



# City of Emeryville

INCORPORATED 1896

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September 30, 2016

Bruce Wolfe, Executive Officer  
San Francisco Regional Water Quality Control Board  
1515 Clay Street  
Oakland, CA 94612

SUBJECT: Annual Report for Fiscal Year 2015-2016 for the City of Emeryville

Dear Mr. Wolfe:

Please find enclosed the Annual Report of Stormwater Program Implementation for the Fiscal Year 2015-2016 (months of July 2015 through June 2016). This is being submitted in accordance with the requirements of our NPDES permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Best Regards,

Maurice Kaufman  
Public Works Director  
City of Emeryville

Enc.

City of Emeryville

**Annual Report**

FY 2015-16

NPDES Permit Number CAS612008

September 30, 2016

**ATTACHMENT B**

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Section 1 – Permittee Information

Background Information					
Permittee Name:	City of Emeryville				
Population:	10,770				
NPDES Permit No.:	CAS612008				
Order Number:	R2-2015-0049				
Reporting Time Period (month/year):	July 2015 through June 2016				
Name of the Responsible Authority:	Carolyn Lehr	Title:	City Manager		
Mailing Address:	1333 Park Avenue				
City:	Emeryville	Zip Code:	94608	County:	Alameda
Telephone Number:	510-596-4371	Fax Number:			
E-mail Address:	<a href="mailto:clehr@emeryville.org">clehr@emeryville.org</a>				
Name of the Designated Stormwater Management Program Contact (if different from above):	Maurice Kaufman	Title:	Public Works Director		
Department:	Public Works				
Mailing Address:	1333 Park Avenue				
City:	Emeryville	Zip Code:	94608	County:	Alameda
Telephone Number:	510-596-4334	Fax Number:			
E-mail Address:	<a href="mailto:mkaufman@emeryville.org">mkaufman@emeryville.org</a>				

Section 2 - Provision C.2 Reporting Municipal Operations

**Program Highlights and Evaluation**

Highlight/summarize activities for reporting year:

Summary:  
 The City of Emeryville participated in the Alameda County Clean Water Program’s Municipal Operations Subcommittee this year, and attended the training put on by that committee. Please see the C.2 Municipal Operations section of the Alameda Countywide Program’s FY 15-16 Annual Report for a description of activities implemented at the County-wide and/or regional levels.

**C.2.a. ► Street and Road Repair and Maintenance**

Place a **Y** in the boxes next to activities where applicable BMPs were implemented. If not applicable, type **NA** in the box and provide an explanation in the comments section below. Place an **N** in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.

<b>Y</b>	Control of debris and waste materials during road and parking lot installation, repaving or repair maintenance activities from polluting stormwater
<b>Y</b>	Control of concrete slurry and wastewater, asphalt, pavement cutting, and other street and road maintenance materials and wastewater from discharging to storm drains from work sites.
<b>Y</b>	Sweeping and/or vacuuming and other dry methods to remove debris, concrete, or sediment residues from work sites upon completion of work.

Comments:

**C.2.b. ► Sidewalk/Plaza Maintenance and Pavement Washing**

Place a **Y** in the boxes next to activities where applicable BMPs were implemented. If not applicable, type **NA** in the box and provide an explanation in the comments section below. Place an **N** in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.

Y	Control of wash water from pavement washing, mobile cleaning, pressure wash operations at parking lots, garages, trash areas, gas station fueling areas, and sidewalk and plaza cleaning activities from polluting stormwater
Y	Implementation of the BASMAA Mobile Surface Cleaner Program BMPs

Comments:

**C.2.c. ► Bridge and Structure Maintenance and Graffiti Removal**

Place a **Y** in the boxes next to activities where applicable BMPs were implemented. If not applicable, type **NA** in the box and provide an explanation in the comments section below. Place an **N** in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.

Y	Control of discharges from bridge and structural maintenance activities directly over water or into storm drains
Y	Control of discharges from graffiti removal activities
Y	Proper disposal for wastes generated from bridge and structure maintenance and graffiti removal activities
Y	Implementation of the BASMAA Mobile Surface Cleaner Program BMPs for graffiti removal
Y	Employee training on proper capture and disposal methods for wastes generated from bridge and structural maintenance and graffiti removal activities.
Y	Contract specifications requiring proper capture and disposal methods for wastes generated from bridge and structural maintenance and graffiti removal activities.

Comments:

C.2.e. ► Rural Public Works Construction and Maintenance			
Does your municipality own/maintain rural <sup>1</sup> roads:		<input type="checkbox"/>	Yes
		<input checked="" type="checkbox"/>	No
If your answer is <b>No</b> then skip to C.2.f.			
Place a <b>Y</b> in the boxes next to activities where applicable BMPs were implemented. If not applicable, type <b>NA</b> in the box and provide an explanation in the comments section below. Place an <b>N</b> in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.			
<input type="checkbox"/>	Control of road-related erosion and sediment transport from road design, construction, maintenance, and repairs in rural areas		
<input type="checkbox"/>	Identification and prioritization of rural road maintenance based on soil erosion potential, slope steepness, and stream habitat resources		
<input type="checkbox"/>	No impact to creek functions including migratory fish passage during construction of roads and culverts		
<input type="checkbox"/>	Inspection of rural roads for structural integrity and prevention of impact on water quality		
<input type="checkbox"/>	Maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts and excessive erosion		
<input type="checkbox"/>	Re-grading of unpaved rural roads to slope outward where consistent with road engineering safety standards, and installation of water bars as appropriate		
<input type="checkbox"/>	Inclusion of measures to reduce erosion, provide fish passage, and maintain natural stream geomorphology when replacing culverts or design of new culverts or bridge crossings		
Comments including listing increased maintenance in priority areas:			

<sup>1</sup>Rural means any watershed or portion thereof that is developed with large lot home-sites, such as one acre or larger, or with primarily agricultural, grazing or open space uses.

<b>C.2.f. ► Corporation Yard BMP Implementation</b>			
Place an <b>X</b> in the boxes below that apply to your corporations yard(s):			
<input checked="" type="checkbox"/>	We do not have a corporation yard (it's indoors)		
<input type="checkbox"/>	Our corporation yard is a filed NOI facility and regulated by the California State Industrial Stormwater NPDES General Permit		
<input type="checkbox"/>	We have a <b>Stormwater Pollution Prevention Plan (SWPPP)</b> for the Corporation Yard(s)		
Place an <b>X</b> in the boxes below next to implemented SWPPP BMPs to indicate that these BMPs were implemented in applicable instances. If not applicable, type <b>NA</b> in the box. If one or more of the BMPs were not adequately implemented during the reporting fiscal year then indicate so and explain in the comments section below:			
<input type="checkbox"/>	Control of pollutant discharges to storm drains such as wash waters from cleaning vehicles and equipment		
<input type="checkbox"/>	Routine inspection prior to the rainy seasons of corporation yard(s) to ensure non-stormwater discharges have not entered the storm drain system		
<input type="checkbox"/>	Containment of all vehicle and equipment wash areas through plumbing to sanitary or another collection method		
<input type="checkbox"/>	Use of dry cleanup methods when cleaning debris and spills from corporation yard(s) or collection of all wash water and disposing of wash water to sanitary or other location where it does not impact surface or groundwater when wet cleanup methods are used		
<input type="checkbox"/>	Cover and/or berm outdoor storage areas containing waste pollutants		
Comments:			
If you have a corporation yard(s) that is not an NOI facility, complete the following table for inspection results for your corporation yard(s) or attach a summary including the following information:			
Corporation Yard Name	Inspection Date (1x/year required)	Inspection Findings/Results	Follow-up Actions
Indoor only	N/A	N/A	N/A

Section 3 - Provision C.3 Reporting New Development and Redevelopment

**C.3.a. ► New Development and Redevelopment Performance  
Standard Implementation Summary Report**

*(For FY 15-16 Annual Report only)* Provide a brief summary of the methods of implementation of Provisions C.3.a.i.(1)-(8).

Summary:

1. The City of Emeryville has legal authority to implement C.3 through its Municipal Code, Chapter 13, Title 6, "Stormwater Management and Discharge Control Program."
2. Building permits are not issued until a C.3 Stormwater permit is also obtained (for regulated projects). At the end of a project, the Temporary Certificate of Occupancy is not issued until the C.3 measures have had their final inspections and a signed Operations and Maintenance agreement is in the City's hands.
3. The City of Emeryville follows CEQA guidelines for the consideration of water quality effects as required for covered projects.
4. Environmental program staff, third-party plan checkers, public works engineering staff, and public works maintenance staff are trained regularly through the County's training programs.
5. Each applicant for a building and/or demolition permit for sites meeting sizing criteria are informed of C.3 permit requirements. Construction projects requiring a SWPPP are informed of BMP requirements regularly, including by letter each fall if construction will continue into the wet season.
6. Emeryville frequently requires additional stormwater control measures through Conditions of Approval. Furthermore, we have not allowed any Special Projects to use less than full LID measures.
7. Emeryville uses conditions of approval to require C3 measures on unregulated projects whenever possible. One example is a requirement to build C.3 infrastructure on adjacent right of way. In addition, all storm drain inlets on developed property are required to have a stencil or medallion.
8. Emeryville's General Plan, adopted in 2009 and amended in 2015, addresses water supply and quality in Chapter 6. Surface water, groundwater, and stormwater runoff are all addressed.

**C.3.b.iv.(2) ► Regulated Projects Reporting**

Fill in attached table **C.3.b.iv.(2)** or attach your own table including the same information.

**C.3.c.ii ▶ Design Specifications for Pervious Pavement Systems**

(For FY 2015-16 Annual Report only). Submit design specifications for pervious pavement systems that have been developed and adopted on a regional or countywide basis. If design specifications have been adopted and are contained in a Countywide stormwater handbook, include a reference to the handbook.

Summary: The City of Emeryville is following the design specifications included in the ACCWP C.3 Technical Guidance Manual.

**C.3.e.iv. ▶ Alternative or In-Lieu Compliance with Provision C.3.c.**

Is your agency choosing to require 100% LID treatment onsite for all Regulated Projects and not allow alternative compliance under Provision C.3.e.?

<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
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Comments (optional):

**C.3.e.v ▶ Special Projects Reporting**

1. In FY 2015-16, has your agency received, but not yet granted final discretionary approval of, a development permit application for a project that has been identified as a potential Special Project based on criteria listed in MRP Provision C.3.e.ii(2) for any of the three categories of Special Projects (Categories A, B or C)?

<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
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2. In FY 2015-16, has your agency granted final discretionary approval to a Special Project? If yes, include the project in both the C.3.b.iv.(2) Table, and the C.3.e.v. Table.

<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
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**C.3.h.v.(2) ▶ Reporting Newly Installed Stormwater Treatment Systems and HM Controls (Optional)**

On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting year) stormwater treatment systems and HM controls to the local mosquito and vector control agency and the Water Board. The list shall include the facility locations and a description of the stormwater treatment measures and HM controls installed.

See attached Table C.3.h.v.(2) for a list of newly installed Stormwater Treatment Systems/HM Controls.

**C.3.h.v.(3)(a) –(c) and (f) ► Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting**

<b>Option 1 – Reporting Site Inspections</b>	<b>Number/Percentage</b>
Total number of Regulated Projects (including offsite projects, and Regional Projects) in your agency's database or tabular format at the end of the previous fiscal year (FY14-15)	19
Total number of Regulated Projects (including offsite projects, and Regional Projects) in your agency's database or tabular format at the end of the reporting period (FY 15-16)	21
Total number of Regulated Projects (including offsite projects, and Regional Projects) for which O&M verification inspections were conducted during the reporting period (FY 15-16)	5
Percentage of the total number of Regulated Projects (including offsite projects, and Regional Projects) inspected during the reporting period (FY 15-16)	26% <sup>2</sup>
<b>Option 2 – Reporting Stormwater Treatment System Inspections</b>	
Total number of stormwater treatment and HM systems in your agency's database or tabular format at the end of the previous fiscal year (FY 14-15)	-
Total number of stormwater treatment systems in your agency's database or tabular format at the end of the reporting period (FY 15-16)	-
Total number of stormwater treatment and HM systems inspected in the reporting period (FY 15-16)	-
Percentage of stormwater treatment and HM systems inspected in the reporting period (FY 15-16)	% <sup>3</sup>

<sup>2</sup> Based on the number of Regulated Projects in the database or tabular format at the end of the previous fiscal year (FY 14-15), per MRP Provision C.3.h.ii.(6)(b).

<sup>3</sup> Based on the number of stormwater treatment and HM systems database or tabular format at the end of the previous fiscal year (FY 14-15), per MRP Provision C.3.h.ii.(6)(b).

**C.3.h.v.(3)(d)-(e) ► Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting**

<p>Provide a discussion of the inspection findings for the year and any common problems encountered with various types of treatment systems and/or HM controls. This discussion should include a general comparison to the inspection findings from the previous year.</p>
<p>Summary:                  The O&amp;M practices in the inspected treatment areas were generally very good. In most cases the owner was advised to add mulch and/or spreaders to repair or prevent bald spots from developing over time.</p>
<p>Provide a discussion of the effectiveness of the O&amp;M Program and any proposed changes to improve the O&amp;M Program (e.g., changes in prioritization plan or frequency of O&amp;M inspections, other changes to improve effectiveness program).</p>
<p>Summary:                  The O&amp;M program is working well. The inspection found almost universally good maintenance of the treatment systems.</p>

**C.3.i. ► Required Site Design Measures for Small Projects and Detached Single Family Home Projects**

<p>On an annual basis, discuss the implementation of the requirements of Provision C.3.i, including ordinance revisions, permit conditions, development of standard specifications and/or guidance materials, and staff training.</p>
<p>Summary:                  BASMAA prepared standard specifications in four fact sheets regarding the site design measures listed in Provision C.3.i, as a resource for Permittees. We have modified local ordinances/policies/procedures and forms/checklists to require all applicable projects approved after December 1, 2012 to implement at least one of the site design measures listed in Provision C.3.i. We are using the following Program and BASMAA products for C.3.i implementation:</p> <ul style="list-style-type: none"> <li>• BASMAA's site design fact sheets</li> <li>• The ACCWP C.3 Technical Guidance Manual Appendix L</li> <li>• City of Emeryville Water Efficient Landscape Ordinance (WELO) Worksheet used for site design. See attached.</li> </ul>

**C.3.j.i.v.(d) ► Green Infrastructure Outreach**

On an annual basis, provide a summary of your agency's outreach and education efforts pertaining to Green Infrastructure planning and implementation.

Summary:

Staff met with department heads and staff in planning, engineering, and maintenance groups, along with the City Attorney and City Manager, to brief them on new Green Infrastructure requirements and goals.

Please refer to the Countywide Program's FY15-16 Annual Report for a summary of outreach efforts implemented at the Countywide level.

**C.3.j.ii.(2) ► Early Implementation of Green Infrastructure Projects**

On an annual basis, submit a list of green infrastructure projects, public and private, that are already planned for implementation during the permit term and infrastructure projects planned for implementation during the permit term that have potential for green infrastructure measures. Include the following information:

- A summary of planning or implementation status for each public and private green infrastructure project that is not also a Regulated Project as defined in Provision C.3.b.ii. (see C.3.j.ii.(2) Table B - Planned Green Infrastructure Projects).
- A summary of how each public infrastructure project with green infrastructure potential will include green infrastructure measures to the maximum extent practicable during the permit term. For any public infrastructure project where implementation of green infrastructure measures is not practicable, submit a brief description of the project and the reasons green infrastructure measures were impracticable to implement (see C.3.j.ii.(2) Table A - Public Projects Reviewed for Green Infrastructure).

