

GOVERNING GREEN TERM GLOSSARY

access to knowledge



A RAIN GARDEN
in Baltimore City
on a sunny day

Winter 2022

Introduction

Welcome to the Governing Green Term Glossary.

This term glossary is a companion document to *Governing Green*, an experiential toolkit. Inside, you will find detailed definitions of terms, initiatives, agencies, programs, and institutions frequently mentioned or involved in community-based green infrastructure projects. Additionally, this glossary provides external links and lists related terms to enhance your knowledge of green infrastructure.

In particular, this document may be of use to those with limited experience with green infrastructure or public projects. Over the course of dozens of interviews in Baltimore, New Orleans, Ft. Collins, St. Louis, Buffalo, Washington D.C., and other cities, researchers learned that community stakeholders must often become familiar with the jargon and terms used by engineers and urban planners in projects. Community members often dedicate their time and resources to become knowledgeable stakeholders. This places an unequal burden on communities, particularly underresourced and segregated ones, to acquire specialized knowledge just to be recognized as advocates.

The *Governing Green* Term Glossary attempts to address this burden by:

1. Assembling commonly used terms, initiatives, agencies, and institutions into a singular document.
2. Providing external links to more detailed documentation or explanations.
3. Demonstrate how different engineering, planning, or environmental terms are connected or used in similar manners.

Before you delve into this guide, I want to remark on the links provided. *Governing Green* was born out of a research project about community perceptions of green infrastructure in Baltimore, Maryland. The origins of this project mean that many of the linked resources are from Baltimore and Maryland. I've provided a variety of resources, but you'll note a distinct geographic bias as you turn the pages.

Additionally, many of the links point to federal or state agencies, and particularly the definitions and standards supported by these institutions. It is impossible to separate public policy from its long history of segregationist policies, exclusion, and racism in US urban and environmental planning. Yet, federal and state agencies have an outsized role in defining terms and the scope of green infrastructure projects. While to quote Audre Lorde, "the master's tools will never dismantle the master's house," knowing how the master's tools work shows how the house got built.

This glossary is a small step in revealing how the house, or in the case with green infrastructure, the sewer, gets built.

Sincerely,
Amanda K. Phillips de Lucas, Ph.D.
Creator of Governing Green

100-year Storm

The USGS defines a 100-year storm as a hydrologic event that has a 100-year recurrence interval, or 1% chance of happening in any given year. A recurrence interval is the probability that a precipitation event will occur within a year. The agency cautions against using this term as it is easily misinterpreted to mean that a 100-year storm will only take place every 100 years. Some may refer to a rain event of this magnitude as a 1% storm.

Links

[USGS – The 100 Year Flood](#)
[NRCS, Wisconsin – What is 100 Year Storm?](#)

Adopt-a-Lot

Adopt-a-Lot programs create a pathway for individuals, businesses, and organizations to steward city-owned vacant lots. Adopted lots may provide space for stormwater management, community gardening, recreation, or green space expansion. Uses of adopted lots vary between cities and municipalities. In Baltimore, MD, The Green Pattern Book provides a framework and roadmap for the different ways to utilize vacant lots. In St. Louis, MO, the Land Reclamation Authority runs a Mow-to-Own program.

Links

[Baltimore City, MD – Adopt-a-Lot](#)
[St. Louis, MO – Mow-to-Own Program](#)
[Community Law Center – Urban Agriculture](#)
[USDA Forest Service – Green Pattern Book](#)

See Also

[Vacant Lot Restoration](#)

Alternative Best Management Practice (aBMP)

Alternative Best Management Practices or aBMPs are practices not identified within stormwater management design guidelines. Approved practices vary from state to state. If using a stormwater management practice not specified within guidelines provided by your state, acquaint yourself with any additional approvals or procedures that may be necessary to utilize an alternative. In general, alternative practices will need to meet the criteria for treatment, maintenance, and environmental impact specified by the state or municipality.

Links

[PA DEP – Guidelines for Alternative BMPs](#)
[MD – Stormwater Design Manual](#)
[Center for Watershed Protection – DC's SWM](#)

See Also

[Best Management Practice Green Infrastructure](#)

AutoCAD®

Per the software's website: "AutoCAD® is computer-aided design (CAD) software that architects, engineers, and construction professionals rely on to create precise 2D and 3D drawings." Many engineers use this software to create site plans, drawings, and other schematics related to a project. AutoCAD allows users to layer visual information, such as electrical or sewer maps, on top of one another.

