

1.1 Applicability Factors

This Section contains guidance on the project characteristics that determine which portions of the **Philadelphia Water Department (PWD) Stormwater Regulations** water.phila.gov/development/stormwater-plan-review/manual/appendices/c-pwd-stormwater-regulations (Stormwater Regulations) apply to an applicant's project. PWD requires submissions for all projects in the City of Philadelphia that generate earth disturbance of 5,000 square feet or more, yet not all projects will need to comply with all requirements of the Stormwater Regulations. There are three main factors that determine which requirements of the Stormwater Regulations apply to a project:

- Development Type (**Section 1.1.1** [p. 2](#)),
- Watershed (**Section 1.1.2** [p. 6](#)), and
- Earth Disturbance (**Section 1.1.3** [p. 8](#)).

These three project characteristics play an important role in determining how the Stormwater Regulations discussed in **Section 1.2** water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations are applied to a project. The applicant will use this Section to identify the project's development type, watershed, and earth disturbance area. This information, in conjunction with the requirement-specific exemptions in **Section 1.2** water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations and clarifications provided for Stormwater Retrofits in **Section 1.3** water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-3-stormwater-retrofits, is necessary for determining applicability and the project's Review Path in **Chapter 2** water.phila.gov/development/stormwater-plan-review/manual/chapter-2.

Of the three key applicability factors, one – earth disturbance – can change during the course of design and construction. If the earth disturbance threshold changes, the applicant must return to **Section 1.1.3** [p. 8](#) to verify whether the project's applicability determinations have changed.

1.1.1 Development Type

Development type plays a key role in determining if and how Post-Construction Stormwater Management (PCSM) Requirements ([Section 1.2.1](#) ☞ water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations#1.2.1) will apply to a project.

Development is defined in the Stormwater Regulations as any human-induced change to a tract of land, whether public or private. Development encompasses, but is not limited to, New Development, Redevelopment, Demolition, and Stormwater Retrofit. It includes the entire Development Site, even when the project is performed in phases. The development types listed below are types that PWD recognizes, and the applicant can only select one development type when completing the ERSA Application ([Section 2.1](#) ☞ water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-1-existing-resources-and-site-analysis).

New Development

New Development is defined in the Stormwater Regulations as a Development project on a tract of land where structures or impervious surfaces never existed or were removed before January 1, 1970. The improved tract of land refers to the area of on-site earth disturbance.

Redevelopment

Redevelopment is defined in the Stormwater Regulations as Development on a tract of land that includes, but is not limited to, the demolition or removal of existing structures or impervious surfaces and replacement with new impervious surfaces. This includes replacement of impervious surfaces that have been removed on or after January 1, 1970. The improved tract of land refers to the area of on-site earth disturbance.

Demolition

Demolition is defined in the Stormwater Regulations as a project that is limited to the razing, or destruction, whether entirely or in significant part, of a building, structure, site, or object; including the removal of a building, structure, site, or object from its site or the removal or destruction of the façade or surface.

Stormwater Retrofit

Stormwater Retrofit is defined in the Stormwater Regulations as *a project that is limited to the voluntary rehabilitation and/or installation of stormwater management practices (SMPs) on a property to better manage stormwater runoff*. Often, the motivation to initiate a Stormwater Retrofit project is to reduce the applicant's monthly Stormwater Management Service Charge (Stormwater Charge) by applying for stormwater credits (**Section 6.3** water.phila.gov/development/stormwater-plan-review/manual/chapter-6/6-3-stormwater-credits/). In addition, these projects are eligible to apply for a Stormwater Grant. For more information on how to apply, applicants are directed to visit the **Stormwater Grants** water.phila.gov/stormwater/incentives/grants/ website or contact **Stormwater Billing and Incentives** water.phila.gov/development/stormwater-plan-review/manual/introduction#6. For more information on how voluntary stormwater management may impact a project's requirements and review phases, the applicant is directed to **Section 1.3** water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-3-stormwater-retrofits.

