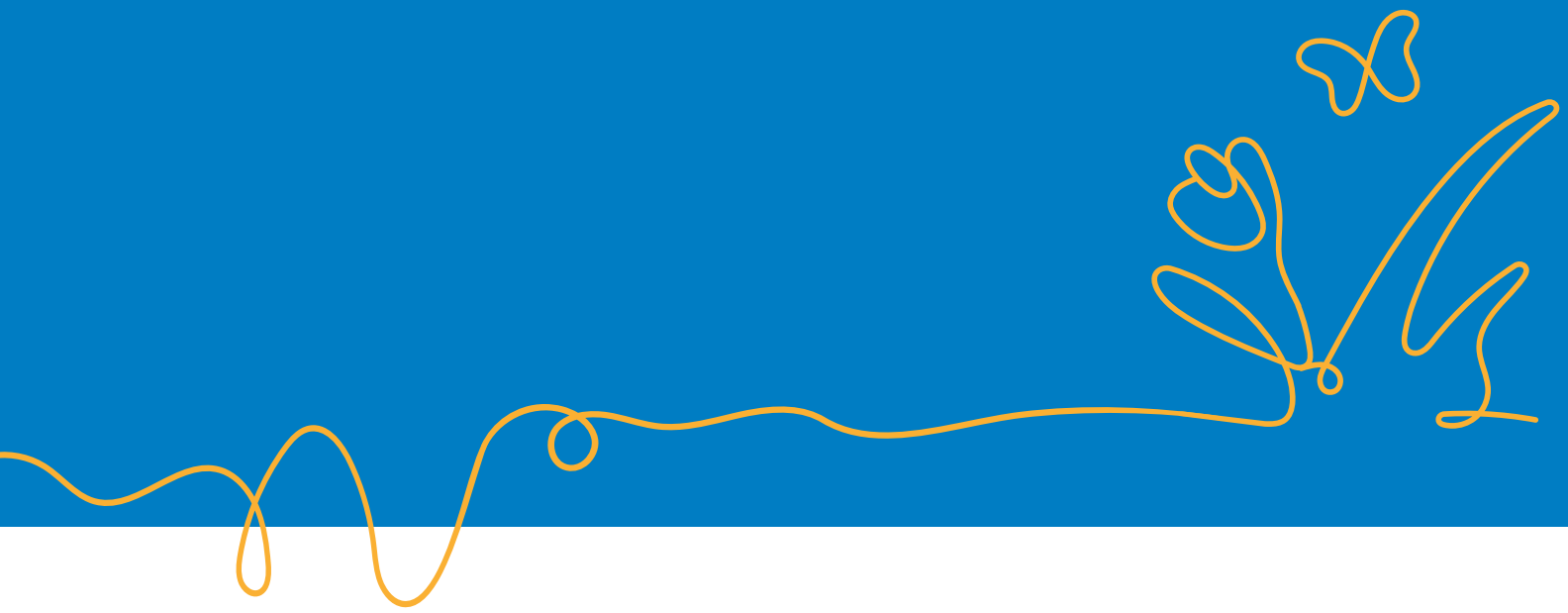
Green Infrastructure for Homes

Residential Maintenance Guidebook

March 2025



San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

Transform the Storm

Table of Contents

Introduction

Each year, more than 10 billion gallons of rain fall on our city, enough for each resident to shower twice a day for an entire year. That's a lot of water. But with climate change, heavy storms means much of this water hits our city's landscape at once.

Your new green infrastructure system is one key tool that helps to capture, slow down, filter, infiltrate, and/or reuse stormwater to reduce the amount of stormwater that enters the city's sewer system. Green infrastructure can also provide a variety of social and environmental co-benefits. For example, rain gardens take advantage of the natural processes of soils and plants in order to slow down and filter stormwater to keep it from exceeding the capacity of our sewer system, while also incorporating vegetation and trees that can provide urban habitat and help cool our city during heat waves.

Ensuring regular maintenance throughout the year is important to keep these green infrastructure systems able to slow down stormwater and transform the storm. This manual provides maintenance schedules and tips for residential rain gardens, rainwater harvesting cisterns, permeable pavers, and infiltration trenches.

Rain Gardens

Green Infrastructure Grants for Homes Pilot Program Participant: Rain Garden and Rainwater Harvesting Cistern

Capturing the Storm

Project: Maple Wood Minnesota
Source: City of Maple Wood

A rain garden experiencing ponding during a rain event. In a functioning rain garden, this ponding should infiltrate into the ground within 24-48 hours.
Source: 12000 Rain Gardens

Your New Green Infrastructure

Congratulations on your new rain garden! Also known as bioretention planters, rain gardens rely on vegetation and unique planting soil to capture, infiltrate, and remove pollutants from stormwater. These systems help San Francisco's sewer system respond to storms, create habitat for urban wildlife, and replenish groundwater aquifers. This green infrastructure also reduces the stormwater component of your sewer bill through the Stormwater Credit Program (stormwater.sfpuc.org/home/credit). Those savings are calculated based on the total impervious area from which your rain garden manages stormwater runoff.

This guide outlines maintenance activities that will help your rain garden continue to keep stormwater out of the city's sewer system.

