Quality Assurance Project Plan

For

Reporting Maryland Nonpoint Source BMP Data via NEIEN

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Prepared for:
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Approvals Signature (required prior to project start):

_____**Date:** _____
Gregorio Sandi, MDE Project Manager

_____**Date:** _____
Jim George, MDE QA Manager

_____**Date:** _____
MDE/SSA Director

_____**Date:** _____
Lucinda Power, EPA CBPO Project Officer

_____**Date:** _____
Rich Batiuk, EPA CBPO QA Officer

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1.0 PROJECT MANAGEMENT

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1.3 - Distribution List

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1.4 - Project Organization

This project will be managed primarily by MDE, Science Services Administration (SSA), with general administrative oversight by senior SSA staff. The following individuals will be involved with project management:

MDE Project Manager – Gregorio Sandi will be responsible for overall project management. Mr. Sandi will oversee obligations for completing all work assigned; maintaining communications with the associated data providers to ensure that assigned tasks are completed in a timely manner and meet CBP requirements including:

- Conduct outreach with internal/external stakeholders
- Maintain official, approved Quality Assurance Project Plan(QAPP)
- Develop amended QAPP
- Process the data
- Provide the data to the Chesapeake Bay Program in XML format

MDE QA Manager – Jim George will be responsible for reviewing and approving the QAPP.

MDE Grant Manager – Paul Emmart will maintain communication with the U.S. Environmental Protection Agency (EPA) for issues related to overall grant management and the budget and immediate supervision of the Project Manager.

Additional personnel involved in project implementation are listed in Table 1, and shown as an organization chart in Figure 1. Figure 2, NEIEN Data Flow, shows their connection to BMP types and sector-specific QAPPs.

The BMPs reported by each partner and data contributor, and their contact information are listed in Table 2 of Appendix A, Maryland's NEIEN XML Generation and Submission to the Chesapeake Bay Program.

Table 1: Project Implementation Personnel

Individual	Role in Project	Organizational Affiliation
Greg Sandi	Project Manager	Maryland Dept of Environment
Alisha Mulkey	Data Contributor	Maryland Dept of Agriculture
Elaine Dietz	Data Contributor	Maryland Dept of Environment
Denise Clearwater	Data Contributor	Maryland Dept of Environment
New Hire 2014	Data Contributor	Maryland Dept of Natural Resources
Marya Levelev	Data Contributor	Maryland Dept of Environment
Sekhoane Rathebe	Data Contributor	Maryland Dept of Environment
Jesse Salter	Data Contributor	Maryland Dept of Environment
Mary Dewa	Data Contributor	Maryland Dept of Environment
Josh Flatley	Data Contributor	Maryland Dept of Environment
Federal Facilities – Sekhoane Rathebe	Data Contributor	Maryland Department of the Environment
Kristen Fleming	Data Contributor	Maryland Dept of Natural Resources
Raymond Bahr	Partner	Maryland Dept of Environment
Jason Keppler	Partner	Maryland Dept of Agriculture
Anne Hairston-Strang	Partner	Maryland Dept of Natural Resources
Jay Prager	Partner	Maryland Dept of Environment
Robin Pellicano	Partner	Maryland Dept of Environment

Data Contributors will be responsible for the following activities:

