Appendix

G

Operation & Maintenance Document Templates

The following templates are provided to assist project applicants in preparing stormwater treatment measure maintenance plans, which municipalities may require as exhibits to a stormwater treatment measure maintenance agreement:

- Standard Treatment Measure O&M Report Form
- Maintenance Plan for Bioretention Area
- Maintenance Plan for Flow-through Planter
- Maintenance Plan for Tree Well Filter
- Maintenance Plan for Infiltration Trench
- Maintenance Plan for Subsurface Infiltration System
- Maintenance Plan for Extended Detention Basin
- Maintenance Plan for Pervious Paving
- Maintenance Plan for Rainwater Harvesting Systems
- Maintenance Plan for Media Filters

Templates are available on the Urban Runoff Program website (www.scvurppp.org ; click on "Elements", then "New Development and Redevelopment", then "C.3 Stormwater Handbook" and go to Appendix G).

Requirements vary from one municipality to the next. Contact the local jurisdiction to obtain information on municipality-specific requirements.

For proprietary tree well filters and media filters, contact the manufacturer for recommended maintenance activities and frequencies.

Stormwater Treatment Measure Operation and Maintenance Inspection Report to the [[== Insert Name of Municipality==]], California

This report and attached Inspection and Maintenance Checklists document the inspection and maintenance conducted for the identified stormwater treatment measure(s) subject to the Maintenance Agreement between the [**Municipality**] and the property owner during the annual reporting period indicated below.

I. Property Information:

Property Address or APN: _____

Property Owner: _____

II. Contact Information:

Name of person to contact regarding this report: _____

Phone number of contact person: _____ Email: _____

Address to which correspondence regarding this report should be directed:

_____

_____

III. Reporting Period:

This report, with the attached completed inspection checklists, documents the inspections and maintenance of the identified treatment measures during the time period from _____ to _____.

IV. Stormwater Treatment Measure Information:

The following stormwater treatment measures (identified treatment measures) are located on the property identified above and are subject to the Maintenance Agreement:

Identifying Number of Treatment Measure	Type of Treatment Measure	Location of Treatment Measure on the Property

V. Summary of Inspections and Maintenance:

Summarize the following information using the attached Inspection and Maintenance Checklists:

Identifying Number of Treatment Measure	Date of Inspection	Operation and Maintenance Activities Performed and Date(s) Conducted	Additional Comments

VI. Sediment Removal:

Total amount of accumulated sediment removed from the stormwater treatment measure(s) during the reporting period: _____ cubic yards.

How was sediment disposed?

- ☐ landfill
- ☐ other location on-site as described in and allowed by the maintenance plan
- ☐ other, explain _____

VII. Inspector Information:

The inspections documented in the attached Inspection and Maintenance Checklists were conducted by the following inspector(s):

Inspector Name and Title	Inspector's Employer and Address

VIII. Certification:

I hereby certify, under penalty of perjury, that the information presented in this report and attachments is true and complete:

_____ _____

Signature of Property Owner or Other Responsible Party Date

_____

Type or Print Name

_____

Company Name

_____

Address

Phone number:_____ Email:_____

Bioretention Area Maintenance Plan for [[== Insert Project Name ==]]

[[== Insert Date =]]

Project Address and Cross Streets_____

Assessor's Parcel No.: _____

Property Owner: _____ Phone No.:_____

Designated Contact: _____ Phone No.:_____

Mailing Address:_____

The property contains [[== insert number ==]] bioretention area(s), located as described below and as shown in the attached site plan[1].

Bioretention Area No. 1 is located at [[== describe location ==]].

[[== Add descriptions of other bioretention areas, if applicable. ==]]

I. Routine Maintenance Activities

The principal maintenance objective is to prevent sediment buildup and clogging, which reduces pollutant removal efficiency and may lead to bioretention area failure. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1.

Table 1
Routine Maintenance Activities for Bioretention Areas

No.	Maintenance Task	Frequency of Task
1	Remove obstructions, weeds, debris and trash from bioretention area and its inlets and outlets; and dispose of properly.	Quarterly, or as needed after storm events
2	Inspect bioretention area for standing water. If standing water does not drain within 2-3 days, till and replace the surface biotreatment soil with the approved soil mix and replant.	Quarterly, or as needed after storm events
3	Check underdrains for clogging. Use the cleanout riser to clean any clogged underdrains.	Quarterly, or as needed after storm events
4	Maintain the irrigation system and ensure that plants are receiving the correct amount of water (if applicable).	Quarterly
5	Ensure that the vegetation is healthy and dense enough to provide filtering and protect soils from erosion. Prune and weed the bioretention area. Remove and/or replace any dead plants.	Annually, before the wet season begins
6	Use compost and other natural soil amendments and fertilizers instead of synthetic fertilizers, especially if the system uses an underdrain.	Annually, before the wet season begins
7	Check that mulch is at appropriate depth (2 - 3 inches per soil specifications) and replenish as necessary before wet season begins. It is recommended that 2" – 3" of arbor mulch be reapplied every year.	Annually, before the wet season begins
8	Inspect the energy dissipation at the inlet to ensure it is functioning adequately, and that there is no scour of the surface mulch. Remove accumulated sediment.	Annually, before the wet season begins

[1] Attached site plan must match the site plan exhibit to Maintenance Agreement.

