

**2019 STORMWATER MANAGEMENT BID TABULATION:**

	<b>Company:</b>	<b>Location:</b>	<b>Date / Time Received:</b>	<b>Baseline Imp. Amount:</b>	<b>SOP Amount:</b>	<b>Annual Inspection Amount:</b>	<b>Total:</b>	<b>Discounted Rate if Awarded Together:</b>
1	A.D. Marble	Hunt Valley, MD	03/20/19, 10:53 AM	\$18,429.70	\$7,424.55	\$5,186.00	\$31,040.25	
2	Advanced Land & Water	Eldersburg, MD	03/20/19, 2:00 PM	\$13,663.00	\$4,664.00	\$3,242.00	\$21,569.00	\$19,367.00
3	ARRO Consulting, Inc.	Hagerstown, MD	03/20/19, 9:45 AM	\$20,918.80	\$20,144.10	\$3,878.10	\$44,941.00	
4	BayLand Consultants & Designers, Inc.	Hanover, MD	03/20/19, 10:35 AM	\$25,534.60	\$4,068.39	\$3,492.61	\$33,095.60	
5	Century Engineering	Hunt Valley, MD	03/20/19, 3:10 PM	\$28,118.95	\$2,618.62	\$8,958.93	\$39,696.50	
6	Charles P. Johnson & Associates, Inc.	Silver Spring, MD	03/20/19, 2:07 PM	\$34,776.00	\$10,032.00	\$25,320.00	\$70,128.00	\$56,102.40
7	Greenman-Pedersen, Inc	Columbia, MD	03/20/19, 1:35 PM	\$15,000.00	\$8,590.00	\$6,000.00	\$29,590.00	
8	RK&K	Baltimore, MD	03/20/19, 11:21 AM	\$45,030.95	No Bid	\$14,839.20	\$59,870.20	
9	Saint Anthony Consultants, LLC	Thurmont, MD	03/20/19, 1:42 PM	\$25,000.00	\$10,000.00	\$10,500.00	\$45,500.00	
10	Wallace Montgomery	Hunt Valley, MD	03/20/19, 9:45 AM	\$66,548.00	No Bid	\$26,700.00	\$93,248.00	



## TOWN OF EMMITSBURG

300A South Seton Avenue Emmitsburg, Maryland 21727; Phone: 301-600-6300; info@emmitsburgmd.gov

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# REQUEST FOR PROPOSAL

## **RE: MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) BASELINE IMPERVIOUS ASSESSMENT, STANDARD OPERATING PROCEDURE MANUAL, & ANNUAL DRY-WEATHER INSPECTIONS.**

The Mayor and Commissioners of Emmitsburg, Maryland are requesting bids from qualified individuals or businesses to perform **one or more** of the following projects as are required in the Town's General Discharge Permit No. 13-IM-5500:

1. Prepare a baseline impervious assessment, including verifying and updating the Town's existing urban Best Management Practice (BMP) database and create a Restoration Work Plan;
2. Developing a Standard Operating Procedure (SOP) manual in support of implementing a State required Illicit Discharge Detection and Elimination (IDDE) program; and
3. Performing annually recurring dry-weather screening of the identified stormwater outfalls (20% per year, up to 100). This section shall be bid as a three (3) year contract. The price shall be shown and paid on a yearly basis.

Applicants may bid one or more of the projects; however, costs for each project must be shown individually.

Sealed proposals are due by 4:00 pm on Wednesday, March 20, 2019. Proposals will not be accepted via email. Please boldly note on sealed bids **"ATTN: ZACH GULDEN, 2019 MS4 PROJECT BIDS, DO NOT OPEN."**

Please direct any questions to Zach Gulden, Town Planner, at 301-600-6309 or at [zgulden@emmitsburgmd.gov](mailto:zgulden@emmitsburgmd.gov).

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## **SCOPE OF WORK**

### **BASELINE IMPERVIOUS ASSESSMENT**

The successful bidder shall create a baseline impervious assessment for area within the Town's jurisdiction. A map of the Town's jurisdiction and approximate acreage can be found on page 6 of this document. County, State, and Federally owned property (including roadways) shall not be included in the impervious calculations. The baseline impervious assessment must meet all criteria as required in the Town's General Discharge Permit No. 13-IM-5500, which will be included in the RFP packet.

