

1.3 Stormwater Retrofits

This Section of the Philadelphia Water Department (PWD) Stormwater Management Guidance Manual (Manual) is intended to aid applicants and vendors who are developing Stormwater Retrofit projects in navigating the Manual and additional relevant resources. This Section also highlights the differences between the Stormwater Retrofit Review Path and other Review Paths presented in [Section 2.2](#) water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-2-review-paths.

1.3.1 Retrofit Project Applicability and Initiation

As discussed in [Section 1.1.1](#) water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-1-applicability-factors/#1.1.1 of this Manual, development projects categorized as Stormwater Retrofits are defined as *the voluntary rehabilitation and/or installation of SMPs on a property to better manage stormwater runoff*. These projects are implemented by property owners who are motivated to:

- Lower their Stormwater Management Service Charge (Stormwater Charge) with **stormwater credits** water.phila.gov/stormwater/incentives/credits/;
- Provide triple bottom line benefits to their property's occupants that SMPs with green surface expressions can provide;
- Demonstrate commitment to sustainability or environmental stewardship goals; and
- Transform underutilized space on their property to benefit Philadelphia's waterways and health.

In order for a project to be classified as a Stormwater Retrofit and not a different development type, the project must follow the following criteria:

- Development work and earth disturbance is limited to the installation of the approved stormwater management practice (SMP) and its components. Minor non-stormwater related work may be approved if it does not meet the earth disturbance threshold for applying Stormwater Regulations in the project's watershed.
- Existing cover types in the predevelopment condition must remain consistent in the post-development condition, unless:
 - Impervious area (or area functioning as impervious area, such as compacted gravel) is converted to well-draining pervious grass area or a surface SMP. The new cover type must provide stormwater management benefits and generally comply with requirements within the **Stormwater Management Service Charge Credits and Appeals Manual** water.phila.gov/pool/files/stormwater-credits-appeals-manual.pdf (*Credits and Appeals Manual*) for open space stormwater credits (Applicants of Stormwater Retrofit projects proposing any depaving work are encouraged to contact Stormwater Billing and Incentives to confirm exemption from Stormwater Regulations); or

- The earth disturbance involved with any site improvements or changes in cover type is less than 15,000 square feet (or the appropriate disturbance threshold for triggering Stormwater Regulations, dependent on the project's watershed).

Property owners who are interested in voluntarily managing stormwater on-site are encouraged to apply for a Stormwater Grant. More information about the Stormwater Grant Program, including how to apply, is available on the **Stormwater Grants** water.phila.gov/stormwater/incentives/grants/ website. This website also provides a link to the **Stormwater Grants Application Guide** water.phila.gov/pool/files/stormwater-grants-application-guide.pdf, which outlines the requirements needed for a Stormwater Grant Application. These requirements include, but are not limited to, a Conceptual Stormwater Management Plan, environmental due diligence, and a project budget. If a Stormwater Retrofit project applies for a Stormwater Grant, their Stormwater Grant Application will serve as their Conceptual Review Phase, with their Stormwater Grant award serving as their Conceptual Approval. These Stormwater Grant projects will enter the Post-Construction Stormwater Management Plan (PCSMP) Review Phase after being awarded a Stormwater Grant unless their Conceptual Stormwater Management Plan significantly changes after their Stormwater Grant award.

Classification of a project as a Stormwater Retrofit is ultimately determined by the judgement of PWD staff. Once a project has been confirmed as a Stormwater Retrofit, it will be reviewed by Stormwater Billing and Incentives. The applicant is referred to Sections **2.2.4** water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-2-review-paths#2.2.4 and **2.3.4** water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-3-review-phases#2.3.4 for more information on how Stormwater Billing and Incentives reviews Stormwater Retrofit plans.

Stormwater Billing and Incentives can be reached during normal business hours (8 am to 5 pm) at (215) 685-6070 or pwd.stormwatercredits@phila.gov for Credits and Incentives Program-related questions.

1.3.2 Retrofit Project Requirements and Guidance

Stormwater Billing and Incentives reviews stormwater management plans for compliance with managing the first 1.5 inches of runoff, as described in the Post-Construction Stormwater Management (PCSM) Water Quality requirement of the Stormwater Regulations. Plans should also meet all criteria for the Erosion and Sediment Control Requirement listed in [Section 1.2.2](#) water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations/#1.2.2. To learn more about Stormwater Credit eligibility after completion of the Stormwater Retrofit project, the applicant is referred to [Section 6.3](#) water.phila.gov/development/stormwater-plan-review/manual/chapter-6/6-3-stormwater-credits/. Stormwater Retrofit projects do not need to incorporate aspects from Flood Control, Channel Protection, or Public Health and Safety Release Rate requirements.

Applicants designing a Stormwater Retrofit project should reference [Section 1.2.1](#) water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations/#1.2.1 for understanding the full Water Quality requirement. However, key differences to note for Stormwater Retrofit reviews are listed below.

Administrative Differences

- There are no review or approval fees for Stormwater Retrofit projects.
- There are no expedited reviews for Stormwater Retrofits. Certain SMP types and stormwater management strategies are considered more competitive in the Stormwater Grant award process.
- Stormwater Retrofit projects do not need to submit a full Construction Certification Package, including material receipts. However, projects should submit construction photographs of key installation points along with their Record Drawings.
- Stormwater Retrofits that receive Stormwater Grant funding will have additional timeline requirements. Applicants should follow recommendations in [Section 2.3.4](#) water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-3-review-phases#2.3.4 and contact the Stormwater Billing and Incentives team to review intended project timelines.

Technical Design Differences

- The applicant is encouraged to manage any feasible drainage area on the private property, which is not limited to the earth disturbance area.
- The area within the limit of earth disturbance is not required to be managed. Earth disturbance is less indicative of the amount of stormwater management for Stormwater Retrofit projects than projects required to meet PCSM Requirements.
- Stormwater Retrofits are not required to implement pollutant-reducing practices in the combined sewer area of the city where infiltration is not feasible. These systems are only required for subsurface detention SMPs proposed in the Municipal Separate Storm Sewer System (MS4) for Stormwater Retrofits. Due to this Water Quality difference, Stormwater Retrofits do not consider roof runoff isolation as a design factor.

- Stormwater Billing and Incentives will review disconnected impervious cover (DIC) disconnection strategies on a case-by-case basis, as the majority of Stormwater Retrofits involve SMPs and depaving funded by Stormwater Grants. Tree credits, as described in this Manual, are not a credited stormwater management type for Stormwater Retrofit projects. However, tree canopies can be a strategy for obtaining stormwater credits on a property's stormwater bill, according to the *Credits and Appeals Manual* — water.phila.gov/pool/files/stormwater-credits-appeals-manual.pdf. Additionally, some DIC features such as green roofs, may have different management requirements as a Stormwater Retrofit. For up-to-date information, the applicant should discuss any DIC strategies with Stormwater Billing and Incentives.