



## AT A GLANCE

The Rain Check Rebate Program offers rebates to eligible applicants that implement one or more of seven practices: rain barrels, cisterns, rain gardens, urban tree canopy, pavement removal, permeable pavement, and green roofs.

**Deadline:**  
Rolling

**Timeline:**  
Projects must be completed within 12 months

**Rebate Requests up to:**  
\$4,000 for individuals, \$20,000 for institutional, commercial, multi-family dwelling, nonprofit, and not-for-profit groups

**Submit Your Application by following instructions at:**  
<http://cbtrust.org/PrinceGeorgesRainCheck>

## Application Instructions

### 1. Introduction

The Chesapeake Bay Trust (Trust) is proud to partner with Prince George's County on its Rain Check Rebate Program, offering incentives to homeowners, businesses, and others to install practices that will improve stormwater runoff quality, reduce runoff quantity, and improve our local streams and rivers.

Prince George's County is committed to improving the quality of life for its communities by promoting green solutions to stormwater runoff. Stormwater runoff occurs when rain (or snowmelt) flows over the land picking up pollutants such as oil, grease, sediment, and nutrients that make their way into local streams and rivers. The Rain Check Rebate Program provides eligible applicants the opportunity to receive rebates for installing approved stormwater management practices. Homeowners, businesses, and nonprofit entities (including homeowner, condominium and civic associations and churches) can recoup some of the costs of installing practices covered by the program.

The Chesapeake Bay Trust promotes public awareness and participation in the restoration and protection of the Chesapeake Bay and its rivers, awarding over \$70 million in grants since 1985. The Trust is supported by purchases of the *Treasure the Chesapeake* license plates, the Chesapeake Bay Fund tax check-off option on the Maryland State income tax form, donations from individuals, and partnerships with government agencies and corporations. The Trust greatly appreciates the support that makes our programs possible.

### 2. Eligible Applicants

An applicant is eligible for a rebate as long as the applicant owns the property or is a non-profit organization with an agreement to complete a project on public land. The following Prince George's County-located entities are eligible for a rebate:

**Residential Property-owners:** individual residences or individual members of a housing cooperative; \$4,000 rebate ceiling per property

**Institutional Property-owners:** commercial businesses, homeowner associations, condominium associations, civic associations, multi-family dwellings, and not-for-profit organizations; \$20,000 rebate ceiling per property

**Nonprofit Organization working on public property:** Non-profit organizations may annually perform community projects up to the \$20,000 ceiling that the Department of Environment determines to be an eligible use of the funds. Community projects consist of stormwater management techniques that benefit the community and are located on public property.

At this time, because the City of Bowie is managing its stormwater program independently of the County, Bowie applicants are not eligible to participate in this program. Applicants in the City of Bowie, please check back into this program for possible future updates on the status of availability to participate. Applicants in the Towns of Cheverly and University Park are eligible for rain barrel, cistern, rain garden, permeable pavement, pavement removal, and green roof rebates through this program, but for Urban Tree Canopy projects, they should contact their Town's Department of Public Works to participate in those towns' specific tree planting programs.

### 3. Eligible Project Types and Criteria

Seven types of stormwater practices are eligible for rebates under the Rain Check Rebate Program. These seven practices are defined on the following pages.

#### Rain Barrels

Rain barrels are containers used to collect a portion of the rainwater that flows from your rooftop and stores it for later use such as on your lawn and garden. Rain barrels are not for storing drinking water or water for use inside your home. By capturing water from downspouts that would otherwise discharge onto a paved surface, rain barrels can reduce the amount of runoff and pollutants reaching local streams.

**For residential properties,** the rain barrel system must capture at least 50 gallons of rainwater.

**For institutional properties,** the rain barrel system must capture at least 100 gallons. Most rain barrels hold 55 gallons of water at full capacity.

For more information on the operations and maintenance of rain barrels, please see Appendix A.

#### Cisterns

A cistern is a sealed tank used to collect rainwater that flows from your rooftop and stores it for non-potable, exterior uses, such as landscape irrigation and car washing. Generally larger than rain barrels, cisterns have capacities ranging from 100 gallons to several thousand gallons and can collect water from several downspouts, from a single roof, or from multiple roofs.

