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DEPARTMENT OF TRANSPORTATION

Stream Restoration Municipal Partnership and Standards

FINAL REPORT

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

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16. Abstract <p>Achieving PennDOT's MS4 and Chesapeake Bay goals can be challenging and costly. Stream restoration projects have been shown to be largely successful in reducing a significant amount of sediment and nutrients to improve water quality, at a more reasonable cost per unit of TMDL credit over most stormwater practices. Most DOTs do not own right-of-way (ROW) that includes entire uninterrupted reaches of streams but often have streams crossing through the ROW or running parallel to the ROW. For this reason, DOT partnering with neighboring property owners and local municipalities/counties is a prudent and cost-effective means to implement stream restoration projects to achieve TMDL credits. This document includes a literature review on stream restoration partnerships and project delivery methods. Its primary purpose is to provide PennDOT with a guidance document on how PennDOT and municipalities can work together to deliver and share MS4 sediment reduction load crediting from stream restoration.</p>			
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STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS

EXECUTIVE SUMMARY

1.0 EXECUTIVE SUMMARY

All National Pollutant Discharge Elimination System (NPDES) Phase I and Phase II Municipal Separate Storm Sewer System (MS4) permittees are responsible for permit compliance within their own permitted areas. Given the potential for overlapping MS4 Permit compliance activities in close proximity with one another, EPA encourages MS4 permittees to establish cooperative agreements in implementing their stormwater programs. Partnerships and agreements between permittees and/or other agencies can minimize unnecessary repetition of activities and result in using available resources as efficiently as possible. Using existing tools and programs instead of creating new ones can allow permittees to focus resources on high priority program components. Additionally, by forming partnerships, water quality can be improved on a larger, consolidated scale rather than on a piece-meal, site-by-site basis. Partnering is a common strategy used to plan, design, implement, monitor, and maintain projects when more than one entity has common goals.

Typically, DOT agencies are responsible for compliance with their issued MS4 permits, and each DOT owns land and/or is responsible for managing pollutants from stormwater runoff from their impervious facilities into receiving waters that are located throughout various counties and/or local jurisdictions, many of which are also required to comply with their own separately issued MS4 permits. Stream restoration projects have been shown to be largely successful in reducing a significant amount of sediment and nutrients to improve water quality, at a more reasonable cost per unit of TMDL credit over most stormwater practices. Most DOTs do not own right-of-way (ROW) that includes entire uninterrupted reaches of streams but often have streams crossing through the ROW or running parallel to the ROW. For this reason, DOT partnering with neighboring property owners and local municipalities/counties is a prudent and cost-effective means to implement stream restoration projects to achieve TMDL credits.



2.0 AVAILABLE LITERATURE RESEARCH

2.1 INTRODUCTION AND METHODS

Stantec Consulting Services Inc. (Stantec), on behalf of the Pennsylvania Department of Transportation (PennDOT), recently conducted a literature review of readily available documents or webpages and conducted interviews with representatives from PennDOT and other Department of Transportation (DOT) agencies within the Chesapeake Bay Watershed. The purpose of the literature review and interviews was to:

1. identify State/District DOT agencies that have established stream restoration design, construction, and maintenance standards that involve partnering with others;
2. determine if any cost benefits are achieved by conducting stream restoration, as opposed to delivering other stormwater control measures which achieve sediment reduction towards Municipal Separate Storm Sewer System (MS4) Permits;
3. identify sample agreements used between partnering organizations to implement MS4 programs and/or projects; and
4. evaluate any additional methods these agency's use when partnering with municipalities, county governments, or other agencies to deliver stream restoration projects and share sediment reduction credits to ensure compliance with their MS4 permits and the Chesapeake Bay Total Maximum Daily Load (Bay TMDL) requirements.

2.2 BACKGROUND INFORMATION ON PARTNERING

According to the U.S. Environmental Protection Agency (EPA), since the Stormwater Phase II Final Rule applies to all small MS4's within an urbanized area regardless of boundaries, it is typical that multiple government agencies within a single geographic area are subject to MS4 permitting requirements. Beginning in 1990, the Phase I MS4 regulations were established for medium and large cities or counties with populations of 100,000 or more to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for their stormwater discharges. Currently, there are approximately 855 Phase I MS4s covered by 250 Individual Permits. In 1999, Phase II MS4 regulations were established requiring small MS4s in U.S. Census Bureau defined urbanized areas, as well as other non-traditional MS4s designated by the permitting authority such as DOT agencies, public universities, hospitals, and prisons, to obtain NPDES permit coverage for their stormwater discharges. Most of the 6,695 Phase II MS4s are covered by statewide General Permits, however, some states use individual permits. (1)

All Phase I and Phase II MS4 permittees are responsible for permit compliance within their own permitted areas. Given the potential for overlapping MS4 Permit compliance activities in close



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proximity with one another, EPA encourages MS4 permittees to establish cooperative agreements in implementing their stormwater programs. Partnerships and agreements between permittees and/or other agencies can minimize unnecessary repetition of activities and result in using available resources as efficiently as possible. Using existing tools and programs instead of creating new ones can allow permittees to focus resources on high priority program components. Additionally, by forming partnerships, water quality can be improved on a larger, consolidated scale rather than on a piece-meal, site-by-site basis. **(2)** Partnering is a common strategy used to plan, design, implement, monitor, and maintain projects when more than one entity has common goals. Generally, a partnership is aimed at improving quality and reducing disputes.

All six (6) Chesapeake Bay Watershed states, including New York, Pennsylvania, Delaware, Maryland, West Virginia, and Virginia, along with the District of Columbia (DC) (i.e., Bay jurisdictions), the Chesapeake Bay Commission, and the US Environmental Protection Agency (EPA) (for the United States of America on behalf of the Federal Government and the Federal Leadership Committee for the Chesapeake Bay), have signed the Chesapeake Bay Watershed Agreement. This agreement commits each of these entities to being formal partners on a watershed-wide scale in the pursuit of an environmentally and economically sustainable Chesapeake Bay watershed with clean water, abundant life, conserved lands and access to the water, a vibrant cultural heritage and a diversity of engaged citizens and stakeholders. **(3)**

Although this agreement and the partnerships formed at the highest levels of Federal and State government are critical to the success of the Chesapeake Bay restoration program, each of the Bay jurisdictions have been required to develop their own Watershed Implementation Plans (WIPs) to address the Bay TMDL allocations established to control nitrogen, phosphorus and sediment entering receiving waters. In its *Guide for Chesapeake Bay Jurisdictions for the Development of Phase II Watershed Implementation Plans*, EPA stresses the importance of each jurisdiction's collaboration with local partners such as conservation districts, local governments, planning commissions, utilities, and watershed associations to implement the WIP strategies. The document states that "The shared goal of protecting local waters and restoring the Chesapeake Bay will only be achieved if federal, state and local partners work together." **(4)**

One of the key strategies incorporated into the WIPs that has helped jurisdictions achieve steep reductions towards meeting nitrogen and phosphorus pollution allocations has been through the implementation of upgrades and operational efficiencies at wastewater treatment plants. **(5)** Other strategies incorporated into each jurisdiction's WIP's to meet nutrient and sediment TMDL allocations include Capital Improvement Projects (CIPs) such as new stormwater management, retrofits to existing stormwater management, and stream restoration projects, as well as voluntary efforts that depend on local governments, institutions (i.e. schools, churches, etc.), and homeowners to implement, such as the installation of small-scale on-site Best Management Practices (BMPs).

Another key strategy used to enforce compliance with Bay TMDL goals and commitments is the use of permit-driven requirements that must be met at the local and/or agency level. Each of the Bay jurisdictions has established agencies that serve as their NPDES permitting authority,



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responsible for developing and issuing permits, and implementing regulations for discharges from MS4s. Due to the more stringent water quality standards established by Bay and local TMDLs over the general State/District water quality standards, TMDL Implementation is a requirement built into the MS4 Permits issued to counties, local municipalities, and agencies such as DOTs that are responsible for the control and management of polluted stormwater runoff from their facilities into MS4 systems or directly to receiving waters. (6)

Typically, DOT agencies are responsible for compliance with their issued MS4 permits, and each DOT owns land and/or is responsible for managing pollutants from stormwater runoff from their impervious facilities into receiving waters that are located throughout various counties and/or local jurisdictions, many of which are also required to comply with their own separately issued MS4 permits. Stream restoration projects have been shown to be largely successful in reducing a significant amount of sediment and nutrients to improve water quality, at a more reasonable cost per unit of TMDL credit over most stormwater practices. (7) As most DOTs do not own right-of-way (ROW) that includes entire uninterrupted reaches of streams but often have streams crossing through the ROW or running parallel to the ROW, DOT agency partnering with neighboring property owners and local municipalities/counties to implement these more cost-effective projects to achieve TMDL credits makes sense.

Below is a description of readily available information from websites and/or information provided by various sources responsible for management of each Bay State and their DOT agencies MS4 Program related to their experience with partnering to achieve mutual MS4 permit commitments.

2.3 STATE AND DOT AGENCY PARTNERING EFFORT STATUS

2.3.1 Pennsylvania / PennDOT

In Pennsylvania, the Department of Environmental Protection (DEP) issues MS4 permits to contributors, including PennDOT, under the NPDES Program. Urban stormwater runoff is regulated under the MS4 Permit. MS4 Permit holders are required to manage their stormwater runoff to prohibit pollution from discharging into water bodies and to attain the targeted waste load allocations (WLAs) for pollutants. PennDOT and other MS4 Permittees must ensure that waste loads are reduced and are not exceeding thresholds that would cause excessive pollution in local waterways or the Chesapeake Bay.

PennDOT recognizes that cooperation with other MS4 Permittees in the state, as well as community, nonprofits, and a wide variety of other organizations, in addition to local citizens, may be necessary for PennDOT to meet its waste load reduction goals and can be beneficial to all partners when shared credit is provided. Because of this, partnering has become an important component in the success of PennDOT's waste load reduction program to comply with their MS4 Permit.

To comply with their MS4 Permit and support the state's goal of meeting the Chesapeake Bay TMDL, a variety of practices may be used to claim credit toward impervious acre treatment requirements and pollutant load reductions. Credits for environmental restoration are computed



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based on methods agreed upon by PennDOT and PADEP. Common BMPs to obtain credit include:

- Floating Treatment Wetlands;
- Urban Filter Strips;
- Disconnecting Impervious Areas;
- Urban Tree Canopy;
- Urban Nutrient Management;
- Enhanced Erosion and Sediment Control;
- Shoreline/Streambank Management;
- Illicit Discharge Detection; and
- Urban Tree Planting

In addition, and of interest because of its applicability to this exercise, during our literature review we located a PADEP webpage that provides a selection of resources for those seeking more information on collaborating with other MS4 Permittees for permit compliance. The webpage includes a link to a PDF of *General Guidelines for MS4 Collaborative Efforts*, which states, “It is not necessary for participating permittees to be joint permittees. It is however expected that there will be a written agreement among the collaborating permittees (whether they are joint permittees or not) to ensure implementability.” **(8)** The resource provides the following outline for such an agreement:

- Scope of the Agreement
 - Complete Pollutant Reduction Plan implementation (or individual BMP implementation)
- Roles and Responsibilities
 - How projects will be selected
 - Selection of engineering and other contracted services
 - Long-term Operations & Maintenance (O&M)
 - Adaptive management of the Pollutant Reduction Plan (PRP) (or the individual BMPs) over the permit period
 - Commitment to using the Plan (or to implementing the individual BMPs)
- Allocations of cost and pollutant reduction
 - Methodology for sharing the cost
 - Methodology for distributing the pollutant reductions
- Timeline for implementation
- Schedule of milestones to complete and implement the plan (or the individual BMPs) **(8)**

This suggested outline could be modified to meet the needs of PennDOT for both program- and project-level partnership agreements. The above-mentioned webpage also provides a 3-page document that discusses collaboration options for meeting MS4 Permit requirements, including a



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list of existing MS4 collaborative efforts occurring in Pennsylvania that could be contacted for information.

2.3.2 Maryland / MDOT - SHA

The Maryland Department of Transportation (MDOT) is committed to delivering a transportation program that protects and improves the land and water resources (trees, water, wetlands, wildlife and aquatic life) of Maryland. MDOT works closely with the Maryland Department of the Environment (MDE), the Maryland Department of Natural Resources (DNR), as well as other state and federal agencies in order to reduce impacts to natural resources. As part of the Bay Restoration efforts, all of the MDOT Business Units incorporate environmental Best Management Practices (BMPs) to effectively reduce pollution in stormwater runoff from highway projects. MDOT's State Highway Administration (SHA) has created a Bay Restoration viewer that allows the public to view completed and proposed highway projects implementing BMPs such as tree planting, removing impervious areas, stream restoration, subsoiling, street sweeping, capturing sediment and debris in catch basins, and incorporating grass swales and bio-swales to naturally remove pollutants and filter stormwater. (9) SHA's Bay Restoration viewer website is as follows: <https://maryland.maps.arcgis.com/apps/webappviewer/index.html?id=cd43b2ce1f8c482d8ec070aac94bfd54>. (10)

MDE is the delegated authority to issue NPDES discharge permits within Maryland. MDE works with state agencies, local county and city governments, non-government partners, and leaders in agriculture to achieve Chesapeake Bay cleanup goals. These partners work with MDE to design effective Watershed Implementation Plans (WIPs) that guide Bay restoration at the local level to help Maryland to achieve its 2025 TMDL goals. This may include the use of both nutrient and water quality trading between partners. (11)

As one of the most significant owners of impervious surfaces throughout the state, SHA is covered under their own Phase I NPDES MS4 permit, separate from other MDOT Business Units, with the most recent permit issued in October 2015. While SHA controls storm drain system pollutant discharges along their roadways, because of the limited amount of natural resources and restoration opportunities located within their owned ROW, SHA typically partners with local jurisdictions to implement additional BMPs outside of their ROW to meet their MS4 goals. (12)

One of the project implementation methodologies utilized by SHA to meet their TMDL compliance requirements follows a watershed focus, where SHA prioritizes impaired watersheds with EPA approved TMDLs and SHA WLA's within each county. Input from the counties is sought regularly and in instances when a local jurisdiction requests SHA to have a stronger focus on certain watersheds, SHA works with the jurisdiction to develop agreements under which the implementation of appropriate practices can be undertaken as a partnership.

According to SHA's *Impervious Restoration and Coordinated TMDL Implementation Plan*, SHA has established an outreach program tasked with coordinating pollution reduction strategies with each of the MS4 jurisdictions and counties. The purpose of the outreach is to establish a cooperative relationship and identify partnering opportunities. This coordination is important to



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ensure that local officials are informed and have an opportunity to provide input on SHA's planned activities. A Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA) is the type of mechanism being actively sought with other MS4 jurisdictions, government agencies, and private organizations with the intent to share resources in restoring local and regional waters. SHA is currently partnering with local jurisdictions, other organizations and agencies, private sector companies, as well as private citizens to implement projects outside of SHA ROW. **(13)**

The Implementation Plan also provides general strategies for possibly splitting credits between partners as follows:

Some impervious surfaces that are not owned by SHA but drain to and are treated by a SHA restoration practice. These areas are used to offset the SHA restoration requirement at a 1:1 ratio, unless an agreement is in place with the surrounding jurisdiction to split credit (13).

SHA is partnering with other willing NPDES permittees to complete programs or projects that will reduce nutrients and sediments. The goal is to produce projects that will have a WLA reduction and move each permittee closer to meeting its load reduction requirement. An agreement on how the credit pounds of phosphorus and sediment is split will be project specific (13).

2.3.3 Delaware / DelDOT

Areas in the western portion of Delaware's three (3) counties drain to the Chesapeake Bay watershed. While the Phase I and initial Phase II WIPs established goals for load reductions to meet the Bay TMDL requirements, none of the areas within the Bay watershed at that time were designated as being within an MS4 regulated area. In 2010, a new urban area within the Bay watershed in western Sussex County was designated by the Delaware Department of Natural Resources and Environmental Control (DNREC), the agency responsible for issuance and compliance oversight of the state's NPDES MS4 program, as being subject to the MS4 regulations. **(14)**

The Delaware Department of Transportation (DelDOT) has a Phase II Permit that covers the urbanized areas within the Bay portion of Sussex County along with portions of Kent County, outside the Bay watershed. They also have a Phase I Permit that covers New Castle County, for which the most urbanized areas are also located outside of the Bay watershed. **(15)**

A small portion of New Castle County drains to the Chesapeake Bay Watershed, and therefore, compliance with the Chesapeake Bay TMDL is required in this portion of the state. DelDOT and New Castle County have been issued a Joint MS4 Permit to cover this area, with the first Phase I permit being issued in 2001. The current joint permit addresses the Chesapeake Bay TMDL. Since issuance of the first permit, both entities have spent time inventorying their stormwater assets, and have worked with a consultant to develop an NPDES Map Viewer that identifies these assets and which entity is responsible for each asset. The webpage did not mention whether DelDOT and New Castle County partner together or with others on MS4 implementation projects. **(16)**



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2.3.4 Virginia / VDOT

The Virginia Department of Environmental Quality (DEQ) partners closely with the U.S. Army Corp of Engineers and the Virginia Marine Resources Commission (VMRC) to achieve goals focused on stream protection. They also coordinate with grant funded initiatives to explore future projects. It appears that most of the municipal partnering within the Commonwealth of Virginia goes through DEQ. (17) Information regarding the status of Virginia’s MS4 Permits is available on a DEQ webpage. (18)

The Virginia Department of Transportation (VDOT) is authorized to discharge stormwater from its MS4 by coverage under the Virginia Pollutant Discharge Elimination System (VPDES) individual permit for discharge of stormwater within urbanized areas of Virginia. (19) VDOT issued a news release in December 2018 stating that the partnered with the Piedmont Environmental Council (PEC) to replace aging stream crossing infrastructure in Rappahannock County with updated designs to help the waterways and wildlife. There was no mention in this article concerning partnering as it pertains to MS4 Permit compliance and credit sharing. (20)

2.3.5 New York / NYSDOT

There was no information found through a web search indicating that the New York State Department of Transportation (NYSDOT) has been involved in projects in which they have partnered on stream restoration with other entities. While there were several stream improvement and/or wetland mitigation projects listed through a search of the “Projects in Your Neighborhood” page of the NYSDOT website, all the projects appear to be undertaken solely by the DOT. (21)

The New York State Department of Environmental Conservation (DEC) is the regulatory agency within the state responsible for ensuring that WIPs are prepared and implemented to address the Chesapeake Bay TMDL. Some or all of 19 different counties in the Southern Tier of New York are within the Susquehanna River or the Chemung River watersheds, which are the two watersheds that form the northern headwaters of the Chesapeake Bay. DEC has partnered with the New York State Department of Agriculture & Markets (NYSDAM), the Upper Susquehanna Coalition (USC), and Cornell University to develop New York’s Phase I and II WIPs, with the Phase III currently under development by these same partners. DEC works with these organizations and other partners to develop and implement New York’s two-year milestones, which include program actions as well as implementation of specific BMPs, such as stream restoration.

A search through the WIP I and II documents and the four (4) programmatic milestone documents linked to DEC’s website indicates that USC and DEC are the two lead agencies within the state that have been implementing or partnering with others to implement streambank rehabilitation or stream restoration projects. There is no mention of NYSDOT being involved in any of these projects. The Draft Phase III WIP, which outlines the actions that New York will take through 2025 to meet nutrient and sediment reduction goals for the Bay TMDL requirements, includes a section on streambank restoration as a BMP, including both urban and non-urban streams. Therefore, greater emphasis on stream restoration projects is likely to occur as DEC administers



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implementation of the Phase III WIP. This may promote more opportunities for partnering on these types of projects in the future.

Most of the partnering to date has been led by the USC, which is a network of soil and water conservation districts which works under an MOU that allows districts to enter into multi-district agreements. The USC's mission is to protect and improve WQ and natural resources in the Upper Susquehanna River Basin with the involvement of citizens and agencies through planning and implementation of conservation projects, such as stream corridor rehabilitation (including natural channel design, stream rehabilitation and stabilization, floodplain enhancement, and establishment of riparian buffers). They mainly focus on agricultural and large landowners when conducting non-urban stream restoration projects. (22)

2.3.6 West Virginia / WVDOT

Specific information about partnering by West Virginia DOT (WVDOT) on MS4 stormwater management and stream restoration projects could not be found through a web search. The WVDOT considers stream restoration as a post-construction stormwater management BMP under their filtration/infiltration practices.

According to a design directive related to post-construction storm water management issued by the WVDOT Division of Highways (DOH), the DOH “does not have the legal authority to regulate this issue beyond State Right-of-Way. The WVDEP already has regulations and NPDES Permits to address this issue.” While the document further states that “DOH will coordinate new project development and substantial improvement projects with the local authorities”, it does not mention teaming or partnering with them to implement projects outside of the DOH MS4 boundary. (23)

As DOH has determined that it is nearly impossible to manage the first inch of rainfall from all storm events, they are establishing a pay-in-lieu program where they may fund a storm water improvement project for the local MS4, as long as the local MS4 is willing to accept the funds and apply the funds to pollution prevention and discharge reduction within the local MS4s service area. (23)

Based on the above information, it appears that partnering within the state may be addressed through the West Virginia Department of Environmental Protection (WVDEP). As stated on WVDEP's Chesapeake Bay Program website: “Major pollution reductions are possible when federal, state, and local governments work together, as West Virginia's partners have shown through wastewater treatment plant upgrades and thousands of instances and acres of agricultural best management practices.” (24) A search of WVDEP's website on stream restoration partnering provided links to descriptions of several projects where numerous local and state agencies, as well as non-governmental organizations (NGOs) and private entities partnered together to implement projects, but the descriptions reviewed did not list any of the WVDOT organizations as partners. (25)



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2.3.7 District of Columbia / DDOT

The District of Columbia (DC) has developed the DC Stormwater Plan, a Consolidated TMDL Implementation Plan to address the requirements of the District's MS4 permit and reduce stormwater runoff and pollution in the District's waterways. The District has a single MS4 permit that covers multiple agencies, and the District Department of Energy & Environment (DOEE) is the primary agency responsible for oversight of the MS4 permit.

Since a single permit covers multiple agencies, including the District Department of Transportation (DDOT), partnering between agencies is built into the District's efforts to comply with the permit. For example, the District MS4 program operates with a mix of funding sources, including the Annual Operating Budget and Capital Plan for all District agencies, stormwater fees, and environmental grants. These funds may be used by agencies to implement stormwater BMPs, stream restoration, and source control activities. The stormwater fee generates approximately \$13 million in revenue per year, for which DOEE uses most of this to address MS4 programmatic requirements, but a sizeable portion of these funds are also distributed directly to DDOT and other District agencies for stormwater-related maintenance, inspection and other source control activities under interagency MOUs. The amount available for direct investment in BMPs and other pollution controls is approximately \$3.65 million per year.

DDOT plays an important role in the implementation of the Consolidated TMDL Implementation Plan because much of the land potentially available for BMP implementation is in public right-of-way and roads. DDOT has developed Green Infrastructure Standards which contains a list of planned or proposed projects that were incorporated into the planned implementation to meet MS4 waste load allocations (WLAs). (26)

2.3.8 DOT Partnering Outside of Chesapeake Bay Region

According to the Ohio Department of Transportation's, *ODOT Partnering Handbook*, partnering is a planned and orchestrated effort by all stakeholders of a project to commit to an organized effort of establishing an environment of mutual trust, open communication, cooperation, and teamwork to achieve mutually agreed upon goals and objectives. A partnership often includes a written agreement that specifies the "what's and how's" of the way people relate to one another and manage themselves in working together to achieve the desired mission of the project. Associated General Contractors (AGC) defines seven essential elements of partnering for it to be successful. These include:

1. Commitment to partnering by the top management of every organization involved in the project.
2. Equity in considering all stakeholders' interests to create shared goals and commitment by all stakeholders.
3. Trust among all parties through personal relationships and open communication with mutual sharing and understanding of each party's risks and goals.
4. A partnering charter developed jointly by all parties that identifies specific mutual goals and objectives.



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5. Implementation of mutual goals and mechanism for problem solving.
6. Continuous evaluation based on the goals to ensure the plan is proceeding as intended and all stakeholders are carrying their share of responsibilities.
7. Timely resolution of all disputes at the lowest level possible during the project. (27)

2.4 WEBLINKS TO SAMPLE MS4-RELATED MOAs, MOUs, AND AGREEMENTS

In our literature review, Stantec found more than one instance where other MS4 Permittees suggest the use of MOUs or MOAs for establishing partnerships with other MS4 Permittees. Stantec was able to locate several “program-level” MOAs and MOUs through our internet search, most of which consist of some form of MS4 Stormwater Management Program agreement between multiple partners. It should be noted that for most DOTs, “project-level” MOAs or MOUs were unable to be obtained through our literature review. Stantec was able to obtain two project-level MOAs from MDOT SHA when we conducted our interviews with DOT agencies.

The following provides a selected list of weblinks to some of these agreements with a brief explanation of the entities involved and primary focus of each agreement. Few of these agreements specifically included DOT agencies as partners.

1. The Hampton Roads Planning District Commission (HRPDC) in Virginia developed a MOA establishing the Hampton Roads Regional Stormwater Management Program, which was signed by HRPDC, six counties, and twelve municipalities in 2013. The MOA outlines a consensus on regional goals the local governments developed to guide the operation of their stormwater management programs, and the agreement establishes an administrative framework to mutually address certain NPDES MS4 permit requirements. The agreement defines the HRPDC and local governments responsibilities, the methods of financing the programs, and provides an appendix with a table listing numerous stormwater-related projects that have been or are planned to be implemented to assist the parties in meeting program goals. This list includes several stream restoration projects and provides a breakdown of the treated impervious and pervious acres, estimated pounds of nutrients and sediment removed, and estimated costs for these projects. This MOA can be found at the following web link:

<https://www.vbgov.com/government/departments/public-works/surface-water-regulation/Documents/MS4%20Permit/appendices-a-c-6-17.pdf>

2. The City of Newport News (VA) Chesapeake Bay TMDL Action Plan discusses the use of MOUs for the implementation of joint projects and the splitting of credits between project partners in the following excerpt:

Pursuant with the City’s MS4 Individual Permit Sections 1.D.1.b) 2) (c) & (d), the City may offset the remainder of their TMDL reduction requirements through the implementation of a joint BMP project with an adjacent MS4 Permittee(s), or through the utilization of a Nutrient Trading Program. The joint BMP project must be



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completed through the establishment of a memorandum of understanding (MOU) with an adjacent MS4 permittee to implement BMPs collectively and split the POC reduction credits under the terms of the MOU. The MOU must be with a municipality that discharges to the same or adjacent eight-digit hydrologic unit within the same basin (7).

[https://www.nnva.gov/DocumentCenter/View/16648/NN-Chesapeake-Bay-TMDL-Action-Plan?bidId=\)](https://www.nnva.gov/DocumentCenter/View/16648/NN-Chesapeake-Bay-TMDL-Action-Plan?bidId=)

3. A Stormwater Program Agreement was entered into by and between a group of MS4 permittees and the Chittenden County (VT) Regional Planning Commission to operate an MS4 Stormwater Program that conform with and satisfies the relevant requirements of the public education and outreach, and the public involvement and participation elements of the Phase II NPDES Permit issued by the Vermont Department of Environmental Conservation (DEC). This agreement describes processes related to the “Selection of Contractors” for competitively bidding contracts for program services. While the location is outside of the Chesapeake Bay region and the focus of the agreement is not on specific stream restoration or other stormwater BMP project implementation, the description on how contractors will be selected may be informative when setting up similar agreements of MOU’s for these types of projects. The agreement can be found at the following link:

https://www.ccrpcvt.org/wp-content/uploads/2016/02/CC_Stormwater_MOU_draft_amendment.pdf

4. An ordinance authorizing the City of Reading, PA to enter into an intergovernmental cooperation agreement with other municipalities that participate in the Berks County MS4 Steering Committee was signed in 2012. The purpose of this ordinance is to ensure that proper application/annual reports to the DEP are accomplished for renewal of MS4 permits required of the municipality. A copy of the Cost-Sharing and Cooperation Agreement is attached to the ordinance, with the agreement focused primarily on sharing responsibilities related to the Intergovernmental Cooperation Educational Program element of the MS4 permit requirements. A copy of the ordinance and agreement are available at the following website:

https://www.readingpa.gov/sites/default/files/council/ordinance/2012/MS4_agreement.PDF

5. In 2014, a MOA was developed between Carroll County, Maryland and the incorporated municipalities within the county for “Cost-Sharing of Stormwater Mitigation Projects and Co-Permittee Responsibilities in Complying with NPDES MS4 Requirements.” While cost-sharing for overall program elements and projects is discussed in this document, there is no discussion on how credits will be shared between the parties. The document can be found at the link below:

<http://ccgovernment.carr.org/ccg/lrm/wrcc/npdesmoa.pdf?x=1549652056457>



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6. A sample MOU between the Allegheny County (PA) Conservation District and any municipality within the District's coverage area is available at the website below. One of the components included in this MOU covers defining responsibilities related to NPDES MS4 programmatic activities. Specifics concerning stream restoration projects are not provided.

https://www.conservationcenter.org/images/stormwater/ACCD_MOU_Fillable_File.pdf

7. Two MOUs were developed between various agencies within the District of Columbia regarding shared responsibilities related to MS4 permit compliance administration and fiscal administration. The District DOT is included as one of the responsible agencies charged with taking the lead in implementing various MS4 program elements and specific projects. The web link to these MOUs is as follows:

https://doe.dc.gov/sites/default/files/dc/sites/ddoe/release_content/attachments/Appendix%20A.pdf

8. The City of Virginia Beach's Department of Public Works (DPW) oversees the City's MS4 program and one of the program elements they are responsible for is coordinating and cooperating with VDOT where the City's storm sewer is interconnected with VDOT's storm sewer. In their MS4 Program Plan, available at the website below, it states that "Permit specific BMP retrofit requirements shall not be double-counted in the calculation of load reductions. If the permittee undertakes the project, the permittee shall be entitled to full credit for the project but may share credit with VDOT on mutually agreeable terms, which shall be in writing." The plan also states that "The City and VDOT are both interested in potential opportunities to partner to develop water quality improvement projects on properties adjoining the VDOT ROW for TMDL credit." Appendix B of the MS4 Program Plan includes copies of a programmatic and a monitoring MOA between the City and the HPRDC, as described in Item #1 above, but no MOA related to cooperation between the City and VDOT.

<https://www.vbgov.com/government/departments/public-works/surface-water-regulation/Pages/stormwater-regulations.aspx>

9. The Spring Creek Watershed's MS4 Partnership was formed between Penn State, State College Borough, and five (5) townships in the central part of Pennsylvania to address their NPDES MS4 permit requirements, including the Bay TMDL requirements. Each Partner has developed their own specific six (6) Minimum Control Measures (MCMs) or programs; however, the MS4 Partners work cooperatively together on three (3) of these MCMs, including the public education and outreach, the public involvement and participation, and the pollution prevention/good housekeeping MCMs in addition to keeping stormwater ordinances similar for uniformity within the region. It does not appear that the partners cooperate to address the illicit discharge detection and elimination, construction site runoff, or post-construction stormwater management MCMs listed by the permit. The



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Partnership's website listed below notes that not all areas within the MS4 Permit Area mapped by PADEP are included, as PennDOT has its own permit that covers State roads. There is no mention of cooperation between the Partnership and PennDOT on the website and a formal MOA/MOU between the partners was not identified.

(<http://ms4partners.org/index.html>)

10. The Blair County Conservation District (BCCD) and MS4 Workgroup prepared a PowerPoint focused on "Success Through Collaboration" available at the website below. The Blair County MS4 area includes portions of seven townships, four boroughs, one city, and the County of Blair in southcentral PA. The Workgroup was formed in 2012 after PADEP issued numerous deficiency orders to MS4 municipalities within the County for the purpose of discussing sharing municipal resources as part of their permit renewal application. Items that are being coordinated and shared within the Workgroup include the public education and outreach, and the public participation and involvement MCMs. In addition, MCM's associated with erosion and sediment control and post-construction stormwater activities are being tracked and reported by the District, and the Workgroup is developing multi-municipal trainings related to the pollution prevention and good housekeeping at municipal facilities MCM.

The presentation includes screen captures of the standardized MOU that was developed to clearly communicate and commit to duties by and between all parties within the Workgroup. The presentation also discusses the benefits of the collaborative approach, including, but not limited to: sharing the district website; public outreach and municipal training; obtaining grant funding and technical assistance for projects to lessen the burden on each municipality; and development of a water-specific website for the Workgroup. The Workgroup is also implementing projects collaboratively with local designers, Borough staff performing earthwork, and installation of plantings by school students. There is no mention in the presentation as to whether or not they are sharing TMDL crediting and the presentation also does not mention working with PennDOT in areas where state roads are located within the MS4 permit area.

(<http://www.nacdnet.org/wp-content/uploads/2016/06/UrbanWaterQuality-BlairCD-PA-January2016.pdf>)



3.0 DOT AGENCY INTERVIEWS / QUESTIONNAIRE RESULTS

3.1 INTRODUCTION AND METHODS

Stantec, on behalf of PennDOT has conducted a series of interviews/questionnaire's with representatives from several DOTs located within the Chesapeake Bay watershed, including VDOT, MDOT SHA, DeIDOT, and PennDOT. While partnering is a strategy generally used by all of these agencies, MD and VA have primarily focused on partnering with other state agencies such as those governing parks and recreation, as opposed to partnering with county or municipal entities. DeIDOT's permit is slightly different from the other DOTs as they are jointly permitted with New Castle County and several small towns for their Phase I MS4 permit. While they are partnering for planning, they state in their agreements that implementation of projects is completed independently.

The following questions were posed to representatives from the DOTs to get a better idea on where they stand with partnering for stream restoration projects and the types of contracting mechanisms that have been used:

1. General Partnering
 - a. Approximately how many projects have you partnered with local municipalities for TMDL/MS4 credit?
 - b. Could we get a list of those projects and funding sources?
 - c. Of those projects, how many were designed by the DOT vs. the municipality?
 - d. Of those projects, how many were constructed by the DOT vs. the municipality?
 - e. What mechanisms were used: P3, Design-build, Design-bid-build?
 - f. Which mechanism worked best and why? Least, and why?
 - g. Did you establish guidelines for partnering? If so, could you share these guidelines?
 - h. How much oversight did the DOT provide during construction and/or design?
2. Agreements/Construction Mechanisms
 - a. What contracting mechanism did you use/What types of agreements did you use? MOAs, MOUs, Easements/ROW? Did you use master agreements versus project specific agreements?
 - b. Could you share sample agreements?
 - c. Were maintenance requirements established in these agreements or separately?
 - d. What were the terms and durations?
 - e. Who was responsible for maintenance or monitoring and how was that determined?



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3. Credit and Financing

- a. Did you establish guidelines for funding/credit splitting? If so, could you share these guidelines?
- b. How was credit split? Based on financial contributions, property ownership, drainage area basis?
- c. How were payment milestones/plans established? When established, were they at specific milestones?
- d. Could you share the costs for these projects? Which project delivery methods were most cost effective/credit?

3.2 VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)

Stantec conducted a phone interview with Tracey Harmon, VDOT TMDL Program Manager on 2/21/2019. The results are as follows:

3.2.1 General Partnering

As of February 2019, VDOT had not partnered with any localities yet. They were in discussion with Fairfax County on potential future projects. The preliminary idea is that Fairfax Co. would design and VDOT would construct. The two would then share credits based on multiple factors (ROW and monetary contribution). At the time of the interview, there was no set formula or formal agreement.

VDOT currently partners with the Virginia Department of Conservation and Recreation (DCR) for shoreline restoration. They have begun partnering with other state agencies as well to eliminate having to acquire easements/ROW. VDOT's driver is to look at big landowners to maximize efficiency. Since DCR lacks funding, VDOT would carry out all design and construction, monitoring, and short-term maintenance. The long-term maintenance would be completed by DCR. VDOT would receive all of the credit. VDOT is currently working on a memorandum of agreement (MOA) with DCR.

In general, VDOTs approach to monitoring and maintenance is that whomever built-it would do short-term monitoring/maintenance and the ultimate owner would do long-term maintenance.

3.2.2 Agreements / Construction Mechanisms

VDOT generally uses an "on-call services contract" for both design and construction which essentially functions like a task order-based design-build. By having the contractor already under contract, they can put out task specific work orders and in VDOTs experience, it makes it easier to get maintenance performed and there are cost savings even by the contractor (time and material). This contracting allows for flexibility over traditional delivery especially when field conditions change.



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Public Private Partnerships (P3) – VDOT usually reserves P3s for big roadway projects, with very long-term funding (i.e., 10+ years). They have not and most likely will not use this delivery method for MS4 projects.

Turn-key projects – These are “full-delivery” or “fixed fee” projects, built and permitted outside of the agency, and generally brought to VDOT by a contractor. The first one that VDOT is purchasing was unsolicited, and it is currently under development. The contractor has a signed task order, but work has not really started. One of the issues that has already come up is payments - VDOT put in a requirement that the 1st payment would not be made to the contractor until a portion of credits were delivered. Because of permit delays, no payments have been made and VDOT is sitting on ~\$5M which may not be able to be paid within their fiscal year. Another complication that has come up is who is going to certify credits and exactly how many credits will be provided. VDOT sought out the Virginia Department of Environmental Quality’s (DEQ’s) opinion prior to signing the task order but the letter they received from DEQ contains lots of caveats on final design/construction.

Open market nutrient trading – VDOT will buy credits by river basin, if they are available.

At the time of the interview, VDOT had issued an Invitation for Bids (IFB) for delivery of nitrogen (N) credits. The cost per pound of phosphorus (P) was the original driver, but now its nitrogen. For this contract, VDOT will determine/certify acceptable credits and not wait until the annual reporting cycle to report these credits to DEQ. Payments would be part of the negotiation with the contractor.

3.2.3 Credit and Financing

VDOT now has dedicated state funding/budgets. They have begun conversations about federal funding but have not used this so far for stream restoration. They are also looking to overbuild roadway SWM facilities and extend stream restoration projects related to highway projects to achieve extra MS4 credits.

Project and payment delivery dates are based on VDOT’s annual plan, fiscal year, length of project, and VDOT workload.

VDOT uses dual benefits to prioritize projects. For example, several projects were prioritized where streams had failing embankments. Outfall projects were prioritized where erosion was causing infrastructure failure.

TMDL design and construction contracting is handled by VDOT headquarters/central office. Because of the specific expertise and permit coordination required, stream restoration projects are not handled by construction divisions/districts. Some of the district staff are used for support, especially the environmental staff. This has also been made easier through the use of the on-call services contracts.



3.3 MARYLAND DEPARTMENT OF TRANSPORTATION – STATE HIGHWAY ADMINISTRATION (MDOT SHA)

Stantec conducted an interview with Sonal Ram, MDOT SHA Director, Office on Environmental Design on 4/29/2019 via e-mail correspondence. The results are as follows:

3.3.1 General Partnering

MDOT SHA has partnered with local municipalities as well as county, state, and federal government agencies for projects and services to support compliance with MDOT SHA's NPDES MS4 permit. The MS4 permits are the Maryland Department of the Environment's (MDE) mechanism to meet the urban sector responsibilities under the Chesapeake Bay TMDL. The MDOT SHA Bay Restoration partnerships are primarily managed through memorandums of understanding (MOUs) with these entities. MDOT SHA provided two examples of a Master MOU (see Section 4.2.4 Example 1) and a project-specific MOU (see Section 4.2.4 Example 2) that were executed between MDOT SHA and Howard County and the Town of Woodsboro, respectively.

