Additional Information and Resources on Stormwater Retrofits

The following documents provide additional information and resources on the planning and design of stormwater retrofits from organizations within Connecticut, elsewhere in New England, and nationally.

- Stormwater Retrofit Manual, Southeast New England Program (SNEP) Network (2022)
- Connecticut Department of Transportation MS4 Resources, CTDOT
- Rhode Island Department of Transportation Linear Stormwater Manual, RIDOT (2019)
- Coastal Stormwater Management Through Green Infrastructure: A Handbook for Municipalities, US EPA (2014)

Table 9- 2 Stormwater Retrofit Criteria for DCIA Disconnection and Reduction Credit

Retrofit Type	When is DCIA Considered Disconnected?	DCIA Reduction Credit
Impervious Area Conversion	➢ Existing excess impervious surfaces (pavement, buildings, etc.) are removed and replaced with pervious vegetated surfaces (lawn, meadow, woods), AND ➢ The infiltration rate and porosity of the underlying soils are restored to pre-development conditions through scarification, ripping (tilling), or use of a shatter-type soil aerator, as necessary, AND ➢ The soil is amended, as necessary, to support vegetation. ➢ Soil testing or other documentation to the satisfaction of the review authority is needed to classify / demonstrate the permeability of the restored pervious area.	**Full Credit** Impervious area[1] (in acres) converted and restored to pervious area.
Impervious Area (Simple) Disconnection	➢ Stormwater runoff from impervious surfaces is re-directed as sheet flow onto adjacent vegetated pervious areas (i.e., lawn, meadow, or woods), AND ➢ The contributing impervious area and the receiving pervious area meet the design criteria for simple disconnection as described in Chapter 5 - Low Impact Development Site Planning and Design Strategies ➢ Soil testing is needed to classify the permeability of the receiving pervious area.	**Full Credit** Impervious area[1] (in acres) from which runoff is re-directed to adjacent vegetated pervious areas.
New or Modified Structural Stormwater BMPs	➢ The applicable post-development stormwater runoff volume (i.e., Required Retention Volume) is fully retained on-site using suitable stormwater retention practices as described in Chapter 4 - Stormwater Management Standards and Performance Criteria.	**Full Credit** Impervious area[1] (in acres) from which stormwater is retained using new or modified stormwater BMP.

[1]Credit only available if existing impervious area is directly connected.

Retrofit Type	When is DCIA Considered Disconnected?	DCIA Reduction Credit
	➢ The applicable post-development stormwater runoff volume retained on-site does not fully meet the Required Retention Volume due to physical site constraints or other factors, but runoff is retained on-site to the "Maximum Extent Achievable" (see Chapter 4 - Stormwater Management Standards and Performance Criteria.) and additional stormwater treatment without retention is provided for the post-development runoff volume above that which can be retained up to 100% of the Water Quality Volume, AND ➢ The proposed retrofit meets or exceeds the minimum required average annual pollutant load reductions (TSS, TP, TN) as demonstrated using stormwater BMP performance curves.	**Full Credit** Impervious area[1] (in acres) from which stormwater is retained or treated using new or modified stormwater BMP.
New or Modified Structural Stormwater BMPs continued	➢ In cases where the additional stormwater treatment requirement cannot be achieved on-site, but stormwater is treated to the "Maximum Extent Achievable" (see Chapter 4 - Stormwater Management Standards and Performance Criteria.)	**Partial Credit** **(X% Reduction)** The amount of DCIA reduction is determined using the stormwater BMP performance curves. • Obtain DCIA (also called "Effective IA" in the BMP performance curves) reduction percentage from the appropriate performance curve based on the type of BMP and the appropriate Hydrologic Soil Group. • Multiply the DCIA reduction percentage by the impervious area[1] draining to the stormwater BMP. If a stormwater BMP performance curve for DCIA or Effective IA does not exist for a given BMP type, estimate the DCIA reduction percentage based on the most representative curve. Table 4-2 of the Regional Retrofit Manual describes a crosswalk of appropriate representative curves. Should a BMP not be mentioned in this table justification for choosing the appropriate curve should be based on function and where necessary HSG.

[1]Credit only available if existing impervious area is directly connected.