Links

[AutoCAD® – Software Overview](#)

See Also

[Site Plan](#)

Basement Backup

A basement backup, or a sewer backup, occurs when sewage enters into the basement through an outflow or a sump pump overflows. Both events can happen when heavy rain events strain the capacity of a municipal sewer system. Some cities have begun offering reimbursement programs for basement back-ups. Often these programs are tied to a city's consent decree.

Links

[Baltimore City DPW – Basement Backup Program](#)
[Philadelphia – Basement Backup Program](#)

See Also

[Consent Decree](#)
[Lateral](#)

Basement Water Alarm

Basement water alarms or water detectors are devices that can alert a resident to unwanted leaks, flooding, or other sources of water damage. Like other home appliances, many newer devices on the market can connect to WIFI or Bluetooth to alert you to the danger. Some insurance companies have begun offering discounts for installing smart devices.

Best Management Practice (BMP)

Per the MD Stormwater Design Manual: a Best Management Practice (BMP) is a “structural or non-structural device designed to temporarily store or treat stormwater runoff to mitigate flooding, reduce pollution and provide other amenities.” Approved BMP’s vary state to state but can include wet ponds, dry ponds, infiltration trenches, or bioretention. See associated links below for a visual dictionary of BMP types.

Links

[MD – Stormwater Design Manual](#)
[SWM at EPA Facilities](#)
[Wisconsin DNR – BMP Photo Gallery](#)

See Also

[aBMP Consent Decree](#)

Bioswale

Per the Natural Resources Conservation Service: “Bioswales are stormwater runoff conveyance systems that provide an alternative to storm sewers. They can absorb low flows or carry runoff from heavy rains to storm sewer inlets or directly to surface waters. Bioswales improve water quality by infiltrating the first flush of stormwater runoff and filtering the large storm flows they convey.” Bioswales differ from rain gardens in that they carry water from one place to another (channel or convey).

Links

[SUNY ESF – Runoff Calculator](#)
[NRCS – Bioswale Information Sheet](#)
[Clemson – An Introduction to Bioswales](#)

See Also

[Green Infrastructure](#)

BIPOC

BIPOC is an acronym that stands for Black, Indigenous, and people of color.

Links

[NY Times – Where did BIPOC come from?](#)

Canopy Cover

As per the United States Department of Agriculture - Northern Research Station, "Urban Tree Canopy (UTC) refers to the layer of tree leaves, branches, and stems that provide tree coverage of the ground when viewed from above." Cities across the US are engaged in tree planting campaigns to increase canopy cover. Benefits associated with increased canopy cover include lower temperatures, better air quality, and wildlife habitat.

Links

[USDA-NRS — Urban Tree Canopy](#)

Central Business District (CBD)

Central Business Districts play a large role in the history and economic development of cities. In many US cities, the central business district refers to an area devoted to economic activity. Typically these districts are densely populated with highrises and cater to commuting workers.

Links

[Bloomberg Citylab — Future of the CBD](#)
[Designing Buildings Wiki](#)

Citizen Science

Basement water alarms or water detectors are devices that can alert a resident to unwanted leaks, flooding, or other sources of water damage. Like other home appliances, many newer devices on the market can connect to WIFI or Bluetooth to alert you to the danger. Some insurance companies have begun offering discounts for installing smart devices.

Links

[Citizen Science Association](#)
[Public Lab](#)
[Dr. Abby Kinchy — Environmental Citizen Science](#)

See Also

[Collaboration/Participation](#)

Clean Water Act (CWA)

Per the EPA, “The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.” The CWA provides the regulatory framework for monitoring water quality and wastewater discharges.

Links

[EPA – Summary of the Clean Water Act](#)

Climate Change Mitigation

Climate mitigation refers to steps taken to reduce the sources of greenhouse gas emissions or enhancing sinks that capture gasses. In cities, climate mitigation may involve tree planting, urban afforestation, or expanding public transportation to reduce reliance on fossil fuels.

Links

[UN – Sustainable Cities and Communities](#)

[ASLA – Climate Change Mitigation: Cities](#)

Collaboration and Participation

Community engagement and participation are increasingly cited as desirable practices to utilize throughout green infrastructure projects. Collaboration with residents or community members can occur at different project stages, such as planning, design, construction, or maintenance. Some cities and municipalities are making these outreach efforts mandatory for public projects.

See Also

[Citizen Science](#)

Combined Sewer

In combined sewer systems, wastewater and stormwater runoff utilize the same pipe to drain to a treatment facility. Due to the multiple collection sources for this type of system, combined sewers may overflow during heavy rainfall. Combined sewer overflows (CSOs) contribute to urban water pollution.