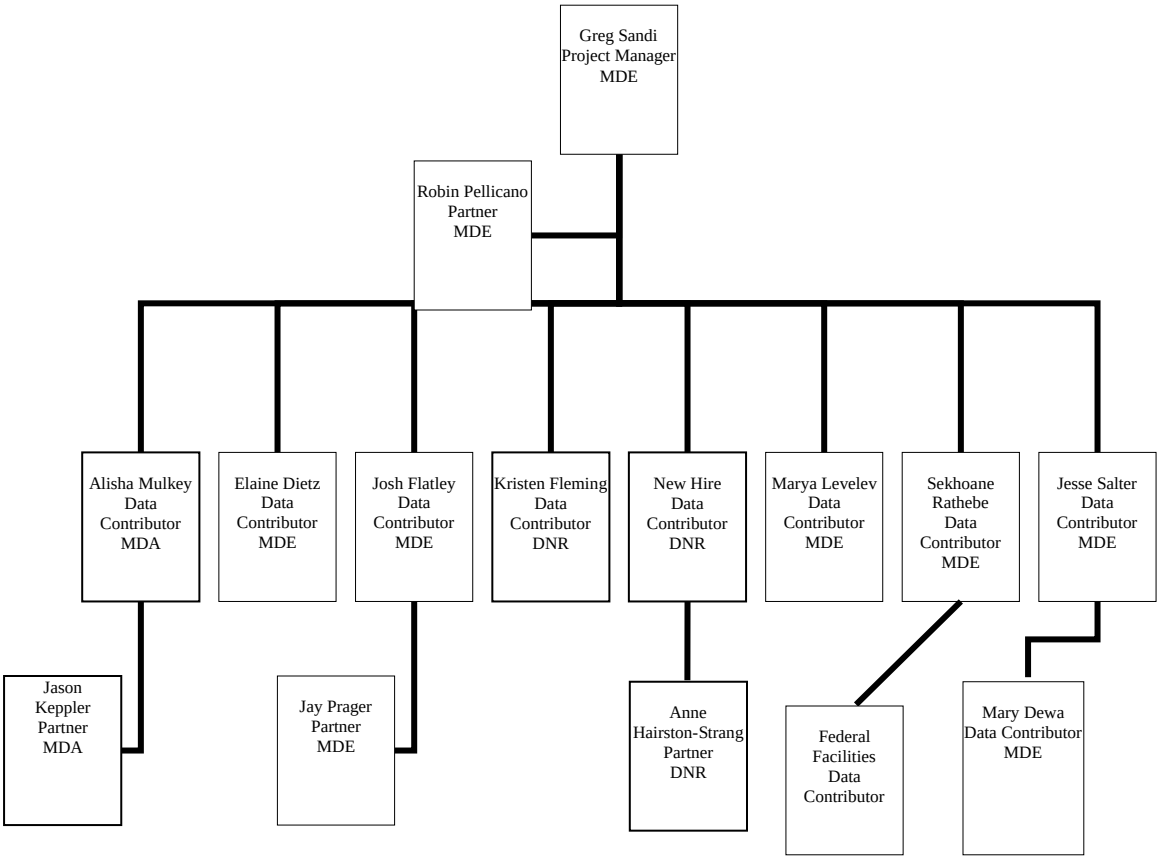
- Provide BMP data in templates
- Provide MDE with BMP data that has been verified, validated and compiled according to the procedures cited in this, or sector specific QAPP documents
- Provide updates and corrections to data as needed

Partners will be responsible for the following activities:

- Documenting and implementing a sector-specific QAPP for data provided to MDE
- Providing assistance when questions arise
- Assuring that the reported BMP data has been verified, validated and compiled according to the procedures cited in their QAPP document

Providing updates and corrections to data as needed

Figure 1: Project Organizational Chart



1.5 - Problem Definition/Background

MDE provides Best Management Practice (BMP) implementation data on an annual basis for the Chesapeake Bay Program Office (CBPO) assessments of Maryland's progress towards reducing nitrogen, phosphorus and sediment loads to the Chesapeake Bay and its tidal tributaries. BMP data represent Maryland's pollution control efforts to reduce these loads, which are translated to annual loading estimates via the CBP Watershed Model (WSM). The purpose of this QAPP is to document procedures used annually to process and submit nonpoint source BMP data, received from multiple entities, via the National Environmental Information Exchange Network (NEIEN) to the CBPO for the previous state fiscal year.

Multiple federal, state and local agencies are involved in tracking and reporting BMP practices. Three state agencies are responsible for the collection and accuracy of the BMP data. MDE WMA is responsible for reporting urban and wetland BMPs, and is developing separate QAPPs for the collection and reporting of those practices. MDA is responsible for all agricultural BMPs and has a stand-alone QAPP describing their procedures. MDNR is responsible for forestry BMPs and has an approved QAPP describing their procedures.

MDE Science Services Administration (SSA) has been collecting and submitting annual implementation of BMPs to the CBPO since 2005. Known as the "Annual Progress Submission," these data were historically provided in a spreadsheet format transmitted via electronic mail to the CBPO. However, for annual progress year 2010 the CBPO required submittals via a web service called the National Environmental Information Exchange Network (NEIEN).