The Town is required to commence impervious area restoration for twenty (20) percent of existing developed lands that have little or no stormwater management by the end of the permit term (October 31, 2023). Guidance for implementing restoration activities is available in the 2014 MDE document *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated*, hereafter referred to as the Accounting Guidance. While the most recent version of the Accounting Guidance should be

referenced by all stormwater permittees, the method below highlights the most relevant information from that document for small MS4 owners and operators. This provides a clear outline for compliance with impervious area restoration for small MS4s.

#### **A. Establishing Baselines: Impervious Surface Area Assessment**

The Town must develop an impervious surface area baseline assessment and delineate the areas that are treated with acceptable water quality BMPs to the maximum extent practicable (MEP). This analysis will provide the baseline used to calculate the twenty percent restoration requirement. The following information is needed for this assessment:

- 1. Land Use and Impervious Surface Area Analysis:** Evaluate the total impervious surface within the Town's regulated permit area using the best available land use data that can be generated from the same source from year to year.

BMPs designed in compliance with the water quality volume (WQv) treatment criteria found in the *2000 Maryland Stormwater Design Manual, Volumes I & II* (Manual) are considered to provide water quality treatment to the MEP. Therefore, the impervious area draining to BMPs designed and approved in accordance with the Manual does not need to be counted toward impervious area restoration requirements.

- 2. Urban BMPs:** The Town will provide the applicant GIS data / maps of the jurisdiction's storm drain infrastructure, which identifies all pipes, outfalls, inlets, stormwater BMPs and their drainage areas, and surface waters. The applicant shall perform a drainage area analysis of the areas upslope of the Town's BMPs not already included in the existing BMP table and estimate the area of impervious surfaces treated by each BMP and update these values if necessary, in the BMP table provided by the Town. The following guidelines must be used to determine the level of water quality treatment provided by existing stormwater BMPs:

- BMPs constructed according to the Manual for new development after the baseline year of 2002 provide acceptable water quality treatment. The impervious areas draining to these BMPs do not need to be counted in the impervious area required to be restored.
- BMPs implemented for new development after 2002 may not be used for credit toward impervious area restoration.
- BMPs implemented prior to 2002 may provide some water quality treatment. These include wet ponds, wetlands, and infiltration BMPs. In these cases, the original design parameters for each BMP are needed to verify the level of treatment provided. The impervious area treated is based on the volume provided in relation to the WQv (i.e., 1 inch of rainfall). For example, if a BMP was designed to treat a half inch of rainfall, the amount of impervious area treated is 50% of the actual impervious area draining to the BMP.
- BMPs designed for flood control do not provide water quality treatment. The impervious area draining to these BMPs must count toward the baseline.
- Where plans, design specifications, and complete inspection and maintenance records are not available, BMPs are not considered to provide acceptable water quality treatment. Impervious areas draining to these structures must count toward the baseline.

- The impervious area treated by BMPs implemented for retrofitting or redevelopment between January 1, 2002, and December 31, 2005, may be subtracted from the baseline number.

A useful tool for an initial assessment is the Stormwater Management by Era approached document by MDE in 2009. The approach considers four distinct regulatory eras where stormwater management requirements correlate with a certain level of BMP performance. These eras are as follows:

- Prior to 1985. Stormwater management regulations came into effect after this era. Any development constructed in this time period is most likely untreated (unless retrofits were constructed in later years).
- Between 1985 and 2002. BMPs implemented during this time addressed flood control; however, individual BMP design criteria must be used to verify whether water quality is provided.
- Between 2002 and 2010. The Manual was fully implemented during this era. New development that meets the water quality requirements of the Manual is considered to have acceptable treatment.
- Post-2010. ESD to the MEP is required. Any development project that complied with State regulations in the third and fourth eras is considered to have acceptable water quality treatment.

This approach was used in the development of Maryland's WIP for meeting Chesapeake Bay TMDLs. It can be used for identifying BMPs that provide water quality so that the treated impervious areas may be deducted from the baseline assessment. The stormwater management by era approached can also be valuable for long term planning for targeting potential areas suitable for retrofitting.