9	Inspect overflow pipe to ensure that it can safely convey excess flows to a storm drain. Repair or replace damaged piping.	Annually, before the wet season begins
10	Replace biotreatment soil and mulch, if needed. Check for standing water, structural failure and clogged overflows. Remove trash and debris. Replace dead plants.	Annually at the end of the rainy season, and/or after large storm events
11	Inspect bioretention area using the attached inspection checklist.	Annually, before the wet season

II. Use of Pesticides

Do not use pesticides or other chemical applications to treat diseased plants, control weeds or removed unwanted growth. Employ non-chemical controls (biological, physical and cultural controls) to treat a pest problem. Prune plants properly and at the appropriate time of year. Provide adequate irrigation for landscape plants. Do not over water.

III. Vector Control

Standing water shall not remain in the treatment measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the County of Santa Clara Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

County of Santa Clara Vector Control District
1580 Berger Dr.
San José, California 95112
Phone: (408) 918-4770
vectorinfo@cep.sccgov.org
www.sccvector.org

IV. Inspections

The attached Bioretention Area Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Bioretention Area
Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Quarterly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season

Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	**Results Expected When Maintenance Is Performed**
1. Standing Water	Water stands in the bioretention area between storms and does not drain within 2-3 days after rainfall.			There should be no areas of standing water once storm event has ceased. Any of the following may apply: sediment or trash blockages removed, improved grade from head to foot of bioretention area, or added underdrains.
2. Trash and Debris Accumulation	Trash and debris accumulated in the bioretention area, inlet, or outlet.			Trash and debris removed from bioretention area and disposed of properly.
3. Sediment	Evidence of sedimentation in bioretention area.			Material removed so that there is no clogging or blockage. Material is disposed of properly.
4. Erosion	Channels have formed around inlets, there are areas of bare soil, and/or other evidence of erosion.			Obstructions and sediment removed so that water flows freely and disperses over a wide area. Obstructions and sediment are disposed of properly.
5. Vegetation	Vegetation is dead, diseased and/or overgrown.			Vegetation is healthy and attractive in appearance.
6. Mulch	Mulch is missing or patchy in appearance. Areas of bare earth are exposed, or mulch layer is less than 2 inches in depth.			All bare earth is covered, except mulch is kept 6 inches away from trunks of trees and shrubs. Mulch is even in appearance, at a depth of 2 – 3 inches.
7. Miscellaneous	Any condition not covered above that needs attention in order for the bioretention area to function as designed.			Meets the design specifications.

Flow-Through Planter Maintenance Plan for
[[== Insert Project Name ==]]

[[== Insert Date =]]

Project Address and Cross Streets_____

Assessor's Parcel No.: _____

Property Owner: _____ Phone No.:_____

Designated Contact: _____ Phone No.:_____

Mailing Address:_____

The property contains [[== insert number ==]] Flow-Through Planter(s), located as described below and as shown in the attached site plan[1].

Flow-Through Planter No. 1 is located at [[== describe location ==]].

[[== Add descriptions of other Flow-Through Planters, if applicable. ==]]

I. Routine Maintenance Activities

The principal maintenance objectives are to ensure that water flows unimpeded into the flow-through planter and landscaping remains attractive in appearance. Table 1 shows the routine maintenance activities, and the frequency at which they will be conducted.