3.3.2 Agreements / Construction Mechanisms

With respect to Master MOUs, MDOT SHA has an open-ended design, permitting subsequent execution of multiple dependent agreements, each for a specific partnership project. The overall funding level in the master agreement is a funding capacity limit, rather than a guaranteed payment, and allows flexibility in issuing multiple dependent task agreements that represent smaller project budgets under the overall funding level. These are referred to as "Project Task Agreements" (PTAs). MDOT SHA provided two unique examples of PTAs executed under their respective Master MOUs with Howard County (see Section 4.2.4 Example 3) and the Maryland Department of Natural Resources (DNR) (see Section 4.2.4 Example 4). These projects are both currently under construction, although one is being designed and constructed entirely by MDOT SHA and the other is being designed/constructed by MDOT SHA's partner, Howard County.

3.3.3 Credit and Financing

Under MDOT SHA's MS4 permit, MDE uses impervious acres treated (for stormwater control structures) or impervious equivalencies (for alternative BMPS such as tree planting and stream restoration) as the unit for measuring goals and progress for the Bay restoration permit requirements. All funding and MS4 credit divisions between the partners are explicitly detailed in the MOUs or PTAs.

The MS4 restoration credit is split according to the percent contribution to the project by each partner. In some instances, MDOT SHA's partner is not an MS4 permit holder, in which case MDOT SHA receives all the restoration/TMDL credit and other benefits are attributed to the partner. The DNR agreement represents such a partnership with DNR benefiting from the restoration of resources.



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Funding for the MDOT SHA design/construction efforts and partner reimbursements associated with its partnership agreements come from both state and federal sources. Payments to partners are most commonly in the form of reimbursements where the partner is required to first invoice MDOT SHA and demonstrate expenditures tied to activities/commitments specifically described in the associated agreement.

Post-construction monitoring and maintenance responsibilities for MDOT SHA and its partner are also described in the agreement. MDOT SHA seeks 5 to 10-year terms for agreements to preserve project access for these efforts and tracks agreement termination dates, seeking agreement amendments as necessary to extend agreement term periods.

3.4 DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT)

Stantec conducted a phone interview with Emily Whiting, DelDOT NPDES program, on 6/10/2019. The results are as follows:

3.4.1 General Partnering

Unlike the other DOTs DelDOT, New Castle County (principal permittees), the towns of Bellefonte, Newport, and Elsmere, and the cities of Delaware City, New Castle, and Wilmington (co-permittees) have jointly applied for an NPDES permit for the discharge of storm water from/through the applicants' MS4 to all surface waters of the State that are located within New Castle County.

DelDOT owns, maintains, and operates Best Management Practices (BMPs) within the MS4. New Castle County oversees maintenance to the BMPs within the unincorporated boundaries of New Castle County, Delaware. Bellefonte, Elsmere, Delaware City, Newport, New Castle, and Wilmington maintain the MS4 and oversee maintenance of BMPs within the areas of the MS4 that those towns and cities respectively own.

DelDOT's Phase I permit requires that New Castle County and DelDOT coordinate with all permittees to clearly define roles and responsibilities as necessary to comply with all permit provisions.

DelDOT is partnered with its co-permittees for planning. They are cost-sharing stormwater pollution prevention plans/water quality improvement plans. They have developed a cost-share MOA which calls for implementation to occur separately. The idea is that the smaller entities can buy into DelDOT projects especially where there are excess credits.

DelDOT's approach to monitoring and maintenance has been established for SWM BMPs but has not been finalized for streams. For green infrastructure/SWM DelDOT generally utilizes service contracts.

Currently DelDOT is pursuing projects on state or county land. They are prioritizing projects where they have ROW and have been using temporary construction easements to help with access.



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3.4.2 Agreements / Construction Mechanisms

To date DelDOT has used traditional design-bid-build for delivery of their MS4 stream restoration. They have used design-build for stream restoration as well but not specifically for MS4 projects. DelDOT is aware of MDOT SHAs Full Delivery contracts and is looking to follow suit.

3.4.3 Credit and Financing

Delaware has assigned their impervious responsibilities by municipal boundaries; unincorporated areas are split 50/50 by New Castle County and DelDOT. Currently DelDOTs projects are all state funded, but they are looking at grants and federal funding moving forward.

DelDOT has a reimbursement agreement for the water quality improvement plans with an established schedule of payments. The funding is split between the co-permittees based on their percentage of impervious area.

TMDL design and construction contracting is handled by the DelDOT MS4 group. Once bid, a construction project is managed and assigned to a DelDOT construction group based on geography. The MS4 group also coordinates within DelDOT to try to group their projects with other infrastructure projects.

One challenge that DelDOT faces is finding enough specialized contractors to bid on stream restoration.

3.5 PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT)

Stantec conducted a phone interview with Daryl St. Clair, and Rich Heineman on 6/13/2019. The results are as follows:

3.5.1 General Partnering

As of June 2019, PennDOT had not finalized any legal agreements for partnering for TMDL/MS4 credit. However, they are in discussions for several projects, notably with the Pittsburgh Water and Sewer Authority (PWSA), York County and Capital Region Water. While they do not hold signed legal agreements for these projects (drafts are under review), there has been a verbal agreement to share MS4 credit. For the York County project, as part of the certification for credit, PennDOT is required to send the pollution reduction plan to the York County Planning Commission for public advertisement/notice. The York County project is a Design-Build-Operate-Maintain (DBOM) project and is expected to be completed Summer 2019.

Ideally, PennDOT will not oversee construction. PennDOT would like to purchase the credit (sediment) from the vendor. No public inspectors are available, which would leave this responsibility on the vendor. The vendor would obtain all required construction permits like a regular developer. For projects on private land, the long-term maintenance would be on the vendor. For projects on municipal land, the landowner would be responsible for long term maintenance.



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PennDOT plans to build flexibility into their future contracts to allow for the purchase of additional credits. In addition, future contracts will likely be P3s or Best-Value RFPs rather than strictly low-bid in order to maximize credits per dollar.

3.5.2 Agreements / Construction Mechanisms

PennDOT's preference to deliver MS4 stream restoration is to use DBOM or P3 contracts. The ideal setup would be for the vendor to hold and maintain the ROW/easements in perpetuity. PennDOT would then hold an agreement with the vendor to allow for the long-term credit.

For the various PennDOT districts, PennDOT intends to have standard master agreements for use with localities. For municipal projects, PennDOT would consider funding/cost sharing to purchase credit.

3.5.3 Credit and Financing

PennDOT intends to share credit at 100% with each partner where the contributing areas are not "parsed out". For projects where the contributing areas are split based on permit boundaries, PennDOT will negotiate and establish credit in a legal agreement, most likely on a prorata basis.

Where PennDOT is funding or administering projects, payment milestones are generally established as follows:

1. Draft Pollution Reduction Plan (PRP)
2. PRP approval
3. 25, 50, 75 and 100% construction complete
4. 5 years of maintenance

Currently all projects are state funded, however PennDOT intends to leverage federal funding in the future.

3.6 INTERVIEW AND QUESTIONNAIRE RESULTS SUMMARY

MDOT SHA and PennDOT have performed the most partnering with municipalities and the results are summarized below in Table 1 DOT Partnering for Stream Restoration. Also include below is Table 2 DOT Credit Sharing for Stream Restoration and Table 3 Contract / Credit Delivery Options for Stream Restoration in the Chesapeake Bay Watershed.



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Table 1 DOT Partnering for Stream Restoration

DOT Agency	Other State Agencies	County Agencies	Municipalities	Consortiums	NGOs
VDOT	VA DCR**		City of Fairfax**		
MDOT SHA***	MD DNR, MD Agricultural Land Preservation Program (MALP), MD Dept of Health & Mental Hygiene (MDH), MD Dept of Public Safety & Correctional Services (DPSCS), MD Military Department (MMD) MD Army National Guard (MDARG), Dept of General Services (DGS), MD Transportation Authority (MdTA)*	Baltimore Co., Montgomery Co.*, Howard Co., MNCPP-C*, Anne Arundel	Town of Hancock, City of Rockville, Town of Woodsboro		Severn River Assoc.
PennDOT		Blair Co., York Co.	Springettsbury Township, City of Pittsburgh Water & Sewer Authority	Capital Region Water (CRW)** includes City of Harrisburg and portions of Penbrook, Paxtang and Steelton Boroughs and Susquehanna, Swatara and Lower Paxton Townships.	
DelDOT		New Castle County****			
<p>* Not specifically for TMDL/MS4 ** Preliminary negotiations *** Information obtained from public documents ****DelDOT is jointly permitted with New Castle County and several small towns for their Phase I MS4 permit</p>					



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Table 2 DOT Credit Sharing for Stream Restoration

DOT Agency	Credit Sharing/Splitting
VDOT	Split credits based on multiple factors (ROW and monetary contribution). Credits will be split in accordance with agreements.
MDOT SHA	<p>Generally, SHA impervious has been parsed out (removed or split from county/municipality impervious baselines).</p> <p>For partners with a TMDL - Split credits based on multiple factors (ROW and monetary contribution), in accordance with MOUs and/or PTA.</p> <p>For partners without a TMDL - SHA generally receives 100% of the credit, in accordance with MOUs and/or PTA.</p>
PennDOT	<p>Where PennDOT has not been parsed out credit is shared, both PennDOT and the partner can claim credit.</p> <p>Where PennDOT has been parsed out the credit is split based on specific agreements.</p> <p>Credits claimed are based on the PRP and ultimately DEP approval. Of note: PennDOT and the partner may claim different load reductions based on methodology/modelling and DEP approvals. In the event DEP doesn't allow credit sharing credit splitting contingencies are provided/negotiated in agreements.</p>
DeIDOT	Generally, whomever implements construction will receive the credits. Smaller entities can buy into DeIDOT projects especially where there are excess credits.



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Various contracting mechanisms have been used by the DOTs for the delivery of stream restoration and the results are summarized in Table 3 below.

Table 3 Contract / Credit Delivery Options for Stream Restoration in the Chesapeake Bay Watershed

DOT Agency	Design-Bid-Build	Design-Build	Turn-Key/Full Delivery/DBOM	Credit Trading	P3	Open-End/On-Call or IDIQ
VDOT	1		X	X		5
MDOT SHA	X	3	X	2	4	6
PennDOT	X		X		7	6
Pros	Allows DOT to maintain control of the process, and builder is quickly selected by low bid. TMDL credits are known during design phase.	Faster than Design-Bid-Build as designer and builder are solicited together. TMDL credits or cost/credit can be a selection requirement.	Projects are already identified and/or completed. TMDL credits or cost/credit can be a selection requirement.	Projects are already completed.	Faster project completion over design-bid-build. The greater efficiency of P3's can reduce government budgets and budget deficits. A P3s return on investment, or ROI, might be greater than projects with traditional, all-private or all-government fulfillment. Innovative design and financing approaches become available when the two entities work together.	Faster than Design-Bid-Build as task orders can be issued rather than RFPs. TMDL credits or cost/credit can be a selection requirement.
Cons	Slower procurement as designer and builder are procured separately. Since the contractor is selected by low bid, the best or most experienced contractor may not be awarded the contract.*	RFPs can often be complicated and selection process of best qualified/low bid can require larger review team. Project/sites included on the RFP cannot be worked on by others until the contract is completed or agreed upon by all parties.	Non-standard RFP may require additional approvals. No DOT oversight during design/construction. Project milestones for payment may not fit well within DOT fiscal years, causing funding issues.	State environmental protection agency must approve. Agreements must be in place between the entities trading. Generally, there is a term/time limit. Costs/markets have not been established yet.	When there are only a limited number of private entities that have the capability to complete a project, the limited number of private participants that are big enough to take these tasks on might limit the competitiveness required for cost-effective partnering. Profits of the projects can vary depending on the assumed risk, the level of competition, and the complexity and scope of the project. If the expertise in the partnership lies heavily on the private side, the government is at an inherent disadvantage.	RFPs can often be complicated and selection process of best qualified/low bid can require larger review team.

1 - Not used extensively for TMDL, but used for many other stream restoration projects

2 - SHA has not started trading. However, Anne Arundel County, MD, offset its shortfall in reducing stormwater runoff by taking credit for the better-than-required performance of its sewage treatment plants.

https://www.bayjournal.com/article/localities_challenged_to_meet_stormwater_reductions

3 - SHA uses traditional design-build as well as design-builds where specific sites are not identified by the DOT, rather a menu or criteria is given to the bidders to choose from

4 - SHA does not use P3 for stream restoration. However, Prince George's County, MD, achieved approx. 1/3 of their impervious acre treatment through their P3 with Corvias.

5 - Using open-ended professional/non-professional unit price contracts

6 - For design only

7 - In process

* MDOT SHA requires the contractor to provide a "Stream Restoration Specialist" on-site to make sure there is experienced contractor staff on the project



4.0 PARTNERSHIP PLAN

4.1 INTRODUCTION AND METHODS

Based upon the findings of the literature review and DOT interviews, Stantec has developed a series of infographics and supplemental information to illustrate how PennDOT and municipalities might work together. PennDOT has a robust and useful website for stormwater management with a subsection on MS4. In order to convey the partnering process to municipalities, Stantec recommends that PennDOT leverage their existing tools by supplementing their MS4 webpage.

4.2 PARTNERSHIP PLAN WEB MATERIALS

Included in the partnership plan are the following infographics and website material:

1. MS4 Stream Project Partnering Process infographic with the following steps:
 1. Identify the Project(s) in Your Pollution Reduction Plan (PRP) with Potential Mutual PennDOT Interest
 2. Contact District Office
 3. Key Discussion Topics
 4. Cost
 5. Enter Partnership Agreement with PennDOT
 6. What happens next?
2. Pollution Reduction Plan infographics for each target watershed
 1. Sediment reduction needs, progress and reduction strategy by watershed
3. Supplemental website information:
 1. MS4 Partnering
 - i. Introduction including key strategy
 - ii. Multiple partnership agreement conditions and scenarios
 - iii. Legal agreement general requirements
 2. Purchasing Credits
 3. Reduction Strategies
 4. Submitting Sediment Reduction Credit Documentation
 5. What makes a good partner project?
 6. What makes a good MS4 stream restoration project?
 7. Stream Restoration Cost
4. Sample Partnering Agreements
5. Weblinks



**STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS
PARTNERSHIP PLAN**

4.2.1 MS4 Stream Project Partnering Process Infographic



MS4 Stream Project Partnering Process



2 Contact District Office

2

Contact your PennDOT District Office using the main office number and ask for the District MS4 permit coordinator.

4 Cost

4

Prepare a cost estimate that includes design, construction, and long-term operation and maintenance. Include the cost per pounds of total suspended solids removed per year (\$/lb TSS/yr).



1 Identify the Project(s) in Your PRP* with Potential Mutual PennDOT Interest

Project must be located in:

- A 2010 US Census Urbanized Area
- The Chesapeake Bay Watershed or the watershed of a sediment impaired stream in the Delaware River, Ohio River, or Lake Erie basins.

*Pollutant Reduction Plan

3 Key Discussion Topics

- Project design and construction oversight lead
- Contract/delivery type (design-build, design-bid-build, etc.)
- Payment logistics
- PRP credit sharing*
- Long-term maintenance responsibility

*Generally full load reduction credit for permittees with significant contributions to project.

5 Enter Partnership Agreement with PennDOT

- PennDOT will consider remaining PRP obligations and benefits of the proposed project before advancing partnership.
- Partner will be required to enter a partnership agreement with PennDOT outlining roles and responsibilities.

 [Click here for more partnering information](#)

What happens next?

Submitting Sediment Reduction Credit for Approval

Submit calculations as soon as possible to allow time for modifications and DEP coordination, if necessary. Send to Central Office Stormwater Section Chief Rich Heineman (rheineman@pa.gov).

Preparation of Documents

The project(s) lead will prepare all documents required to obtain proposals from qualified bidders to design and/or build the stream restoration. These documents must meet requirements set in the partner agreement.

Maintenance

Performed based on terms set in the partner agreement and/or bid documents.

Payments and Credit

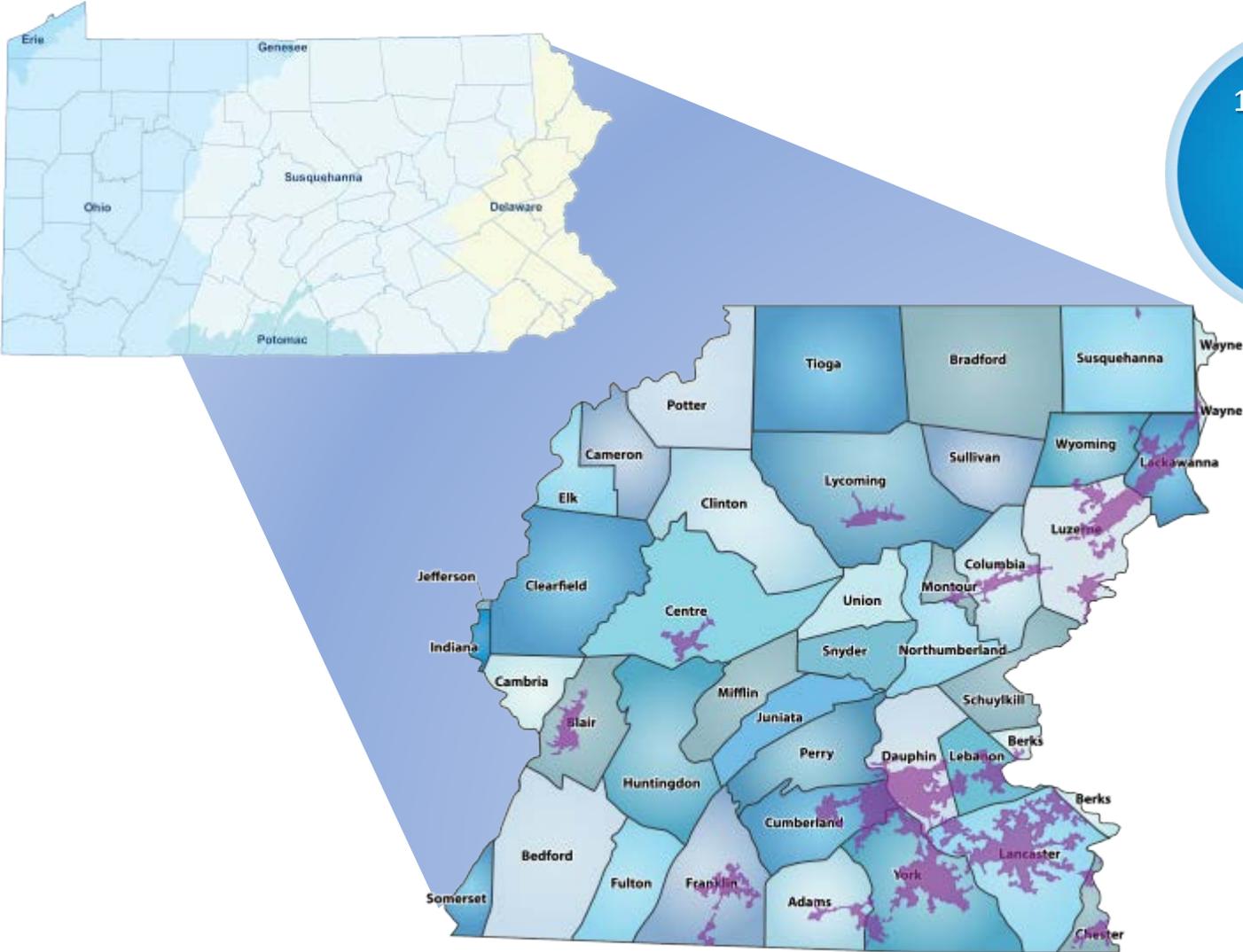
Made/received based on terms set in the partner agreement and/or bid documents.

**STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS
PARTNERSHIP PLAN**

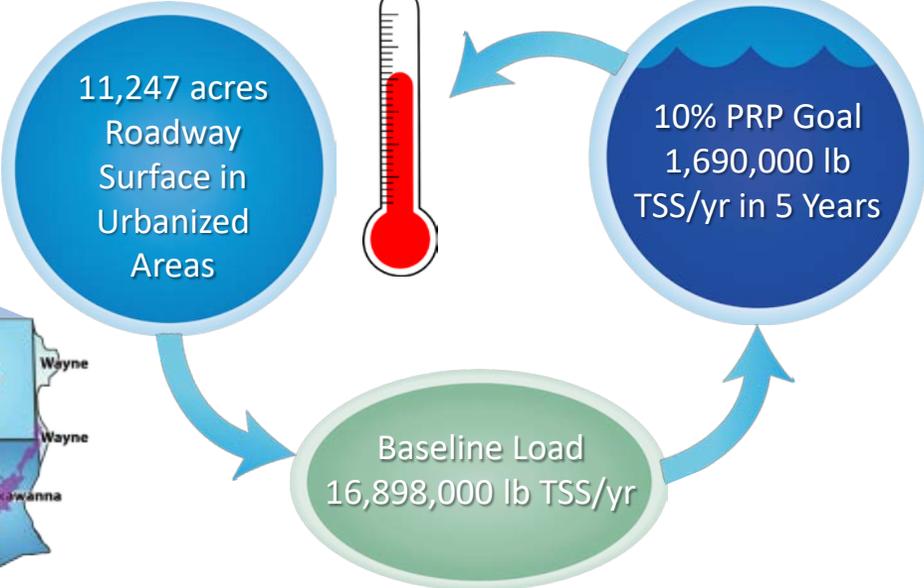
4.2.2 Pollution Reduction Plan Infographics



POLLUTANT REDUCTION PLAN CHESAPEAKE BAY WATERSHED



Click for Progress



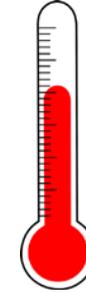
update

Reduction Strategy Portfolio

- 40% Stream Restoration
- 30% P3 Projects
- 10% Tree Planting
- 10% Vegetated Swale Retrofits
- 5% Outfall Stabilization
- 5% Other Practices/ Purchasing Credits

POLLUTANT REDUCTION PLAN OHIO RIVER WATERSHED

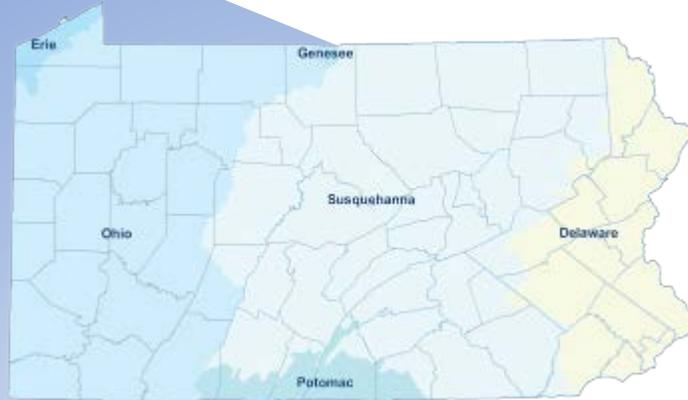
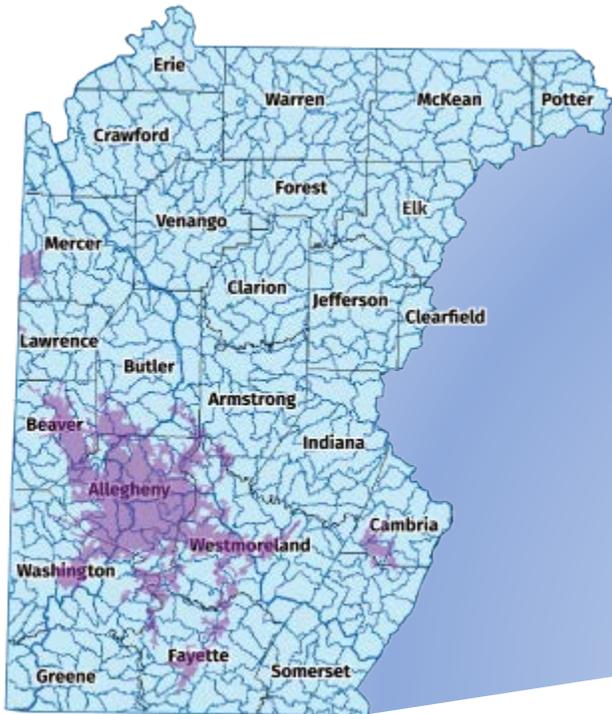
Click for Progress



Baseline Load
8,751,000 lb TSS/yr

5,273 acres
Roadway
Surface in
Urbanized
Areas

5% PRP Goal
437,500 lb
TSS/yr in 5 Years



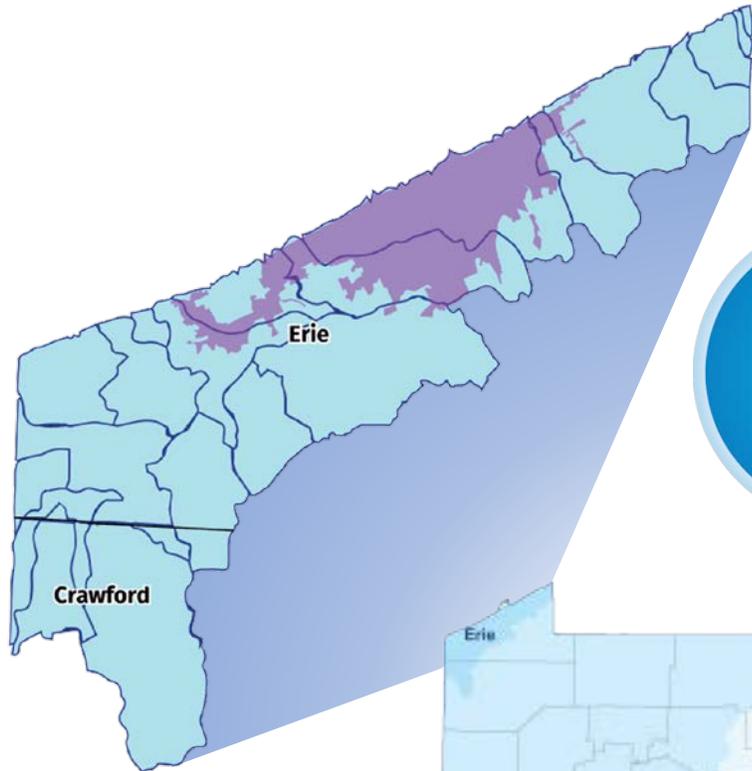
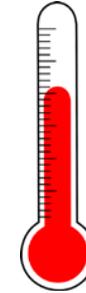
update

Reduction Strategy Portfolio



POLLUTANT REDUCTION PLAN LAKE ERIE WATERSHED

Click for Progress



583 acres
Roadway
Surface in
Urbanized
Areas

Baseline Load
968,000 lb TSS/yr

5% PRP Goal
48,400 lb TSS/yr
in 5 Years



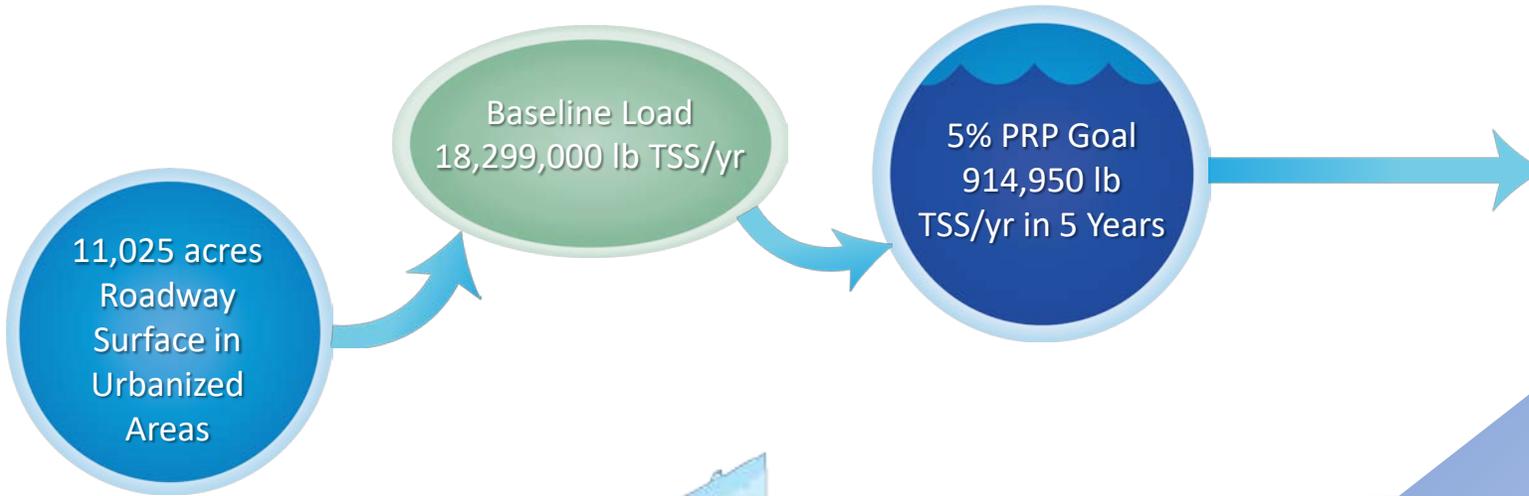
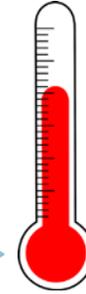
update

Reduction Strategy Portfolio

40% Stream Restoration	30% P3 Projects	10% Tree Planting
10% Vegetated Swale Retrofits	5% Outfall Stabilization	5% Other Practices/ Purchasing Credits

POLLUTANT REDUCTION PLAN DELAWARE RIVER WATERSHED

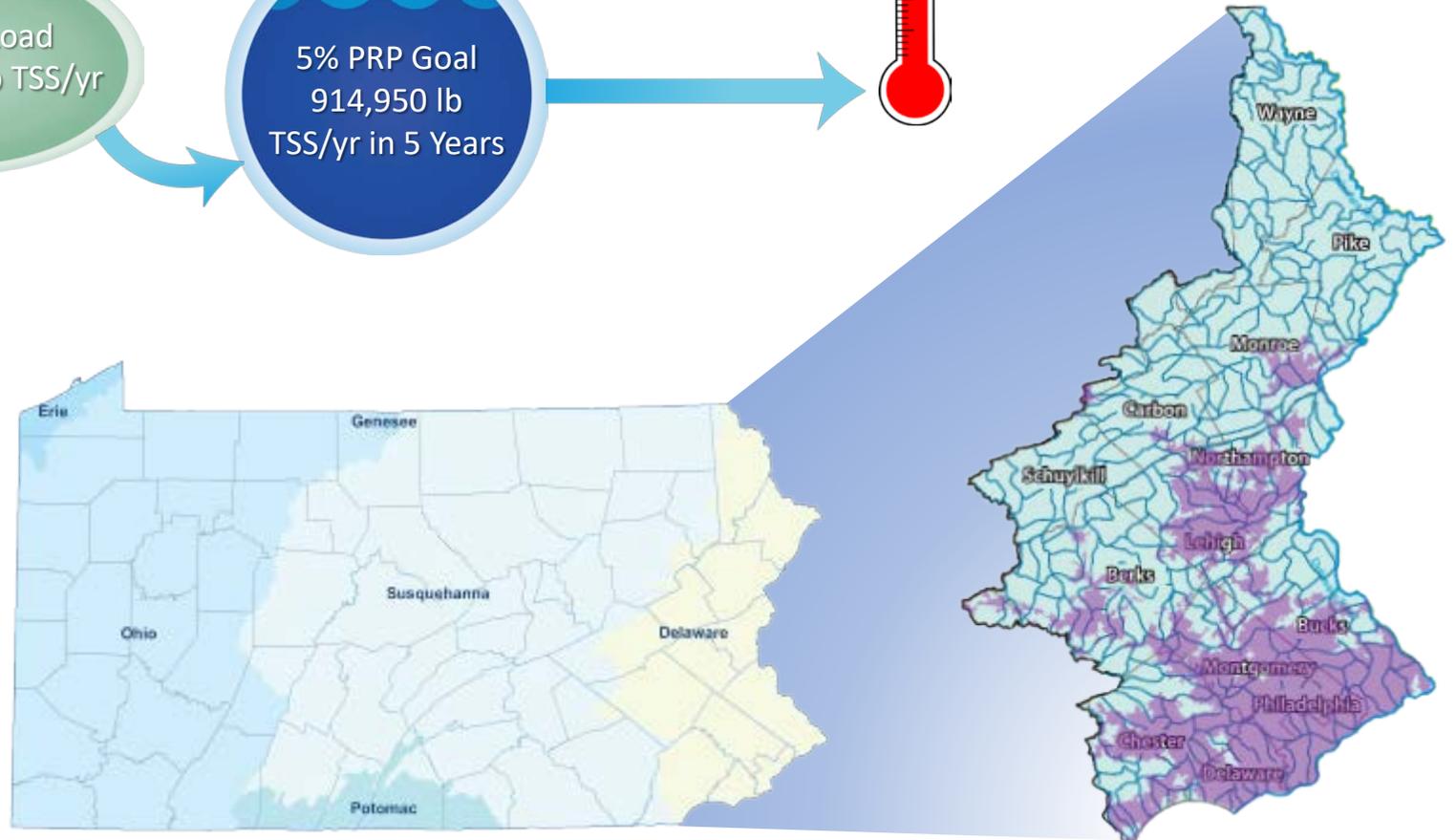
Click for Progress



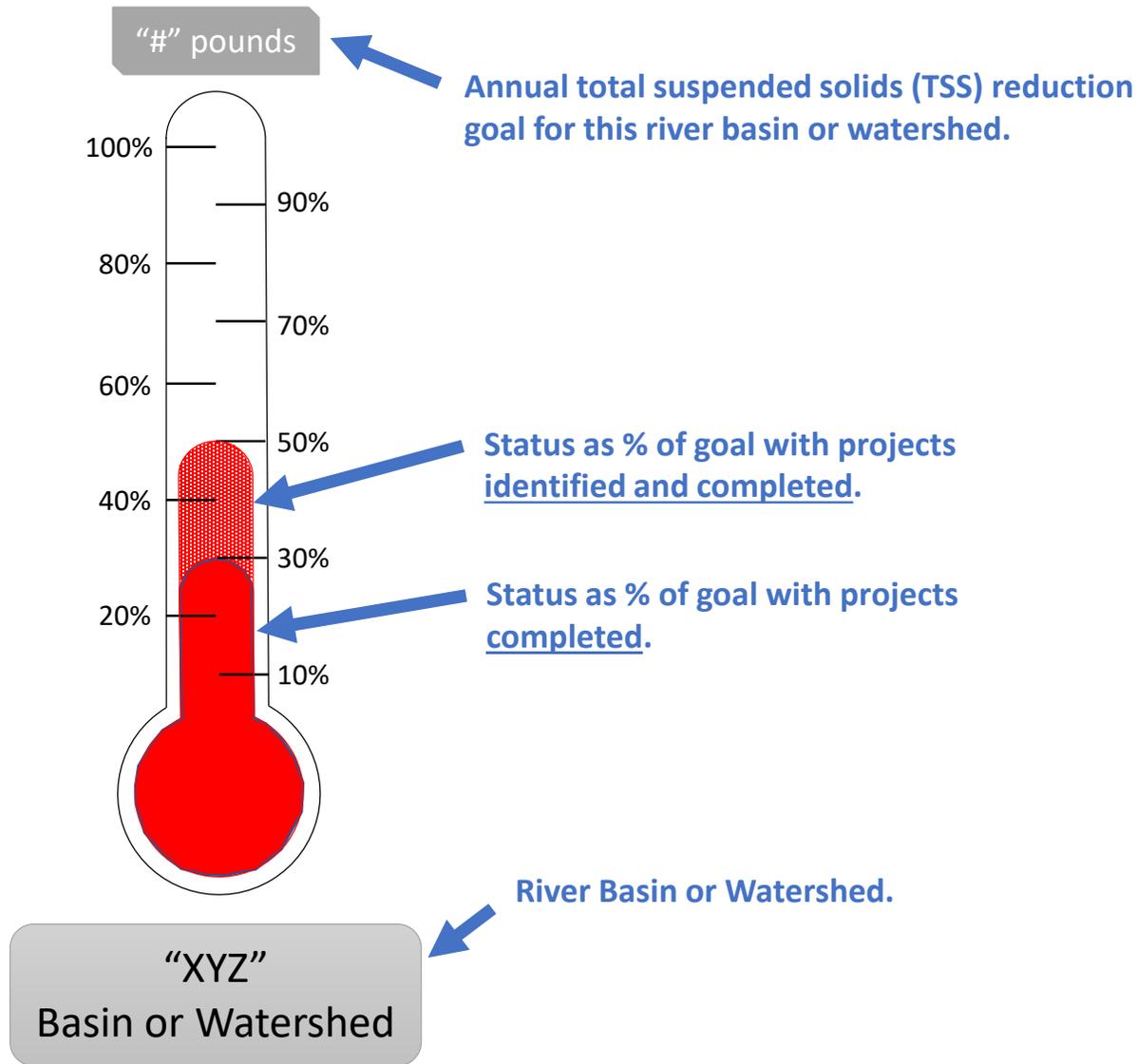
update

Reduction Strategy Portfolio

40% Stream Restoration	30% P3 Projects	10% Tree Planting
10% Vegetated Swale Retrofits	5% Outfall Stabilization	5% Other Practices/ Purchasing Credits



POLLUTANT REDUCTION PLAN - **PROGRESS**



When progress is less than 100%, PennDOT is continuing to look for opportunities to reduce TSS loads in the watershed. Municipalities who are interested in collaborating on potential PRP projects should contact the MS4 Coordinator in the appropriate District.

POLLUTANT REDUCTION PLAN - **PROGRESS**

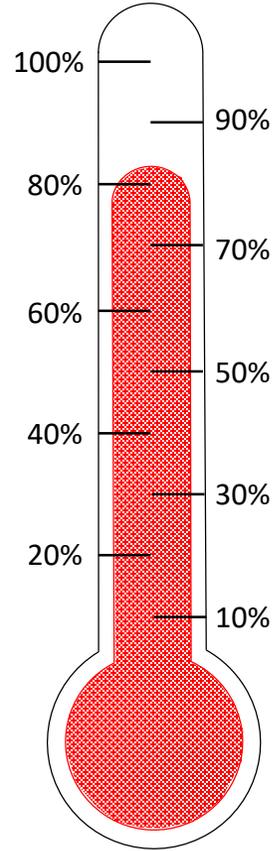
1,690,000 pounds

437,500 pounds

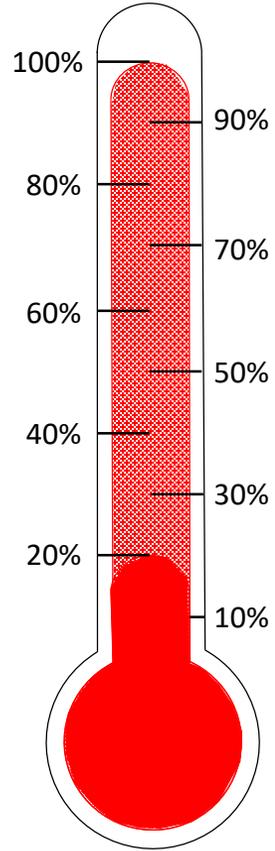
lb TSS/year

48,400 pounds

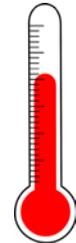
914,950 pounds



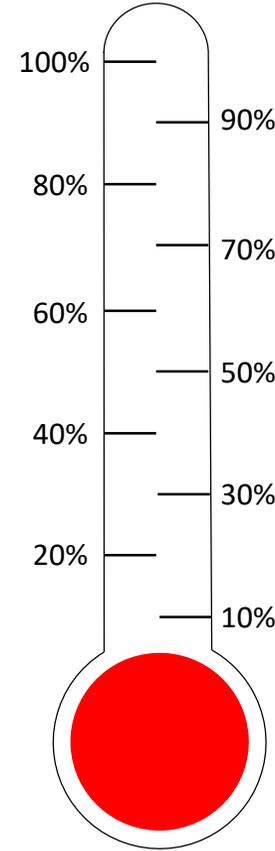
Chesapeake Bay Watershed



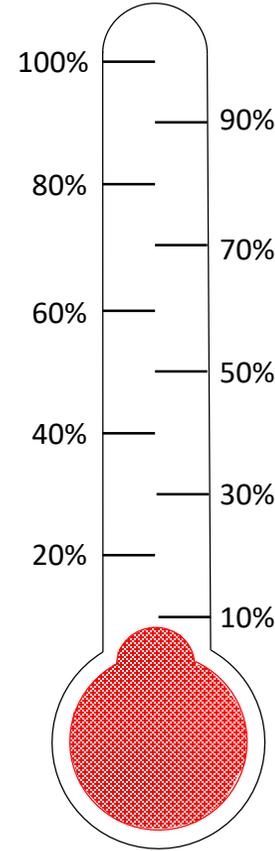
Ohio River Basin



Click for More Information



Lake Erie Basin



Delaware River Basin

4.2.3 Supplemental Website Information



MS4 Partnering

PennDOT roadways and facilities are not included in the Pollutant Reduction Plan (PRP) planning areas of municipalities with a National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit. However, PA DEP (DEP) has incentivized partnering between MS4 permittees by allowing full pollutant reduction credit for collaborative projects. From PennDOT's perspective, partnering with other MS4s provide an opportunity to share costs while potentially utilizing land outside the right-of-way. PennDOT is more likely to partner if the municipality offers a resource (e.g., land, maintenance responsibility, etc.) under the partnership.

