



*Quality Assurance Project Plans  
for Point and Nonpoint Source  
Data*

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Watershed Technical Workgroup Meeting  
April 1, 2013



# Quality Assurance Project Plans

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## Quality Assurance Project Plans (QAPPs) for the collection and use of environmental data are required from Bay Program jurisdictions.

- Point source data and non-point source BMP implementation levels reported annually to the Chesapeake Bay Program office for use in the CBP Watershed Model.
  - U.S. EPA Chesapeake Bay Program Grant and Cooperative Agreement Guidance
    - Chesapeake Bay Program Quality Assurance Guidelines and Requirements – Attachment 7 at <http://www.epa.gov/Region3/chesapeake/grants.htm#2011>
    - Responsibilities for development of QAPP
    - Guidance and requirements for their development
    - Schedules for their submission
    - Review and approval of the QAPPs
  - QA/R-5: EPA Requirements for Quality Assurance Project Plans
    - <http://www.epa.gov/quality1/qs-docs/r5-final.pdf>
    - Important elements for nonpoint source data, under section 2.2.9 “Non-direct Measurements” and Chapter 3 “Projects Using Existing Data”



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## Why are QAPPs needed?

- Understand the various sources of nonpoint source BMP data within and among jurisdictions.
- Understand any analyses done by jurisdictions prior to submissions to the CBP office.
- Ensure on-the-ground pollutant controls are best and equitably represented in the CBP Watershed Model
- Enable CBP office to accurately translate tracked BMP implementation data exchanged on the National Environmental Information Exchange Network (NEIEN)
- Verification = detailed scrutiny of all Watershed Model inputs





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## Essential components of a QAPP

- Standard Operating Procedures for Managing Nonpoint Source Data
- Data Acquisition and Management of Non-Direct Measurements
  - Listing of all BMPs for which implementation is tracked, compiled, analyzed and reported to the CBP office annually.
  - For each BMP or relevant groups of BMPs, a description of the project data management scheme, tracing the path of the data from the non-measurement source to its use in the project's database or computer model.
  - For each BMP, define the acceptance criteria for the use of this data in the project and discuss any limitations on the use of the data resulting from uncertainty in its quality.
    - For example, accounting for double-counting



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## Essential components of a QAPP

- Data Acquisition and Management of Non-Direct Measurements
  - For each BMP, a detailed description of the procedures being used to process, compile, and analyze the data prior to submission to the CBP office annually.
  - QAPPs should specifically address the reasonableness of each BMP's implementation level, understanding CBP BMP definitions and how environmental data is applied in CBP watershed models.
    - Does each BMP's implementation level reasonably reflect on-the-ground conditions – or are results of the data management indicating conservative or optimistic levels compared to best-professional judgments of on-the-ground conditions?



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## Essential components of a QAPP

- Data Acquisition and Management of Non-Direct Measurements
  - QAPPs need, in part, to answer the following questions as outlined in the “Indicator and Data Survey” of the Chesapeake Bay Restoration Assessment for the Reduction Pollution environmental indicators at
  - <http://www.chesapeakebay.net/track/restoration>
    - Were the data collected according to an EPA-approved Quality Assurance Plan?
    - Are the descriptions of the survey design clear, complete and sufficient to enable the survey to be reproduced?
    - Were the compilation and analysis methods performed consistently throughout the data record?
    - If datasets from two or more agencies are merged, are their survey designs and methods comparable?
    - Are uncertainty measurements or estimates available for the data sets?
    - Do the uncertainty and variability impact the conclusions that can be inferred from the data and the utility of the ultimate use of the data – nutrient and sediment load changes as assessed by CBP watershed models?
    - Are there noteworthy limitations or gaps in the data record?



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## Submission requirements

- Single QAPP for all nonpoint source BMPs was preferable.
  - Separate SOW for each jurisdictional program (i.e., source sector) is acceptable.
  - Refer to CIMS "Chesapeake Bay Program Guidance for Data Management" at <http://archive.chesapeakebay.net/cims/Guidance%20for%20Data%20Management%20Nov%202006.pdf>
- Timeline
  - Notice of required updates to QAPPs with 2014 Chesapeake Bay Program Grant Guidance – with specifics under:
  - Attachment 6 - Point-Non Point Source Data