Table 1
Routine Maintenance Activities for Flow-Through Planters

No.	Maintenance Task	Frequency of Task
1	Inspect the planter surface area, inlets and outlets for obstructions and trash; clear any obstructions and remove trash.	Quarterly
2	Inspect planter for standing water. If standing water does not drain within 2-3 days, the surface biotreatment soil should be tilled or replaced with the approved soil mix and replanted. Use the cleanout riser to clear any underdrains of obstructions or clogging material.	Quarterly
3	Check for eroded or settled biotreatment soil media. Level soil with rake and remove/replant vegetation as necessary.	Quarterly
4	Maintain the vegetation and irrigation system. Prune and weed to keep flow-through planter neat and orderly in appearance.	Quarterly
5	Evaluate health and density of vegetation. Remove and replace all dead and diseased vegetation. Remove excessive growth of plants that are too close together.	Annually, before the rainy season begins
6	Use compost and other natural soil amendments and fertilizers instead of synthetic fertilizers, especially if the system uses an underdrain.	Annually, before the rainy season begins
7	Inspect the overflow pipe to make sure that it can safely convey excess flows to a storm drain. Repair or replace any damaged or disconnected piping. Use the cleanout riser to clear underdrains of obstructions or clogging material.	Annually, before the rainy season begins
8	Inspect the energy dissipator at the inlet to ensure it is functioning adequately, and that there is no scour of the surface mulch. Remove any accumulation of sediment.	Annually, before the rainy season begins
9	Inspect and, if needed, replace wood mulch. It is recommended that 2" to 3" of composted arbor mulch be applied once a year.	Annually, before the rainy season begins

[1] Attached site plan must match the site plan exhibit to Maintenance Agreement.

10	Inspect system for erosion of biotreatment soil media, loss of mulch, standing water, clogged overflows, weeds, trash and dead plants. If using rock mulch, check for 3" of coverage.	Annually at the end of the rainy season and/or after large storm events,
11	Inspect system for structural integrity of walls, flow spreaders, energy dissipators, curb cuts, outlets and flow splitters.	Annually at the end of the rainy season and/or after large storm events,

II. Use of Pesticides

Do not use pesticides or other chemical applications to treat diseased plants, control weeds or removed unwanted growth. Employ non-chemical controls (biological, physical and cultural controls) to treat a pest problem. Prune plants properly and at the appropriate time of year. Provide adequate irrigation for landscape plants. Do not over water.

III. Vector Control

Standing water shall not remain in the treatment measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the County of Santa Clara Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

County of Santa Clara Vector Control District
1580 Berger Dr.
San José, California 95112
Phone: (408) 918-4770
vectorinfo@cep.sccgov.org
www.sccvector.org

IV. Inspections

The attached Flow-Through Planter Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Flow-Through Planter
Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Quarterly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season

Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	**Results Expected When Maintenance Is Performed**
1. Vegetation	Vegetation is dead, diseased and/or overgrown.			Vegetation is healthy and attractive in appearance.
2. Soil	Soil too deep or too shallow.			Soil is at proper depth (per soil specifications) for optimum filtration and flow.
3. Mulch	Mulch is missing or patchy in appearance.			Mulch is even in appearance and 2-3" deep.
4. Sediment, Trash and Debris Accumulation	Sediment, trash and debris accumulated in the flow-through planter. Planter does not drain within 3-4 hours.			Sediment, trash and debris removed from flow-through planter and disposed of properly. Planter drains within 3-4 hours.
5. Clogs/Drainage	Planter does not drain within 3-4 hours after rainfall.			Planter drains per design specifications.
6. Downspouts and Sheet Flow	Flow to planter is impeded. Downspouts are clogged or pipes are damaged. Splash blocks and rocks in need of repair, replacement or replenishment.			Downspouts and sheet flow is conveyed efficiently to the planter.
7. Overflow Pipe	Does not safely convey excess flows to storm drain. Piping damaged or disconnected.			Overflow pipe conveys excess flow to storm drain efficiently.
8. Structural Soundness	Planter is cracked, leaking or falling apart.			Cracks and leaks are repaired and planter is structurally sound.
9. Miscellaneous	Any condition not covered above that needs attention in order for the flow-through planter to function as designed.			Meet the design specifications.

Tree Well Filter Maintenance Plan for
[[== Insert Project Name ==]]

[[== Insert Date =]]

Project Address and Cross Streets_____

Assessor's Parcel No.: _____

Property Owner: _____ Phone No.:_____

Designated Contact: _____ Phone No.:_____

Mailing Address:_____

The property contains [[== insert number ==]] tree well filter(s), located as described below and as shown in the attached site plan[1].

- **Tree Well Filter No. 1** is located at [[== describe location ==]].
- [[== Add descriptions of other tree well filters, if applicable. ==]]

I. Routine Maintenance Activities

The principal maintenance objective is to prevent sediment buildup and clogging, which reduces pollutant removal efficiency and may lead to tree well filter failure. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1.