It is at PennDOT's discretion to determine how to best fund and allocate the resources necessary to meet its PRP goals. Current published information on the various practices indicates that stream restoration is, on average, the most cost-effective practice for obtaining sediment reduction credit. As such, stream restoration is considered a key strategy in PennDOT's PRPs. All available practices, however, should be considered as resources and implementation opportunities are evaluated.

Key Strategy

Stream restoration, on average, is the most cost-effective practice for obtaining sediment reduction credit. It is considered a key strategy in PennDOT PRPs.

One example of a partnership is where PennDOT and a municipality contribute resources to implement a practice that treats PennDOT roadway area within the municipality. Multiple conditions and scenarios for a partnership agreement are outlined below.

- **Condition 1:** Municipality assumes the costs for design, construction, and maintenance of a stormwater control measure (SCM) within the right-of-way. Both PennDOT and the municipality include the drainage area to the SCM in their respective planning areas and both receive full pollutant reduction credit.
 - **Scenario A** – Project at the intersection of a local and state road. Utilizing much of the space in one of the quadrants, the municipality asks permission to install an SCM partially within the state right-of-way.
 - **Scenario B** – A stretch of state road in an area of controlled growth and no plans for future widening. The municipality wishes to retrofit vegetated filter strips and swales along the roadway shoulders to reduce the untreated impervious area.
 - **Scenario C** – A portion of roadway through a borough is curbed. The curb has partially deteriorated and does not provide significant value. The municipality proposes to remove the curb and install vegetated swales.
- **Condition 2:** PennDOT assumes the costs for design and construction of an SCM within the right-of-way; the municipality agrees to maintain it. Both PennDOT and the municipality include the drainage area to the SCM in their respective planning areas and both receive full pollutant reduction credit.
 - **Scenario A** – Resurfacing project within the Chesapeake Bay watershed that requires little or no stormwater controls. Leveraging the administrative and mobilization cost savings, the municipality asks PennDOT to install an SCM to treat runoff from a portion of the roadway surface.

- **Scenario B** – Reconstruction project within the watershed of a sediment-impaired stream. Stormwater controls are needed for both the net new impervious area and for reduction of untreated impervious area. Leveraging the efficiencies of adding SCMs to a project where SCMs are already being constructed, the municipality asks PennDOT to install an SCM to further reduce the untreated imperious area.
- **Condition 3:** PennDOT assumes the costs for design, construction, and maintenance of an SCM outside the right-of-way; the municipality donates the necessary land. Both PennDOT and the municipality include the drainage area to the SCM in their respective planning areas and both receive full pollutant reduction credit.
 - Scenario A – The existing drainage system for a portion of roadway conveys runoff to an outfall consisting of a rock lined ditch at a local park. PennDOT approaches the municipality to donate park land for the construction of a bioretention facility. The municipality proposes adding a walking trail and signage for public education adjacent to the SCM.
 - Scenario B – A sediment impaired stream reach is present on municipal property. The municipality does not have the funding to implement a stream restoration project on their own. PennDOT proposes to complete a stream restoration project on the property.

A legal agreement is needed for any MS4 partnership where it is proposed to share costs, responsibilities, or PRP credits. The agreement should cover each party's responsibility for construction, maintenance, and crediting for the life of the proposed practice (e.g., SCM).

A legal agreement is needed for any MS4 partnership where it is proposed to share costs, responsibilities, or PRP credits.



Purchasing Credits

A relatively new approach in PA to stemming point source and nonpoint source pollution is purchasing credits (e.g., offsetting or nutrient trading). In this scenario, PennDOT would purchase reduction credits (e.g., lb TSS/yr) from another entity that has a bank or surplus of available credit. PennDOT would receive credit towards its PRP goals without having to implement, own, or maintain any reduction strategy. A similar process that is supported by the Pennsylvania Infrastructure Investment Authority (PENNVEST) and DEP has existed for point sources of pollution (e.g., wastewater treatment plants).

Projects need be located within urbanized areas and (for outside of the Chesapeake Bay watershed) within watersheds of local sediment impaired streams.

Reduction Strategies

The reduction strategies that may be used to obtain PRP credit include stormwater control measures (e.g., stormwater basins and swales) and other practices that reduce pollutant loads from PennDOT's roadways or reduce the in-stream production of sediment loads.

Refer to the [DEP BMP Effectiveness Values](#) and [Chesapeake Bay Program expert panel reports](#) for a complete list of PRP pollutant reduction practices available.

Current published information on the various practices in indicates that stream restoration is, on average, the most cost-effective practice for obtaining sediment reduction credit. As such, stream restoration is considered a key strategy in PennDOT's PRPs. All available practices, however, should be considered as resources and implementation opportunities are evaluated.

To receive sediment reduction credit, any proposed practice must meet the design requirements of [DEP's NPDES Stormwater Discharges from Small MS4 BMP Effectiveness Values](#) and/or the [Chesapeake Bay Program expert panel reports](#). Stormwater control measures must also be sized at a minimum to treat the equivalent of one inch of runoff from the contributing impervious drainage area.

The PRPs utilize the "simplified method" described in DEP's NPDES Stormwater Discharges from Small MS4 PRP Instructions ([3800-PM-BCW0100k](#)) to determine the existing (baseline) sediment loads, PRP goals, and reductions achieved.

Submitting Sediment Reduction Credit Documentation

Calculations for potential PRP credit should be submitted for review and approval to Rich Heineman (rheineman@pa.gov), Chief, Stormwater Section, Maintenance Technical Leadership Division, Bureau of Maintenance and Operations. Alternatively, submission can be made to the District MS4 Permit Coordinator who will forward the appropriate information. Information should be submitted in the planning or Design Field View phases for traditional design-bid-build projects. For other project delivery types, information should be submitted as soon as possible to allow time for DEP coordination and modifications, if necessary.

The following data should be submitted. Additional project information may be necessary and requested to substantiate credits.

- Project location map
- Post-Construction Stormwater Management (PCSM) Plan or other mapping showing all project stormwater control measures (SCMs) and PRP reduction practices, including drainage areas, if applicable
- PRP practice type(s) and associated effectiveness value(s)
- Baseline sediment load calculation
- Sediment reduction calculations for each proposed PRP reduction practice
- Anticipated cost of PRP reduction practices

For non-traditional projects or practices not already covered under the PRP, PennDOT may forward the project information to DEP for concurrence.

What makes a good partner project?

The most successful projects have:

- Low cost per pound of sediment reduction.
- Right-of-way or easements are cleared/coordinated prior to design (state or municipal owner).

- Good site access for construction and maintenance.
- Avoidance or absence of existing natural resources.
- Avoidance or absence of existing utilities.
- An experienced design team.
- An experienced specialty contractor.
- A clear pollutant load reduction crediting methodology during planning.
- Flexibility to extend the project or purchase additional credit.
- Clear legal agreements (or MOU) delegating specific responsibilities of partners.
- Regular coordination during planning, design and construction.
- Long-term maintenance is the responsibility of the municipality or contractor.

What makes a good MS4 stream restoration project?

Stream restoration projects can occur almost anywhere that streams are badly eroding. They are best implemented when:

- It is part of a comprehensive watershed approach.
- Geomorphic evidence shows active stream degradation.
- The index of biological diversity for the stream scores as fair or worse.
- Hydrologic evidence shows the floodplain is disconnected from the stream.
- Evidence shows that legacy sediments are prevalent in the project reach.
- Evidence indicates that stream functions can be improved.
- Adjacent land becomes available through eminent domain due to flooding and offers opportunities for floodplain reconnection.



Some of the best locations are streams that run through public parks and municipal land. The best opportunities are in areas with severely incised streams that have adjacent floodplain areas to which the stream can be reconnected. Property ownership is a key issue; thus, it is critical to involve adjoining property owners from the beginning.

Likewise, the best projects are part of a comprehensive watershed restoration plan to assure better outcomes of the project goals. This plan should identify key upland practices in the watershed as well as priority areas for stream restoration.

The availability of construction access is an important constraint to consider in urban watersheds. A cost-effective way to move equipment in, out, and around the site should be available. Significant clearing of mature riparian vegetation can be required to provide access, which may outweigh the potential benefits of the proposed stream channel project.

Cost is a final consideration. As a general rule of thumb, the more impaired the stream and the higher the stream order, the more expensive the project. In addition, utility and infrastructure relocation or repairs can add significant cost to a project. In some cases, the costs of a project may outweigh its utility.

Additional information/considerations can be found on the [Chesapeake Bay Panel’s Stream Restoration FAQ sheet](#).

Stream Restoration Cost

The price for stream restoration varies greatly. Costs and resource needs vary depending on the project scale and components to be implemented. Cost per pound for longer stream restoration projects (>1,000 lf) also tend to be more cost effective than shorter projects. Sample costs for longer projects are provided below

Source	Quantity	Cost (year)	Equiv. lbs TSS (using 44.8 lb/lf and 100 lf/ac)	Cost /lb TSS
MD SHA Contract AX7665D82 Areawide Total Maximum Daily Load (TMDL) Design-Build Project	500-631 acres	\$50,000,000 ¹ (2019)	2,240,000-2,826,880 lbs TSS	\$17.69-\$22.32
MDE Stormwater Report Costs Urban Stream Restoration	1 acre	\$64,500 ² (2012)	4,480 lbs TSS	\$14.40
MD SHA Contract FR5975182 TMDL Stream Restoration of Little Catoctin Creek at US 340	3,063 lf	\$2,367,073 ³ (2017)	136,012.8 lbs TSS	\$17.40
MD SHA Contract AA8955182 Broad Creek Stream Restoration	2,300 lf	\$1,417,053 ³ (2015)	103,040 lbs TSS	\$13.75
DeIDOT Stormwater and NPDES Training Leatherman’s Run	640 lf	\$616,000 ³ (2012)	28,726 lbs TSS	\$21.44

¹ - Includes design, construction, ROW and permitting

² - Includes design, construction and permitting

³ - Construction only

4.2.4 Sample Partnering Agreements



MEMORANDUM OF UNDERSTANDING
Chesapeake Bay Watershed Implementation Plan Activities
By and Between
Howard County
and the
Maryland State Highway Administration

THIS MEMORANDUM OF UNDERSTANDING (MOU), by and between the State Highway Administration of the Maryland Department of Transportation, acting for and on behalf of, the State of Maryland, (hereinafter called “**SHA**”), and Howard County, Maryland, a body corporate and politic, (hereinafter called the “**COUNTY**”) is effective as of the date that the last signature is affixed hereto.

WHEREAS, the State of Maryland is required by the U. S. Environmental Protection Agency (“**EPA**”) to reduce the flow of nutrients and sediment to the Chesapeake Bay as part of the requirements of the Chesapeake Bay Total Maximum Daily Load (“**TMDL**”) established by EPA on December 29, 2010; and

WHEREAS, the Maryland Department of the Environment (“**MDE**”) issues National Pollutant Discharge Elimination System (“**NPDES**”) and Municipal Separate Storm Sewer System (“**MS4**”) discharge permits to municipalities and other large property owners requiring control of stormwater runoff from their properties and reductions of pollutants entering local waterways; and

WHEREAS, SHA will be issued a MS4 permit by MDE that requires SHA to provide additional stormwater runoff management for SHA-owned impervious acres equal to 20% of the impervious area for which runoff is not currently managed (“**SHA RESTORATION CREDIT**”) to the maximum extent practicable; and

WHEREAS, the COUNTY has been issued a MS4 permit by MDE that requires the COUNTY to provide stormwater runoff management for impervious acres equal to 20% of the impervious area of the County for which runoff is not currently managed (“**COUNTY RESTORATION CREDIT**”) to the maximum extent practicable; and

WHEREAS, analysis by SHA has found that SHA has limited right-of-ways (“**ROW**”) within which to accomplish the SHA Restoration Credit; and

WHEREAS, MDE which administers the MS4 permit program in Maryland has published guidance entitled “Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated” (“**GUIDANCE**”) that outlines alternative methods for meeting MS4 permit requirements; and

WHEREAS, the COUNTY and SHA are land owners within Howard County and are working together to control runoff and reduce the amount of nutrients and sediment entering Maryland waters; and

WHEREAS, while each party is independently responsible for developing and implementing a watershed implementation plan and restoration projects, the COUNTY and SHA can gain efficiency in implementation of certain TMDL and MS4 work where proposed projects are contiguous or neighboring or where a hydraulic benefit exists; and

WHEREAS, each party has already independently established restoration credits that are not subject to this agreement and will continue to independently establish restoration credits that are not subject to this agreement; and

WHEREAS, the COUNTY and SHA have developed independent processes for identifying and prioritizing ecosystem restoration projects within their respective jurisdictions that will provide significant benefit to the restoration of the Chesapeake Bay, and

WHEREAS, the COUNTY and SHA desire to work together to maximize the public benefit and efficient use of available funding to further the requirements established in *Maryland's Watershed Implementation Plan for the Chesapeake Bay Total Maximum Daily Load* ; and

WHEREAS, the COUNTY and SHA desire to create a framework to develop and implement cooperative restoration projects;

NOW, THEREFORE, be it understood that SHA and the COUNTY do hereby agree as follows:

I. PROJECT DESCRIPTION

- A. Activities shall consist of projects, conducted under the separate SHA and COUNTY MS4 permits, in which the COUNTY and SHA will jointly identify sites to implement restoration best management practices (**PROJECT/S**) where each party will receive benefit. For each PROJECT, the parties will jointly develop a PROJECT task agreement ("**PTA**") that will include: a list of work tasks ("**PROJECT TASK/S**"), allocation of funding responsibilities and a division of the RESTORATION CREDIT between the parties based on the latest version of the GUIDANCE.

II. ROLES AND RESPONSIBILITIES

- A. Establishment of PROJECTS. The COUNTY and SHA shall review and identify PROJECT opportunities.
- B. PROJECT TASKS. The Parties agree to develop a restoration PTA for each agreed upon PROJECT. The PTA will document PROJECT costs and define the specific

PROJECT TASKS, funding and reimbursement amounts, inspection and maintenance agreements, and RESTORATION CREDIT division for each PROJECT. For SHA, the PTA will need to be approved by the Director of the Office of Environmental Design (“OED”), or designee. For the COUNTY, the PTA will need to be approved by the Director of the Department of Public Works (“DPW”), or designee.

- C. Request For PROJECT Approval. As each PROJECT is identified, the COUNTY or SHA shall submit to the other party a PROJECT description that recommends which party should serve as the PROJECT Lead (“LEAD”).
- D. Funding. The COUNTY and SHA will provide funds as agreed upon in the PTA funding and reimbursement provisions for: the cost of ROW, design, construction, maintenance, inspection and PROJECT management of each PROJECT occurring on the parties’ respective land.
- E. Credit Division. Load reduction and RESTORATION CREDIT for each PROJECT will be divided as agreed upon in the PTA.
- F. Access. Access to the PROJECT property will be managed by the LEAD and the LEAD shall be responsible for authorizing and coordinating all appropriate access to design, construct, inspect, and maintain the PROJECT. Means for coordinating access through the LEAD will be documented in the PTA as necessary with the goal of minimizing impacts to operations due to access issues. If any right-of-entry or easement is necessary for the execution of work under a PTA, obtaining the right of entry or easement shall be the responsibility of the project LEAD.
- G. Maintenance. Each party will maintain the PROJECTS built on their own ROW unless set forth otherwise in the PTA. If the PROJECT becomes non-functional regardless of regular routine maintenance, agreement as to remediation, retrofit or abandonment will be addressed by the parties as set forth in the PTA. If the PROJECT cannot be repaired through mutual agreement by both parties, and must be abandoned, it is understood that any funds expended up to the time of abandonment will not be reimbursed, unless otherwise agreed to in writing.
- H. Inspection. The LEAD shall have the responsibility to inspect the PROJECT according to standards outlined in the PTA.
- I. Credit Accounting. The COUNTY and SHA shall maintain an accounting of the RESTORATION CREDIT and nutrient, sediment, or other TMDL credits generated by each PROJECT. A credit summary will be exchanged upon PROJECT completion or as needed for annual permit reporting. The RESTORATION CREDIT for each PROJECT will be divided between the parties as agreed upon in the PTA.

- J. Utilities. It shall be the LEAD's responsibility, with the cooperation of the land owner, to coordinate the location of all existing utilities in areas of the proposed construction unless otherwise agreed upon in the PTA.
- K. Permits and Codes. The LEAD shall be responsible for acquiring all applicable federal, State, and local permits to construct the PROJECT. The LEAD shall be responsible for designing and constructing the PROJECT in accordance with all applicable federal, State, and local laws, regulations and codes unless otherwise agreed upon in the PTA.
- L. Geotechnical Requirements. The LEAD shall be responsible for soil borings and geotechnical analysis for the design and construction of the PROJECT unless otherwise agreed upon in the PTA.
- M. Survey. The LEAD shall be responsible for any surveys necessary for the design, construction, and permitting of the PROJECT unless otherwise agreed upon in the PTA.
- N. Bid Documents. Unless otherwise agreed upon in the PTA, the LEAD shall prepare detailed plans, specifications, and cost estimates sufficient to procure the construction of the PROJECT as detailed in the PTA and pursuant to their respective procurement requirements. The LEAD shall advertise, receive bids and award the construction contract in accordance with its procurement process. SHA or the COUNTY may utilize federal funding that may require that federal standards and procurement processes be followed.
- O. Design Review Schedule: The LEAD shall provide to the other party a work schedule detailing estimated target dates of the milestones anticipated for the various phases of work. While the LEAD will be responsible for the design, the design of the PROJECT shall be a collaborative process between the COUNTY and SHA. During the course of design, the COUNTY and SHA shall coordinate and collaborate at the following milestones:
- i. Design-Development – Conceptual plans only
 - ii. 30% Construction Documents – Plans and preliminary estimate only
 - iii. 60% Construction Documents – Plans, specification and estimate (for major PROJECTs). 60% construction document may not be required for each project as determined by the project LEAD.
 - iv. 90% Construction Documents – Plans, specification and estimate
 - v. Bid Documents
 - vi. As needed interim progress meetings will be held.

The LEAD will have the right to sign the Bid Documents after providing the other party 60 days to review the Bid Documents. The LEAD will have ultimate authority subject only to the provisions of Part VI.B of this MOU

P. Construction Review Schedule: During the construction phase collaboration between the COUNTY and SHA will continue, including coordination of the following activities:

- i. Both parties will designate a PROJECT MANAGER.
- ii. As determined by the PTA, the PROJECT MANAGER from the LEAD Agency, will be designated as the LEAD PROJECT MANAGER.
- iii. The LEAD PROJECT MANAGER will verify the PROJECT TASKS outlined in the PTA are being properly implemented.
- iv. The LEAD PROJECT MANAGER will review submitted invoices for completeness.
- v. The LEAD PROJECT MANAGER will carry out inspection tasks.
- vi. The LEAD PROJECT MANAGER will coordinate with the other party's PROJECT MANAGER to verify that all tasks outlined in the PTA have been completed to the satisfaction of both parties.
- vii. Interim progress meetings will be held, as deemed necessary by either PROJECT MANAGER or the PTA.

Q. Extra Work Orders ("EWO"):

- i. Field Changes:
 - a. It shall be the responsibility of the LEAD PROJECT MANAGER to document all design or cost adjustments made during construction to accommodate existing field conditions at the time of construction and to keep the other PROJECT MANAGER informed of these changes according to the PTA. If changes are necessary, the LEAD PROJECT MANAGER will direct the initiation of all EWOs and provide the other PROJECT MANAGER copies of all EWOs for review and comment. The PROJECT MANAGERS will consult and collaborate on a timely basis to achieve agreement prior to approval of the EWO, which will be made pursuant to sound engineering principles and not so as to create a contractor delay claim. The LEAD PROJECT MANAGER shall have discretion in final issuance of EWOs in order to avoid delay claims and meet project schedule milestones. The Funding responsibilities for EWOs will be outlined in the PTA.

ii. Design Changes, Errors and Omissions:

- a. In the event that a major design change is required or a design error/omission is identified and requires correction, the LEAD PROJECT MANAGER shall be responsible to coordinate all changes or revisions as quickly as possible. Errors and omissions will be the responsibility of the design consultant engineer and no additional payment to the design consultant engineer will be allowed. For design changes, upon mutual agreement as to necessity and details, the LEAD PROJECT MANAGER shall be responsible to coordinate changes with the construction contractor and negotiate any additional costs.
- R. Data Format and Sharing: Data requirements, development, and delivery of data to track PROJECT credits, inspection, establishment, and maintenance status, as well as to report restoration progress to regulatory authorities, will be coordinated between the parties and documented in a PTA as necessary. This includes as-built certification criteria and digital data format for plans and other contract documents.
- S. Data Submittal: The LEAD shall submit 100% construction phase drawings, specifications and documents including As-Built certification to the other party upon completion.

III. TERM AND FUNDING

- A. The term of this MOU is for a period of approximately ten (10) years beginning with the date of full execution of this MOU and ending on December 31, 2026 (“**TERM**”); both dates are inclusive, unless sooner terminated as set forth herein. The **TERM** of this MOU may be extended by an amendment executed by the parties to this MOU.
- B. During the **TERM** of this MOU the total amount to be reimbursed to the COUNTY by SHA for PROJECT TASKS shall not exceed Ten Million Dollars (\$10,000,000). The amount to be reimbursed to the COUNTY by SHA under this MOU may be increased by an amendment executed by the parties of this MOU.
- C. Subject to appropriations, during the **TERM** of this MOU the total amount to be reimbursed to SHA by the COUNTY for PROJECT TASKS shall not exceed Ten Million Dollars (\$10,000,000). The amount to be reimbursed to SHA by the COUNTY under this MOU may be increased by an amendment executed by the parties of this MOU.

IV. TERMINATION

- A. Either party may terminate this MOU with written notice given ninety (90) days in advance to the other party. Prior to termination, each party shall provide to the other party a credit accounting as set forth in Section II(I) herein.

- B. Termination shall not occur during construction of a PROJECT or before all construction inspection tasks have been completed to meet regulatory and permit requirements.
- C. For termination of PROJECTS under design, each party shall keep their commitment to any PROJECT in design up to the next design milestone as outlined in Section II. O.

V. REIMBURSEMENT

- A. As determined by the PTA, if tasks are to be performed by one party (the “LEAD”) but funded by the other party (the “FUNDER”), the FUNDER shall, within thirty (30) days following receipt of each itemized invoice, reimburse the LEAD for all actual undisputed costs incurred by the LEAD to design or construct tasks outlined in the PTA, including the LEAD’s direct salaries, payroll burden, and overhead.
- B. In the event that there is a dispute, the FUNDER may withhold payment for disputed items and shall notify the LEAD in writing of the dispute within thirty (30) days of its receipt of the invoice. SHA and the COUNTY agree to meet to resolve disputed items within thirty (30) days of notice of a dispute.
- C. Items not resolved within sixty (60) days of the COUNTY’s receipt of the invoice shall be referred to the SHA –Director of the Office of Environmental Design, or designee, and the COUNTY - Director, Department of Public Works, or designee, for resolution.
- D. When SHA is the LEAD of tasks to be reimbursed and invoices are not paid in a timely manner by the COUNTY, the FUNDER, SHA, may make a deduction equal to the invoice amount due from the COUNTY’s share of Highway User Revenue.

VI. GENERAL PROVISIONS

- A. Agencies Held Harmless. **Recognizing that the COUNTY and SHA are government agencies and, as such, are subject to limitations on the indemnity they can legally provide,** each Party agrees, to the extent permitted by Maryland law and to the extent of available appropriations, to indemnify, hold harmless and defend one another from and against any and all claims, damages, liability, and expense in connection with the loss of life, personal injury and/or property damage arising out of or in any way related to its negligence in design, construction and/or maintenance of the PROJECT for which it is the LEAD, and which is occasioned solely by any act or failure to act in connection with the PROJECT. This indemnification shall survive construction of the PROJECT. This indemnification shall not be deemed as a waiver of any immunity which may exist in any action against either entity. The LEAD shall require all of its contractors to purchase and maintain comprehensive third-party liability insurance and other such insurance as

is appropriate for the work to be performed for each PROJECT. This insurance shall include the insurance requirements as set forth in TC Section 5.01 Insurance in SHA's Standard Specifications for Construction and Materials, 2008, as may be revised or amended from time to time and all liability policies shall name both SHA and COUNTY as Additional Insured.

- B. Resolution of Disagreements. Should disagreements arise as to the interpretation of the provisions of this MOU, or amendments and/or revisions thereto, each party shall provide in writing its interpretation of the disputed provision and its reasoning for its position to the other party for consideration by an agreed upon date. If agreement on interpretation is not reached within 30 days, the parties shall forward both written presentations of the disagreement to the SHA –Director of the Office of Environmental Design, or designee, and the COUNTY - Director, Department of Public Works, or designee, for resolution.
- C. No Third Party Beneficiaries. This MOU does not and is not intended to create any rights or benefits for any third party. No third party shall have any legally enforceable rights or benefits under this MOU.
- D. Amendments. Any amendment to the MOU must first be approved in writing by all the parties signing the MOU, subject to any additional approval required by Maryland law.
- E. Maryland Law Prevails. This MOU shall be construed, interpreted, and enforced according to the laws of the State of Maryland and in Maryland courts.
- F. Authority. The parties hereby warrant and affirm that the persons executing this MOU are authorized and empowered to act on behalf of their respective party.
- G. Recitals. The WHEREAS clauses are incorporated herein as a substantive part of this AGREEMENT.
- H. Non Discrimination. All parties to this MOU shall comply with the requirements of **APPENDIX A** (2 pages) and **APPENDIX E** (1 page) of SHA's Standard Title VI/Non-Discrimination Assurances DOT Order No. 1050.2A, which generally set forth non-discrimination requirements. **APPENDIX A** and **APPENDIX E** are attached hereto and incorporated herein as substantive parts of this document.
- I. Any financial obligation of the COUNTY hereunder, including, but not limited to, funding, reimbursement, or indemnification, is subject to the appropriation of funds.

VII.

CONTACTS

For the COUNTY:

Mark S. Richmond
Chief, Stormwater Management Division
Department of Public Works
Howard County
6751 Columbia Gateway Drive, Suite 514
Columbia, MD 21046
Phone: 410.313.6413
Email: msrichmond@howardcountymd.gov
(or such other persons as may be formally designated to act)

For SHA:

Robert Shreeve
Deputy Director, Office of Environmental Design
Maryland State Highway Administration
707 N. Calvert Street, MS C-303
Baltimore, MD 21202
Phone: 410-545-8644
Fax: 410-209-5003
Email: rshreeve@sha.state.md.us
(or such other persons as may be formally designated to act)

with a copy to:

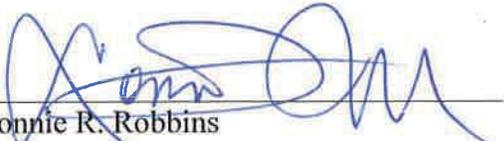
SHA Agreements Team
Regional and Intermodal Planning Division
707 N. Calvert Street, MS C-405
Baltimore, MD 21202
Phone: 410-545-5675
Fax: 410-209-5025
Email: SHA_Agreements_Team@sha.state.md.us

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IN WITNESS WHEREOF, the parties hereto have caused this MOU to be executed by their respective duly authorized officers.

WITNESS:

HOWARD COUNTY, MARYLAND,
a body corporate and politic



Lonnie R. Robbins
Chief Administrative Officer

BY:  6/24/2016

Allan H. Kittleman (SEAL)
County Executive Date

APPROVED: DEPARTMENT OF
PUBLIC WORKS



James M. Irvin, Director
Department of Public Works

APPROVED FOR SUFFICIENCY
OF FUNDS:



Stanley J. Milesky, Director
Department of Finance

APPROVED FOR FORM AND
LEGAL SUFFICIENCY ON
THE 18th DAY OF June, 2016



Gary W. Kuc
County Solicitor



Lewis Taylor
Assistant County Solicitor

WITNESS:

Marilyn D. Hill

**MARYLAND STATE HIGHWAY
ADMINISTRATION**

By: Gregory C. Johnson 7/18/2016 (SEAL)
Gregory C. Johnson, P.E. Date
Administrator

**APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:**

John J. Jaks
Assistant Attorney General

RECOMMENDED FOR APPROVAL:

David J. Coyne
David J. Coyne, P.E.
Deputy Administrator/Chief Engineer
for Operations

Gregory I. Slater
Gregory I. Slater
Deputy Administrator for Planning
Engineering Real Estate & Environment

Cheryl R. B. Hill 7/18/16
Cheryl R. B. Hill
Deputy Administrator
for Administration

Lisa B. Conners
Lisa B. Conners
Director
Office of Finance

Sonal Sanghavi
Sonal Sanghavi
Director
Office of Environmental Design

MARYLAND STATE HIGHWAY ADMINISTRATION
APPENDIX A OF THE TITLE VI ASSURANCES

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, the Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the Federal Highway Administration as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the Contractor under the contract until the Contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

MARYLAND STATE HIGHWAY ADMINISTRATION
APPENDIX E OF THE TITLE VI ASSURANCES

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

MEMORANDUM OF UNDERSTANDING
TMDL Restoration of Israel Creek
By and Between
Town of Woodsboro
and
State Highway Administration

THIS MEMORANDUM OF UNDERSTANDING (“MOU”), executed in duplicate, made effective on this 8th day of DECEMBER, 2016 by and between the State Highway Administration of the Maryland Department of Transportation, acting for and on behalf of the State of Maryland, (hereinafter called “**SHA**”), and the Town of Woodsboro located in Frederick County, MD, a municipal corporation of the State of Maryland, (hereinafter called the “**TOWN**”).

WHEREAS, the State of Maryland is required by the U. S. Environmental Protection Agency (“**EPA**”) to reduce the flow of nutrients and sediment to the Chesapeake Bay as part of the requirements of the Chesapeake Bay Total Maximum Daily Load (“**TMDL**”) established by EPA on December 29, 2010; and

WHEREAS, analysis by SHA has found that SHA has limited right-of-ways (“**ROW**”) within which to accomplish the TMDL requirements; and

WHEREAS, SHA and the TOWN desire to partner with one another for the restoration of Israel Creek in the Woodsboro Regional Park (“**Creek**”) which property is owned by the TOWN, in order to reduce the amount of nutrient and sediment run off, (hereinafter called the “**PROJECT**”); and

WHEREAS, SHA, at its own cost, shall complete the PROJECT, including its design and construction, and the Creek’s restoration credits shall count towards SHA’s TMDL nutrient and sediment reduction requirements (“**Restoration Credits**”); and

WHEREAS, the TOWN will maintain ownership of the property and SHA will monitor and maintain the results of the PROJECT after its completion; and

WHEREAS, the parties desire to formalize their understandings with respect to the foregoing and enter into this MOU for that purpose.

NOW, THEREFORE, be it understood that SHA and the TOWN do hereby agree as follows:

I. PROJECT DESCRIPTION

- A. SHA, at its cost, will take all steps to evaluate, design and construct those items necessary to bring about the restoration of the Israel Creek, the location of which is shown in **Exhibit Number 1**, attached hereto and incorporated herein. The TOWN will maintain ownership of its property, and the TOWN hereby grants SHA a perpetual right to enter upon the TOWN's land in order to first construct the PROJECT and thereafter to monitor the restoration and perform any necessary maintenance to keep the project in the same condition as designed and constructed or modified with concurrence from the Town of Woodsboro. All tasks, including designing, constructing, monitoring and maintaining, are collectively called "PROJECT TASKS", and the PROJECT TASKS shall be carried out by SHA or its assigns in a manner that is in full compliance with applicable TMDL regulations.

II. ROLES AND RESPONSIBILITIES

- A. SHA shall coordinate with the designated TOWN officials to obtain approval of the PROJECT and PROJECTS TASKS and before entering upon any land owned by the TOWN in order to carry out any aspect of the PROJECT.
- B. SHA shall provide the TOWN with all pertinent information, including final plans and subsequent revisions to the final plans that are necessary or used to construct the PROJECT.
- C. SHA, and its assigns shall take every reasonable precaution necessary to maintain the PROJECT free of hazardous conditions. Any changes and/or disturbances to the area affected by the PROJECT, other than the restoration and stabilization, shall be restored as close to their original conditions as is reasonable prior to acceptance of the PROJECT by the TOWN.
- D. SHA shall apply for and obtain all permits, licenses, and approvals necessary to start and complete the PROJECT, as required by Federal, State or local authority.
- E. SHA shall not issue a Notice to Proceed to its construction contractor until and unless all permits, licenses and approvals as required by Federal, State or local authorities have been received.
- F. The TOWN shall grant SHA a perpetual right to enter upon the TOWN's land in order to first construct the PROJECT and thereafter to monitor the restoration and perform any necessary maintenance to keep the project in the same condition as designed and constructed or modified with concurrence from the Town of Woodsboro.
- G. The restoration will count towards SHA's TDML requirement.

- H. Access. Access to the PROJECT property will be granted to SHA by the TOWN. SHA shall be responsible for authorizing and coordinating all appropriate access to design, construct, inspect, and maintain the PROJECT.
- I. Maintenance. SHA will maintain the PROJECT built on TOWN property and TOWN rights of way at no cost to the TOWN, unless otherwise agreed by both parties.. If the PROJECT becomes non-functional regardless of regular routine maintenance, and other regular due diligence maintenance performed by SHA, agreement as to remediation, retrofit or abandonment will be addressed by the parties at that time.
- J. Inspection. SHA shall have the responsibility to inspect the PROJECT.
- K. Credit Accounting. SHA shall maintain an accounting of the Restoration Credit or other TMDL credits generated by each PROJECT. The Restoration Credit for this PROJECT shall be awarded to SHA.
- L. Utilities. The TOWN shall provide all available utility information to SHA. It shall be SHA's responsibility, with the cooperation of the TOWN, to coordinate the location of all existing utilities in areas of the proposed construction. Existing utility services shall be maintained throughout the project construction phase to include sewer, water, air and electrical services.
- M. Permits and Codes. SHA be responsible for acquiring all applicable federal, State, and local permits to construct the PROJECT. SHA shall be responsible for designing and constructing the PROJECT in accordance with all applicable federal, State, local laws, and regulations.
- N. Geotechnical Requirements. SHA shall be responsible for soil borings and geotechnical analysis for the design and construction of the PROJECT.
- O. Survey. SHA shall be responsible for any surveys necessary for the design, construction, and permitting of the PROJECT.
- P. Design and Construction Considerations:
 - i. Project Area
 - a. SHA shall design and construct the project to remain within the Limits of Disturbance (LOD) as shown on **Exhibit No. 1** attached. The LOD is defined as the area where permanent changes may occur including, but not limited to grading, channel re-alignment, construction of structures, trail and bridge replacement.
 - b. Any proposed work beyond the LOD must be approved in writing by the Burgess of Woodsboro.

- c. If SHA fails to comply with the LOD the Town may terminate this agreement with no responsibility to pay SHA costs as described in section IV. D, of this agreement.
- ii. Trees
 - a. A continuous mature tree line will be maintained along Israel Creek to the maximum extent possible. Special attention should be given to the line of site between the residences adjacent to the park and the Woodsboro activity complex.
 - b. It is understood that thinning of the mature trees will occur and removal of trees subject to damage due to close proximity of excavation will be removed.
 - c. The birch trees in or adjacent to the activity meadow shall be preserved.
 - d. Any memorial trees shall be preserved and/or relocated.
- iii. SHA shall design the project and sequence construction to:
 - a. Maintain one bridge crossing of Israel Creek at all times.
 - b. Provide maximum public use of the park during construction to include trails and parking.
 - c. Replace or restore any disrupted trails, exercise stations, park benches and memorial trees as soon as practical to maximize public use of the park during the construction phase.
- iv. Areas outside the LOD may be used for construction activities such as access or stockpiling of materials. All disturbed areas will be restored to prior condition after construction.
- v. The existing bridges within the LOD will be replaced. The replacement bridges shall span the entire zone of disturbance and walking surface shall be at or above the existing grade. (e.g. activity meadow level), and as wide or wider than the existing bridges.
- vi. The project must maintain a skating pond of at least 75% of the current size and it must remain at its current location.

Q. Bid Documents. SHA shall prepare detailed plans, specifications, and cost estimates sufficient to procure the construction of the PROJECT and pursuant SHA's procurement requirements. SHA shall advertise, receive bids and award the construction contract in accordance with its procurement process. SHA or the TOWN may utilize federal funding that may require that federal standards and procurement processes be followed.

R. Design Review Schedule: SHA shall provide to the TOWN a work schedule detailing estimated target dates of the milestones anticipated for the various phases of work. While SHA will be responsible for the design, the design of the PROJECT shall be a

collaborative process between the TOWN and SHA. During the course of design, the TOWN and SHA shall coordinate and collaborate at the following milestones:

- i. Design-Development – Conceptual plans only
- ii. 30% Construction Documents – Plans and preliminary estimate only
- iii. 60% Construction Documents – Plans, specification and estimate (for major PROJECTs). 60% construction document may not be required for each project as determined by SHA.
- iv. 90% Construction Documents – Plans, specification and estimate
- v. Bid Documents
- vi. As needed interim progress meetings will be held.

SHA will have the right to sign the Bid Documents after providing the TOWN sixty (60) days to review the Bid Documents. SHA will have ultimate authority to sign, subject only to the provisions of this MOU.

S. Construction Review Schedule: During the construction phase, collaboration between the TOWN and SHA will continue, including coordination of the following activities:

- vii. Both parties will designate a PROJECT MANAGER.
- viii. SHA's PROJECT MANAGER shall be designated the "LEAD PROJECT MANAGER".
- ix. The LEAD PROJECT MANAGER will review submitted invoices for completeness.
- x. The LEAD PROJECT MANAGER will carry out inspection tasks.
- xi. Interim progress meetings will be held, as deemed necessary by the LEAD PROJECT MANAGER.

T. Extra Work Orders ("EWO"):

- i. Field Changes:

It shall be the responsibility of SHA to document all design or cost adjustments made during construction to accommodate existing field conditions at the time of construction and to keep the other PROJECT MANAGER informed of design changes. All costs shall be paid by SHA.