This change in reporting methodology presented a great challenge for those partners submitting information to the CBP. Maryland has a fairly mature progress reporting system; however, refinements to the Bay watershed model and these new reporting requirements revealed the need to refine this system further. During the first year of using NEIEN as a data conduit, it was a challenging learning process leading to many delays and inaccurate information however Maryland was able to create a system of data processing and transmission via NEIEN.

Each year the process has improved data processing efficiency and data quality. However, the data requested by CBPO and the process by which Maryland submits data is still evolving to become more inclusive of additional data sources and increase the efficiency of collection, conversion and transmission of Maryland's annual progress submission.

In 2014, MDE SSA received two Chesapeake Bay Regulatory and Accountability Program (CBRAP) grants that will support the BMP data management system used to process and submit data to CBPO via NEIEN. One grant supports the initiation of a data management system. The other grant is to identify and incorporate data elements associated with nutrient trading. The three components of this initiative are the identification of data needs, the design and development of a database system and the establishment of a communications plan. The communications plan will formalize coordination with partners and data contributors including the documentation of their standard operating procedures.

It is envisioned, that a future annual progress reporting system will enable MDE to increase the automation of receiving, maintaining, analyzing and reporting data. Effectively reducing inefficiencies and potential errors associated with manually processing the information. This is a critical issue in view

of heightened expectations associated with the Chesapeake Bay TMDL implementation accountability and increasing complexity associated with BMP implementation and maintenance verification and potential market-based crediting of reductions across pollution source sectors.

MDE Roles and Responsibilities with regard to NEIEN

NEIEN is a partnership between the Bay jurisdictions and the CBPO for the secure, real time exchange of BMP implementation information. The Network uses extensible markup language (XML), web services for geo-location, and common data standards to transmit data from the jurisdictions to the CBPO. Existing data management systems are able to remain in place and through the Network, data is transferred based on strict formatting methods, or a schema. The schema in use contains fields such as jurisdiction, data source, contact information, name of practice, practice components, unique ID for practices, location, unit of measure, quantity, status, and funding source.

MDE SSA has served as Maryland's NEIEN submission conduit since its inception in the 2010 CBPO annual progress submission. Because MDE is the host of the State's NEIEN node, and the lead on Maryland's Chesapeake Bay TMDL and Watershed Implementation Plan (WIP), it was logical to use SSA as a conduit for reporting information via NEIEN.

Every year, SSA sends out several requests to partner agencies and WIP contacts, with timelines, for submitting BMP data to use in the annual progress submission. The data are currently submitted from other units within MDE, MDA and DNR via electronic mail in MS Excel spreadsheets to MDE SSA's NEIEN Project Manager, currently Gregorio Sandi.

Once SSA receives the BMP data from its partners, it conducts several formatting tests to ensure the information provided is complete and consistent with NEIEN submission formats. An additional limited QA/QC is conducted to check for duplicates, unusual levels of BMP reporting relative to expected levels, make sure dates are within reporting range, look for outliers that do not conform to practice types and ensure BMP names are consistent with existing CBPO values. If non-conforming data are identified, SSA reports results back to its partners for further modification within the constraints of the data reporting schedule. Aside from these checks, the data are assumed to have acceptable levels of quality assurance and quality control (QA/QC) performed by the data provider[1].

SSA then processes the data into a single dataset with a consistent format that conforms to the NEIEN schema as documented in Maryland's NEIEN XML Generation and Submission to the Chesapeake Bay Program (Appendix A). The NEIEN XML data is then transmitted to the password protected CBPO NEIEN node via a NEIEN node client software. The NEIEN submission is acknowledged by CBPO via transmittal to MDE SSA of a summary of the individual BMPs processed by its Scenario Builder tool. MDE then has the opportunity to review and update the NEIEN submission prior to it being finalized.

[1] MDE SSA staff provide QA/QC services for septic system upgrade and some stormwater BMP data; however, these services function outside of the NEIEN data processing scope documented in this QAPP.