Background Information:

Describe how this provision is being implemented by your agency, including the process used by your agency to identify projects with potential for green infrastructure, if applicable.

The City of Emeryville has for several years incorporated green infrastructure projects in the right of way wherever feasible, and has required GI installations as an element of Conditions of Approval for projects of sufficient size and location. The City is also using BASMAA's guidance to identify and review potential green infrastructure projects on an ongoing basis.

Summary of Planning or Implementation Status of Identified Projects:

See Tables C.3.j.ii.(2)-A and C.3.j.ii.(2)-B for details on public and private projects being considered for GI potential.

**C.3.j.iii.(2) ▶ Participate in Processes to Promote Green Infrastructure**

On an annual basis, report on the goals and outcomes during the reporting year of work undertaken to participate in processes to promote green infrastructure.

Please refer to the Countywide Program's FY 15-16 Annual Report for a summary of efforts conducted to help regional, State, and federal agencies plan, design and fund incorporation of green infrastructure measures into local infrastructure projects, including transportation projects.

**C.3.j.iv.(2) ▶ Tracking and Reporting Progress**

On an annual basis, report progress on development and implementation of methods to track and report implementation of green infrastructure measures and provide reasonable assurance that waste load allocations for TMDLs are being met.

Please refer to the Countywide Program's FY 15-16 Annual Report for a summary of methods being developed to track and report implementation of green infrastructure measures.

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period**

Project Name Project No.	Project Location <sup>10</sup> , Street Address	Name of Developer	Project Phase No. <sup>11</sup>	Project Type & Description <sup>12</sup>	Project Watershed <sup>13</sup>	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft <sup>2</sup> ) <sup>14</sup>	Total Replaced Impervious Surface Area (ft <sup>2</sup> ) <sup>15</sup>	Total Pre- Project Impervious Surface Area <sup>16</sup> (ft <sup>2</sup> )	Total Post- Project Impervious Surface Area <sup>17</sup> (ft <sup>2</sup> )
<b>Private Projects</b>											
EmeryStation West (Transit center)	5959 Horton Street	Wareham Development	NA	Mixed use transit center	Temescal Creek	1.746 ac	1.736 ac	3,354 sf	55,530 sf	68,988 sf	58,884 sf
Public Market Parcel D	6301 Shellmound Street	Avalon Bay Communities, Inc.	NA	Mixed-use apartments.	Temescal Creek	1.52 ac	1.52 ac	0	59,720 sf	59,720 sf	59,720 sf
The Intersection	3800 San Pablo Avenue	Holiday Developments	NA	Mixed-use Apts.	West Oakland Broadway Branch	1.01 ac	1.01 ac	0	47,916 sf	47,916 sf	47,916 sf
<b>Public Projects</b>											
Phase 1 and phase 2 street realignment	Shellmound Street	City Center Development	1 and 2	Street Realignment	Temescal Creek	1.67 ac	1.67 ac	0	72,840 sf	72,840 sf	72,840 sf

<sup>10</sup>Include cross streets

<sup>11</sup>If a project is being constructed in phases, indicate the phase number and use a separate row entry for each phase. If not, enter "NA".

<sup>12</sup>Project Type is the type of development (i.e., new and/or redevelopment). Example descriptions of development are: 5-story office building, residential with 160 single-family homes with five 4-story buildings to contain 200 condominiums, 100 unit 2-story shopping mall, mixed use retail and residential development (apartments), industrial warehouse.

<sup>13</sup>State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.

<sup>14</sup>All impervious surfaces added to any area of the site that was previously existing pervious surface.

<sup>15</sup>All impervious surfaces added to any area of the site that was previously existing impervious surface.

<sup>16</sup>For redevelopment projects, state the pre-project impervious surface area.

<sup>17</sup>For redevelopment projects, state the post-project impervious surface area.

**C.3.b.iv.(2) ► Regulated Projects Reporting Table  
 (part 2) – Projects Approved During the Fiscal  
 Year Reporting Period (private projects)**

Project Name Project No.	Application Deemed Complete Date <sup>18</sup>	Application Final Approval Date <sup>19</sup>	Source Control Measures <sup>20</sup>	Site Design Measures <sup>21</sup>	Treatment Systems Approved <sup>22</sup>	Type of Operation & Maintenance Responsibility Mechanism <sup>23</sup>	Hydraulic Sizing Criteria <sup>24</sup>	Alternative Compliance Measures <sup>25/26</sup>	Alternative Certification <sup>27</sup>	HM Controls <sup>28/29</sup>
<b>Private Projects</b>										
Emerstation West	6/30/2016	6/30/16	Efficient landscaping, maintenance cleaning, signage	Roof drains to bioretention, pervious pavement, podium landscaping	Flow-through and bio retention	O&M agreement with public entity and private land owner	Combination flow and volume and 4%	NA	Yes	Combo flow and volume method
Parcel D (Avalon Public Market)	4/5/2016	4/5/2016	Landscaping at podium, roofs too	Landscaping at podium, roofs too	Flow-through planters	O&M agreement with private landowner	4% method	N/A	Yes	4% method
The Intersection	1/22/16	1/22/16	Efficient irrigation system and reduce runoff	Direct runoff into vegetated areas	Flow-through planters and bioretention areas	O&M agreement with private landowner	4% method	None	Yes	4% method

<sup>18</sup>For private projects, state project application deemed complete date. If the project did not go through discretionary review, report the building permit issuance date.

<sup>19</sup>For private projects, state project application final discretionary approval date. If the project did not go through discretionary review, report the building permit issuance date.

<sup>20</sup>List source control measures approved for the project. Examples include: properly designed trash storage areas; storm drain stenciling or signage; efficient landscape irrigation systems; etc.

<sup>21</sup>List site design measures approved for the project. Examples include: minimize impervious surfaces; conserve natural areas, including existing trees or other vegetation, and soils; construct sidewalks, walkways, and/or patios with permeable surfaces, etc.

<sup>22</sup>List all approved stormwater treatment system(s) to be installed onsite or at a joint stormwater treatment facility (e.g., flow through planter, bioretention facility, infiltration basin, etc.).

<sup>23</sup>List the legal mechanism(s) (e.g., O&M agreement with private landowner; O&M agreement with homeowners' association; O&M by public entity, etc...) that have been or will be used to assign responsibility for the maintenance of the post-construction stormwater treatment systems.

<sup>24</sup>See Provision C.3.d.i. "Numeric Sizing Criteria for Stormwater Treatment Systems" for list of hydraulic sizing design criteria. Enter the corresponding provision number of the appropriate criterion (i.e., 1.a., 1.b., 2.a., 2.b., 2.c., or 3).

<sup>25</sup>For Alternative Compliance at an offsite location in accordance with Provision C.3.e.i.(1), on a separate page, give a discussion of the alternative compliance site including the information specified in Provision C.3.b.v.(1)(m)(i) for the offsite project.

<sup>26</sup>For Alternative Compliance by paying in-lieu fees in accordance with Provision C.3.e.i.(2), on a separate page, provide the information specified in Provision C.3.b.v.(1)(m)(ii) for the Regional Project.

<sup>27</sup>Note whether a third party was used to certify the project design complies with Provision C.3.d.

<sup>28</sup>If HM control is not required, state why not.

<sup>29</sup>If HM control is required, state control method used (e.g., method to design and size device(s) or method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control).

**C.3.b.iv.(2) ► Regulated Projects Reporting Table (part 2) –  
 Projects Approved During the Fiscal Year Reporting Period  
 (public projects)**

Project Name Project No.	Approval Date <sup>30</sup>	Date Construction Scheduled to Begin	Source Control Measures <sup>31</sup>	Site Design Measures <sup>32</sup>	Treatment Systems Approved <sup>33</sup>	Operation & Maintenance Responsibility Mechanism <sup>34</sup>	Hydraulic Sizing Criteria <sup>35</sup>	Alternative Compliance Measures <sup>36/37</sup>	Alternative Certification <sup>38</sup>	HM Controls <sup>39/40</sup>
<b>Public Projects</b>										
Public Market Street Realignm ent Phase 1	10/22/15	November 2016	100% C3 treatment	Minimize impervious surfaces, construct sidewalks and other surfaces with permeable surfaces, plant trees. No groundwater infiltration permitted.	C3 planters.	A signed and recorded Operations and Maintenance Agreement	4%	None	Yes	N/A; the project is not adjacent to waterway and no groundwater infiltration is required.
Public Market Street Realignm ent Phase 2	10/22/15	November 2016	100 C3 treatment	Minimize impervious surfaces, construct sidewalks and other surfaces with permeable surfaces, plant trees. No groundwater infiltration permitted.	C3 planters.	A signed and recorded Operations and Maintenance Agreement	4%	None	Yes	N/A; the project is not adjacent to waterway and no groundwater infiltration is required.
Comments:										

<sup>30</sup>For public projects, enter the plans and specifications approval date.

<sup>31</sup>List source control measures approved for the project. Examples include: properly designed trash storage areas; storm drain stenciling or signage; efficient landscape irrigation systems; etc.

<sup>32</sup>List site design measures approved for the project. Examples include: minimize impervious surfaces; conserve natural areas, including existing trees or other vegetation, and soils; construct sidewalks, walkways, and/or patios with permeable surfaces, etc.

<sup>33</sup>List all approved stormwater treatment system(s) to be installed onsite or at a joint stormwater treatment facility (e.g., flow through planter, bioretention facility, infiltration basin, etc.).

<sup>34</sup>List the legal mechanism(s) (e.g., maintenance plan for O&M by public entity, etc...) that have been or will be used to assign responsibility for the maintenance of the post-construction stormwater treatment systems.

<sup>35</sup>See Provision C.3.d.i. "Numeric Sizing Criteria for Stormwater Treatment Systems" for list of hydraulic sizing design criteria. Enter the corresponding provision number of the appropriate criterion (i.e., 1.a., 1.b., 2.a., 2.b., 2.c., or 3).

<sup>36</sup>For Alternative Compliance at an offsite location in accordance with Provision C.3.e.i.(1), on a separate page, give a discussion of the alternative compliance site including the information specified in Provision C.3.b.v.(1)(m)(i) for the offsite project.

<sup>37</sup>For Alternative Compliance by paying in-lieu fees in accordance with Provision C.3.e.i.(2), on a separate page, provide the information specified in Provision C.3.b.v.(1)(m)(ii) for the Regional Project.

<sup>38</sup>Note whether a third party was used to certify the project design complies with Provision C.3.d.

<sup>39</sup>If HM control is not required, state why not.

<sup>40</sup>If HM control is required, state control method used (e.g., method to design and size device(s) or method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control).

**C.3.h.v.(2). ► Table of Newly Installed<sup>41</sup> Stormwater Treatment Systems and Hydromodification Management (HM) Controls (Optional)**

Fill in table below or attach your own table including the same information.

Name of Facility	Address of Facility	Party Responsible <sup>42</sup> For Maintenance	Type of Treatment/HM Control(s)
3900 Adeline	3900 Adeline Street	Madison Park Financial Corp.	Combination flow and volume method
Parc on Powell	1333 Powell Street	Equity Residential	Flow-through and bioretention planters
64 <sup>th</sup> Street & Christie Ave	64 <sup>th</sup> Street & Christie Ave	Essex Apartment Homes	Flow-through planters

<sup>41</sup> "Newly Installed" includes those facilities for which the final installation inspection was performed during this reporting year.

<sup>42</sup> State the responsible operator for installed stormwater treatment systems and HM controls.

C.3.e.v.Special Projects Reporting Table												
Reporting Period – July 1 2015 - June 30, 2016												
Project Name & No.	Permittee	Address	Application Submittal Date <sup>43</sup>	Status <sup>44</sup>	Description <sup>45</sup>	Site Total Acreage	Gross Density DU/Acre	Density FAR	Special Project Category <sup>46</sup>	LID Treatment Reduction Credit Available <sup>47</sup>	List of LID Stormwater Treatment Systems <sup>48</sup>	List of Non-LID Stormwater Treatment Systems <sup>49</sup>
None	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

<sup>43</sup>Date that a planning application for the Special Project was submitted.

<sup>44</sup> Indicate whether final discretionary approval is still pending or has been granted, and provide the date or version of the project plans upon which reporting is based.

<sup>45</sup>Type of project (commercial, mixed-use, residential), number of floors, number of units, type of parking, and other relevant information.

<sup>46</sup> For each applicable Special Project Category, list the specific criteria applied to determine applicability. For each non-applicable Special Project Category, indicate n/a.

<sup>47</sup>For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit available. For Category C Special Projects also list the individual Location, Density, and Minimized Surface Parking Credits available.

<sup>48</sup>: List all LID stormwater treatment systems proposed. For each type, indicate the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area.

<sup>49</sup>List all non-LID stormwater treatment systems proposed. For each type of non-LID treatment system, indicate: (1) the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, and (2) whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification.

**C.3.j.ii.(2) ► Table A - Public Projects Reviewed for Green Infrastructure**

Project Name and Location <sup>44</sup>	Project Description	Status <sup>45</sup>	GI Included? <sup>46</sup>	Description of GI Measures Considered and/or Proposed or Why GI is Impracticable to Implement <sup>47</sup>
Eastshore State Park/Powell Street Bioswale	Bioswale	Beginning planning; awaiting funding	Yes	Bioswale
Emeryville Greenway - Stanford to Powell	Construction of section of multi-use path	Completing design phase	Yes	Permeable pavement, self-treating areas, trees, and planters
Horton Landing Park Expansion	Park and bike/ped path construction	Completing design phase	Yes	Permeable pavement, self-treating areas, trees, and planters
South Bayfront Bridge and Horton Landing Park	Construction of new park and ped/bike bridge	Completing design phase	Yes	Permeable pavement, self-treating areas, trees, and planters
Transit Center - Plaza and Platform Extension	Improvements to train station with new multi modal facility	In construction	Yes	Permeable pavement, self-treating areas, trees, and planters
Transit Center - Public Parking and Bus Bays	Construction of multi modal facility	In construction	Yes	Permeable pavement, self-treating areas, trees, and planters
Art Center	Renovation of existing unoccupied building	In design phase; awaiting funding	Yes	Self-treating areas, trees, and planters
3706 San Pablo Avenue Housing Site	Low-income housing construction	In planning	TBD	There is not yet enough information to assess the project for GI potential
Affordable Senior Housing	Affordable housing. No site identified.	In planning	TBD	There is not yet enough information to assess the project for GI potential
Bike/Ped Plan Implementation	Projects to be determined	In planning	TBD	There is not yet enough information to assess the project for GI potential
ECCL - North/South pedestrian pathway	Construction of a multi-use path	In planning	TBD	There is not yet enough information to assess the project for GI potential
Emery-Go-Round Shuttle Bus Yard	Acquisition of bus yard	In planning	TBD	There is not yet enough information to assess the project for GI potential
Frontage Road Bay Trail	Upgrade of mutli-use path	In planning	TBD	There is not yet enough information to assess

<sup>44</sup> List each public project that is going through your agency's process for identifying projects with green infrastructure potential.

<sup>45</sup> Indicate status of project, such as: beginning design, under design (or X% design), projected completion date, completed final design date, etc.

<sup>46</sup> Enter "Yes" if project will include GI measures, "No" if GI measures are impracticable to implement, or "TBD" if this has not yet been determined.

<sup>47</sup> Provide a summary of how each public infrastructure project with green infrastructure potential will include green infrastructure measures to the maximum extent practicable during the permit term. If review of the project indicates that implementation of green infrastructure measures is not practicable, provide the reasons why green infrastructure measures are impracticable to implement.