Table 1
Routine Maintenance Activities for Tree Well Filters

No.	Maintenance Task	Frequency of Task
1	Evaluate health of trees and groundcover. Remove and replace all dead and diseased vegetation.	Twice a year
2	Maintain the vegetation and irrigation system. Prune and weed to keep tree well filter neat and orderly in appearance.	As needed
3	Use compost and other natural soil amendments and fertilizers instead of synthetic fertilizers, especially if the system uses an underdrain.	As needed
4	Check that planting mix is at appropriate depth and replenish as necessary. Replenish mulch as needed.	Before wet season and as necessary
5	Remove sediment, litter and debris from tree well filter. Confirm that no clogging will occur and that the filter will drain per the design specifications. Dispose of sediment, litter and debris properly.	Before wet season and as necessary
6	Inspect tree well filter to ensure that it drains between storms per design specifications	Periodically or as needed after storm events
7	Inspect overflow pipe to ensure that it will safely convey excess flows to storm drain. Repair or replace any damaged or disconnected piping.	As necessary
8	Inspect tree well filter using the attached inspection checklist.	Monthly, or after large storm events, and after removal of accumulated debris or material

[1] Attached site plan must match the site plan exhibit to Maintenance Agreement.

II. Use of Pesticides

Do not use pesticides or other chemical applications to treat diseased plants, control weeds or removed unwanted growth. Employ non-chemical controls (biological, physical and cultural controls) to treat a pest problem. Prune plants properly and at the appropriate time of year. Provide adequate irrigation for landscape plants. Do not over water.

III. Vector Control

Standing water shall not remain in the treatment measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the County of Santa Clara Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

County of Santa Clara Vector Control District
1580 Berger Dr.
San José, California 95112
Phone: (408) 918-4770
vectorinfo@cep.sccgov.org
www.sccvector.org

IV. Inspections

The attached Tree Well Filter Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Tree Well Filter
Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: ☐ Monthly ☐ Pre-Wet Season ☐ After heavy runoff ☐ End of Wet Season

Inspector(s): _____ ☐ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	**Results Expected When Maintenance Is Performed**
1. Vegetation	Vegetation is dead, diseased and/or overgrown.			Vegetation is healthy and attractive in appearance.
2. Planting Mix	Planting mix too deep or too shallow.			Planting mix is at proper depth for optimum filtration and flow.
3. Mulch	Mulch is missing or patchy in appearance.			Mulch is even in appearance and 2-3" deep.
4. Trash and Debris Accumulation	Trash and debris accumulated in the tree well filter.			Trash and debris removed from tree well filter and disposed of properly.
5. Clogs/Drainage	Tree well filter does not drain as specified.			Filter drains per design specifications.
6. Sediment	Evidence of sedimentation in tree well filter.			Material removed so that there is no clogging or blockage. Sediment is disposed of properly.
7. Standing Water/Vector Control	Water stands in the tree well filter between storms and does not drain per design specifications.			Filter drains per design specifications. Any of the following may apply: sediment or trash blockages removed, overflow pipe repaired.
8. Overflow Pipe	Does not safely convey excess flows to storm drain. Piping damaged or disconnected.			Overflow pipe conveys excess flow to storm drain efficiently.
9. Miscellaneous	Any condition not covered above that needs attention in order for the tree well filter to function as designed.			Meets the design specifications.

Infiltration Trench Maintenance Plan for
[[== Insert Project Name ==]]

[[== Insert Date =]]

Project Address and Cross Streets_____

Assessor's Parcel No.: _____

Property Owner: _____ Phone No.:_____

Designated Contact: _____ Phone No.:_____

Mailing Address:_____

The property contains [[== insert number ==]] infiltration trench(es), located as described below and as shown in the attached site plan.

- **Infiltration Trench No. 1** is located at [[== describe location ==]].
- [[== Add descriptions of other infiltration trenches, if applicable. ==]]

I. Routine Maintenance Activities

The principal maintenance objective is to prevent sediment buildup and clogging, which reduces pollutant removal efficiency and may lead to trench failure. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1.

Table 1
Routine Maintenance Activities for Infiltration Trenches

No.	Maintenance Task	Frequency of Task
1	Monitor observation well to confirm that trench has drained during dry season. If inspection indicates that the trench is partially or completely clogged, restore to design conditions.	Annually, during dry season
2	Remove obstructions, debris and trash from infiltration trench and dispose of properly.	Monthly, or as needed after storm events
3	Check observation well 2 to 3 days after storms to confirm drainage. Trench should completely dewater within 5 days.	Monthly during wet season, or as needed after storm events
4	Mow and trim vegetation around the trench to maintain a neat and orderly appearance.	As needed
5	Remove any trash, grass clippings and other debris from the trench perimeter and dispose of properly.	As needed
6	Check for erosion at inflow or overflow structures. Repair as necessary.	Monthly, or as needed after storm events
7	Inspect infiltration trench using the attached inspection checklist.	Monthly, or after large storm events, and after removal of accumulated debris or material

II. Prohibitions

Trees and other large vegetation shall be prevented from growing adjacent to the trench to prevent damage.

III. Use of Pesticides

Do not use pesticides or other chemical applications to control weeds or unwanted growth near the trench.