The successful bidder shall conduct a records review and/or information requests for relevant documents and data from Frederick County. This data will include available County data and inspection records for BMPs within the Town boundary, and a GIS layer of storm sewer features for impervious surfaces within the Town boundary but outside the Town's MS4 jurisdiction.

- 3. Impervious Surfaces in Rural Areas:** Many rural roads and residential subdivisions have open vegetated drainage systems, impervious area disconnections, and sheet flow to conservation areas that filter and infiltrate stormwater runoff. The applicant must conduct a systematic review of existing rural areas to determine the extent of water quality treatment already provided. This review will also aid in identifying opportunities for retrofitting.

Land use designation can help in selecting areas that are already adequately managed. For example, public roads and residential subdivisions in predominantly rural areas with low population densities (e.g., one or fewer dwelling unit per three acres) may have water quality design features equivalent to those defined in the Manual. These practices include rooftop disconnect, non-rooftop disconnect, and sheet flow to conservation areas. These practices promote sheet flow or treatment through vegetative filtering of runoff. The applicant shall document where conditions meet the Manual's criteria and adequate treatment is provided, then the impervious acres in these areas may be excluded from the

baseline. Acceptable documentation can include a comprehensive GIS desktop analysis of land use and zoning conditions and local runoff patterns. Sufficient evidence to justify assumptions in the analysis must be included for MDE review and approval.

4. **Total Impervious Acres Not Treated to the MEP:** Subtract total impervious areas draining to water quality BMPs and nonstructural practices (determined above) from the total impervious land area owned or operated by the permittee as of the baseline year selected. Restoration requirements will apply to twenty percent of the remaining untreated impervious area at the start of the permit term.

## **B. Criteria for Impervious Area Restoration Crediting**

The water quality objective for impervious area restoration is based on treating the WQv (i.e., 1 inch of rainfall) using BMPs defined in the Manual. Because of the numerous constraints inherent in the urban environment, meeting the design standards specified in the Manual may not always be achievable. In these cases, retrofit opportunities that currently achieve less than the WQv must be pursued where they make sense. Applying impervious area treatment credit for these projects will be based on the proportion of the full WQv treated.

Where stormwater retrofits provide water quality treatment for existing unmanaged urban areas, impervious area restoration credit may be applied according to the following criteria:

- An acre for acre impervious credit will be given when a BMP is designed to provide treatment for the full WQv (i.e., 1 inch of rainfall); or
- A proportional acreage of credit will be given when less than the WQv is provided: (percent of the WQv achieved) x (drainage area impervious acres).
- When a BMP is designed to treat greater than one inch of rainfall, additional credit may be granted in accordance with the Accounting Guidance.

## **C. Restoration Work Plan / Acceptable Restoration Strategies**

Once the baseline impervious area assessment is completed, the successful bidder shall evaluate potential options the Town has for reaching its 20% restoration goals. To help realize the 20% goal, the applicant shall provide five (5) or more options for restoration strategies with their estimated costs of implementation. The format of the restoration work plan shall follow Table 2. Restoration Activity Schedule as shown on page 14 of the Town's NPDES permit.