**For residential and institutional properties,** the cistern must capture at least 250 gallons of rainwater.

For more information on the operations and maintenance of cisterns, please see Appendix A.

#### Rain Gardens

A rain garden is a planted shallow depression that uses water-tolerant native plants and landscaping to treat stormwater flowing from downspouts or hard (impervious) surfaces, such as your driveway, patio, or sidewalk. Rain gardens allow water to slowly soak into the ground, reducing the amount of water that flows directly into nearby storm drains, creeks, or rivers. Rain gardens are an aesthetically attractive, low-tech, and inexpensive way for homeowners, communities, and businesses to help reduce stormwater pollution in local streams and rivers.

**For residential and institutional properties,** the size of the rain garden must be at least 100 square feet in size. To qualify, rain gardens must:

- be at least 10 feet away from all structures;
- be located downhill from the foundations of any structures;
- drain water away from your home and your neighbors' homes;
- be at least 25 feet away from a septic field or a wellhead;
- be exposed to full or partial sun, and
- be in an area in which water can seep quickly enough into the soil so that it drains within 36 hours.

For more information on the operations and maintenance of rain gardens, please see Appendix A.

## Urban Tree Canopy

The canopy of a tree or group of trees is the area of leaves and branches that create shade under the tree(s). Like umbrellas, trees reduce the amount of sunlight and rain reaching the ground. Trees in urban environments are particularly important for intercepting rainfall before it becomes stormwater runoff. Tree leaves, branches, and roots intercept falling rain, filter out pollutants, and absorb stormwater.

**For residential and institutional properties**, the following criteria must be met:

- New trees must be planted on private property (not in the public right-of-way).
- Trees must be planted between October 1 and May 1.
- Trees must be native species with the exception of ash (*Fraxinus* species), which is not recommended due to the spread of the invasive emerald ash borer, an insect that kills ash trees.
- At the time of planting, trees must be at least 5 feet tall.
- Trees should be species that grow greater than 25 feet tall at maturity (“shade trees”); however, where larger trees are not appropriate due to spacing and property size, smaller native trees may be used.

For more information on the operations and maintenance of urban tree canopy projects, please see Appendix A.

## Pavement Removal

Pavement removal is the replacement of impervious surfaces (such as asphalt and concrete) with grass, native plants, or with permeable pavement and/or pavers. Instead of soaking into the soil (infiltrating) and replenishing groundwater, rainfall that lands on driveways, sidewalks, and other impervious surfaces rapidly accumulates in the form of runoff, which often contains pollutants (nutrients, sediment, chemicals, animal waste, trash, etc.). In urbanized areas, stormwater runoff typically enters the storm drain system (underground pipes that carry stormwater to streams) and ultimately, flows to the Chesapeake Bay. Large expanses of impervious area are also associated with increased stream bank erosion and decreased water quality.

**For residential properties**, there is no minimum size requirement for pavement removal.

**For institutional properties**, a minimum of 400 square feet of pavement must be removed to qualify for a rebate.

For more information on the operations and maintenance of pavement removal, please see Appendix A.

## Permeable Pavement

When rainwater falls on conventional pavement, such as concrete, it flows over this impervious surface as stormwater runoff. Permeable pavement allows stormwater to slowly soak through the surface (infiltrate), reaching the soil and groundwater. When water infiltrates the soil, water quality is improved and stormwater pollution and stream bank erosion decrease. A variety of permeable pavement materials are available; however, gravel does not qualify as a permeable pavement for this program.

**For residential properties**, there is no minimum size requirement for permeable pavement.

**For institutional properties**, a minimum of 400 square feet of permeable pavement must be installed to qualify for a rebate.

**For residential and institutional properties**, the area on which you install permeable pavement must currently be an impermeable surface. Rebates will be calculated on 1:1 ratio of pavement removal to permeable pavement installed. No rebates will be granted for projects that establish permeable pavement over existing permeable surfaces.

For more information on the operations and maintenance of permeable pavement, please see Appendix A.