Inspection & Maintenance

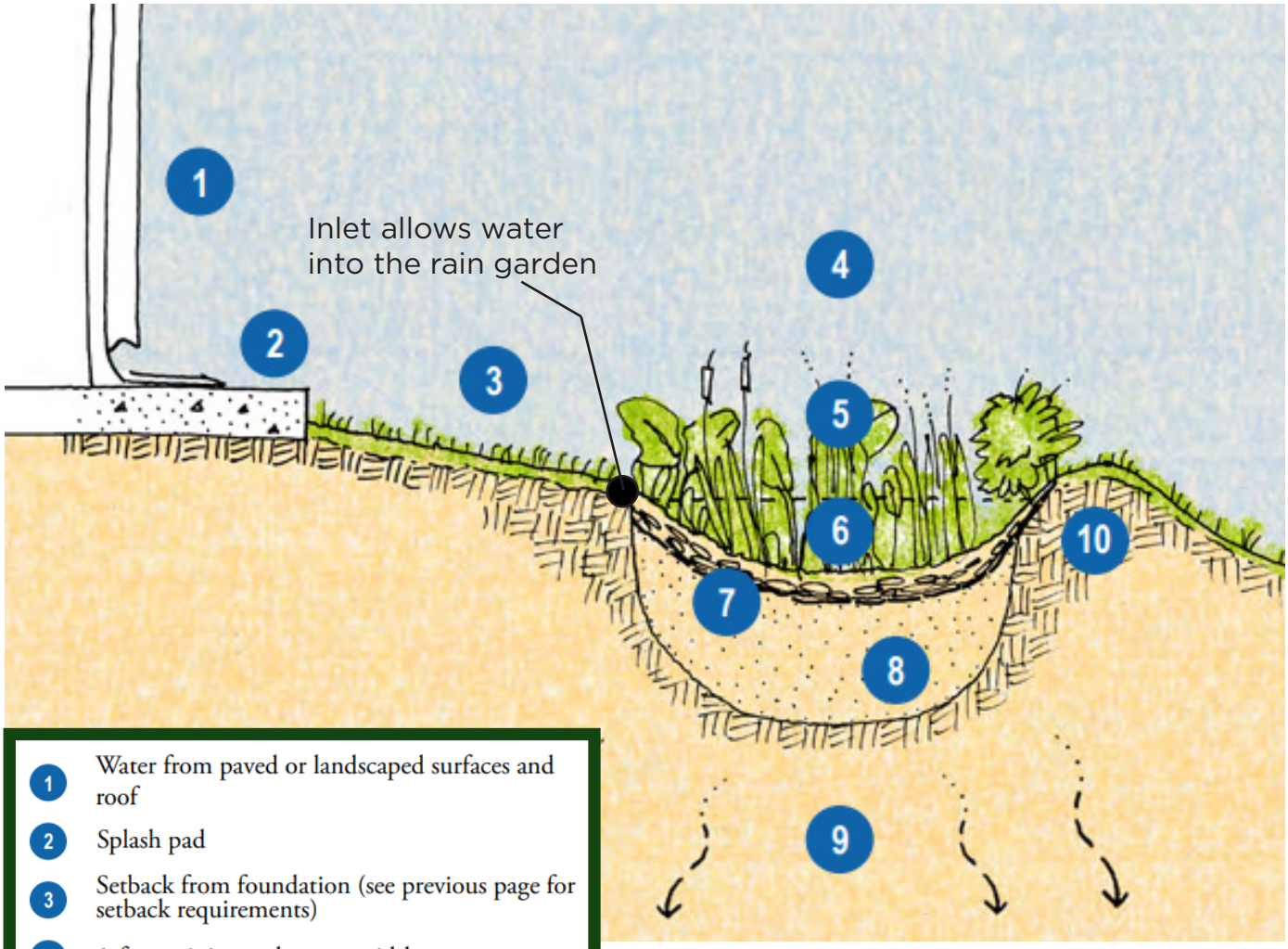
Rain gardens need to be cared for to ensure the plants remain healthy and that water continues to flow through the system when it rains.

The maintenance calendar below is a suggested list of seasonal maintenance activities, and you may find that you need more or less frequent maintenance as you get familiar with your rain garden. Refer to the inspection checklist below for a list of components to regularly inspect annually.

Materials

- Gloves
- Trowel or shovel
- Rake
- Hose

Common Rain Garden Components



1. Water from paved or landscaped surfaces and roof
2. Splash pad
3. Setback from foundation (see previous page for setback requirements)
4. 1-foot minimum bottom width
5. Dense, wet- and dry-tolerant vegetation
6. Ponding depth, 6 to 12 inches
7. Mulch, 2- to 3-inch depth
8. 18-inch bioretention planting soil
9. Native soils suitable for infiltration
10. Berm

Figure 1: Cross-section diagram of a typical rain garden. Source: SFPUC Best Management Practice Fact Sheets

Maintenance Calendar

Month	*Task*
	Start of Rainy Season
Rainy Season (Oct-March)	**KEEP A LOOKOUT** – As the rainy season progresses, add mulch to bare areas and remove mulch that has become clogged with sediment, or other material. ☐ **TOO MUCH RAIN/NO RAIN?** – Break up the soil and replant if the system doesn't drain. If there is no rain, keep the soil fresh by tilling, adding new soil, and replanting if necessary. ☐
Spring (April-May)	**ROUTINE MAINTENACE** – Remove visible sediment, debris, and trash from inlets (downspout) or any outlets (overflow or underdrain). This task should be completed once a month throughout the year. This is especially important during the rainy season to avoid clogging. ☐
Summer (June-Aug)	**AESTHETICS** – Trim vegetation to maintain desired appearance. Add mulch to bare areas as needed. ☐ **WEED CONTROL** – Replace dead, damaged, or diseased plants and remove weeds. ☐
Before the Rainy Season (Sept-Oct)	**PRE-RAIN CLEAN OUT** – Remove contaminants, debris, and trash from inlets and outlets. ☐ **KEEP YOUR CREDIT** – In October, make sure to fill out and submit the Stormwater Credit Program checklist (found later in this guidebook) to continue saving on the stormwater component of your sewer bill! ☐

Extra Tips

In the first 2-3 years after planting a rain garden, budget for replacement plants and mulch in case plants die.

Depending on the types of plants you have in your garden, you may need to water your rain garden during months with little or no rain. This is especially important in the first three months after construction so the vegetation can establish roots.

Getting Credit

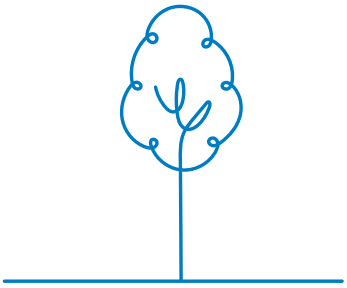
Before the rainy season starts, inspect your GI using the checklist on pg. 8. Then submit the checklist below to StormwaterCredits@sfwater.org to renew your Stormwater Credit and continue receiving monthly savings on your bill. Visit the Stormwater Credit Program website for more information (stormwater.sfpuc.org/home/credit).

