soils

The following performance standards apply to all areas where soils have been cut or filled.

a. For coarse textured (sandy) surface soils, positive indicators of hydric soil formation must be demonstrated within 6 inches of the soil surface.

b. For fine textured soils (silts, clays, loams), positive indicators of hydric soil formation must be demonstrated within 12 inches of the soil surface.

c. Immediately prior to planting, the surface of the soil may be tilled with a chisel-plow or heavy disk to the maximum practicable depth (minimum of 12 inches), in a crisscross pattern with at least two passes, to loosen the soil and integrate soil amendments. Where "perched" or "episaturated" wetlands are proposed over clayey soils, clayey soils may be disked to a depth of 6-8 inches in place of ripping or chisel plowing. Satisfaction of this performance standard shall be documented in the as-built and not subsequently monitored.

d. For all monitoring years piezometers or shallow wells will demonstrate free water within 12 inches of the surface for 14 consecutive days during the growing season.

iii. Forested Wetland Vegetation

a. Wetland Vegetation Dominance: More than 50% of all dominant tree, shrub, and herbaceous plant species shall be facultative (FAC) or wetter (i.e. facultative wet [FACW] or obligate [OBL]). Wetland vegetation dominance, defined as a vegetation community where more than 50% of all dominant species are FAC or wetter using "routine delineation methods" as described in the 1987 Corps of Engineers Wetland Delineation Manual and the most current version of the appropriate Regional Supplement to the Manual must be achieved.

b. Native Stem density of at least 200 living woody stems of native tree or shrub species per acre with an indicator of FAC or wetter shall be maintained through the end of the monitoring period or until canopy coverage of tree species is greater than 30%, whichever comes first. Canopy coverage shall be at least 30% each monitoring year thereafter.

c. The Year 5 and Year 10 reports shall contain documentation that the average tree height of all established and surviving trees has increased by not less than an average of 10% per year. This standard applies until shrub and/or canopy/crown coverage is at least 30%. Canopy coverage shall be at least 30% each monitoring year thereafter.

d. Document compliance with Section 7.B. Invasive Species Management Plan of this document.

B. Upland Buffer Performance Standards

In all forested Upland Buffer areas:

a. A minimum of 200 woody stems of native tree or shrub species per acre (including volunteers) shall be achieved by the end of the first growing season following planting and maintained each monitoring year until shrub and/or canopy/crown coverage is at least 30%. Canopy coverage shall be at least 30% each monitoring year thereafter. The number of woody stems of native tree species per acre may vary under certain circumstances.

b. The Year 5 and Year 10 reports shall contain documentation that the average tree height of all established and surviving trees has increased by not less than an average of 10% per year. This standard applies until shrub and/or canopy/crown coverage is at least 30%. Canopy coverage shall be at least 30% each monitoring year thereafter.

c. Document compliance with Section 7.B. Invasive Species Management Plan of this document.

10. Monitoring Requirements

This section will outline the monitoring requirements for the Mitigation Site based on each project phase.

A. As-Built Monitoring and Reporting

The Sponsor shall submit an as-built report no more than ninety (90) calendar days after the Mitigation Site is fully constructed. Thereafter, the Sponsor shall monitor the Mitigation Site according to the specific monitoring requirements. The Sponsor shall not deviate from these Monitoring Requirements without written approval from the Regulatory Agencies.

The as-built report shall include comparisons of the design plan to the as-built plan, using the following components:

a. Plan view maps of the constructed wetlands, and adjacent buffers that depict the Mitigation Site boundaries, as-built topography, all compensatory mitigation activities (including buffer activities), and the of all monitoring stations (photo stations, vegetation sampling plots, wetland monitoring wells or iris tubes, soil boring locations, precipitation gages, etc.).

b. Photographs of the completed construction taken at permanent photo stations.

c. Photographs documenting wetland soils in cut or filled areas have been ripped/ disked prior to planting.

d. Planting composition, location, and densities.

e. Revised credit totals for the entire Mitigation Site/ phase for which the as-built is submitted, and individual compensatory mitigation activities. Explanation of any differences in credit totals from design to as-built plans.

B. Performance Monitoring

The performance monitoring period for this Mitigation Site shall be ten (10) years, unless final performance metrics are met earlier. The monitoring period begins at the end of the first full growing season following Mitigation Site construction, and monitoring reports are due to Regulatory Agencies by January 31 of the year following each monitoring year. The Sponsor shall prepare a monitoring report for monitoring years 1, 2, 3, 4, 5, 7, and 10.