1.6 - Project/Task Description and Schedule

BMP submissions are to be aggregated by state fiscal year, July 1st of year A to June 30th of year B (e.g. First submission was for the period July 1st, 2009 to June 30th, 2010). Each submission may include only BMPs from this time range, or revisions to past progress years that have utilized NEIEN. As of 2014, each successive annual submission is added to the submission from previous years. Each annual submission is archived once it has been successfully transferred and confirmed as processed by the CBP.

Multiple non-site or time-specific projects involving BMP data analysis activities are covered under the scope of this QAPP to describe information processing conducted by SSA. This project acquires data from multiple local jurisdictions, federal and state agencies.

In Maryland, BMPs are routinely tracked at several levels of government. Locally, BMPs are tracked through Soil Conservation Districts (Agriculture), County/Municipal Governments (Stormwater Management Facilities) as well as Federal installations (DOD facilities, National Institute of Standards and Technology (NIST), General Services Agency (GSA), etc.). Using Maryland's Data Exchange template (Appendix B) and reporting guidance supplied by MDE (Appendix C), these agencies report their BMPs to their respective source sector State agency who then submits the data to SSA.

Agricultural BMPs are reported to the Maryland Department of Agriculture. Stormwater controls are reported to the Maryland Department of Environment. Forestry related practices are reported to the Maryland Department of Natural Resources. Since all agencies operate under the guidelines of sector specific QAPPs, it is assumed that at each of these levels there has been adequate Quality Assurance or Quality Control of the information about the BMPs. Refer to the QAPPs for Agriculture, 319 (h) stormwater and Forestry for greater detail on QA/QC procedures.

The individual agency information is then summarized into spreadsheets and sent to the Maryland Department of Environment. BMPs, in general, are reported in one of three levels of geographic scale. Agricultural BMPs are generally reported in a summary table by county. Forestry BMPs are generally reported by county. Stormwater Facilities on new development are reported using spatial coordinates. MDE takes the tables of information and consolidates them. This data is then converted to XML and sent to the Chesapeake Bay Program Office (CBPO) via NEIEN where the CBPO Scenario Builder tool distributes them geographically for entry into the watershed model.

Table 1: Annual Submission Schedule

Milestones/Tasks	**Completion Date**
1. Send out BMP Data Request Letter	August 1
2. Begin consolidating data from available sources	September
3. Data due to MDE	September 30
4. Integrate new data/send notice of deficiencies	October - November
5. Send notice to tardy data suppliers	November 1
6. Send NEIEN submission to CBP	December 1
7. Refine submission as needed	December – February (as needed)
8. Finalize annual progress run	February (following year)

1.7 - Quality Objectives and Criteria for Acceptance of Data

The information collected under this Project will be used to evaluate the progress of Maryland's BMP implementation on a state fiscal year basis. A system of performance criteria has been established to ensure that this data is of appropriate quality and that it is suitable for use as key input files to the CBP's Watershed Model used to guide environmental managers in their assessment of the impacts of nutrient and sediment control activities on loads, and ultimately the water quality of the Chesapeake Bay and its tributaries.

The information is collected under the following conditions to ensure that the resulting data supports its intended use:

- Data is understood to undergo QA/QC at the submitting agency
- Consistent reporting and data verification is employed
- To be considered valid, a BMP must have an associated implementation (completion) date, must meet design specifications and performance criteria and in the future, must meet BMP verification protocols to be phased in by 2018.

As stated previously all data acquired for this project is understood to have been verified for all factors by the submitting entity. Quality objectives, tracking and verification procedures for Agriculture and Forestry BMPs are described in the respective QAPP. Quality objectives and acceptance criteria for reporting MDE regulated practices, i.e., stormwater, erosion control, septics and wetlands, are described in their respective QAPP.