Upgrades				the project for GI potential
Frontage Road Landscape Median Island	Landscaping of median island	In planning	TBD	There is not yet enough information to assess the project for GI potential
Large Trash Separator in Storm Drain Line	Feasibility study for the installation of a large trash capture device	In planning	TBD	There is not yet enough information to assess the project for GI potential
Marina Park Improvements	No plans in place	In planning	TBD	There is not yet enough information to assess the project for GI potential
Point Emery Shoreline Protection	Rip-rap at shoreline	In planning	TBD	There is not yet enough information to assess the project for GI potential
Powell Street Bridge Widening	Road widening/bridge work	In design	TBD	There is not yet enough information to assess the project for GI potential
Temescal Creek Park Adeline Street Connection	Bike/ped path construction	Pre-planning phase	TBD	There is not yet enough information to assess the project for GI potential
6150, 5890 and 5900 Christie Housing Site	Low-income housing construction	In planning	TBD	This project is not scheduled to begin design within the permit term.
Below Market Rate Housing Acquisition	Real estate acquisition	In planning	TBD	This project is not scheduled to begin design within the permit term.
Greenway Crossings Safety Enhancement	Utility upgrades/signage and striping	In planning	No	Construction of new streetlights or traffic signals - no GI potential.
Marina Park and Powell Street Lighting	Utility upgrades/maintenance	In planning	No	Construction of new streetlights or traffic signals - no GI potential.
Traffic Signal - 40th/Harlan	Utility upgrade/installation	In planning	No	Construction of new streetlights or traffic signals - no GI potential.
Traffic Signal - Powell/Doyle	Utility upgrade/installation	In planning	No	Construction of new streetlights or traffic signals - no GI potential.
Video Detection Traffic Signal Enhancement	Utility upgrades/repairs	In design	No	Construction of new streetlights or traffic signals - no GI potential.
3706 San Palo Avenue Remediation	Environmental remediation	Underway	No	Environmental remediation prior to site construction (addressed elsewhere)
Bike Share Stations	Placement of bike share stations	In permitting phase	No	Equipment acquisition - no GI potential
Vehicle Replacements and Purchases	Vehicle purchasing	Underway	No	Equipment purchase - no GI potential
City Wide Trash Receptacle Replacement	Equipment upgrades	In planning	No	Equipment purchase or maintenance - no GI potential.
Carport Solar Installation and City Hall Parking Lot	Installation of solar canopy in City Hall lot	In planning	No	Exterior building upgrades or equipment - no GI potential.
Civic Center Exterior Painting	Maintenance painting	In planning	No	Exterior building upgrades or equipment - no GI potential.

Civic Center HVAC	Maintenance/equipment upgrade	In planning	No	Exterior building upgrades or equipment - no GI potential.
Corporation Yard Improvements	Remediation and renovation of corp yard building.	In design phase	No	Exterior building upgrades or equipment - no GI potential.
Electric Vehicle Chargers for City Hall Parking Lot	Installation of electric chargers in City Hall lot	In planning	No	Exterior building upgrades or equipment - no GI potential.
1-80/Caltrans Right of Way Landscape Improvements	Landscaping	In planning	No	Maintenance/minor construction - no GI potential.
40th Street/San Pablo Avenue Median Rehabilitation	Median maintenance	In planning	No	Maintenance/minor construction - no GI potential.
ADA Transition Plan	Improvements to facilities to improve ADA access	In planning	No	Maintenance/minor construction - no GI potential.
Additional Storm Drain Inlet Trash Capture Devices	Installation of storm drain inlet trash capture devices	In planning	No	Maintenance/minor construction - no GI potential.
Amtrak Pedestrian Bridge Modifications	Renovations to existing bridge	In design	No	Maintenance/minor construction - no GI potential.
Annual Street Rehab/Preventive Maintenance	Street maintenance	In design	No	Maintenance/minor construction - no GI potential.
Davenport Mini Park Rehabilitation	Maintenance of park equipment	In planning	No	Maintenance/minor construction - no GI potential.
Emergency Generator and Fuel Tank Upgrades	Equipment maintenance and replacement	In planning	No	Maintenance/minor construction - no GI potential.
General Major Maintenance Program	Ongoing municipal maintenance	Underway	No	Maintenance/minor construction - no GI potential.
Lumec Streetlight Pole Painting and LED Retrofit	Utility upgrades	Underway	No	Maintenance/minor construction - no GI potential.
Powell Street Bridge Seal Coat and Joint Seal Replacement	Street maintenance	In design	No	Maintenance/minor construction - no GI potential.
Quiet Zone Railroad Crossing Quadrant Gates	Maintenance of safety equipment	In planning	No	Maintenance/minor construction - no GI potential.
Shorebird Park Boardwalk Rehabilitation	Maintenance of existing boardwalk	In planning	No	Maintenance/minor construction - no GI potential.
Sidewalk Improvement Program	Maintenance of sidewalks	Underway	No	Maintenance/minor construction - no GI potential.
Stanford Avenue Park Rehabilitation	Maintenance of park equipment	In planning	No	Maintenance/minor construction - no GI potential.
Storm Drain Cleaning and	Maintenance of storm drains	Underway	No	Maintenance/minor construction - no GI potential.

System Repair Program				potential.
Storm Drain Inventory and CCTV Inspection	Maintenance of storm drains	Underway	No	Maintenance/minor construction - no GI potential.
Street Tree Maintenance Program	Maintenance of street trees	Underway	No	Maintenance/minor construction - no GI potential.
Survey Monument and Benchmark Preservation Program	Maintenance of survey monuments	Underway	No	Maintenance/minor construction - no GI potential.
Temescal Creek Bridge Seal Coat	Street maintenance	In design	No	Maintenance/minor construction - no GI potential.
Traffic Signal LED Relamping	Utility upgrades	In planning	No	Maintenance/minor construction - no GI potential.
Transit Stop Improvements	Maintenance of transit stops	In planning	No	Maintenance/minor construction - no GI potential.
Marina Navigation Channel Maintenance Dredging Program	Maintenance dredging in marina	In planning	No	Marine project - no GI potential.
40th Street Bridge - Paint Railing	Painting/maintenance	In planning	No	Minor bridge repairs/replacement – no GI potential
Arts Master Plan	Public art plan development	In planning	No	No exterior work - no GI potential.
Bus Shelter Public Art Program, Phase IV	Public art installation	Underway	No	No exterior work - no GI potential.
Child Development Center Rehabilitation	Interior renovations	In planning	No	No exterior work - no GI potential.
Civic Center Carpet Replacement	Interior renovations	In planning	No	No exterior work - no GI potential.
Civic Center Fire Sprinkler System Repair	Maintenance	In planning	No	No exterior work - no GI potential.
Civic Center Garden Level Conf Room/Permit Counter Upgrades	Interior renovations	Design completed	No	No exterior work - no GI potential.
Computer Aided Dispatch/Records Management System	Software	In planning	No	No exterior work - no GI potential.
Computerized Maintenance Management System	Equipment and software	Underway	No	No exterior work - no GI potential.
ECCL Public Art	Public art installation	Underway	No	No exterior work - no GI potential.
Electronic Document Management System	Software	In planning	No	No exterior work - no GI potential.

GIS Development	Software and data	In planning	No	No exterior work - no GI potential.
Hollis Street Fire Station/EOC Upgrade (Station 35)	Interior renovations	In design phase	No	No exterior work - no GI potential.
IT Replacements and Purchases	Equipment purchases	In planning	No	No exterior work - no GI potential.
Shellmound/Powell Street Bridge Art Project and District Plan	Public art plan development	In planning	No	No exterior work - no GI potential.
Halleck Beach Dog Park	Construction of new dog park completely under bridge	Beginning design phase	No	No exterior work - no GI potential. (under cover)
North Hollis Undergrounding District	Undergrounding utilities	In planning	No	Non-stormwater utility project - no GI potential.
Sanitary Sewer Rehabilitation Program	Sewer maintenance	Underway	No	Non-stormwater utility project - no GI potential.
Underground Tank Closures	Subsurface remediation work	Underway	No	Non-stormwater utility project - no GI potential.
40th/San Pablo Transit Hub Feasibility Study	Study/plan for potential upgrades to transit facilities	In planning	No	Technical study, planning - no GI potential.
North Hollis Paid Parking and Trans. Demand Management	Parking meter installation	In planning	No	Technical study, planning - no GI potential.
Point Emery Art Project	Public art installation	In planning	No	There is not yet enough information to assess the project for GI potential
South Bayfront Site B	No plans in place.	In planning	No	There is not yet enough information to assess the project for GI potential
Horton Street Experimental Traffic Calming	Traffic calming measures	Underway	No	This project is under construction- no GI potential.
Safe Routes to Schools	Signalling, striping, and other safety measures	Underway	No	This project is under construction- no GI potential.
Implementing Art Projects	Public art acquisition and installation	In planning		There is not yet enough information to assess the project for GI potential

<b>C.3.j.ii.(2) ► Table B - Planned Green Infrastructure Projects</b>			
<b>Project Name and Location<sup>48</sup></b>	<b>Project Description</b>	<b>Planning or Implementation Status</b>	<b>Green Infrastructure Measures Included</b>
San Pablo Spine	Installation of Raingarden	Construction planned	The project is a raingarden that will treat nearly 4 acres of runoff from Emeryville and Oakland streets

<sup>48</sup> List each planned (and expected to be funded) public and private green infrastructure project that is not also a Regulated Project as defined in Provision C.3.b.ii. Note that funding for green infrastructure components may be anticipated but is not guaranteed to be available or sufficient.

Section 4 – Provision C.4 Industrial and Commercial Site Controls

**Program Highlights and Evaluation**  
 Highlight/summarize activities for reporting year:

Summary:  
 See Section C.4, Industrial and Commercial Site Controls, in the Alameda County Clean Water Program’s Annual Report for a description of county-wide activities.  
 The City of Emeryville contracted with EOA, Inc. for fiscal year 15/16 annual inspections, and plans to do the same for FY 16/17. The facilities list has been updated to include new businesses. No other changes or updates needed. Close relationship with and monitoring of inspections done with a new contractor has enabled the City to build a better, City-tailored inspection program, including accurate data useful for City MRP compliance reporting.  
 City staff attends regularly scheduled Industrial & Illicit Discharge Committee meetings of the Clean Water Program.

**C.4.b.iii ► Potential Facilities List**

List below or attach your list of industrial and commercial facilities in your Inspection Plan to inspect that could reasonably be considered to cause or contribute to pollution of stormwater runoff.

See attached list of industrial and commercial facilities in Emeryville’s inspection plan.

**C.4.d.iii.(1)(a) ► Facility Inspections**

Fill out the following table or attach a summary of the following information. Indicate your violation reporting methodology below.

<input type="checkbox"/>	Permittee reports multiple discrete violations on a site as one violation.
<input checked="" type="checkbox"/>	Permittee reports the total number of discrete violations on each site.

	Number	Percent
Number of businesses inspected	51	
Total number of inspections conducted	53	
Number of violations (excluding verbal warnings)	0	
Sites inspected in violation	0	0
Violations resolved within 10 working days or otherwise deemed resolved in a longer but still timely manner	NA	NA

Comments:

**C.4.d.iii.(1)(b) ► Frequency and Types/Categories of Violations Observed**

Fill out the following table or attach a summary of the following information.

Type/Category of Violations Observed	Number of Violations
Actual discharge (e.g. active non-stormwater discharge or clear evidence of a recent discharge)	3
Potential discharge and other	5
Comments:	

**C.4.d.iii.(1)(b) ► Frequency and Type of Enforcement Conducted**

Fill out the following table or attach a summary of the following information.

	Enforcement Action (as listed in ERP) <sup>49</sup>	Number of Enforcement Actions Taken	% of Enforcement Actions Taken <sup>50</sup>
Level 1	Verbal Warning	3	100%
Level 2	Written Warning/NOV	0	0
Level 3	Notice to Comply	0	0
Level 4	Legal Action	0	0
<b>Total</b>		3	100%

<sup>49</sup>Agencies to list specific enforcement actions as defined in their ERPs.

<sup>50</sup>Percentage calculated as number of each type of enforcement action divided by the total number of enforcement actions.

**C.4.d.iii.(1)(c) ▶ Types of Violations Noted by Business Category**

Fill out the following table or attach a summary of the following information.

Business Category <sup>51</sup>	Number of Actual Discharge Violations	Number of Potential/Other Discharge Violations
Grocery Store	0	1
Food Service	3	1
Gas Station	0	1
Courier/Fleet Service	1	0
Property Management	1	0

**C.4.d.iii.(1)(d) ▶ Non-Fileers**

List below or attach a list of the facilities required to have coverage under the Industrial General Permit but have not filed for coverage:

No industries identified as non-filers during scheduled inspections during this fiscal year.

**C.4.e.iii ▶ Staff Training Summary**

Training Name	Training Dates	Topics Covered	No. of Industrial/Commercial Site Inspectors in Attendance	Percent of Industrial/Commercial Site Inspectors in Attendance	No. of IDDE Inspectors in Attendance	Percent of IDDE Inspectors in Attendance
Emeryville document review	3/24/2016	Emeryville BIP and ERP review	1	33%	N/A	N/A
SCVURPPP Industrial/Commercial Stormwater Inspections Workshop	5/26/2016	Reissued MRP, State Industrial General Permit, illicit discharge inspection basics, review of commercial inspection scenarios	1	33%	N/A	N/A
ACCWP Clean Water Program Training for Stormwater Business Inspectors	6/9/2016	MRP 2.0 impact on inspections, non-stormwater discharges, utility vault discharge general permits	1	33%	N/A	N/A

<sup>51</sup>List your Program's standard business categories.

Section 5 – Provision C.5 Illicit Discharge Detection and Elimination

**Program Highlights and Evaluation**

Highlight/summarize activities for reporting year:

Provide background information, highlights, trends, etc.

Summary:  
 City Municipal crews are out on the street checking illegal dumping locations and collecting litter with litter collection crews every day. We have a very proactive program and Emeryville is a small city, so discharges are discovered quickly. The City also has a screening point at the outfall pipe to the Emeryville Crescent on the south side of the intersection of Powell Street and Frontage Road. There were no illicit discharges detected at that location during the reporting period. Furthermore, City staff are active members of the Alameda County Clean Water Program’s Industrial and Illicit Discharge Committee, and participates in regular meetings and trainings on the subject. Refer to the C.5 Illicit Discharge Detection and Elimination section of countywide program’s FY 15-16 Annual Report for description of activities at the countywide level.

**C.5.c.iii ► Complaint and Spill Response Phone Number**

List below or attach your complaint and spill response phone number

Active spills are reported to 911; potential spills and complaints are reported to (510) 596-3728.

Provide your complaint and spill response web address, if used

<http://www.ci.emeryville.ca.us/335/Stormwater>

Is a screen shot of your website showing the central contact point attached?  Yes  No

If No, explain:

Provide a discussion of how the central contact point (complaint and spill response phone number and, if used, web address) is being publicized to your staff and the public.

The contact information is on the City’s website.