## Green Roof

A green roof is a low-maintenance, vegetated roof system that stores rainwater in a lightweight, engineered soil medium. The stored water either evaporates from the roof top or is taken up by plants. As a result, compared to a conventional rooftop of the same area, much less water runs off of a green roof.

**For residential and institutional properties**, a minimum of a ¼ roof retrofit must be completed to qualify for a rebate. The green roof must replace an existing traditional roof area rather than expanding the original roof footprint. A structural load analysis report from a licensed structural engineer is required for approval.

For more information on the operations and maintenance of green roofs, please see Appendix A.

## 4. Maximum Rebate Request, Eligible Costs, and Ineligible Costs

A rebate request cannot exceed the cost of the project. The maximum rebate per property is \$4,000 for residential properties and \$20,000 for institutional properties, homeowner associations, condominium associations, civic associations, multi-family dwellings, nonprofits, and not-for-profit organizations. An applicant may complete multiple projects until the property rebate ceiling is met. Nonprofit organizations established pursuant to Section 501(c)(3) of the Internal Revenue Code may implement eligible stormwater management projects on public property that benefit the community up to the \$20,000 ceiling.

Only costs associated with the stormwater functions of a project are eligible for reimbursement. Related structural features of a project that do not directly play a role in the treatment of stormwater are not eligible for a rebate. Examples include benches, decorative items such as boulders, walkways, bridges, and other similar items. Itemized, detailed invoices must be submitted to the Trust upon the completion of the project.

**Applicants are not eligible for a rebate under this program if the project is part of the permit approval requirements for new building construction or renovations or if the property is located within a municipality that has a similar rebate program for stormwater management projects.**

Minimum Project Sizes and Maximum Rebate Request

Project Type	Individual Residence or Individual Members of a Housing Cooperative		Institutional, Commercial, Multi-Family Dwelling, Nonprofit, Not-for-Profit Organization, Housing Cooperative	
	Minimum Size	Maximum Rebate Amount per Unit	Minimum Size	Maximum Rebate Amount per Unit
Rain Barrel	50 gallons	\$2 per gallon stored	100 gallons	\$2 per gallon stored
Cistern	250 gallons	\$1 per gallon stored	250 gallons	\$2 per gallon stored
Rain Garden	100 square feet	\$10 per square foot	100 square feet	\$10 per square foot
Urban Tree Canopy	Minimum tree height of 5 ft.	\$150 per tree	Minimum tree height of 5 ft.	\$150 per tree
Pavement Removal	None	\$6 per square foot	400 square feet	\$6 per square foot
Permeable Pavement	None	\$12 per square foot	400 square feet	\$12 per square foot
Green Roof	¼ total roof area	\$10 per square foot	¼ total roof area	\$10 per square foot if planting height is less than 6 inches; \$20 per square foot if

				planting height is greater than 6 inches
Maximum Rebate Allowed per Property	\$4,000		\$20,000	

\*The rebate amount will be the maximum rebate allowed or the actual cost, whichever is lower.

## 5. Application Process for Residential Property Owners

Step 1: Select the practice(s) you wish to install.

Step 2: Review the practice guidelines at [www.cbtrust.org/PrinceGeorgesRainCheck](http://www.cbtrust.org/PrinceGeorgesRainCheck) under the “Additional Resources” tab.

Step 3: Submit an application and property owner agreement by following the instructions at [www.cbtrust.org/PrinceGeorgesRainCheck](http://www.cbtrust.org/PrinceGeorgesRainCheck). To be eligible for a rebate, applicants for all projects (except rain barrels) must submit an application and be approved by the Trust prior to implementation. Applicants seeking rebates for rain barrel projects may apply up to 12 months after installation.

Step 4: Attend a pre-installation site visit with the Trust (except for rain barrel projects), submit any contingencies, and receive approval from the Trust. An application may be fully awarded, partially awarded (if, for example, an ineligible budget amount is requested), declined, or placed on hold for more information from the applicant.