1) Accuracy and Completeness Objectives (Qualitative)

a. **Objective: Timely annual reporting.** Both low bias and high Bias occurs, on an annual basis, due to the lag time and subsequent catch-up in reporting. Low bias for a given year can occur when data is not submitted on time. High bias can occur when old data is reported in a later year[2]. In the long term, these types of biases cancel out; however, they degrade the accuracy of annual progress results reflected in a high degree of annual variance. Overcoming this will necessitate addressing a variety of factors including inadequate inventory management, MS4 reporting dates that are inconsistent with annual progress data submission, and lack of resources.

b. **Objective: Increase data reporting and data completeness.** Low Bias occurs because of incomplete data and missing submissions.

c. **Objective: Increase data reporting of geolocation data for stormwater controls on new development:** Low Bias is anticipated to occur for stormwater controls on new development due to EPA requiring Lat/Long coordinates for individual BMPs. This is a special case of the previous objective; however, it is of sufficient significance to warrant highlighting.

d. Objective: Ensure grant making entities promote local BMP reporting by the sectors receiving pollution reduction credit. To avoid double-counting of BMPs by both a grant making entity and the recipient of the grant, it is general Maryland policy that the recipient of the grant is responsible for reporting, potentially via another party like a local government. Unless this policy is implemented via effective communications, this could result in under reporting (low bias).

e. Objective: Improve verification of BMP installation and maintenance information. Although Maryland has many procedures in place to verify the proper installation and maintenance of BMPs, a consolidated documentation of these procedures remains outstanding. As part of the CBPO's BMP Verification Framework, Maryland will document BMP verification procedures by July 2015 and phase in those procedures fully by 2018.

[2] The CBPO does not re-run past annual progress evaluations for the public record. As a consequence, annual model results do not reflect actual annual progress supported by the most current data.

1.8 - Special Training Requirements/Certification

Some specialized training is required to successfully complete this project. Familiarity with this QAPP and Maryland's NEIEN XML Generation and Submission to the Chesapeake Bay Program," the NEIEN SOP (**Appendix A**), is required. Any training (MDE internal or external) is documented and these records are maintained in the Baltimore office. As future training or retraining needs are identified, Program staff will address them appropriately.

Alternate MDE staff users will need to be trained regarding the XML conversion and NEIEN submission system. Materials for staff training (Appendix A) and experience will be gained throughout the testing and troubleshooting process, as well as individual training of staff to complete this process. Periodic update of the SOPs will need to occur in order to maintain the NEIEN submission process. As improvements are made to the data collection and submission process, this QAPP will be modified to reflect any changes to the training needs for successful NEIEN submission.

1.9 - Documents and Records

1) Data provided to MDE is a part of long-standing reporting system, dating back to the 1990s, which has evolved over time. The most recent documentation of the reporting system is reflected in Section 6 of Maryland's Phase I WIP completed in December 2010.[3] Maryland intends to update this information as part of documenting the State's BMP Verification Program in July 2015 at which time the operating procedures for each data contributor will also be updated to include details on their data/records retention policies.

2) MDE retains compiled BMP data sets for a given progress year for at least 5 years in an electronic format. Any manipulations to previous progress submissions will be kept 5 years from the date of their last manipulation.

The Program generates and maintains a variety of records in the Baltimore headquarters.

- Standard Operating Procedures – SOPs for the NEIEN submission will be maintained at the Baltimore office. The project manager overseeing BMP data acquisition activities shall periodically review these SOPs.
- Documentation associated with funded projects is maintained in the Baltimore office. These documents include grantee's Funding Proposals (Applications, Project Area and Watershed Identification, Scope of Work, Schedule of Activities and Projected Budget) and Management Measures status on each Project and Summary Table Reports.
- Records are stored on internal computer networks which are backed-up on a daily basis and are stored at another location.
- Senior management has the responsibility for assurance that the personnel have the most current version of this QAPP and any project-specific QAPP developed by grantees.

[3] Maryland's Phase I Watershed Implementation Plan (WIP), December, 2010. http://www.mde.state.md.us/programs/Water/TMDL/Documents/www.mde.state.md.us/assets/document/MD_Phase_I_Plan_12_03_2010_Submitted_Final.pdf

2.0 DATA SOURCES AND ACQUISITION

This project's purpose is to accept and maintain data to allow collation and transmission of information gathered by Maryland's local jurisdictions, state agencies and federal partners. The tracking system produced will not generate data but receive and maintain that which is submitted to MDE for the CBP annual progress modeling scenario.

