

## K.5 Green Streets Maintenance Schedule

## Appendix K: Guidance on Green Infrastructure

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# **Green Streets Maintenance Schedule**



## **County of San Diego Department of Public Works**

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## **Section 1 Introduction**

The following maintenance schedule provides the maintenance tasks, frequency, and time of year for initial, routine, and as-needed maintenance for the following Green Streets facilities:

- Tree Wells,
- Rain Gardens,
- Rock Gardens, and
- Permeable Pavement.

This schedule should be used as a guideline for preparing a project specific maintenance schedule.

## Section 2 Maintenance Schedule

<b>Tree Wells</b>			
<b>When</b>	<b>Maintenance Task</b>	<b>Frequency</b>	<b>Time of the Year</b>
<b>Initial maintenance during establishment period (First three years)</b>	Inspect tree for health and establishment and report any changes to County	Three times during establishment; Every five years for life of tree	Spring 1st Season Fall 1st Season Fall 2nd Season
	Remove stakes and wires.	One time	One year after planting
	Water tree – first year	25 gallons Weekly via slow release device	April-October
	Water tree – second & third year	25 gallons Bi-Monthly via slow release device	April-October
<b>Routine Maintenance</b>	Remove weeds and trash	Quarterly inspection at minimum and maintenance as needed.	March-November
	Remove sediment and trash from any inlets and slot drains	Annually or as needed.	
<b>As-Needed Maintenance</b>	Mulch with 3 inches double ground shredded hardwood mulch. Place mulch in a ring to capture rain water. Mulch shall not be mounded around tree.	Annually or as needed.	Feb-April
	Inspect tree for damage, disease, or interference with utilities. Contact County if pruning is required.	Annually or as needed.	Broken branches should be pruned at any time. Most trees should be pruned in the winter or fall.

## Rain Gardens and Rock Gardens

When	Maintenance Task	Frequency	Time of the Year
Initial maintenance during establishment period (First three years)	Within 6 months following construction, the practice and drainage area should be inspected after storm events.	Twice after installation	Following storm events
	Remove stakes, wires, and tags on any new trees.	One time	One year after planting
	Water plants if applicable - initial three years	Weekly during first 2-3 months after installation, and when rainfall is less than 1 inch per week	April-October
Routine Inspection	<ul style="list-style-type: none"> <li>• Conduct maintenance inspections</li> <li>• Check curb cuts and inlets for accumulated grit, leaves, and debris that may block inflow</li> <li>• Identify maintenance tasks needed</li> <li>• Look for erosion, bare areas, and where mulch, if applicable, needs to be applied</li> </ul>	Quarterly inspection at minimum and maintain as needed.	
Routine Maintenance	<ul style="list-style-type: none"> <li>• Spot weed</li> <li>• Adjust mulch, if applicable, as needed to ensure full cover</li> <li>• Remove trash and animal waste</li> <li>• Remove any dead or diseased plants</li> <li>• Remove sediment in pretreatment cells and inflow points</li> <li>• Mow filter strips with turf cover</li> </ul>	Quarterly inspection at minimum and maintain as needed.	
	Mulch as needed to replace 3" surface cover	Annually or as needed.	February - April
As-Needed Maintenance	Prune trees and shrubs as needed to keep inlets and outlets clear.	As-needed	Feb-April and Sep - Nov as Appropriate

When	Maintenance Task	Frequency	Time of the Year
	Water plants, if applicable, after three years	Weekly during droughts (more than 2 weeks of no rain)	April-October
	<ul style="list-style-type: none"> <li>• Remove invasive plants using recommended control methods</li> <li>• Add planting to maintain desired vegetation density, if applicable</li> <li>• Blow-off cleanouts using compressed air, high pressure water hose, or drain snake in practices that show evidence of clogged underdrain</li> <li>• Stabilize the surrounding drainage area to prevent erosion.</li> <li>• Repair or replace cracked pipes or planter box if cracks are greater than 1"</li> <li>• Secure or repair the liner, if applicable, if loose or damaged</li> <li>• If scouring is occurring at inlets, add splash pads or rock protection</li> <li>• Adjust the overflow structure if less than 6" above soil surface or 2" below waterproof liner/top of facility</li> </ul>	As needed following inspection	<ul style="list-style-type: none"> <li>• At appropriate time for disease or pest treatment.</li> <li>• October-April</li> </ul>
	Replace drain rock surface material, if applicable, if water ponds at surface during storm events or operates at less than 90% of the design infiltration rate.	As needed following inspection	
	Remove and replace the mulch layer, if applicable	Once every 3 years	February-April