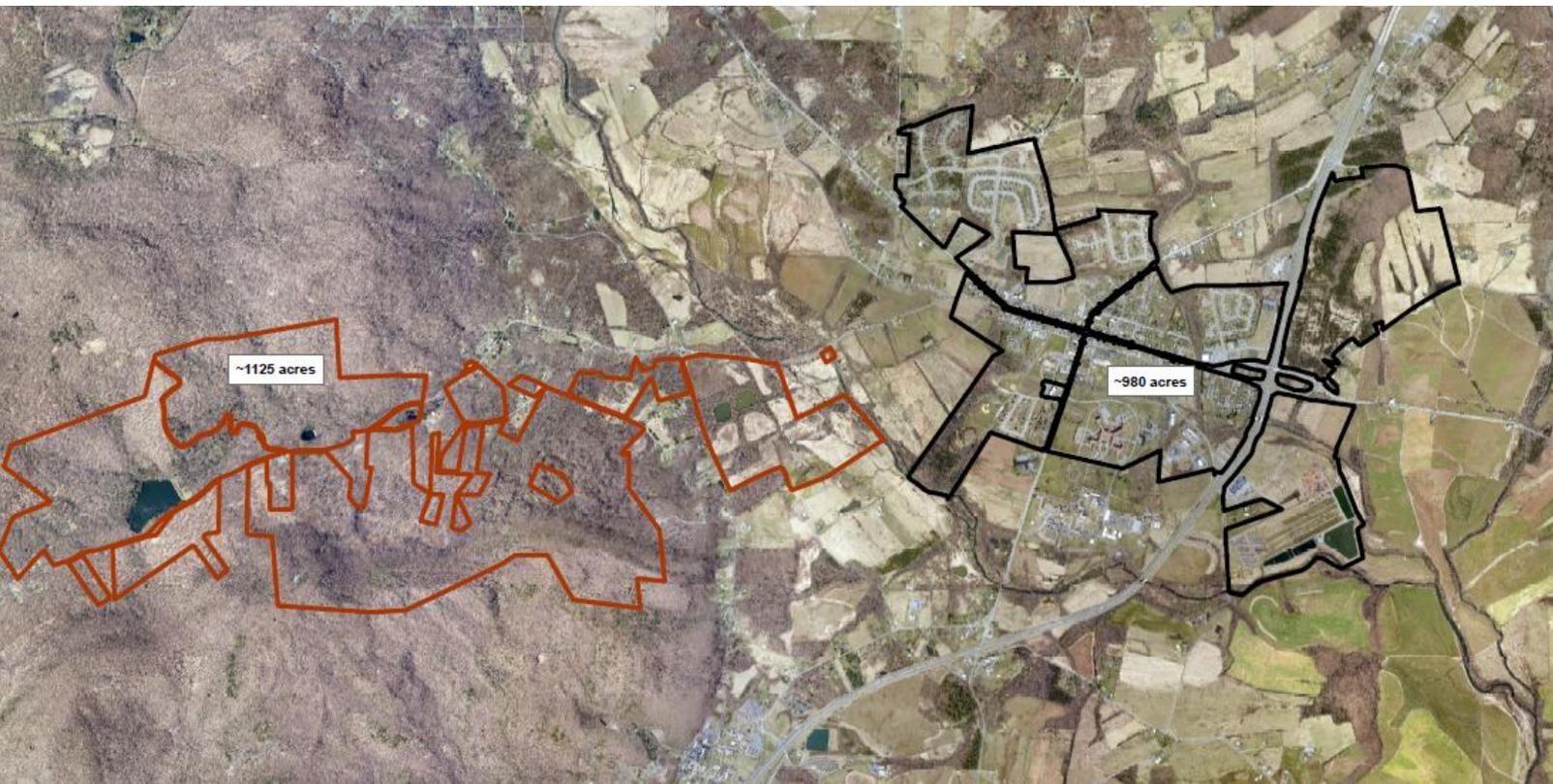
The following are acceptable restoration strategies for receiving impervious area restoration credit. Restoration BMPs may be implemented anywhere within the jurisdictional boundary. The applicant may submit alternate actions to comply with impervious area restoration requirements, subject to MDE approval.

1. **New Retrofit BMPs:** This includes new stormwater BMPs installed to provide water quality BMPs and designed criteria are provided in the Manual. When a BMP from this list is used and the full WQv is provided, the total impervious surface within the drainage area may be credited toward restoration.
2. **Existing BMP Retrofits:** These are existing BMPs that were not originally designed to provide water quality treatment (e.g., detention pond). As discussed previously, the

impervious area draining to these BMPs may not be counted as treated. However, when retrofitted to an acceptable water quality BMP, such as converting a dry pond to a wetland, or providing additional WQv storage; the impervious acres draining to the BMP may be credited as restored.