**C.5.d.iii.(1), (2), (3) ► Spill and Discharge Complaint Tracking**

Spill and Discharge Complaint Tracking (fill out the following table or include an attachment of the following information)

	Number	Percentage
Discharges reported (C.5.d.iii.(1))	1	
Discharges reaching storm drains and/or receiving waters (C.5.d.iii.(2))	1	100%

100%Discharges resolved in a timely manner (C.5.d.iii.(3))	1	
<p>Comments:          One discharge was reported this year, and stormwater staff, public works, police, and fire all responded quickly. Public works staff immediately placed absorbents around the storm drain. The city engaged its on-call hazardous materials company, which cleaned the spill and the affected storm drain. Notifications to all relevant agencies were made quickly. The case is now with the County DA's office.</p>		

**C.5.f.iii ► MS4 Map Availability**

We have links on the City's website, on the 'Stormwater' page, to the regional watershed maps, including the interactive map available on the Alameda County Flood Control site.

Alameda County Flood Control & Water Conservation District Alameda County Watersheds Interactive Maps  
<http://www.acfloodcontrol.org/resources/explore-watersheds/>

ACCWP - View Creeks and Watersheds website  
<http://www.cleanwaterprogram.org/watersheds/watersheds-view-creeks-a-watersheds.html>

Section 6 – Provision C.6 Construction Site Controls

<b>C.6.e.iii.(1) ► Hillside Development Criteria</b>		
What criteria is your agency using to determine hillside development areas?	<input checked="" type="checkbox"/>	Local criteria such as maps of hillside development areas or other written criteria
		The permit definition of projects on sites with $\geq 15\%$ slope
Attach a copy of hillside development area maps or provide your written criteria below, if applicable.		
Description: No locations within the City of Emeryville exceed 10% slope.		

<b>C.6.e.iii.2.a, b, c ► Site/Inspection Totals</b>		
<b>Number of High Priority Sites (sites disturbing &lt; 1 acre of soil requiring storm water runoff quality inspection)</b> (C.6.e.iii.1.a)	<b>Number of sites disturbing <math>\geq 1</math> acre of soil</b> (C.6.e.iii.1.b)	<b>Total number of storm water runoff quality inspections conducted (include only High Priority Site and sites disturbing 1 acre or more)</b> (C.6.e.iii.1.c)
# <b>0</b>	# <b>1</b>	# <b>2</b>
Comments:		

<b>C.6.e.iii.2.d ▶ Construction Activities Storm Water Violations</b>		
<b>BMP Category</b>	<b>Number of Violations<sup>52</sup> excluding Verbal Warnings</b>	<b>% of Total Violations<sup>53</sup></b>
Erosion Control	0	0
Run-on and Run-off Control	0	0
Sediment Control	0	0
Active Treatment Systems	0	0
Good Site Management	0	0
Non Stormwater Management	0	0
<b>Total<sup>54</sup></b>		<b>100%</b>

<sup>52</sup>Count one violation in a category for each site and inspection regardless of how many violations/problems occurred in the BMP category. For example, if during one inspection at a site, there are 2 erosion control violations, only 1 violation would be counted for this table.

<sup>53</sup>Percentage calculated as number of violations in each category divided by total number of violations in all six categories.

<sup>54</sup>The total number of violations may count more than one violation per inspection, since some inspections may result in violations in more than one category. For example, during one inspection of a site, there may have been both an erosion control violation and a sediment control violation. For this reason, the total number of violations in this table may not match the total number of enforcement actions reported in Table C6.e.iii.1.e.

**C.6.e.iii.2.e ► Construction Related Storm Water Enforcement Actions**

	Enforcement Action (as listed in ERP) <sup>55</sup>	Number Enforcement Actions Issued	% Enforcement Actions Issued <sup>56</sup>
Level 1 <sup>57</sup>	Warning-Verbal	2	100
Level 2	Written Warning-Notice of Violation	0	
Level 3	Notice to Comply	0	
Level 4	Legal Action	0	
<b>Total</b>		<b>2</b>	<b>100%</b>

**C.6.e.iii.2.f, g ► Illicit Discharges**

	Number
Number of illicit discharges, actual and those inferred through evidence at high priority sites and sites that disturb 1 acre or more of land (C.6.e.iii.1.f)	0
Number of sites with discharges, actual and those inferred through evidence at high priority sites and sites that disturb 1 acre or more of land (C.6.e.iii.1.g)	0

<sup>55</sup>Agencies should list the specific enforcement actions as defined in their ERPs.

<sup>56</sup>Percentage calculated as number of each type of enforcement action divided by the total number of enforcement actions.

<sup>57</sup>For example, Enforcement Level 1 may be Verbal Warning.

**C.6.e.iii.2.h, i ► Violation Correction Times**

	Number	Percent
Violations (excluding verbal warnings) fully corrected within 10 business days after violations are discovered or otherwise considered corrected in a timely period (C.6.e.iii.1.h)	0	0% <sup>58</sup>
Violations (excluding verbal warnings) not fully corrected within 30 days after violations are discovered (C.6.e.iii.1.i)	0	0% <sup>59</sup>
Total number of violations (excluding verbal warnings) for the reporting year <sup>60</sup>	0	100%
Comments:		

**C.6.e.iii.(4) ► Evaluation of Inspection Data**

Describe your evaluation of the tracking data and data summaries and provide information on the evaluation results (e.g., data trends, typical BMP performance issues, comparisons to previous years, etc.).

Description: General housekeeping and BMP maintenance are typical areas in need of correction during site visits.

**C.6.e.iii.(4) ► Evaluation of Inspection Program Effectiveness**

Describe what appear to be your program’s strengths and weaknesses, and identify needed improvements, including education and outreach.

Description:  
 Engineering staff has attended some stormwater inspection training sessions and will need to keep training current. Staffing levels create challenges with regard to inspection frequency and timeliness.

**C.6.f ► Staff Training Summary**

Training Name	Training Dates	Topics Covered	No. of Inspectors in Attendance
C3, C6 BMP Training	March 5, 2015	C3, C6 Inspections	1

<sup>58</sup>Calculated as number of violations fully corrected in a timely period after the violations are discovered divided by the total number of violations for the reporting year.  
<sup>59</sup>Calculated as number of violations not fully corrected within 30 days after the violations are discovered divided by the total number of violations for the reporting year.  
<sup>60</sup>The total number of violations reported in the table of Violation Correction Times equals the number of initial enforcement actions, i.e., this assumes one violation is issued for several problems during an inspection at a site. The total number of violations in the table of Violation Correction Times may not equal the total number of enforcement actions because one violation issued at a site may have a second enforcement action for the same violation at the next inspection if it is not corrected.

Section 7 – Provision C.7. Public Information and Outreach

**C.7.b.i.1 ► Outreach Campaign**

Summarize outreach campaign. Include details such as messages, creative developed, and outreach media used. The detailed outreach campaign report may be included as an attachment. If outreach campaign is being done by participation in a countywide or regional program, refer to the separate countywide or regional Annual Report.

Summary:

City Environmental Program staff organized and hosts the annual Coastal Clean Up event, and participated this year in 4 separate Earth Day events, both public and private, at which hundreds of people received Clean Water Program messages. Messages conveyed by staff and materials included how and where litter originates, ways to prevent it, and collecting litter year-round. The City's Shorebird Park Hot Spot is highlighted and given additional attention by volunteers. In addition, see the ACCWP's 2015-16 Program Report for information on County-wide and regional efforts.

**C.7.c. Stormwater Pollution Prevention Education**

**Guidance - (For FY 15-16 Annual Report only, unless changes made) Provide details of website or phone number used as the point of contact for information on stormwater issues. Report on how the point of contact is publicized and maintained. Certify that your agency maintains a website (or refers to a regional website) to provide information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives.**

Local stormwater phone number(s)	Nancy Humphrey 510-596-3728
Local/Regional stormwater website(s)	<a href="http://www.emeryville.org/335/stormwater">www.emeryville.org/335/stormwater</a> -or- report a spill <a href="http://emeryville.org/1026/Engage-Emeryville-SeeClickFix">http://emeryville.org/1026/Engage-Emeryville-SeeClickFix</a>

Outreach:

Local point of contact is at top of City webpages shown above. Other options posted include 911. Also see Countywide Program's C.7 Public Information and Outreach section of Program's FY 15-16 Annual Report for efforts conducted by the countywide program to publicize stormwater points of contact (e.g. program website, hotline, outreach materials, etc.).

**C.7.d ► Public Outreach and Citizen Involvement Events**

Describe general approach to event selection. Provide a list of outreach materials and giveaways distributed. Use the following table for reporting and evaluating public outreach events

Event Details	Description (messages, audience)	Evaluation of Effectiveness
<p><b>Coastal Clean Up Day.</b> City of Emeryville organized and hosted, as part of the international day of Clean Up. 120 total participants, including volunteers, City staff, additional 4 volunteers from Four Points Sheraton helped with hospitality. Volunteers collected 1.05 tons or 2,100 lbs. of waste, and 256 gallons recycling. At the City's Hot Spot, Shorebird Park: Volunteers collected 9 bags of trash @about a total of 432 lbs.</p> <p><b>City of Emeryville Community Expo:</b> a fair highlighting free services available for Emeryville residents. Environmental Programs staff distributed Clean Water Program materials and engaged residents, informing them about the upcoming Earth Day Shoreline Clean Up the following week.</p> <p><b>"The Towers Emeryville" April 21,2016:</b> Commercial high-rise multi-tenant buildings publicized to 2200 tenants in 3 buildings. Approximately 500 people participated during a lunch-time public education event.</p>	<p><b>Annual International Coastal Clean Up</b> of shoreline, joining the international day of clean up sponsored by the State Coastal Commission. Along Powell St. on East Bay Regional Park, Shorebird Park and Pt. Emery. All ages attend, many families. Group Orientation messages included keeping the Bay clean, being aware of our actions that lead to Bay pollution and the impact on wildlife. Staff engaged Emeryville-based businesses to support the event and volunteers by donating coffee, food, tools and raffle prizes.</p> <p><b>City of Emeryville Community Expo:</b> Event organized by City Community Services Dept. Residents of all ages including families attended. Clean Water Program pesticide-recipe labels were popular, as were other CWP public education materials.</p> <p><b>Earth Day at The Towers:</b> environmentally-focused for workers in commercial offices who commute in from neighboring communities. Clean Water Program bottle-labels, seeds, reusable bags and many leaflets were put in people's hands.</p>	<p><b>Coastal Clean Up:</b> General feedback from staff and participants is that the event was well organized and fun. Only those interested attend in response to media and outreach publicizing the event. Those who attend are already convinced of the need to keep the Bay clean, but may not engage in other activities beyond this day. Number of participants about the same as recent years. Post-event effectiveness would be anecdotal. 1.05 tons of trash and 432 lbs. of recyclables, which is similar to previous years.</p> <p><b>City of Emeryville Community Expo:</b> This was a very popular event, about 150 attended, all ages, families and seniors. Ability to hold open dialog about environmental issues was valuable. Free items like water bottle labels for pesticide recipes were popular. No post-event results available.</p> <p><b>The Towers:</b> This event is busy and reaches a lot of people while they are at work, meaning they don't have to go out of their way to attend. The audience was very attentive, many conversations about subject matter, also lots who appreciated free grocery bags, seeds, spray-bottle pesticide recipe labels, etc...Worth doing, reaches a wide range of workers who go back to their homes and families with helpful info.</p>

<p><b>Grifols May 6, 2016:</b>          Over 100 employees of this medical diagnostics company were invited by their company to attend a lunch time Earth Day event that included electronics collection. Voluntary, but encouraged.</p> <p><b>Shoreline Clean Up City of Emeryville Earth Day</b>          April 23, 2016          Held at Shorebird Park, Emeryville, annually to coincide with Earth Day. A 9 a.m.to 12 noon event, 50 volunteers collected approximately one cubic yard of trash and 64 gallons of recycling.</p> <p><b>Please see the Alameda Countywide Program’s Public Information and Outreach section for a description of events.</b></p>	<p>A lunch outreach event for <b>Grifols, a private company</b>, employees. Prizes offered to employees as incentive to attend. Clean Water Program information and give-away items distributed to over 100 employees.</p> <p><b>Earth Day Shorebird Park Clean Up event:</b>          All ages attend, message is the sources of and nature of litter, and how to capture it before it ends up in the water.</p>	<p><b>Grifols</b> lunch time event is invitational, and includes other environmentally-focused vendors and agencies. It is worth doing, though it reaches a smaller audience than the Towers lunch time event.</p> <p>Public requests an <b>Earth Day clean up</b> event, therefore this event is held by demand. As much as volunteers internalize the message that this is an awareness raising event and litter is captured at other times and venues, it is a worthwhile event.</p>
<p><b>Stormwater Exhibit at the Alameda County Fair:</b>          The Fair was held from June 15 to July 4, 2016. Setting up the exhibit and producing the outreach materials are Countywide Program efforts. Staffing the exhibit is an effort conducted by individual Permittees.</p>	<p>The County Fair is attended by a wide range of residents from throughout the County. The primary message of the exhibit and outreach materials is to encourage residents to reduce their use of pesticides or when necessary use less-toxic pesticides. The exhibit also illustrates the basic watershed awareness/stormwater pollution message.</p>	<p>Several hundred thousand residents attend the fair each year. A more detailed description of the exhibit is included in Section C.7 Public Information and Outreach of the ACCWP FY 15/16 Annual Report.</p>

**C.7.e. ► Watershed Stewardship Collaborative Efforts**

Summary:

See the Alameda Countywide Program Annual Report for a summary of efforts conducted at the countywide or regional level.

**C.7.f. ► School-Age Children Outreach**

Program Details	Focus & Short Description	Number of Students/Teachers reached	Evaluation of Effectiveness
Please see the C.7 Section of the countywide program's FY 15-16 Annual Report for a description of School-age Children Outreach efforts conducted at the countywide level.			

Section 9 – Provision C.9 Pesticides Toxicity Controls

C.9.a. ► Implement IPM Policy or Ordinance							
Is your municipality implementing its IPM Policy/Ordinance and Standard Operating Procedures?				<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
If no, explain:							
Report implementation of IPM BMPs by showing trends in quantities and types of pesticides used, and suggest reasons for increases in use of pesticides that threaten water quality, specifically organophosphates, pyrethroids, carbaryl, and fipronil. A separate report can be attached as evidence of your implementation.							
Trends in Quantities and Types of Pesticides Used <sup>61</sup>							
Pesticide Category and Specific Pesticide Used	Amount <sup>62</sup>						
	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	
Organophosphates	0						
Pyrethroids	0						
Carbamates	0						
Fipronil	0						
Indoxacarb	Reporting not required in FY 15-16						
Diuron	Reporting not required in FY 15-16						
Diamides	Reporting not required in FY 15-16						
IPM strategies used include hand and mechanical weeding, structural fixes for buildings, and use of non-hazardous pest control when necessary.							

<sup>61</sup>Includes all municipal structural and landscape pesticide usage by employees and contractors.

<sup>62</sup>Weight or volume of the product or preferably its active ingredient, using same units for the product each year. Please specify units used. The active ingredients in any pesticide are listed on the label. The list of active ingredients that need to be reported in the pyrethroids class includes: metofluthrin, bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambdacyhalothrin, and permethrin.

**C.9.b ▶ Train Municipal Employees**

Enter the number of employees that applied or used pesticides (including herbicides) within the scope of their duties this reporting year.	0
Enter the number of these employees who received training on your IPM policy and IPM standard operating procedures within this reporting year.	0
Enter the percentage of municipal employees who apply pesticides who have received training in the IPM policy and IPM standard operating procedures within this reporting year.	N/A
Type of Training:	

**C.9.c ▶ Require Contractors to Implement IPM**

Did your municipality contract with any pesticide service provider in the reporting year?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
If yes, briefly describe how contractor compliance with IPM Policy/Ordinance and SOPs was monitored Public Works staff meet with contractors regularly and pest control is one of the topics covered. Prohibiting the use of pesticides is no longer an unusual contract element, and these meetings and field checks are effective.				