Step 5: Apply for permits, if required. Most projects will not require permits. However, if a project on its own or in conjunction with a concurrent project on your property involves any of the following activities, a permit is likely required:

- 5,000 square feet or more of ground is disturbed;
- 100 cubic yards or more of earth moving occurs ; or
- 12-inch change (+/-) in grade that alters drainage flow.

Step 6: Complete the project within 12 months and submit all receipts, invoices, and copies of final permit inspections (if applicable) by the due date to the Chesapeake Bay Trust.

Step 7: Attend a post-installation site visit with the Trust to inspect the completed project.

Step 8: Receive rebate check from Prince George’s County.

*Applications will be approved on a first-come, first-served basis.*

## 6. Application Process for Institutional Property Owners and Nonprofits working on public property

Step 1: Select the practice(s) you wish to install.

Step 2: Review the practice guidelines at [www.cbtrust.org/PrinceGeorgesRainCheck](http://www.cbtrust.org/PrinceGeorgesRainCheck) under the “Additional Resources” tab.

Step 3: Submit an application and property owner agreement by following the instructions at [www.cbtrust.org/PrinceGeorgesRainCheck](http://www.cbtrust.org/PrinceGeorgesRainCheck). To be eligible for a rebate, applicants for all projects (except rain barrels) must submit an application and be approved by the Trust prior to implementation. Applicants seeking rebates for rain barrel projects may apply up to 12 months after installation.

Step 4: Attend a pre-installation site visit with the Trust (except for rain barrel projects).

Step 5: Receive pre-approval letter from Trust (subject to pre-approval by the County). An application may be fully awarded, partially awarded (if, for example, an ineligible budget amount is requested), declined, or placed on hold for more information from the applicant.

Step 6: Prior to construction, you must submit any contingencies listed in the pre-approval letter by logging into the Chesapeake Bay Trust Online Grant System account accessed through the link [https://www.GrantRequest.com/SID\\_1520](https://www.GrantRequest.com/SID_1520) with the same username and password used when you applied.

Step 7: Apply for permits, if required. Most projects will not require permits. However, if a project on its own or in conjunction with a concurrent project on your property involves any of the following activities, a permit is likely required:

- 5,000 square feet or more of ground is disturbed;
- 100 cubic yards or more of earth moving occurs ; or
- 12-inch change (+/-) in grade that alters drainage flow.

Step 8: Complete the project within 12 months of approval date.

Step 9: Upon completion of the project, submit final paperwork by logging into the Chesapeake Bay Trust Online Grant System account accessed through the link [https://www.GrantRequest.com/SID\\_1520](https://www.GrantRequest.com/SID_1520) with the same username and password used when you applied. Final paperwork includes but is not limited to:

- a. accounting of expenditures using the Trust’s Rain Check budget form;
- b. documentation of project expenses including receipts, and/or invoices showing payment or \$0 balance, and/or invoices with proof of payment; and
- c. copies of final permit inspections (if applicable)

Step 7: Attend a post-installation site visit with the Trust to inspect the completed project.

Step 8: Receive rebate check from Prince George’s County.

*Applications will be approved on a first-come, first-served basis.*

## **7. Application Submission Instructions**

To apply online, follow the instructions at [www.cbtrust.org/PrinceGeorgesRainCheck](http://www.cbtrust.org/PrinceGeorgesRainCheck). If you have not registered to use this new system click on “New Applicant” and follow the on-screen instructions. Online applications are preferred.

To apply via paper application, download the forms at [www.cbtrust.org/PrinceGeorgesRainCheck](http://www.cbtrust.org/PrinceGeorgesRainCheck) and mail to Prince George’s Rain Check Rebate Program, Chesapeake Bay Trust, 60 West Street, Suite 405, Annapolis, MD 21401. Completed forms must contain the original signatures of the applicant.

When completing the online application process, you will be asked for the following information. It is suggested that you gather this information before you login to the system.