IV. Vector Control

Standing water shall not remain in the treatment measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the County of Santa Clara Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

County of Santa Clara Vector Control District
1580 Berger Dr.
San José, California 95112
Phone: (408) 918-4770
vectorinfo@cep.sccgov.org
www.sccvector.org

V. Inspections

The attached Infiltration Trench Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Infiltration Trench
Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Monthly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season
Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	**Results Expected When Maintenance Is Performed**
1. Standing Water/Vector Control	Water stands in the infiltration trench between storms and does not drain within 2-3 days.			There should be no areas of standing water once storm event has ceased. Any of the following may apply: sediment or trash blockages removed, improved grade from head to foot of infiltration trench, removed clogging at check dams, or added underdrains.
2. Trash and Debris Accumulation	Trash and debris accumulated in the infiltration trench.			Trash and debris removed from infiltration trench and disposed of properly.
3. Sediment	Evidence of sedimentation in trench.			Material removed and disposed of properly so that there is no clogging or blockage.
4. Inlet/Outlet	Inlet/outlet areas clogged with sediment or debris, and/or eroded.			Material removed and disposed of properly so that there is no clogging or blockage in the inlet and outlet areas.
5. Overflow Drain	Clogged with sediment or debris, and/or eroded.			Material removed and disposed of properly so that there is no clogging or blockage, and trench is restored to design condition.
6. Observation Well	Routine monitoring of observation well indicates that trench is not draining within specified time or observation well cap is missing.			Restore trench to design conditions. Observation well cap is sealed.
7. Miscellaneous	Any condition not covered above that needs attention in order for the infiltration trench to function as designed.			Meets the design specifications.

Subsurface Infiltration System Maintenance Plan for
[[== Insert Project Name ==]]
[[== Insert Date =]]

Project Address and Cross Streets_____

Assessor's Parcel No.: _____

Property Owner: _____ Phone No.:_____

Designated Contact: _____ Phone No.:_____

Mailing Address:_____

The property contains [[== insert number ==]] Subsurface Infiltration System(s) located as described below and as shown in the attached site plan.

- **Subsurface Infiltration System No. 1** is located at [[== describe location ==]].
- [[== Add descriptions of other subsurface infiltration systems, if applicable. ==]]

I. Routine Maintenance Activities

The principal maintenance objective is to prevent sediment buildup and clogging, which reduces pollutant removal efficiency and may lead to system failure. A pretreatment measure is typically required to keep sediment and other pollutants out of the infiltration system. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1. Routine maintenance of the pretreatment measure should also be conducted; refer to the maintenance plan for the appropriate type of measure.

Table 1
Routine Maintenance Activities for Subsurface Infiltration Systems

No.	Maintenance Task	Frequency of Task
1	Monitor observation well to confirm that the subsurface infiltration system has drained during dry season. If inspection indicates that the system is partially or completely clogged, restore to design conditions.	Annually, during dry season
2	Remove obstructions, debris and trash near inlet and dispose of properly.	Monthly during wet season, or as needed after storm events
3	Check observation well 2 to 3 days after storms to confirm drainage. The subsurface infiltration system should completely dewater within 3 days (preferred) or within 5 days to avoid mosquito production.	Monthly during wet season, or as needed after storm events
4	Check for erosion at inflow or overflow structures. Repair as necessary.	Monthly, or as needed after storm events
5	Inspect subsurface infiltration system using the attached inspection checklist.	Monthly, or after large storm events, and after removal of accumulated debris or material

II. Prohibitions

Trees and other large vegetation shall be prevented from growing adjacent to the subsurface infiltration system to prevent damage.

III. Vector Control

Standing water shall not remain in the treatment measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the County of Santa Clara Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

County of Santa Clara Vector Control District
1580 Berger Dr.
San José, California 95112
Phone: (408) 918-4770
vectorinfo@cep.sccgov.org
www.sccvector.org

IV. Inspections

The attached Subsurface Infiltration System Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Subsurface Infiltration System
Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Monthly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season

Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	**Results Expected When Maintenance Is Performed**
1. Standing Water	Water stands in the infiltration system or pretreatment measure between storms and does not drain within 3 days.			There should be no areas of standing water 3 days after a storm event. Sediment or trash blockages have been removed and infiltration system is restored to design condition.
2. Trash and Debris Accumulation	Trash and debris accumulated in the infiltration system or pretreatment measure.			Trash and debris removed from infiltration system and/or pretreatment measure and disposed of properly.
3. Sediment	Evidence of sedimentation in infiltration system.			Material removed and disposed of properly so that there is no clogging or blockage.
4. Inlet/Outlet, or Overflow Drain	Inlet/outlet areas or overflow drain clogged with sediment or debris, and/or eroded.			Material removed and disposed of properly so that there is no clogging or blockage in the inlet and outlet areas or overflow drain.
5. Observation Well	Routine monitoring of observation well indicates that infiltration system is not draining within specified time or observation well cap is missing.			Restore infiltration system to design conditions. Observation well cap is sealed.
6. Miscellaneous	Any condition not covered above that needs attention in order for the infiltration system to function as designed.			Meets the design specifications.