See Also

[Combined Sewer Overflow Separate Sewer](#)

Combined Sewer Overflow (CSO)

Combined sewers overflow if too much water enters the system. Combined sewer overflows (CSOs) contribute to urban water pollution. As per the EPA, CSOs “contain not only stormwater but also untreated human and industrial waste, toxic materials, and debris.”

Links

[EPA – What are Combined Sewer Overflows?](#)

See Also

[Combined Sewer Separate Sewer](#)

Community-Based Public-Private Partnership (CBP3)

Per the EPA, “A CBP3 is a partnership between a local government and a private entity. The primary goal of a CBP3 is to provide high-quality services in a cost-effective way. The partnership is designed to provide flexibility, provide access to advanced technology, address dynamic community development trends and goals, and encourage long-term financial and regulatory commitments for integrating green infrastructure into stormwater management programs.”

Links

[EPA – Financing Green Infrastructure Prince George’s County CBP3](#)

Com (cont) — Con

Community Development Corporation (CDC)

Per Community Wealth: “Community Development Corporations (CDCs) are nonprofit, community-based organizations focused on revitalizing the areas in which they are located, typically low-income, underserved neighborhoods that have experienced significant disinvestment... They are usually involved in a range of initiatives critical to community health such as economic development, sanitation, streetscaping, and neighborhood planning projects, and oftentimes even provide education and social services to neighborhood residents.”

Links

[Community Wealth – CDC’s](#)

Complete Streets

Per Smart Growth America, “Complete streets are streets for everyone. They are designed and operated to prioritize safety, comfort, and access to destinations for all people who use the street, especially people who have experienced systemic underinvestment or whose needs have not been met through a traditional transportation approach.” Complete streets may lower vehicular speeds and accommodate multiple modes of transportation. Complete streets designs may include green infrastructure in the form of landscaping or median swales.

Links

[Smart Growth America – What are Complete Streets?](#)
[Baltimore City – Complete Streets Ordinance](#)

Consent Decree

A consent decree is a legal agreement between two or more parties resolving a dispute. The EPA often enters into consent decrees with cities or municipalities that violate the Clean Water Act (CWA). Consent decrees may set benchmarks, monitoring requirements, or compel activities to remediate violations.

Links

[EPA – Basic Information on Enforcement](#)
[EPA – Civil Cases and Settlements by Statute](#)

Cu — De

Curb Cut

A curb cut is when a curb slopes downward from a sidewalk to be flush with the street. This design creates a ramp that eases pedestrian traffic and makes mobility easier for wheelchair and stroller users.

Links

[SSRI – The Curb-Cut Effect](#)

Curb Bump-out

A curb bump-out or a curb extension extends the sidewalk into the right of way. As per the National Association of City Transportation Officials (NACTO), “curb extensions visually and physically narrow the roadway, creating safer and shorter crossings for pedestrians while increasing the available space for street furniture, benches, plantings, and street trees.”

Links

[NACTO – Curb Extensions](#)

Deferred Maintenance

Deferred maintenance is when repairs, upgrades, or required repair activities are delayed until a future time. Deferred maintenance often creates or adds to a backlog of repairs that threaten the functionality of public systems.

Links

[Bipartisan Policy Center – Deferred Maintenance](#)

Design Center

Design Centers emerged in the 1970's following calls from civil rights groups to address the racialized impacts of urban renewal. Presently, design centers, such as Baltimore's Neighborhood Design Center provide "community-engaged design and planning services" to low and moderate-income communities.

Links

[Neighborhood Design Center - What We Do](#)

Dry Swale

Dry swales, or grass swales, are shallow linear channels that often have a vegetated component. As per the Chesapeake Stormwater Network, "The dry swale is a soil filter system that temporarily stores and then filters the desired Treatment Volume."

Links

[CSN – Dry Swale Design Specification](#)
[Minnesota Stormwater Manual](#)

See Also

[Green Infrastructure](#)

Ecosystem Services

In 1997, Ecologist Gretchen Daily defined ecosystem services as "the conditions and processes through which natural ecosystems, and the species that make them up, sustain, and fulfill human life." The term refers to and calculates the value of nature. The Millennium Ecosystem Assessment (MEA) identified four categories of ecosystem services: provisioning, regulating, cultural, and supporting services.

Links

[NWF – Ecosystem Services](#)
[MEA – Ecosystems and Their Services](#)

Environmental Justice

Environmental Justice is a term coined and stewarded by Dr. Robert Bullard. He defines the term as “the principle that all people are entitled to equal environmental protection regardless of race, color or national origin. It’s the right to live and work and play in a clean environment.”