### **Personal Information**

- 1) Name
- 2) Mailing Address
- 3) Primary Phone Number
- 4) Email Address

### **Property Information**

- 1) Property Tax Account Number
- 2) Property Address
- 3) Property Type (residential, institutional, etc.)
- 4) If Institutional, Tax ID number and Business Name
- 5) If Residential, whether property is part of a Homeowners Association (HOA)

### **Rebate and Project Information**

- 1) Project Type (cistern, green roof, pavement removal, permeable pavement, rain barrel, rain garden, urban tree canopy)
- 2) Project Goal (receive a rebate; solve a drainage problem; reduce stormwater runoff; reduce water usage; reduce watering costs; reduce maintenance; reduce energy costs; shading; expanding existing tree canopy; aesthetics; learn about a new form of gardening; reduce paved area; create or enhance landscaping, garden or lawn; other)
- 3) Total Rebate Requested
- 4) Project Start and End Date

### **Supporting Documents**

- 1) Photos of the site prior to implementation of the project
- 2) Completed Property Owner Agreement Form - This form allows Prince George's County and Chesapeake Bay Trust to place promotional signage on the property for the Rain Check Rebate Program, take photographs of the property for possible publication, and conduct follow-up evaluations as needed.
- 3) For Residential Property (within HOAs only) - HOA Approval Letter
- 4) For Vegetation Projects Only – (rain garden, urban tree canopy, pavement removal projects that involve vegetation, and green roofs) - Detailed Planting Plan
- 5) For permeable paver Projects – contracting company name and contact information, type of permeable paver to be installed, design plan and/or detailed sketch that shows what stone/gravel will be used for the sub base, and the height of the sub base.
- 6) For Green Roof Projects – A professional engineer's stamped plan of the roof design
- 7) For Nonprofit Applicants working on Third Party Property Only - Approved Third Party Agreement

As described in the Application Submission Instructions, some projects will require permits. The applicant is responsible for acquiring all necessary permits with the Prince George's County Department of Permitting, Inspections and Enforcement (DPIE). While permits need not be in hand at the time of application for the rebate, the final inspection report from DPIE must be submitted before a rebate check can be issued and will, therefore, be a condition of the rebate award.

*\* For the remainder of your application, complete only the sections that apply to your project.*

#### Rain Barrel or Cistern Projects

- 1) What size (gallons) rain barrel/cistern do you intend to purchase?
- 2) How many rain barrels/cisterns do you intend to have?

#### Rain Garden Projects

- 1) Rain garden length
- 2) Rain garden width

#### Urban Tree Canopy Projects

- 1) Please describe the following:
  - a. Number of trees to be planted (At the time of planting, trees must be at least 5 feet tall; at least ½ caliper inch; and planted in a 5-gallon (or larger) container or balled and burlapped.
  - b. Species of trees to be planted

#### Pavement Removal and/or Permeable Pavement Projects

- 1) If you intend to remove pavement:

- a. What is the total area of the pavement to be removed and replaced with either vegetation or permeable pavers (in sq. ft., area = length x width)
  - b. With what do you intend to replace the pavement? (turf or lawn, native plants, rain garden, permeable pavement/pavers, other)
- 2) If you intend to install permeable pavement:
- a. What types of pavement/pavers do you intend to install? What is the make and manufacturer of the pavement/paver system?
  - b. Will the system include stormwater storage? If so, how will the system discharge stored stormwater? (infiltration, underdrain, discharge to open area, tie into public storm drain system)

### Green Roof Projects

\*All green roof projects will require a stamped structural analysis of the roof system from an engineer. You will also need to obtain a permit from the County Department of Permits, Inspections, and Enforcement. Their website:

<http://www.princegeorgescountymd.gov/sites/dpie/Pages/default.aspx>

- 1) Please provide the following information:
  - a. Intended planting depth (in inches)
  - b. Total cubic feet of the project (planting depth x area of roof divided by 12)
- 2) What is the make and manufacturer of the green roof system and components, and what type of system do you intend to install? (integral, modular, plug, other)



# Appendix A: Operations and Maintenance

## Rain Barrels

Rain barrels require periodic maintenance. Drain them after each significant rainfall from April to November. As a general rule, empty the rain barrel every five to seven days. Clean the rain barrel periodically and inspect it for clogs and leaks. If you suspect mosquitoes may be a problem, a fine mesh screen fitted on the lid of the rain barrel will prevent mosquitoes from gaining access and laying eggs. Remove leaves and other debris from the filter screen and ensure that it is not damaged and is securely fastened. Unless designed for freezing temperatures, the rain barrel should be disconnected and drained in the fall or winter, before the first frost, and stored upside-down in a protected location to avoid damage.