Extended Detention Basin Maintenance Plan for [[== Insert Project Name ==]]

[[== Insert Date =]]

Project Address and Cross Streets_____

Assessor's Parcel No.: _____

Property Owner: _____ Phone No.:_____

Designated Contact: _____ Phone No.:_____

Mailing Address:_____

The property contains [[== insert number ==]] extended detention basins, located as described below and as shown in the attached site plan.

- **Extended Detention Basin No. 1** is located at [[== describe location ==]].
- [[== Add descriptions of other extended detention basins, if applicable. ==]]
- [[==Identify Extended Detention Basin(s) designed for Hydromodification Management (HM).]]

I. Routine Maintenance Activities

Primary maintenance activities include vegetation management and sediment removal, although mosquito abatement is a concern if the extended detention basin is designed to include permanent pools of standing water. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1.

Table 1
Routine Maintenance Activities for Extended Detention Basins

No.	Maintenance Task	Frequency of Task
1	Evaluate the health of vegetation and remove and replace any dead or dying plants.	Twice a year
2	Trim vegetation at beginning and end of wet season.	Twice a year
3	Inspect vegetation to prevent establishment of woody vegetation and for aesthetics and mosquito control.	Monthly
4	Harvest vegetation annually, during the summer	Annually
5	Examine the outlet, embankments, dikes, berms, and side slopes for structural integrity and signs of erosion or rodent burrows. Fill in any holes detected in the side slopes.	Twice a year
6	Inspect inlets, outlets and overflow structures to ensure that piping is intact and not plugged. Remove any accumulated sediment and debris. Ensure that energy dissipation is functioning adequately.	Twice a year
7	Inspect for standing water and correct any problems that prevent the basin from draining as designed.	Twice a year
8	Confirm that any fences around the facility are secure	Twice a year
9	Remove sediment from forebay when the sediment level reaches the level shown on the fixed vertical sediment marker and dispose of sediment properly.	As needed
10	Remove accumulated sediment from the detention basin and regrade when the accumulated sediment volume exceeds 10% of basin volume and dispose of sediment properly.	Every 10 years, or as needed
11	Remove accumulated trash and debris from the extended detention basin and dispose of properly.	Twice a year
12	Inspect extended detention basin using the attached inspection checklist.	Quarterly, or as needed

II. Use of Pesticides

Do not use pesticides or other chemical applications to treat diseased plants, control weeds or removed unwanted growth. Employ non-chemical controls (biological, physical and cultural controls) to treat a pest problem. Prune plants properly and at the appropriate time of year. Provide adequate irrigation for landscape plants. Do not over water.

III. Vector Control Contact

Standing water shall not remain in the treatment and/or hydromodification management measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the County of Santa Clara Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

County of Santa Clara Vector Control District
1580 Berger Dr.
San José, California 95112
Phone: (408) 918-4770
vectorinfo@cep.sccgov.org
www.sccvector.org

IV. Inspections

The attached Extended Detention Basin Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Extended Detention Basin
Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Monthly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season
Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	**Results Expected When Maintenance Is Performed**
Trash & Debris	Trash and debris accumulated in basin. Visual evidence of dumping.			Trash and debris cleared from site and disposed of properly.
Tree/Brush Growth, Woody Vegetation	Growth does not allow maintenance access or interferes with maintenance activity. Dead, diseased, or dying trees.			Trees do not hinder maintenance activities. Vegetation harvested annually, during the summer.
Erosion	Erosion on a compacted berm embankment. Rodent burrows on slope.			Cause of erosion is managed appropriately. Side slopes or berm restored to design specifications, as needed. Rodent burrows filled up.
Drainage time/Vector control	Standing water remains in basin more than five days.			Any circumstances that restrict the flow of water from the system corrected. Drainage restored to design condition. If the problem cannot be corrected and problems with standing water recur, then mosquitoes should be controlled with larvicides, applied by a licensed pesticide applicator. Contact the Santa Clara County Vector Control District.
Inlet and outlet	Piping broken. Inlet or outlet blocked.			Piping intact. Debris/sediment removed and disposed properly.
Fences	Fences broken or missing			Fences around facility are secure
Sediment	Accumulated sediment >10% of designed basin depth			Sediment cleaned out to designed basin shape and depth; basin reseeded if necessary to control erosion. Sediment disposed of properly.
Miscellaneous	Any condition not covered above that needs attention to restore extended detention basin to design conditions.			Meets the design specifications.