Links

[The Guardian – Robert Bullard on EJ](#)

See Also

[Equity
Equity Prioritization Framework](#)

Environmental Protection Agency (EPA)

The US Environmental Protection Agency (EPA) was created in July of 1970. The formation of this agency “consolidated federal research, monitoring, and enforcement activities in a single agency.” The mission of the EPA “is to protect human health and the environment.”

Links

[EPA – Our Mission and What We Do](#)

[EPA – Milestones in EPA and Environmental History](#)

See Also

[Clean Water Act
Consent Decree
MS4 Permit](#)

Equity

Equity is an oft-mentioned, but poorly defined, characteristic of contemporary environmental and sustainability plans. We define equity as the contextual fairness of choices, needs, and merit of decisions about environmental benefits and burdens. Equity can have multiple dimensions including distributional, procedural, structural, and/or transgenerational.

See Also

[Environmental Justice
Equity Prioritization Framework](#)

Eq (cont) — Fe

Equity Prioritization Framework

The question of how to systemically prioritize equity in environmental projects is a priority for many agencies and organizations. Baltimore recently released a watershed assessment where analysts considered a broad range of factors “not typically included in watershed assessments... To reduce inequities for community members who live, work, and play within the watershed.” Other organizations are issuing similar guidance to address issues of equity within their fields.

Links

[Baltimore City – Watershed Assessment](#)
[APA – Planning for Equity Policy Guide](#)

See Also

[Equity Environmental Justice](#)

Feasibility

Not all sites are equally suited for green infrastructure (GI) or green stormwater infrastructure (GSI). Factors determining whether a practice is suitable for a given location include soil type, soil quality, legacy land uses, weather, and space constraints. Find additional details regarding state-specific feasibility requirements in regional stormwater design manuals.

Links

[EPA – GI Design and Implementation](#)

See Also

[Site Plan](#)

Federal Funding

Federal support for green infrastructure (GI) often comes from the EPA. A complete list of federal programs is linked below. Some EPA regions also have specific funding programs or initiatives.

Links

[EPA – GI Funding Opportunities](#)

See Also

[CBP3 Environmental Protection Agency G3 Program](#)

Grant

Researchers in Baltimore found that most green infrastructure projects constructed by non-profit organizations receive financial support through external grants. Grants that support green infrastructure may come from public or private philanthropic sources. Grant funding supports site-plan development, planning, or construction activities. These same grants do not cover the ongoing or maintenance of GI. A lack of dedicated funding for maintenance activities is challenging for GI projects that require intensive upkeep for the first few years following construction.

See Also

[Non-Profit Organization](#)

Greening Commission

Some US cities have created greening commissions or sustainability committees to involve local leaders and citizens in urban environmental issues. A commission will often consist of representatives from advocacy groups, community organizations, business stakeholders, or community members with expertise in the environment or public health.

Links

[Baltimore Commission on Sustainability](#)

Green Infrastructure (GI) / Green Stormwater Infrastructure (GSI)

The definitions of green infrastructure (GI) and green stormwater infrastructure (GSI) are debated amongst practitioners, academics, and other stakeholders. Green infrastructure often refers to interconnected green spaces that provide multiple functions. Green stormwater infrastructure, on the other hand, refers to site-specific facilities that manage stormwater runoff. Depending on the municipality, GSI may manage water quality, water quantity, or both.

Links

[The Water Collaborative: Why does NOLA Flood?](#)
[Missouri Guide to Green Infrastructure](#)

See Also

[Bioswale](#)
[Dry Swale](#)
[Rain Garden](#)

Gre (cont) — Gu

Green Space

Per the EPA: Open/Green space is an “open piece of land that is undeveloped and is accessible to the public.” Green space is distinguished from other public spaces by the presence of landscaping or foliage. Within urban contexts, green spaces are desirable for their positive community and health impacts.

Links

[EPA – What is Open/Green Space?](#)

Green Streets, Green Jobs, Green Town (G3) Program

Per the EPA, “the G3 initiative supports the use of green streets to bring a community’s “Green Vision” to life and provides the tools and resources needed to develop a green vision, design-build, and operate and maintain green infrastructure stormwater management practices.”

Links

[EPA – G3 Program](#)

See Also

[Environmental Protection Agency
Federal Funding](#)

Guerilla Greening

Guerilla Greening is a term that describes grassroots or community-based efforts to landscape a piece of land not legally owned by the persons doing the greening. The practice has a rich history tracing back to the 1970s. Tactical urbanism is closely associated with Guerilla Greening, which refers to the community reclamation of urban spaces, often roads, for community use.

Links

[Guerrilla Gardening](#)
[Tactical Urbanism Guide](#)

Historically Black Colleges and Universities (HBCUs)

HBCUs are colleges or universities “whose principal mission was, and is, the education of black Americans.”

