SPA BMP Monitoring Report Structure

BMP monitoring reports are to be prepared by qualified professionals as per SPA Regulation. Reviewers are to initial this outline to certify the report meets all submission requirements on this outline. If the BMP monitoring report contains all required elements as reported in this outline and analysis requirements as explained beforehand by DEP staff, the report is considered to be final. If report elements contained on this outline and analysis requirements as explained beforehand are not included, the report will be returned to the consultant to be corrected with a note to the client as to why the report was unacceptable. All other additional edits and suggestions for report improvement will be discussed with the consultant and DPE and DPS staff for the next year's submittal.

Summary

- ☐ Briefly describe the monitoring including:
  - ☐ purpose/hypothesis
  - ☐ study design
  - ☐ status
  - ☐ results
  - ☐ conclusions
  - ☐ Provide enough background information on the project to give the results and conclusions some context. Remember that the point of the monitoring is to evaluate the effectiveness of BMPs and innovative site design in achieving or not achieving the performance goals of the development.

Introduction

- ☐ Describe the project. Much of this information should be found in the water quality plan. Provide information on:
  - ☐ project size
  - ☐ location in county
  - ☐ prior land use
  - ☐ proposed land use
  - ☐ natural resources
  - ☐ Sediment and stormwater management plan description (including capacity of BMP's) (for study BMP's).
  - ☐ Type and location of each sediment control device and SWM BMP (for study BMP's).
  - ☐ Total drainage area to each SWM BMP and sediment control device (for study BMP's).
  - ☐ Date of conversion from sediment and erosion control to SWM BMP (for study BMP's).

- ☐ BMP-DA land use breakdown for pre and post-construction phase (for study BMP's) (can be obtained from site plans).
- ☐ Summary of the inspection and maintenance records (for study BMP's).
- ☐ Summary of any sediment control failures (date, time, location, how resolved)
- ☐ how development has progressed (use the following as stages: mass grading under way, mass grading and road paving, 0 to 30% units within the DA under construction, 30 to 60% units within the DA under construction, 60 to 100% units within the DA under construction, post- construction (sediment control has been converted to SWM).
- ☐ current status of development, etc.

☐ Explain the purpose/hypothesis of the monitoring.

☐ Describe the study design. (Outline how the data collection relates to the hypothesis.)

☐ Include illustrations showing the

- ☐ location of the site in the county
- ☐ overall site plan
- ☐ relevant natural features (streams, wetlands, buffers, etc.) Be sure to indicate direction of flow on diagrams.

Methods

☐ Describe the methods and procedures (referencing DEP BMP monitoring protocols). Relate to BMP locations, inlets, outfalls as dictated by the hypothesis.

- ☐ Diagram sampling points and BMPs
- ☐ Indicate the frequency of samples and whether they are storm or baseflow. Consider designating sampling points descriptively (upstream, outfall, upland, etc.) rather than using strictly numerical designations.
- ☐ Include any required documentation of calibration (temperature loggers, etc.) and if DEP monitoring protocols were not followed exactly.

Results

☐ Include tables, graphs and statistics as agreed to beforehand with DPS and DEP to support the analysis. Water temperature should be reported in Fahrenheit.

- ☐ Use descriptive titles, labels and units.
- ☐ Graphs:
  - ☐ Vertical axis should not be misleading or exaggerate trends. It is desirable to start the vertical axis at 0 for consistency among graphs of the same type.
  - ☐ Time series data (templogger, continuous flow, etc.) should be shown with time on the horizontal axis. Time scales should be readable.
  - ☐ Multiple parameters shown on a single graph should be easily distinguished.

- ☐ Pre-construction, construction and post-construction phases should be illustrated on time series plots that extend through the life of a project.
- ☐ Compare to pre-construction data where appropriate.
- ☐ Examine the data in detail for construction impacts and present those results.
- ☐ Present data on the impact weather may have had on your results when appropriate. For example, to identify sediment pond thermal impacts, stream temperatures should be plotted with rainfall data.
- ☐ Include detection limits for those results and methods as specified.

Discussion

- ☐ Discuss the results.
- ☐ Include conclusions relating to the hypothesis of BMP efficiency.
- ☐ In some instances results will be preliminary or inconclusive. Those conclusions should be explained also.

Data submittal

- ☐ Reports are considered final only when accompanied by the digital data. All data collected during the reporting period is to be submitted with the report. Contact DEP beforehand for data submittal instructions.

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Preparer Date

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Reviewer Date

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DEP Reviewer Date

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DEP Senior Ecologist Date