Pervious Paving Maintenance Plan for [[== Insert Project Name ==]]

[[== Insert Date =]]

Project Address and Cross Streets_____

Assessor's Parcel No.: _____

Property Owner: _____ Phone No.:_____

Designated Contact: _____ Phone No.:_____

Mailing Address:_____

The property contains [[== insert number ==]] pervious paving area(s), located as described below and as shown in the attached site plan[1].

- **Pervious Paving Area No. 1** is located at [[== describe location ==]].
- [[== Add descriptions of other pervious paving areas, if applicable. ==]]

I. Routine Maintenance Activities

Types of pervious pavement include pervious concrete, porous asphalt, and permeable interlocking concrete pavement (PICP), concrete grid pavers, and plastic reinforcement grid pavers. The principal maintenance objective is to prevent sediment buildup and clogging, which reduces infiltration capacity and pollutant removal efficiency. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1.

Table 1
Routine Maintenance Activities for Pervious Paving Areas

No.	Maintenance Task	Frequency of Task
1	Check for sediment and debris accumulation. Prevent soil from washing or blowing onto the pavement. Do not store sand, soil, mulch or other landscaping materials on pervious pavement surfaces.	Two to four times annually
2	Conduct preventative surface cleaning, using commercially available regenerative air or vacuum sweepers, to remove sediment and debris.	Two to four times annually
3	Inspect for any signs of pavement failure. Repair any surface deformations or broken pavers. Replace missing joint filler in PICP.	Two to four times annually
4	Check for standing water on the pavement surface within 30 minutes after a storm event.	Two to four times annually
5	Inspect underdrain outlets and cleanouts, preferably before the wet season. Remove trash/debris.	Two to four times annually
6	Remove sediment and debris accumulation on pervious pavement.	Two to four times annually
7	Remove weeds. Mow vegetation in grid pavements (such as turf block) as needed.	As needed
8	Perform restorative surface cleaning with a vacuum sweeper, and/or reconstruction of part of the pervious surface to restore surface permeability as needed. Replenish aggregate in PICP joints or grids as needed after restorative surface cleaning.	As needed
9	Power washing with simultaneous vacuuming also can be used to restore surface infiltration to highly clogged areas of pervious concrete, porous asphalt or PICP, but is not recommended for grid pavements.	As needed
10	Inspect pervious paving area using the attached inspection checklist.	Quarterly or as needed

[1] Attached site plan must match the site plan exhibit to Maintenance Agreement.

II. Use of Pesticides

Do not use pesticides or other chemical applications to control weeds or unwanted growth near pavement or between pavers.

III. Vector Control

Standing water shall not remain in the treatment measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the County of Santa Clara Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

County of Santa Clara Vector Control District
1580 Berger Dr.
San José, California 95112
Phone: (408) 918-4770
vectorinfo@cep.sccgov.org
www.sccvector.org

IV. Inspections

The attached Pervious Pavement Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Pervious Pavement
Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Monthly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season

Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	**Results Expected When Maintenance Is Performed**
1. Standing Water	Water stands in the pervious pavement and does not drain within 30 minutes after storm event			There should be no areas of standing water once storm event has ceased. Restorative surface cleaning with a vacuum sweeper and/or reconstruction of part of the pervious surface may be required.
2. Trash, or Sediment and Debris Accumulation	Trash, sediment or debris accumulated on pervious pavement			Trash and debris removed from pervious pavement and disposed of properly. Adjacent areas do not contribute to sediment and debris.
3. Damage	Surface deformation or broken pavers			Surface restored; no deformation or broken pavers.
4. Vegetation	Weeds growing on pervious pavement			No weeds on pervious pavement.
5. Underdrain Outlets	Water accumulates due to trash/sediment accumulation in outlets.			No standing water observed. Clean underdrain outlets and cleanouts.
6. Miscellaneous	Any condition not covered above that needs attention in order for the pervious pavement to function as designed.			Meets the design specifications.

Rainwater Harvesting Systems Maintenance Plan for [[== Insert Project Name ==]]

[[== Insert Date =]]

Project Address and Cross Streets_____

Assessor's Parcel No.: _____

Property Owner: _____ Phone No.:_____

Designated Contact: _____ Phone No.:_____

Mailing Address:_____

The property contains [[== insert number ==]] pervious paving area(s), located as described below and as shown in the attached site plan[1].

- **Rainwater Harvesting System No. 1** is located at [[== describe location ==]].
- [[== Add descriptions of other rainwater harvesting systems, if applicable. ==]]

I. Routine Maintenance Activities

The principal maintenance objective is to prevent sediment buildup and clogging, which reduce rainwater harvesting capacity. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1.