Links

[White House Initiative on HBCUs](#)

Illegal Dumping

Illegal dumping is when waste is disposed of in a place unlicensed to receive solid waste. Illegal dumping can occur in vacant lots, alleyways, within the right of way, or any public space. Often, illegal dumping occurs with difficult or expensive to dispose of items such as mattresses or tires. In many cities, you can report illegal dumping activities to 311.

Land Reutilization Authority

The Land Reutilization Authority is a semi-fictional government agency created for this toolkit that manages the reuse and repurposing of vacant lots. In some cities, the local housing authority may lease or sell vacant properties. In St. Louis, the Land Reutilization Authority (LRA) “received title to all tax delinquent properties not sold at the Sheriff’s sale.”

Links

[STL Land Reutilization Authority](#)
[STL Today – Article on LRA Ownership](#)

See Also

[Adopt-a-Lot
Vacant Lot Restoration](#)

La (cont) — Li

Lateral

The lateral pipe carries wastewater from your residence to the public sanitary sewer system. Property owners are responsible for the maintenance of laterals.

Lay Expertise

Lay expertise is when non-professionals or those not trained or educated in a formal setting possess a mastery of a given subject. Lay expertise can take many forms. In urban planning settings, residents or community leaders may possess lay expertise in neighborhood or regional issues.

Listening Session

A listening session is a facilitated discussion with a group of stakeholders designed to understand (and listen to) the experiences of others. Within a listening session, questions may be proposed to a group that prompt criticism, reflection, or descriptions of injustice or harm.

Links

[Community Tool Box – Conducting a Listening Session](#)

See Also

[Collaboration and Participation](#)

Li (cont) — Me

Little Free Library

Little free libraries are a network of book-sharing boxes located across the US and the world. These library boxes are free and encourage users to share books with their neighbors.

Links

[Little Free Library](#)

Median Width

Median widths are the portions of highways or boulevards that divide traffic traveling in opposite directions. The median width can sometimes serve as a simple form of stormwater management, draining runoff from the road.

Links

[Baltimore Commission on Sustainability](#)

Memorandum of Understanding (MOU)

A memorandum of understanding (MOU) is an agreement between two or more parties. These agreements outline the official rights and responsibilities of participants in a partnership. In green infrastructure projects located on publicly owned lands, MOUs detail maintenance agreements and obligations. Some green infrastructure projects require that organizations agree to perform long-term maintenance on practices through an MOU before a project begins.

Links

[Vibrant Cities Lab — Sample MOU](#)

MS4 — Na

MS4 Permit

MS4 Permits provide federal authorization to cities, municipalities, and government bodies to discharge the contents of municipal separate storm sewers into receiving bodies of water. As per the EPA, “To prevent harmful pollutants from being washed or dumped into MS4s, certain operators are required to obtain National Pollutant Discharge Elimination System permits and develop stormwater management programs.” Many permits and stormwater management programs mandate landscaped stormwater management practices.

Links

[Stormwater Discharges from Municipal Surfaces](#)

See Also

[Clean Water Act
Consent Decree](#)
[Environmental Protection Agency](#)

National Pollutant Discharge Elimination System (NPDES) Permit

Per the EPA, “The Clean Water Act prohibits anybody from discharging “pollutants” through a “point source” into a “water of the United States” unless they have an NPDES permit. The permit will contain limits on what you can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people’s health. In essence, the permit translates general requirements of the Clean Water Act into specific provisions tailored to the operations of each person discharging pollutants.”

Links

[EPA – NPDES Permit Basics](#)

See Also

[Clean Water Act
MS4 Permit
Separate Sewer](#)

Native Plants

Per the Natural Resources Conservation Service (NRCS) - Connecticut, a native plant is “a plant that is a part of the balance of nature that has developed over hundreds or thousands of years in a particular region or ecosystem.” Only plants found in this country before European settlement are native to the United States.

Links

[NRCS – Plant-Related Definitions](#)

See Also

[Bioswale
Pollinator Garden](#)

Neighborhood or Community Association

Neighborhood associations are one mode of social organization that provides city residents a venue to advocate for shared community goals. These groups are often incorporated as 501(c)(3) organizations to collect donations or dues from members. Incorporation also allows organizations to apply and receive money from philanthropic sources to fund projects at the neighborhood scale.

Links

[Vancouver – Neighborhood Association](#)

See Also

[CDC
Non-Profit Organization](#)

Non-Profit Organization

Per the Cornell Law School Legal Information Institute: “A non-profit organization is a group organized for purposes other than generating profit and in which no part of the organization’s income is distributed to its members, directors, or officers.” Non-profit organizations drive green infrastructure projects in many US cities.

