

USEPA Stormwater Calculator FAQs
(for NEORS D Green Infrastructure Grant Application purposes)
June 2020

1. Q: How do I define my project limits?

A: Your project limits should be defined as the outermost boundary that results when you overlay your parcel boundary with the boundary of the drainage areas to proposed Low Impact and Development (LID) Controls. This will ensure any runoff from adjacent parcels is adequately accounted for. Unless there is a significant change in drainage patterns from pre- to post-development conditions, your project limits should be the same for all model runs (i.e., baseline & results scenarios).

2. Q: How should my “Baseline Scenario” be defined?

A: If you are increasing the amount of impervious area (i.e., decreasing vegetated area), proposed conditions that meet the minimum NEORS D Title IV requirements will serve as your Baseline Scenario. If you are not expanding the footprint of impervious areas (i.e., only retrofitting, or decreasing existing impervious areas), existing conditions will serve as your Baseline Scenario

3. Q: What infiltration rate should I use within the Soil Drainage module?

A: Use available site-specific soil infiltration rates as determined by previous studies (e.g., soil borings, infiltration tests, etc.). Ensure you identify the source of the data. Otherwise, use the default value provided by the model, which is determined by the hydrologic soil group (HSG) classification of on-site soils (Soil Group A-D).

4. Q: How do I take stormwater treatment trains into account?

A: The Stormwater Calculator (SWC) doesn't model treatment trains, as it only models the amount of runoff each LID practice manages for the impervious area of a given site. Modeling stormwater treatment trains is beyond the capabilities of the SWC. A user may model stormwater treatment trains using the full Stormwater Management Model (SWMM).

5. Q: My site has multiple LID Controls proposed. How should I account for this in the model runs?

A: Assuming each LID Control has a unique drainage area to it (i.e., no treatment train), it is advised to run the model using the following two-step process. First, run each LID Control separately and then add the runoff reduction results to arrive at a total runoff reduction value. Second, run the model once and account for all the LID Controls at the same time. If the results differ from the first step, use the results that provide the most favorable outcome for the design scenario.

6. Q: If I propose LID Controls with standard underdrains, will NEORSR still consider these as infiltrating practices that qualify for the GI grant?

A: Under the LID Controls module there are seven different practices listed. Based upon the diagrams provided and the description of each, underdrains do not appear to be considered. Unless ideal soil conditions exist, NEORSR believes underdrains are a necessary design feature for street planters and permeable pavement. If standard underdrains are proposed, it will not adversely affect grant applications. However, we do encourage applicants to alter the design of underdrains to maximize the infiltration potential (e.g., adding an upturned elbow).

7. Q: How do I account for proposed runoff rate control practices (e.g., detention and retention basins) that are designed to complement proposed LID Control practices, but do not necessarily contribute to the overall reduction of runoff volumes?

A: There is no way to account for runoff rate control practices in the stormwater calculator, so they should not be considered in the calculations related to runoff reduction.

8. Q: I am proposing one or more SCMs that do not fit the mold of any of the seven LID Controls listed in the calculator...what should I do?

A: If a proposed SCM does not fit the mold of any of the calculator's seven Lid Control options, use best professional judgement to select one or more of the seven LID Controls, and then provide a brief narrative to justify the selection.

For Purposes of Data Input Consistency

Soil Type module

All soil map units classified as “Urban” (e.g., Udorthents) shall be considered as hydrologic soil group (HSG) D, unless site specific soils information has determined otherwise (e.g., soil borings).

Climate Change module

Select “No Change” under “Select a future climate change scenario to apply”.

Land Cover module

When determining the percentage of the site’s land cover, the actual footprints of permeable pavement and green roofs shall be considered impervious. Alternatively, the actual footprints of rain gardens, street planters and infiltration basins shall be considered pervious.

LID Controls module

1. Enter 0.00 for “Design Storm for Sizing”
2. Use default values for data input related to “Verify cost-estimation variables below”
3. For proposed bioretention cells and infiltration trenches, enter the data as “Street Planters”
4. When determining the percentage of the site’s impervious area being treated, the actual footprints of permeable pavement and green roofs shall be considered impervious. Alternatively, the actual footprints of rain gardens, street planters and infiltration basins shall be considered pervious.

Results module (under “Options”)

1. “Years to Analyze” should be set to 20
2. “Event Threshold (inches)” should be set to 0.10
3. “Ignore Consecutive Days” should not be checked

Questions regarding the use of the EPA Stormwater Calculator for NEORS D Green Infrastructure Grant application purposes should be directed to:

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