In most circumstances, projects classified as Demolition or Stormwater Retrofits will be exempt from PCSM Requirements, regardless of size. Stormwater Retrofits with SMPs must be designed to follow a modified PCSM Requirement, further explained in **Section 1.3** water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-3-stormwater-retrofits. However, both Demolition and Stormwater Retrofit project types must still comply with the Erosion & Sediment Control (E&S) requirement. The applicant is referred to **Chapter 2** water.phila.gov/development/stormwater-plan-review/manual/chapter-2 for more information.

Due to historic urbanization, New Development projects are uncommon in Philadelphia and must comply with the most stringent PCSM Requirements. The vast majority of development projects in Philadelphia are classified as Redevelopment projects. The applicant can submit supporting documentation (e.g., photographs, past permits, inspection reports, etc.) to confirm a redevelopment classification. If a Redevelopment project meets certain conditions, it may be exempt from the Flood Control and Channel Protection requirements. The applicant is referred to **Section 1.2** water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations for the Stormwater Regulations as well as requirement-specific exemptions.

Hybrid Development Types

It is possible for a project to fall under more than one development type, though only one can be selected on the ERSA Application (**Section 2.1** water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-1-existing-resources-and-site-analysis). If an applicant is unsure which development type they should select on their ERSA Application they should contact PWD. Some of the most common hybrid developments are described in the next section.

New and Redevelopment Projects with Voluntary Retrofit Components

Development projects that must meet Stormwater Regulations may be eligible for incentives if they choose to go “above and beyond”, managing more impervious area on their property than is required by Stormwater Regulations. There are two incentives most commonly available to these projects:

- **Developer Right-of-Way Incentive:** This is for property owners who are able to direct drainage area from the right-of-way (ROW) into their SMP. The designer includes the additional runoff in sizing the SMP and designing conveyance to the SMP while meeting all required project criteria. During construction, the development contractor constructs any on-site structures needed for this management. PWD will later construct infrastructure, such as an inlet and junction box, within the ROW using separate, non-Incentive funding.
- **Stormwater Grant:** This is for property owners with impervious area on their property that is not disturbed or included in the development project and Stormwater Regulations. The designer directs this drainage area to the SMP and meets all applicable design criteria. The grant may be used for design and construction funding for the additional stormwater management. During construction, the development contractor constructs any on-site structures needed for this management. PWD will later construct infrastructure, such as an inlet and junction box, within the ROW using separate, non-Grant funding.

Any applicant interested in incentive or grant opportunities for their project is urged to contact **Stormwater Plan Review** water.phila.gov/development/stormwater-plan-review/manual/introduction#4 and **Stormwater Billing and Incentives** water.phila.gov/development/stormwater-plan-review/manual/introduction#6 as early as possible in the design process. In addition, each development project submitted to PWD is analyzed for opportunities to over-size SMPs, and the applicant may be contacted by PWD regarding incentive funding. Additional information about funding available to development projects can be found on the **PWD Stormwater Incentives** water.phila.gov/stormwater/incentives/ website.

Development projects that must meet Stormwater Regulations that elect to include a voluntary retrofit component would follow the Development Compliance Review Path (**Section 2.2.1** water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-2-review-paths#2.2.1) and should select “New Development” or “Redevelopment” on their ERSA Application. Development projects that do not need to meet the Stormwater Regulations will typically follow the Stormwater Retrofit Review Path (**Section 2.2.4** water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-2-review-paths#2.2.4) and should select “Stormwater Retrofit” on their ERSA Application. The project team will coordinate with both Stormwater Plan Review and Stormwater Billing and Incentives throughout review and construction in both scenarios.

Phased Projects with Demolition then Subsequent Development and/or Retrofit Construction

Many development or retrofit projects begin with a demolition/site clearing phase. In most circumstances, the review of the demolition can occur within the review of the development/retrofit. In these circumstances, the applicant would select “New Development,” “Redevelopment,” or “Stormwater Retrofit” on their ERSA Application and follow the appropriate Development Compliance or Stormwater Retrofit Review Path. If the demolition must occur prior to completion of the review, then the applicant will need to submit a separate ERSA Application using the “Demolition” development type and follow the Demolition Review Path.