Links

[Cornell Legal Information Institute – Non-Profit](#)

See Also

[Grant
G3 Program](#)

Nutrient Reduction

When stormwater flows over paved and impervious surfaces, the runoff picks up nutrients and pollutants, including nitrogen, phosphorus, oils, and lead. In a separate storm sewer system where water is delivered directly to receiving bodies of water, pollutants can cause adverse environmental effects. Landscaped stormwater management filters these contaminants before water can enter the sewer system - reducing the total number of nutrients deposited into water bodies.

See Also

[Green Infrastructure](#)

Of — Or

Office of Surface Water Management

The specific agency tasked with managing stormwater runoff varies from city or municipality. The Department of Public Works may manage all water systems in some cities. Elsewhere, a consortium of agencies works collaboratively to improve regional water quality. Complicating matters, some departments like the Department of Transportation may have their own office to manage stormwater runoff. In the toolkit, the Office of Surface Water Management must meet the regulatory requirements stipulated in the Municipal Separated Storm Sewer (MS4) permit.

Links

[Metropolitan St. Louis Sewer District](#)
[Northwest Florida Water Management District](#)

See Also

[MS4 Permit](#)

Open Data

Per the Open Data Handbook, “Open data is data that can be used, re-used, and redistributed by anyone.” In the context of this toolkit, we are referring to open and public data made available by city agencies or offices. Open data can include anything from 311 calls, incidences of crimes, federal census data, listings of city-owned properties, or city tree inventories.

Links

[Open Data Handbook – What is Open Data?](#)

Oral History

Oral history is a process of collecting information about the past through an interview and the products that result from that interview. Oral histories center the experiences of an interviewee in larger social and historical contexts.

Links

[Oral History Association – What is Oral History?](#)

Permeable Pavers

Permeable pavers, or permeable pavement, are materials used in sidewalks, parking lots, patios, or other applications, that allow for the drainage of stormwater runoff. Permeable pavers are used in some GI projects because they effectively mimic permeable surfaces.

Links

[Green Building Alliance – Permeable Pavement](#)

See Also

[Bioswale](#)
[Green Infrastructure](#)
[Rain Garden](#)

Place-Based Solution

A place-based solution is a project, design, or other intervention that solves a problem defined by a designated neighborhood, community, or affected group.

Plant Type

When stormwater flows over paved and impervious surfaces, the runoff picks up nutrients and pollutants, including nitrogen, phosphorus, oils, and lead. In a separate storm sewer system where water is delivered directly to receiving bodies of water, pollutants can cause adverse environmental effects. Landscaped stormwater management filters these contaminants before water can enter the sewer system - reducing the total number of nutrients deposited into water bodies.

Links

[CCE – An Introduction to Bioswales](#)
[NWF – Gardens for Wildlife](#)

See Also

[Bioswale](#)
[Native Plants](#)
[Pollinator Garden](#)

Pollinator Garden

Per the Ecological Landscape Alliance (ELA), a pollinator garden provides “sufficient food to reverse the decline of pollinators, and provide habitat for monarch butterflies.” Pollinator gardens use native plants to attract these insects and increase their population numbers.

Links

[ELA — More than Just a Pollinator Garden](#)
[USDA Forest Service — Gardening for Pollinators](#)

See Also

[Native Plants](#)
[Plant Types](#)
[Rain Garden](#)

Rain Barrel

Rain barrels are above-ground containers designed to intercept stormwater runoff, often from a disconnected downspout on a residential or commercial property. Rain Barrels provide multiple functions. By trapping water, the barrel ensures that polluted runoff does not travel to receiving water bodies. The collected water can be reused for watering plants, washing cars, or even flushing the toilet.

Links

[Bluewater Baltimore — Harvest Rainwater](#)
[Greenlight New Orleans — Rain Barrel Give Away](#)

See Also

[Stormwater Planter](#)

Rain Garden

As per the Maryland Stormwater Design Manual: “A rain garden is a shallow, excavated landscape feature or a saucer-shaped depression that temporarily holds runoff for a short period of time. Rain gardens typically consist of an absorbent-planted soil bed, a mulch layer, and planting materials such as shrubs, grasses, and flowers.”

Links

[Maryland Stormwater Design Manual](#)

See Also

[Bioswale](#)
[Native Plants](#)
[Plant Types](#)

Re — Ret

Redlining

Redlining refers to a discriminatory practice where racial or ethnic groups are systemically denied services. The Home Owners Loan Corporation (HOLC) Residential Security Maps are frequently cited as the origin of grading neighborhoods based on racial or ethnic categorizations. 'C' or 'D' grades on the map led to the denial of loans or investment in these neighborhoods. In the present day, redlining is used as a shorthand, referring to systemically exclusionary practices.