**C.9.d ▶ Interface with County Agricultural Commissioners**

Did your municipality communicate with the County Agricultural Commissioner to: (a) get input and assistance on urban pest management practices and use of pesticides or (b) inform them of water quality issues related to pesticides,	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
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<p><b>If yes, summarize the communication. If no, explain.</b>          See the Alameda Countywide Program’s Annual Report for a description of engagement with County Agricultural Commissioners.</p>				
<p>Did your municipality report any observed or citizen-reported violations of pesticide regulations (e.g., illegal handling and applications of pesticides) associated with stormwater management, particularly the California Department of Pesticide Regulation (DPR) surface water protection regulations for outdoor, nonagricultural use of pyrethroid pesticides by any person performing pest control for hire.</p>	<input type="checkbox"/>	<b>Yes</b>	<input checked="" type="checkbox"/>	<b>No</b>

**C.9.e.ii (1) ► Public Outreach: Point of Purchase**

Provide a summary of public outreach at point of purchase, and any measurable awareness and behavior changes resulting from outreach (here or in a separate report); **OR** reference a report of a regional effort for public outreach in which your agency participates.

Summary:  
 See the C.9 Pesticides Toxicity Control section of Countywide Program’s FY 15-16 Annual Report for information on point of purchase public outreach conducted countywide and regionally.

**C.9.e.ii (2) ► Public Outreach: Pest Control Contracting Outreach**

Provide a summary of outreach to residents who use or contract for structural pest control and landscape professionals); **AND/OR** reference a report of a regional effort for outreach to residents who hire pest control and landscape professionals in which your agency participates.

Summary:  
 See the C.9 Pesticides Toxicity Control section of Countywide Program’s FY 15-16 Annual Report for information on point of purchase public outreach conducted countywide and regionally.

**C.9.e.ii.(3) ► Public Outreach: Pest Control Operators**

Provide a summary of public outreach to pest control operators and landscapers and reduced pesticide use (here or in a separate report); **AND/OR** reference a report of a regional effort for outreach to pest control operators and landscapers in which your agency participates.

Summary:  
 See the C.9 Pesticides Toxicity Control section of Program’s FY 15-16 Annual Report for a summary of our participation in and contributions towards countywide and regional public outreach to pest control operators and landscapers to reduce pesticide use.

**C.9.f ▶ Track and Participate in Relevant Regulatory Processes**

Summarize participation efforts, information submitted, and how regulatory actions were affected; **AND/OR** reference a regional report that summarizes regional participation efforts, information submitted, and how regulatory actions were affected.

Summary:

During FY 15-16, we participated in regulatory processes related to pesticides through contributions to the countywide Program, BASMAA and CASQA. For additional information, see the Program's Annual Report and the Regional Report submitted by BASMAA on behalf of all MRP Permittees.

Section 10 - Provision C.10 Trash Load Reduction

<b>C.10.a.i ► Trash Load Reduction Summary</b>	
For Population-based Permittees, provide an estimate of the overall trash reduction percentage achieved to-date within the jurisdictional area of your municipality that generates problematic trash levels (i.e., Very High, High or Moderate trash generation). Base the estimate on the information presented in C.10.b i-iv and C.10.e.i-ii. Provide a discussion of the trash estimate below, including whether the applicable trash reduction performance guideline or deadline was attained. If not attained, include a discussion of next steps (e.g., development of a detailed plan or report of non-compliance).	
<b>Trash Load Reductions</b>	
Percent Trash Reduction in All Trash Management Areas (TMAs) due to <b>Trash Full Capture Systems</b> (as reported C.10.b.i)	35%
Percent Trash Reduction in all TMAs due to <b>Control Measures Other than Trash Full Capture Systems</b> (as reported in C.10.b.ii)	26%
Percent Trash Reduction due to <b>Jurisdictional-wide Source Control Actions</b> (as reported in C.10.b.iv)	8%
<b>SubTotal for Above Actions</b>	<b>69%</b>
<b>Trash Offsets (Optional)</b>	
Offset Associated with Additional Creek and Shoreline Cleanups (as reported in C.10.e.i)	N/A
Offset Associated with Direct Trash Discharges (as reported in C.10.e.ii)	N/A
<b>Total Estimated % Trash Load Reduction in FY 15-16</b>	<b>69%</b>
<b>Discussion of Trash Load Reduction Estimate:</b>	

<b>C.10.a.iii ► Mandatory Trash Full Capture Systems</b>		
Provide the following:		
1) Total number and types of full capture systems (publicly and privately-owned) installed prior to FY 15-16, during FY 15-16, and to-date, including inlet-based and large flow-through or end-of-pipe systems, and qualifying low impact development (LID) required by permit provision C.3.		
2) Total land area (acres) treated by full capture systems for population-based Permittees and total number of systems for non-population based Permittees compared to the total required by the permit.		
<b>Type of System</b>	<b># of Systems</b>	<b>Areas Treated (Acres)</b>
<b>Installed Prior to FY 15-16</b>		
Full trash capture inlet devices	48	37.4
Low impact development	5	3.6
<b>Installed in FY 15-16</b>		
How many were installed in FY 15-16?	0	0
<b>Total for all Systems Installed To-date</b>	<b>53</b>	<b>41</b>
<b>Treatment Acreage Required by Permit (Population-based Permittees)</b>		<b>21</b>
<b>Total # of Systems Required by Permit (Non-population-based Permittees)</b>		

C.10.b.i ► Trash Reduction - Full Capture Systems				
TMA	Jurisdiction-wide Reduction (%)	Total # of Full Capture Systems	% of Systems Exhibiting Plugged/Blinded Screens or >50% full	Summary of Maintenance Issues and Corrective Actions
1	1.8%	49	8%	All inlets are vacuumed out prior to the wet season each year. The inlets are inspected regularly – they're inspected and cleaned as needed twice a week during the wet season and at least once during the dry season each year.
2	15.3%			
3	1.1%			
4	16.7%			
5	0%			
<b>Total</b>	<b>34.9%</b>			
<p><b>Certification Statement:</b>            The City of Emeryville certifies that a full capture system maintenance and operation program is currently being implemented to maintain all applicable systems in manner that meets the full capture system requirements included in the Permit</p>				

**C.10.b.ii ► Trash Reduction – Other Trash Management Actions (PART A)**

Provide a summary of trash control actions other than full capture systems or jurisdictional source controls that were implemented within each TMA, including the types of actions, levels and areal extent of implementation, and whether actions are new, including initiation date.

TMA	Summary of Trash Control Actions Other than Full Capture Systems
1-5	Trash collection crews of 5-10 individuals pick up trash City-wide seven days a week, 52 weeks a year. In addition, twice-weekly street sweeping is conducted in high and very high trash generation areas. Neither action is new, but what is new is the focus on high and very high generation areas. Routes for both trash capture actions were adjusted in 2015-16 to better address needs as shown on the trash generation maps and in response to findings of the visual assessments.

**C.10.b.ii ► Trash Reduction – Other Trash Management Actions (PART B)**

Provide the following:

- 1) A summary of the on-land visual assessments in each TMA (or control measure area), including the street miles or acres available for assessment (i.e., those associated with VH, H, or M trash generation areas not treated by full capture systems), the street miles or acres assessed, the % of available street miles or acres assessed, and the average number of assessments conducted per site within the TMA; and
- 2) Percent jurisdictional-wide trash reduction in FY 15-16 attributable to trash management actions other than full capture systems implemented in each TMA.

TMA ID or (as applicable) Control Measure Area	Total Street Miles or Acres Available for Assessment	Summary of On-land Visual Assessments			Jurisdictional-wide Reduction (%)
		Street Miles or Acres Assessed	% of Applicable Street Miles or Acres Assessed	Avg # of Assessments Conducted at Each Site	
1	19.1 acres	1	0%	3	0%
2	51.8 acres	0	0%	3	0%
3	27.2 acres	26.9 acres	99%	12	10%
4	53.2 acres	10.5 acres	20%	12	11%
5	23.9 acres	19 acres	80%	6	5%
<b>Total</b>		<b>56.5</b>			<b>26%</b>

**C.10.b.iv ► Trash Reduction – Source Controls**

Provide a description of each jurisdictional-wide trash source control action implemented to-date. For each control action, identify the trash reduction evaluation method(s) used to demonstrate on-going reductions, summarize the results of the evaluation(s), and provide the associated reduction of trash within your jurisdictional area. Also include the total % reduction credit for all source controls up to the maximum 10% allowed by MRP 2.0.

Source Control Action	Summary Description & Dominant Trash Sources and Types Targeted	Evaluation/Enforcement Method(s)	Summary of Evaluation/Enforcement Results To-date	% Reduction	Total Reduction Credit (%)
Single-use Plastic Bag Ordinance or Policy	The Alameda County Waste Management Authority adopted the Single-Use Bag Ban. As of January 1, 2013, all grocery stores, supermarkets, mini-marts, convenience stores, liquor stores, pharmacies, drug stores or other entities that sell milk, bread, soda and snack foods (all four items) and/or alcohol (Type 20 or 21 license) in Alameda County must comply with the Single-Use Bag Ban Ordinance. Affected stores may no longer provide customers with single-use bags at check-out. A copy of the Ordinance is available on the Alameda County Waste Management Authority's website: <a href="http://reusablebagsac.org/ordinancetext.html">http://reusablebagsac.org/ordinancetext.html</a>	See Section C.10 of the ACCWP FY 15-16 Annual Report.	See Section C.10 of the ACCWP FY 15-16 Annual Report.	4%	8%
Expanded Polystyrene Food Service Ware Ordinance or Policy	Emeryville has an eco-foodware ordinance that prohibits the use or distribution of polystyrene food service ware. <a href="http://www.ci.emeryville.ca.us/DocumentCenter/Home/View/333">http://www.ci.emeryville.ca.us/DocumentCenter/Home/View/333</a>	See Section C.10 of the ACCWP FY 15-16 Annual Report.	See Section C.10 of the ACCWP FY 15-16 Annual Report.	4%	

**C.10.c ► Trash Hot Spot Cleanups**

Provide the FY 15-16 cleanup date and volume of trash removed during each MRP-required Trash Hot Spot cleanup during each fiscal year listed. Indicate whether the site was a new site in FY 15-16.

Trash Hot Spot	New Site in FY 15-16 (Y/N)	FY 15-16 Cleanup Date(s)	Volume of Trash Removed (cubic yards)				
			FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Shorebird Park	N	Sept. 19, 2015	.08 cu yd.	.07 cu yd	.88 cu yd	.38 cu. Yd	1.44 cu. Yd.
Shorebird Park	N	April 23, 2016	Not available	Not available	.44 cu yd	.45 cu. yd	1.3 cu. Yd.

<b>C.10.d ► Long-Term Trash Load Reduction Plan</b>	
Provide descriptions of significant revisions made to your Long-term Trash Load Reduction Plan submitted to the Water Board in February 2014. Describe significant changes made to primary or secondary trash management areas (TMA), trash generation maps, control measures, or time schedules identified in your plan. Indicate whether your trash generation map was revised and is attached to your Annual Report.	
Description of Significant Revision	Associated TMA
The baseline trash generation map was revised using data from 2009 Google Street View and local knowledge of conditions. The new baseline map has been appended to the Long Term Trash Plan and is attached here in Appendix E.	1-5
The TMA boundaries were changed to better fit trash generation categories and land use types. The number of TMAs remains the same. The attached map in Appendix E, which is also appended to the Long Term Trash Plan, shows the new TMA boundaries.	1-5

**C.10.e. ► Trash Reduction Offsets (Optional)**

Provide a summary description of each offset program implemented, the volume of trash removed, and the offset claimed in FY 15-16. Also, for additional creek and shoreline cleanups, describe the number and frequency of cleanups conducted, and the locations and cleanup dates. For direct discharge control programs approved by the Water Board Executive Officer, also describe the results of the assessments conducted in receiving waters to demonstrate the effectiveness of the control program. Include an Appendix that provides the calculations and data used to determine the trash reduction offset.

Offset Program	Summary Description of Actions and Assessment Results	Volume of Trash (CY) Removed/Controlled in FY 15-16	Offset (Jurisdiction-wide Reduction %)
Additional Creek and Shoreline Cleanups (Max 10% Offset)	None	N/A	N/A
Direct Trash Discharge Controls (Max 15% Offset)	None.	0	0

Appendix XX. Baseline trash generation and areas addressed by full capture systems and other control measures in Fiscal Year 15-16.

TMA	2009 Baseline Trash Generation (Acres)					Trash Generation (Acres) in FY 15-16 After Accounting for Full Capture Systems					Jurisdiction-wide Reduction via Full Capture Systems (%)	Trash Generation (Acres) in FY 15-16 After Accounting for Full Capture Systems <u>and</u> Other Control Measures					Jurisdiction-wide Reduction via Other Control Measures (%)	Jurisdiction-wide Reduction via Full Capture <u>AND</u> Other Control Measures (%)
	L	M	H	VH	Total	L	M	H	VH	Total		L	M	H	VH	Total		
1	81	11	8	2	102	82	11	8	0	102	2%	82	11	8	0	102	0%	2%
2	77	44	6	19	147	95	44	0	7	147	15%	95	44	0	7	147	0%	15%
3	35	0	26	4	66	38	0	23	4	66	1%	38	27	0	0	66	10%	11%
4	15	31	0	39	85	31	30	0	24	85	17%	31	40	0	13	85	11%	27%
5	287	5	19	0	311	287	5	19	0	311	0%	287	24	0	0	311	5%	5%
Totals	495	91	60	64	709	534	90	51	35	709	35%	534	146	9	21	709	26%	61%

Section 11 - Provision C.11 Mercury Controls

- C.11.a ▶ Implement Control Measures to Achieve Mercury Load Reductions**
- C.11.b ▶ Assess Mercury Load Reductions from Stormwater**
- C.11.c ▶ Plan and Implement Green Infrastructure to Reduce Mercury Loads**
- C.11.d ▶ Prepare Implementation Plan and Schedule to Achieve TMDL Allocations**
- C.11.e ▶ Implement a Risk Reduction Program**

Summary:

A summary of countywide Program and regional accomplishments for these sub-provisions are included within the C.11 Mercury Controls section of Program's FY 15-16 Annual Report and/or BASMAA regional reports.

Section 12 - Provision C.12 PCBs Controls

- C.12.a ▶ Implement Control Measures to Achieve PCBs Load Reductions**
- C.12.b ▶ Assess PCBs Load Reductions from Stormwater**
- C.12.c ▶ Plan and Implement Green Infrastructure to Reduce PCBs Loads**
- C.12.d ▶ Prepare Implementation Plan and Schedule to Achieve TMDL Allocations**
- C.12.e ▶ Evaluate PCBs Presence in Caulks/Sealants Used in Storm Drain or Roadway Infrastructure in Public Rights-of-Way**
- C.12.f ▶ Manage PCB-Containing Materials and Wastes During Building Demolition Activities So That PCBs Do Not Enter Municipal Storm Drains**
- C.12.g ▶ Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins**
- C.12.h ▶ Implement a Risk Reduction Program**

Summary:

A summary of Permittee, Countywide Program and regional accomplishments for these sub-provisions are included within the C.12 PCB Controls section of Program's FY 15-16 Annual Report and/or BASMAA regional reports.