Redevelopment of an Earlier Development or Retrofit Project

Property is constantly being redeveloped in Philadelphia, whether the result of new ownership or when an existing owner wishes to make improvements to their own site. Before undertaking a development or retrofit project, it is important to determine whether the land where the improvement is proposed was previously subject to Stormwater Regulations or managed stormwater through a voluntarily installed SMP. Most properties that fall into this category will have an Operations and Maintenance (O&M) Agreement recorded against the deed (**Section 6.1** water.phila.gov/development/stormwater-plan-review/manual/chapter-6/6-1-property-owner-inspections-and-maintenance#6.1.2) and are also identified on the **Green Stormwater Infrastructure Projects Map** water.phila.gov/green-projects-map. If the land was previously subject to Stormwater Regulations or has an existing SMP on-site, the applicant must contact PWD prior to submitting their ERSA Application. This can have a significant impact on the project’s Review Path and whether a new ERSA Application is required or if the improvement should be submitted as a PCSMP Field Change under an existing project tracking number.

Waterway Encroachments

Waterway encroachments are projects that occur within streambanks or rivers with the purpose of repairing the waterway or an object within the waterway. These projects include streambank stabilization, dam removal projects, and bridge abutment repairs. Earth disturbance that occurs within the waterway will be exempt from the PCSM Requirements. However, ancillary earth disturbance that occurs outside of the waterway, such as trail improvements or other development activities, will be applicable to the PCSM Requirements.

1.1.2 Watershed

The watershed in which a project site is located plays an important role in determining how PCSM Requirements ([Section 1.2.1](#) water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations#1.2.1) are applied to a project. For example, ongoing watershed-wide Pennsylvania Stormwater Management Act (Act 167) planning studies determine Flood Management Districts for controlling peak rates of runoff; watershed locations are also used to determine the applicability of the Channel Protection requirement for Redevelopment projects. For this reason, it is important that the applicant identify the correct watershed early in the design process. Watershed Maps in [Appendix D](#) water.phila.gov/development/stormwater-plan-review/manual/appendices/d-watershed-maps provide a basic guide, but the applicant can also contact PWD to verify a site's watershed location.

There are seven major watersheds in Philadelphia:

- Darby and Cobbs Creeks,
- Delaware Direct,
- Lower Schuylkill River,
- Pennypack Creek,
- Poquessing Creek,
- Tookany/Tacony-Frankford, and
- Wissahickon Creek.


Watershed-based regulations are evolving to address stormwater challenges within Philadelphia. While the Stormwater Regulations apply to all New Development and Redevelopment projects that result in earth disturbance totals of 15,000 square feet or more ([Section 1.1.3](#) p. 8), watershed-specific regulations trigger the Stormwater Regulations at a lower disturbance threshold. Project sites located in the Darby and Cobbs Creeks Watershed and in the Wissahickon Creek Watershed are subject to additional watershed-specific stormwater management requirements. The latest information about [watershed-specific regulations](#) water.phila.gov/development/stormwater-plan-review/manual/appendices/c-pwd-stormwater-regulations/ can be found on the [PWD Stormwater Plan Review](#) www.pwdplanreview.org website.


Darby and Cobbs Creeks Watershed

Projects located in the Darby and Cobbs Creeks Watershed are subject to the provisions of the [Darby and Cobbs Creeks Watershed Act 167 Stormwater Management Plan](#) water.phila.gov/pool/files/Darby_Cobbs_WMP.pdf. Because the Stormwater Regulations were developed to comply with the plan for the Darby and Cobbs Creeks Watershed, all projects that propose 5,000 square feet or more of earth disturbance in the Darby and Cobbs Creeks Watershed are subject to the Stormwater Regulations and their associated PCSM Requirements ([Section 1.2.1](#) water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations#1.2.1).

Wissahickon Watershed Overlay

To help reduce flooding, erosion, siltation, and channel enlargement resulting from development within the Wissahickon Creek Watershed, additional stormwater management requirements and impervious coverage limits may apply to projects within this watershed.

Projects located in the Wissahickon Creek Watershed are subject to the Philadelphia Code §14-510 / WWO, Wissahickon Watershed Overlay District. The applicability of these requirements depends on the location of the project within the watershed and the amount of impervious cover proposed in comparison to the existing impervious condition. A map of the Wissahickon Watershed Overlay (WWO) District can be found within the Code and can also be viewed using the City's [Atlas map](https://atlas.phila.gov/)  <https://atlas.phila.gov/> tool.