Sidewalk rain garden
Source: King County, Washington

Annual Self-Inspection Checklist for Stormwater Credit Program

Problem	*How to address it*	*Notes*
Stormwater runoff is bypassing the rain garden	1. Remove debris and sediment from inflow areas. 2. Make sure the rain garden remains a basin to capture water, with the plants and soil at a lower elevation than its edges.	☐
Rain garden is ponding for more than 24 hours	1. Remove debris, sediment, and excess mulch from permeable area. 2. Loosen the topsoil by tilling or forking. 3. Check inlet, outlet, and overflow structure for blockage. 4. Add mulch. 5. Replace with new and more porous soil. Refer to the Further Resources section for where to find appropriate soil and mulch.	☐
Excessive trash / debris accumulation	1. Remove visible contaminants, debris, and trash from inlets (downspout) and outlets (overflow or underdrain).	☐
Visible surface contaminants / pollution	1. Attempt to remove physical contaminants with gloves. 2. If necessary, seek outside assistance from a maintenance contractor (see city contractor list in Further Resources).	☐
Excessive weed growth	1. Remove weeds at least once a month.	☐
Plants are stressed or dying (wilting, falling, or yellowing leaves)	1. Ensure water drains within 24 hours. 2. Check soil for contaminants and replace soil if needed. 3. Replace with new native plants. 4. Consult with a professional on appropriate plant irrigation regime.	☐
Rodent and animal damage/ mosquito larvae observed	1. Utilize Integrated Pest Management (IPM) strategies (see Further Resources). 2. If problems persist with mosquitoes, contact the San Francisco Environmental Health Vector Control Program at (415) 252-3806, or email EnvHealth.DPH@sfdph.org. 3. Consult with a licensed professional pest control service if needed. 4. Visit sf.gov/information/keeping-your-building-free-vermin for more information.	☐
Unpleasant odors	1. Ensure there is no standing or ponding water (see below for how to address standing water).	☐
Water damage on house wall interior (only for rain gardens near property wall)	1. Level the soil surface to prevent overflow. 2. Inspect impermeable liners for holes or tears. 3. Place patch on impermeable liner tear. 4. Consult list of contractors (see Further Resources) to repair or replace damaged impermeable liners.	☐
Erosion at inlet, outlet, overflow, or side slopes	1. Remove sediment near eroded area. 2. Reduce water flow to area by leveling soil and adding mulch. 3. Add cobbles in eroded areas. 4. Consult list of contractors (see Further Resources) to repair or replace eroded area.	☐

Further Resources



Rain Garden Maintenance

- SFPUC Best Management Practice Fact Sheets for Various GI Types (sfpuc.gov/sites/default/files/construction-and-contracts/design-guidelines/SMR_ApxA_FactSheets_May2016.pdf)
- SFPUC Green Infrastructure Maintenance Guidebook (sfpuc.sharefile.com/share/view/sb83923c24cb4298a)

Plant and Garden Care

- SFPUC Gardening Tips (sfpuc.gov/sites/default/files/learning/GardeningTips-Booklet_V4.pdf)
- Integrated Pest Management (sfenvironment.org/what-inte-grated-pest-management-ipm)
- SFPUC Vegetation Palette for Bioretention Best Management Practices (sfpuc.gov/sites/default/files/construc-tion-and-contracts/design-guidelines/SMR_ApxD_Vegeta-tionPalette_May2016.pdf)

Suppliers for Rain Garden Soil and Mulch

- American Soil and Stone in Berkeley and Richmond (americansoil.com/index.html)
- L.H. Voss Materials in Dublin (lhvoss.com/)
- Lyngso Garden Materials in Oakland (lyngsogarden.com/)
- TMT Enterprises in San Jose (tmtenterprises.net/products.php)

Stormwater Credit Program

- Stormwater Charge Lookup (stormwater.sfpuc.org/home/credit)

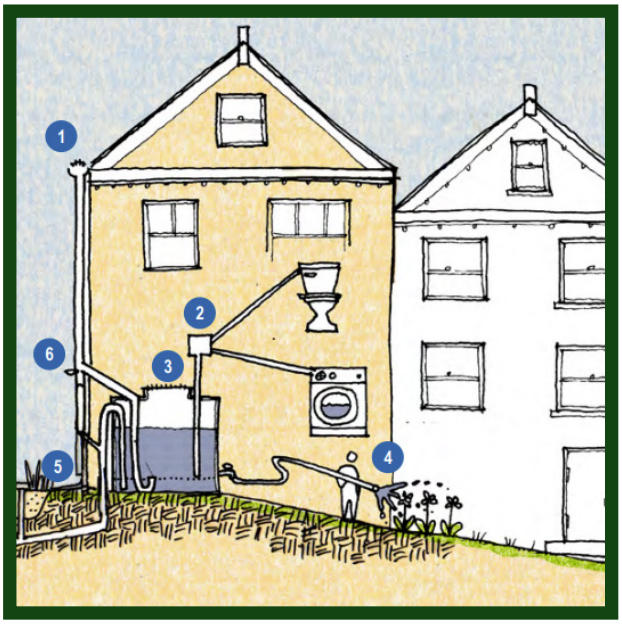
Contact information

- SFPUC Interested Residential Contractor List (sfpuc.gov/sites/default/files/documents/GI_Vendor_List_20240104.pdf)

Rainwater Harvesting Cistern

Green Infrastructure Grants for Homes Pilot Program Participant: Rainwater Harvesting Cistern

Harvesting the Storm



Source: SFPUC Best Management Practice Fact Sheets

Source: ReadingEagle

Your New Green Infrastructure

Congratulations on your new cistern! This rainwater harvesting system collects the water that runs off your roof during storms. By using the stored rainwater for irrigation, you can reduce your water bill. You'll also receive a reduction on your utility bill's stormwater component through the Stormwater Credit Program (stormwater.sfpuc.org/home/credit). Like all green infrastructure, cisterns reduce the impact of heavy rains on San Francisco's sewer system.

Making sure that water flows unobstructed from your roof's drainage area to your cistern is key to a properly functioning system. This guide offers tips and reminders for maintaining your green infrastructure.

Inspection & Maintenance

Regularly inspect your cistern before and after each large rain event to ensure its components are clear of debris.

The maintenance calendar below is a suggested list of seasonal maintenance activities, and you may find that you need more or less frequent maintenance as you get familiar with your cistern. Refer to the inspection checklist below for a list of components to inspect annually.

Materials

- Gloves
- Hose
- If mold or algae is present: oxygen bleach, spray bottle, ladder, and cleaning supplies

Common Rainwater Cistern Components

TIP: As the rainy season progresses, your cistern may fill up without much use for the harvested rainwater yet. **To prevent the cistern from overflowing, you should open the low-flow valve in between storms**, to allow rainwater to slowly drain from the tank.

This helps slow down rainwater entering the sewer system, and you can still retain stormwater for irrigation by closing the low-flow valve as the rainy season ends.