The Regulatory Agencies may reduce the monitoring period or monitoring requirements, if the Regulatory Agencies conclude that the Mitigation Site has met its performance standards and that the full monitoring requirements are not necessary to ensure that the Mitigation Site will meet its objectives. Conversely, the Regulatory Agencies may extend the monitoring period if the Regulatory Agencies determine that Performance Standards have not been met or the Mitigation Site is not on track to meet its objectives.

The Sponsor and Regulatory Agencies will use monitoring reports, visual observations, and best professional judgment to evaluate attainment of Performance Standards and in determining whether the Mitigation Site has met its goals and objectives, or whether corrective action or adaptive management are warranted.

Monitoring reports shall address the performance standards and the following monitoring and reporting guidelines:

i. Wetland Hydrology

The depth of water and the hydroperiod will be measured to demonstrate that the appropriate hydrogeomorphic standards have been met and they are similar to the target wetland type or a reference wetland. Monitoring wells will be installed at the Mitigation Site using the requirement of a minimum of 1 monitoring well per 2 acres for sites less than 20 acres and their locations will be documented on the as-builts.

Water level data will be submitted in each monitoring report in tabular and graph format for the associated monitoring year. A hydrograph including a comparison of the current monitoring year's hydrograph with a hydrograph for the wetland type that is being restored or created will be submitted for the associated monitoring year. Daily precipitation data will be obtained from the publicly available data at the Martinsville Filter Plant managed by the National Oceanic Atmospheric Administration for the monitoring period with a comparison to historical average precipitation data will be provided in tabular and graphic form.

ii. Wetland Soils

A complete morphologic soil profile and description shall be documented immediately post-construction and in monitoring years 3, 7, and 10 to document changes in overall soil morphology, particularly the development of redoximorphic features over time (such as a reduction in matrix chroma or development of redox depletions and/or concentrations), to demonstrate that soils at the site are progressing towards hydric soil conditions. Soil profiles shall be described at a distance of 10 feet from each monitoring well.

In the associated monitoring report, the soil profile shall be described. A table shall also be included with the following information for each soil profile: horizon, depth, color, texture, matrix color, redoximorphic feature type, abundance, location, and color, and any documented field indicators per current NRCS guidance.

iii. Wetland and Upland Buffer Vegetation

Forested Monitoring Plots

Created or enhanced wetlands and upland buffer areas shall be stratified into relatively homogeneous sample areas. These sample areas may correspond to planting zones, phases, proposed habitat, cover/community type, or other characterizations. These sample areas do not have to be contiguous. Appropriate methods shall be used to randomly locate Forested or scrub/shrub (woody) monitoring plots within sample areas (transects with random number generators, GIS randomization methods, etc.). Plots shall be re-established in new random locations each year.

Woody plots shall be circular in dimension and measure 1,076 square feet (ft^2) (100 square meters [m^2]), which is equivalent to a circle with a radius of 18.5 feet (ft) (5.6 meters [m]). This plot size equates to 0.025 or 1/40th of an acre, which provides a multiplier of 40x for stem density conversion to per acre values. At a minimum, the total area covered by Woody plots shall be at least 2% of the sample area. Sampling adequacy can be determined using a variety of methods (e.g. species-area curves leveling off, variance stabilization, etc.) and shall be included in all monitoring reports. Conversely, after 3 years of sampling, if sampling adequacy analysis indicates oversampling, the number of plots may be reduced.

The woody vegetation data shall include identification of all live woody stems found in the sampling plot by scientific and common name with corresponding wetland indicator status, native status, stem count, stem height (as needed), overall canopy coverage, aerial coverage by each species (using cover classes below), or others, as required by the performance standards Section 9.

Herbaceous Monitoring Plots

Herbaceous plots shall be located on a stratified random basis within wetland and upland buffer areas (as described above). Herbaceous vegetation sampling plots shall be square sampling frames with inside dimensions of 3.3x3.3 ft (1x1 m), which is equivalent to an area of 10.8 ft^2 (1m^2), or equivalent sized circles.

A minimum of three herbaceous plots per acre is required. However, additional plots will be required if the number of plots is determined to be inadequate. Sampling adequacy can be determined using a variety of methods (e.g. species-area curves leveling off, variance stabilization, etc.) and shall be included in monitoring reports. Conversely, after three years of sampling, if sampling adequacy analysis indicates oversampling, the number of plots may be reduced.