2.1 - Data Acquisition

All data that are needed and used for this project will come from non-direct sources. (**See Figure 2**) Local jurisdictions and Federal partners provide spreadsheets that contain numeric data to state agencies. There are requirements to report numeric data, but also to supply narrative information in the form of electronic mail discussion. The numeric data will be used as a basis for the annual submission under this project. Most of our partners will submit the information required using Maryland's Data Exchange Template (**Appendix B**) to MDE SSA.

BMPs currently supplied to SSA include:

Septic:
Septic upgrade data is currently provided to MDE SSA by MDE's WMA based on reporting to MDE through a cost reimbursement process associated with Maryland's Bay Restoration Fund (BRF).

Data on the connection of septic systems to waste water treatment plans is provided to MDE SSA by MDE's Office of Budget and Financing, Water Quality Financing Administration. This avenue captures connections funded by the State. MDE SSA has provided a spreadsheet to local jurisdictions to report septic connections that are funded locally.

Forestry:
Forestry practices in the urban setting, such as urban riparian buffers and tree plantings that may be credited towards stormwater restoration, are generally provided to MDE SSA through stormwater management reporting avenues described below.

Forestry practices in the agricultural setting, such as riparian buffers and wind breaks, are reported to MDE SSA by the Maryland Department of Agriculture per the agricultural reporting avenues described below.

Forestry practices on State lands are reported to MDE SSA by the Maryland Department of Natural Resources, which has an approved QAPP from EPA to track and report those BMPs. (MD Dept. Nat. Res., June, 2011)

Forest Practices associated with forest harvesting are reported to MDE SSA by the Maryland Department of Natural Resources, which has an approved QAPP from EPA to track and report those BMPs.

Agriculture:
Agricultural Practices are provided to MDE SSA from the Maryland Department of Agriculture, which has an approved QAPP from EPA to track and report those BMPs. (MD Dept. Ag., March, 2012)

Stormwater:
Currently data is reported to the MDE SSA NEIEN Project Manager through two avenues:

Data for stormwater restoration BMPs on old developed land with little or no stormwater controls in Phase I MS4 jurisdictions, are reported by MDE WMA Sediment, Stormwater and Dam Safety Program.

Data for BMPs on new development are reported via an electronic spreadsheet compiled by MDE SSA staff. This data is managed according to an existing QAPP developed pursuant to a 319(h) grant project. (MD Dept. Env., May 2011)

Note: The field names in Appendix B will include required elements of the stormwater performance standards which are listed below.

Stormwater Performance Standards

- Year Implemented
- State Abbreviation
- BMPShortName
- Segment
- Landuse Group (either Urban or UrbanWithCSS)
- Amount (acres treated or disturbed)
- Unit (acres)
- Impervious acres
- Runoff storage volume
- Project type
- Previous BMP(if project type is converted retrofit)

Project types are:

- New Development
- Re-Development
- New Retrofit
- Converted Retrofit
- Enhanced Retrofit
- Restored Retrofit

Erosion and Sediment Control (E&SC):
The E&SC data provided to MDE SSA for inclusion in the NEIEN submission has traditionally been a summary spreadsheet indicating an estimated number grading permits, and another estimation of actual disturbed acres. These numbers are based on a 2-year running averages of disturbed acres.

There are difficulties in determining the geographic distribution of disturbed acres for jurisdictions that have not accepted delegated authority to manage an E&SC program. This remains an opportunity for improving the data.

Another opportunity for improving data is reconciling the amount of disturbed acres reported through MDE's E&SC summary spreadsheet with the amount of disturbed acres in the model. Generally, this spreadsheet reports three times the amount of disturbed acres than are in the model for any given year.

Faced with this deficiency in data, MD devised a percent compliance rate of reporting based on acres inspected and violations over a ten year period. Adding a 2% margin of safety to be conservative, it is estimated that 91% of E&SC acres in MD are in compliance. This 91% is applied to pre-BMP LU estimates from the model and reported by county.

One potential fix MDE may use to revise the way it reports E&SC controls for progress 2015 is by going to individual Soil Conservation Districts and trying to determine the actual number of disturbed acres by county. This solution, as others, depends on personnel and budget availability to achieve success.