- ii. Design Changes, Errors and Omissions:

In the event that a major design change is required or a design error/omission is identified and requires correction, SHA shall be responsible to coordinate all changes or revisions as quickly as possible.

U. Data Format and Sharing: Data requirements, development, and delivery of data to track PROJECT credits, inspection, establishment, and maintenance status, as well as to report restoration progress to regulatory authorities, will be coordinated between the parties. This includes as-built certification criteria and digital data format for plans and other contract documents.

V. Data Submittal: SHA shall submit 100% construction phase drawings, specifications and documents including As-Built certification to the Town of Woodsboro upon completion.

III. TERM AND FUNDING

- A. The term of this MOU is for a period of ten (10) years, more or less, beginning with the date of full execution of this MOU and ending on December 31, 2026 (“**TERM**”); both dates are inclusive, unless sooner terminated as set forth herein. The **TERM** of this MOU may be extended by an amendment executed by the parties to this MOU.
- B. During the **TERM** of this MOU the total amount that may be spent by SHA shall not exceed Three Million Three Hundred Thousand dollars (\$3,300,000). All design, construction and maintenance costs associated with this project shall be paid by SHA.

IV. TERMINATION

- A. Either party may terminate this MOU with written notice given ninety (90) days in advance to the other party. Prior to termination, each party shall provide to the other party a credit accounting as set forth in Section II. K herein.
- B. Termination shall not occur during construction of this PROJECT or before all construction inspection tasks have been completed to meet regulatory, permit and restoration credits requirements.
- C. For termination of PROJECTS under design, each party shall keep their commitment to any PROJECT in design up to the next design milestone as outlined in this MOU. The TOWN is not responsible for any design costs associated with this MOU whether the MOU is terminated or not.
- D. If the TOWN desires to terminate this MOU after 30% design and before the **TERM**, the TOWN will pay all reasonable costs associated with this MOU, except design costs, to SHA that SHA has spent up to the date of termination and

all reasonable costs associated with termination of this MOU up to the FUNDING AMOUNT and no work shall proceed.

V. GENERAL PROVISIONS

- A. Resolution of Disagreements. Should disagreements arise as to the interpretation of the provisions of this MOU, or amendments and/or revisions thereto, each party shall provide in writing its interpretation of the disputed provision and its reasoning for its position to the other party for consideration by an agreed upon date. If agreement on interpretation is not reached within thirty (30) days, the parties shall forward both of the written presentations of the disagreement to the SHA –Director of the Office of Environmental Design, or designee, and to the TOWN - Director, Department of Public Works, or designee, for resolution.
- B. No Third Party Beneficiaries. This MOU does not and is not intended to create any rights or benefits for any third party. No third party shall have any legally enforceable rights or benefits under this MOU.
- C. Amendments. Any amendment to this MOU must first be approved in writing by all the parties signing this MOU, subject to any additional approval required by Maryland law.
- D. Maryland Law Prevails. This MOU shall be construed, interpreted, and enforced according to the laws of the State of Maryland and in Maryland courts.
- E. Authority. The parties hereby warrant and affirm that the persons executing this MOU are authorized and empowered to act on behalf of their respective party.
- F. Recitals. The WHEREAS clauses are incorporated herein as a substantive part of this MOU.
- G. Title VI Assurances. All parties to this MOU shall comply with the requirements of **APPENDIX A** (2 pages) and **APPENDIX E** (1 page) of SHA's Standard Title VI/Non-Discrimination Assurances DOT Order No. 1050.2A which generally set forth non-discriminatory regulations and other civil rights related regulations. **APPENDIX A** and **APPENDIX E** are attached hereto and incorporated herein as substantive parts of this document. The term "Acts" in Appendix A refers to Title VI of the Civil Rights Act of 1964. The term "Regulations" in Appendix A refers to 49 C.F.R Part 21 and 28 C.F.R. Section 50.3. The term "Recipient" in Appendix A refers to SHA.

vii.

CONTACTS

For the TOWN:

Kenneth Kellar
Commissioner
Town of Woodsboro
Woodsboro Fire Hall
3rd street
Woodsboro, Md. 21798
Phone: 240-446-9797
Email: KKellar@Woodsboro.org
(or such other persons as may be formally designated to act)

For SHA:

Robert Shreeve
Deputy Director, Office of Environmental Design
Maryland State Highway Administration
707 N. Calvert Street, MS C-303
Baltimore, MD 21202
Phone: 410-545-8644
Fax: 410-209-5003
Email: rshreeve@sha.state.md.us
(or such other persons as may be formally designated to act)

with a copy to:

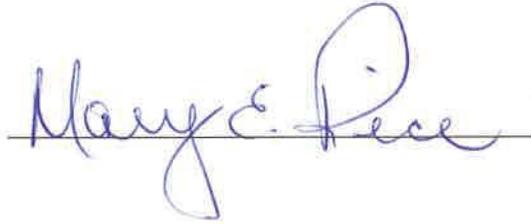
SHA Agreements Team
Office of Procurement and Contract Management
707 N. Calvert Street, MS C-405
Baltimore, MD 21202
Phone: 410-545-5675
Fax: 410-209-5025
Email: SHA_Agreements_Team@sha.state.md.us

(Signature Pages Follows)

IN WITNESS WHEREOF, the parties hereto have caused this MOU to be executed by their respective duly authorized officers.

WITNESS:

TOWN OF WOODSBORO, MARYLAND
a body corporate and politic




BY: _____
Gary Smith
Burgess

11/30/16 (SEAL)
_____ Date

WITNESS:

**MARYLAND STATE HIGHWAY
ADMINISTRATION**

Maelyn D Hill

By: Gregory C. Johnson 12/8/2016 (SEAL)
Gregory C. Johnson, P.E. Date
Administrator

**APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:**

RECOMMENDED FOR APPROVAL:

Lobby C. Rappaport
Assistant Attorney General

David J. Coyne
David J. Coyne, P.E.
Deputy Administrator/Chief Engineer
for Operations

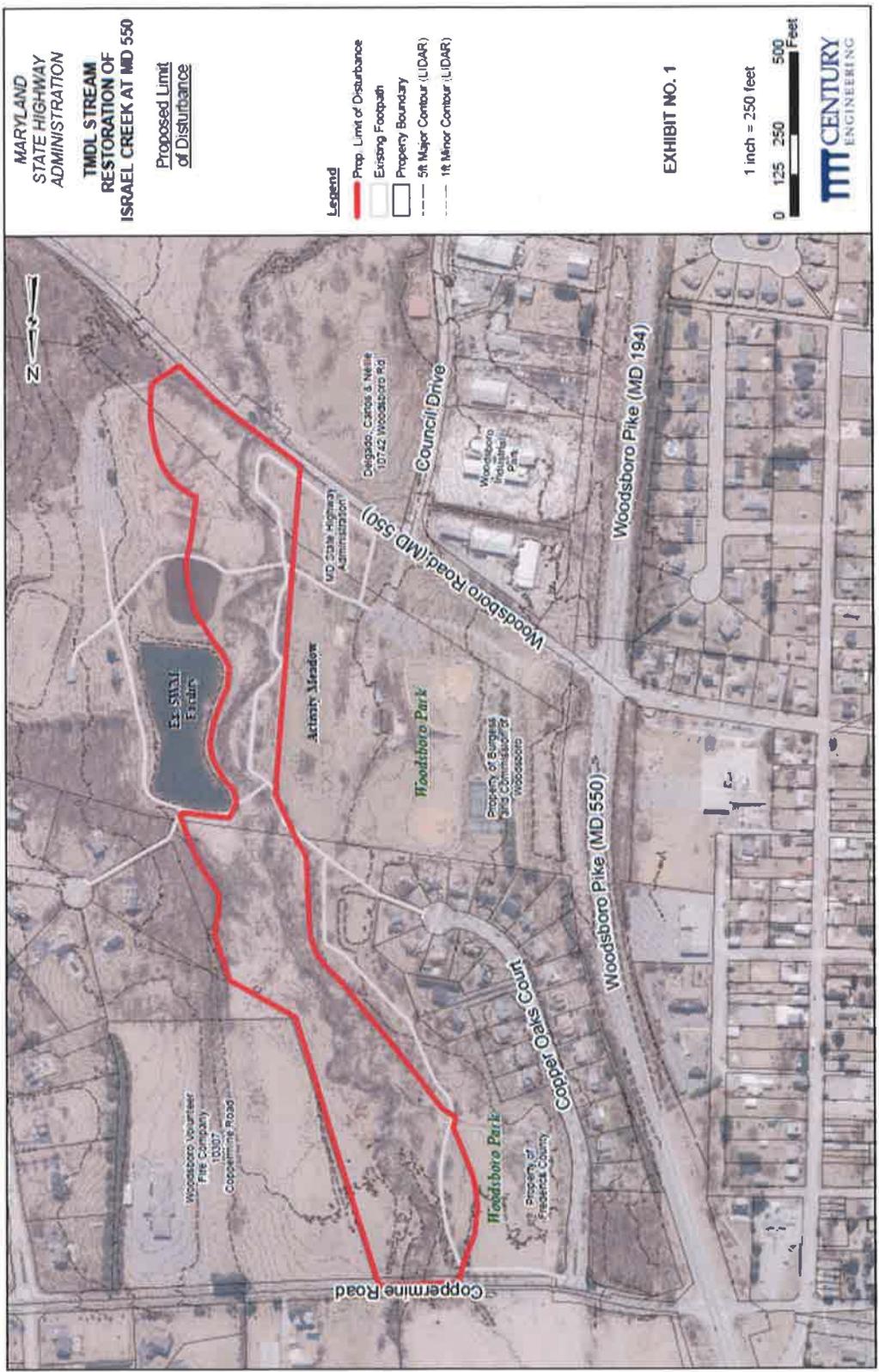
Gregory I. Slater
Gregory I. Slater
Deputy Administrator for Planning
Engineering Real Estate & Environment

Lisa B. Conners
Lisa B. Conners
Acting Deputy Administrator
for Administration

William J. Bertrand
William J. Bertrand
Acting Director
Office of Finance

Sonal Ram
Sonal Ram
Director
Office of Environmental Design

Exhibit No. 1



MARYLAND STATE HIGHWAY ADMINISTRATION
APPENDIX A OF THE TITLE VI ASSURANCES

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, the Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the Federal Highway Administration as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the Contractor under the contract until the Contractor

- complies; and/or
- b. cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

MARYLAND STATE HIGHWAY ADMINISTRATION
APPENDIX E OF THE TITLE VI ASSURANCES

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

FIRST AMENDMENT
To
MEMORANDUM OF UNDERSTANDING
TMDL Restoration of Israel Creek
by and between
TOWN OF WOODSBORO
and
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

THIS FIRST AMENDMENT (“Amendment I”) to an executed Memorandum of Understanding (“MOU”), executed in duplicate, made effective as of this Fifteen (15th) day of January 2018, by and between Maryland Department of Transportation State Highway Administration acting for and on behalf of the State of Maryland, hereinafter called “**MDOT SHA**”, and Town of Woodsboro located in Frederick County, Maryland, a municipal corporation of the State of Maryland, hereinafter called “**TOWN**”.

WHEREAS, the State of Maryland is required by the U.S Environmental Protection Agency (“**EPA**”) to reduce the flow of nutrients and sediment to the Chesapeake Bay as part of the requirements of the Chesapeake Bay Total Maximum Daily Load (“**TMDL**”) established by EPA on December 29, 2010; and

WHEREAS, MDOT SHA and the TOWN agreed to partner with one another for the restoration of Israel Creek in the Woodsboro Regional Park, property is owned by the TOWN in order to reduce the amount of nutrient and sediment run off; and

WHEREAS, MDOT SHA and TOWN executed an MOU on December 8, 2016, whereby MDOT SHA, at its cost, will take all steps to evaluate, design and construct those items necessary to bring about the restoration of Israel Creek, said MOU is attached hereto and incorporated herein as **Exhibit No. 1**; and

WHEREAS, MDOT SHA has identified the need to redefine the bridges to be replaced on TOWN property and will fund the design and construction of the bridges (to be reclassified as “boardwalks”) and the professional review and certification of the hydraulic and structural engineering design of the pedestrian boardwalks; and

WHEREAS, pursuant to a Letter of Concurrence dated March 30, 2017 and signed by both parties, attached hereto and incorporated herein as **Exhibit No. 2**, the 30% milestone design documents have been accepted by the TOWN; and

WHEREAS, MDOT SHA and TOWN pursuant to Section V (C) of the MOU consent to enter this Amendment I in order to modify the scope of work as originally defined in **Exhibit No. 1**;

NOW, THEREFORE, be it understood that MDOT SHA and the COUNTY do hereby agree as follows:

I. AMENDMENT I

- A. Page 7. Section IV. TERMINATION, Subsection “D”, Line 3, *INSERT NEW* item “i”, written as follows:
- i. The TOWN hereby gives its consent to the 30% Project milestone design documents, submitted to the TOWN on November 29th, 2016 and amended in response to requests presented to MDOT SHA by the TOWN at the TOWN meeting held on December 13th, 2016 and as described explicitly in **Exhibit No. 2**. Hereafter, changes to the PROJECT requested by the TOWN will require an amendment to the MOU to describe the associated funding responsibilities of the TOWN.
- B. Page 11. To be appended to the MOU between the end of Page 11 (attachment “Exhibit No.1”) and the beginning of Page 12, *INSERT NEW* attachment, “Letter of Concurrence”, as attached hereto and incorporated herein.
- C. Page 4. Section II. ROLES AND RESPONSIBILITIES, Subsection “P”, item “iii”, part “a”, Line 1, *DELETE* “bridge” and *INSERT* “pedestrian”.
- D. Page 4. Section II. ROLES AND RESPONSIBILITIES, Subsection “P”, item “v”, Line 1, *DELETE* “bridges” and *INSERT* “pedestrian boardwalks”.
- E. Page 4. Section II. ROLES AND RESPONSIBILITIES, Subsection “P”, item “v”, Line 2, *DELETE* “bridges” and *INSERT* “pedestrian boardwalks”.
- F. Page 4. Section II. ROLES AND RESPONSIBILITIES, Subsection “P”, item “v”, Line 4, *DELETE* “bridges” and *INSERT* “pedestrian boardwalks”.
- G. Page 4. Section II. ROLES AND RESPONSIBILITIES, Subsection “P”, item “v”, Line 5, *INSERT NEW* parts “a” through “e”, written as follows:
- a. MDOT SHA will be responsible for funding the design and construction of two pedestrian boardwalks according to design criteria documented in the 30% milestone design documents and in Exhibit No. 2
 - b. MDOT SHA will hire a professionally licensed, structural engineering consultant to review and certify the hydraulic and structural engineering design for the pedestrian boardwalks.
 - c. MDOT SHA will adhere to current industry standards for the design and construction of the pedestrian boardwalks outlined in the “AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges”.
 - d. MDOT SHA offers no warrantee and accepts no liability for the pedestrian boardwalks following acceptance of construction by the

TOWN. Once construction is complete, the TOWN will formally accept the final construction completion of the pedestrian boardwalks and all further liability, operations, and maintenance responsibilities for the pedestrian boardwalks will be assumed by the TOWN.

- e. Documentation releasing MDOT SHA from further liability and responsibility concerning the pedestrian boardwalks will be provided to MDOT SHA by the TOWN upon acceptance of construction of the pedestrian boardwalks from MDOT SHA.

- H. Page 6. Section II. ROLES AND RESPONSIBILITIES, immediately following Subsection “V. Data Submittal”, *INSERT NEW* Subsection “W” and associated items “i” through “iii”, written as follows:

W. Special Accommodations: In exchange for permission to construct the Israel Creek stream restoration project on Woodsboro Park property, MDOT SHA agrees to the following accommodations concerning projects proposed on adjacent MDOT SHA rights-of-way:

- i. The loop trail on MDOT SHA property impacted by a proposed storm water management facility will be redesigned and reconstructed to replace the function to the satisfaction of Town which may include shortening of the trail.
- ii. The tree planting project site proposed to be implemented between MD 194 and the parallel, north/south running, park interior road will be set back at least 25 feet from the edge of the park road for the entire length of the park road.
- iii. MDOT SHA will remove from its consideration a proposed tree planting site located south of Woodsboro Park between the interior, east/west running park road and the northern edge of MD 550.

II. GENERAL

- A. Except as modified by this Amendment I, the provisions of the MOU shall remain in full force and effect.
- B. This Amendment I shall inure to and be binding upon the PARTIES hereto, their agents, successors and assigns.
- C. The recitals (WHEREAS clauses) are incorporated herein as part of this Amendment I.

IN WITNESS, WHEREOF, the parties have executed this Amendment I by causing the same to be signed on the day and year first above written.

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Marilyn D. Hill
WITNESS

BY: [Signature] 1/2/14 (SEAL)
Gregory Slater Date
Administrator

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

[Signature]
Assistant Attorney General

[Signature]
Sonal Ram
Director
Office of Environmental Design

RECOMMENDED FOR APPROVAL:

[Signature]
for Tim Smith P.E.
Deputy Administrator/Chief Engineer
for Operations

[Signature]
Jason A. Ridgway P.E.
Deputy Administrator/Chief Engineer
for Planning, Preliminary Engineering,
Real Estate & Environment

N/A
Lisa B. Conners
Deputy Administrator for Administration

[Signature]
William J. Bertrand
Director
Office of Finance

WITNESS:

Mary E. Rice

TOWN OF WOODSBORO, MARYLAND
a body corporate and politic

BY: William P. Rittelmeyer
William P. Rittelmeyer
Burgess



Exhibit No. 2

Larry Hogan, **Governor**
Boyd K. Rutherford, Lt. **Governor**
Pete K. Rahn, **Secretary**
Gregory Slater, **Administrator**

Letter of Concurrence

March 30, 2017

Mr. Kenneth Kellar, Town Commissioner
The Town of Woodsboro
2 Third Street
Woodsboro MD 21798

Dear Mr. Kellar:

Thank you for inviting representatives from the SHA Office of Environmental Design (OED), Water Programs Division (WPD) to attend the town meeting held on December 13, 2016 to present and discuss the SHA 30 percent design plans for the Israel Creek stream restoration project located on Woodsboro Park property. This letter seeks to obtain concurrence on the 30 percent Israel Creek design plans presented during the meeting, clarifications on ownership and maintenance responsibilities for the pedestrian boardwalks, and subsequent coordination concerning work to be performed on SHA ROW adjacent the park. The recently executed Memorandum of Understanding (MOU) between the Town of Woodsboro and SHA (dated 12/08/2016) stipulates that if the Town terminates the agreement after 30 percent design, costs (except design costs) will be reimbursed to SHA by the Town.

Officials in attendance and representing the Town of Woodsboro included: Town Burgess, Mr. Gary Smith; and Town Commissioners Mr. Chris Spruill, Mr. Bill Rittlemeyer, Mr. Carl Piechowski, and Mr. Kenneth Kellar. Those in attendance and representing the SHA WPD included: Ms. Karen Coffman, Division Chief; Mr. Colin Hill, stream design project manager; and Mr. Christopher Zink, WPD agreements coordinator.

Summary of Design Plan Changes Proposed by the Town of Woodsboro during 12/13/2016 Meeting

1. The pedestrian pathway being designed to run along the southern boundary of the project area will, at minimum, span the distance between and connect to the two existing trail intersections and will remain within 10 feet of the project grade line and curve with that line. The final design pathway will not be a straight pathway. The Town of Woodsboro commissioners have authorized removal of any trees in the project boundaries that are necessary for the purpose of ensuring these pathway design requests are implemented. Furthermore, the Town has requested that trees be planted on both sides of the pedestrian pathway but not beyond the authorized project boundary.

Maryland Department of Transportation
State Highway Administration

707 North Calvert St., Baltimore, MD 21202

410.545.0300 | TTY 800.735.2258 | roads.maryland.gov

My telephone number/toll-free number is 1-800-446-5962

2. A natively grown 'memorial' serviceberry tree (*Amelanchier x grandiflora* 'Autumn Brilliance') measuring approximately ten feet tall with a ten inch multi-stem base existent in the current project boundaries will be relocated by SHA to an area that will not be disturbed by the project. The Town will identify the relocation site and communicate it to the SHA project manager. No warrantee as to the survival of this plant is provided, however, SHA will replace the tree with the same species, multi-stemmed, container grown plant that is a minimum of eight feet tall at the Town's request if the plant does not survive.
3. During project construction, SHA will ensure that at least one pedestrian bridge remains accessible and usable by the park patrons to the extent practical to also ensure safety.

Responsibility for Pedestrian Bridges

SHA proposes language be added to the MOU through an amendment to clarify maintenance and ownership responsibilities with respect to the bridges to follow the points outlined below. The SHA Agreements Team will be responsible to develop the formal amendment document and this will be delivered, reviewed and executed separate from this 30 percent milestone documentation, but agreement as to the amendment content as described in the points below is requested in order to move the amendment forward.

- Refer to the structures as 'boardwalks', rather than 'bridges'.
- SHA will be responsible for funding the design and construction of two pedestrian boardwalks according to the agreed upon design criteria including materials, general location, length and elevation documented in the 30 percent design plans and changes documented in this letter. SHA agrees to provide timber boardwalk deck, railings, and substructure with concrete piles that will be constructed at an elevation to span the floodplain. The boardwalks will be ADA compatible.
- After 30 percent design criteria has been accepted by the Town, changes requested by the town to the pedestrian boardwalk 30 percent design criteria and associated increases in construction costs, will be funded by the Town. Coordination for final design configuration and details for the boardwalks will be undertaken as the project moves forward and geotechnical and structural engineering design information is acquired with mutual agreement and will not impact the Town's costs.
- SHA will hire a professionally licensed, structural engineering consultant to review and certify the hydraulic and structural engineering design for the pedestrian boardwalks.
- SHA will adhere to current industry standards for the design and construction of the pedestrian boardwalks outlined in 'AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges' (table of contents attached).

- SHA offers no warrantee and accepts no liability for the pedestrian boardwalks beyond acceptance of construction by the Town. Once construction is complete and the Town has accepted the pedestrian boardwalks from SHA, all further liability, operations, and maintenance responsibilities for the pedestrian boardwalks will be assumed by the Town.
- Documentation releasing SHA from further liability and responsibility concerning the pedestrian boardwalks will be provided to SHA by the Town upon acceptance of the boardwalks from SHA.

Subsequent Coordination on SHA Projects and ROW Adjacent the Town Property

Subsequent to the meeting held on December 13, 2016, negotiations transpired between SHA and Town representatives regarding additional projects proposed by SHA to be located on SHA right-of-way (ROW) lands, and materials and maintenance requirements for the pedestrian boardwalks. To document the outcome of those negotiations the following points will also be proposed for inclusion in the Agreement amendment:

- In email dated 1/27/2017, SHA identified the material for the pedestrian boardwalk as timber deck, railing, and substructure with concrete piers. This is dependent upon results of subsurface geotechnical investigations.
- The Town will allow the Israel Creek Stream Restoration Project to move forward on Town property based on SHA agreement to the following accommodations concerning projects proposed on adjacent SHA ROW:
 - Loop trail on SHA property impacted by a proposed stormwater management facility will be redesigned and reconstructed to replace the function to the satisfaction of Town which may include shortening of the trail.
 - Tree planting project site proposed to be implemented between MD 194 and the parallel, north/south running, park interior road will be set back at least 25 feet from the edge of the park road for the entire length of the park road.
 - SHA will remove a tree planting site located south of the park between the interior, east/west running park road and the northern edge of MD 550.
 - SHA agrees to these accommodations.

Concurrence at 30 Percent Milestone

Contained at the conclusion of this letter is a signature line for demonstrating concurrence by Town of Woodsboro of the following statements:

- 1.) The Town of Woodsboro has reviewed and accepted the 30 percent design plans dated 11/29/2016 submitted by SHA for the project detailed in the MOU. Acceptance of these plans is conditioned on SHA's adaptation of the requested changes detailed in this letter into the project moving forward. In the case where the Town of Woodsboro terminates the existing MOU after this date, the Town of Woodsboro acknowledges that it would be their responsibility to reimburse SHA for all reasonable costs spent by SHA associated with the MOU, except design costs, up to the date of termination but not any amount exceeding the funding detailed in section III, part B of the MOU.
- 2.) The Town of Woodsboro has reviewed and accepts the proposal for an amendment to the MOU regarding the pedestrian boardwalks and accommodations by SHA for proposed projects on SHA ROW. Both SHA and the Town of Woodsboro acknowledge that execution of an official amendment to the MOU will be necessary.

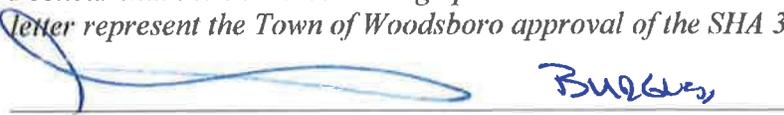
If you have any questions or comments please contact Ms. Karen Coffman at kcoffman@sha.state.md.us or 410-545-8407, or me at sram@sha.state.md.us or 410-545-8640.

Sincerely,



Sonal Ram, Director
Office of Environmental Design

I concur that the 30 Percent design plans dated 11/29/2016 and clarifications documented in this letter represent the Town of Woodsboro approval of the SHA 30 Percent milestone.



Gary Smith, Burgess
Town of Woodsboro

4/24/17
Date

- cc: Mr. Gary Smith, Burgess, Town of Woodsboro
Mr. Chris Spruill, Commissioner, Town of Woodsboro
Mr. Carl Piechowski, Commissioner, Town of Woodsboro
Mr. Bill Rittlemeyer, Commissioner, Town of Woodsboro
Ms. Karen Coffman, Chief, OED/WPD, SHA
Mr. Colin Hill, Project Manager, OED/WPD, SHA
Mr. Robert Shreeve, Deputy Director, OED, SHA
Mr. Christopher Zink, OED/WPD, SHA

SECOND AMENDMENT
To
MEMORANDUM OF UNDERSTANDING
TMDL Restoration of Israel Creek
by and between
THE TOWN OF WOODSBORO
and the
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

THIS SECOND AMENDMENT (“Amendment II”), executed in duplicate, made effective as of this 26th day of February 2019, by and between the Maryland Department of Transportation State Highway Administration, acting for and on behalf of the State of Maryland, hereinafter referred to as “**MDOT SHA**”, and the Town of Woodsboro, a municipal body corporate and politic located in Frederick County, Maryland, hereinafter referred to as the “**TOWN**”.

WHEREAS, A Total Maximum Daily Load (“**TMDL**”) is a regulatory term in the U.S. Clean Water Act, describing a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards; and

WHEREAS, The Clean Water Act (§402), mandated by the U.S. Environment Protection Agency (“**EPA**”), with regulating authority, delegated to the Maryland Department of Environment (“**MDE**”), requires the State of Maryland to reduce the flow of nutrients and sediment to the Chesapeake Bay as part of the requirement of the Chesapeake Bay Total Maximum Daily Load established by EPA on December 29, 2010; and

WHEREAS, Israel Creek flows through Woodsboro Regional Park, property owned by the TOWN and located adjacent to MD-550, and its deteriorated condition contributes to the flow of nutrients and sediment to the Chesapeake Bay; and

WHEREAS, MDOT SHA and the TOWN agreed to partner with one another for the restoration of Israel Creek in the Woodsboro Regional Park in order to reduce the amount of nutrient and sediment runoff, as a TMDL requirement, hereinafter referred to as the “**PROJECT**”; and

WHEREAS, MDOT SHA and the TOWN executed a Memorandum of Understanding (“**MOU**”), “Control No: P01626 M-1”, on December 8, 2016, and then executed an amendment (“**AMENDMENT I**”), “Control No: P01626 M-2”, on January 15, 2018, attached hereto and incorporated herein as **ATTACHMENT 1**; and

WHEREAS, the TOWN was obligated to encumber portions of the Woodsboro Regional Park property around Israel Creek with Maryland Forest Conservation Act (“**FCA**”) easements in accordance with FCA regulations that establish minimum forest conservation requirements for land development; and

WHEREAS, the PROJECT will permanently impact existing FCA easements that were conveyed to Frederick County by the Town of Woodsboro to offset forest impacts incurred by the construction of Woodbury Subdivision in 2005; and

WHEREAS, MDOT SHA and the TOWN have identified the need to specify the roles and responsibilities of the parties associated with mitigating the impacts to the existing FCA easements expected to result from the PROJECT as necessary to satisfy regulating authorities; and

WHEREAS, pursuant to a second Letter of Concurrence dated October 1, 2018 and signed by both parties, attached hereto and incorporated herein as **ATTACHMENT 2**, the design plan for the 2.5" raw water (utility) line relocation, necessary for the construction of the TMDL Restoration of Israel Creek, has been approved by the TOWN; and

WHEREAS, MDOT SHA and the TOWN have identified the need to specify the roles and responsibilities of the parties associated with the design, construction, ownership, and maintenance of the 2.5" raw water (utility) line;

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements and consideration contained herein, the Parties to this Amendment II to the MOU and AMENDMENT I do hereby covenant and agree as follows:

I. REVISIONS TO THE MOU AND AMENDMENT I:

In the MOU and AMENDMENT I, mention of Maryland State Highway Administration (SHA) shall be construed as: Maryland Department of Transportation State Highway Administration ("**MDOT SHA**").

II. REVISIONS TO THE MOU Section II. "ROLES AND RESPONSIBILITIES":

A. Subsection "D" INSERT NEW item "i":

i. As a condition of the PROJECT approval for the stream restoration exemption, in accordance with the Natural Resources Article 5-1601 et seq. Annotated Code of Maryland ("**COMAR**") Title 8, Subtitle 19 (Forest Conservation), the Maryland Department of Natural Resources, as the delegated regulating authority, is requiring that impacts to the existing Forest Conservation Act ("**FCA**") easement areas be mitigated to the satisfaction of Frederick County ("**COUNTY**"). The COUNTY will accept mitigation by establishment of replacement easements or by transfer of forestry credit from a COUNTY-approved Forest Conservation Bank.

a. The TOWN, being a party to the existing FCA easements, shall be responsible for submittal of the Forest Modification Request application to the COUNTY, the purchase of necessary forestry credits, the execution of the Transfer of Forestry Credit Form with a COUNTY-approved Forest Conservation Bank, and the completion of any other requirements established by the COUNTY in association with the required mitigation described in Section II.D.i. of this MOU, given appropriations are provided by MDOT SHA in accordance with Section II.D.i.b. of this MOU. Such action will not be unreasonably withheld, denied or delayed by the TOWN to avoid impacts to the PROJECT schedule.

b. MDOT SHA, being the party impacting the existing FCA easements, shall be responsible for all costs associated with the

required mitigation described in Section II.D.i. of this MOU and MDOT SHA shall provide funding to the TOWN, in accordance with Section II.D.i.a. of this MOU, through reimbursements or a payment for services not yet rendered, exclusively if said payment does not exceed \$60,000 and if a minimum of three (3) quotes solicited from COUNTY-approved Forest Conservation Bankers are provided by the TOWN to MDOT SHA and the payment amount requested by the TOWN for the necessary transfer of forestry credit equals that described in the lowest/most competitive quote provided, in response to invoices submitted by the TOWN and received by MDOT SHA.

B. Subsection “L” **DELETE** existing paragraph and **INSERT** new paragraph to read:

L. Utilities. The TOWN shall provide all available utility information to MDOT SHA. It shall be MDOT SHA’s responsibility, with cooperation of the TOWN, to coordinate the location and relocation of all existing utilities in areas of the proposed construction. Existing utility service shall be maintained throughout the project construction phase to include sewer, water, gas and electrical services.

i. The TOWN hereby gives its consent to the design plan for the 2.5” raw water (utility) line relocation, submitted to the TOWN on October 1, 2018 and approved as described explicitly in **ATTACHMENT 2**.

ii. MDOT SHA will be responsible for funding the design and construction of 2.5” raw water (utility) line relocation in accordance with the design plan incorporated in **ATTACHMENT 2**.

a. MDOT SHA offers no warrantee and accepts no liability for the relocated 2.5” raw water (utility) line following acceptance of construction by the TOWN. Once construction is complete, the TOWN will formally accept the final construction completion of the relocated 2.5” raw water (utility) line and all further liability, operations, and maintenance responsibilities for the relocated 2.5” raw water (utility) line will be assumed by the TOWN.

b. The TOWN at its option and expense, may provide an inspector during construction of the utility relocation.

iii. Documentation releasing MDOT SHA from further liability and responsibility concerning the relocated 2.5” raw water (utility) line will be provided to MDOT SHA by the TOWN upon acceptance of construction of the 2.5” raw water (utility) line relocation.

III. REVISIONS TO THE MOU Section V. “GENERAL PROVISIONS”:

A. **INSERT NEW** Subsection “H”, written as follows:

1. Agencies Held Harmless. Recognizing that MDOT SHA and the TOWN are government agencies and, as such, are subject to limitations in the

indemnity that each can legally provide, MDOT SHA and the TOWN agree, to the fullest extent permitted by law, and subject to available appropriations, to indemnify and save harmless and defend one another and all of their employees, officials, and representatives from all suits, actions, or claims of any character, brought on account of any injuries or damage sustained by any person or property in consequence of any work performed on the PROJECT under this MOU, either by MDOT SHA or the TOWN or any contractor to MDOT SHA or the TOWN, or the contractor's employees, agents, or representatives. This is not to be deemed as a waiver of any immunity which may exist in any action.

IV. Page 11. To be appended to the MOU between the end of Page 11 (attachment "Exhibit No.1") and the beginning of Page 12, **INSERT NEW** attachment, "Letter of Concurrence"- 3 pages, as attached hereto and incorporated herein as "**ATTACHMENT 2**".

V. **GENERAL**

- A. Except as modified, by this Amendment II, the above described MOU and AMENDMENT I, with all the terms and provisions shall remain in full force and effect.
- B. This Amendment II shall inure to and be binding upon the parties hereto, their agents, successors and assigns.
- C. The recitals (WHEREAS clauses) are incorporated herein as part of this Amendment II.

IN WITNESS WHEREOF, the parties have executed this Amendment II by causing the same to be signed on the day and year first above written.

WITNESS:

TOWN OF WOODSBORO, MARYLAND
a body corporate and politic



A large, stylized handwritten signature in blue ink, written over a horizontal line. The signature is cursive and appears to be the name of a witness.

BY: William P. Rittelmeyer 2/26/2019
William P. Rittelmeyer
Burgess

MARYLAND DEPARTMENT
OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

WITNESS:

Tanya meniel

BY: Tim Smith (SEAL)

Tim Smith, P.E.
Deputy Administrator/Chief Engineer
for Operations

February 26, 2019

Date

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

[Signature]
Assistant Attorney General

RECOMMENDED FOR APPROVAL:

[Signature]
Jason A. Ridgway, P.E.
Deputy Administrator
for Planning, Engineering,
Real Estate, and Environment

[Signature]
Lisa B. Conners
Deputy Administrator for Administration

[Signature]
William J. Bertrand
Director
Office of Finance

[Signature]
Sonal Ram
Director
Office of Environmental Design

Attachment 2



Larry Hogan
Governor
Boyd K. Rutherford
Lt. Governor
Pete K. Rahn
Secretary
Gregory Slater
Administrator

October 1, 2018

Town of Woodsboro, Burgess and Commissioners
Attention: Burgess William Rittelmeyer
2 South 3rd Street
Post Office Box 88
Woodsboro MD 21798

Dear Burgess Rittelmeyer:

The Maryland Department of Transportation State Highway Administration (MDOT SHA) is hereby requesting concurrence from the Town of Woodsboro (TOWN) for the proposed relocation of the 2.5" raw water (utility) line, necessary for construction of the Israel Creek stream restoration in Woodsboro Park (MDOT SHA project number FR6715182). Enclosed, for your review, is the design plan sheet for the utility relocation.

In addition, MDOT SHA desires to execute a second amendment to the Memorandum of Understanding (MOU) for the Israel Creek stream restoration (MDOT SHA agreement number P01626 M-2) to add language that clarifies post-construction maintenance and ownership responsibilities related to the utility line to be relocated. The MDOT SHA Agreements Division, from the Office of Procurement and Contract Management, will be responsible for developing, reviewing, and executing the amendment with the TOWN, subsequent to your reception of this letter, but the TOWN's concurrence with the amendment content/intentions, as described in the points below, is requested in order to move the amendment forward:

- Clarify that MDOT SHA will be responsible for funding the design and construction of any utility adjustments or utility relocations necessary to complete construction of the Israel Creek stream restoration project
- Note the TOWN's concurrence with the design plan for the 2.5" raw water (utility) line relocation, referencing the letter of concurrence
- Attach this letter of concurrence to the MOU
- Clarify that, once construction of the Israel Creek stream restoration project is complete, the TOWN will accept, in writing, ownership of the relocated utility and all associated maintenance, operations, and liability responsibilities

Town of Woodsboro, Burgess and Commissioners
Attention: Burgess William Rittelmeyer
Page 2

- Clarify that MDOT SHA offers no warrantee and accepts no liability for the relocated utility beyond acceptance of the construction by the TOWN

Contained at the end of this letter is a signature line for demonstrating concurrence by the TOWN with the following statements:

- 1.) The TOWN has reviewed and accepted the design plan for the utility relocation necessary for construction of the Israel Creek stream restoration project (MDOT SHA project number FR6715182).
- 2.) The TOWN has reviewed and accepts the proposal for a second amendment to the MOU regarding the utility relocation. Both MDOT SHA and the TOWN acknowledge that execution of an official amendment to the MOU will be necessary.

Once signed, please return this letter to MDOT SHA to my attention. If you have any questions or concerns, please contact Ms. Karen Coffman at 410-545-8407 or via email at kcoffman@sha.state.md.us. Ms. Coffman will be happy to assist you.

Sincerely,



Sonal Ram, Director
Office of Environmental Design

Concur:

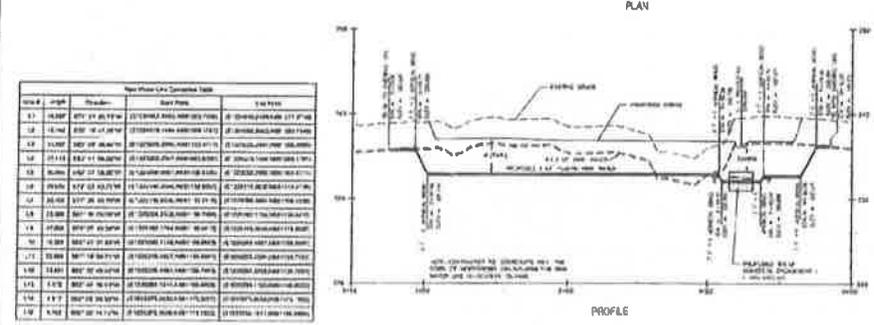
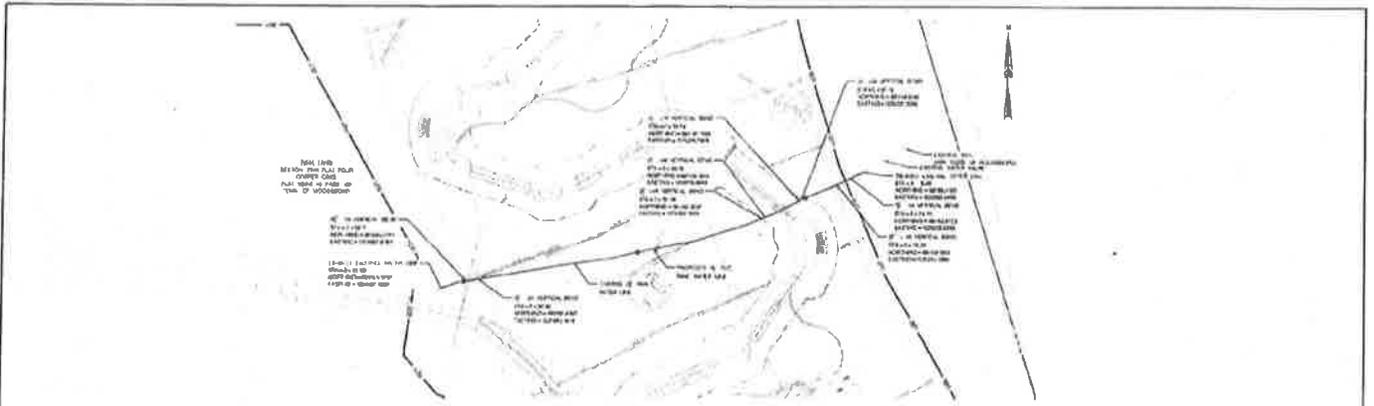


William Rittelmeyer, Burgess
Town of Woodsboro

10/10/2018
Date

Enclosure

cc: Mr. Jason Boyer, Commissioner, TOWN
Mr. Carl Piechowski, Commissioner, TOWN
Mr. Gary Smith, Commissioner, TOWN
Ms. Karen Coffman, Office of Environmental Design, MDOT SHA
Mr. Christopher Zink, Office of Environmental Design, MDOT SHA



STATION	INVERT	PIPE	LENGTH	DATE
1+00	115.00	18\"/>		



THIRD CENTURY
ENGINEERS & ARCHITECTS
 (LANDING ENGINEERS - PLANNING
 AND SURVEYING)
 1000 W. 10th St., Suite 100
 Fort Collins, CO 80521
 Phone: (970) 225-2100 Fax: (970) 225-2101

THIS PLAN IS FOR PUBLIC INFORMATION ONLY.
 THE INFORMATION IS FOR YOUR INFORMATION ONLY.
 IT IS NOT A CONTRACT. THE CONTRACT IS THE
 SET OF DRAWINGS AND SPECIFICATIONS.
 ANY CHANGES TO THE PLAN SHALL BE MADE
 BY THE ENGINEER.