Section 13 - Provision C.13 Copper Controls

**C.13.a.iii ► Manage Waste Generated from Cleaning and Treating of Copper Architectural Features**

<i>(For FY 15-16 Annual Report only)</i> Do you have adequate legal authority to prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of copper architectural features, including copper roofs?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
<i>(For FY 15-16 Annual Report only)</i> Provide a summary of how copper architectural features are addressed through the issuance of building permits.				
Summary: We are unaware of copper architectural features in Emeryville.				
<i>(FY 15-16 Annual Report and each Annual Report thereafter)</i> Provide summaries of permitting and enforcement activities to manage waste generated from cleaning and treating of copper architectural features, including copper roofs, during construction and post-construction.				
Summary: The use of architectural copper is discouraged, and no projects have used it.				

**C.13.b.iii ► Manage Discharges from Pools, Spas, and Fountains that Contain Copper-Based Chemicals**

<i>(For FY 15-16 Annual Report only)</i> Do you have adequate legal authority to prohibit the discharge to storm drains of water containing copper-based chemicals from pools, spas, and fountains?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
<i>(For FY 15-16 Annual Report only)</i> Provide a summary of how copper-containing discharges from pools, spas, and fountains are addressed to accomplish the prohibition of the discharge.				
Summary: No discharges from pools or fountains are ever permitted to the storm drains, as outlined in the stormwater section of our Municipal Ordinance.				
<i>(FY 15-16 Annual Report and each Annual Report thereafter)</i> Provide summaries of any enforcement activities related to copper-containing discharges from pools, spas, and fountains.				
Summary: No discharges were reported or discovered, so no enforcement actions were necessary.				

**C.13.c.iii ► Industrial Sources Copper Reduction Results**

Based upon inspection activities conducted under Provision C.4, highlight copper reduction results achieved among the facilities identified as potential users or sources of copper, facilities inspected, and BMPs addressed.

Summary:

There are no known users or potential users of copper in Emeryville's industrial inspection program.

Section 15 -Provision C.15 Exempted and Conditionally Exempted Discharges

**C.15.b.vi.(2) ► Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering**

Provide implementation summaries of the required BMPs to promote measures that minimize runoff and pollutant loading from excess irrigation. Generally the categories are:

- Promote conservation programs
- Promote outreach for less toxic pest control and landscape management
- Promote use of drought tolerant and native vegetation
- Promote outreach messages to encourage appropriate watering/irrigation practices
- Implement Illicit Discharge Enforcement Response Plan for ongoing, large volume landscape irrigation runoff.

Summary:

The City of Emeryville promotes, and in some cases requires, the use of best management practices from the Bay Friendly Landscaping and Gardening program, which includes water conservation as one of its key principles. In addition, the City reduced its irrigation usage in 2014-15 ceasing irrigation in all medians and by reducing irrigation in parks and other areas by a minimum of 25%. These measures are accompanied by signage that states "Brown is the New Green." Countywide efforts are described in sections C.7 and C.9 of the ACCWP Annual Report.

## Appendices

A	City of Emeryville's Water Efficient Landscape Ordinance (WELO)	C.3.i
B	Facilities Requiring Inspections	C.4.b.iii
C	Screenshot of Website Showing Central Contact Point	C.5.c.iii
D	Screenshot of Website Showing Link to Watershed Map	C.5.f.iii
E	Updated Baseline Trash Generation Map with New TMA Boundaries	C.10.d

Appendix A: City of Emeryville's Water Efficient Landscape Ordinance (WELO)

(Section C.3.i)

# **City of Emeryville**

## **Water Efficient Landscape Requirements**

### **Performance Requirements for Larger Landscapes**

This document defines the water efficient landscape design, construction and documentation standards referred to in Section 9-4.602 of the Emeryville Municipal Code.

#### **Applicability and Exceptions 2**

##### **Landscape Documentation Package**

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## Applicability and Exceptions

New and rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet are subject to this section.

These requirements do not apply to the following:

- registered historical sites, or
- ecological restoration projects that do not require a permanent irrigation system.

For projects subject to these requirements, planting and irrigation shall be designed, installed, maintained, and operated to result in total annual applied water use less than or equal to the maximum applied water allowance calculated as specified in these requirements. These projects are required to obtain Design Review, a Building or Grading Permit, and a Certificate of Occupancy, and to meet the design, construction and documentation standards described in this document. Projects must also comply with stormwater (Section 6-13.301) and recycled water (Section 9-4.603) provisions of the Emeryville Municipal Code and Stopwaste.org's Bay-Friendly Landscape Guidelines.

## Landscape Documentation Package

### Submitted as Part of the Design Review Application

The Landscape Documentation Package shall include project information, a soil management report, a landscape design plan, a water efficient landscape worksheet, and a grading design plan. This package shall be submitted as part of the Design Review Application for the project.

#### I. Project Information Form

Use the Water Efficient Landscaping Project Information Form on Page 12 to provide contact and project information.

#### II. Water Efficient Landscape Worksheet

The Water Efficient Landscape Worksheet shows the Estimated Total Water Use, the Maximum Applied Water Allowance, and the Evapo-Transpiration Adjustment Factor for the proposed landscape. The Estimated Total Water Use must be less than the Maximum Applied Water Allowance. The Evapo-Transpiration Adjustment Factor for the proposed regular landscape areas must be 0.55 or less for residential areas, and 0.45 or less for non-residential areas. The Water Efficient Landscape Worksheet form is on page 13 of this document.

**A. Plant factors.** Plant factors range from 0 to 0.1 for very low water use plants, from 0.2 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants. To determine if a plant's water use is low, medium or high, refer to any published plant reference book approved by the California Department of Water Resources, including any of the following books or more recent editions of them:

- California Native Plants for the Garden, Carol Bornstein, David Fross and Bart O'Brien, Cachuma Press, 2005. (CNP)

- Plants and Landscapes for Summer-Dry Climates, Nora Harlow (ed.), East Bay Municipal Utility District, 2004. (EBMUD)
- Landscape Plants for California Gardens, Robert C. Perry, Land Design Publisher, 2010.
- Sunset Western Garden Book, editors of Sunset Magazine, Oxmoor House, 2012.
- University of California Division of Agriculture and Natural Resources. Water Use Classification of Landscape Species (WUCOLS IV), [www.ucanr.edu/sites/WUCOLS](http://www.ucanr.edu/sites/WUCOLS)

**B. Water, Plants, and Hydrozones.** Include all water features in the high water use hydrozone, and temporarily irrigated areas in the low water use hydrozone. Exclude non-irrigated rain gardens from the hydrozones. If a hydrozone includes plants with two similar water use levels (very low-low, low-moderate, moderate-high), either calculate the plant factor based on the proportions of the plants with each water use factor, or use the plant factor for the higher use level.

### III. Soil Management Report

In order to create drought resistant soil, reduce runoff and encourage healthy plant growth, submit a soil management report addressing soil attributes of the project site, including the following elements:

**A. Soil Areas.** Identify areas of quality topsoil to be protected during construction, and critical soil limitations such as compaction, water logged soils or wetlands, and thin, eroded or erosion prone soils.

**B. Soil Analysis.** Sample and analyze the soil(s) into which plantings are to be made. If all plantings will be in new imported soil, City staff may waive this requirement.

1. The soil analysis must be performed by a laboratory certified by the United States Composting Council (USCC) under the Seal of Testing Assurance (STA) Program.

2. Sample soils in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.

3. Provide the soil laboratory with information about the types of plantings intended (such as turf, perennial bed, annual bed, swale, etc.).

4. At a minimum the soil analysis shall include:

a. soil texture;

b. infiltration rate determined by laboratory test or soil texture infiltration rate table;

c. pH;

d. total soluble salts;

e. sodium;

f. essential nutrients

g. percent organic matter; and

h. recommendations for soil with compost to bring the soil organic matter to a minimum of 6% by dry weight and incorporating organic fertilizers to recommended levels for planting areas. Acceptable organic fertilizers and amendment products are those allowed for use in crop production by at least one of the following:

Organic Materials Review Institute's Generac Materials List

California Department of Food and Agriculture's Organic Input Materials Program

U.S. Department of Agriculture's National Organic Program

5. The soil report shall include the following types of recommendations:

- a. if the soils are to be irrigated with recycled water, recommendations tailored to recycled water.
- b. management actions to remediate limiting soil characteristics, such as ripping the soil to alleviate compaction.

**C. Soil Specifications.** Submit specifications for protecting topsoil, ameliorating soil limitations, and incorporating compost and/or amendments as per recommendations in the soil analysis report. If all planting soil is to be imported, submit information on the composition of the new soil and any amendments. If the imported soil does not contain adequate compost, then a minimum of 6 cubic yards of compost, with a composition according to City standards, per 1,000 square feet of landscape area shall be incorporated into the top 6 inches of soil.

**D. Use in Design.** Provide the soil management report to the landscape and irrigation designers in time to be used in the design. If significant mass grading is planned, the soil analysis report may be submitted as part of the Certificate of Completion rather than as part of the Landscape Documentation Package.

#### **IV. Landscape Design Plan**

Submit a landscape design plan meeting the following criteria as part of the Design Review Application. For the efficient use of water, carefully design the landscape for the intended function of the project.

**A. Plants.** Use the following criteria in plant selection.

1. The Estimated Total Water Use (ETWU) of the plant material selected must not exceed the Maximum Applied Water Allowance (MAWA), and the Evapo-Transpiration Factor must not exceed 0.55 for residential areas and 0.45 for non-residential areas. Methods to achieve water efficiency shall include one or more of the following:
  - a. protect and preserve native species and natural vegetation;
  - b. select plants based on local climate suitability, and disease and pest resistance;
  - c. select water-conserving plant, tree and turf species, especially local native plants;
  - d. select trees based on size at maturity as appropriate for the planting area;
  - e. select plants from local and regional landscape program plant lists;
  - d. use the Sunset *Western Garden Book's* Climate Zone System, which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;
  - e. select and locate plants considering invasive surface roots, to minimize damage to buildings, pavement, utility lines, and other property and infrastructure;
  - f. consider the solar orientation for plant placement to maximize summer shade and winter solar gain.
2. Each hydrozone shall have plant materials with similar water use. Hydrozones may include a mix of plants with very low and low, low and moderate, or moderate and high water use.
4. Turf is not allowed on slopes greater than 25% where the toe of the slope is adjacent to an impermeable hardscape; 25% means 1 foot of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent).
5. Turf is allowed in multi-unit residential projects with five units or more and non-residential projects only if it is a recreational area. Turf is allowed in residential projects with one to four units if the water budget is met.
6. Do not use species identified by the California Invasive Plant

Council's "Don't Plant a Pest! San Francisco Bay Area" and "Don't Plant a Pest! Trees in California" brochures.

7. The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives per Civil Code Section 1351, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.
8. High water use plants, those with a plant factor of 0.7 to 1.0, are prohibited in street medians..

**B. Water Features.** Features such as pools, fountains and spas have two requirements:

1. Use re-circulating water systems for water features.
2. Design water features to minimize water loss. Outdoor swimming pools and spas (hot tubs) must have covers.

**C. Soil Preparation, Amendments and Mulch**

1. Before planting any materials, transform compacted soils to a friable condition. On engineered slopes, only amended planting holes need to meet this requirement.
2. If there is a soils report, incorporate compost and soil amendments according to recommendations of the soil report and what is appropriate for the plants selected.
3. In the absence of a soils report, incorporate compost at a rate of 6 cubic yards per 1,000 square feet of landscape area, with a composition according to City standards, into the top 6 inches of soil. Soils with more than 6% organic matter in the top 6 inches of soil are exempt from adding compost and tilling; an accredited soil testing laboratory must confirm organic matter. In projects that incorporate sheet mulching, compost may be installed above the cardboard layer instead of tilling it into the soil. Purchase compost from processors who participate in the U.S. Composting Council's (USCC) Standard Testing Assurance (STA) Program.
4. Apply a minimum 3-inch layer of mulch on all exposed soil surfaces of planting areas except in turf areas, areas receiving closely spaced plugs as a lawn alternative, or direct seeding applications where mulch is contraindicated. To provide habitat for beneficial insects and other wildlife, up to 5% of the landscape area may be left without mulch; designated insect habitat must be included in the landscape design plan as such. Do not place nonporous material under the mulch.
5. Use biologically based stabilizing mulching products that meet current engineering standards on slopes.
6. The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.
7. Organic, recycled or post-consumer mulch shall take precedence over inorganic materials or virgin forest products.
8. Required trees shall have adequate rootable soil volume (600 cubic feet for small trees, 900 cubic feet for medium-size trees, and 1,200 cubic feet for large trees) and good drainage. Tree sizes refer to sizes of canopy at maturity: small 15-24' wide and 20' tall, medium 25-34' wide and 35' tall, large 35'+ wide.

**D. The Landscape Design Plan Document.** Draw the landscape design plan clearly on project base sheets, to a scale that is adequate to identify each component of the plan, at least 1 inch equals 20 feet. The plan shall include the following elements:

1. Project base sheet including dimensioned property lines, building footprints, and pervious and non-pervious hardscape areas including parking, paving and sidewalks;
2. Existing trees and shrubs and whether each will be kept or removed;
3. Hydrozone delineation and water use as low, moderate, high water, or mixed water use;

3. Recreational areas (turf used as a play surface);
4. Edible plant areas that are permanently and solely dedicated to edible plants;
5. Recycled-water irrigated areas, indicating whether recycled water is available now or not;
6. Soil amendments, type, and quantity;
7. Mulch type and application depth;
8. Water features, indicating type and surface area;
9. Stormwater retention and infiltration facilities, with location, depth, and 24-hour infiltration capacity;
10. Rain harvesting facilities;
11. If the project includes graywater, graywater discharge piping, system components and area(s) of distribution;
12. Location of plants indicating each species of tree, shrub, groundcover, turf and vine using a unique symbol for each;
13. Table of plants including botanical name, common name, container size, spacing, quantity and water use level for each species of plant;
14. Tree staking and soil preparation details including planting specifications;
15. Statement: "I have complied with the criteria of the Water Efficient Landscape Ordinance and applied them for the efficient use of water in the Landscape Design Plan"; and
16. Signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape.

#### **V. Grading Design Plan**

Submit a grading plan as part of the Landscape Documentation Package. A comprehensive grading plan prepared by a civil engineer for other City permits satisfies this requirement, but is not necessary for all projects. For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff, and water waste.

**A. Preventing Erosion and Runoff.** To prevent excessive erosion and runoff, it is highly recommended that project applicants:

1. Grade so that all irrigation and normal rainfall remains within property lines and does not drain onto non-permeable hardscapes;
2. Avoid disruption of natural drainage patterns and undisturbed soil; and
3. Avoid soil compaction in landscape areas.

**B. The Grading Design Plan Document.** Draw the grading design plan clearly on project base sheets, to a scale that is adequate to identify each component of the plan, at least 1 inch equals 20 feet. The plan shall indicate finished configurations and elevations of the landscape, and shall include the following elements:

1. Height of graded slopes;
2. Contour elevations with spacing shown at no greater than 5 feet;
3. Drainage patterns;
4. Pad elevations;
5. Finish grade;
6. Stormwater retention improvements, if applicable;
7. Statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan;" and
8. Signature of a licensed professional as authorized by law.

**VI. Bay-Friendly Landscape Scorecard**

Include a filled-in copy of the attached Bay-Friendly Landscape Scorecard.

**Irrigation Documentation Package  
Submitted as Part of the Grading or Building Permit Application**

This section applies to landscaped areas requiring permanent irrigation, not areas that require temporary irrigation solely for the plant establishment period. The Irrigation Documentation Package shall include an updated Landscape Documentation Package, an irrigation design plan, an irrigation schedule, and a copy of a letter or e-mail sending documents to the water purveyor. This package shall be submitted as part of the Building Permit or Grading Permit application for the project.