Links

[NCRC – HOLC Redlining Maps](#)

[Mapping Inequality – Redlining in New Deal America](#)

Resilience

As per the American Planning Association (APA), “urban resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.”

Links

[APA – Planning for Resilience](#)

Retrofit

Retrofitting is a technique of improving, upgrading, or modernizing an existing system to improve functionality. The term, when used in context with stormwater BMPs, refers to the installation or improvement of practices to improve stormwater quality or quantity.

Links

[Tomorrow City – Urban Retrofitting](#)

[Vermont DEC – What is a Stormwater Retrofit?](#)

See Also

[BMP
MS4 Permit](#)

Separate Sewer

A separate sewer system is a system where wastewater and stormwater are in different pipes. In a separate sewer system, wastewater and effluent travel to treatment facilities. Stormwater, on the other hand, is discharged into receiving water bodies.

See Also

[Combined Sewer](#)
[MS4 Permit](#)

Site Plan

Funding organizations, such as the Chesapeake Bay Trust, require completed site plans and project designs for restoration projects involving green infrastructure. The detail required of these plans varies based on project type, ground disturbance levels, and the complexity of the project.

Links

[CB Trust – Outreach and Restoration Grant Program](#)

See Also

[Collaboration and Participation](#)
[AutoCad®](#)

Slope

Green infrastructure and other stormwater catchments are constructed with sloped sides to intercept runoff effectively. Different practices have different standards for the desired slope. Additionally, the slope of the landscape where a project is located can impact what type of project is the best fit for the site.

See Also

[Feasibility](#)
[Green Infrastructure](#)

Sp — St

Speculation

Speculation is an investment, in the case of this toolkit, in property, that the investor hopes will gain value over time. This investment may come with a risk of loss.

Soil Type

Per the Baltimore Harbor Watershed Assessment: “soil characteristics can determine the rate of infiltration, runoff, erosion that occurs as a result of a storm, and also influences plant health... The Natural Resources Conservation Services (NRCS) classifies soils into four hydrologic soil groups (HSG) based on their runoff potential, which is estimated based on the infiltration rate (or the ability of a soil to absorb precipitation) of the soil when thoroughly wetted and not protected by vegetation.”

Links

[Baltimore Harbor Watershed Assessment](#)
[NRCS Updated Hydrologic Soil Groups](#)

See Also

[Feasibility
Green Infrastructure
Site Plan](#)

Standing Water

Standing water occurs when water pools or is otherwise unable to drain from a site. Standing water can lead to increased mosquito populations, health hazards, and flooding concerns. This hazard is a concern on vacant lots where water can pool in discarded vessels and untended surfaces. Dr. Shannon LaDeau found that larger mosquito populations are present in areas with lower socio-economic populations. This trend is attributed to a greater abundance of vacant lots, abandoned buildings, and illegal dumping sites.

Links

[Finding Baltimore’s Mosquito Hot-Spots](#)

See Also

[Adopt-a-Lot
Vacant Lot Restoration](#)

Ste — Sto

Stewardship Mapping and Assessment Project (STEW-MAP)

Per the Forest Service, “The Stewardship Mapping and Assessment Project (STEW-MAP) is a research methodology, community organizing approach, and partnership mapping tool developed by scientists at the USDA Forest Service Northern Research station that answers the question: who takes care of the local environment?... Understanding the structure and function of stewardship groups across a landscape is a powerful step in leveraging stewardship capacity and achieving social and environmental outcomes as well as developing a model of shared stewardship.”

Links

[USDA FS-NRS – STEW-MAP](#)

Stormwater Management Fee

Over the past decade, stormwater management fees have emerged as a solution to fund the repair, maintenance, and retrofit of stormwater systems. Often these laws charge property owners based on the amount of stormwater runoff generated or the amount of impervious surface on a given property. These fees are often controversial amongst residents and politicians who see these provisions as a ‘rain tax’. Others support such measures as a way to rebuild greener and more sustainable stormwater infrastructure.

Links

[Abell Foundation – Baltimore’s New Stormwater Fee](#)
[North Jersey – ‘Rain Tax’ is Law](#)

See Also

[MS4 Permit](#)
[NPDES Permit](#)
[Retrofit](#)

Stormwater Planter

Stormwater planters are above-ground pots or vessels that capture stormwater runoff, preventing immediate drainage into the storm sewer system. Unlike a rain garden or bioswale, a stormwater planter sits above the surface of the ground. Often a property owner will disconnect their downspout so that runoff from a roof can flow directly into the planter.