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 BY THE ENGINEER.

DATUM: NAD 83 (International NAVD 83 Vertical)

RAW WATER LINE RELOCATION PLAN

DATE: 10/15/2010
 DRAWN BY: J. H. [Name]
 CHECKED BY: [Name]
 SCALE: 1" = 40'

PROJECT NO: **UT-01-01**

Sample Partnering Agreements - Example 3

**PROJECT TASK AGREEMENT (PTA)
FOR TIMBERS AT TROY
BY AND BETWEEN**

**MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION (MDOT SHA)
AND
HOWARD COUNTY (COUNTY)**

REFERENCE: MASTER MOU AGREEMENT P01518 C-1
TASK NUMBER: 02

WHEREAS MDOT SHA and the COUNTY have entered into a Master Memorandum of Understanding, incorporated herein, to cooperatively develop and implement impervious restoration and nutrient and sediment reduction projects and activities; and

WHEREAS MDOT SHA and the COUNTY have worked together to identify opportunities for a PROJECT located on MDOT SHA and County property at 6100 Marshalee Drive, Elkridge, Maryland 21075 (Tax Account ID No. 1401274813, Parcel 0687, Tax Map 0037) within the Timbers at Troy Golf Course; and

WHEREAS both MDOT SHA and the COUNTY have conducted a PROJECT concept meeting and MDOT SHA and the COUNTY have agreed the PROJECT should move forward to the design phase; and

WHEREAS MDOT SHA has agreed to act as the PROJECT LEAD and fully fund the PROJECT, and the COUNTY has agreed to provide access to its property so that MDOT SHA may perform the necessary work; and

WHEREAS MDOT SHA and the COUNTY have agreed that any NPDES MS4 impervious surface restoration credits or TMDL pollutant load reductions (collectively, "CREDIT") that are produced as a direct result of the PROJECT will be owned entirely by MDOT SHA;

THEREFORE, MDOT SHA and the COUNTY do hereby agree as follows:

I. PROJECT INFORMATION

Title: TMDL Outfall Restoration in Howard County – Group 1

Description: NPDES MS4 and TMDL Stream Restoration and Outfall Stabilization

Scope: MDOT SHA is partnering with the COUNTY on a stormwater outfall and channel retrofit PROJECT that will allow MDOT SHA to retrofit an existing stormwater outfall owned by MDOT SHA (MDOT SHA facility #1305005.001) and to stabilize the perennial receiving stream channel located on COUNTY lands at 6100 Marshalee Drive, Elkridge, Maryland 21075 (Tax Account ID No. 1401274813, Parcel 0687, Tax Map 0037) within the Timbers at Troy Golf

Course adjacent to the westbound lanes of Maryland Route 100 (MD 100) between Maryland Route 103 and Interstate 95 in Elkridge, Howard County, Maryland.

ATTACHMENT A is a map that details the extent of the PROJECT on MDOT SHA and COUNTY lands and delimits the extent of MDOT SHA maintenance responsibility and the extent of the MDOT SHA CREDIT ownership associated with the PROJECT. These are described further in Section IV and Section VII herein. Floodplain reconnection will result in minor increases in flood elevations in some areas on COUNTY lands. None of these increases will impact existing infrastructure.

Proposed Milestone Schedule:

<i>30% Construction Documents (PI Review)</i>	05/24/2017
<i>60% Construction Documents (Semi-Final Review)</i>	08/09/2017
<i>90% Construction Documents (Final Review)</i>	12/12/2017
<i>PS&E Package Submittal to Federal Aid</i>	02/06/2018
<i>Contract Advertisement</i>	05/01/2018
<i>NTP Issued to Contractor</i>	08/09/2018
<i>Construction Completion</i>	03/01/2019

Some adjustment to the milestone dates is anticipated based on permitting and other coordination for advertisement. Adjustments to milestone dates will be communicated to the COUNTY. This PTA will not be amended based on date changes unless the need is identified by either MDOT SHA or the COUNTY.

PROJECT MANAGERS:

(LEAD) MDOT SHA: Karen Coffman, Chief
 Water Programs Division
 Office of Environmental Design
 Maryland State Highway Administration
 707 North Calvert Street, MS C-303
 Baltimore, MD 21202
 Phone: 410-545-8407
 Email: kcoffman@sha.state.md.us

COUNTY: Mark S. Richmond, Chief
 Stormwater Management Division
 Department of Public Works
 Howard County
 6751 Columbia Gateway Drive, Suite 514
 Columbia, MD 21046
 Phone: 410-313-6413
 Email: msrichmond@howardcountymd.gov

II. PROJECT ADMINISTRATION – MDOT SHA will be the LEAD responsible for the overall PROJECT administration and management. MDOT SHA will develop the design

plans and perform construction contract oversight. MDOT SHA will be responsible for each of the tasks indicated below:

- ✓ Utility designation, with the cooperation of the land owner
- ✓ Permits and Code Compliance (Except COUNTY reviews associated with COUNTY regulations)
- ✓ Geotechnical Investigation and Analysis
- ✓ Survey – Topographic and Boundary as needed
- ✓ Bid Documents

The PROJECT design will include coordination between MDOT SHA and the COUNTY at each milestone. MDOT SHA will allow a three-week period following each milestone for commenting by the COUNTY and if necessary, MDOT SHA will provide response to comments from the COUNTY within three weeks of receipt. The COUNTY will be responsible for facilitating COUNTY required regulatory reviews (if applicable) as well as access needs for the PROJECT as described in Section V (ACCESS REQUIREMENTS).

- III. FUNDING** – The estimated design and construction costs are \$340,000. MDOT SHA will contribute all funding for design, construction, inspection, and maintenance of the PROJECT. Fees for COUNTY ACCESS REQUIREMENTS will be waived for MDOT SHA by the COUNTY.
- IV. CREDIT** – All CREDIT directly produced by the PROJECT will accrue to and be owned in their entirety by MDOT SHA. See ATTACHMENT A for a geographic representation of the relative extent of MDOT SHA CREDIT ownership for the PROJECT. MDOT SHA may use the CREDIT from the PROJECT to satisfy regulatory requirements at any point, and in perpetuity. After construction of the PROJECT is complete, the COUNTY and MDOT SHA will, in accordance with Section VII of the MOU, coordinate as necessary to establish a separate, unique PTA for any work proposed by either entity to be performed on the PROJECT site that might in any way impact the CREDIT and/or the design or integrity of the PROJECT.
- V. ACCESS** – This PTA serves as the right-of-entry agreement for MDOT SHA to access COUNTY lands to implement the PROJECT. Pursuant to this PTA, the COUNTY will grant MDOT SHA personnel, contractors, and inspectors access, in accordance with Sections III and IV of the MOU, to the COUNTY-owned property at 6100 Marshalee Drive, Elkridge, Maryland 21075 (Tax Account ID No. 1401274813, Parcel 0687, Tax Map 0037), within the Timbers at Troy Golf Course and depicted in ATTACHMENT A, for the purposes of survey, geotechnical investigations, design and construction activities, and compliance inspections and verifications as necessary to implement the PROJECT. MDOT SHA personnel, contractors, and inspectors will provide 48 hours prior notice to the COUNTY Project Manager, designated in Section II herein, before accessing COUNTY property. The COUNTY will be responsible for facilitating all ACCESS REQUIREMENTS to grant MDOT SHA the access described in this Section.

- VI. INSPECTIONS** – Following completion of the construction phase of the PROJECT and in accordance with Section III herein, MS4 three-year compliance inspections, data development, tracking, and reporting to ensure long-term management of the CREDIT will be performed for the PROJECT by MDOT SHA. Data will be shared jointly between MDOT SHA and the COUNTY if requested.
- VII. MAINTENANCE** – Following completion of the construction phase of the PROJECT and in accordance with Section III herein, MDOT SHA will be responsible for performing adaptive management activities for the PROJECT to ensure long-term PROJECT success and management of the PROJECT CREDIT. MDOT SHA and the COUNTY will communicate to the other entity any apparent need for maintenance or adaptive management to the PROJECT and, if desired by both parties, will coordinate to develop a remediation plan or to establish a separate, unique PTA to address the maintenance or adaptive management need. Any maintenance or remediation, associated costs, permits, or related actions or expenses, required by any regulatory body or otherwise needed to respond to PROJECT deficits or failures due to faulty design or construction, negligence, or normal system wear at the outfall stabilization or the stream channel restoration component of the PROJECT will be the sole responsibility of MDOT SHA.
- VIII. DATA SHARING** – MDOT SHA and the COUNTY will share with the other entity any and all data associated with the PROJECT, including maintenance and inspections that occur after the construction phase of the PROJECT, upon request by the other entity. Data will conform to MDE Geodatabase standards where applicable.

IX. TECHNICAL AND ADMINISTRATIVE AGENCY CONTACTS

For MDOT SHA: Kevin P. Wilsey, Deputy Director
Office of Environmental Design
MDOT State Highway Administration
707 North Calvert Street, MS C-303
Baltimore, MD 21202
Phone: 410-545-8605
Email: KWilsey@sha.state.md.us

For the COUNTY: Mark S. Richmond, Chief
Stormwater Management Division
Department of Public Works
Howard County
6751 Columbia Gateway Drive, Suite 514
Columbia, MD 21046
Phone: 410-313-6413
Email: msrichmond@howardcountymd.gov

X. TASK AUTHORIZATION SIGNATURES

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION:

BY:  5.23.18 (SEAL)
Sonal Ram, Director Date
Office of Environmental Design
MDOT State Highway Administration

HOWARD COUNTY, MARYLAND:

WITNESS:


Lonnie R. Robbins
Chief Administrative Officer

BY:  5/14/2018 (SEAL)
Allan H. Kittleman Date
County Executive

**APPROVED FOR SUFFICIENCY
OF FUNDS:**


Janet R. Irvin, Director
Department of Finance

**APPROVED: DEPARTMENT OF
PUBLIC WORKS**

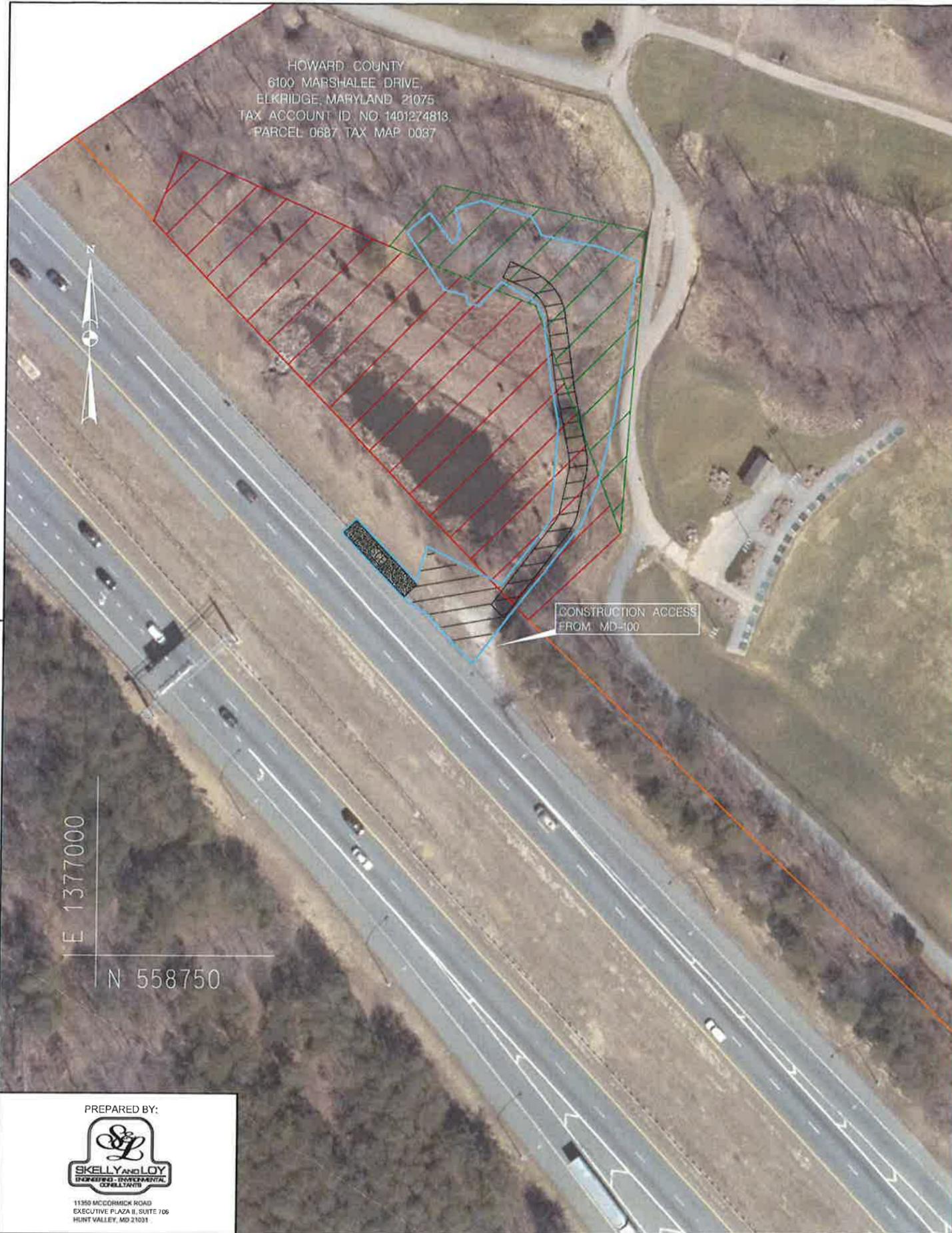
 5/9/18
James M. Irvin, Director
3430 Court House Drive
Ellicott City, MD 21043
Phone: 410-313-4401
Email: jirvin@howardcountymd.gov

**APPROVED AS TO FORM AND
LEGAL SUFFICIENCY ON
THE 8th DAY OF May, 2018**


Gary W. Kuc, County Solicitor


Lewis Taylor, Senior Assistant County Solicitor

HOWARD COUNTY
 6100 MARSHALEE DRIVE
 ELKBRIDGE, MARYLAND 21075
 TAX ACCOUNT ID NO. 1401274813
 PARCEL 0687 TAX MAP 0037



Existing SHA Easement Vertices

NO	NORTHING	EASTING
1	559244.7930	1377034.0134
2	559291.6288	1377053.5049
3	559219.2923	1377212.4039
4	559188.3012	1377291.2428
5	559035.3236	1377349.2760
6	558976.8981	1377287.5390

SHA Maintenance and Credit

NO	NORTHING	EASTING
7	559228.2691	1377192.6849
8	559269.5409	1377227.3335
9	559238.3441	1377365.4408
10	559115.2739	1377347.8594
11	559067.9601	1377336.8951
12	559188.3012	1377291.2428
13	559219.292	1377212.404

Access Vertices

NO	NORTHING	EASTING
14	559043.5368	1377171.9666
15	559000.2035	1377213.4662
16	559002.2055	1377213.6280
17	559019.2694	1377218.8909
18	559018.9015	1377219.7030
19	559023.4158	1377220.7389
20	558997.9362	1377267.7107
21	558999.2116	1377268.6740
22	558996.0585	1377269.8684
23	559046.6991	1377307.0864
24	559064.8463	1377311.4503
25	559082.6421	1377314.6385
26	559135.7242	1377305.0391
27	559180.5502	1377299.4626
28	559192.268	1377294.8081
29	559200.224	1377285.0267
30	559207.3273	1377269.4536
31	559218.2452	1377274.4334
32	559211.142	1377290.0066
33	559199.3671	1377304.4830
34	559182.0246	1377311.3716
35	559138.81	1377316.7220
36	559089.7607	1377325.9854
37	559082.5492	1377326.6381
38	559075.3488	1377325.8738
39	559049.4874	1377320.5303
40	559041.767	1377318.0260
41	559034.7783	1377313.8986
42	558978.0385	1377271.3100
43	558959.726	1377257.5630
44	558955.7427	1377250.0794
45	558958.9371	1377242.2265
46	558970.3578	1377231.6567
47	558982.7663	1377220.0299
48	558991.9036	1377204.7995
49	559035.2369	1377163.2999

LEGEND

-  EXISTING SHA EASEMENT
-  MDOT SHA – PROJECT maintenance responsibility and CREDIT extent – 100% of PROJECT CREDIT is owned by MDOT SHA
-  ACCESS
-  LOD
LIMIT OF DISTURBANCE



P01518 C-1 PTA 02
 TMDL OUTFALL RESTORATION
 IN HOWARD COUNTY – GROUP 1
 ATTACHMENT A

OUTFALL 1305005.001 STREAM RESTORATION AREA

SCALE 1:40 ADVERTISED DATE JUL 2018 CONTRACT NO. HO398A21

DESIGNED BY DAF COUNTY HOWARD
 DRAWN BY TDH LOGMILE
 CHECKED BY DAF
 MDE/PRD

SHEET NO. 01 OF 01

PREPARED BY:



11350 MCCORMICK ROAD
 EXECUTIVE PLAZA II, SUITE 706
 HUNT VALLEY, MD 21031

BY: theberg

**PROJECT TASK AGREEMENT (PTA)
BY AND BETWEEN THE**

**MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION (SHA)
AND THE
MARYLAND DEPARTMENT OF NATURAL RESOURCES (DNR)**

REFERENCE: MASTER MOU AGREEMENT P01532 G-1
TASK NUMBER: 10

WHEREAS MDOT SHA and DNR have entered into a Master Memorandum of Understanding (MOU) to develop and implement nutrient and sediment reduction projects and activities on DNR lands that would assist MDOT SHA in meeting their Bay TMDL goals and MS4 Permit requirements; and

WHEREAS MDOT SHA and DNR have worked together to identify opportunities for a PROJECT within Sandy Point State Park in Anne Arundel County, Maryland; and

WHEREAS both MDOT SHA and DNR have conducted a PROJECT concept meeting and MDOT SHA and DNR have agreed the PROJECT should move forward to the design phase;

THEREFORE, MDOT SHA and DNR do hereby agree as follows:

I. PROJECT INFORMATION

Title: Captain John Smith Plaza Redevelopment and Tree Planting at Sandy Point State Park

Description: Impervious Area Removal and Tree Planting

Scope: The PROJECT will replace the existing hardscaped plaza at the South Beach area of Sandy Point State Park with new pavers, boardwalk, and landscaping improvements. Rebuilding the existing paved area resulting in a net decrease in impervious surfaces for the site will provide water quality credit. **ATTACHMENT A** depicts the area and redevelopment associated with this PTA.

In addition, DNR will plant and establish trees within Sandy Point State Park as needed to ensure that MDOT SHA maintains a minimum one (1) acre impervious surface restoration credit and all associated TMDL pollutant load reductions (hereinafter called "CREDIT") for the PROJECT and associated with this PTA. **ATTACHMENT B** depicts the potential areas that DNR will plant trees for the PROJECT. MDOT SHA has reviewed the proposed tree planting areas.

Proposed Captain John Smith Plaza Redevelopment Milestone Schedule:

<i>30% Construction Documents</i>	9/1/2016
<i>60% Construction Document</i>	3/1/2017
<i>90% Construction Documents</i>	6/1/2017
<i>Contract Advertisement</i>	9/1/2017
<i>NTP Issued to Contractor</i>	6/1/2018
<i>Construction Completion</i>	5/1/2019

Proposed Tree Planting at Sandy Point State Park Milestone Schedule:

<i>30% Construction Documents</i>	2/1/2018
<i>60% Construction Document</i>	4/1/2018
<i>90% Construction Documents</i>	6/1/2018
<i>Contract Advertisement</i>	N/A – DNR to construct
<i>NTP Issued to Contractor</i>	N/A – DNR to construct
<i>Construction Completion</i>	6/30/19

Upon mutual agreement between MDOT SHA and DNR this PROJECT scope may be amended if the need is identified. Some adjustment to the milestone dates is anticipated based on permitting and other coordination for advertisement. This PTA will not be amended based on date changes unless the need is identified by either MDOT SHA or DNR.

II. PROJECT ADMINISTRATION – DNR will be responsible for the overall PROJECT administration and management. DNR will develop the design plans and perform construction contract oversight. DNR will provide MDOT SHA copies of all bid documents, including plans and specifications. DNR will be responsible for each of the tasks indicated below:

- Utility designation, with the cooperation of the land owner
- Permits and Code Compliance
- Geotechnical Investigation and Analysis
- Survey – Topographic and Boundary as needed
- Bid Documents
- Construction Oversight

DNR will be responsible for ensuring that the design, construction, and maintenance aspects of the PROJECT are implemented in accordance with the *2000 Maryland Stormwater Design Manual*.

DNR will establish tree planting areas for CREDIT in accordance with recommendations of the DNR Forest Service to ensure long term survival at a minimum density of 100 trees per acre with 50 percent of trees 2-inch diameter at 4.5 feet above ground.

DNR will be responsible for collaborating with MDOT SHA to replace any CREDIT lost due to the intentional removal or repurposing of areas where trees are planted for CREDIT in association with the PROJECT.

- III. ACCESS** – DNR shall grant MDOT SHA and MDOT SHA’s contractors access to DNR owned property for the purpose of inspecting the PROJECT to collect data as required by the Maryland Department of the Environment (MDE) to verify and report the locations, size, condition, and other parameters of the sites to demonstrate they are acceptable to maintain the CREDIT consistent with the MOU and this PTA. MDOT SHA and/or MDOT SHA’s contractors shall provide notice to DNR and receive approval at least 72 hours prior to accessing DNR property. Field access shall be coordinated with:

Name: Dorna Cooper, Park Manager for Sandy Point State Park
Phone: 410-974-2149
Email: dorna.cooper@maryland.gov

- IV. FUNDING** – DNR will fund the design, construction, and maintenance of the PROJECT plaza reconstruction and tree planting areas. DNR will provide adequate tree planting site establishment and adaptive management activities to ensure continuity of CREDIT associated with tree planting areas MDOT SHA has accepted for CREDIT in accordance with the terms outlined in this section. MDOT SHA will contribute \$200,000 to DNR in support of the PROJECT and in return for a minimum of one (1) acre PROJECT CREDIT. A Compensation Sheet is attached detailing the MDOT SHA funding contribution and CREDIT received. MDOT SHA will be responsible for funding all necessary inspections of the PROJECT as mandated by MDE for verification and continuity of CREDIT.

Upon execution of this PTA, the completion of the plaza reconstruction design, and submittal by DNR to MDOT SHA of all 100% design and advertisement/bid documents for the plaza reconstruction, DNR may submit to MDOT SHA an invoice totaling \$200,000 for the MDOT SHA contribution to the PROJECT described in this Section. MDOT SHA will provide payment to DNR within 30 days of its receipt of an undisputed DNR invoice associated with this PTA.

For each tree planting site associated with the PROJECT, as construction is completed, DNR will draft and submit to MDOT SHA a letter requesting MDOT SHA acceptance for CREDIT. Upon MDOT SHA approval of the letter of acceptance, DNR may request payment associated with any additional CREDIT, specifically CREDIT beyond the minimum one (1) acre PROJECT CREDIT, and that payment will be released to DNR upon receipt by MDOT SHA of an associated invoice from DNR in accordance with Section VI.C. of the MOU.

If DNR and MDOT SHA agree, in accordance with the terms outlined in this section, to additional CREDIT, beyond the minimum one (1) acre PROJECT CREDIT, to be purchased in association with this PROJECT and PTA, MDOT SHA will provide payment at a rate of \$150,000 per acre for that additional CREDIT.

- V. MAINTENANCE** – DNR will be responsible for maintenance for the reconstructed plaza and establishment and adaptive management of the tree installation CREDIT areas. After installation, MDOT SHA will inspect the PROJECT sites to ensure they meet MDE requirements for acceptance for CREDIT. If the PROJECT sites are acceptable, following construction activities for the reconstructed plaza or any tree planting site, DNR will draft and submit to MDOT SHA a letter requesting acceptance for CREDIT. If any site is unacceptable, MDOT SHA will provide a letter in response identifying deficiencies for DNR to use when upgrading the site for acceptance for CREDIT and MDOT SHA will reinspect the site. Once the site is deemed acceptable for CREDIT, MDOT SHA will approve the DNR letter of acceptance for CREDIT.

Establishment and adaptive management activities of areas where trees are planted for CREDIT is defined here to include but not be limited to periodic site evaluation, mowing, watering, vegetation management, mulching, predation monitoring and/or control measures, and replanting of trees. Establishment activities will be undertaken to ensure that a minimum density of 100 trees per acre with 50 percent of trees 2-inch diameter at 4.5 feet above ground is maintained on the PROJECT to ensure continued CREDIT. In accordance with Section III herein, MDOT SHA will be granted perpetual access and permission by DNR to perform inspections and data collection of the plaza reconstruction and tree planting areas for CREDIT.

- VI. INSPECTIONS** – DNR will be responsible for performing inspections necessary to complete construction of the PROJECT. MDOT SHA will be responsible for performing inspections of the PROJECT necessary to monitor and ensure continuity of CREDIT associated with the PROJECT.

VII. VALUATION AND COMPENSATION FOR PARK LANDS - A Project Compensation Sheet is attached to this PTA and provides an accounting of contributions by MDOT SHA to the PROJECT and CREDIT provided by DNR as a result of implementing this PROJECT. The total amount of funding to be transferred to DNR from MDOT SHA under the terms of this PTA will be \$200,000. DNR hereby waives, exclusively for this PTA, the requirements described in Section I(G)(Subsection I, II, and III) of the MOU.

VIII. CREDIT – A minimum of one (1) acre CREDIT and associated TMDL Pollutant Load Reductions associated with the PROJECT will be given to MDOT SHA. MDOT SHA may use CREDIT and TMDL Pollutant Load Reductions associated with the PROJECT to satisfy regulatory requirements after making payment to DNR for compensation for use of Park Lands as described in Section VII herein and verification of the project CREDIT aspects has been performed by MDOT SHA.

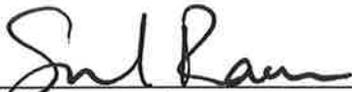
IX. DATA SHARING/REPORTING/FORMAT– DNR will coordinate with MDOT SHA at each PROJECT milestone as scheduled in Section I herein by submitting associated design documents and stormwater management reports for MDOT SHA review and CREDIT determination. DNR will submit 100% construction phase drawings, as-built documents (where applicable), and stormwater management reports in digital format upon completion of the construction phase of the PROJECT for use by MDOT SHA in inspecting sites, and computing and reporting CREDIT to regulating authorities

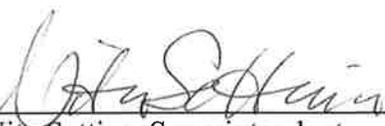
X. TECHNICAL AND ADMINISTRATIVE AGENCY CONTACTS

For MDOT SHA: Karen Coffman, Chief
Water Programs Division
Office of Environmental Design
MDOT State Highway Administration
707 N. Calvert Street, MS C-303
Baltimore, MD 21202
Phone: 410-545-8407
Fax: 410-209-5003
Email: kcoffman@sha.state.md.us

For DNR: LeeAnne Chandler, Chief of Planning
Maryland Park Service
Maryland Department of Natural Resources
580 Taylor Avenue, E-3
Annapolis, MD 21401
Phone: 410-260-8177
Fax: 410-260-8739
Email: leanne.chandler@maryland.gov

XI. TASK AUTHORIZATION SIGNATURES

MDOT SHA:  DATE: 1.29.18
Sonal Ram, Director
Office of Environmental Design
MDOT State Highway Administration
707 N. Calvert Street, MS C-303
Baltimore, MD 21202
Phone: 410-545-8640
Fax: 410-209-5003
Email: SRam@sha.state.md.us

DNR:  DATE: 1.25.18
Nita Settina, Superintendent
Maryland Park Service
Maryland Department of Natural Resources
580 Taylor Avenue, E-3
Annapolis, MD 21401
Phone: 410-260-8186
Fax: 410-260-8191
Email: nita.settina@maryland.gov

Captain John Smith Plaza Redevelopment and Tree Planting at Sandy Point State Park

Compensation Sheet
 Agreement P01532G-1, PTA 10
 Date: 01/12/2018

Project Details

Total Acres of Treatment CREDIT Associated with Plaza Redevelopment Project according to Stormwater Report	0.69												
Estimated DNR Acres for tree planting needed to offset CREDIT deficit (0.31 ac/0.38 ac)	0.82												
Impervious Acre Equivalent for Reforestation on Pervious Urban	0.38 acres of treatment CREDIT per 1.0 acres of Reforestation on Pervious Urban												
Total Acres of DNR tree planting (design, construction, and maintenance) contributed by DNR	0.82												
Total Acres of Treatment CREDIT Associated with DNR Tree Plantings given to MDOT SHA	0.31												
Total Estimated Restoration Credit for Project Task Agreement (acres)	1.00												
	<table border="1"> <thead> <tr> <th>MDOT SHA Costs</th> <th>DNR Costs</th> <th>Totals</th> </tr> </thead> <tbody> <tr> <td>MDOT SHA Funding Contribution to Captain John Smith Plaza Redevelopment Project</td> <td align="right">\$ 200,000</td> <td align="right">\$ 200,000</td> </tr> <tr> <td>Total Costs</td> <td align="right">\$ 200,000</td> <td align="right">\$ 200,000</td> </tr> <tr> <td>PTA Cost per Acre of CREDIT for MDOT SHA</td> <td align="right">\$199,681</td> <td></td> </tr> </tbody> </table>	MDOT SHA Costs	DNR Costs	Totals	MDOT SHA Funding Contribution to Captain John Smith Plaza Redevelopment Project	\$ 200,000	\$ 200,000	Total Costs	\$ 200,000	\$ 200,000	PTA Cost per Acre of CREDIT for MDOT SHA	\$199,681	
MDOT SHA Costs	DNR Costs	Totals											
MDOT SHA Funding Contribution to Captain John Smith Plaza Redevelopment Project	\$ 200,000	\$ 200,000											
Total Costs	\$ 200,000	\$ 200,000											
PTA Cost per Acre of CREDIT for MDOT SHA	\$199,681												

Project Balance Sheet

Total Costs	-\$200,000	\$0
Balance of Costs	-\$200,000	\$0

ATTACHMENT A
Page 1 of 2

Location of South Beach Plaza at Sandy Point State Park



AE CONSULTANTS
Melville Thomas Architects, Inc.
 ARCHITECT
 100 WASHINGTON AVENUE, SUITE 1100
 BALTIMORE, MD 21201
 CIVIL ENGINEER
 100 WASHINGTON AVENUE, SUITE 1100
 BALTIMORE, MD 21201
 ARCHITECT
 100 WASHINGTON AVENUE, SUITE 1100
 BALTIMORE, MD 21201
 ENGINEER
 100 WASHINGTON AVENUE, SUITE 1100
 BALTIMORE, MD 21201

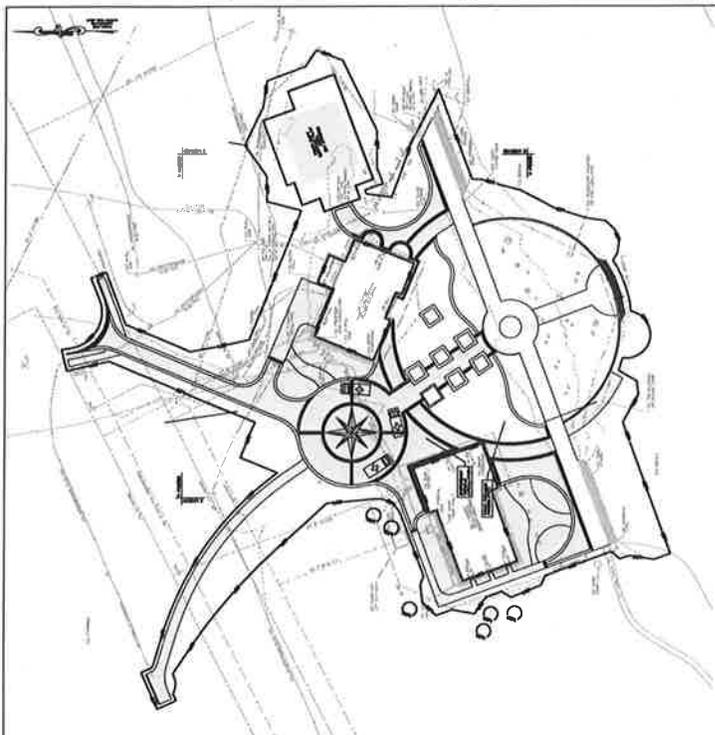


PROJECT TITLE
**Improvements to the
 Environment Center,
 Plaza and Playground,
 Sandy Point State Park**
 1100 E College Pkwy
 Annapolis, MD 21409
 Anne Arundel County

ATTACHMENT A
 Page 2 of 2
 P01532 G-1
 Task Number: 10

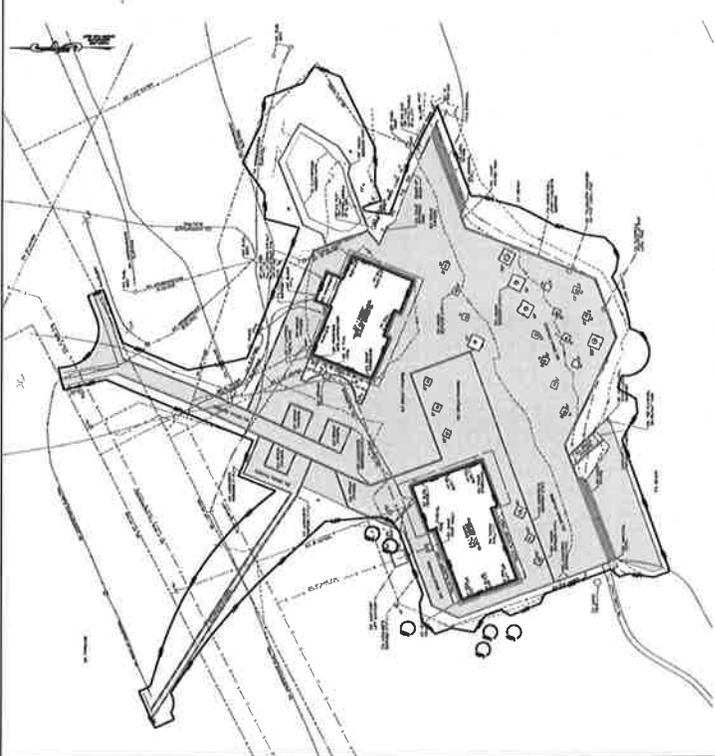
NO.	DATE	DESCRIPTION
1	4.22.2016	CONTRACT ADMINISTRATION
2	5.13.2017	50% DESIGN REVIEW
3	5.22.2017	50% DESIGN REVIEW
4	5.22.2017	50% DESIGN REVIEW
5	5.22.2017	50% DESIGN REVIEW
6	5.22.2017	50% DESIGN REVIEW
7	5.22.2017	50% DESIGN REVIEW
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98	5.22.2017	50% DESIGN REVIEW
99	5.22.2017	50% DESIGN REVIEW
100	5.22.2017	50% DESIGN REVIEW

DRAWING TITLE
**STORMWATER
 IMPERVIOUS AREA
 MAP**
 DGS PROJECT NO. P-021-139-001
 ISSUE DATE 6.22.2017
C4.00



EXISTING CONDITIONS IMPERVIOUS AREA MAP
 SCALE 1"=40'

EXISTING CONDITIONS
 IMPERVIOUS AREA ANALYSIS
 IMPERVIOUS AREA = 2,922 SQ. FT. OR 0.07 ACRES



PROPOSED CONDITIONS IMPERVIOUS AREA MAP
 SCALE 1"=40'

PROPOSED CONDITIONS
 IMPERVIOUS AREA ANALYSIS
 IMPERVIOUS AREA = 2,180 SQ. FT. OR 0.05 ACRES





Tree Planting Areas to be Designed, Constructed, and Maintained by DNR for MDOT SHA CREDIT



Tree Planting Areas to be Designed, Constructed, and Maintained by DNR for MDOT SHA CREDIT

Sample Partnering Agreements - Example 5

EFFECTIVE DATE: _____
(PennDOT shall insert)

AGREEMENT NO.:
FEDERAL I.D. NO.:
SAP VENDOR NO.:

CONTRIBUTION AGREEMENT

This Contribution Agreement (Agreement) is made by and between the Commonwealth of Pennsylvania (Commonwealth), acting through the Department of Transportation (PennDOT),

and

Pittsburgh Water and Sewer Authority (PWSA), an authority formed under the laws of the Commonwealth.

BACKGROUND

PennDOT and PWSA are partnering to reduce sediment pollution in the Saw Mill Run Watershed as part of the pollutant reduction plan obligations in the National Pollutant Discharge Elimination System permits for their respective municipal separate storm sewer systems. PennDOT will issue and award a request for proposals to construct a project in the City limits within the Watershed to reduce sediment pollution. PennDOT will also contribute five hundred thousand dollars (\$500,000) toward the Project. PWSA will contribute up to six million four hundred thousand dollars (\$6,400,000) toward the Project.

The parties, intending to be legally bound, agree as follows:

1. **Definitions.** Words used in this Agreement have the following meanings unless the context clearly indicates otherwise.

- a. "Agreement" when capitalized means this Contribution Agreement.
- b. "Combined Contribution" means the sum of PWSA's Contribution and PennDOT's Contribution.
- c. "Commonwealth" means the Commonwealth of Pennsylvania.
- d. "MS4" means a municipal separate storm sewer system.
- e. "NPDES" means the National Pollutant Discharge Elimination System.
- f. "PennDOT" means the Commonwealth of Pennsylvania, acting through its Department of Transportation.
- g. "PennDOT's Contribution" means the sum of five hundred thousand (\$500,000) dollars and any additional funds that PennDOT elects to make available consistent with Section 2(g) below.
- h. "PRP" means a pollutant reduction plan.
- i. "PWSA's Contribution" means the sum of six million four hundred thousand (\$6,400,000) dollars and any additional payments made by PWSA to PennDOT pursuant to Section 3(e) below.
- j. "PennDOT's Pro Rata Share" means a percentage calculated as the quotient of PennDOT's Contribution and the Combined Contribution.
- k. "Project" when capitalized means the project in the Watershed to reduce sediment pollution.