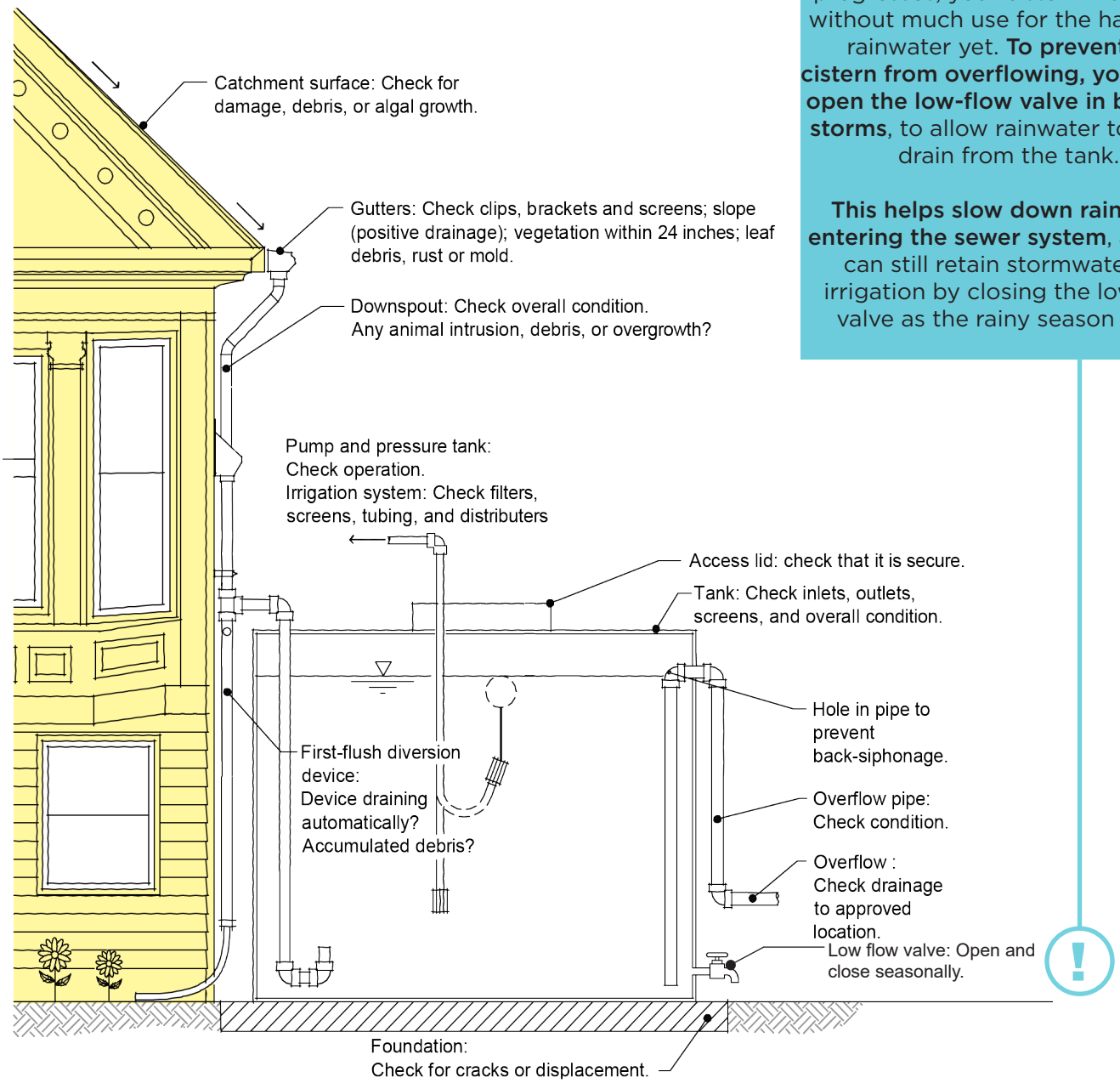


Figure 2: A typical rainwater harvesting system in San Francisco.
Source: SFPUC Rainwater Harvesting Manual

Maintenance Calendar

Month	*Task*
January	MID-RAIN CHECK IN – Check for debris or other blockages that would prevent the cistern from collecting rainwater and draining properly. If necessary, clean gutters, downspouts, or the cistern. ☐
February	PLAN FOR SPRING – If you use your cistern to irrigate other parts of your yard, start planning for any new plants you may want to grow this spring and summer! ☐
March	SAVE FOR SUMMER – As the rainy season winds down, close the low-flow valve to start storing more water for later reuse. (Refer to the Figure 2 on pg. 12 to see where the valve is located.) ☐
April	POST-RAIN CLEAR OUT — Clean out litter, sediment, debris, and contaminants from the drainage area, gutters, and downspouts. ☐
May	WATER QUALITY - Check for algae growth in the cistern or on your roof, and clean it if needed (see Extra Tips and Further Resources below). ☐
June	WATER USE – Put your harvested rainwater to work! Use it to irrigate your gardens and landscaping throughout the summer. ☐

Month	*Task*
July	REPAIR – Now that you've used your cistern for a whole rainy season, check for and repair any broken parts. ☐
August	INSPECT — Inspect the catchment area (roof), gutters, and downspouts before the rainy season to check for debris, algae growth, damage, or obstructions that may block the flow of water. ☐
September	CLEAN CISTERN PARTS — Before the rainy season begins, clean your cistern's prescreening filters, first flush diverters, and storage tank interiors with a non-toxic cleanser such as distilled white vinegar. ☐
	Start of Rainy Season
October	PREP FOR RAIN/KEEP YOUR CREDIT — Clear debris from the drainage area and tank. Trim plants that may block water on its way to the cistern. Submit the Stormwater Credit checklist (pg. 15) to keep saving on your stormwater bill. ☐
November	READY FOR RAIN – As the rainy season starts, you may find yourself with extra rainwater. Open your cistern's low-flow valve to prevent overflow. Draining your cistern between rain events makes space for the next storm. ☐
December	MAKE ROOM FOR MORE – Keep watching your levels. As the rainy season continues, use stored water periodically (or check that the low-flow valve is still open and functioning) to ensure that storage is available for the next rain event. ☐

Extra Tips

Compare cistern levels with your water use. Discrepancies might indicate leaks and can help you plan retrofits. Measure water levels using a dipstick or DIY float gauge with string, a small bolt, and a float (see Further Resources).

In tanks with proper filtration and no photosynthesis, a beneficial biofilm forms on the tank's sides and bottom. This biofilm removes bacteria from the tank water, keeping it clear and odor-free.

The City's fog can support algae or mold growth on your roof. Oxygen bleach powder mixed with water can remove the growth without affecting human or plant health. Prepare the solution according to the manufacturer label.

Getting Credit

Before the rainy season starts, inspect your GI using the checklist on pg. 15. Then submit the checklist below to StormwaterCredits@sfwater.org to renew your Stormwater Credit and continue receiving monthly savings on your bill. Visit the Stormwater Credit Program website for more information (stormwater.sfpuc.org/home/credit).