Links

[East Multnomah Soil & Water Conservation District](#)
[Southeast Metro Stormwater Authority](#)

See Also

[Bioswale](#)
[Rain Barrel](#)
[Rain Garden](#)

Str — Tr

Streetscape

Per the Complete Communities Toolbox, “streetscape is a term used to describe the natural and built fabric of the street, and defined as the design quality of the street and its visual effect.” Streetscaping involved design elements that enhance accessibility, mobility, and the visual characteristics of a street.

Links

[Complete Communities Toolbox – What is Streetscaping?](#)

See Also

[Complete Streets Traffic Calming](#)

Tool Library

Tool libraries function similarly to traditional libraries, but instead of books, you can rent tools. Individuals can join tool libraries as members, often for a nominal, sliding scale fee. Other facilities serve a similar mission but will only rent to nonprofit organizations or community groups. These facilities might be called ‘tool banks’. Tool banks can provide tools in bulk to assist with tree plantings, community garden projects, or group projects.

Links

[USDN Sustainable Consumption – Tool Lending Libraries](#)
[Find a Tool Library Near You](#)
[History of the Berkeley Tool Library](#)

Traffic Calming

Traffic calming uses design interventions such as curb extensions, tree pits, roundabouts, speed humps, and visible signage to slow vehicle speeds. Green infrastructure is often incorporated as an element of traffic calming measures.

Links

[USDOT – Traffic Calming to Slow Vehicle Speeds](#)
[NACTO – Urban Bikeway Design Guide](#)

See Also

[Complete Streets Median Width Streetscape](#)

Tr (cont) — Va

Tree Pit

Tree pits are planters, often on sidewalks, that contain urban street trees. Size and parameters for tree pits depend on location. New York City, for instance, suggests that the optimal tree pit size is 4 feet by 10 feet or 5 feet by 10 feet. Tree pits can enhance stormwater management when designed for interception. Tree pits engineered for this purpose will often be larger and interconnected with other pits.

Links

[NYC Parks – Tree Planting Standards](#)
[EPA – Stormwater to Street Trees](#)

See Also

[Canopy Cover](#)

Urban Agriculture

Greens Grow describes urban agriculture as a practice that “assumes a level of commerce, the growing of products to be sold as opposed to being grown for personal consumption or sharing.” The commercial focus of urban agriculture distinguishes the practice from community gardens or other greening activities. Urban agriculture may also serve a stormwater function by reducing runoff.

Links

[Agricultural Law Information Partnership – Urban Agriculture](#)
[Community Law Center – Resource on Urban Agriculture](#)
[Greens Grow – What is Urban Farming](#)

See Also

[Adopt-a-Lot](#)
[Ecosystem Services](#)
[Vacant Lot Restoration](#)

Vacant Lot Restoration

In urban areas, vacant lot restoration is a method of clearing abandoned lots for public use. Restored vacant lots serve many purposes including stormwater management, community gardening, recreation, or green space expansion. Many cities have developed specific programs (adopt-a-lot, mow-to-own) that determine the procedures and practices necessary to restore lots.

Links

[Baltimore City, MD – Adopt-a-Lot](#)
[St. Louis, MO – Mow-to-Own Program](#)
[USDA Forest Service – Green Pattern Book](#)

See Also

[Adopt-a-Lot](#)
[Urban Agriculture](#)

Wa — Wi

Watershed

Per United States Geological Service (USGS), “a watershed is an area of land that drains all of the streams and rainfall to a common outlet such as a reservoir, mouth of a bay, or a point along a stream channel.”

Links

[USGS – Watersheds and Drainage Basins](#)

WiFi Hubs

Also known as a resilience hub. A WiFi or resilience hub is a physical space devoted to improving emergency management and community resilience. A resilience hub might provide access to essential services, serve as a communication or coordination site, and other resources in an emergency. In the toolkit, the WiFi hub provides residents and the larger community with a reliable WiFi connection.

Links

[USDN – Guide to Developing Resilience Hubs](#)

See Also

[Resilience](#)

Wildlife Habitat

Green spaces and parks within cities are home to urban wildlife. Agencies like the US Forest Service view the restoration of urban wildlife habitat as an essential part of conservation efforts. USFS writes, “urban wildlife habitat can support habitat connectivity within ecological landscapes and serve as a refuge for species impacted by urbanization.”

Links

[USFS Research and Development – Urban Wildlife](#)

See Also

[Pollinator Garden](#)



For more information about this term glossary,
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*This resource was prepared by Cary Institute of Ecosystem Studies
as a part of The JPB Foundation funded project –
Making Green Infrastructure Equitable.*