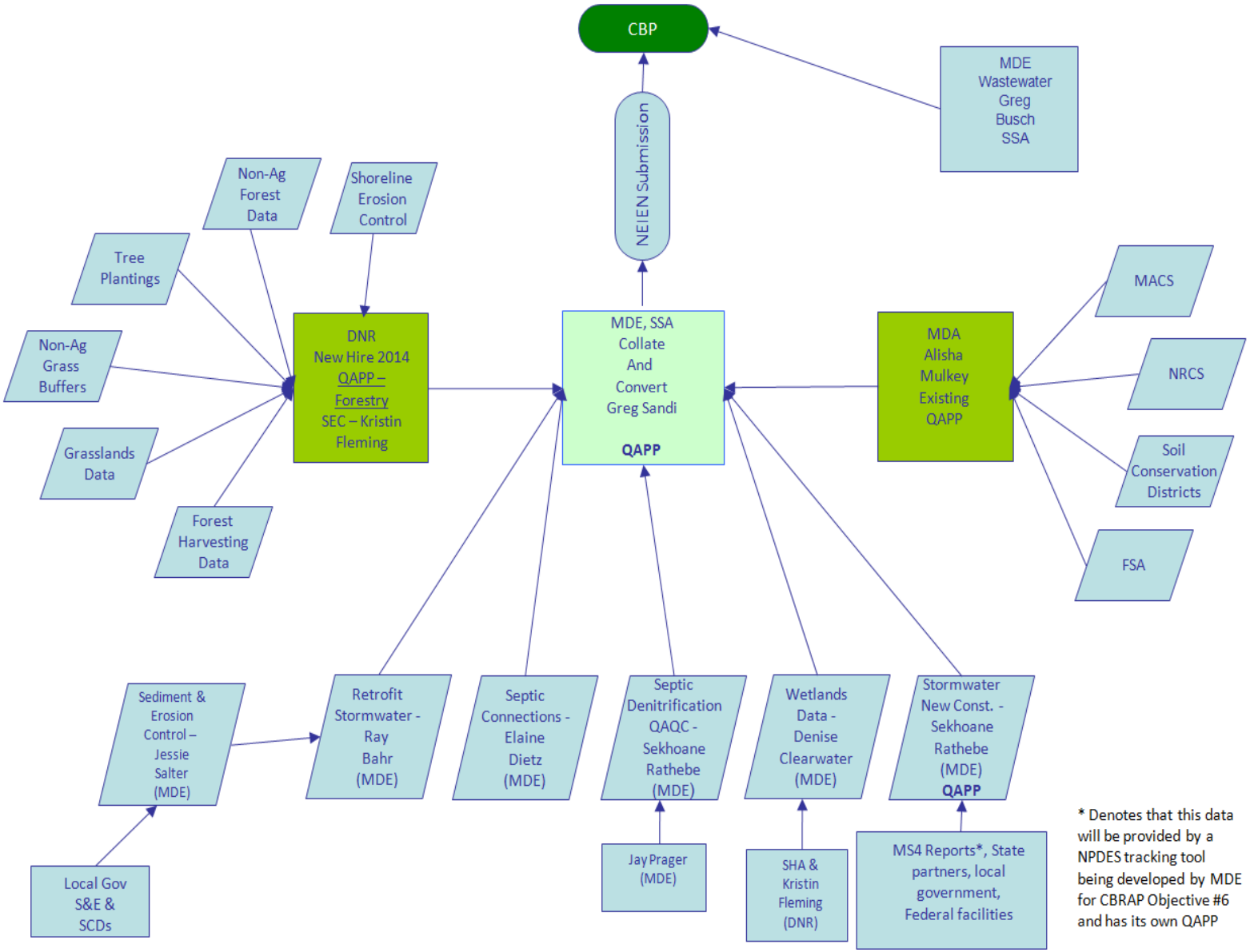
Wetlands:
This is tracked by MDE WMA through their permitting process, however all Ag wetlands are reported by MDA.

Data not included in NEIEN

Point Sources:
These practices are not tracked or reported through NEIEN and therefore not included in this document.

Homeowner BMPs:
The collection of urban/suburban BMPs installed by homeowners is still being developed. This information is to be collected by local governments and submitted to MDE via standard reporting avenues. It is anticipated that these will be phased into progress submissions gradually as data collection programs expand throughout the state.