SFPUC Bill Savings

A single-family home in San Francisco that has a 700-gallon rainwater-harvesting cistern and a roof drainage area of 1500 square feet would save around $209 on its annual water, wastewater, and stormwater bill, based on 2024 rates.

On a residential property, rainwater harvesting helps save across all three components of monthly SFPUC water bills. For example, capturing water with a cistern reduces the amount of stormwater that goes down the drain and reduces demand for potable water. See the "Getting Credit" section for instructions on renewing your credit.

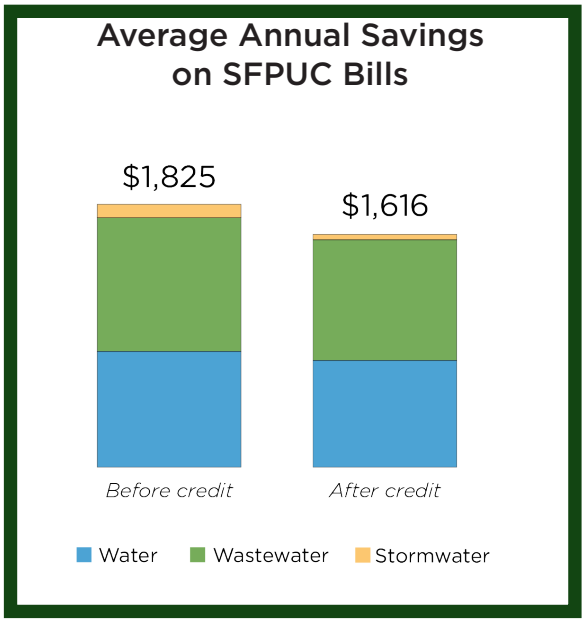
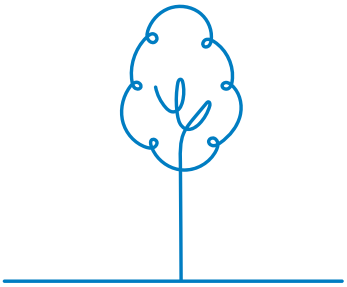


Figure 3: Average annual savings on SFPUC bills after receiving Stormwater Credit, assuming average household water use and 2024 water and sewer rates.

Annual Self-Inspection Checklist for Stormwater Credit Program

Problem	How to address it	Notes
Cistern parts are damaged, missing, or not working	1. Note broken or missing parts in the next column. 2. Repair/replace parts or seek assistance (see Residential Contractor list below).	☐
Roof catchment area has sediment, debris, or algae	1. Clear debris and sediment to prevent clogged gutters and pretreatment devices. 2. If algae growth is evident, disconnect the downspouts or conveyance structures from the rainwater harvesting system and wash the algae from the roof.	☐
First flush diverter is not draining	1. Remove debris in the first flush diverter before the rainy season.	☐
Gutters or downspouts are damaged or clogged with debris	1. Gutters: inspect for security of clips and brackets, slope of gutter, condition of screens, and presence of trees or vines. Downspouts: inspect for clogs or animal intrusions, damage, and debris. 2. Remove debris and clogs. 3. Ensure vegetation is trimmed back from the roof to maintain a 24" clear zone. 4. Flush gutters and downspouts (as needed): disconnect downspouts from storage tank; treat gutters to remove rust, mold, or algae; flush downspouts and gutters once debris is removed to wash away remaining dirt. 5. Reconnect downspouts.	☐
Storage tank has sediment, pollutants, odor, or otherwise needs cleaning	1. Drain tank and disconnect electrical devices. 2. Spray walls and bottom of tank with soap and water, or non-toxic cleaner; let surfaces dry. 3. Rinse until soap and debris drain through the tank drain.	☐
Structural damage in cistern or cistern concrete pad foundation	1. Contact a licensed professional. See the SFPUC Residential Contractor List below for available Green Infrastructure contractors in the Bay Area. 2. Yearly: repair minor damage like chips and cracks to structural components such as walls, floors, and lids. 3. ASAP: repair major damage, as from construction or natural disasters.	☐
Drawdown time > 48 hours when low flow outlet open	1. This may be caused by sediment and debris or damaged cistern parts. Address those issues to reduce drawdown time.	☐
Mosquitoes or mosquito larvae	1. Contact the San Francisco Environmental Health Vector Control Program at (415) 252-3806, or email EnvHealth.DPH@sfdph.org. 2. Consult with a licensed professional pest control service if needed.	☐

Further Resources



Cistern Maintenance

- SFPUC Best Management Practice Fact Sheets for Various GI Types (sfpuc.gov/sites/default/files/construction-and-contracts/design-guidelines/SMR_ApxA_FactSheets_May2016.pdf)
- SFPUC Rainwater Harvesting Manual (sfpuc.gov/sites/default/files/learning/RWH_Manual_Final-APR2018.pdf)

Rainwater Harvesting Information

- Greywater Action Rainwater Harvesting Resources (greywateraction.org/rainwater-harvesting-resources/)
- American Rain Catchment Systems Association Website (arcsa.org/resources/rainwater-faqs)
- Bay Area Stormwater Management Agencies
- Association Rainwater Harvesting Fact Sheet (basmaa.org/wp-content/uploads/2021/02/basmaa_rain_barrel_fact_sheet_082312_approved_8.5x11-online_viewing.pdf)

Stormwater Credit Program

- Stormwater Component Lookup (stormwater.sfpuc.org/home/credit)

Green Infrastructure Interested Vendor List

- SFPUC Interested Residential Contractor List (sfpuc.gov/sites/default/files/documents/GI_Vendor_List_20240104.pdf)
    - Some of these contractors may provide maintenance services or can recommend professional services for maintenance.

Permeable Pavers

Permeable Paver Driveway
Source: Climate Action Now!

Transforming the Storm

Source: Holland Eco Driveway

Source: MetroBlooms

Your New Green Infrastructure

Congratulations on your new permeable pavers! Permeable pavers are a type of surface that allows water to soak in between the gaps in the pavers and into the underlying soil when it rains, helping San Francisco's sewer system handle large storms. This green infrastructure also reduces the stormwater component of your sewer bill through the Stormwater Credit Program (stormwater.sfpuc.org/home/credit). Those savings are calculated based on the total impervious area from which your permeable pavers manages stormwater runoff.

This guide will help you maintain your permeable pavers to ensure they continue to keep water out of the city's sewer system.