- l. "PWSA" means the Pittsburgh Water and Sewer Authority.
- m. "PWSA's Pro Rata Share" means a percentage calculated as the quotient of PWSA's Contribution and the Combined Contribution.
- n. "RFP" means a request for proposals. When preceded by the definite article, RFP means the RFP for the Project.
- o. "Watershed" when capitalized means the Saw Mill Run Watershed.

2. Responsibilities of PennDOT.

- a. **Issue the RFP.** PennDOT shall issue an RFP to construct the Project with terms and conditions consistent with the draft RFP attached and incorporated into this Agreement as Exhibit A.
- b. **Evaluation.** PennDOT shall evaluate the proposals consistent with the RFP. The committee to evaluate proposals shall have a total of five members and shall include **two** members assigned by PWSA.
- c. **Technical Nonconforming Proposals.** PennDOT shall notify PWSA in writing of any technical nonconformities in an offeror's proposal that PennDOT intends to waive. If PennDOT anticipates that the technical nonconformities will increase the cost of the Project above six million five hundred (\$6,900,000) dollars, then PennDOT shall state the amount of the increase in the notice, whether PennDOT elects to make additional state funds available and the amount of additional contribution required from PWSA. PennDOT shall not waive the technical nonconformities unless PWSA concurs to the waiver in writing.
- d. **Final Ranking.** PennDOT shall consult with PWSA as part of any best and final offer process conducted. PennDOT shall provide the final ranking to PWSA at least 14 days before beginning contract negotiations. Thereafter

PennDOT shall conduct contract negotiations and award a contract consistent with the RFP.

- e. **Rejection.** Upon receiving a written notice and statement from PWSA consistent with Section 3(d) below, PennDOT shall exercise its discretion to reject all proposals or cancel the request for proposals. PennDOT reserves the right to reject all proposals or cancel the request for proposals consistent with the RFP regardless of any election, or lack thereof, by PWSA.
- f. **Award.** PennDOT shall negotiate a contract with the selected offeror consistent with the RFP. PennDOT shall consult with PWSA during contract negotiations and shall provide a copy of the proposed contract, along with all incorporated plans and specifications, to PWSA at least 30 days prior to fully executing it.
- g. **Contribution.** PennDOT shall make five hundred thousand dollars (\$500,000) available for the Project. PennDOT may elect, at its sole discretion, to make additional state funds available for the Project.
- h. **Change Orders.** After a contract is fully executed with the selected offeror, PennDOT shall require the selected offeror to construct the Project in accordance with the contract. PennDOT shall not authorize the selected offeror to change the Project from the plans and specifications without written concurrence of PWSA unless the additional cost of such change is less than five thousand (\$5,000) dollars and the aggregate cost of all such changes is less than fifty thousand (\$50,000) dollars.
- i. **Reimbursement.** If PennDOT cancels the request for proposals without fully executing a contract for construction of the Project, then PennDOT shall reimburse 100% of PWSA's Contribution to PWSA within thirty days of the cancellation. If PennDOT determines after making the final payment to the selected offeror that the total cost of the Project is less than Combined

Contribution, then PennDOT shall reimburse PWSA's Pro Rata Share of the difference to PWSA within thirty days of making the final payment. If PennDOT determines after making the final payment that the total cost of the Project exceeds the Combined Contribution, then PennDOT shall send an invoice to PWSA in the amount of the difference.

- j. **Approvals by PennDOT.** For purposes of this Agreement, consent, concurrence or approval by PennDOT may be provided by the Deputy Secretary for Highway Administration or such other PennDOT employee as designated by the Deputy Secretary.

3. **Responsibilities of PWSA.**

- a. **Contribution.** Within 60 days of payment milestone dates identified in the Request for Proposal, PWSA shall make milestone payments to PennDOT with the sum totaling six million four hundred thousand (\$6,400,000) dollars.
- b. **Evaluation.** PWSA shall assign and make available **two** individuals to serve on the committee to evaluate proposals.
- c. **Technical Nonconforming Proposals.** Within 30 days of receipt of notice from PennDOT that PennDOT intends to waive technical nonconformities in an offeror's proposal, PWSA shall notify PennDOT in writing whether it concurs in the waiver. Failure to respond within 30 days shall be deemed nonconcurrence. If PWSA concurs and the notice from PennDOT indicates that an additional contribution is required from PWSA, then PWSA shall make a payment to PennDOT in the amount of the required additional contribution within 30 of sending its written concurrence. No additional payment shall be required if PWSA does not concur.

- d. **Election.** At any time prior to the time when a contract is fully executed, PWSA may notify PennDOT in writing that it elects to have PennDOT reject all proposals or cancel the request for proposals.
- e. **Reimbursement.** Within 30 days of receiving an invoice from PennDOT pursuant to Section 2(i) above, PWSA shall make a payment to PennDOT in the amount of the invoice.
- f. **Payment Method.** All payments made in satisfaction of the requirements of this Section 3 shall be by corporate check or the like made payable to the “Commonwealth of Pennsylvania,” with a notation referencing **[INSERT ACCOUNT INFORMATION]**, and shall be sent to:
 - PA Department of Transportation
 - Bureau of Fiscal Management
 - P.O. Box 62190
 - Harrisburg, PA 17106
- g. **Maintenance.** PWSA shall be responsible for enforcing long term operation and maintenance of the improvements constructed by the Project by the responsible entity consistent with the RFP and shall be responsible for long term operation and maintenance of any improvements not maintained by a responsible entity.
- h. **Approvals by PWSA.** For purposes of this Agreement, consent, concurrence or approval by PWSA may be provided by the Executive Director or such other PWSA employee as designated by the Executive Director.

4. **Credit Sharing.** The parties will make every effort to obtain full credit for both for all of the sediment reduction achieved by the Project. To the extent credit must be divided between the parties, PWSA’s Pro Rata Share of the available credit will go to PWSA and the remaining credit will go to PennDOT.

6. **Sufficient Funds.** PWSA, by executing this Agreement, certifies it has on hand funds to meet its contribution and reimbursement obligations.

7. **Indemnification.** Unless otherwise agreed to by the parties in writing, in addition to PWSA's contribution and reimbursement obligations, PWSA shall indemnify and (if requested) defend PennDOT, its agents and employees from, and be solely responsible for, the payment and satisfaction of awards, judgments, claims, costs, and damages, including costs of appraisers and attorneys, witness fees, and other court costs and expenses resulting from the following:

- a. Changes required to be made to PennDOT's approved plans and specifications for the Project made necessary by requests by and for PWSA.
- b. Time delays and extensions of time or termination of work requested or caused by PWSA.
- c. Right-of-way and other property damages resulting from the acquisition or condemnation of the lands necessary for or the construction of the Project made necessary by requests by and for PWSA. Right-of-way and other property damages, as used in this section, shall include consequential damages; damages arising from de facto or inverse takings; special damages for displacement; damages for the preemption, destruction, alteration, blocking and diversion of facilities; and other damages that may be claimed or awarded within the purview of the Eminent Domain Code of 1964, as amended, the State Highway Law of 1945, as amended, and eminent domain case law of the Commonwealth of Pennsylvania; and claims awarded or entered against PennDOT or PWSA.
- d. Relocation of utility facilities, including gas, water, railroad, sewer, electric, telecommunications or drainage facilities, in the Project area and made necessary by requests by and for PWSA.

- e. Where made necessary by requests by and for PWSA, preparation or revisions of environmental impact statements, negative declarations, environmental reports or other documents required by law and environmental litigation; public environmental hearings made necessary by the planning, design and environmental litigation; public environmental hearings made necessary by the planning, design, and construction of the Project and Supplemental Improvements; and increased planning, design, construction, utility relocation and right-of-way costs resulting therefrom.
- f. Unforeseen costs and expenses not included in the Project cost estimates, but which are directly related to or made necessary by requests by and for PWSA.
- g. Injuries to and damages received or sustained by people or property arising out of, resulting from, or connected with an act, omission, neglect, or misconduct of PWSA and its contractors, their officers, agents and employees with respect to maintenance, operation and use of the completed Supplemental Improvements or otherwise with respect to this Agreement.

11. **Standard Provisions.** PennDOT shall require the selected offeror to comply with the standard Commonwealth provisions consistent with the RFP.

12. **Right-to-Know Law.** The Pennsylvania Right-to-Know Law, 65 P.S. §§ 67.101 – 3104, applies to this Agreement. Therefore, this Agreement is subject to, and PWSA shall comply with, the clause entitled *Contract Provisions – Right to Know Law*, attached as Exhibit B. As used in this Agreement, the term Contractor refers to PWSA.

13. **Termination.** The parties may terminate this Agreement for convenience or non-appropriation until the date when a contract with the selected offeror is fully executed, but not after that date. Each party shall bear the costs it incurred during the time this Agreement was in effect. Nothing contained in the Agreement shall be deemed to be a waiver by PennDOT of its discretion to abandon or postpone the Project.

14. **Amendments and Modification.** No alterations or variations to this Agreement shall be valid unless made in writing and signed by the parties. Amendments to this Agreement shall be accomplished through a formal written document signed by the parties with the formality of the original Agreement, with exception of the notice section.

15. **Titles Not Controlling.** Titles of sections are for reference only, and shall not be used to construe the language in this Agreement.

16. **Severability.** The provisions of this Agreement shall be severable. If a phrase, clause, sentence or provision of this Agreement is declared to be contrary to the Constitution of Pennsylvania or of the United States or of the laws of the Commonwealth and its applicability to a government, agency, person, or circumstance is held invalid, the validity of the remainder of this Agreement and its applicability to a government, agency, person, or circumstance shall not be affected.

17. **No Waiver.** Either party may elect not to enforce its rights and remedies under this Agreement in the event of a breach by the other party. Failure by either party to enforce its rights and remedies shall not be construed as a waiver of a subsequent breach of the same or another term or condition of this Agreement.

18. **Independence of the Parties.** Nothing contained in this Agreement is intended or shall be construed to create or establish the relationship of partners between PennDOT and PWSA, or as constituting either party as the other party's representative or general agent.

20. **Assignment.** Neither party may assign this Agreement, either in whole or in part, without the other party's written consent.

21. **No Third-Party Beneficiary Rights.** This Agreement does not create or intend to confer rights in or on persons or entities not a party to this Agreement.

22. **Notice.** Notices and reports arising out of, or from, this Agreement shall be in writing and given to the parties at the addresses below, either by regular mail, facsimile, email, or delivery in person. A party may revise its contact information by providing written notice to the other party.

If to PennDOT:

PennDOT
Highway Administration Executive Office
8th Fl Commonwealth Keystone Building
Harrisburg, PA 17120

If to PWSA:

Executive Director
Pittsburgh Water and Sewer Authority
1200 Penn Ave,
Pittsburgh, PA 15222

23. **Force Majeure.** Neither party shall be liable for failure to perform if the failure to perform arises out of causes beyond the control and without the fault or negligence of the nonperforming party. Causes may include acts of God or the public enemy, fires, floods, epidemics, quarantine restrictions, freight embargoes and unusually severe weather. This provision shall become effective only if the party failing to perform immediately notifies the other party of the extent and nature of the problem, limits delay in performance to that required by the event, and takes reasonable steps to minimize delays. This provision shall not be effective unless the failure to perform is beyond the control and without the fault or negligence of the nonperforming party.

24. **Integration and Merger.** This Agreement, when executed, approved, and delivered, shall constitute the final, complete, and exclusive Agreement between the parties containing the terms and conditions agreed on by the parties. Representations,

understandings, promises and agreements pertaining to the subject matter of this Agreement made before or at the time this Agreement is executed are superseded by this Agreement unless specifically accepted by this Agreement. No conditions precedent to the performance of this Agreement exist, except as expressly set forth in this Agreement.

25. **Choice of Law.** This Agreement shall be construed and interpreted in accordance with the laws of the Commonwealth of Pennsylvania, without regard to conflicts of law principles.

26. **Automated Clearing House Network Provisions.** Submission of invoices for purposes of reimbursement or payment by PennDOT shall be made through the Pennsylvania Electronic Payment Program. The following provisions apply:

- a. PennDOT will make payments to PWSA through Automated Clearing House (ACH). Within 10 days of the execution of this Agreement, PWSA must submit or must have already submitted its ACH and electronic addenda information, if desired, on an ACH enrollment form obtained at: www.vendorregistration.state.pa.us/cvmupaper/Forms/ACH-EFTenrollmentform.pdf to the Commonwealth's Payable Service Center, Vendor Data Management Unit at 717-214-0140 (FAX) or by mail to the Office of Comptroller Operations, Bureau of Payable Services, Payable Service Center, Vendor Data Management Unit, 555 Walnut Street – 9th Floor, Harrisburg, PA 17101.
- b. PWSA must submit a unique invoice number with each invoice submitted. The unique invoice number will be listed on the Commonwealth of Pennsylvania's ACH remittance advice to enable the PWSA to properly apply the state agency's payment to the respective invoice or program.
- c. It is the responsibility of PWSA to ensure that the ACH information contained in the Commonwealth's Central Vendor Master File is accurate and complete.

Failure to maintain accurate and complete information may result in delays in payments.

26. **Offset.** PWSA agrees that PennDOT may offset the amount of any state tax or Commonwealth liability of the Borough or its affiliates and subsidiaries that is owed to the Commonwealth against any payments due the Borough under this or any other contract with the Commonwealth.

27. **Counterparts.** This Agreement may be signed in counterparts, each of which shall be deemed to be an original and all of which together shall constitute one and the same instrument.

26. **Effective Date.** This Agreement shall not be effective until the necessary Commonwealth officials required by law have executed it. Following full execution, PennDOT shall insert the effective date at the top of page 1.

[The remainder of this page is intentionally left blank.]

The parties have executed this Agreement to be effective as of the date of the last signature affixed below.

ATTEST

PITTSBURGH WATER AND SEWER AUTHORITY

Title: DATE

BY _____
Title: DATE

If a Corporation, a senior corporate officer must sign; if a sole proprietorship, only the owner must sign; if a partnership, only one partner need sign; if a limited partnership, only the general partner must sign. If a Municipality, Authority or other entity, please attach a resolution.

DO NOT WRITE BELOW THIS LINE--FOR COMMONWEALTH USE ONLY

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BY _____
Deputy Secretary DATE

APPROVED AS TO LEGALITY
AND FORM

FUNDS COMMITMENT DOC. NO. _____
CERTIFIED FUNDS AVAILABLE UNDER
SAP NO. _____
SAP COST CENTER _____
GL. ACCOUNT _____
AMOUNT _____

BY _____
for Chief Counsel Date

BY _____
Deputy General Counsel Date

BY _____
for Office of Comptroller Operations Date

BY _____
Deputy Attorney General Date

**STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS
PARTNERSHIP PLAN**

4.2.5 Weblinks

PennDOT District Office - <https://www.penndot.gov/RegionalOffices/Pages/default.aspx>

DEP BMP Effectiveness Values -

<http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=53605&DocName=13%20BMP%20EFFECTIVENESS%20VALUES.PDF%20%20%3Cspan%20style%3D%22color%3Ablue%3B%22%3E%3C%2Fspan%3E>

Chesapeake Bay Program expert panel reports - <https://chesapeakestormwater.net/bmp-resources/>

DEP's NPDES Stormwater Discharges from Small MS4 BMP Effectiveness Values –

<http://www.depgreenport.state.pa.us/elibrary/PDFProvider.ashx?action=PDFStream&docID=53605&chksum=&revision=0&docName=13+BMP+EFFECTIVENESS+VALUES.PDF+++%3Cspan+style%3D%22color%3Ablue%3B%22%3E%3C%2Fspan%3E&nativeExt=pdf&PromptToSave=False&Size=122035&ViewerMode=2&overlay=0>

DEP's NPDES Stormwater Discharges from Small MS4 PRP Instructions (3800-PM-BCW0100k) -

[http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=11734&DocName=3800-PM-BCW0100k%20PRP%20Instructions%20\(3-28-17\)%20\(003\).pdf](http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=11734&DocName=3800-PM-BCW0100k%20PRP%20Instructions%20(3-28-17)%20(003).pdf)

Chesapeake Bay Panel's Stream Restoration FAQ sheet - http://chesapeakestormwater.net/wp-content/uploads/dlm_uploads/2018/03/Stream-Restoration-FAQ_final-1.pdf

MD SHA Contract AX7665D82 Bid Results-

https://www.roads.maryland.gov/ohd2/AX7665D82_Selection_Results.pdf

MDE Stormwater Report Costs -

https://mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Documents/King_Hagan_Stormwater%20Cost%20Report%20to%20MDE_Final%20Draft_12Oct2011.pdf

MD SHA Contract FR5975182 Bid Tabulation -

http://apps.roads.maryland.gov/businesswithsha/contBidProp/ohd/constructContracts/CICtextview.asp?filename=17_10_16.FR5975182.tab.z&selection=tab&contract=FR5975182

MD SHA Contract AA8955182 Bid Tabulation -

http://apps.roads.maryland.gov/BusinessWithSHA/contBidProp/ohd/constructContracts/tab/PDF/15_03_18.AA8955182%20-%20WEB-TABS.tab.pdf

DelDOT Stormwater and NPDES Training –

<https://deldot.gov/Business/drc/pdfs/stormwater/guidelines/2019-05-21-SWM-NPDES-Training.pdf>



5.0 DEPLOYMENT PLAN

5.1 INTRODUCTION AND METHODS

Stantec has been assisting PennDOT with advertising a stream restoration partnership project with Capital Region Water (CRW) in Dauphin County. CRW, is a municipal authority that improves, maintains, and operates the greater Harrisburg area’s water system and infrastructure — from raindrop to river. Capital Region Water is the steward for drinking water, wastewater and stormwater services for the City of Harrisburg and portions of surrounding municipalities including Penbrook, Paxtang and Steelton Boroughs and Susquehanna, Swatara and Lower Paxton Townships. Stantec, PennDOT, CRW, DEP and EPA have met several times to discuss the partnering process and status of the project (minutes are included in Section 5.2).



5.2 CORRESPONDANCE AND MEETINGS



PennDOT Stream Restoration Municipal Partnership Research

Capital Region Water

March 5, 2019 11:00 AM

AGENDA:

- Introductions
- Background information (Daryl St. Clair)
 - Research Project
 - Partnering Guidebook Preparation
 - Status of current research (Stantec)
 - Deployment Project and RFP
- Next Steps
 - Verify municipalities still on board
 - PennDOT has legal agreement template ready
 - PennDOT is going through first MS4 crediting process now with York County Pilot
- Discuss consortium location and scope of project
 - Time constraints for construction
 - Is project in PRP?
 - Has a public meeting occurred?
- Background information on consortium PRP
- Other PennDOT MS4 Updates
 - DEP approval of I-83 widening partnership
 - Smart Green Corridor RFP

ACTION ITEMS

PennDOT Stream Restoration Municipal Partnership Research

Capital Region Water

March 5, 2019 11:00 AM

Name:	Organization:	Email Address:
JEFF ROBERTSON	STANTEC	jeff.robertson2@stantec.com
Claire Maulhardt	Capital Region Water	claire.maulhardt@capitalregionwater.com
DANIEL STUMP	PENNDOT	DSTUMP@PA.GOV
Jeff MacKay	NTM Engineering	jmacKay@ntmeng.com
Randy Allen	LPT	rallen@lowermerion-pa.gov
George Wolfe	LPT	gwolfe@lowermerion-pa.gov
Jame Eberl	DEP	jeberl@pa.gov
Bradley Gotshall	LPT	bgotshall@lowermerion-pa.gov
Betsy Logan	Susquehanna Twp	blogan@susquehanna.twp.pa.gov
David Kratzer	" "	dkratzer@susquehanna.twp.pa.gov
Elizabeth Kanner	Stantec	ekanner@stantec.com



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
HARRISBURG, PENNSYLVANIA

OFFICE OF
SECRETARY OF TRANSPORTATION

March 12, 2019

Claire Maulhardt, PLA, Program Manager
Capital Region Water
212 Locust Street, Suite 500
Harrisburg, PA 17101

Dear Ms. Maulhardt:

This is a follow up to our March 5 meeting with Lower Paxton Township and Susquehanna Township where it was determined beneficial if PennDOT issued a letter to kick off a MS4 Partnership Agreement. PennDOT has received federal dollars to conduct research on MS4 Stream Restoration standards and municipal partnerships and wishes to deploy a contract with a collaboration of municipalities in Dauphin County. PennDOT will supplement the federal dollars with state dollars. We estimate the total federal and state contribution between \$500,000 and \$1,000,000.

Attached is a Contribution Agreement template and Request for Proposal template for you to share with the collaboration for the purpose of providing PennDOT feedback. For this research project and contract, PennDOT is not requiring the collaboration to contribute funds, but should they be willing to do so, PennDOT will add those dollars or work into its contract. For this project, PennDOT is looking for the collaboration to provide a location(s) and land for a vendor to perform work on. For estimating purposes another PennDOT pilot project yielded 1,990 ft of stream restoration for \$750,000 including long term maintenance (231,270 TSS/ yr).

If you could please forward the attachments and coordinate with the municipalities. Additional questions can be emailed to me at dstclair@pa.gov. I can also be reached at 717-787-9512 for further assistance.

Sincerely,

Daryl R. St. Clair, P.E., Special Assistant
Highway Administration

Attachments

CC: Lee Murphy, Scott Arwood, Jamie Eberl, DEP
George W. McAuley P.E., Jr., Deputy Secretary
Chris Duda, P.E., ADE-D 8-U
Rich Heineman, BOMO
Teresa Swisher, Planning
Dawn Grabuloff, Office Services
Jeff Robertson, P.E., Stantec
Jeff MacKay, P.E., NTM

Draft Contribution Agreement

EFFECTIVE DATE: _____
(PennDOT shall insert)

AGREEMENT NO.:
FEDERAL I.D. NO.:
SAP VENDOR NO.:

CONTRIBUTION AGREEMENT

This Contribution Agreement (Agreement) is made by and between the Commonwealth of Pennsylvania (Commonwealth), acting through the Department of Transportation (PennDOT),

and

Municipality an authority formed under the laws of the Commonwealth.

BACKGROUND

PennDOT and Municipality are partnering to reduce sediment pollution in the xxx Watershed as part of the pollutant reduction plan obligations in the National Pollutant Discharge Elimination System permits for their respective municipal separate storm sewer systems. PennDOT will issue and award a request for proposals to construct a project in the Watershed to reduce sediment pollution. PennDOT will also contribute at least five hundred thousand dollars (\$500,000) toward the Project. Municipality will contribute xxx toward the Project.

The parties, intending to be legally bound, agree as follows:

1. **Definitions.** Words used in this Agreement have the following meanings unless the context clearly indicates otherwise.

- a. "Agreement" when capitalized means this Contribution Agreement.
- b. "Combined Contribution" means the sum of Municipality Contribution and PennDOT's Contribution.
- c. "Commonwealth" means the Commonwealth of Pennsylvania.
- d. "MS4" means a municipal separate storm sewer system.
- e. "NPDES" means the National Pollutant Discharge Elimination System.
- f. "PennDOT" means the Commonwealth of Pennsylvania, acting through its Department of Transportation.
- g. "PennDOT's Contribution" means the sum of five hundred thousand (\$500,000) dollars and any additional funds that PennDOT elects to make available consistent with Section 2(g) below.
- h. "PRP" means a pollutant reduction plan.
- i. "Municipality Contribution" means the sum of xxx dollars and any additional payments made by Municipality to PennDOT pursuant to Section 3(e) below.
- j. "PennDOT's Pro Rata Share" means a percentage calculated as the quotient of PennDOT's Contribution and the Combined Contribution.
- k. "Project" when capitalized means the project in the Watershed to reduce sediment pollution.
- l. Municipality acronym means the xxxx Authority.

- m. Municipality Pro Rata Share” means a percentage calculated as the quotient of Municipality Contribution and the Combined Contribution.
- n. “RFP” means a request for proposals. When preceded by the definite article, RFP means the RFP for the Project.
- o. “Watershed” when capitalized means the xxx Watershed.

2. **Responsibilities of PennDOT.**

- a. **Issue the RFP.** PennDOT shall issue an RFP to construct the Project with terms and conditions consistent with the draft RFP attached and incorporated into this Agreement as Exhibit A.
- b. **Evaluation.** PennDOT shall evaluate the proposals consistent with the RFP. The committee to evaluate proposals shall have a total of five members and shall include **two** members assigned by Municipality.
- c. **Technical Nonconforming Proposals.** PennDOT shall notify Municipality in writing of any technical nonconformities in an offeror’s proposal that PennDOT intends to waive. If PennDOT anticipates that the technical nonconformities will increase the cost of the Project above xxx dollars, then PennDOT shall state the amount of the increase in the notice, whether PennDOT elects to make additional state funds available and the amount of additional contribution required from Municipality. PennDOT shall not waive the technical nonconformities unless Municipality concurs to the waiver in writing.
- d. **Final Ranking.** PennDOT shall consult with Municipality as part of any best and final offer process conducted. PennDOT shall provide the final ranking to Municipality at least 14 days before beginning contract negotiations.

Thereafter PennDOT shall conduct contract negotiations and award a contract consistent with the RFP.

- e. **Rejection.** Upon receiving a written notice and statement from Municipality consistent with Section 3(d) below, PennDOT shall exercise its discretion to reject all proposals or cancel the request for proposals. PennDOT reserves the right to reject all proposals or cancel the request for proposals consistent with the RFP regardless of any election, or lack thereof, by Municipality.
- f. **Award.** PennDOT shall negotiate a contract with the selected offeror consistent with the RFP. PennDOT shall consult with Municipality during contract negotiations and shall provide a copy of the proposed contract, along with all incorporated plans and specifications, to Municipality at least 30 days prior to fully executing it.
- g. **Contribution.** PennDOT shall make up to five hundred thousand dollars (\$500,000) available for the Project. PennDOT may elect, at its sole discretion, to make additional state funds available for the Project.
- h. **Change Orders.** After a contract is fully executed with the selected offeror, PennDOT shall require the selected offeror to construct the Project in accordance with the contract. PennDOT shall not authorize the selected offeror to change the Project from the plans and specifications without written concurrence of Municipality unless the additional cost of such change is less than five thousand (\$5,000) dollars and the aggregate cost of all such changes is less than fifty thousand (\$50,000) dollars.
- i. **Reimbursement.** If PennDOT cancels the request for proposals without fully executing a contract for construction of the Project, then PennDOT shall reimburse 100% of Municipality Contribution to Municipality within thirty days of the cancellation. If PennDOT determines after making the final

payment to the selected offeror that the total cost of the Project is less than Combined Contribution, then PennDOT shall reimburse Municipality Pro Rata Share of the difference to Municipality within thirty days of making the final payment. If PennDOT determines after making the final payment that the total cost of the Project exceeds the Combined Contribution, then PennDOT shall send an invoice to Municipality in the amount of the difference.

- j. **Approvals by PennDOT.** For purposes of this Agreement, consent, concurrence or approval by PennDOT may be provided by the Deputy Secretary for Highway Administration or such other PennDOT employee as designated by the Deputy Secretary.

3. **Responsibilities of PWSA.**

- a. **Contribution.** Within 30 days of the effective date of this Agreement, Municipality shall make a payment to PennDOT in the amount of xx dollars.
- b. **Evaluation.** Municipality shall assign and make available xx individuals to serve on the committee to evaluate proposals.
- c. **Technical Nonconforming Proposals.** Within 30 days of receipt of notice from PennDOT that PennDOT intends to waive technical nonconformities in an offeror's proposal, Municipality shall notify PennDOT in writing whether it concurs in the waiver. Failure to respond within 30 days shall be deemed nonconcurrence. If Municipality concurs and the notice from PennDOT indicates that an additional contribution is required from Municipality, then Municipality shall make a payment to PennDOT in the amount of the required additional contribution within 30 of sending its written concurrence. No additional payment shall be required if Municipality does not concur.

- d. **Election.** At any time prior to the time when a contract is fully executed, Municipality may notify PennDOT in writing that it elects to have PennDOT reject all proposals or cancel the request for proposals.
- e. **Reimbursement.** Within 30 days of receiving an invoice from PennDOT pursuant to Section 2(i) above, Municipality shall make a payment to PennDOT in the amount of the invoice.
- f. **Payment Method.** All payments made in satisfaction of the requirements of this Section 3 shall be by corporate check or the like made payable to the “Commonwealth of Pennsylvania,” with a notation referencing **[INSERT ACCOUNT INFORMATION]**, and shall be sent to:
 - PA Department of Transportation
 - Bureau of Fiscal Management
 - P.O. Box 62190
 - Harrisburg, PA 17106
- g. **Maintenance.** Municipality shall be responsible for enforcing long term operation and maintenance of the improvements constructed by the Project by the responsible entity consistent with the RFP and shall be responsible for long term operation and maintenance of any improvements not maintained by a responsible entity.
- h. **Approvals by Municipality.** For purposes of this Agreement, consent, concurrence or approval by Municipality may be provided by the Executive Director or such other Municipality employee as designated by the Executive Director.

4. **Credit Sharing.** The parties will make every effort to obtain full credit for both for all of the sediment reduction achieved by the Project. To the extent credit must be divided between the parties, Municipality Pro Rata Share of the available credit will go to Municipality and the remaining credit will go to PennDOT.

6. **Sufficient Funds.** Municipality, by executing this Agreement, certifies it has on hand funds to meet its contribution and reimbursement obligations.

7. **Indemnification.** Unless otherwise agreed to by the parties in writing, in addition to Municipality contribution and reimbursement obligations, Municipality shall indemnify and (if requested) defend PennDOT, its agents and employees from, and be solely responsible for, the payment and satisfaction of awards, judgments, claims, costs, and damages, including costs of appraisers and attorneys, witness fees, and other court costs and expenses resulting from the following:

- a. Changes required to be made to PennDOT's approved plans and specifications for the Project made necessary by requests by and for Municipality .
- b. Time delays and extensions of time or termination of work requested or caused by Municipality.
- c. Right-of-way and other property damages resulting from the acquisition or condemnation of the lands necessary for or the construction of the Project made necessary by requests by and for Municipality. Right-of-way and other property damages, as used in this section, shall include consequential damages; damages arising from de facto or inverse takings; special damages for displacement; damages for the preemption, destruction, alteration, blocking and diversion of facilities; and other damages that may be claimed or awarded within the purview of the Eminent Domain Code of 1964, as amended, the State Highway Law of 1945, as amended, and eminent domain case law of the Commonwealth of Pennsylvania; and claims awarded or entered against PennDOT or Municipality.
- d. Relocation of utility facilities, including gas, water, railroad, sewer, electric, telecommunications or drainage facilities, in the Project area and made necessary by requests by and for Municipality.

- e. Where made necessary by requests by and for Municipality, preparation or revisions of environmental impact statements, negative declarations, environmental reports or other documents required by law and environmental litigation; public environmental hearings made necessary by the planning, design and environmental litigation; public environmental hearings made necessary by the planning, design, and construction of the Project and Supplemental Improvements; and increased planning, design, construction, utility relocation and right-of-way costs resulting therefrom.
- f. Unforeseen costs and expenses not included in the Project cost estimates, but which are directly related to or made necessary by requests by and for Municipality.
- g. Injuries to and damages received or sustained by people or property arising out of, resulting from, or connected with an act, omission, neglect, or misconduct of Municipality and its contractors, their officers, agents and employees with respect to maintenance, operation and use of the completed Supplemental Improvements or otherwise with respect to this Agreement.

11. **Standard Provisions.** PennDOT shall require the selected offeror to comply with the standard Commonwealth provisions consistent with the RFP.

12. **Right-to-Know Law.** The Pennsylvania Right-to-Know Law, 65 P.S. §§ 67.101 – 3104, applies to this Agreement. Therefore, this Agreement is subject to, and Municipality shall comply with, the clause entitled *Contract Provisions – Right to Know Law*, attached as Exhibit B. As used in this Agreement, the term Contractor refers to Municipality.

13. **Termination.** The parties may terminate this Agreement for convenience or non-appropriation until the date when a contract with the selected offeror is fully executed, but not after that date. Each party shall bear the costs it incurred during the time this

Agreement was in effect. Nothing contained in the Agreement shall be deemed to be a waiver by PennDOT of its discretion to abandon or postpone the Project.

14. **Amendments and Modification.** No alterations or variations to this Agreement shall be valid unless made in writing and signed by the parties. Amendments to this Agreement shall be accomplished through a formal written document signed by the parties with the formality of the original Agreement, with exception of the notice section.

15. **Titles Not Controlling.** Titles of sections are for reference only, and shall not be used to construe the language in this Agreement.

16. **Severability.** The provisions of this Agreement shall be severable. If a phrase, clause, sentence or provision of this Agreement is declared to be contrary to the Constitution of Pennsylvania or of the United States or of the laws of the Commonwealth and its applicability to a government, agency, person, or circumstance is held invalid, the validity of the remainder of this Agreement and its applicability to a government, agency, person, or circumstance shall not be affected.

17. **No Waiver.** Either party may elect not to enforce its rights and remedies under this Agreement in the event of a breach by the other party. Failure by either party to enforce its rights and remedies shall not be construed as a waiver of a subsequent breach of the same or another term or condition of this Agreement.

18. **Independence of the Parties.** Nothing contained in this Agreement is intended or shall be construed to create or establish the relationship of partners between PennDOT and Municipality, or as constituting either party as the other party's representative or general agent.

20. **Assignment.** Neither party may assign this Agreement, either in whole or in part, without the other party's written consent.

21. **No Third-Party Beneficiary Rights.** This Agreement does not create or intend to confer rights in or on persons or entities not a party to this Agreement.

22. **Notice.** Notices and reports arising out of, or from, this Agreement shall be in writing and given to the parties at the addresses below, either by regular mail, facsimile, email, or delivery in person. A party may revise its contact information by providing written notice to the other party.

If to PennDOT:

PennDOT
Highway Administration Executive Office
8th Fl Commonwealth Keystone Building
Harrisburg, PA 17120

If to Municipality:

Click or tap here to enter text.

23. **Force Majeure.** Neither party shall be liable for failure to perform if the failure to perform arises out of causes beyond the control and without the fault or negligence of the nonperforming party. Causes may include acts of God or the public enemy, fires, floods, epidemics, quarantine restrictions, freight embargoes and unusually severe weather. This provision shall become effective only if the party failing to perform immediately notifies the other party of the extent and nature of the problem, limits delay in performance to that required by the event, and takes reasonable steps to minimize

delays. This provision shall not be effective unless the failure to perform is beyond the control and without the fault or negligence of the nonperforming party.

24. **Integration and Merger.** This Agreement, when executed, approved, and delivered, shall constitute the final, complete, and exclusive Agreement between the parties containing the terms and conditions agreed on by the parties. Representations, understandings, promises and agreements pertaining to the subject matter of this Agreement made before or at the time this Agreement is executed are superseded by this Agreement unless specifically accepted by this Agreement. No conditions precedent to the performance of this Agreement exist, except as expressly set forth in this Agreement.

25. **Choice of Law.** This Agreement shall be construed and interpreted in accordance with the laws of the Commonwealth of Pennsylvania, without regard to conflicts of law principles.

26. **Automated Clearing House Network Provisions.** Submission of invoices for purposes of reimbursement or payment by PennDOT shall be made through the Pennsylvania Electronic Payment Program. The following provisions apply:

- a. PennDOT will make payments to Municipality through Automated Clearing House (ACH). Within 10 days of the execution of this Agreement, Municipality must submit or must have already submitted its ACH and electronic addenda information, if desired, on an ACH enrollment form obtained at: www.vendorregistration.state.pa.us/cvmupaper/Forms/ACH-EFTenrollmentform.pdf to the Commonwealth's Payable Service Center, Vendor Data Management Unit at 717-214-0140 (FAX) or by mail to the Office of Comptroller Operations, Bureau of Payable Services, Payable Service Center, Vendor Data Management Unit, 555 Walnut Street - 9th Floor, Harrisburg, PA 17101.

- b. Municipality must submit a unique invoice number with each invoice submitted. The unique invoice number will be listed on the Commonwealth of Pennsylvania's ACH remittance advice to enable the Municipality to properly apply the state agency's payment to the respective invoice or program.
- c. It is the responsibility of Municipality to ensure that the ACH information contained in the Commonwealth's Central Vendor Master File is accurate and complete. Failure to maintain accurate and complete information may result in delays in payments.

26. **Offset.** Municipality agrees that PennDOT may offset the amount of any state tax or Commonwealth liability of the Borough or its affiliates and subsidiaries that is owed to the Commonwealth against any payments due the Borough under this or any other contract with the Commonwealth.

27. **Counterparts.** This Agreement may be signed in counterparts, each of which shall be deemed to be an original and all of which together shall constitute one and the same instrument.

26. **Effective Date.** This Agreement shall not be effective until the necessary Commonwealth officials required by law have executed it. Following full execution, PennDOT shall insert the effective date at the top of page 1.

[The remainder of this page is intentionally left blank.]

The parties have executed this Agreement to be effective as of the date of the last signature affixed below.

ATTEST

MUNICIPALITY

Title: DATE

BY _____
Title: DATE

If a Corporation, a senior corporate officer must sign; if a sole proprietorship, only the owner must sign; if a partnership, only one partner need sign; if a limited partnership, only the general partner must sign. If a Municipality, Authority or other entity, please attach a resolution.

DO NOT WRITE BELOW THIS LINE--FOR COMMONWEALTH USE ONLY

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BY _____
Deputy Secretary DATE

APPROVED AS TO LEGALITY
AND FORM

FUNDS COMMITMENT DOC. NO. _____
CERTIFIED FUNDS AVAILABLE UNDER
SAP NO. _____
SAP COST CENTER _____
GL. ACCOUNT _____
AMOUNT _____

BY _____
for Chief Counsel Date

BY _____
Deputy General Counsel Date

BY _____
for Office of Comptroller Operations Date

BY _____
Deputy Attorney General Date

Request for Proposals Template (RFP)

PennDOT & Municipality MS4 Partnership RFP

PART III

TECHNICAL SUBMITTAL

Statement of Work

PennDOT and Municipality are partnering to reduce sediment pollution in the xx Watershed as part of their PRP obligations in the NPDES permits for their respective MS4s. PennDOT and Municipality request proposals for a project to construct BMPs that reduce sediment pollution discharging to the watershed. The BMPs must conform to PADEP Guidance Documents, and there must be direct nexus between the BMPs and water quality improvement for waterways in the watershed impaired by sediment from urban areas. The proposals must provide for siting, design, permitting, acquisition of property interests, construction, inspection, operation, maintenance, post-construction monitoring and long term operation and maintenance of the BMPs. Long term operation and maintenance must be provided by an entity other than PennDOT or Municipality.

In evaluating proposals, the technical criterion will be based on the amount of sediment reduction credit to be achieved in five years. Sediment reduction credit will be calculated in accordance with PADEP Guidance Documents on PRPs in NPDES permits for MS4s. Bonus points will be awarded for stormwater detention and for separation of stormwater discharges from combined sewer systems.

Definitions

The following words and terms, when used in this Statement of Work, have the following meanings, unless the context clearly indicates otherwise.

BMP. A best management practice. BMPs related to stormwater discharge are sometimes also referred to as stormwater control measures.

DCCD. Dauphin County Conservation District

xx Watershed. The area of Dauphin County, Pennsylvania that drains into the xx Watershed. The xx Watershed is a subwatershed of the xx River Basin, which is part of the xx River Watershed.

Combined Sewer System (CSS). A sewer system that has been designed to serve as both a sanitary sewer and a storm sewer.