The vegetation data collected shall include identification of all herbaceous species found in the sampling plot by scientific and common name with corresponding estimate of absolute percent cover (including bare ground and/or open water), indicator status, native status, or others, as required by the Performance Standards. For estimating herbaceous species cover, it is required that cover classes be used, taking the midpoints of the classes for data analysis. The following cover classes are recommended (midpoints in parentheses, rounded to the nearest whole interger):

Class 1: 0-1% (1%)
Class 2: 1-5% (3%)
Class 3: 5-25% (15%)
Class 4: 25-50% (38%)
Class 5: 50-75% (63%)
Class 6: 75-95% (85%)

Class 7: 95-100% (98%)

The monitoring report shall include raw and summary vegetation data. The raw data can be submitted as a supplementary Excel file and should include all vegetation data from all plots. The summary data shall present the vegetation data summarized (e.g. averages, variance, totals, etc.) for each strata (homogenous sample area described above) preferably in table form. These summary tables shall include comparisons of summarized data to all applicable performance standards. The summary tables shall be consistent in presenting requirements of the success criteria.

iv. Photographs

Visual observations shall be documented and provided with each monitoring report via ground-level photographs taken in each cardinal direction from stations located adjacent to each vegetation plot. These photographs shall be provided as an attachment to the associated monitoring report.

11. Monitoring and Reporting Guidelines

Monitoring activities will follow the timing and guidelines set forth in the permit conditions, and according to the following monitoring schedules, requirements, and reporting requirements. General conditions on monitoring and reporting include the following:

- The monitoring period begins at the end of the first full growing season following Mitigation Site construction, and monitoring reports are due to USACE and VDEQ by January 31 of the year following each monitoring year.
- The Sponsor shall prepare a monitoring report for monitoring years 1, 2, 3, 4, 5, 7, and 10.
- For any year in which planting was conducted, monitoring of the vegetation shall take place at least 6 months following planting.
- Monitoring of all vegetation should be conducted during the growing season.
- If all performance standards have not been met in the tenth monitoring year, then a monitoring report may be required for each consecutive year until two sequential annual reports indicate that all criteria have been successfully satisfied.
- Documentation of the status of all short-term financial assurances (performance, monitoring and maintenance, etc.) shall be provided by January 31 of any year for the preceding year. This documentation shall include account balances, all deposits and withdrawals, the type of assurance and the expiration dates on those assurances.
- Documentation of the status of the long-term management endowment shall be provided by January 31 of any year for the preceding year. This documentation shall include account balances, and all deposits and withdrawals.

12. Long Term Management Plan

The Mitigation Site shall be managed per the LTMP to ensure the management and maintenance of the Mitigation Site in perpetuity. The LTMP establishes objectives, priorities, and tasks to manage and maintain the Mitigation Site. The LTMP is a binding and enforceable instrument, implemented in accordance with the requirements of the VDEQ Individual Permit, Final Mitigation Plan, and USACE Permit covering the Mitigation Site.

The Sponsor anticipates The Barn Group will serve as the Long-Term Steward of the Mitigation Site. The Barn Group is a 501(c)(3) qualified land trust focused on the management of open space, mitigation and conservation properties.

Long-term management tasks shall be funded through the Long-Term Management Fund. The Long-Term Steward shall maintain a copy of the Final Mitigation Plan and all addendums associated with the Mitigation Site including the Regulatory Agency permits and all deed restrictions. The Long-Term Steward shall be responsible for providing annual reports to the Regulatory Agencies detailing existing conditions of the Mitigation Site, and any recommended management activities. Any proposed grading, or alteration of the site's hydrology and/or topography by the Long-Term Steward or its representatives must be approved by the Regulatory Agencies and the necessary permits must be obtained if required. The Long Term Management Fund will be funded at the same time as the Maintenance and Monitoring Assurance.

13. Adaptive Management Plan

The Sponsor will be responsible for ensuring the success of the Mitigation Site during the 10-year monitoring period. After the monitoring period has ended, the LTMP will be in effect. The monitoring period will consist of 6 monitoring events to occur in years 1, 2, 3, 5, 7, and 10 unless otherwise agreed upon with the Regulatory Agencies. During the 10-year monitoring period, annual inspections will be performed to confirm the stability and success of the restoration. The monitoring period of 10 years may be shortened if performance standards are successfully met before such a time.