Inspection & Maintenance

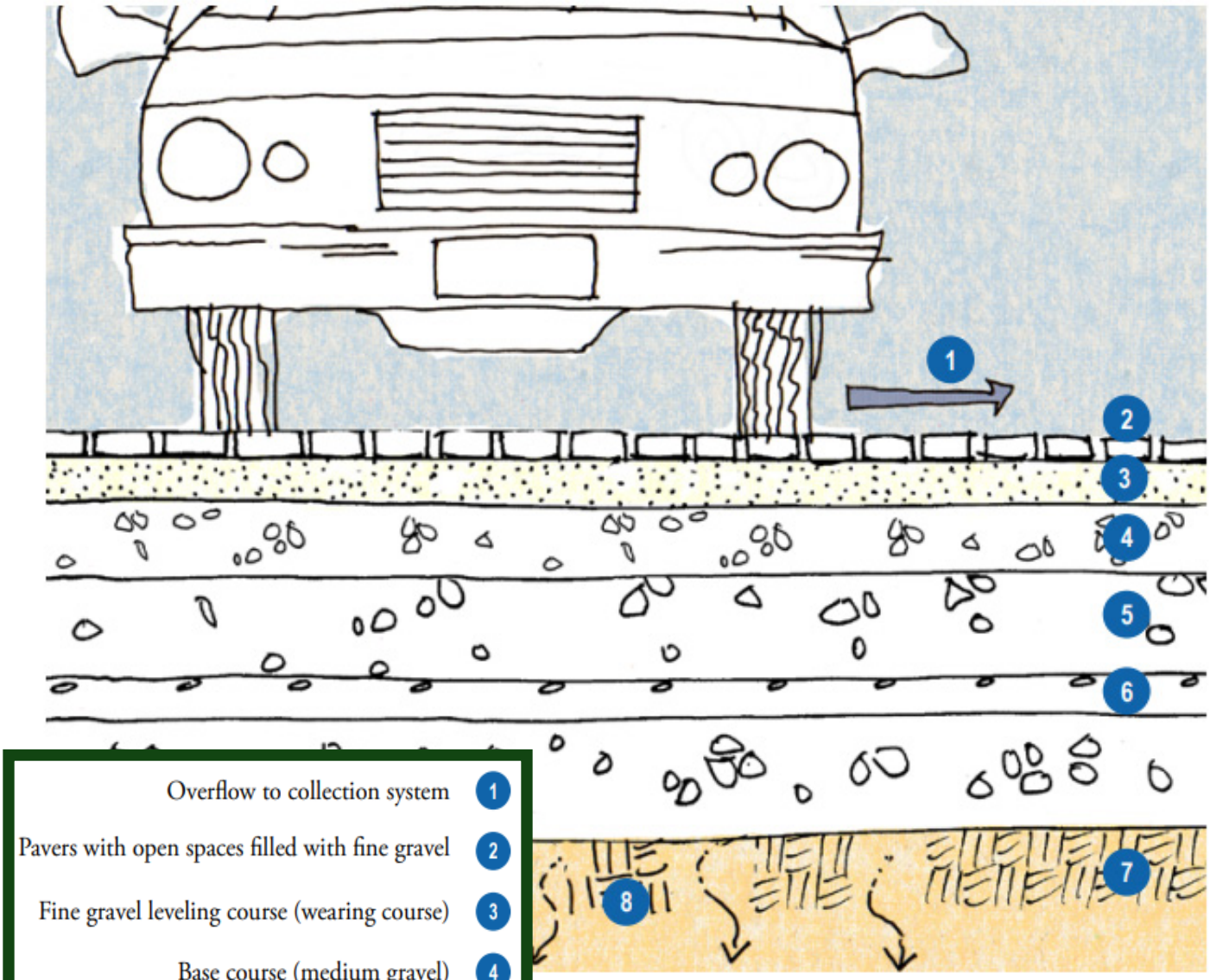
To maintain your pavers' **permeability**, you'll need to periodically remove sediment and debris from the surface and between the pavers.

The maintenance calendar below is a suggested list of seasonal maintenance activities, and you may find that you need more or less frequent maintenance as you get familiar with the pavers. Refer to the inspection checklist below for a list of components to regularly inspect annually.

Materials

- Gardening gloves
- Stiff bristle broom and dustpan
- Rake or pick
- Replacement gravel (as needed)

Common Permeable Paver Components



1. Overflow to collection system
2. Pavers with open spaces filled with fine gravel
3. Fine gravel leveling course (wearing course)
4. Base course (medium gravel)
5. Coarse gravel reservoir course
6. Underdrain (if necessary)
7. Subgrade
8. Infiltration where feasible

Figure 4: Cross-section diagram of permeable pavers.
Source: SFPUC Best Management Practice Fact Sheets

Maintenance Calendar

Month	*Task*	
	Start of Rainy Season	
Rainy Season (Oct-March)	**KEEP A LOOKOUT** – Assess the permeability of your pavers when it rains. If water did not soak into the ground, consider removing debris, trash, and sediment more frequently. If the issue persists, refer to the checklist below to evaluate potential problems.	☐
Spring (April-May)	**ROUTINE MAINTENANCE** – Remove debris, trash, weeds, and sediment that builds up between the pavers after the rainy season. You may need a stiff bristle broom and/or a tool such as a pick or rake to break up the material that builds up between the pavers. Removing debris from the pavers should also be completed once a month throughout the year.	☐
Summer (June-Aug)	**KEEP UP THE GOOD WORK** – Continue routine maintenance activities and keep a lookout for any problems. Refer to the inspection checklist below for a list of potential problems and how to solve them.	☐
Before the Rainy Season (Sept-Oct)	**REPLACE** – If gravel is clogged, replace it before the rainy season starts. **PRE-RAIN CLEAN OUT** – Remove contaminants, debris, and trash from inlets and outlets. **KEEP YOUR CREDIT** – In October, make sure to fill out and submit the Stormwater Credit Program checklist (found later in this guidebook) to continue saving on the stormwater component of your sewer bill!	☐ ☐ ☐

Extra Tips

Look out for structural issues like collapsed pavers or cracks. In extreme cases, you might need to hire a contractor to repair the surface (see city contractor list in Further Resources).

Getting Credit

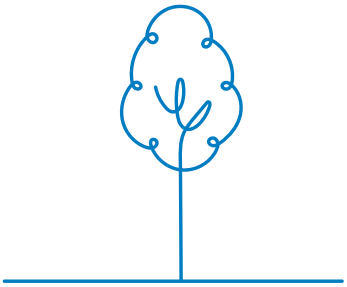
Before the rainy season starts, inspect your GI using the checklist on pg. 22. Then submit the checklist below to StormwaterCredits@sfwater.org to renew your Stormwater Credit and continue receiving monthly savings on your bill. Visit the Stormwater Credit Program website for more information (stormwater.sfpuc.org/home/credit).