## Permeable Interlocking Concrete Pavers

When	Maintenance Task	Frequency	Time of Year
Initial maintenance during establishment period (First year)	In the first year following construction, inspect the practice and contributing drainage area twice within 24 hours after storm events. Conduct any needed repairs or stabilization.	Twice after Installation	Within 24 hours after storm events
Routine Inspection	Conduct a maintenance inspection	Annually or as needed.	
Routine Maintenance	<p>Mechanically sweep pavement to remove sediment using:</p> <ul style="list-style-type: none"> <li>- Conventional broom sweeper (acceptable for removing crust when joints/apertures are accessible to brushes)</li> <li>- Regenerative air sweeper (better option for maintaining permeable pavements)</li> <li>- Pure vacuum machines (best for restoration if clogged)</li> </ul>	4 times per year in potential high sediment load areas, 2 times per year otherwise	Fall
	Remove any accumulated sediment in pretreatment cells and inflow points if applicable	Annually or as needed.	April -October
	Spot weed.		
As-Needed Maintenance	Stabilize contributing drainage area within public land to prevent siltation of pavement	As needed following annual inspection	

When	Maintenance Task	Frequency	Time of Year
	Maintain planted areas adjacent to pavement. Remove any soil or sediment deposited on pavement. Replace or repair any paver surfaces that are damaged that may compromise structural integrity of the surface. Repair ruts or deformations exceeding 0.5".		
	Blow-out cleanouts using compressed air, high pressure water hose, or drain snake in practices that show evidence of clogged underdrain.	If clogged	
	Conduct maintenance using a vacuum machine.		
	Replace any necessary joint filler material	As needed.	

## Permeable Concrete Pavement

When	Maintenance Task	Frequency	Time of Year
Initial maintenance during establishment period (First year)	In the first year following construction, inspect the practice and contributing drainage area twice within 24 hours after storm events. Conduct any needed repairs or stabilization.	Twice after Installation	Within 24 hours after storm events
Routine Inspection	Conduct a maintenance inspection	Annually or as needed.	
Routine Maintenance	Mechanically sweep pavement with a vacuum sweeper or regenerative street sweeper to remove sediment	4 times per year in potential high sediment load areas, 2 times per year otherwise	
	Remove any accumulated sediment in pretreatment cells and inflow points if applicable	Annually or as needed.	Fall
	Spot weed for vegetation growth in pavement.	Annually or as needed.	April -October
As-Needed Maintenance	Stabilize contributing drainage area within public land to prevent siltation of pavement	As needed following annual inspection	
	Maintain planted areas adjacent to pavement. Remove any soil or sediment deposited on pavement.		

<b>When</b>	<b>Maintenance Task</b>	<b>Frequency</b>	<b>Time of Year</b>
	<p>Replace or repair any pavement surfaces that are degenerating. For damaged areas of less than 50 square feet, a declivity could be patched by any means suitable with standard pavement, with the loss of porosity of that area being insignificant. The declivity can also be filled with porous mix. If an area greater than 50 SF is in need of repair, approval of patch type must be sought from either the engineer or owner.</p>		
	<p>Blow-out cleanouts using compressed air, high pressure water hose, or drain snake in practices that show evidence of clogged underdrain.</p>	<p>If clogged</p>	
	<p>Conduct maintenance using a regenerative street sweeper, or power washing (&lt;500 psi, at an angle 30 or less).</p>		

## Permeable Asphalt Concrete Pavement

When	Maintenance Task	Frequency	Time of Year
Initial maintenance during establishment period (First year)	In the first year following construction, inspect the practice and contributing drainage area twice within 24 hours after storm events. Conduct any needed repairs or stabilization.	Twice after Installation	Within 24 hours after storm events
Routine Inspection	Conduct a maintenance inspection	Annually or as needed.	
Routine Maintenance	Mechanically sweep pavement with a vacuum sweeper or regenerative street sweeper to remove sediment	4 times per year in potential high sediment load areas, 2 times per year otherwise	
	Remove any accumulated sediment in pretreatment cells and inflow points if applicable	Annually or as needed.	Fall
	Spot weed for vegetation growth in pavement.	Annually or as needed.	April -October

When	Maintenance Task	Frequency	Time of Year
As-Needed Maintenance	Stabilize contributing drainage area within public land to prevent siltation of pavement	As needed following annual inspection	
	Maintain planted areas adjacent to pavement. Remove any soil or sediment deposited on pavement.		
	Replace or repair any pavement surfaces that are degenerating. For damaged areas of less than 50 square feet, a declivity could be patched by any means suitable with standard pavement, with the loss of porosity of that area being insignificant. The declivity can also be filled with porous mix. If an area greater than 50 SF is in need of repair, approval of patch type must be sought from either the engineer or owner.		
	Blow-out cleanouts using compressed air, high pressure water hose, or drain snake in practices that show evidence of clogged underdrain.	If clogged	
	Conduct maintenance using a regenerative street sweeper, or power washing (<500 psi, at an angle 30 or less).		
	Sealing is a common maintenance practice with conventional asphalt. Pervious asphalt must not be sealed or it will lose its pervious function. Owners should take extra care not to seal pervious asphalt pavement. If porous pavement is sealed, additional stormwater treatment may be required.		