Final Guidance for Verification of Urban Stormwater BMPs

USWG

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Background

- USWG has progressively adopted its verification guidance over last 24 months
- Draft guidance submitted to Verification Expert Panel on 6/30/2013
- This final version incorporates their Nov 19th 2013 comments

Guidance Rather Than Protocols

- Verification Guidance for BMPs Located in MS4 areas
- Verification Guidance for BMPs Located in non-MS4 areas
- Verification Guidance for Non-Regulatory BMPs (NEW)
- Verification Guidance for Legacy BMPs
- Process for Developing Urban BMP Verification Protocols

Some Changes

- Some editing and word-smithing, w/ substantive changes/additions shown in blue font in 1/6/14 memo
- LID maintenance note
- Definition of NEIEN
- Data validation
- More clarity on verification options for semi-regulated BMPs

More documentation on existing local/state verification procedures

Table 1: Existing Review and Inspection Procedures for Select Urban BMPs *	
Urban BMP Type	*Key Procedures*
Stormwater BMPs for New Development or Redevelopment	Detailed engineering review, geotechnical feasibility tests, performance bond, multiple inspections during BMP construction, final inspection to accept the facility, preparation of "as-built" drawing, release of performance bond, prescribed maintenance agreement, creation and maintenance of local BMP file, local reporting to state stormwater authority, routine owner maintenance, periodic regulatory inspections
Erosion & Sediment Control BMPs	Site analysis, detailed engineering review of ESC plan, pre-construction meeting, weekly self-inspection by contractor, routine regulatory inspections (weekly to monthly), final inspection, release of ESC performance bond.
Stream Restoration	Stream reach data collection and analysis, detailed engineering review, state and federal environmental permit review, multiple environmental and engineering inspections during project construction, final inspection and preparation of as-built drawings, post-construction project monitoring, ongoing project maintenance
Stormwater Retrofits	Generally the same as for new stormwater BMPs, but the inspection and maintenance requirements may be vested with the property owner or the governmental jurisdiction that is financing the retrofit
* the exact procedures will differ somewhat from locality to locality and from state to state, depending on their land development ordinance and review procedures, and state permit and regulatory requirements.	

More flexible NEIEN reporting standards are needed for certain classes of urban BMPs

- Several operational BMPs, such as street sweeping, urban nutrient management plans, enhanced erosion and sediment control, inappropriate discharge elimination, do not lend themselves well to the specific geographic requirements of NEIEN. In addition, some non-regulated urban BMPs, such as homeowner practices, are so small but potentially so numerous that it is neither practical or useful to give them a specific individual geographic address in NEIEN.

- In these situations, it is recommended that only aggregate BMP data be reported for the county/river basin segment in which it occurs. Local governments that report the data are still required to retain specific geographic data records individual practices in order to track and verify them over time.

The Intensity of Verification Efforts Should be in Direct Proportion to Contribution that a BMP makes to overall TMDL Pollutant Reduction in a State's Urban Source Sector

- The workgroup was mindful of the extensive resources needed to support BMP verification, and fully supports the "verification intensity" concept recommended by the CBP-VRP (2013). The basic notion is to prioritize local and state verification resources on the BMPs that produce the greatest load reduction for each state's urban source sector, as reported in their progress runs over time.

- This also implies that less verification resources be devoted to BMPs that make only minor overall load reductions, although any BMP should still meet certain minimum criteria for initial inspection and reporting. Operationally, the workgroup defines "minor BMPs" as those that collectively contribute less than 1% to the overall total urban source sector nutrient reduction in the most recent progress run year submitted to the CBP.

More Tools and Technology are Needed to Streamline the BMP Verification Process

- Actual implementation of the BMP performance verification protocols will require considerable investment in tools and technologies by federal, state and local partners. Some major needs include:
  - Development of visual indicators to rapidly assess BMP performance in the field
  - Training and certification programs for the "verifiers" that go out in the field
  - GIS/website platforms to upload BMP data to local and state databases
  - Quality control checks to validate the uploaded data

Urban BMP Definitions Preclude the Need for "Functional Equivalency".

- The policy of the USWG has been to develop Bay-wide urban BMP definitions that can be easily interpreted in the context of each individual Bay state's stormwater design manual and regulations (i.e., sizing and design specifications for individual urban BMPs). Each Expert Panel has developed detailed protocols to estimate removal rates for individual practices based on common design and sizing elements for that class of BMP (see SPSEP, 2012 and SREP, 2012).

- The BMP design specifications in each Bay state are very prescriptive as to the minimum sizing and design criteria that each urban BMP must meet in order to receive permit approval. Consequently, the issue of "functional equivalency" among BMPs, as defined by the agricultural sector in the Chesapeake Bay, does not apply to the urban sector.

Part 6: Guidance for Verifying Non-Regulatory BMPs

- Non-regulatory refers to any BMP that is voluntarily installed in a community (i.e., not triggered by a MS4 permit requirement or stormwater management regulation). The most common examples are homeowner BMPs that are installed on private land (e.g., rain gardens, permeable pavers, downspout disconnection, etc.).

- To promote greater engagement by land owners in Bay restoration, the work group developed streamlined verification procedures for this class of non-regulatory BMPs (USWG, 2013) which is considered a minor source of state-wide urban sector nutrient reductions, as defined by the CBP-VRP (2013).

Part 6 continued

- The basic premise is to simplify the homeowner BMP reporting process while still retaining a high degree of verification rigor, using the following measures:
  - Allow localities to aggregate individual homeowner BMP data into a single practice at the county level, which is then reported to the state without any specific geographic location data (apart from the river-basin segment in which it occurred).
  - To receive credit, local governments must maintain records for each individual homeowner BMP, including contact information and geographic information (lat/long or street address).
  - The actual installation of each homeowner BMP must be field-verified by the local government or designated third party at the time of construction, and homeowner submitted BMP data will require validation, by spot checking it against typical default values for the practice.

Part 6 continued

- The credit duration for homeowner BMPs has been reduced to 5 years as compared to the 10 years afforded to larger retrofits (UREP, 2012). The credit can be renewed based on verification that the practice still exists and is working.

- Local governments may opt to use the sub-sampling approach outlined in Part 5, Option 2 of this memo. Alternatively, they may request homeowners to submit digital photos to confirm their practices, with the final decision on BMP condition made by the locality

Questions/Comments