

Technical Requirements for Reporting and Crediting of Urban Filter Strips in Scenario Builder and the Phase 5.3.2 Watershed Model

Presented to WTWG for Review and Approval: May 27, 2014

Background: In June, 2013 the Water Quality Goal Implementation Team (WQGIT) agreed that each BMP expert panel would work with CBPO staff and the Watershed Technical Workgroup (WTWG) to develop a technical appendix for each expert panel report. The purpose of this technical appendix is to describe how the Urban Filter Strips Expert Panel's recommendations will be integrated into the modeling tools including NEIEN, Scenario Builder and the Watershed Model.

Q1. What are the efficiency reductions a jurisdiction can claim for Urban Filter Strips in the Phase 5.3.2 Watershed Model?

A1. The expert panel recommended two types of urban filter strips that could receive credit in the Phase 5.3.2 Watershed Model. Reductions for these two new BMPs are listed in the table below.

Table 1. Percent of Nutrients Reduced Per Acre Treated by Urban Filter Strip BMPs

Practice Type	TN	TP	TSS
UFS Runoff Reduction	20%	54%	56%
UFS Stormwater Treatment	N/A	N/A	22%

More details about percent reductions can be found in Section 6 of the expert panel report.

Q2. What is the definition of each new Urban Filter Strip BMP?

A2. Definitions are listed below.

UFS Runoff Reduction – Urban filter strips are stable areas with vegetated cover on flat or gently sloping land. Runoff entering the filter strip must be in the form of sheetflow and must enter at a non-erosive rate for the sit-specific soil conditions. A 0.4 design ratio of filter strip length to impervious flow length is recommended for runoff reduction urban filter strips (pg. 4).

UFS Stormwater Treatment – Urban filter strips are stable areas with vegetated cover on flat or gently sloping land. Runoff entering the filter strip must be in the form of sheetflow and must enter at a non-erosive rate for the sit-specific soil conditions. A 0.2 design ratio of filter strip length to impervious flow length is recommended for runoff reduction urban filter strips (pg. 4).

Additional qualifying conditions for both practices can be found on pp. 4-5 of the expert panel's report.

Q3. Is there a specific year that a state should begin reporting UFS as Runoff Reduction as opposed to Stormwater Treatment?

A3. There is no specific year that this transition of reporting to NEIEN should occur. The panel intended the stormwater treatment filter strip BMP to represent older practices that pre-date each state's

stormwater design specifications (as of this writing in 2014). These older practices were often designed to be only 10-15 feet in length and were used solely for sediment trapping (p. 23). Jurisdictions should report all filter strips with a 0.4 design ratio of filter strip length to impervious flow length as UFS Runoff Reduction (pg. 4), and all practices that meet a jurisdiction's design criteria as described in its stormwater manual. Design criteria for each jurisdiction is summarized in Appendix C of the report.

Q4. What do jurisdictions need to report in NEIEN in order to receive credit for the new UFS BMPs?

A4. Jurisdictions should report the following information to NEIEN:

- Practice Name: Urban Filter Strip RR; Urban Filter Strip ST
- Acres Treated: number of acres treated by the practice
- Approved NEIEN land uses: impervious or pervious urban lands (impervious urban with CSS will be the default land use group)
- Location: Latitude and Longitude: the coordinates for the center of the practice
- Date of Implementation: year the practice was installed

Q5. How will the reductions be calculated in Scenario Builder and the Watershed Model?

A5. Reductions for each BMP will be applied as percent reductions to loads exiting urban land uses. The impact of these reductions in the Watershed Model will vary across the watershed as a result of hydrologic conditions, application rates to land uses and nutrient export from land uses.

Q6. How will UFS BMPs be combined with other practices in Scenario Builder?

A6. UFS practices are typically designed as stand-alone practices to treat sheetflow runoff. As such, acres treated by UFS practices cannot also be treated by other urban stormwater practices in Scenario Builder. Additionally, an acre cannot be treated by two separate UFS practices. However, an acre treated by UFS may also be treated by urban nutrient management.

Q7. Was any credit given for Stream Buffer Upgrades?

A7. No. The expert panel did not provide a recommendation for stream buffer upgrades because they did not locate sufficient data to evaluate how an upgraded stream buffer would function differently from existing BMPs already credited in the Watershed Model (pg. 24).