For projects located within the WWO District, the Philadelphia City Planning Commission (PCPC) will determine if additional stormwater management requirements are applicable; however, PWD Stormwater Plan Review will be responsible for review of the Post-Construction Stormwater Management Plan (PCSMP). The applicant is referred to [Section 2.6](https://water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-6-pwds-role-in-philadelphias-development-process)  water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-6-pwds-role-in-philadelphias-development-process for more information on the WWO as it relates to project-specific requirements.

1.1.3 Earth Disturbance

Earth disturbance is the primary factor that determines whether a project is subject to the Stormwater Regulations. It is also a primary factor in determining the applicability of PCSM Requirements ([Section 1.2.1](#) ☞ water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations#1.2.1) and the E&S requirement ([Section 1.2.2](#) ☞ water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-2-stormwater-regulations#1.2.2). As such, applicants must properly and accurately assess the limits of earth disturbance associated with development projects to determine applicable requirements and the Review Path required.

While earth disturbance of 15,000 square feet or more triggers the PCSM Requirements for New Development or Redevelopment projects in most areas of the City, earth disturbance of 5,000 square feet or more triggers the PCSM Requirements for these project types in the Darby and Cobbs Creek Watershed. Some projects located in the Wissahickon Creek Watershed may also be required to comply with PCSM Requirements at even lower earth disturbance totals. The applicant is referred to [Section 1.1.2](#) ☞ p. 6 above for specific requirements regarding projects located within the Wissahickon Creek Watershed or the Darby and Cobbs Creeks Watershed.

Earth disturbance is defined in the Stormwater Regulations as *any construction or other activity that disturbs the surface of land.*

Examples of activities that consist of, or can commonly involve, earth disturbance include, but are not limited to, the following:

- Excavation;
- Embankments;
- Land development;
- Subdivision development;
- Moving, depositing, stockpiling, or storing of soil, rock, or earth materials, except as excluded below;
- Demolition activity that results in the disturbance of the land beneath or surrounding a structure, including foundation or building slab removal;
- Concrete slab removal;
- Development above subsurface structures where earth, such as gravel or dirt, is exposed;
- Stormwater Retrofits that include ground-level SMP installation;
- Utility connections, including work in the public rights-of-way;
- Installation of new Streets;
- Street Maintenance Activities;
- New paving and full depth pavement replacement;

Quick Tip

A project may have multiple boundaries, each of which is significant when determining stormwater management applicability during the development process. For example, the parcel boundary, limits of earth disturbance, and area that must be managed for stormwater may all be different. Only the limit of earth disturbance is used to determine whether or not, and which PCSM Requirements of, the Stormwater Regulations apply to most projects.

- Installation of E&S controls and construction-related disturbance located over existing pervious areas, such as establishment of rock construction entrances, stockpiles, silt fencing, construction vehicle paths, staging, and fill areas;
- Grading;
- Clearing and grubbing; and
- Landscaping.

Activities that are not typically classified as earth disturbance include the following:

- Interior building renovations;
- Temporary stockpiles or rock construction entrances located over existing impervious surfaces;
- Restriping of paved areas; and
- Milling and repaving of existing paved areas, as long as the pavement subbase is not exposed during the milling process. The pavement subbase is defined as the layer of aggregate material laid on the subgrade, on which the base course layer is laid.

Some earth disturbance activities and their associated areas count toward the regulatory disturbance threshold for triggering PCSM Requirements, but are not required to be managed in the post-development condition. Such activities include the following:

- Demolition, provided the surface of the land is returned to a pervious condition;
- Waterway encroachment activities occurring within streambanks, rivers, or other waterways for the purpose of repairing the waterway. This can include streambank stabilization, dam removal, bridge abutment repairs, dredging, stream restoration, and erosion stabilization activities;
- Artificial turf areas specifically reserved for dog use;
- Certain water features, as determined by PWD, such as spraygrounds, swimming pools, and fountains that will be chlorinated; and
- Earth disturbance located beneath an undisturbed existing impervious superstructure, such as a highway overpass.