- 3. BMP Enhancement and Restoration:** When a BMP has failed and significant structural problems exist, the BMP must be restored to receive proper restoration credit. Restoring a failed BMP must include providing the full WQv, and may entail increasing storage capacity, providing forebays, increasing the flow path by installing berms or other design enhancements, re-planting with desirable wetland and native vegetation, or significant sediment clean outs. This restoration credit may apply to failed structures that need water quality enhancements in accordance with Chapter 3 of MDE's Manual. This is intended to ensure that BMPs are functioning as designed and that routine maintenance is addressed in order for the permittee to keep the credit.
- 4. Alternative Stormwater BMPs:** The Accounting Guidance recognizes that new and innovated approaches to stormwater management are being developed on a continuous basis. Therefore, several alternative BMPs are documented that may be used for the purpose of impervious area restoration. Some of these alternative BMPs include street sweeping, buffer planting, reforestation, stream restoration, inlet cleaning, shoreline stabilization, and others. A list of alternative BMPs is provided in Table B.3 in the Town's stormwater permit. The Accounting Guidance references acceptable criteria for BMP implementation and provides a method for translating pollutant load reductions from alternative BMPs into an impervious acre equivalent in order to credit these practices toward restoration requirements. When innovative practices are approved through Chesapeake Bay Program (CBP) expert panels or by MDE, the associated credits and design criteria may also be used for restoration credit.

Impervious acres treated must be reported according to the "impervious acre equivalent" identified in Table B.4 for each alternative practice. As an example, where stream restoration is proposed, the impervious acre equivalent is equal to 0.01 acre per linear foot. This means that when 1,000 linear feet of stream are restored, then 10 acres of credit may be granted toward impervious area restoration.



^ Town's responsibility area to be included in the baseline impervious assessment.  
Total acreage = approximate 1,125 acres of forested area and 980 of urbanized area.

## **STANDARD OPERATING PROCEDURE MANUAL**

The successful bidder must develop SOPs that outline methods to conduct dry weather outfall inspections, locate the source of a suspected illicit discharge, and address illicit discharges. Program implementation as detailed in the SOPs shall be prioritized in the areas that have higher potential to pollute (e.g. urbanized, commercial, or areas with older stormwater infrastructure) and must include a long-term schedule for completing a jurisdiction-wide map. The SOPs must identify the number of outfalls to be investigated per year and include an inspection checklist to document the outfall screening. A good resource for developing the Illicit Discharge Detection and Elimination (IDDE) program and field checklist is found in the 2004 *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, authored by the Center for Watershed Protection and Dr. Robert Pitt. Figure B.2 in the Town's NPDES permit, the "Outfall Reconnaissance Inventory/Sample Collection Field Sheet", is one of several tools the successful bidder may choose to use in the Town's program. This checklist will assist the Town in identifying any potential illicit discharge, determining the need for a more in-depth investigation, and noting any other outfall maintenance needs (e.g., cracks, erosion, excessive vegetation).

The Town will provide the applicant with GIS data layers and maps of existing Town stormwater pipes, outfalls, inlets, and BMPs. The applicant must assign each identified outfall a unique ID and provide a map and table with geospatial coordinates as outlined in the Town's NPDES permit.

In summary, the applicant must develop SOPs that specify the following:

- a) An inspection checklist describing how outfalls are screened for dry weather flows (see Figure B.2 of Appendix B in the Town's NPDES permit for an example of an outfall screening checklist);
- b) Screening of 20% of total outfalls per year, up to 100 outfalls;
- c) Procedures for identifying the source, and eliminating spills, illegal dumping, and other suspected illicit discharges;
- d) Identification of priority areas for illicit discharge screening based on pollution potential;
- e) Enforcement and penalty procedures;
- f) Procedures to inform employees, businesses, and the general public of issues relating to illegal discharges and improper waste disposal; and
- g) Coordination with adjacent/interconnected MS4 operator(s).

## **ANNUAL DRY WEATHER OUTFALL SCREENINGS**

The successful bidder must screen 20% of the Town's total outfalls per year, up to 100 outfalls per the Town's Standard Operating Procedure's Manual. Following a 48 hour (or longer) period without precipitation, the applicant must visit each outfall (20% of the previously identified outfalls in Town, each year) to verify its location, record recent weather conditions, the interpreted origin of the outfall, and record field conditions via digital photography. To help facilitate potential trespass issues and related citizen interactions, a Town employee will accompany the applicant. Each outfall inspection must be documented on the Outfall Reconnaissance Inventory / Sample Collection Field Sheet as shown on Figure B.2 of the Town's NPDES.