Permeable Paver Driveway
Source: City of Portland

Annual Self-Inspection Checklist for Stormwater Credit Program

Problem	*How to address it*	*Notes*
Standing water evident / silt and sediment build up significantly reducing permeability	1. Sweep permeable surface regularly to remove debris, sediment, and garbage. 2. Sweep with a stiff bristle broom and/or with a tool to break up material in the cracks between the pavers as needed. 3. If problem persists, hire a maintenance contractor.	☐
Gaps or voids appear in between pavers	1. Fill in gaps by adding more small-sized gravel and sweeping the material into the gaps between the pavers, as needed. Consult with your contractor for the appropriate type of gravel to use.	☐
Trash and large debris accumulation on pavers	1. Remove all debris and garbage.	☐
Excessive oil staining on pavers	1. Scrub or power wash oil stains from pavers as needed. 2. Larger stains may require outside assistance to partially or fully replace pavers (see city contractor list in "Further Resources").	☐
Weed growth in paver joints / expansion joints	1. Remove weeds on a monthly basis.	☐
Cracks or damage to permeable pavers	1. Avoid putting heavy loads on permeable pavers. 2. Consult with a contractor to partially or fully replace or repair damaged pavers (see Further Resources).	☐
Settling of pavers or potholes forming	1. Consult with a contractor to partially replace paver subsurface aggregate with equivalent material and replace pavers to match surrounding grade (see Further Resources).	☐

Further Resources



Permeable Paver Maintenance

- SFPUC Best Management Practice Fact Sheets for Various GI Types (sfpuc.gov/sites/default/files/construction-and-contracts/design-guidelines/SMR_ApxA_FactSheets_May2016.pdf)
- SFPUC Green Infrastructure Maintenance Guidebook (sfpuc.sharefile.com/share/view/sb83923c24cb4298a)
- EPA Maintenance Guidelines for Permeable Pavement (epa.gov/system/files/documents/2021-11/bmp-permeable-pavements.pdf)

Stormwater Credit Program

- Stormwater Charge Lookup (stormwater.sfpuc.org/home/credit)

Contact Information

- SFPUC Interested Residential Contractor List (sfpuc.gov/sites/default/files/documents/GI_Vendor_List_20240104.pdf)

SFPUC Urban Watershed Planning Division
Prepared by: Story Golkin, Will Callan, and Margaret Kalaw
Email: gihomes@sfwater.org

Infiltration Trenches

Sample Infiltration Trench
Source: Acton Wakefield Watersheds Alliance

Transforming the Storm

Project: Crown Street, Vancouver, British Columbia.
Source: Rosey Jenck

Project: Crown Street, Vancouver, British Columbia.
Source: Rosey Jenck

Your New Green Infrastructure

Congratulations on your new infiltration trench! This rock-filled trench captures stormwater and allows it to infiltrate into the ground, recharging groundwater and reducing the impact on San Francisco's sewer system during storms. This green infrastructure also reduces the stormwater component of your sewer bill through the Stormwater Credit Program (stormwater.sfpuc.org/home/credit). Those savings are calculated based on the total impervious area from which your infiltration trench manages stormwater runoff.

This guide outlines maintenance activities that will help your infiltration trench continue to keep stormwater out of the city's sewer system.

Inspection & Maintenance

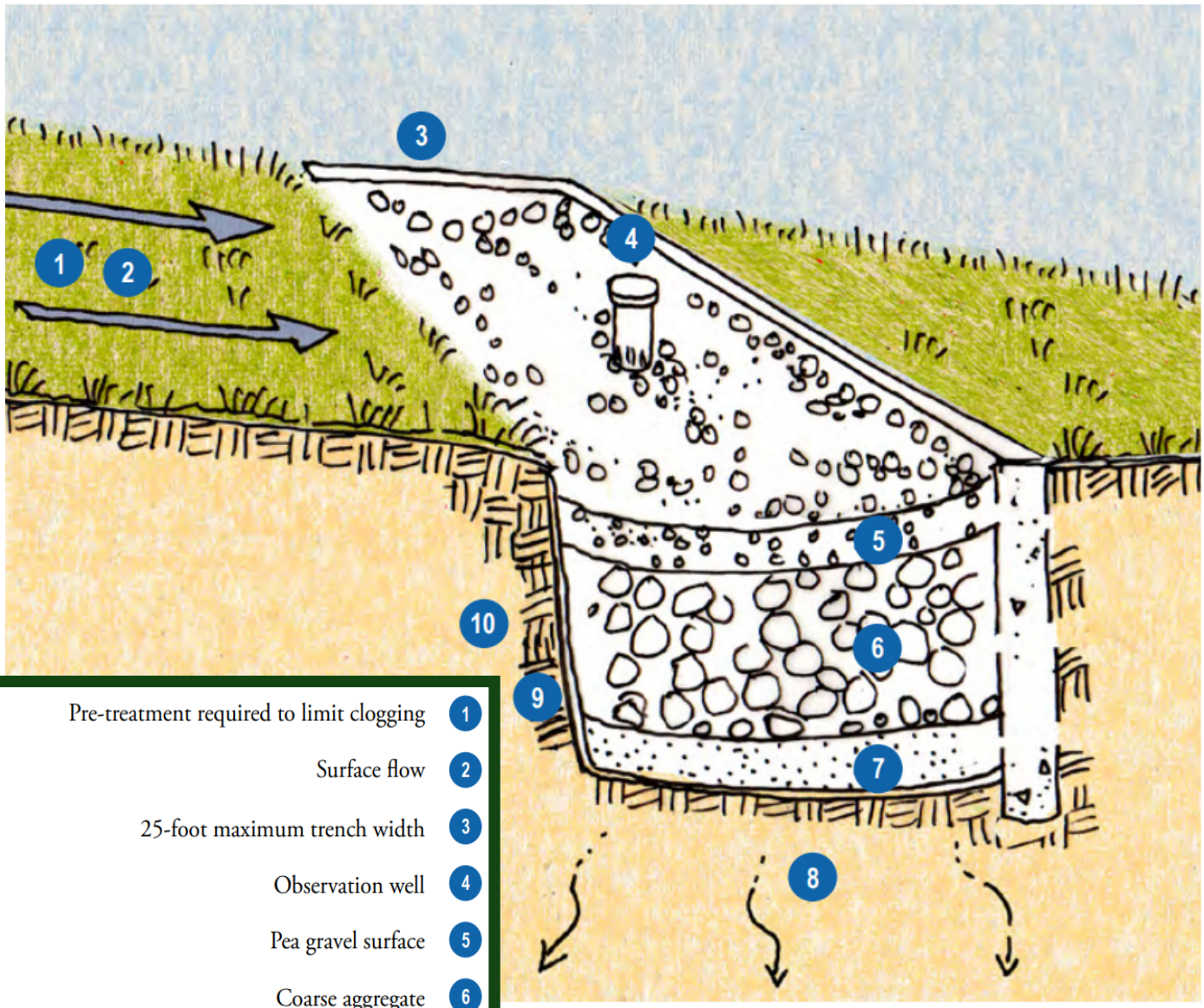
Maintaining your infiltration trench is key! Neglecting maintenance can lead to clogging, reduced infiltration, infiltration of pollutants, and standing water (which means mosquitoes). Generally, water should drain from your infiltration trench within 24-48 hours.