Construction. When used to denote a period of time, construction means the period that begins when physical work starts on the BMPs identified in the final PRP and ends when the vendor supplies PennDOT with as-built records sealed by a licensed professional documenting that all BMPs have been fully constructed in accordance with the design drawings.

Direct Nexus. A connection between a BMP and a water quality improvement sufficient that PADEP and EPA will allow credit to PennDOT for the BMP for purposes of complying with MS4 permit requirements and the Total Maximum Daily Load.

EPA. The United States Environmental Protection Agency.

Long Term Operation and Maintenance. Operating and maintaining a BMP on an ongoing basis following post-construction as required by the PADEP Guidance Documents for PennDOT to receive credit for the reductions under an NPDES MS4 PRP.

Offeror. The person offering the proposal.

MS4. Municipal Separate Storm Sewer System.

NPDES. National Pollutant Discharge Elimination System.

PADEP. The Commonwealth of Pennsylvania, Department of Environmental Protection.

PADEP Guidance Documents. PADEP documents that provide guidance for calculating sediment reduction and for developing PRPs and TMDL plans, along with any updates to them. To the extent that these documents conflict, the most recent controls. Most of the PADEP Guidance Documents are available on PADEP's eLibrary (www.elibrary.dep.state.pa.us) in the "Technical Guidance Final Documents" and the permit and authorization packages for general and individual NPDES permit applications for MS4s. The following PADEP Guidance Documents are of particular importance to this Statement of Work:

- PRP Instructions (Document 3800-PM-BCW0100k Rev. 3/2017)
- TMDL Plan Instructions (Document 3800-PM-BCW0200d Rev. 3/2017)
- BMP Effectiveness Values (Document 3800-PM-BCW0100mm Rev. 5/2016)

PennDOT. The Commonwealth of Pennsylvania, Department of Transportation.

Phosphorus Reduction Credit. Credit in accordance with the PADEP Guidance Documents toward PennDOT's and PWSA's current, future or anticipated obligations to reduce phosphorus discharging to the Saw Mill Run Watershed measured for purposes of this Statement of Work in pounds of sediment reduced. The term excludes phosphorus reduction credit already used or accounted for under other required environmental mitigation.

Post-Construction. When used to denote a period of time, post-construction means the period of time that begins at the end of construction.

PRP. Pollutant Reduction Plan.

xxxx. title of group. Municipality is an authority of the City of xx

Sediment Reduction Credit. Credit in accordance with the PADEP Guidance Documents toward PennDOT's and Municipality current, future or anticipated obligations to reduce sediment discharging to the Saw Mill Run Watershed measured for purposes of this Statement of Work in pounds of sediment reduced. The term excludes sediment reduction credit already used or accounted for under other required environmental mitigation. The following rules apply to calculating Sediment Reduction Credit:

- To calculate sediment reduction credit, you must first calculate the baseline existing water quality load to each BMP that provides a percent pollutant reduction.
- Sediment removal calculations for each proposed BMP must use the effectiveness values provided by PADEP's BMP Effectiveness Values (Document # 3800-PM-BCW0100m 5/2016): <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document->

[116283/3800-PM-BCW0100k%20PRP%20Instructions%20\(3-28-17\)%20\(003\).pdf](http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-112621/3800-PM-BCW0100k%20PRP%20Instructions%20(3-28-17)%20(003).pdf)

- For structural and restoration BMPs with a percent (%) effectiveness, the reduction credit will require calculation of the existing load to the BMP. The PADEP Simplified Method described in PADEP's Pollution Reduction Plan Instructions (Document 3800-PM-BCW0100k Rev. 3/2017) must be used for this calculation: [http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-112621/3800-PM-BCW0100m%20BMP%20Effectiveness%20\(Final\).pdf](http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-112621/3800-PM-BCW0100m%20BMP%20Effectiveness%20(Final).pdf).
- The calculation must use the developed land sediment loading rates for Dauphin County. The rates are 1,839 lbs/acre/year for impervious and 264.96 lbs/acre/year for pervious land uses, or the calibrated HSPF watershed model loading rates by land use for the areas tributary to the BMP.
- Should a stream restoration BMP be proposed, the 44.88 lbs/ft/yr sediment reduction must be used to calculate the total load reduction for the BMP. A higher rate can be justified, subject to PADEP approval; however, the proposed work must adhere to one of the eligible protocols covered in the Chesapeake Bay Recommendations of the Expert Panel to Define Removal rates for Individual Stream Restoration Projects: http://www.chesapeakebay.net/channel_files/18983/attachment_b1--urban_stream_restoration_panel_final_report_12062012.pdf

Stormwater Detention Volume. A measurement in acre-feet of the volume of stormwater for which the outflow rate from a BMP when constructed is controlled from the 10-year 24-hour storm event peak rate to the 1-year 24-hour storm event peak rate. Stormwater Detention Volume calculations must utilize the available HEC-RAS model of the xx Run stream and available tributaries.

Stormwater Separation Volume. A measurement in acre-feet of the volume of stormwater that will no longer flow into a CSS during the 10-year 24 hour storm event as the result of the construction of a BMP. Stormwater Separation Volume calculations must utilize the available HEC-RAS model of the xx stream and available tributaries.

TMDL. Total Maximum Daily Load.

Urbanized Area. An area identified as urbanized by the 2010 United States Decennial Census.

Unit Price. The total amount paid to the vendor pursuant to this RFP divided by the total sediment reduction credits to be achieved by the proposal.

USACE. The United States Army Corps of Engineers.

Vendor. The awarded offeror. In the terms and conditions and standard specifications included elsewhere in this RFP, the vendor may also be referred to as the "Contractor."

III-1. Statement of the Project. Provide a succinct summary of your proposal for the project presented by this RFP. State the unit price and the total sediment reduction credit, total stormwater detention volume and total stormwater separation volume that your proposal will achieve in five years.

III-2. Qualifications.

- A.** Company Overview. Offerors Project Manager must be a licensed Professional in Pennsylvania. Offerors or their subcontractors must disclose any Notice of Violations received in the past seven (7) years from a regulatory Agency.
- B.** Prior Experience. Offeror must demonstrate working experience with the EPA, PADEP and municipal governments. Offeror must demonstrate a minimum of five (5) years doing business with Municipal Separate Storm Sewer System Projects, which includes BMP design, obtaining NPDES Permits, Construction, Construction Inspection, Construction Management, Post Construction Storm Water Management and Monitoring. Experience shown should be work done by individuals who will be assigned to this project as well as that of your company. Studies or projects referred to must be identified and the name of the customer shown, including the name, address, and telephone number of the responsible official of the customer, company, or agency who may be contacted.
- C.** Personnel. Include the number of executive and professional personnel, analysts, auditors, researchers, programmers, consultants, etc., who will be engaged in the work. Show where these personnel will be physically located during the time they are engaged in the Project. For key personnel include the employee's name and, through a resume or similar document, the Project personnel's education and experience in Municipal Separate Storm Sewer Systems, which includes BMP design, obtaining NPDES Permits, Construction, Construction Inspection, Construction Management, Post Construction Storm Water Management and Monitoring. Indicate the responsibilities each individual will have in this Project and how long each has been with your company.
- D.** Subcontractors: Provide a subcontracting plan for all subcontractors, including small diverse business and small business subcontractors, who will be assigned to the Project. The selected Offeror is prohibited from subcontracting or outsourcing any part of this Project without the express written approval from the Commonwealth. Upon award of the contract resulting from this RFP, subcontractors included in the proposal submission are deemed approved. For each position included in your subcontracting plan provide:
 - 1. Name of subcontractor;
 - 2. Address of subcontractor;
 - 3. Number of years worked with the subcontractor;
 - 4. Number of employees by job category to work on this project;
 - 5. Description of services to be performed;
 - 6. What percentage of time the staff will be dedicated to this project;
 - 7. Geographical location of staff; and
 - 8. Resumes (if appropriate and available).

The Offeror's subcontractor information shall include (through a resume or a similar document) the employees' names, education and experience in the

services outlined in this RFP. Information provided shall also indicate the responsibilities each individual will have in this Project and how long each has been with subcontractor's company.

III-3. Training. If appropriate, indicate recommended training of agency personnel. Include the agency personnel to be trained, the number to be trained, duration of the program, place of training, curricula, training materials to be used, number and frequency of sessions, and number and level of instructors.

III-4. Work Plan. Describe in narrative form your technical plan for accomplishing the work using the task descriptions as your reference point. Modifications of the task descriptions are permitted; however, reasons for changes should be fully explained. Indicate the number of person hours allocated to each task. Include a Program Evaluation and Review Technique (PERT) or similar type display, time related, showing each event. If more than one approach is apparent, comment on why you chose this approach.

Task 1. Identify sites and design the BMPs.

Your work plan must include the following information:

- A list of the BMPs that you propose to construct. BMP types may include only the following:
 1. Wet Ponds and Stormwater Wetlands
 2. Dry Extended Detention Basins
 3. Hydrodynamic Structures
 4. Infiltration Practices
 5. Filtering Practices
 6. Filter Strip Runoff Reduction
 7. Filter Strip Stormwater Treatment
 8. Bio-Retention or Raingardens
 9. Vegetated Open Channels
 10. Bioswales
 11. Permeable Pavements
 12. Stream Restoration
 13. Forest Buffers (create or restore)
 14. Tree Planting
 15. Storm Sewer Solids Removal
 16. Converting Land Use
 17. Separating a storm sewer from a CSS
- Visual sketches and schematics for each proposed BMP.
- The location for each proposed BMP.
- A property acquisition approach. Your work plan must describe the approach that you will use to acquire the necessary property interests to construct, operate, maintain and assure long term operation and maintenance of the BMPs in conformance with Task 3 below.
- A narrative that demonstrates the required direct nexus between each BMP and water quality improvements.

- An estimated timeline for constructing the BMPs.
- Preliminary Sediment baseline, reduction and effectiveness calculations, including total pounds of sediment in accordance with the methods described above.
- Stormwater detention volume calculations for each BMP and for the total project.
- For each BMP that provides stormwater detention volume, provide a sketch of the additional site footprint and indicate the estimated additional property acquisition and construction costs of enhancing the BMP to accommodate the additional capacity necessary to reduce the 25-year, 24-hour storm event to the 1-year 24-hour storm event peak rates.
- Stormwater Separation Volume calculations for each BMP and for the total project.

Task 2: Acquire the property interests to construct, maintain and preserve the BMPs.

Your work plan must describe your approach to acquire the necessary property interests to construct, operate, maintain and assure long term operation and maintenance of the BMPs.

Examples of property interests include long term leases, easements, and fee simple ownership. If the property is not owned by the Commonwealth, then you must acquire the right to record, and record, an instrument (e.g., a conservation easement or deed restriction) identifying and preserving the BMP; identifying the entity responsible for the long term operation and maintenance of the BMP; and granting reasonable access for inspection to EPA, PennDOT, PADEP, CCDs and the entity responsible for long term maintenance. You may use your own property, acquire property, acquire easements or leases, or enter into agreements. You must record easements or deed restrictions conforming to this Task and Task 3 below in the appropriate County Recorder of Deeds Office for properties not owned by the Commonwealth or Municipality.

If you propose to use municipal land, then you must attach a committal letter from the Municipality to your proposal.

You may use state highway right-of-way for the project only if both of the following requirements are met:

- You attach to your proposal a committal letter from the District Executive for PennDOT Engineering District 8-0. PennDOT has sole discretion over whether to issue a committal letter. The most likely reason that PennDOT might refuse to issue a committal letter is that your proposed use conflicts with the existing use or an anticipated future use of the highway right-of-way. PennDOT, however, reserves the right to refuse to issue a committal letter for any reason whatsoever.
- You apply for and obtain one or more highway occupancy permits from PennDOT allowing the work prior to beginning construction within the state

highway right-of-way. You must satisfy all highway occupancy permit requirements.

Task 3: Provide for Long Term Operation and Maintenance of the BMPs

You must identify an entity other than PennDOT or PWSA that will assume responsibility for long term operation and maintenance of each BMP conforming to the requirements of the PADEP Guidance Documents. The entity must also agree to provide written documentation to PennDOT and PWSA upon request confirming that the entity has performed the required long term operation and maintenance. This entity must be one of the following: a governmental entity; a fee simple owner or easement holder of the BMP site; or an adjacent property owner in the case of stream restoration. If the entity is a property owner and is not the Commonwealth then you must obtain and record fully-executed instruments in the chain of title for the property that make these obligations legally binding and enforceable by PennDOT, Municipality and PADEP on the owner and subsequent owners. (See Task #2 above.) If the entity is a municipality, then you must obtain a fully-executed and binding agreement with an appropriate resolution from the municipality. This agreement between you and the municipality must be enforceable by PennDOT, Municipality and PADEP.

Task 4: Provide a Final Plan.

The Final Plan is based on your work plan but also includes the following:

- Copies of all recorded instruments and agreements required by Tasks 2 and 3 above.
- Final BMP(s) plans consistent with PADEP standards
- Final Schedule for implementing the BMPs
- Operations and Maintenance Plan consistent with the PADEP Guidance Documents
- Calculations showing the sediment, nitrogen and phosphorus removed per year consistent with the PADEP Guidance Documents.
- Stormwater detention volume calculations for each BMP and for the total project.
- Stormwater separation volume calculations for each BMP and for the total project.

Task 5: Obtain Necessary Permits.

You must perform all activities necessary to obtain and comply with all USACE Clean Water Act Section 404 and Rivers and Harbors Act Section 10 permits; PADEP Chapter 102 and 105 permits; and if applicable, local Floodplain consistency, local Stormwater Management consistency, local zoning approval and any other permits or authorizations required to construct the BMPs. You must provide copies of the permits and authorizations to PennDOT upon request.

Task 6: Construct the BMPs.

You must provide all field services necessary to construct all BMPs consistent with the applicable permits and approvals, operation, any inspections and any maintenance required by PADEP to receive credit for the reductions under a NPDES MS4 PRP.

Task 7: Provide As-Built Records.

You must provide as-built records sealed by a licensed professional, to document the end of construction and certify the project was constructed as designed.

Task 8: Operate, monitor and maintain all BMPs during construction and post-construction.

During construction, you must operate, monitor and maintain all BMPs as required to comply with the applicable permits and the maintain their effectiveness once constructed.

During post-construction, you must do all the following:

- Monitor all stream restoration BMPs for no less than five years in accordance with the regulations found at Code of Federal Regulations, Title 33, Part 332 ("Compensatory Mitigation for Losses of Aquatic Resources) and USACE Regulatory Letter No. 08-03 ("Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources"), and any updates to them.
- Inspect all other BMPs no fewer than two times to confirm that they are functioning as designed. The inspections shall at least include both of the following:
 - A condition assessment no sooner than one month and no later than one year after that BMP is constructed using PennDOT Form M79; and
 - A visual inspection performed no sooner than two years after the condition assessment using PennDOT Forms M77 and M78.
- Perform any other post-construction monitoring or maintenance required by the DEP Guidance Documents for PennDOT to receive credit for the reductions under an NPDES MS4 PRP.
- Repair or reconstruct any BMPs that do not function as designed.
- Provide PennDOT and PWSA with copies of any required inspections, record keeping, and other documentation for each BMP conforming to the PADEP Guidance Documents and PennDOT's and PWSA's MS4 permit conditions for each BMP during construction and post-construction.

III-5. Requirements

A. Schedule.

The vendor must meet the following schedule unless PennDOT and Municipality both agree in writing to an extension:

#	Milestone Activity	Milestone Date (on or before)
1.	Final Plan submitted to PennDOT	10 Months after Notice to Proceed
2.	Final Plan approved by PennDOT	varies
3.	Federal, State, and Local permits & approvals	6 Months after #2
4.	Begin BMP construction	8 Months after #3
5.	25% construction complete	8 Months after #4
6.	50% construction complete	8 Months after #5
7.	100% construction complete	16 Months after #6
8.	Post-Construction to End of Post-Construction	varies

PennDOT and Municipality each reserve the right, at their sole discretion, to deny any request for an extension.

B. Unit Price.

The vendor must achieve the unit price indicated in the proposal. At any milestone, if PennDOT and Municipality determine, in conformity with the PADEP Guidance Documents, that PADEP will allow them less sediment credit reduction toward their MS4 permit obligations than necessary to achieve the unit price bid by the vendor, PennDOT and Municipality may proportionally reduce all remaining payments due as necessary to achieve the unit price proposed by the vendor. PennDOT and Municipality, at their sole discretion, may consult with PADEP in making this determination. PennDOT and Municipality may also consider any BMP for which the vendor has failed to fully comply with all tasks set forth in Section III-4 above as providing no (zero) sediment reduction credit.

C. Emergency Preparedness.

To support continuity of operations during an emergency, including a pandemic, the Commonwealth needs a strategy for maintaining operations for an extended period of time. One part of this strategy is to ensure that essential contracts that provide critical business services to the Commonwealth have planned for such an emergency and put contingencies in place to provide needed goods and services.

1. Describe how you anticipate such a crisis will impact your operations.
2. Describe your emergency response continuity of operations plan. Please attach a copy of your plan, or at a minimum, summarize how your plan addresses the following aspects of pandemic preparedness:
 - a. Employee training (describe your organization's training plan, and how frequently your plan will be shared with employees)
 - b. Identified essential business functions and key employees (within your organization) necessary to carry them out

- c. Contingency plans for:
 - i. How your organization will handle staffing issues when a portion of key employees are incapacitated due to illness.
 - ii. How employees in your organization will carry out the essential functions if contagion control measures prevent them from coming to the primary workplace.
 - iii. How your organization will communicate with staff and suppliers when primary communications systems are overloaded or otherwise fail, including key contacts, chain of communications (including suppliers), etc.
- d. How and when your emergency plan will be tested, and if the plan will be tested by a third-party.

Reports and Project Control.

Upon the issuance of the fully-executed Purchase Order or Notice to Proceed letter, the Selected Offeror shall attend the start of work kick-off meeting to review all project tasks. This meeting may be held in person, by videoconference, or by telephone conference call and should occur no later than two (2) weeks following the Notice to Proceed. The Selected Offeror will be responsible for informing the PennDOT Project Manager of all project-related meetings at least two (2) weeks prior to the meeting date or as the meeting date is decided by the meeting participants. Subsequent project meetings will be held at the request of the Selected Offeror or PennDOT's Project Manager.

Written minutes of, and action items resulting from, all project meetings starting with the project Kick-off Meeting, will be provided by the Selected Offeror (or designated recorder) within ten (10) working days of the meeting to all meeting participants, including PennDOT's Project Manager, and any other project team members unable to attend the meeting, regardless of whether the meetings are held in person or by conference call.

The Selected Offeror will submit *Task Deliverables*, as listed above and agreed to by PennDOT throughout the project period. A completed **OS-501 Confirmation of Services Form, Appendix A**, must be submitted by the Selected Offeror to the Project Manager for review and verification at each payment milestone; the approved form should then accompany each invoice submitted for payment (please see the OS-501 instructions for more information). All reports will be submitted to the PennDOT Project Manager in a reproducible electronic version compatible with PennDOT's most current software system.

Oral or written communications that may affect the scope, budget, deliverables or time frame of this RFP shall be documented and relayed immediately to the PennDOT Project Manager by telephone, e-mail or memo for consideration. Any changes shall only be effective through execution of a change order to the Contract Purchase Order. Additionally, no amendments or modifications to this RFP will be considered within the last thirty (30) days of the project.

- A. Quarterly Status Report.** Covering activities, problems and recommendations. This report should be keyed to the work plan the Offeror developed in its proposal, as amended or approved by the Issuing Office.
- B. Problem Identification Report.** An “as required” report, identifying problem areas. The report should describe the problem and its impact on the overall project and on each affected task. It should list possible courses of action with advantages and disadvantages of each and include Offeror recommendations with supporting rationale. If a Notice of Violation is received during construction of this project, the offer must notify PennDOT within 24 hours of that notice. Remedy of any Violations must be documented on this report.
- C. Final Report.** Upon five years of Post Construction Compliance and must include:
1. Documentation of the Waterway Impairment Background with the Watershed and how much sediment reduction PennDOT and the Municipality achieved toward their municipal MS4 permit requirements. An abstract or summary of the service in terminology that will be meaningful to management and others generally familiar with the subject;
 2. Copies of any required inspections and condition assessments, record keeping, and other documentation for each BMP conforming to the DEP Guidance Documents and PennDOT and the Municipality MS4 permit conditions.
 3. A description of any data collection and other techniques used during the project;
 4. A summary of findings, conclusions and recommendations;

III-6. Objections and Additions to Standard Contract Terms and Conditions. The Offeror will identify which, if any, of the terms and conditions (contained in Part VI) it would like to negotiate and what additional terms and conditions the Offeror would like to add to the standard contract terms and conditions. The Offeror’s failure to make a submission under this paragraph will result in its waiving its right to do so later, but the Issuing Office may consider late objections and requests for additions if to do so, in the Issuing Office’s sole discretion, would be in the best interest of the Commonwealth. The Issuing Office may, in its sole discretion, accept or reject any requested changes to the standard contract terms and conditions. The Offeror shall not request changes to the other provisions of the RFP, nor shall the Offeror request to completely substitute its own terms and conditions for Part VI. All terms and conditions must appear in one integrated contract. The Issuing Office will not accept

references to the Offeror's, or any other, online guides or online terms and conditions contained in any proposal.

Regardless of any objections set out in its proposal, the Offeror must submit its proposal, including the cost proposal, on the basis of the terms and conditions set out in Part VI. The Issuing Office will reject any proposal that is conditioned on the negotiation of the terms and conditions set out in Part VI or to other provisions of the RFP as specifically identified above.

PennDOT Stream Restoration Municipal Partnership Research**Location: Capital Region Water****June 27, 2019 2:00 PM**

ATTENDEES

- Claire Maulhardt, Capital Region Water (CRW)
- Betsy Logan, Susquehanna Township (ST)
- David Kratzer, Susquehanna Township (ST)
- Bill Weaver, Lower Paxton Township (LPT)
- George Wolfe (Ret.), Lower Paxton Township via phone
- Daryl St. Clair, PennDOT
- Teresa Swisher, PennDOT via phone
- Jeff MacKay, NTM Engineering
- Bryan Hoover, Stantec
- Jeff Robertson, Stantec

PURPOSE:

The purpose of this meeting was to update Capital Region Water, Susquehanna Township and Lower Paxton Township on the progress to date for the PennDOT Stream Restoration Municipal Partnership Project and discuss path moving forward.

DISCUSSION ITEMS:

- D. St. Clair provided an overview of the municipal partnership research project and its purpose
- B. Hoover provided an overview of project progress and overview of literature review
 - Research of other DOTs shows partnering in planning and construction phases of projects
- C. Maulhardt – Received comment from DEP and submitted response on Pollutant Reduction Plan (PRP), going to add alternate list into PRP from Paxton Creek data; hopefully have approved plan by beginning 2020; provided Paxton Creek GIS dataset to Stantec Team
- D. St. Clair – Stated Legal agreement is critical path at this point. CRW/LPT/ST is ready to move forward, basically just needs final legal agreement to approve.

Discussion regarding Legal Agreement with consortium:

- Group discussed several items of the type of construction contract that could influence the legal agreement language.
- PennDOT partnering with York County currently and project is example of full delivery (design/build/operate/maintain) contracting mechanism. D. St. Clair likes this type of project contracting. Group favored this kind of delivery.
- D. St. Clair – Stated he could write the construction contract to put additional money in if consortium wants to add more projects in the future. Legal agreement language will be revised to allow this option.
- PennDOT will administer bidding and contract
- PennDOT would initially select project, but allow consortium to add additional projects

- G. Wolfe – Prefers not paying contractor directly, rather have consortium pay PennDOT, then PennDOT disburses payment to contractor
- D. St. Clair will revise legal agreement between PennDOT and CRW/LPT/ST, send to CRW/LPT/ST for review
- All entities sign will one legal agreement

Discussion regarding Request for Proposal (RFP):

- RFP would be advertised through PA Department of General Services eMarketplace not ECMS
- RFP will be weighted on a technical proposal and a price proposal; will have to provide unit cost for additional work
- LPT prefers unit of measure in pounds of sediment removed for unit cost, not linear foot of stream
- D. St. Clair asked if consortium wanted to participate in selection process
 - G. Wolfe – Since PennDOT makes the decisions for selection, municipalities will be ok with legal agreement between contractor and PennDOT
 - CRW/LPT/ST to let Daryl know if they want to review bids
- Add language to RFP such that, vendors can't just enter private land to review possible project sites
- RFP will designate how O&M must happen. City of Pittsburgh project had 5-yr O&M with vendor then returned to City.

Schedule

- Group discussed general constraints for getting construction started (seasonal restrictions, design/permitting time, legal reviews). Design to have construction break ground in 2020.
- Roughly within two-months have RFP ready to go, by end of August. Have draft ready by end of July. Stantec to prepare schedule on timing and send to D. St. Clair
- Legal Department at PennDOT could take up to 90 days to review RFP prior to advertisement

PennDOT Partnership ProjectPennDOT Partnership Project / 2027131562

Date/Time: January 8, 2020 / 3:00 PM
Place: Phone
Next Meeting: N/A
Attendees: Elizabeth Kanner; Claire Maulhardt
Absentees: None
Distribution: Bryan Hoover, Rich Pfingsten

Elizabeth called Claire to discuss which site CRW would like to use for the parentship project with PennDOT. Claire informed Elizabeth that CRW had been working with Daryl directly and pulled away from the idea of “project sites” and have been discussing a bid for \$/lbs

While CRW can’t solicit design and construction (design-build) in a single contract, they can solicit a low bid for purchasing credit.

Claire said that essentially the credit could be generated from anywhere within the Joint Pollutant Reduction Plan (PRP) which includes the Paxton Creek Watershed Total Maximum Daily Load (TMDL) Plan, the Chesapeake Bay PRP, the Wildwood Lake PRP, and the UNT Spring Creek PRP to reduce sediment from stormwater discharges and stream bank erosion and improve the health of Paxton Creek, Beaver Creek, Spring Creek, and the Chesapeake Bay. If contractor proposed specific projects are not within the PRP, the PRP would need to be revised. Which means that “new” project would have to go through public comment – The contractor would prepare for CRW and CRW would submit. This would need to be specified in the RFP. Claire requested to see the latest version of the RFP. Elizabeth informed her that she has the latest from PennDOT but we are working on updates as a result of this call which we would submit to Darryl who would then give to CRW.

Elizabeth briefly discussed specifications and said that these RFPs are left very broad as the “performance” is almost entirely based on delivering the credit. The credit calculations in the RFP refer back to the Chesapeake Bay and DEP guidance documents.

The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

Elizabeth Tane Kanner, PE

Senior Water Resources Engineer

Direct: 443 632-3050

Elizabeth.Kanner@stantec.com

Stantec

810 Glen Eagles Court Suite 300

Baltimore MD 21286-2237 US

5.3 DRAFT AGREEMENT AND ADVERTISED INVITATION FOR BID (IFB) MUNICIPAL STREAM RESTORATION COLLABORATION, PAXTON CREEK WATERSHED, DAUPHIN COUNTY, PA

Through the meetings and discussions with PennDOT and CRW it was determined that the best course of action was for PennDOT to solicit bids to reduce sediment pollution to in the Paxton Creek Watershed in Dauphin County, PA. PennDOT and CRW are requesting bids for a project to construct stormwater Best Management Practices (BMPs), specifically stream restoration projects, that reduce sediment pollution discharging to the watershed. Both PennDOT and the Municipal Partners will receive 100% each of the sediment reduction credit toward their PRPs.

The BMPs must conform to PADEP Guidance Documents, must be located in the Paxton Creek watershed, and there must be direct nexus between the BMPs and water quality improvement for the sediment-impaired waterways in the watershed. The proposals must provide for siting, design, permitting, acquisition of property interests, construction, inspection, during and post-construction monitoring, and long-term operation and maintenance of the BMPs. Long-term operation and maintenance must be provided by an entity other than PennDOT or the Municipal Partners.

In evaluating proposals, the technical criterion will be based on the annual sediment reduction credit that can be realized on a continuous basis. Sediment reduction credit will be calculated in accordance with PADEP Guidance Documents on PRPs in NPDES permits for MS4s. The length of the contract will vary based on the BMP type(s) but will be no less than five (5) years.

The draft partnership agreement and Invitation for Bids (IFB) advertised on February 24, 2020 on <http://www.emarketplace.state.pa.us/> are included below.



**STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS
DEPLOYMENT PLAN**

5.3.1 Draft Partnership Agreement



EFFECTIVE DATE: _____
(PennDOT shall insert)

AGREEMENT NO.:
FEDERAL I.D. NO.:
SAP VENDOR NO.:

CONTRIBUTION AGREEMENT

This Contribution Agreement (Agreement) is made by and between the Commonwealth of Pennsylvania (Commonwealth), acting through the Department of Transportation (PennDOT),

and

Municipality an authority formed under the laws of the Commonwealth.

BACKGROUND

PennDOT and Municipality are partnering to reduce sediment pollution in the xxx Watershed as part of the pollutant reduction plan obligations in the National Pollutant Discharge Elimination System permits for their respective municipal separate storm sewer systems. PennDOT will issue and award a request for proposals to construct a project in the Watershed to reduce sediment pollution. PennDOT will also contribute at least five hundred thousand dollars (\$500,000) toward the Project. Municipality will contribute xxx toward the Project.

The parties, intending to be legally bound, agree as follows:

1. **Definitions.** Words used in this Agreement have the following meanings unless the context clearly indicates otherwise.

- a. "Agreement" when capitalized means this Contribution Agreement.
- b. "Combined Contribution" means the sum of Municipality Contribution and PennDOT's Contribution.
- c. "Commonwealth" means the Commonwealth of Pennsylvania.
- d. "MS4" means a municipal separate storm sewer system.
- e. "NPDES" means the National Pollutant Discharge Elimination System.
- f. "PennDOT" means the Commonwealth of Pennsylvania, acting through its Department of Transportation.
- g. "PennDOT's Contribution" means the sum of five hundred thousand (\$500,000) dollars and any additional funds that PennDOT elects to make available consistent with Section 2(g) below.
- h. "PRP" means a pollutant reduction plan.
- i. "Municipality Contribution" means the sum of xxx dollars and any additional payments made by Municipality to PennDOT pursuant to Section 3(e) below.
- j. "PennDOT's Pro Rata Share" means a percentage calculated as the quotient of PennDOT's Contribution and the Combined Contribution.
- k. "Project" when capitalized means the project in the Watershed to reduce sediment pollution.
- l. Municipality acronym means the xxxx Authority.

- m. Municipality Pro Rata Share” means a percentage calculated as the quotient of Municipality Contribution and the Combined Contribution.
- n. “RFP” means a request for proposals. When preceded by the definite article, RFP means the RFP for the Project.
- o. “Watershed” when capitalized means the xxx Watershed.

2. **Responsibilities of PennDOT.**

- a. **Issue the RFP.** PennDOT shall issue an RFP to construct the Project with terms and conditions consistent with the draft RFP attached and incorporated into this Agreement as Exhibit A.
- b. **Evaluation.** PennDOT shall evaluate the proposals consistent with the RFP. The committee to evaluate proposals shall have a total of five members and shall include **two** members assigned by Municipality.
- c. **Technical Nonconforming Proposals.** PennDOT shall notify Municipality in writing of any technical nonconformities in an offeror’s proposal that PennDOT intends to waive. If PennDOT anticipates that the technical nonconformities will increase the cost of the Project above xxx dollars, then PennDOT shall state the amount of the increase in the notice, whether PennDOT elects to make additional state funds available and the amount of additional contribution required from Municipality. PennDOT shall not waive the technical nonconformities unless Municipality concurs to the waiver in writing.
- d. **Final Ranking.** PennDOT shall consult with Municipality as part of any best and final offer process conducted. PennDOT shall provide the final ranking to Municipality at least 14 days before beginning contract negotiations.

Thereafter PennDOT shall conduct contract negotiations and award a contract consistent with the RFP.

- e. **Rejection.** Upon receiving a written notice and statement from Municipality consistent with Section 3(d) below, PennDOT shall exercise its discretion to reject all proposals or cancel the request for proposals. PennDOT reserves the right to reject all proposals or cancel the request for proposals consistent with the RFP regardless of any election, or lack thereof, by Municipality.
- f. **Award.** PennDOT shall negotiate a contract with the selected offeror consistent with the RFP. PennDOT shall consult with Municipality during contract negotiations and shall provide a copy of the proposed contract, along with all incorporated plans and specifications, to Municipality at least 30 days prior to fully executing it.
- g. **Contribution.** PennDOT shall make up to five hundred thousand dollars (\$500,000) available for the Project. PennDOT may elect, at its sole discretion, to make additional state funds available for the Project.
- h. **Change Orders.** After a contract is fully executed with the selected offeror, PennDOT shall require the selected offeror to construct the Project in accordance with the contract. PennDOT shall not authorize the selected offeror to change the Project from the plans and specifications without written concurrence of Municipality unless the additional cost of such change is less than five thousand (\$5,000) dollars and the aggregate cost of all such changes is less than fifty thousand (\$50,000) dollars.
- i. **Reimbursement.** If PennDOT cancels the request for proposals without fully executing a contract for construction of the Project, then PennDOT shall reimburse 100% of Municipality Contribution to Municipality within thirty days of the cancellation. If PennDOT determines after making the final

payment to the selected offeror that the total cost of the Project is less than Combined Contribution, then PennDOT shall reimburse Municipality Pro Rata Share of the difference to Municipality within thirty days of making the final payment. If PennDOT determines after making the final payment that the total cost of the Project exceeds the Combined Contribution, then PennDOT shall send an invoice to Municipality in the amount of the difference.

- j. **Approvals by PennDOT.** For purposes of this Agreement, consent, concurrence or approval by PennDOT may be provided by the Deputy Secretary for Highway Administration or such other PennDOT employee as designated by the Deputy Secretary.

3. **Responsibilities of PWSA.**

- a. **Contribution.** Within 30 days of the effective date of this Agreement, Municipality shall make a payment to PennDOT in the amount of xx dollars.
- b. **Evaluation.** Municipality shall assign and make available xx individuals to serve on the committee to evaluate proposals.
- c. **Technical Nonconforming Proposals.** Within 30 days of receipt of notice from PennDOT that PennDOT intends to waive technical nonconformities in an offeror's proposal, Municipality shall notify PennDOT in writing whether it concurs in the waiver. Failure to respond within 30 days shall be deemed nonconcurrence. If Municipality concurs and the notice from PennDOT indicates that an additional contribution is required from Municipality, then Municipality shall make a payment to PennDOT in the amount of the required additional contribution within 30 of sending its written concurrence. No additional payment shall be required if Municipality does not concur.

- d. **Election.** At any time prior to the time when a contract is fully executed, Municipality may notify PennDOT in writing that it elects to have PennDOT reject all proposals or cancel the request for proposals.
- e. **Reimbursement.** Within 30 days of receiving an invoice from PennDOT pursuant to Section 2(i) above, Municipality shall make a payment to PennDOT in the amount of the invoice.
- f. **Payment Method.** All payments made in satisfaction of the requirements of this Section 3 shall be by corporate check or the like made payable to the “Commonwealth of Pennsylvania,” with a notation referencing **[INSERT ACCOUNT INFORMATION]**, and shall be sent to:
 - PA Department of Transportation
 - Bureau of Fiscal Management
 - P.O. Box 62190
 - Harrisburg, PA 17106
- g. **Maintenance.** Municipality shall be responsible for enforcing long term operation and maintenance of the improvements constructed by the Project by the responsible entity consistent with the RFP and shall be responsible for long term operation and maintenance of any improvements not maintained by a responsible entity.
- h. **Approvals by Municipality.** For purposes of this Agreement, consent, concurrence or approval by Municipality may be provided by the Executive Director or such other Municipality employee as designated by the Executive Director.

4. **Credit Sharing.** The parties will make every effort to obtain full credit for both for all of the sediment reduction achieved by the Project. To the extent credit must be divided between the parties, Municipality Pro Rata Share of the available credit will go to Municipality and the remaining credit will go to PennDOT.

6. **Sufficient Funds.** Municipality, by executing this Agreement, certifies it has on hand funds to meet its contribution and reimbursement obligations.

7. **Indemnification.** Unless otherwise agreed to by the parties in writing, in addition to Municipality contribution and reimbursement obligations, Municipality shall indemnify and (if requested) defend PennDOT, its agents and employees from, and be solely responsible for, the payment and satisfaction of awards, judgments, claims, costs, and damages, including costs of appraisers and attorneys, witness fees, and other court costs and expenses resulting from the following:

- a. Changes required to be made to PennDOT's approved plans and specifications for the Project made necessary by requests by and for Municipality .
- b. Time delays and extensions of time or termination of work requested or caused by Municipality.
- c. Right-of-way and other property damages resulting from the acquisition or condemnation of the lands necessary for or the construction of the Project made necessary by requests by and for Municipality. Right-of-way and other property damages, as used in this section, shall include consequential damages; damages arising from de facto or inverse takings; special damages for displacement; damages for the preemption, destruction, alteration, blocking and diversion of facilities; and other damages that may be claimed or awarded within the purview of the Eminent Domain Code of 1964, as amended, the State Highway Law of 1945, as amended, and eminent domain case law of the Commonwealth of Pennsylvania; and claims awarded or entered against PennDOT or Municipality.
- d. Relocation of utility facilities, including gas, water, railroad, sewer, electric, telecommunications or drainage facilities, in the Project area and made necessary by requests by and for Municipality.

- e. Where made necessary by requests by and for Municipality, preparation or revisions of environmental impact statements, negative declarations, environmental reports or other documents required by law and environmental litigation; public environmental hearings made necessary by the planning, design and environmental litigation; public environmental hearings made necessary by the planning, design, and construction of the Project and Supplemental Improvements; and increased planning, design, construction, utility relocation and right-of-way costs resulting therefrom.
- f. Unforeseen costs and expenses not included in the Project cost estimates, but which are directly related to or made necessary by requests by and for Municipality.
- g. Injuries to and damages received or sustained by people or property arising out of, resulting from, or connected with an act, omission, neglect, or misconduct of Municipality and its contractors, their officers, agents and employees with respect to maintenance, operation and use of the completed Supplemental Improvements or otherwise with respect to this Agreement.

11. **Standard Provisions.** PennDOT shall require the selected offeror to comply with the standard Commonwealth provisions consistent with the RFP.

12. **Right-to-Know Law.** The Pennsylvania Right-to-Know Law, 65 P.S. §§ 67.101 – 3104, applies to this Agreement. Therefore, this Agreement is subject to, and Municipality shall comply with, the clause entitled *Contract Provisions – Right to Know Law*, attached as Exhibit B. As used in this Agreement, the term Contractor refers to Municipality.

13. **Termination.** The parties may terminate this Agreement for convenience or non-appropriation until the date when a contract with the selected offeror is fully executed, but not after that date. Each party shall bear the costs it incurred during the time this

Agreement was in effect. Nothing contained in the Agreement shall be deemed to be a waiver by PennDOT of its discretion to abandon or postpone the Project.

14. **Amendments and Modification.** No alterations or variations to this Agreement shall be valid unless made in writing and signed by the parties. Amendments to this Agreement shall be accomplished through a formal written document signed by the parties with the formality of the original Agreement, with exception of the notice section.

15. **Titles Not Controlling.** Titles of sections are for reference only, and shall not be used to construe the language in this Agreement.

16. **Severability.** The provisions of this Agreement shall be severable. If a phrase, clause, sentence or provision of this Agreement is declared to be contrary to the Constitution of Pennsylvania or of the United States or of the laws of the Commonwealth and its applicability to a government, agency, person, or circumstance is held invalid, the validity of the remainder of this Agreement and its applicability to a government, agency, person, or circumstance shall not be affected.

17. **No Waiver.** Either party may elect not to enforce its rights and remedies under this Agreement in the event of a breach by the other party. Failure by either party to enforce its rights and remedies shall not be construed as a waiver of a subsequent breach of the same or another term or condition of this Agreement.