Any noted issues that are isolated and or minor in nature such as small supplemental planting needs or standard invasive species treatments will be addressed immediately upon being identified to the extent practical to ensure they do not evolve into much larger problems. The treatment of any such areas would be called out in the monitoring report for that year. In the event the project or a specific component of the project fails to meet the necessary performance standards or isn't trending towards success as outlined in this narrative, the Sponsor shall notify the Regulatory Agencies and work with these agencies to develop contingency plans and remedial actions. The following provides some examples of potential adaptive management activities that may be needed.

If portions of the planted buffer are struggling to meet the vegetation success requirements due to herbivory, competition, or site conditions, corrective action will be taken including, but not limited to herbicide treatments, depredation trapping, reduction of compaction and/or supplemental planting/seeding of woody and or herbaceous species. In addition, the site inspections will include an assessment of the degree to

which invasive species threaten the success of the project. Because of this fact, along with the limited disturbance proposed by the selected restoration method, a significant issue with invasive species colonization is not anticipated; however, should the monitoring program indicate a problematic increase in invasive species, spot treatments will be provided within the immediate vicinity of the species of concern to keep them in check.

If the performance criteria specified in the final mitigation plan or any alternative corrective action plan (CAP) are not achieved by the end of the last monitoring period and the Regulatory Agencies determine that additional corrective action cannot sufficiently address the reasons for such failures, then the permittee shall submit to the Regulatory Agencies for review and approval, within 30 days of such determination, a proposal to purchase mitigation bank credits or contributions to an in-lieu fund to provide compensatory mitigation to satisfy performance criteria or portion thereof. The permittee shall purchase the commensurate credit portion that any mitigation area, or combination thereof, or make contributions to an in-lieu fund, as approved by the Regulatory Agencies, in accordance with this paragraph, within 30 days to account for any such failures.

14. Financial Assurances

The Project Applicant has hired the Sponsor to fully implement the Mitigation Site. Accordingly, Financial Assurances will be secured by the Sponsor in an amount sufficient to cover the estimated cost of various project activities including design, permitting, and construction of the wetland restoration work as well as post-construction monitoring efforts. This Project will have two financial assurances, a Performance Assurance and a Maintenance and Monitoring Assurance. Financial Assurances for the Mitigation Site will be in the form of Letters of Credit or another appropriate mechanism with the USACE Norfolk District listed as the beneficiary.

Performance Assurance

The Performance Assurance will be sufficient to cover costs for the design, permitting, and construction of the Mitigation Site. The Performance Assurance has been calculated using the current Virginia Aquatic Resources Trust Fund credit price. The Performance Assurance will be $631,000.00, to be secured upon approval of this Mitigation Plan, and released upon As Built approval for the construction of the Mitigation Site.

Maintenance and Monitoring Assurance

The Maintenance and Monitoring Assurance will be sufficient to cover costs for activities described in Sections 8-10 of this Mitigation Plan. The Maintenance and Monitoring Assurance will be secured by the Sponsor upon the release of the Performance Assurance, and will be incrementally released after submittal of each annual monitoring report as illustrated below. When all performance metrics have been achieved or at project closing, the Maintenance and Monitoring Assurance will be fully released. The Maintenance and Monitoring Assurance will be secured in the amount of $181,500.00.

Table 3: Maintenance and Monitoring Assurance Drawdown Schedule

Year	Reduction %	Reduction	Base Security
0	0%	$ -	$ 181,500.00
1	15%	$ 27,225.00	$ 154,275.00
2	15%	$ 23,141.25	$ 131,133.75
3	15%	$ 19,670.06	$ 111,463.69
4	0%	$ -	$ 111,463.69
5	15%	$ 16,719.55	$ 94,744.13
6	0%	$ -	$ 94,744.13
7	15%	$ 14,211.62	$ 80,532.51
8	0%	$ -	$ 80,532.51
9	0%	$ -	$ 80,532.51
10	25%	$ 20,133.13	$ 60,399.39
Total	100%		

References

Virginia Department of Environmental Quality (VDEQ), Viginia Department of Conservation and Recreation (VDCR). (2006) Bacterial Total Maximum Daily Load Development for Pigg River, Snow Creek, Story Creek, and Old Womans Creek. VT-BSE Document No. 2006-0002. Department of Biological Systems Engineering, Viginia Tech.

Virginia Department of Environmental Quality. (2024). Virginia's 2024 305(b)/303(d) Water Quality Assessement Integrated Report.

Appendix A – Mitigation Site Maps

Appendix B – Mitigation Concept Design Plan

Appendix C - Conservation Easement Draft

Appendix D - Wetland Delineation

Appendix E - Virginia Invasive Plant Species List

Appendix F - Long Term Management Plan


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