The maintenance calendar below is a suggested list of seasonal maintenance activities, and you may find that you need more or less frequent maintenance as you get familiar with your infiltration trench. Refer to the inspection checklist below for a list of components to regularly inspect annually.

Materials

- Gloves
- Trowel or shovel
- Rake
- Hose

Common Infiltration Trench Components



Pre-treatment required to limit clogging	1
Surface flow	2
25-foot maximum trench width	3
Observation well	4
Pea gravel surface	5
Coarse aggregate	6
6-inch sand filter	7
Minimum infiltration rate of 1/2-inch per hour	8
Optional filter fabric	9
3- to 8-foot trench depth	10

Figure 5: Cross-section diagram of a typical infiltration trench.
Source: SFPUC Best Management Practice Fact Sheets

Maintenance Calendar

Month	*Task*
	Start of Rainy Season
Rainy Season (Oct-March)	**UNCLOG** – Remove sediment, oil, and grease from the whole trench system before it begins raining and as needed during the rainy season. ☐ **CHECK FOR DRAINAGE** – Ensure after each storm, especially large ones, that all of stormwater infiltrates through your trench within 48 hours after the rain stops. ☐
Spring (April-May)	**POST-RAIN CLEAR OUT** — Clean out any litter, sediment, debris, or contaminants after the last rain. ☐
Summer (June-Aug)	**REPAIR** – If your infiltration trench stops draining entirely (i.e. you have standing water), restore it by removing the trench rock, tilling the trench bottom, and replacing the bottom layer of sand. ☐ **EROSION** – Repair minor erosion within or around the trench by adding native plants, mulch, or stone. If major erosion occurs, contact a professional for support (see Residential Contractor List in Further Resources section). ☐
Before the Rainy Season (Sept-Oct)	**REPLACE** – If gravel is clogged, replace it before the rainy season starts. ☐ **PRE-RAIN CLEAN OUT** – Remove contaminants, debris, and trash from inlets and outlets. ☐ **KEEP YOUR CREDIT** – In October, make sure to fill out and submit the Stormwater Credit Program checklist (found later in this guidebook) to continue saving on the stormwater component of your sewer bill! ☐

Extra Tips

Look out for a fine layer of sediment or crust forming over the surface of the infiltration trench. This is a strong indicator of poor infiltration capacity.

Use a shovel to check below the surface layer of gravel for any clogging.

Check the infiltration trench's observation well 48 hours after the end of a rainstorm. If there's water in the well, the trench might be clogged.

Getting Credit

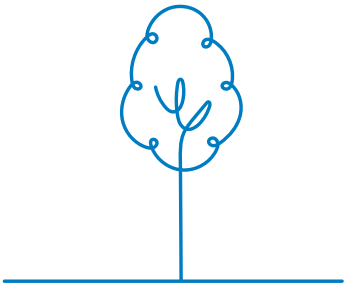
Before the rainy season starts, inspect your GI using the checklist on pg. 29. Then submit the checklist below to StormwaterCredits@sfwater.org to renew your Stormwater Credit and continue receiving monthly savings on your bill. Visit the Stormwater Credit Program website for more information (stormwater.sfpuc.org/home/credit).

Sample residential infiltration trench
Source: Acton Wakefield Watersheds Alliance

Annual Self-Inspection Checklist for Stormwater Credit Program

Problem	*How to address it*	*Notes*
Water not draining within 48 hours	1. Remove debris, trash, vegetation from the surface of the trench. 2. Remove accumulated sediment from the surface of the trench by scraping it off with a shovel. 3. Replace pea gravel if necessary.	☐
Erosion surrounding infiltration trench	1. Stormwater may be flowing too quickly and not infiltrating into the trench. Regrade or add stone to the trench.	☐
Hazardous materials begin entering the impervious surface area draining to the trench	1. Hazardous materials begin entering the impervious surface area draining to the trench. 2. For more hazardous materials, contact a professional to ensure the pollutants are prevented from entering the trench and infiltrating the soil (see Further Resources). 3. Aim to identify and mitigate the source of hazardous pollution. They may come from petroleum-based substances, pesticides, or herbicides. 4. Replace any aggregate removed by the cleanup.	☐
Inlets or outlets to the infiltration trench are blocked	1. Remove trash or debris blocking any inlets and outlets. 2. Overgrown plants should be trimmed back or moved to another location.	☐
Structural damage	1. Contact a licensed professional, such as your contractor or another design and maintenance firm. See the SFPUC Residential Contractor List below for some available Green Infrastructure contractors in the Bay Area. 2. Minor damage like chips and cracks to structural components such as walls, floors, and lids should be repaired on a yearly basis. 3. Major damage, such as from construction or natural disasters, should be repaired ASAP.	☐
Mosquitoes or mosquito larvae	1. Contact the San Francisco Environmental Health Vector Control Program at (415) 252-3806, or email EnvHealth.DPH@sfdph.org. 2. Consult with a licensed professional pest control service for eradication, if needed. 3. Visit sfdph.org/dph/eh/WestNile/default.asp for more information.	☐

Further Resources



Infiltration Trench Maintenance

- SFPUC Best Management Practice Fact Sheets for Various GI Types (sfpuc.gov/sites/default/files/construction-and-contracts/design-guidelines/SMR_ApxA_FactSheets_May2016.pdf)
- EPA Infiltration Trench Management Practice (epa.gov/system/files/documents/2021-11/bmp-infiltration-trench.pdf)

Stormwater Credit Program

- Stormwater Charge Lookup (stormwater.sfpuc.org/home/credit)

Contact information

- SFPUC Interested Residential Contractor List (sfpuc.gov/sites/default/files/documents/GI_Vendor_List_20240104.pdf)

SFPUC Urban Watershed Planning Division
Prepared by: Story Golkin, Will Callan, and Margaret Kalaw
Email: gihomes@sfwater.org