During each annual field check, the applicant will record the location, piping material, shape, dimension, land surface conditions, etc. If no discharge is observable, the applicant will note the dry condition. If an observable discharge is occurring, the successful bidder will follow the Town's approved SOPs for dry weather screenings, which may include:

- A. Measure/Estimate Flow Volume** – either a bucket and a stopwatch or the cross-sectional area method to estimate flow coming from the outfall, to the degree field conditions allow. The successful bidder shall measure temperature, pH, and ammonia with in-field equipment.
- B. Identify Physical Indicators** – the successful bidder shall identify unusual odor, color, turbidity, and floatables (to the degree observable). Indicators such as outfall damage, deposits/stains, or abnormal vegetation will be assessed for both flowing and non-flowing outfalls. The applicant shall record the presence of any such illicit discharge indicator, document descriptions, and estimate a relative level of severity.
- C. Relative Qualitative Characteristics** – The successful bidder shall use the indicators and severity levels in the previous scope item to assign each outfall an overall characterization. Outfalls can be characterized as unlikely, potential, suspect, or obvious regarding illicit discharges.

- D. Collect Water Samples** – The successful bidder shall collect a water sample from each illicitly discharging outfall depending on its characterization. Water samples, for parameters suggested by applicable MDE guidance, will be sent to a local lab recommended by the applicant, but contracted directly by the Town. The Town will pay for the lab fees. The Town will share lab results with the applicant.

Record Results, Concerns, or Maintenance Needs – the successful bidder shall document results of the field checks and observations of illicit discharges, as well as potential concerns not related to illicit discharges. Such concerns shall include damaged or failing infrastructure, the presence of trash, excessive vegetation and/or erosion. Reporting shall take the form of a brief summary letter with attached tabular summaries, photographs, and (as applicable) lab reports.

**SUBMITTAL REQUIREMENTS**

**A.) Letter of Transmittal:** The letter of transmittal must contain the following information:

1. Company name, address, and telephone number.
2. Name, title, address, e-mail address, and telephone number of the person(s) whom correspondence should be directed.
3. Federal and state taxpayer identification numbers of your organization.
4. Briefly state your understanding of the services to be performed and make a positive commitment to provide the services and materials as specified.
5. Statement which indicates “proposal and cost schedule shall be valid and binding for one year following proposal due date and will become part of the contract that is negotiated with the Town of Emmitsburg”.

**B.) Detailed Cost Statement**

The cost statement should include the total project cost, cost of supplies, cost of labor, etc. It should be clear what factors make up the total project cost.

**C.) References**

Provide client references and pictures for similar work completed within the past three (3) years. Please provide the organization, name, address and telephone number of the person(s) at the client reference who is most knowledgeable about the work performed and can comment on the professional qualifications/expertise of your organization/staff.

**I. PROPOSED TIMELINE**

Tuesday, February 5, 2019	RFP available on the Town of Emmitsburg’s website
Wednesday, March 20, 2019	<b>DEADLINE: Bids due by 4:00 p.m.</b>
Wednesday, April 03, 2019	Announcements of winning bidder made by 4:00 p.m.
Mid-2019	Winning bidder can begin work.

**II. MISCELLANEOUS INFORMATION**

**A.)** The Town of Emmitsburg reserves the right to accept or reject any and/or all bids and to waive any informalities or irregularities in the bidding process.

**B.)** The RFP creates no obligation on the part of the Town to award a contract or to compensate the proposer for any costs incurred during the proposal presentation, response, submission, presentation, or oral interviews (if requested/held). The Town reserves the right to award a

contract based upon proposals received without further discussion or negotiation. Proposers should not rely upon the opportunity to alter their qualifications during discussions.

- C.)** The Town further reserves the right to make investigations as it deems necessary to determine the ability of proposers to furnish the required services, and proposers shall furnish all such information for this proposal as the Town may request.
- D.)** Proposers must specifically identify any portion of their submittals deemed to contain confidential or proprietary information.
- E.)** The Town of Emmitsburg does not discriminate based on race, color, national origin, sex, religion, age and disability in employment or the provision of services.