MAINTENANCE SCHEDULE FOR RAIN BARRELS												
	Spring			Summer			Fall		Winter			
Drain after significant rainfalls	■	■	■	■	■	■	■	■				
Clean and inspect for clogs or leaks	■	■	■	■	■	■	■	■				
Remove leaves and debris	■	■	■	■	■	■	■	■				
Replace damaged filter screen	■	■	■	■	■	■	■	■				
Drain before frost								■				

Required
  Required at Low Frequency
  Required As Necessary

## Cisterns

Cisterns require periodic maintenance. All cisterns should be designed with multiple access points to support pump maintenance, inspection, repair, and cleaning. Inspect your cistern and its associated components twice per year to ensure that

- downspouts are properly positioned, intact, and free of debris;
- filters and screens are intact and free of debris and sediment;
- tanks and covers are intact and not leaking;
- pumps are working properly;
- overflow outlets are clear and are directed away from building foundations; and
- spigots and hoses are functioning properly.

To maintain adequate storage, cisterns should be drained between significant rainstorms. Clean out the cistern and its inflow and outflow components as part of routine maintenance during dry parts of the year. Unless designed for placement below ground or for freezing temperatures, the cistern should be disconnected and drained in the fall or winter, before the first frost, to avoid damage.

MAINTENANCE SCHEDULE FOR CISTERNS												
	Spring			Summer			Fall		Winter			
Drain after significant rainfalls	■	■	■	■	■	■	■	■				
Clean cistern and inflow/outflow components	■											
Inspect and conduct required maintenance	■						■					

Required
  Required at Low Frequency
  Required As Necessary

## Rain Gardens

Rain gardens require less maintenance compared to traditional gardens. Primary maintenance requirements involve weeding, repair, and replacement of components in the treatment area. The use of native plants reduces fertilizer, pesticide, water, and overall maintenance requirements. During the first growing season, the garden must be watered regularly

during dry periods. However, if the soil is moist at a depth of 4 inches, and wilting plants recover at night, watering is not needed. Regularly remove any weeds, litter, sand, and sediment that enter the garden. Weeding should be accomplished routinely, at least monthly during the growing season. Rainwater entering a rain garden normally carries nutrients, so fertilization is normally not needed; however, if a soil test indicates very low soil fertility, an organic fertilizer may be applied. At least once a year, apply a new layer of double-shredded hardwood mulch, maintaining between 2 and 3 inches of cover. You may need to remove old mulch every year or two to maintain the appropriate depth for your rain garden to function properly. As with any garden, divide overcrowded plants in the spring or fall, and prune dead vegetation annually. Perennial plants can be cut back in the spring, if desired for neatness, but it is not required for plant health. Plants can be pinched, pruned, sheared, or deadheaded during the growing season to encourage flowering, bushier growth, or fresh leaves. Diseased or damaged portions of plants should be pruned, as needed, and trees and shrubs can be pruned in the fall for shape or to increase fruit production.

Rain gardens are designed to have water standing for up to four hours. If this period is routinely exceeded, the garden may not be functioning properly. The surface blockage problem can often be corrected by removing the mulch layer and raking the surface. For blocked filter fabric, use lengths of small reinforcing bar (2'-3' #4 rebar) to puncture the fabric with holes every 1' on center. If the soils themselves are causing the problem, punch holes in the soil to increase aeration. In a worst case scenario, the entire rain garden may need to be re-installed. Check where the water enters the garden to be sure it is not being clogged by soil, mulch, or debris; and remove obstructions, as needed. Pet waste should not be left to decay in rain gardens.