**I. Updated Landscape Documentation Package**

During and after the design review process, the project information, water efficient landscape worksheet, soil management report, landscape design plan and/or grading design plan may be revised. Submit the final versions of these documents, or resubmit the design review documents if they have not been changed.

**II. Irrigation Design Plan**

Submit an irrigation design plan meeting the irrigation design criteria as part of the application for a Building Permit or a Grading Permit. For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. Design the irrigation system and its related components to allow for proper installation, management, and maintenance.

**A. System.** The system shall meet the criteria described below.

1. Provide a dedicated landscape water meter separate from indoor water for 5,000 square feet. Install a private submeter for non-residential irrigated landscapes of 1,000 sq. ft. but not more than 5,000 sq. ft.
2. Use rain, freeze and wind sensors, either integral or auxiliary, that suspend or alter irrigation operation during rain or windy or freezing weather.
3. Automatic irrigation controllers are required, and shall utilize soil moisture sensor data with non-volatile memory for irrigation scheduling.
4. If the water pressure is below or exceeds the recommended pressure of the specified irrigation devices, install a pressure regulating device.
5. Master shut-off valves are required on all projects except landscapes that allow for the individual control of sprinklers or emitters that are individually pressurized in a system equipped with low pressure shut down features.
6. Install a backflow prevention device to protect the potable water supply from contamination by the irrigation system.

7. Flow sensors that detect and report high flow conditions created by system damage or malfunction are required for all non-residential landscapes, and for residential landscapes of 5,000 square feet or larger.
8. Design the irrigation system to prevent irrigation runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.
9. Use information from the soil management plan, such as soil type and infiltration rate, when designing the irrigation system.
10. The design of the irrigation system shall conform to the hydrozones of the landscape design plan.
11. In mulched planting areas, use low volume irrigation to maximize water infiltration into the root zone.
12. All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers'/International Code Council's (ASABE/ICC) 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard." All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
13. Head to head coverage is recommended. In any case, sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
14. Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to hardscapes or in high traffic areas of turf grass.
15. Check valves or anti-drain valves are required on all sprinkler heads where low point drainage could occur.
16. Areas less than 10 feet in width in any direction shall be irrigated with subsurface irrigation or other means that produce no runoff or overspray.
17. Overhead irrigation is not permitted within 24 inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:
  - a. the landscape area is adjacent to permeable surfacing and no irrigation runoff occurs;
  - or
  - b. the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping.
18. Slopes greater than 25% shall not be irrigated with an irrigation system with an application rate exceeding 0.75 inches per hour. Prevention of runoff and erosion must be confirmed during the irrigation audit.

#### **B. Hydrozones.**

1. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.
2. Plants in storm water bio-treatment zones shall be on a separate valve.
3. Select sprinkler heads and other emission devices based on what is appropriate for the plant types within that hydrozone.
4. Where feasible, place trees on separate valves from shrubs, groundcovers, and turf to facilitate the appropriate irrigation of trees. Consider the mature size and extent of the root zone when designing irrigation for the tree.

5. On the landscape design plan and irrigation design plan, designate hydrozone areas by number, letter, or other designation. On the irrigation design plan, designate the area irrigated by each valve, and assign a number to each valve. Use this valve number in the Water Efficient Landscape Worksheet.

**C. The Irrigation Design Plan Document.** Draw the irrigation design plan clearly on project base sheets, to a scale that is adequate to identify each component of the plan, at least 1 inch equals 20 feet. The plan shall include the following elements:

1. Designated hydrozones and area irrigated by each valve;
2. Location and size of the water meter for the landscape area;
3. Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices;
4. Static water pressure at the point of connection to the public water supply;
5. Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station (valve);
6. Recycled water irrigation systems if recycled water is available or projected to be available in the foreseeable future, as specified in Article 9-4.68, Water Reuse;
7. Statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan"; and
8. Signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or any other person authorized to design an irrigation system.

## **Project Completion Package**

### **Submitted Prior to Issuance of Certificate of Occupancy or Final Inspection**

#### **I. Certificate of Completion**

Use the form on pages 14-15 to provide contact information and certification that the landscape project for the property has been installed according to the approved Landscape Design Plan and the Irrigation Design Plan. Attach As-Built Drawings, an Irrigation Scheduling Parameters, Schedule of Landscape and Irrigation Maintenance, Landscape Irrigation Audit Report, Soil Analysis Report if not submitted earlier with the Landscape Design Package, and documentation verifying compliance with the recommendations in the Soil Analysis Report, as specified below.

**A. As-Built Drawings and Hydrozone Diagram.** Attach as-built drawings and a hydrozone diagram.

1. As-Built Drawings. Show changes made in the field during construction on attached as-built record drawings. If no changes were made, attach the landscape and irrigation plans.
2. Hydrozone Diagram. Attach a diagram of the irrigation plan showing hydrozones, and keep it with the irrigation controller for subsequent management purposes.

**B. Irrigation Scheduling.** Attach irrigation schedules and the parameters used to set them. For the efficient use of water, develop, manage, and evaluate the irrigation schedules to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:

1. Controllers. Irrigation scheduling shall be regulated by automatic irrigation controllers.

2. Overhead Hours. Overhead irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m. unless weather conditions prevent it. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.
3. Meeting MAWA. Specify run times, emission devices, and flow rates so that applied water meets the Estimated Total Water Use. Total annual applied water shall be less than or equal to Maximum Applied Water Allowance (MAWA). Regulate actual irrigation schedules by automatic irrigation controllers using current reference evapotranspiration data (e.g. California Irrigation Management Information System - CIMIS) or soil moisture sensor data.
4. Parameters. Develop and submit parameters used to set the automatic controller for the plant establishment period, the established landscape, and temporarily irrigated areas.
5. Factors. Each irrigation schedule shall consider for the station all of the following that apply: irrigation interval (days between irrigation), irrigation run times (hours or minutes per irrigation event to avoid runoff), number of cycle starts required for each irrigation event to avoid runoff, amount of applied water scheduled to be applied on a monthly basis, application rate setting, root depth setting, plant type setting, soil type and mulch depth, slope factor setting, shade factor setting, and irrigation uniformity or efficiency setting.

**C. Schedule of Landscape and Irrigation Maintenance.** Attach a schedule of landscape and irrigation maintenance, and convey a copy to the owner. Landscapes shall be maintained to ensure water use efficiency.

1. Schedule elements. The regular maintenance schedule shall include routine inspection, adjustment and repair of the irrigation system and its components, aerating and dethatching turf areas, top dressing with compost, replenishing mulch regularly to a depth of 3 inches, fertilizing, pruning, weeding, replacing failed plants with the same or equivalent plants, removing any obstruction to emission devices, and annual transmittal of total annual irrigation water use to the City Environmental Programs Supervisor.
2. Auditing and Maintenance. Operation of the irrigation system outside the normal watering hours is allowed for auditing and system maintenance.
3. Replacement Parts. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents.
4. Sustainable Best Practices. The project applicant is encouraged to implement established landscape industry sustainable best practices for all landscape maintenance activities.

**D. Landscape Irrigation Audit Report and Implementation.** Attach a Landscape Irrigation Audit Report and implementation documents as specified in section 4 below.

1. Who may conduct the audit. The irrigation audit report shall be prepared by a City landscape irrigation auditor or a third party Certified Landscape Irrigation Auditor. Audits shall not be conducted by the person who designed or installed the landscape or irrigation system.
2. Audit elements. Audits shall include inspection, system tune-up, system test with distribution uniformity or emission uniformity, reporting overspray or irrigation runoff that causes overland flow, and edits to or approval of the irrigation schedule.
3. Audit method. The audit must be conducted in a manner consistent with the Irrigation Association's Landscape Irrigation Auditor Certification program or other U.S. Environmental Protection Agency "Watersense" labeled auditing program.
4. Documents to be submitted with audit. The applicant shall also submit information on how any overspray and irrigation runoff have been eliminated, a final irrigation schedule incorporating the auditor's edits, where the irrigation schedule will be kept on site, and who will implement the irrigation schedule.

**E. Soil Management Report.** Attach a soil analysis report if it was not submitted earlier with the Landscape Documentation Package. Attach documentation verifying implementation of recommendations from the soil analysis report.

**II. Final Landscape Inspection**

Call the project planner and the Environmental Program Supervisor to arrange for a final landscape inspection. They will check to see that the plants and irrigation system have been installed as specified and there is no or minimal irrigation runoff or overspray. Submit a record of an approved final inspection.

WATER EFFICIENT LANDSCAPE PROJECT INFORMATION FORM

Date: \_\_\_\_\_

Project Name \_\_\_\_\_ Planning Project Number \_\_\_\_\_

Project Address \_\_\_\_\_

Assessor's Parcel Number(s) \_\_\_\_\_

Applicant Name and Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ E-Mail \_\_\_\_\_

Property Owner Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ E-Mail \_\_\_\_\_

Total Landscape Area (Sq. Ft.) \_\_\_\_\_

Landscape Type (check one): \_\_\_\_\_ New \_\_\_\_\_ Rehabilitated \_\_\_\_\_

Land Use Type (check one): \_\_\_\_\_

\_\_\_\_\_ Multi-Family \_\_\_\_\_ Single-Family \_\_\_\_\_ Commercial \_\_\_\_\_ Other (specify) \_\_\_\_\_

Irrigation/Water Supply Type (check one): \_\_\_\_\_

\_\_\_\_\_ Potable \_\_\_\_\_ Recycled (Reclaimed) from EBMUD \_\_\_\_\_ Graywater \_\_\_\_\_ Rain Cisterns \_\_\_\_\_

Compliance Method: \_\_\_\_\_ Prescriptive (Smaller Landscapes) \_\_\_\_\_ Performance (Larger Landscapes) \_\_\_\_\_

Documents Included (only for projects meeting Performance Requirements for Larger Landscapes): \_\_\_\_\_

\_\_\_\_\_ Worksheet \_\_\_\_\_ Soil Report \_\_\_\_\_ Landscape Plan \_\_\_\_\_ Grading Plan \_\_\_\_\_

I agree to comply with the requirements of the Water Efficient Landscape Ordinance. \_\_\_\_\_

Applicant Signature \_\_\_\_\_ Date \_\_\_\_\_

**WATER EFFICIENT LANDSCAPE WORKSHEET**

Project Address \_\_\_\_\_ Date \_\_\_\_\_

Hydrozone # or Planting Description <sup>a</sup>	Plant Factor (PF) (water use) <sup>b</sup>	Irrigation Method <sup>c</sup>	Irrigation Efficiency (IE) <sup>d</sup>	Proposed ETAF <sup>e</sup>	Landscape Area (sq. ft.)	Proposed ETAF Area	Estimated Water Use <sup>f</sup>
<b>Regular Landscaped Areas</b>							
<b>Totals</b>						<b>(A)</b>	<b>(B)</b>
<b>Special Landscape Areas (SLA)<sup>g</sup></b>							
				1			
				1			
				1			
<b>Totals</b>						<b>(C)</b>	<b>(D)</b>
<b>Estimated Total Water Use (ETWU)<sup>h</sup></b>							
<b>Maximum Applied Water Allowance (MAWA)<sup>i</sup></b>							

Estimated Total Water Use (ETWU) must be less than Maximum Applied Water Allowance (MAWA).

<sup>a</sup>Hydrozone # or Planting Description: for example 1, front planting bed, or low water use plants

<sup>b</sup>Plant Factor (PF) (water use): very low 0-0.1, low 0.2-0.3, moderate 0.4-0.6, high 0.7-1.0

<sup>c</sup>Irrigation Method: overhead spray or drip

<sup>d</sup>Irrigation Efficiency: spray head 0.75; drip 0.81

<sup>e</sup>Proposed Evapo-Transpiration Adjustment Factor (ETAF) = Plant Factor (PF) / Irrigation Efficiency (IE)

<sup>f</sup>Estimated Water Use (Annual Gallons Required) = (Proposed ETAF Area) x 41.8 x 0.62

where 41.8 is Emeryville's Reference Evapo-Transpiration rate per year and

0.62 converts from acre-inches per acre per year to gallons per square foot per year

<sup>g</sup>SLA: edibles, recreation, recycled water irrigation, recycled water features

<sup>h</sup>Estimated Total Water Use (ETWU) = Total Proposed ETAF Area x 41.8 x 0.62 = (B + D) x 25.916

<sup>i</sup>MAWA = [(Max Allowed ETAF x Total Landscape Area) + ((1 - Max Allowed ETAF) x SLA)] x 41.8 x 0.62

Residential Max Allowed ETAF is 0.55. Non-residential Max Allowed ETAF is 0.45.

So Residential MAWA = [(0.55 x (A + C)) + ((0.45) x (C))] x 25.916

Non-residential MAWA = [(0.45 x (A + C)) + ((0.55) x (C))] x 25.916

Evapo-Transpiration Adjustment Factor (ETAF):  
Regular Landscape Areas

Total Proposed ETAF Area (B)	
Total Area (A)	
Average Proposed ETAF (B/A)	
All Proposed Landscape Areas	
Total Proposed ETAF Area (B + D)	
Total Proposed Area (A + C)	
Site-wide Proposed ETAF (B + D) / (A + C)	

Average Evapo-Transpiration Adjustment Factor (ETAF) for Regular Landscape Areas must be 0.55 or less for Residential areas, and 0.45 or less for Non-residential areas.

WATER EFFICIENT LANDSCAPE CERTIFICATE OF COMPLETION

Project Information

Date: \_\_\_\_\_

Project Name \_\_\_\_\_ Planning Project Number \_\_\_\_\_

Project Address \_\_\_\_\_

Assessor's Parcel Number(s) \_\_\_\_\_

Applicant: Name and Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Property Owner: Name and Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package, the Irrigation Documentation Package, and the Certificate of Completion, and that it is my/our responsibility to see that the project is maintained in accordance with the Schedule of Landscape and Irrigation Maintenance."

Property Owner Signature \_\_\_\_\_ Date \_\_\_\_\_

Landscape Documentation Package:

Date submitted \_\_\_\_\_ Date approved \_\_\_\_\_

Irrigation Documentation Package:

Date submitted \_\_\_\_\_ Date approved \_\_\_\_\_

Certificate of Installation According to the Landscape Documentation Package

Certifier:  Landscape Designer  Irrigation Designer  Licensed Landscape Contractor

Name and Title \_\_\_\_\_

License or Certification Number \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

"I/we certify based upon periodic site observations, that the work has been completed in accordance with the ordinance and that the landscaping planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package and the approved Irrigation Documentation Package."

\_\_\_\_\_  
Signature        Date

Attachments

\_\_\_\_\_

Submitted  Approved

\_\_\_\_\_  As-Built Drawings

\_\_\_\_\_  Hydrozone Diagram  Copy to be kept with irrigation controller

\_\_\_\_\_  Irrigation Schedules and Scheduling Parameters

\_\_\_\_\_  Schedule of Landscape and Irrigation Maintenance

\_\_\_\_\_  Landscape Irrigation Audit Report

\_\_\_\_\_  Soil Analysis Report

\_\_\_\_\_  Documentation verifying implementation of soil recommendations

\_\_\_\_\_  Final Landscape Inspection

\_\_\_\_\_  
Approved City Staff       Date \_\_\_\_\_

## DEFINITIONS

**as-built drawings** A set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

**automatic controller** An automatic timing device used to remotely control valves that operate an irrigation system, using either evapotranspiration (weather-based) or soil moisture data.