There are other earth disturbance areas that do not count toward the regulatory disturbance threshold for triggering PCSM Requirements and are not required to be managed in the post-development condition. When calculating the total limit of earth disturbance for a development project, the earth disturbance area associated with the following activities should not be counted toward the total disturbance value triggering the PCSM Requirements. These areas include:

- Street Maintenance Activities within an existing Street that do not result in increased impervious areas. Examples include sidewalk replacement, asphalt repaving, utility trenching, curb cuts, street tree planting, and installation of associated street features such as ADA ramps, light poles, signs, benches, decorative planters, and Green Stormwater Infrastructure (GSI);
- New sidewalk installation along an existing paved Street; and
- Area disturbed for Stormwater Retrofit installation (**Section 1.3** water.phila.gov/development/stormwater-plan-review/manual/chapter-1/1-3-stormwater-retrofits).

Applicants who wish to claim exemption from PCSM Requirements as a result of these earth disturbance areas should delineate them separately on E&S Plans submitted to PWD as part of the Conceptual Review Phase.

Earth disturbance activities that are exempt from PCSM Requirements are still required to comply with all appropriate E&S submission and review requirements, which may include PWD approval of an E&S Plan. Submission of an ERSA application is required for all projects that propose more than 5,000 square feet of earth disturbance. The applicant is referred to **Chapter 2** water.phila.gov/development/stormwater-plan-review/manual/chapter-2 for more information on submission requirements. Exemption of a project from PWD's PCSM Requirements does not necessarily imply that the project is also exempt from PCSM Requirements from other City and State agencies. The applicant is referred to **Section 2.6** water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-6-pwds-role-in-philadelphias-development-process and **Section 2.7** water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-7-pwd-and-pennsylvania-department-of-environmental-protection for more information.

Phased Projects, Common Plans of Development, and Contiguous Areas of Earth Disturbance

It is not uncommon for large real estate projects to be developed and permitted in phases. When phasing is proposed, PWD will look at the earth disturbance associated with the entire Development Site to determine applicable requirements under the Stormwater Regulations. The Development Site is defined in the Stormwater Regulations as *the land area where any Development activities are planned, conducted, or maintained, regardless of individual parcel ownership. It includes contiguous areas of disturbance across Streets and other rights of way, or private streets and alleys, during any stage of or on any portion of a larger common plan of development or sale.*

A project may be considered a “common plan of development” if it is associated with any announcement or piece of documentation (including a sign, public notice, hearing, sales pitch, advertisement, website, drawing, zoning request, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor marking, etc.) indicating construction activities may occur on a specific plot. As an example, a redevelopment of a former industrial site that lays out streets, public parks, schools, areas of commercial development, and residential lots that may be sold to another developer are all considered part of the same development site.

Disturbance along multiple parcels separated by an existing street will not be considered contiguous in cases where the linking disturbance activity is limited to sidewalk replacement and/or improvements to PWD infrastructure such as a Private Cost water or sewer extension or GSI installation.

Being Conservative

PWD often observes earth disturbances that occur during construction activity that exceed initial estimates provided on plans. To avoid costly delays, PWD recommends that the applicant be conservative when estimating the disturbance area at each stage of the review process. Should a site inspection reveal that 15,000 or more square feet of earth disturbance has occurred on a Redevelopment site, the site will be required to comply with the Stormwater Regulations and will be subject to the enforcement actions outlined in the Stormwater Regulations.

Should a site inspection reveal that more than one acre of earth has been disturbed, the site will be required to apply for a Pennsylvania Department of Environmental Protection (PA DEP) National Pollutant Discharge Elimination System (NPDES) Permit. The site will be subject to the enforcement actions outlined in the Stormwater Regulations until the applicant receives a NPDES Permit. The applicant is referred to

Section 2.7 water.phila.gov/development/stormwater-plan-review/manual/chapter-2/2-7-pwd-and-pennsylvania-department-of-environmental-protection for more information on the interaction between PWD and PA DEP.

PWD should be contacted prior to plan submittal and before any construction activities whenever there are questions or a need for clarification regarding earth disturbance activities.