MAINTENANCE SCHEDULE FOR URBAN RAIN GARDENS		Spring		Summer		Fall		Winter	
Plant Care	Trimming, Pruning and Thinning	Required	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required	Required
	Mowing (turf areas only)	Required As Necessary	Required at Low Frequency	Required	Required	Required	Required at Low Frequency	Required As Necessary	Required As Necessary
	Weeding	Required As Necessary	Required at Low Frequency	Required	Required	Required	Required at Low Frequency	Required As Necessary	Required As Necessary
	Watering (established and drought)	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary
	Fertilizing	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary
	Pest Management	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary
	Plant Replacement	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary
Infiltration Maintenance	Ponding and Drainage Problems	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary
	Trash and Debris Removal	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary
	Mulching	Required	Required As Necessary	Required As Necessary	Required	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary
	Pet Waste Removal	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary	Required As Necessary

Required
  Required at Low Frequency
  Required As Necessary

## Urban Tree Canopy

Aside from watering, trees require minimal maintenance. As part of installation, newly planted trees should be watered and mulched. Continue watering your trees at a rate of 25 gallons per week throughout the growing season (April through September) during dry spells. You may want to use a slow-release watering bag to make watering easier. If you are unsure when to water your trees, follow Casey Trees weekly watering recommendations from <http://caseytrees.org/get-involved/water/>. To ensure long-term success, this watering regime should continue throughout the first three growing seasons after installation. Mulching your tree seasonally—and even connecting the area around your tree with a nearby mulched area or planted bed—not only has a beautifying effect, but also provides your tree with a number of sustaining benefits. Be sure, however, to keep mulch and other debris from touching the trunk of the tree. Soil and mulch piled against the top of the root ball and the trunk can invite pests and rot the bark. Correctly applied mulch helps maintain the temperature of the soil, encourages retention of moisture in the root zone, provides important nutrients, and suppresses grass and weeds that can take water and nutrients from your tree. Mulching also creates a barrier that can protect your tree from damage by lawn maintenance machines.

Basic tree care practices such as watering and mulching can be properly done by anyone; however, some tree care is best left up to trained professionals. Examples include work that cannot be performed from the ground; work that cannot be

performed with hand tools like pruners, loppers, and pole saws; and any work within 10 feet of any kind of overhead utility line. In addition, pruning or removing trees, especially large trees, can be dangerous work. This type of work should only be completed by those trained and equipped appropriately. Improper pruning can cause more harm than good by introducing disease, causing weak growth, making the tree more vulnerable to storms, and/or creating wounds that weaken or kill your tree. Never top a tree.

MAINTENANCE SCHEDULE FOR URBAN TREE CANOPIES		Spring			Summer			Fall			Winter		
New Plantings	Trimming, Pruning and Thinning	Required							Required	Required	Required	Required	Required
	Fertilizing	Required at Low Frequency	Required at Low Frequency					Required at Low Frequency	Required at Low Frequency	Required at Low Frequency			
	Watering	Required	Required	Required	Required	Required	Required	Required	Required	Required			
	Plant Replacement	Required	Required	Required				Required	Required	Required	Required	Required	Required
Established Trees	Trimming, Pruning and Thinning	Required	Required	Required	Required	Required	Required	Required	Required	Required	Required	Required	Required
	Fertilizing	Required at Low Frequency	Required at Low Frequency					Required at Low Frequency	Required at Low Frequency	Required at Low Frequency			
	Watering	Required	Required	Required	Required	Required	Required	Required	Required	Required			
	Plant Replacement	Required	Required	Required				Required	Required	Required	Required	Required	Required

Required
  Required at Low Frequency
  Required As Necessary

### Pavement Removal

Depending on the size of the project, maintenance requirements will vary considerably, but are typically the same as for other types of landscaping projects. The use of native plants and trees are typically associated with lower maintenance costs. After a garden is established, the frequency and amount of watering will depend on the types of plants installed as well as local weather conditions. Regular activities, such as weeding are also recommended; the use of mulch can reduce the frequency and duration of weeding required. Approximately 2 to 3 inches of mulch should be added annually.