Table 1
Routine Maintenance Activities for Rainwater Harvesting Systems

No.	Maintenance Task	Frequency of Task
1	Inspect and clean filters and screens, and replace as needed.	Every 3-6 months
2	Inspect and clean debris from gutters, downspouts, first-flush devices and roof washers.	Every 3-6 months
3	Inspect and verify that disinfection, filters, and other water quality treatment devices are operational, in accordance with manufacture's recommendations or local jurisdictional requirements	Every 3-6 months
4	Inspect and clean debris from rainwater gutters, roof surfaces, downspouts, roof washers, and first-flush devices, Remove tree branches and vegetation overhanging roof surfaces.	Every 6 months, or as needed to prevent clogging
5	If rainwater is provided for indoor use, conduct annual water quality testing per the requirements of the local jurisdiction.	Annually
6	Inspect all components, including pumps, valves, tanks, backflow prevention systems, and verify operation.	Annually
7	Flush or vacuum cisterns to remove sediment. Drain flushed water to landscaping or sanitary sewer.	Annually
8	Inspect rainwater harvesting systems using the attached inspection checklist.	Quarterly or as needed

[1] Attached site plan must match the site plan exhibit to Maintenance Agreement.

II. Vector Control

Should any mosquito issues arise, contact the County of Santa Clara Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

County of Santa Clara Vector Control District
1580 Berger Dr.
San José, California 95112
Phone: (408) 918-4770
vectorinfo@cep.sccgov.org
www.sccvector.org

III. Inspections

The attached Rainwater Harvesting Systems Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Rainwater Harvesting Systems
Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Monthly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season

Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	**Results Expected When Maintenance Is Performed**
1. Sediment and Debris Accumulation	Sediment or debris accumulated in filters, screens, gutters, downspouts, first-flush devices, or roof washers, or on roof or other collection surfaces. Sediment accumulated in collection system.			Sediment and debris removed and disposed of properly. Collection surfaces do not contribute sediment and debris.
2. Leaks and holes	Water leaking from system. Mosquitoes entering the system.			No leakage. No evidence of mosquitoes or larvae.
3. Water Quality	Treatment system is not working properly.			Treatment system is operational and maintaining minimum water quality requirements.
4. Miscellaneous	Any condition not covered above that needs attention in order for the rainwater harvesting system to function as designed.			Meets the design specifications.

Media Filter Maintenance Plan for
[[== Insert Project Name ==]]

[[== Insert Date =]]

Project Address and Cross Streets_____

Assessor's Parcel No.: _____

Property Owner: _____ Phone No.:_____

Designated Contact: _____ Phone No.:_____

Mailing Address:_____

The property contains [[== insert number ==]] media filter (s), located as described below and as shown in the attached site plan[1].

- **Media Filter No. 1** is located at [[== describe location ==]].
- [[== Add descriptions of other media filters, if applicable. ==]]

I. Routine Maintenance Activities

The principal maintenance objective is to prevent sediment buildup and clogging, which reduces pollutant removal efficiency and may lead to failure of the media filter. Follow manufacturer's requirements for maintenance. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1.

Table 1
Routine Maintenance Activities for Media Filters

No.	Maintenance Task	Frequency of Task
1	Inspect for standing water, sediment, trash and debris.	Monthly during rainy season
2	Remove accumulated trash and debris in the unit during routine inspections.	Monthly during rainy season, or as needed after storm events
3	Inspect to ensure that the facility is draining completely within five days and per manufacturer's specifications.	Once during the wet season after major storm event.
4	Replace the media per manufacturer's instructions or as indicated by the condition of the unit.	Per manufacturer's specifications.
5	Inspect media filters using the attached inspection checklist.	Quarterly or as needed

II. Vector Control

Standing water shall not remain in the treatment measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the County of Santa Clara Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

County of Santa Clara Vector Control District
1580 Berger Dr.
San José, California 95112
Phone: (408) 918-4770
vectorinfo@cep.sccgov.org
www.sccvector.org

[1] Attached site plan must match the site plan exhibit to Maintenance Agreement.

IV. Inspections

The attached Treatment Measure Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Media Filters
Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Monthly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season
Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	**Results Expected When Maintenance Is Performed**
1. Sediment, trash and debris accumulation on filter	Sediment, trash and debris accumulated in the media filter unit, vault or piping.			Sediment, trash and debris removed and disposed of properly.
2. Standing water	Treatment unit or vault does not drain within five days after rainfall.			Source of clogging removed. Filter drains per design specifications.
3. Mosquitoes	Evidence of mosquito larvae in treatment unit.			No evidence of mosquito larvae.
4. Miscellaneous	Any condition not covered above that needs attention in order for the manufactured treatment measure to function as designed.			Meet the design specifications.