18. **Independence of the Parties.** Nothing contained in this Agreement is intended or shall be construed to create or establish the relationship of partners between PennDOT and Municipality, or as constituting either party as the other party's representative or general agent.

20. **Assignment.** Neither party may assign this Agreement, either in whole or in part, without the other party's written consent.

21. **No Third-Party Beneficiary Rights.** This Agreement does not create or intend to confer rights in or on persons or entities not a party to this Agreement.

22. **Notice.** Notices and reports arising out of, or from, this Agreement shall be in writing and given to the parties at the addresses below, either by regular mail, facsimile, email, or delivery in person. A party may revise its contact information by providing written notice to the other party.

If to PennDOT:

PennDOT
Highway Administration Executive Office
8th Fl Commonwealth Keystone Building
Harrisburg, PA 17120

If to Municipality:

Click or tap here to enter text.

23. **Force Majeure.** Neither party shall be liable for failure to perform if the failure to perform arises out of causes beyond the control and without the fault or negligence of the nonperforming party. Causes may include acts of God or the public enemy, fires, floods, epidemics, quarantine restrictions, freight embargoes and unusually severe weather. This provision shall become effective only if the party failing to perform immediately notifies the other party of the extent and nature of the problem, limits delay in performance to that required by the event, and takes reasonable steps to minimize

delays. This provision shall not be effective unless the failure to perform is beyond the control and without the fault or negligence of the nonperforming party.

24. **Integration and Merger.** This Agreement, when executed, approved, and delivered, shall constitute the final, complete, and exclusive Agreement between the parties containing the terms and conditions agreed on by the parties. Representations, understandings, promises and agreements pertaining to the subject matter of this Agreement made before or at the time this Agreement is executed are superseded by this Agreement unless specifically accepted by this Agreement. No conditions precedent to the performance of this Agreement exist, except as expressly set forth in this Agreement.

25. **Choice of Law.** This Agreement shall be construed and interpreted in accordance with the laws of the Commonwealth of Pennsylvania, without regard to conflicts of law principles.

26. **Automated Clearing House Network Provisions.** Submission of invoices for purposes of reimbursement or payment by PennDOT shall be made through the Pennsylvania Electronic Payment Program. The following provisions apply:

- a. PennDOT will make payments to Municipality through Automated Clearing House (ACH). Within 10 days of the execution of this Agreement, Municipality must submit or must have already submitted its ACH and electronic addenda information, if desired, on an ACH enrollment form obtained at: www.vendorregistration.state.pa.us/cvmupaper/Forms/ACH-EFTenrollmentform.pdf to the Commonwealth's Payable Service Center, Vendor Data Management Unit at 717-214-0140 (FAX) or by mail to the Office of Comptroller Operations, Bureau of Payable Services, Payable Service Center, Vendor Data Management Unit, 555 Walnut Street - 9th Floor, Harrisburg, PA 17101.

- b. Municipality must submit a unique invoice number with each invoice submitted. The unique invoice number will be listed on the Commonwealth of Pennsylvania's ACH remittance advice to enable the Municipality to properly apply the state agency's payment to the respective invoice or program.
- c. It is the responsibility of Municipality to ensure that the ACH information contained in the Commonwealth's Central Vendor Master File is accurate and complete. Failure to maintain accurate and complete information may result in delays in payments.

26. **Offset.** Municipality agrees that PennDOT may offset the amount of any state tax or Commonwealth liability of the Borough or its affiliates and subsidiaries that is owed to the Commonwealth against any payments due the Borough under this or any other contract with the Commonwealth.

27. **Counterparts.** This Agreement may be signed in counterparts, each of which shall be deemed to be an original and all of which together shall constitute one and the same instrument.

26. **Effective Date.** This Agreement shall not be effective until the necessary Commonwealth officials required by law have executed it. Following full execution, PennDOT shall insert the effective date at the top of page 1.

[The remainder of this page is intentionally left blank.]

The parties have executed this Agreement to be effective as of the date of the last signature affixed below.

ATTEST

MUNICIPALITY

Title: DATE

BY _____
Title: DATE

If a Corporation, a senior corporate officer must sign; if a sole proprietorship, only the owner must sign; if a partnership, only one partner need sign; if a limited partnership, only the general partner must sign. If a Municipality, Authority or other entity, please attach a resolution.

DO NOT WRITE BELOW THIS LINE--FOR COMMONWEALTH USE ONLY

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BY _____
Deputy Secretary DATE

APPROVED AS TO LEGALITY
AND FORM

FUNDS COMMITMENT DOC. NO. _____
CERTIFIED FUNDS AVAILABLE UNDER
SAP NO. _____
SAP COST CENTER _____
GL. ACCOUNT _____
AMOUNT _____

BY _____
for Chief Counsel Date

BY _____
Deputy General Counsel Date

BY _____
for Office of Comptroller Operations Date

BY _____
Deputy Attorney General Date

**STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS
DEPLOYMENT PLAN**

**5.3.2 Invitation For Bid (IFB) Municipal Stream Restoration Collaboration, Paxton
Creek Watershed, Dauphin County, PA**



REQUEST TO ADVERTISE SOLICITATION: 6100050101**General Information**

Department: Procurement
 Date Prepared: 02/24/20 Type: IFB
 Advertisement Type : Service
 Solicitation# : 6100050101 Solicitation Title : Paxton Creek Watershet Sediment Reduction

Description : The Pennsylvania Department of Transportation (PennDOT) is procuring services on behalf of PennDOT and several Municipal partners (i.e. Townships and Authorities) to reduce sediment pollution in the Paxton Creek Watershed in Dauphin County, Pennsylvania. Bid will be awarded based on the annual sediment reduction credit that can be realized on a continuous basis. Sediment reduction credit will be calculated in accordance with PADEP Guidance Documents on PRPs in NPDES permits for MS4s. This IFB is only for the payment of sediment removal credit not already used or accounted for under any other required environmental mitigation. You will view the IFB and submit your response through the PA Supplier Portal, <https://pasupplierportal.state.pa.us>. If you need technical assistance, please contact the DGS Supplier Portal Help Desk at (877) 435-7363 and choose option 1.

Department Information

Department/Agency : Transportation Delivery Location : Paxton Creek Watershed Dauphin County Pa
 County (if applicable) : Dauphin Duration : 5 years

Contact Information

First Name : Dawn Last Name: Grabuloff
 Phone Number : 717-346-9707 Ext: Email : dgrabuloff@pa.gov

Bid Information

Solicitation Start Date: 02/24/20 Solicitation End Date : 03/23/20
 Bid Opening Date : 03/23/20 Bid Opening Time : 3:00 PM
 Bid Opening Location:
 No. of Flyers: (# of bid versions) 3

Check here if this Solicitation is in SRM <https://www.vendorregistration.state.pa.us/CVMU/paper/default.aspx>

Amended Date: 03/05/20

Close Window

Attachment A - Statement of Work for Invitation for Bid (IFB) 6100050101

Municipal Stream Restoration Collaboration

Paxton Creek Watershed, Dauphin County, PA

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- 1. General Information**
- 2. Scope of Work**
- 3. Standard Specifications**
- 4. Bid Requirements**
- 5. Invoicing and Billing Instructions**

Attachment A - Statement of Work for Invitation for Bid (IFB) 6100050101

Municipal Stream Restoration Collaboration

Paxton Creek Watershed, Dauphin County, PA

1. General Information

PennDOT is procuring services on behalf of PennDOT and several Municipal Partners (Capital Region Water, Lower Paxton Township and Susquehanna Township) to reduce sediment pollution in the Paxton Creek Watershed in Dauphin County, PA. Each party has Pollutant Reduction Plan (PRP) obligations in the National Pollutant Discharge Elimination System (NPDES) permits for their respective Municipal Separate Storm Sewer Systems (MS4s). The Municipal Partners have submitted a Joint Pollutant Reduction Plan (PRP) to PADEP, last revised December 27, 2019, which describes the Joint Planning Area and BMPs that were publicly reviewed. PennDOT is operating under an administratively extended prior permit with anticipation a future permit will include a sediment reduction requirement. The Municipal Partners have a shared planning area for their PRPs. PennDOT requests bids for a project to construct stormwater Best Management Practices (BMPs), specifically stream restoration projects, that reduce sediment pollution discharging to the watershed. Both PennDOT and the Municipal Partners will receive 100% each of the sediment reduction credit toward their PRPs.

The BMPs must conform to PADEP Guidance Documents, must be located in the Paxton Creek watershed, and there must be direct nexus between the BMPs and water quality improvement for the sediment-impaired waterways in the watershed. BMPs identified in the PRP that are excluded from this bid are: Stonebridge Apartments (BMP-02), Susquehanna Union Green (BMP-07), CRW UNT to Spring Creek GSI Projects (BMP-14), CRW Street Sweeping (BMP-15), and Combined Sewer System Rehabilitation & Optimization (BMP-16). The PRP includes proposed BMPs; however, other locations may be accepted by the Municipal Partners. The proposals must provide for siting, design, permitting (Chapter 102, Chapter 105, and any Pollutant Reduction Plan revisions), acquisition of property interests, construction, inspection, during and post-construction monitoring, and long-term operation and maintenance of the BMPs. Long-term operation and maintenance must be provided by an entity other than PennDOT or the Municipal Partners.

In evaluating proposals, the technical criterion will be based on the annual sediment reduction credit that can be realized on a continuous basis. Sediment reduction credit will be calculated in accordance with PADEP Guidance Documents on PRPs in NPDES permits for MS4s. The length of the contract will vary based on the BMP type(s) but will be no less than five (5) years.

This IFB is only for the payment of sediment removal credit not already used or accounted for under any other required environmental mitigation. Services under this IFB that have already been performed, including acquisition of property interests, are eligible for payment and must be included in the Conceptual PRP submission.

Definitions

The following words and terms, when used in this Statement of Work, have the following meanings, unless the context clearly indicates otherwise.

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Municipal Stream Restoration Collaboration

Paxton Creek Watershed, Dauphin County, PA

BMP. A Best Management Practice. BMPs related to stormwater discharge are sometimes also referred to as stormwater control measures (SCM). For this contract, stream restoration is considered a key BMP that must be incorporated into the response.

Construction. When used to denote a period of time, construction means the period that begins when physical work starts on the BMP(s) and ends when the Vendor supplies PennDOT with as-built records sealed by a licensed professional documenting that all BMPs have been fully constructed in accordance with the design drawings.

CRW. Capital Region Water, an authority within the City of Harrisburg formed under the laws of the Commonwealth.

DCCD. Dauphin County Conservation District.

Direct Nexus. A connection between a BMP and a water quality improvement sufficient that PADEP and EPA will allow credit to PennDOT and the Municipal Partners for the BMP for purposes of complying with MS4 permit requirements and any applicable Total Maximum Daily Load.

EPA. The United States Environmental Protection Agency.

Long-term Operation and Maintenance. Operating and maintaining a BMP on an ongoing basis following construction, as required by the PADEP Guidance Documents, for PennDOT and the Municipal Partners to receive credit for the reductions under an NPDES MS4 PRP.

LPT. Lower Paxton Township, a Township of the Second Class.

MS4. Municipal Separate Storm Sewer System.

Municipal Partner or Municipal Partners. Capital Region Water, Lower Paxton Township and Susquehanna Township, individually or collectively.

NPDES. National Pollutant Discharge Elimination System.

Offeror. The person offering the proposal.

PADEP. The Commonwealth of Pennsylvania, Department of Environmental Protection.

PADEP Guidance Documents. PADEP documents that provide guidance for calculating sediment reduction and for developing MS4 PRPs and TMDL plans, along with any updates to them. To the extent that these documents conflict, the most recently published or updated document controls. Most of the PADEP Guidance Documents are available on PADEP's eLibrary (www.elibrary.dep.state.pa.us) under – Permit and Authorization Packages – Clean Water – PAG-13 NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) and Individual NPDES Permit Application for MS4s. The following PADEP Guidance Documents are of particular importance to this Statement of Work:

- PRP Instructions (Document 3800-PM-BCW0100k Rev. 3/2017)
- TMDL Plan Instructions (Document 3800-PM-BCW0200d Rev. 3/2017)
- BMP Effectiveness Values (Document 3800-PM-BCW0100m Rev. 6/2018)

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- Considerations of Stream Restoration Projects in Pennsylvania for eligibility as an MS4 Best Management Practice, May 11, 2018 (files.dep.state.pa.us/Water/BNPNSM/StormwaterManagement/MunicipalStormwater/PRP_TMDL_Plans/Stream%20Restoration%20Eligibility%20for%20MS4%205.11.2018.pdf)

Paxton Creek Watershed. The HUC 12 area of Dauphin County, Pennsylvania that drains into the Paxton Creek. The Paxton Creek watershed is a subwatershed of the Chesapeake Bay.

PennDOT. The Commonwealth of Pennsylvania, Department of Transportation.

Post-Construction. When used to denote a period of time, post-construction means the 5-year period of time for a particular BMP that begins at the end of construction but ends at the start of Long-term Operation and Maintenance.

PRP. Pollutant Reduction Plan.

Sediment Reduction Credit. Credit in accordance with the PADEP Guidance Documents toward PennDOT's and the Municipal Partners' current, future or anticipated obligations to reduce sediment discharging to the Paxton Creek Watershed. Credit is measured in pounds of sediment reduced annually for purposes of this Statement of Work. The term excludes sediment reduction credit already used or accounted for under other required environmental mitigation. PennDOT's and the Municipal Partner's PRPs have been calculated using different methodologies allowed by DEP. The vendor will be required to provide and report sediment reduction using both types of methods, but the award will be based upon the simplified method.

The following rules apply to calculating Sediment Reduction Credit for purposes of this IFB:

For the stream restoration BMPs proposed by the Vendor, the default BMP effectiveness value of 44.88 lbs/ft/yr TSS sediment reduction (edge of stream) shall be used as the minimum criteria to calculate the total load reduction where existing sediment loads have been calculated using the Chesapeake Bay loading rates (i.e., the "Simplified Method"), as established in PADEP's BMP Effectiveness Values (Document # 3800-PM-BCW0100m 6/2018). Sediment reduction credits must be calculated using the centerline of the stream and not the bank length. If the vendor believes a specific site will produce a sediment reduction credit higher than the default rate, the Vendor must provide written justification for the higher rate with the proposal. The reduction credit provided must follow all aspects of the protocol(s) chosen from the *Expert Panel* Report. For example, proposals utilizing Protocol 1 shall include information on the stream sediment erosion rate estimation methods, sediment delivery ratio, and restoration efficiency as applicable. PennDOT, at its sole discretion, may reject any bid that uses a higher rate if PennDOT is not satisfied by the written justification for the rate. Soil density testing may also be required to verify assumptions. Further, because the actual removal rate is unknown at the time of bid and because of the potential that PADEP may not approve the higher removal rate during the monitoring period, PennDOT may adjust the payment schedule set forth in Section 5 of this Statement of Work by reducing the payments at earlier milestones and correspondingly adjust the payments at the final milestone so that the total payment will achieve the unit

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price bid by the vendor. The proposed work must adhere to one of the eligible protocols covered in the Chesapeake Bay *Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects* (Schueler, T. and B. Stack,

<https://chesapeakestormwater.net/bmp-resources/urban-stream-restoration/>

For reporting purposes for the Municipal Partners Joint PRP refer to <https://capitalregionwater.com/jointprp/> for the baseline modeling information and methodology to utilized the use of Model My Watershed. For the stream restoration BMPs proposed by the Vendor, the default BMP effectiveness value of 115 lbs/ft/yr TSS sediment reduction (edge of stream) shall be used as the minimum criteria to calculate the total load reduction because existing sediment loads are calculated using Model My Watershed modeling at a local watershed scale, as described in the PADEP's TMDL Plan Instructions (Document # 3800-PM- BCW0200d Rev. 3/2017). The proposed work must adhere to one of the eligible protocols covered in the Chesapeake Bay *Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects* (Schueler, T. and B. Stack,

<https://chesapeakestormwater.net/bmp-resources/urban-stream-restoration/>

- If BMP effectiveness values are updated in DEP's BMP Effectiveness Values document or in Chesapeake Bay Program Expert Panel Reports between the time the PRP is approved and the time the final report is developed to document compliance with the permit, those updated effectiveness values may optionally be used, in accordance with prevailing MS4 permit conditions.

ST. Susquehanna Township, a Township of the First Class.

TMDL. Total Maximum Daily Load.

Unit Price. The total amount paid to the Vendor pursuant to this IFB divided by the total annual sediment reduction credit to be achieved by the proposal (\$/lb TSS/year).

Urbanized Area. An area identified as urbanized by the 2010 United States Decennial Census.

USACE. The United States Army Corps of Engineers.

Vendor. The awarded offeror. In the terms and conditions and standard specifications included elsewhere in this IFB, the Vendor may also be referred to as the "Contractor."

Basis of Award

The award will be based upon the lowest total cost per pound of annual sediment reduction credit that can be achieved in five years for the compensation of \$2,000,000.00.

2. Scope of Work.

The scope of services to be delivered includes all of the following:

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Task 1: Prepare Conceptual PRP, Identify Sites and Design the BMPs.

Following award, the Vendor must prepare and submit a Conceptual PRP, which is a document that describes in narrative form the Vendor's approach to achieving the bid cost per pounds of sediment reduction credit in five years for the compensation of \$2,000,000.00. The Conceptual PRP must demonstrate a direct nexus between the BMPs and water quality improvement for waterways in the Paxton Creek Watershed that are impaired by sediment and treating flow from urbanized areas.

PennDOT reserves the right to terminate the contract if PennDOT determines, at its sole discretion, that the Conceptual PRP fails to meet the requirements of this Scope of Work.

The Conceptual PRP also must include the following information:

- The Conceptual PRP must include stream restoration as the BMP incorporated into the plan as a qualification for the federal funds to be provided to PennDOT for this project.
- Visual sketches and schematics for each proposed BMP.
- The location for each proposed BMP.
- A property acquisition approach. The Vendor's work plan must describe the approach that the Vendor will use to acquire the necessary property interests to construct, operate, maintain and assure long-term operation and maintenance of the BMPs in conformance with Task 3 below.
- An estimated timeline for constructing the BMPs.
- Preliminary sediment baseline, reduction and effectiveness calculations, including total pounds of sediment reduction annually in accordance with the methods described above under the definition of the term Sediment Reduction Credit.

Task 2: Acquire the Property Interests to Construct, Maintain and Preserve the BMPs.

The Conceptual PRP must describe the approach that the Vendor will use to acquire the necessary property interests to construct, operate, maintain, preserve, and assure long-term operation and maintenance of the BMPs. Examples of property interests include long-term leases, easements, and fee simple ownership. If the property is not owned by the Commonwealth, the areas where BMPs are located will require the Vendor to acquire the right to record, and record an instrument (e.g., a conservation easement or deed restriction) identifying and preserving the BMP; identifying the entity responsible for the long-term operation and maintenance of the BMP; and granting reasonable access for inspection to EPA, PennDOT, PADEP, DCCD, the Municipal Partners, and the entity responsible for long-term maintenance. The Vendor may use their own property, acquire property, acquire easements or leases, or enter into agreements. The Vendor shall obtain local stormwater permits for each project. The Vendor must record easements or deed

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restrictions conforming to this Task and Task 3 below in the Dauphin County Recorder of Deeds Office for properties not owned by the Commonwealth or Municipality.

The Vendor, at its sole discretion and risk, may contact the Municipal Partners to inquire whether municipal land is available to be used to implement BMPs. Each Municipal Partner has sole discretion over whether to make any of its land available. The contact persons for each of the Municipal Partners are as follows:

- Capital Region Water (CRW); Claire Maulhardt or David Stewart – (717) 216-5269
- Lower Paxton Township (LPT); Randy Allen or Bradley Gotshall – (717) 657-5600
- Susquehanna Township (ST); David Kratzer or Betsy Logan – (717) 545-4751

If use of municipal land is being proposed, the Conceptual PRP must include a committal letter from the Municipal Partner. The Municipal Partner must remain non-exclusive for bidding purposes.

The Vendor may use state highway right-of-way for the project only if both of the following requirements are met:

- The Vendor must attach to the proposal a committal letter from the District Executive for PennDOT Engineering District 8-0. PennDOT has sole discretion over whether to issue a committal letter. The most likely reason that PennDOT might refuse to issue a committal letter is that the Vendor's proposed use conflicts with the existing use or an anticipated future use of the highway right-of-way. PennDOT, however, reserves the right to refuse to issue a committal letter for any reason whatsoever.
- The Vendor must apply for and obtain one or more highway occupancy permits from PennDOT allowing the work prior to beginning construction within the state highway right-of-way. The Vendor must satisfy all highway occupancy permit requirements.

Task 3: Provide for Long-Term Operation and Maintenance of the BMPs

The Vendor will be responsible for post-construction operation and maintenance for a minimum of 5 years before turning over the long-term maintenance to another entity if the Vendor does not assume long-term operation and maintenance responsibilities. The Vendor must identify an entity other than PennDOT or the Municipal Partners that will assume responsibility for long-term operation and maintenance of each BMP conforming to the requirements of the PADEP Guidance Documents. The entity must also agree to provide written documentation to PennDOT and the Municipal Partners upon request confirming that the entity has performed the required long-term operation and maintenance. This entity must be one of the following: a governmental entity; a fee simple owner or easement holder of the BMP site, which could be the Vendor; or an adjacent property owner in the case of stream restoration. The Vendor must prepare an Operation and Maintenance Plan that identifies types of maintenance activities, maintenance frequencies, personnel and equipment requirements, and estimated annual maintenance costs to turn over to the entity that will assume maintenance responsibility. If the entity is a property owner and is not the Commonwealth, then the Vendor must obtain and record fully-executed instruments in the

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chain of title for the property that make these obligations legally binding and enforceable by PennDOT, the Municipal Partners and PADEP on the owner and subsequent owners. If the entity is a municipality, then the Vendor must obtain a fully-executed and binding agreement with an appropriate resolution from the municipality. This agreement between the Vendor and the municipality must be enforceable by PennDOT, PADEP, and the Municipal Partners.

Task 4: Provide a Final Plan

Following approval of the Conceptual PRP, the Vendor must supply a Final PRP. The Final PRP is based on the Conceptual PRP but also includes the following:

- Copies of all recorded instruments and agreements required by Tasks 2 and 3 above.
- Final BMP(s) plans consistent with PADEP standards.
- Final Schedule for implementing the BMPs.
- Accommodations in the project schedule for regular progress meetings and review and approval of design drawings by PennDOT and other entities requiring permits.
- Operations and Maintenance Plan consistent with the PADEP Guidance Documents.
- Calculations showing the sediment, nitrogen and phosphorus removed per year consistent with the PADEP Guidance Documents.

Task 5: Obtain Necessary Permits.

Perform all activities necessary to obtain and comply with all USACE Clean Water Act Section 404 and Rivers and Harbors Act Section 10 permits; PADEP Chapter 102 and 105 permits; and if applicable, local Floodplain consistency, local Stormwater Management consistency, local zoning approval and any other permits or authorizations required to construct the BMPs. Provide copies of the permits and authorizations to PennDOT and Municipal Partners upon receipt.

Task 6: Construct the BMPs.

Provide all field services necessary to construct all BMPs consistent with the applicable permits and approvals, operation, any inspections and any maintenance required by PADEP to receive credit for the reductions under an NPDES MS4 PRP/TMDL.

Task 7: Provide As-Built Records.

Provide as-built records sealed by a Pennsylvania licensed professional engineer, to document the end of construction and certify the project was constructed as designed.

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Task 8: Operate, Monitor and Maintain All BMPs During Construction and Post-Construction.

During construction, the Vendor must operate, monitor and maintain all BMPs as required to comply with the applicable permits and then maintain their effectiveness once constructed.

During post-construction, the Vendor must do all the following:

- a. Monitor all stream restoration BMPs for no less than five years in accordance with the regulations found at Code of Federal Regulations, Title 33, Part 332 ("Compensatory Mitigation for Losses of Aquatic Resources") and USACE Regulatory Letter No. 08-03 ("Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources"), and any updates to them. The five-year time period starts for each BMP independently.
- b. Perform any other post-construction monitoring or maintenance required by the PADEP Guidance Documents for PennDOT and the Municipal Partners to receive credit for the reductions under an NPDES MS4 PRP/TMDL.
- c. Repair or reconstruct any BMPs that do not function as designed.
- d. Provide PennDOT and the Municipal Partners with copies of any required inspection reports, record keeping, and other documentation for each BMP conforming to the PADEP Guidance Documents and PennDOT's and the Municipal Partners' MS4 permit conditions for each BMP during construction and post-construction.

3. Standard Specifications

To the extent that the specific provisions of this Scope of Work conflict with any terms and conditions or standard specifications included elsewhere in this IFB, the specific provisions of this Scope of Work control and supersede the conflicting terms and conditions or standard specifications.

The Vendor must complete the services in accordance with the April 1, 2016 PennDOT Publication 408 specifications:

http://www.dot.state.pa.us/public/PubsForms/Publications/Pub_408/PUB%20408.pdf

If required, conduct Maintenance and Protection of Traffic in accordance with the most current version of Publication 213. Work Zone Traffic Control is considered incidental.

<http://www.dot.state.pa.us/public/PubsForms/Publications/PUB%20213.pdf>

4. Bid Requirements

The Bid Submission must include:

- Attachment B – Cost Submittal.
- A permitting, construction, inspection and maintenance schedule.
- A financial model: anticipated expenditures per year for ten years. This will demonstrate how inspection and long-term operation and maintenance will be covered.

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- A list of past environmental and stormwater mitigation projects managed or constructed by the Vendor. The Vendor must demonstrate they have been conducting this type of work for at least three (3) years.

5. Invoice and Billing Instructions

Payment Milestones are as follows:

#	Milestone Activity	Milestone Date (on or before)	Maximum Payment
1.	Conceptual PRP submitted to PennDOT	2 Months after award	\$0.00
2.	Conceptual PRP approved by PennDOT	varies	\$200,000.00
3.	Final PRP submitted to PennDOT	10 Months after #2	\$0.00
4.	Final PRP approved by PennDOT	varies	\$400,000.00
5.	Federal, State, and Local permits & approvals	6 Months after #4	\$0.00
6.	Begin BMP construction	8 Months after #5	\$0.00
7.	25% construction complete	8 Months after #6	\$200,000.00
8.	50% construction complete	8 Months after #7	\$400,000.00
9.	100% construction complete	16 Months after #8	\$400,000.00
10.	End of Post-Construction	varies	\$400,000.00

PennDOT reserves the right, at its sole discretion, to adjust the milestone dates as necessary, or to deny any request for extension by the Vendor. Where multiple BMPs are proposed, the Vendor must include a construction schedule to be tied with payment milestones for PennDOT approval. At any milestone, if PennDOT determines, in conformity with the PADEP Guidance Documents, that PADEP will allow PennDOT less sediment credit reduction toward PennDOT and Municipal Partners' MS4 permit obligations than necessary to achieve the unit price bid by the Vendor, PennDOT may proportionally reduce all remaining payments due as necessary to achieve the total cost per pound of sediment reduction credit bid by the Vendor. PennDOT, at its sole discretion, may consult with PADEP in making this determination. PennDOT may also consider any BMP for which the Vendor has failed to fully comply with the Scope of Work as providing no (zero) sediment reduction credit.

A completed Confirmation of Services Form (Form OS-501) must be submitted by the Vendor to the Project Manager, for review and verification at each payment milestone.

The Project Manager will notify the Vendor if corrections are needed. Each OS-501 is to be itemized to include sufficient detail to validate that the Payment Milestone has been completed.

Untimely or incomplete submissions of Form OS-501 and required supporting documentation may delay payment as required by the Payment section of the Terms and Conditions.

PennDOT reserves the right, throughout the life of the contract, to make changes to Form OS-501, and its instructions, content, and all other requirements.

Attachment A - Statement of Work for Invitation for Bid (IFB) 6100050101

Municipal Stream Restoration Collaboration

Paxton Creek Watershed, Dauphin County, PA

PennDOT's Project Manager for this contract will be Daryl St. Clair, dstclair@pa.gov 717-787-9512. **Contact before award is not allowed.**

Bid Submission Requirement

Award Based Upon

Total Annual Sediment Reduction Credit based upon a \$2,000,000 bid _____ (lbs.)
Using Simplified Method

For Information Only

Total Annual Sediment Reduction Credit based upon a \$2,000,000 bid _____ (lbs.) Using
Model My Watershed Method

Attachment B – Cost Submittal
Municipal Stream Restoration Collaboration
Paxton Creek Watershed, Dauphin County, PA



Date:	2/25/2020
Subject:	Amendment of Terms and Conditions: Section 111.2-Method of Award and Section V.2-Term of Contract
Solicitation:	IFB 6100050101 -Paxton Creek Watershed Sediment Reduction
Due Date/Time:	3/23/2020 @ 2:00PM
Addendum Number:	One (1)

To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals), including but not limited to questions and answers, which are considered a material part of the solicitation.

Please see the following update:

Addendum one (1) does the following:

1. Changes the Terms and Conditions, Section 111.2 Method of Award:

FROM: *It is the intent of the Commonwealth to make a single award of item(s) listed in the IFB to the lowest responsive and responsible bidder.*

TO: *It is the intent of the Commonwealth to make a single award of item(s) listed in the IFB based upon the highest annual total of pounds of sediment reduction that can be achieved in five years, or less, for the compensation of \$2,000,000.00.*

2. Changes the Terms and Conditions, Section V.2 Term of Contract:

FROM: *The initial term of the Contract shall be 00 year(s) and 00 month(s).*

TO: *The initial term of the Contract shall be a term no more than five (5) years.*

Except as clarified and amended by this Addendum, the terms, conditions, specifications, and instructions of the solicitation and any previous Addendum(s), remain as originally written.

Regards,

A handwritten signature in black ink, appearing to read "Dawn Grabuloff", with a long horizontal flourish extending to the right.

Dawn Grabuloff

Issuing Officer

PA Department of Transportation

400 North Street - 5th Fl, Keystone Bldg. | Harrisburg, PA 17120

Phone: 717.346.9707 | Fax: 717.783.7971

www.penndot.gov



Date:	2/26/2020
Subject:	Replace IFB Attachment A - Paxton Creek Watershed Sediment Reduction - SOW with new.
Solicitation:	IFB 6100050101 -Paxton Creek Watershed Sediment Reduction
Due Date/Time:	3/23/2020 @ 2:00PM
Addendum Number:	Two (2)

To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals), including but not limited to questions and answers, which are considered a material part of the solicitation.

Please see the following update:

Addendum two (2) does the following:

1. Replaces the current Attachment A -Paxton Creek Watershed Sediment Reduction- SOW with Attachment A - Paxton Creek Watershed Sediment Reduction- SOW-Amended 2.26.20.

Except as clarified and amended by this Addendum, the terms, conditions, specifications, and instructions of the solicitation and any previous Addendum(s), remain as originally written.

Regards,

A handwritten signature in black ink that reads "Dawn Grabuloff".

Dawn Grabuloff
 Issuing Officer
 PA Department of Transportation
 400 North Street - 5th Fl, Keystone Bldg. | Harrisburg, PA 17120
 Phone: 717.346.9707 | Fax: 717.783.7971
www.penndot.gov



Date:	3/5/2020
Subject:	Replace IFB Attachment A - Paxton Creek Watershed Sediment Reduction - SOW with new version.
Solicitation:	IFB 6100050101 -Paxton Creek Watershed Sediment Reduction
Due Date/Time:	3/23/2020 @ 2:00PM
Addendum Number:	Three (3)

To All Suppliers:

The Commonwealth of Pennsylvania defines a solicitation "Addendum" as an addition to or amendment of the original terms, conditions, specifications, or instructions of a procurement solicitation (e.g., Invitation for Bids or Request for Proposals), including but not limited to questions and answers, which are considered a material part of the solicitation.

Please see the following update:

Addendum three (3) does the following:

1. Replaces the current **Attachment A -Paxton Creek Watershed Sediment Reduction- SOW** with **Attachment A - Paxton Creek Watershed Sediment Reduction- SOW-Amended 3.5.2020**; changes made to pages four (4) and five (5).

Except as clarified and amended by this Addendum, the terms, conditions, specifications, and instructions of the solicitation and any previous Addendum(s), remain as originally written.

Regards,

A handwritten signature in black ink that reads "Dawn Grabuloff".

Dawn Grabuloff
 Issuing Officer
 PA Department of Transportation
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STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS

CITATIONS

6.0 CITATIONS

1. U.S. Environmental Protection Agency (EPA). 2019. NPDES Stormwater Discharges from Municipal Sources – Overview webpage. EPA. Webpage available at:

(<https://www.epa.gov/npdes/stormwater-discharges-municipal-sources>)

2. U.S. Environmental Protection Agency (EPA). 2010. MS4 Permit Improvement Guide. EPA Office of Water, Office of Wastewater Management, Water Permits Division. EPA-833-R-10-001. PDF document available at:

(https://www3.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf)

3. Chesapeake Bay Program. 2014. Chesapeake Bay Watershed Agreement. PDF document available at:

(<https://www.chesapeakebay.net/documents/ChesapeakeBayWatershedAgreementFINAL.pdf>).

4. U.S. Environmental Protection Agency (EPA). 2011. Guide for Chesapeake Bay Jurisdictions for the Development of Phase II Watershed Implementation Plans. PDF document available at:

(https://www.epa.gov/sites/production/files/2015-07/documents/guideforthePhaseIIWIPs_330final.pdf)

5. U.S. EPA. 2016. Wastewater Out Front in Bay Restoration: Stories of Progress in Achieving Healthy Waters. EPA Region 3 Water Protection Division. Webpage document available at:

(<https://www.epa.gov/chesapeake-bay-tmdl/wastewater-out-front-bay-restoration>)

6. U.S. EPA. 2010. Urban Stormwater Approach for the Mid-Atlantic Region and the Chesapeake Bay Watershed. EPA Region 3 Mid-Atlantic Water. PDF document available at:

(https://www.epa.gov/sites/production/files/2015-07/documents/ms4guider3final07_29_10.pdf)

7. Schueler, Tom and Stack, Bill. Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects. September 8, 2014. Chesapeake Stormwater Network and Center for Watershed Protection. PDF document available at:

(http://chesapeakestormwater.net/wp-content/uploads/dlm_uploads/2013/10/stream-restoration-short-version.pdf)

8. Pennsylvania Department of the Environment (PA-DEP). 2016. General Guidelines for MS4 Collaborative Efforts. Link on PA-DEP Collaboration webpage. PDF document available at:

(http://files.dep.state.pa.us/Water/BNPNSM/StormwaterManagement/MunicipalStormwater/Collaboration/General_Guidelines_for_MS4_Collaborative_Efforts.pdf)



STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS

CITATIONS

9. Maryland Department of Transportation (MDOT). 2019. Environmental Programs, Land and Water Resources Webpage. MDOT. Webpage available at:

(<https://maryland.maps.arcgis.com/apps/MapSeries/index.html?appid=6fd6584f8b834aa9a56d30566a4a1e0f&entry=6>)

10. Maryland Department of Transportation – State Highway Administration (MDOT SHA). 2019. MDOT SHA Bay Restoration Website (interactive project viewer). MDOT SHA. Webpage available at:

(<https://maryland.maps.arcgis.com/apps/webappviewer/index.html?id=cd43b2ce1f8c482d8ec070aac94bfd54>)

11. Maryland Department of the Environment. 2019. Local Partners' Bay Cleanup Home webpage. MDE. Webpage available at:

(<https://mde.maryland.gov/programs/Water/TMDL/TMDLImplementation/Pages/local-partners.aspx>)

12. Maryland Department of Transportation – State Highway Administration (MDOT SHA). 2019. Restoring the Chesapeake Bay and Local Waterways & MDOT SHA Bay Restoration Strategies webpages. MDOT SHA. Webpages available at:

(<https://www.roads.maryland.gov/Index.aspx?PageId=333> and <https://www.roads.maryland.gov/Index.aspx?PageId=37>)

13. Maryland Department of Transportation - State Highway Administration (MDOT SHA). 2016. Impervious Restoration and Coordinated Total Maximum Daily Load Implementation Plan. SHA, Baltimore, MD. PDF document available at:

(<https://www.roads.maryland.gov/OED/Entire%20Plan.pdf>)

14. Delaware Department of Natural Resources and Environmental Control (DNREC). 2019. Delaware's Chesapeake Bay Watershed Implementation Plan (WIP) webpage. Division of Watershed Stewardship. Webpage available at:

(http://www.dnrec.delaware.gov/swc/wa/Pages/Chesapeake_Wip.aspx)

15. Delaware Department of Transportation (DelDOT). 2019. DelDOT's Stormwater Management webpage and associated document links. Webpage available at:

(<https://deldot.gov/Programs/stormwater/index.shtml?dc=permit#>)

16. Chesapeake Stormwater Network. 2019. Spotlight on DelDOT and New Castle County, DE. Webpage document available at:

(<https://chesapeakestormwater.net/2019/02/spotlight-on-deldot-and-new-castle-county-de/>)



STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS

CITATIONS

17. Virginia Department of Environmental Quality (DEQ). 2019. Wetlands and Stream Protection webpage. DEQ. Webpage available at:

(<https://www.deq.virginia.gov/Programs/Water/WetlandsStreams.aspx>)

18. Virginia Department of Environmental Quality (DEQ). 2019. Municipal Separate Storm Sewer System (MS4) Permits. DEQ. Webpage available at:

(<https://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPPermits/MS4Permits.aspx>)

19. Virginia Department of Transportation (VDOT). 2019. MS4 / Stormwater Management webpage. VDOT. Webpage available at:

(http://www.virginiadot.org/business/locdes/ms4_stormwater_management.asp)

20. Virginia Department of Transportation (VDOT). 2018. VDOT News – Statewide: VDOT Partners with Environmental Council to Develop Resilient Stream Crossings. VDOT. Webpage available at:

(<https://www.virginiadot.org/newsroom/statewide/2018/vdot-partners-with-environmental-council-to-develop-resilient-stream-crossings12-6-2018.asp>)

21. New York State Department of Transportation (NYSDOT). 2019. Projects in Your Neighborhood webpage. Webpage available at:

(<https://www.dot.ny.gov/projects>)

22. New York State Department of Environmental Conservation (NYSDEC). 2019. Chesapeake Bay Watershed Program webpage and associated linked documents. Webpage available at:

(<https://www.dec.ny.gov/lands/33279.html>)

23. West Virginia Department of Transportation, Division of Highways. 2017. Design Directive (DD-506): Post Construction Storm Water Management. PDF document available at:

(<https://transportation.wv.gov/highways/engineering/Documents/Publications%20Committee%20Meeting/DD-506%202016-02-19%20rev.%202017-06-01%20changes%20complete.pdf>)

24. West Virginia Department of Environmental Protection. 2019. Chesapeake Bay Program webpage. Webpage document available at:

(<https://dep.wv.gov/wwe/watershed/wqmonitoring/pages/chesapeakebay.aspx>)

25. West Virginia Department of Environmental Protection. 2019. Web Search on Stream Restoration Partnering. Webpage available at:

(<https://dep.wv.gov/Pages/Search.aspx?q=stream%20restoration%20partnering>)



STREAM RESTORATION MUNICIPAL PARTNERSHIP AND STANDARDS

CITATIONS

26. DC Stormwater Plan. 2019. Consolidated TMDL Implementation Plan webpage, links and attachments. Webpage available at:

(<https://dcstormwaterplan.org/>)

27. State of Ohio, Department of Transportation (ODOT). 2000. ODOT Partnering Handbook. PDF document available at:

(<http://www.dot.state.oh.us/Divisions/ConstructionMgt/Admin/Partnering/handbook.pdf>)