Compared with native vegetation, the maintenance requirements for sod are more frequent, especially during the summer months and growing season. Regular watering may be needed even after the turf becomes established; watering early in the morning or later in the evening is most efficient. Apply a steady stream of water to ensure adequate infiltration. If you observe runoff, stop watering as this means that the soil is saturated. When mowing, aim for a grass height of 2.5 to 3.5 inches during the summer and 2 inches during the autumn and spring. Cutting more than one-third of a grass blade will hinder growth and accelerate the loss of soil moisture. Maintaining a higher grass height (by raising the mower blade) will help reduce the frequency of mowing and provide for a more robust lawn.

Although occasional maintenance will be required, the replacement of pavement with vegetation, whether sod, small trees, or native plants, will provide countless benefits to both the property owner and the local environment. There are maintenance requirements for permeable pavement or pavers as well. Please see the Permeable Pavement stormwater management guidelines for more information.

MAINTENANCE SCHEDULE FOR PAVEMENT REMOVAL													
Two-Track Driveway		Spring			Summer			Fall			Winter		
	Inspect edges												
	Fill and stabilize ruts												
Plant Maintenance		Spring			Summer			Fall			Winter		
Native Plants	Annual mulching												
	Weeding												
	Watering												
	Pruning as desired												
Trees	Mulch upon installation												
	Annual mulching												
	Watering												
	Prune limbs												
	Pest control												
Sod	Watering												
	Mowing												

Required
  Required at Low Frequency
  Required As Necessary

## Permeable Pavement

As with any structural feature, permeable pavement requires maintenance to ensure that the system continues to function properly. The most common problem impacting permeable pavement is clogging, which occurs when sediment and other material obstructs pores, reducing infiltration. To help prevent these problems, keep landscaped areas well maintained and prevent soil from being transported onto the pavement. The most effective preventive maintenance for permeable pavement is yearly dry weather vacuum sweeping. Brooms, hoses, and pressure washers can compromise the system's integrity and should not be used for cleaning and clearing. For paving stones, periodically add joint materials (sand) to replace material that has been transported away. Inspect your permeable pavement each year to check for and repair cracking, splitting, or other damage to the pavement surface. Do not reseat or repave with impermeable materials. Grass pavers may require periodic reseeded to fill in bare spots. In winter, salt can be used in moderation to melt ice, but never use sand unless you have paving stones. Pervious concrete works well in cold climates as the rapid drainage of the surface reduces the occurrence of freezing puddles and black ice. Melting snow and ice infiltrates directly into the pavement, facilitating faster melting. Snow plows can catch the edge of grass pavers and some paving stones. Rollers should be attached to the bottom edge of a snowplow to prevent this problem.

MAINTENANCE SCHEDULE FOR PERMEABLE PAVEMENT													
		Spring			Summer			Fall			Winter		
Interlocking Pavers	Inspection												
	Cleaning and sweeping												
	Replacement of filler material												
Grass Pavers	Inspection												
	Reseeding of bare spots												

Required
  Required at Low Frequency
  Required As Necessary




## Green Roof

Extensive green roofs, when properly installed, require relatively limited maintenance, but they are not maintenance-free. Green roofs require some attention during establishment and yearly maintenance thereafter. Intensive green roofs have irrigation needs and require more maintenance than extensive green roofs. Green roofs require irrigation during the 18-month to 2-year establishment phase, and as needed during drought conditions. Be sure to check gutters and downspouts

annually and remove any accumulated sediment or debris. Check surface vegetation and remove undesirable weeds annually; plant replacement is best done in the spring and fall. Weeds and native grasses are carried to the roof by wind, birds, and insects and can compete with roof plants for sunlight, moisture, and nutrients; therefore, they should be weeded annually. Once a year, lightly apply a specially blended, organic, slow-release fertilizer to help keep your green roof functioning efficiently. Supplemental planting material may be needed if the wind blows away some of the plants and soils.

MAINTENANCE SCHEDULE FOR GREEN ROOFS											
	Spring			Summer			Fall			Winter	
Irrigation (until established)											
Irrigation (during drought)											
Weeding											
Plant replacement											
Fertilizing											

	Required		Required at Low Frequency		Required As Necessary
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