Figure 2. NEIEN Data Flow



2.3 - Data Management

This project is a data management process. Data to be included within the data tracking system originates from municipalities, counties, Federal facilities and state agencies. Data storage and security as well as hardware and software requirements, will be modified as the process evolves.

MDE SSA receives information in the form of Microsoft Excel Spreadsheets. The data from the partner spreadsheets are reviewed for duplicates, date ranges, potential outliers, and completeness. Once the QA/QC is complete, the data within in these sheets will then be sorted by "Built Date". All data from the current progress year will be extracted from these spreadsheets and combined into a separate Excel file in preparation for the conversion to XML. This data will be then be converted and submitted according to Appendix A.

Data within the partner spreadsheets that falls within previous NEIEN progress reporting years will be compared to the data from previous submissions to identify any new records for those years. If new records are found, a review is conducted to determine the number of records and amount of acres covered by the new submission. Depending upon the size of the previous submission, and the number of new records, MDE SSA will remove all submissions from a previous progress year for a given data provider and replace them with the newest information provided. The revised progress submissions will be uploaded into NEIEN along with the most recent progress submission for pollutant load reduction credit.

As an example: Anne Arundel County (AACo) provided updates for 2010-2013 BMP progress, MDE SSA removed all BMPs from for AACo in 2010 – 2013 and replaced them with the new information. The revised progress years were resubmitted to NEIEN independent of the 2014 progress year data.

This process is repeated annually for all data providers in order to provide the most current inventory of MD BMPs.

MDE SSA has committed to the development of a data management system that should help to automate the data management process in the future, it is anticipated that such a system may be in place for 2016 annual progress.

3.0 ASSESSMENT AND OVERSIGHT

3.1 Data Validation Methods

The project manager, currently Gregorio Sandi, is responsible for validation checks of both internal and external data. Validation is independent from those staff responsible for data collection and entry.

Methods for data validation include the following procedures:

Internally provided data -	Completeness reviews for required fields Valid date ranges Locational accuracy checks (on-site and GIS checks) Checks for double counting (e.g., BMP unique values) BMP records with "not built" or "waivers" are omitted
Externally provided data -	Completeness reviews for required fields Valid date ranges Locational data checks (on-site and GIS checks) BMP records with "not built" or "waivers" are omitted County/Municipality office visits planned for 2015

3.2 Assessment and Response Actions

SSA's Project Manager, currently Gregorio Sandi, will conduct an internal systems evaluation annually after each Annual Progress assessment has been completed and provided to the QA manager. Any anomalies will be addressed and corrected, if necessary, and provided to the QA manager. Any recommendations or changes will be reflected in future versions of this QAPP document.

Senior staff holds the primary responsibility for ensuring that the problems identified through the evaluations are responded to and corrected in a timely fashion. If any problems are identified from the audits discussed above, various measures are taken.

- Communicating with authorities in the reporting agencies and those jurisdictions that provide information to MD state agencies. This is done via telephone, e-mail, webinar outreach or personal visits with the purpose of filling in the data gaps. Visits are undertaken either when requested by data suppliers, or the missing important data items are too numerous. During the visits communication and review of data deficiencies are conducted in order to obtain the following:

  i) missing data from key reporting fields which prevent BMP transmission to CBPO;
  ii) the specific name of the structure type if it is not specified in the original data report
  iii) communicate what data needs to be reported to receive credit under the new Stormwater Performance Standards

3.3 Reports to Management

Annual reports for CBRAP will be updated for the assessment of Objective #16. This objective is funded by EPA and the scope of work is approved by EPA annually. The project is titled "Accountability

Framework" and is intended to provide a process for Maryland data to be transferred to CBPO via the NEIEN system accurately and in a timely manner.

4.0 DATA REVIEW AND USABILITY

Upon completion of the BMP data analysis, the file will be reviewed by a qualified member of the staff to determine if the data meets the objectives of the QAPP. The following activities will be performed:

- Data reflects increase in BMP implementation
- Data reflects the feasible implementation of the BMP; does not reflect implementation beyond the possible
- Data contains all applicable fields required by CBP
- Data is formatted in a manner consistent with NEIEN requirements
- Data was successfully transmitted to the CBP via NEIEN and is stored on the CBP production node

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