**backflow prevention device** A safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

**certified irrigation designer** A person certified to design irrigation systems by an accredited academic institution a professional trade organization or other program such as the US Environmental Protection Agency's "WaterSense" irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

**certified landscape irrigation auditor** A person certified to perform landscape irrigation audits by an accredited academic institution, professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program or Irrigation Association's Certified Landscape Irrigation Auditor program.

**check valve** A valve located under a sprinkler head, or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

**compost** The safe and stable product of controlled biological decomposition of organic materials that is beneficial to plant growth..

**drip irrigation** Any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

**drought resistant soil** Soil that has been managed, by amending with compost and covering with mulch, for example, to maximize rainfall infiltration, increase the soil's capacity to hold water, and allow for plant roots to penetrate and proliferate such that the landscape can survive with less than optimal water (i.e. less than the Maximum Applied Water Allowance).

**ecological restoration project** A project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

**emitter** A drip irrigation emission device that delivers water slowly from the system to the soil.

**established landscape** The point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

**Estimated Total Water Use (ETWU)** The total water used for the landscape as described in Section 9-4.70.7.

**Evapotranspiration Adjustment Factor (ETAF)** A factor that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape.

**evapotranspiration rate** The quantity of water evaporated from soil and other surfaces and transpired by plants during a specified time.

**flow sensor** An inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate. A combination flow sensor/controller may function as a water meter or submeter.

**friable soil** Soil that is easily crumbled or loosely compacted down to a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread unimpeded.

**graywater** Untreated waste water which has not come into contact with toilet, food, or chemical waste. Graywater includes used water from bathtubs, showers, bathroom sinks, clothes washing machines and laundry tubs. It does not include waste water from kitchen sinks, photo lab sinks, dishwashers or laundry water from soiled diapers.

**hardscape** Any durable material (pervious and non-pervious).

**hydrozone** A portion of the landscaped area having plants and/or water with similar water needs (classified as high, medium, low or very low water use) and rooting depth. A hydrozone may be irrigated or non-irrigated.

**infiltration rate** The rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

**Irrigation Efficiency (IE)** The amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum average irrigation efficiencies for purposes of this ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.

**irrigation runoff** Applied water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, runoff may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or where there is a slope.

**landscape architect** A person who holds a license to practice landscape architecture as specified in the State of California Business and Professions Code, Section 5615.

**landscape area** All the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, or other non-planted areas.

**landscape contractor** A person licensed by the State of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

**landscape water meter** An inline device installed at the irrigation supply point that measures the flow of water into the irrigation system and is connected to a totalizer to record water use.

**lateral line** The water delivery pipeline that supplies water to emitters or sprinklers from a valve.

**low volume irrigation** The application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

**main line** The pressurized pipeline that delivers water from the water source to the valve.

**master shut-off valve** An automatic valve installed at the irrigation supply point which controls water flow into the irrigation system. When this valve is closed, water will not be supplied to the irrigation system. A master valve will greatly reduce any water loss due to a leaky station valve.

**Maximum Applied Water Allowance (MAWA)** The upper limit of annual applied water for the established landscaped area. It is based upon Emeryville's Evapotranspiration Adjustment Factor and the size of the landscape area, including the Special Landscape Area.

**mulch** Any organic material such as leaves, arbor or wood chips, recycled wood waste, straw, compost, or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

**operating pressure** The pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

**overhead spray** Water delivered through the air (e.g., sprinkler heads and rotors).

**overspray** Irrigation water which is delivered beyond the target area.

**plant factor** or **plant water use factor** A factor that, when multiplied by an evapotranspiration rate, estimates the amount of water needed by plants. The plant factor range for very low water use plants is 0 to 0.1, the plant factor range for low water use plants is 0.2 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the Department of Water Resources publication "Water Use Classification of Landscape Species" (WUCOLS). Plant factors may also be obtained from horticultural researchers from academic institutions or professional associations as approved by the California Department of Water Resources.

**precipitation rate** The rate of application of water measured in inches per hour.

**rain shutoff device** A component which automatically suspends irrigation when it rains.

**recreational area** Area designated for active play, recreation or public assembly, such as a park, sports field, picnic ground, pool, spa, amphitheater, or informal play area where turf provides a playing surface.

**recycled water** Reclaimed, treated waste water of a quality suitable for non-potable uses such as landscape irrigation and water features. This water is not intended for human consumption.

**rehabilitated landscape** Any re-landscaping project in which the modified area was previously planted and the modified landscape area is equal to or greater than 2,500 square feet.

**rootable soil volume** The volume of soil in and around tree wells and planting islands that tree roots can easily utilize.

**soil moisture sensor** A device that measures the amount of water in the soil. The device may also suspend or initiate irrigation.

**soil texture** The classification of soil based on its percentage of sand, silt, and clay.

**Special Landscape Area (SLA)** An area of the landscape dedicated solely to edible plants, recreational areas, areas irrigated with recycled water, or water features using recycled water.

**sprinkler head** A device which delivers water through a nozzle.

**static water pressure** The pipeline or water supply pressure when water is not flowing.

**station** An area served by one valve or by a set of valves that operate simultaneously.

**submeter** A device to measure water applied to the landscape that is installed after the primary utility water meter.

**subsurface irrigation** Irrigation placed either under the soil or under the mulch on top of the soil.

**swing joint** A component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent damage.

**turf** A ground cover surface of mowed grass. Annual bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

**valve** A device used to control the flow of water in the irrigation system.

**water conserving plant species** A plant species that has a very low or low plant factor.

**water feature** A design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied). The surface area of water features is included in the high water use hydrozone of the landscape area. Constructed wetlands used solely for on-site wastewater treatment or storm water best management practices that are not irrigated are not water features and, therefore, are not subject to the water budget calculation.

## **Emeryville Water Efficient Landscape Prescriptive Requirements for Smaller Landscapes**

New landscaping from 500 square feet and up to, but not including, 2,500 square feet of landscape area shall comply with the following requirements, as referred to in Section 9-4.70.3 of the Emeryville Municipal Code, unless the applicant opts to comply with the performance requirements for larger landscapes. Any project with a landscape area less than 2,500 square feet that meets the landscape water requirement entirely with graywater, rainwater captured on site, or both, is subject only to the sections B and C of these requirements. Applications for projects that include new landscapes must include a project information form.

### **A. Plants**

1. For residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 75% of the plant area excluding edibles and areas using recycled water. For non-residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 100% of the plant area excluding edibles and areas using recycled water. ([http://ucanr.edu/sites/WUCOLS/Plant\\_Search](http://ucanr.edu/sites/WUCOLS/Plant_Search) → North Central Coast)
2. Those species identified by the California Invasive Plant Council's "Don't Plant a Pest! San Francisco Bay Area" and "Don't Plant a Pest! Trees in California" brochures shall not be installed.
3. Turf shall not exceed 25% of the landscaped area in residential areas, and there shall be no turf in non-residential areas, with recreational areas exempted. Exceptions may be granted when using drought-tolerant grasses requiring limited irrigation and mowing or for grassy swales designed and maintained to treat stormwater runoff.
4. Turf shall not be planted on sloped areas which exceed a slope of 1 foot vertical elevation change for every 4 feet horizontal length.
5. Turf is prohibited in parkways less than 10 feet wide, unless the parkway is adjacent to a parking strip and used to enter and exit vehicles. Any turf in parkways must be irrigated by subsurface irrigation or by other technology that creates no overspray or irrigation runoff.

### **B. Amendments and Mulch**

1. At least 6 cubic yards of compost, with a composition according to City standards or a City-approved soil report recommendation, per 1,000 square feet shall be incorporated into the top 6 inches of soil.
2. A minimum 3-inch layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, areas receiving closely spaced plugs as a lawn alternative, areas with creeping or rooting ground covers, or direct seeding applications where mulch is contraindicated. Nonporous material shall not be placed under the mulch.
3. Required trees shall have adequate rootable soil volume (600 cubic feet for small trees, 900 cubic feet for medium-size trees, and 1,200 cubic feet for large trees) and good drainage. Tree sizes refer to sizes of canopy at maturity: small 15-24' wide and 20' tall, medium 25-34' wide and 35' tall, large 35'+ wide.

### **C. Irrigation**

1. Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data and utilize a rain sensor.
2. Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted.
3. Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturer's recommended pressure range.
4. Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be installed as close as possible to the point of connection to the water supply.
5. All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, ASABE/ICC 802-2014. "Landscape Irrigation Sprinkler and Emitter Standard." All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICCC 802-2014.

6. Areas less than 10 feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no irrigation runoff or overspray.
7. For non-residential projects with landscape areas of 1,000 square feet or more, a private submeter to measure landscape water use shall be installed.

## Definitions

**automatic controller** An automatic timing device used to remotely control valves that operate an irrigation system, using either evapotranspiration (weather-based) or soil moisture data.

**compost** The safe and stable product of controlled biological decomposition of organic materials that is beneficial to plant growth.

**flow sensor** An inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate. A combination flow sensor/controller may function as a water meter or submeter.

**graywater** Untreated waste water which has not come into contact with toilet, food, or chemical waste. Graywater includes used water from bathtubs, showers, bathroom sinks, clothes washing machines and laundry tubs. It does not include waste water from kitchen sinks, photo lab sinks, dishwashers or laundry water from soiled diapers.

**irrigation runoff** Applied water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, runoff may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or where there is a slope.

**mulch** Any organic material such as leaves, arbor or wood chips, recycled wood waste, straw, compost, or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

**overspray** Irrigation water which is delivered beyond the target area.

**recreational area** Area dedicated to active play, recreation or public assembly, such as a park, sports field, picnic ground, pool, spa, amphitheater, or informal play area where turf provides a play surface.

**rehabilitated landscape** Any re-landscaping project in which the modified area was previously planted and the modified landscape area is equal to or greater than 2,500 square feet. .

**rootable soil volume** The volume of soil in and around tree wells and planting islands that tree roots can easily utilize.

**soil moisture sensor** A device that measures the amount of water in the soil. The device may also suspend or initiate irrigation.

**sprinkler head** A device which delivers water through a nozzle.

**turf** A ground cover surface of mowed grass. Annual bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

**valve** A device used to control the flow of water in the irrigation system.

## Appendix B: Facilities Requiring Inspections

(Section C.4.b.iii)

Name	Address	Inspection Frequency	Category	FY beginning	FY next due	Last Inspection
Polaris Café	5858 Horton St	5	Food service	2016	2015	3-May-16
AC Transit Emeryville	1177 47th St	1	Fleet Operations	2015	2016	29-Mar-16
Admrac Pre-Press Company	1464 67th St	3	Commercial	2013	2016	1-Jan-13
Banh Mi Joint	3905 BROADWAY	TBD	CAFÉ	2016	2016	
Bank Club Café	3900 San Pablo Ave	5	Food Service	2011	2016	26-Sep-11
Baskin Robbins	1199 40th St	3	Food Service	2013	2016	1-Jan-13
Bay Street Emeryville	5616 Bay St	5	Commercial	2011	2016	21-Sep-11
BF Printing Service	6647 HOLLIS ST	TBD	PRINTING	2016	2016	
Bombay Belly, Inc.	6400 CHRISTIE AVE, #4102	TBD	CATERING BUSINESS	2016	2016	
Boyd's Body Shop	1245 Powell St	1	Vehicle Service	2015	2016	26-Mar-16
Chevron	1400 Powell St	1	Gas Station	2015	2016	3-May-16
Chevys	1890 Powell St	1	Food Service	2015	2016	5-Apr-16
Coultter Steel And Forge	1494 67th St	1	Industrial	2015	2016	29-Mar-16
Courtyard By Marriott	5555 Shellmound St	3	Food Service	2013	2016	1-Jan-13
Dee Spot	1195 65TH ST	TBD	CAFÉ	2016	2016	
Dennys	1776 Powell St	2	Food Service	2014	2016	30-May-15
Doyle Street Cafe	5515 Doyle Street	3	Food Service	2013	2016	1-Jan-13
Emeryville Market Office Towers	6001 Shellmound St	5	Property Management	2011	2016	21-Sep-11
Emeryville Vet Hospital	3995 EMERY ST	TBD	VETERINARY CLINIC	2016	2016	
Engine World	1489 67th St	3	Vehicle Service	2013	2016	1-Jan-13
Federal Express Corp	1600 63rd St	1	Fleet Operations	2015	2016	1-Apr-16
Grifols - BLDG N, Q, R	4560 HORTON St. Building N	1	Laboratory	2015	2016	20-Apr-16
Griststone Oncology	5858 HORTON ST, #210	TBD	R&D	2016	2016	
Home Depot	3838 Hollis St	2	Retail	2014	2016	5-Jun-15
Hong Kong East Ocean	3199 Powell St	1	Food Service	2015	2016	29-Mar-16
Honor Kitchen	1411 Powell	1	Food Service	2015	2016	5-Apr-16
Hyatt Place Emeryville	5700 BAY ST	TBD	HOTEL	2016	2016	
Ikea	4400 Shellmound St	3	Retail	2013	2016	1-Jan-13
KFC	4501 San Pablo Ave	1	Food Service	2015	2016	3-May-16
Lanesplitter	3645 San Pablo Ave	3	Food Service	2013	2016	1-Jan-13
Leport Schools	6460 Hollis St	5	ELEMENTARY SCHOOL 5-6TH GRADE	2015	2016	14-Apr-16

Name	Address	Inspection Frequency	Category	Last inspector	FY beginning	FY next due	Next due	Last Inspection
Lifelong Emeryville Health Care	4727 SAN PABLO AVE, #B214	TBD	SCHOOL BASED HEALTH CARE		2016	2016		
Los Cantaros Taqueria #2	4115 San Pablo Ave	3	Food Service		2013	2016		1-Jan-13
Metalco	1475 67th St	5	Manufacturing		2011	2016		22-Sep-11
N&Y Food Corporation	4330 SAN PABLO AVE	TBD	GROCERY		2016	2016		
New Florence Salon	1195 B 65TH ST	TBD	BEAUTY SERVICES		2016	2016		
Novartis, Bld G&T	1400 53rd St Building Mgt	3	Laboratory		2013	2016		1-Jan-13
Oaks Corner/Oaks Club	4099 San Pablo Ave	1	Food Service		2015	2016		3-May-16
Pak-N-Save Store #3125	3889 San Pablo Ave	1	Grocery Store		2015	2016		29-Mar-16
Painters & Co.	1410 62nd St	3	Food Service		2013	2016		1-Jan-13
Perfection Ltd. Body Shop/Continental/Gomez	1355 Park Ave	3	Vehicle Service		2013	2016		1-Jan-13
Pixar	1200 Park Ave	5	Commercial		2011	2016		26-Oct-11
Proto House	6315 DOYLE ST	TBD	3D PRINTING & DESIGN SERVICES		2016	2016		
R & L Warehouse (Rypins Lipinski Assoc)	1490 66th St	3	Commercial		2013	2016		1-Jan-13
Renee Willis Jewelry	1527 63RD ST	TBD	HANDMADE JEWELRY		2016	2016		
Robas Pizza Cafe	2320 Powell Street	3	Food Service		2013	2016		1-Jan-13
Roller Press, Inc	6647 Hollis St	3	Commercial		2013	2016		1-Jan-13
Rubys Cafe	6233 HOLLIS ST	3	Food Service		2013	2016		1-Jan-13
Rudy's Can't Fail Cafe	4081 Hollis Street	3	Food Service		2013	2016		1-Jan-13
Scends Restaurant	3627 San Pablo Ave	1	Food Service		2015	2016		4-May-16
SHM Emryville DBA Emeryville Marina	3310 POWELL ST	TBD	EMERYVILLE MARINA OPERATOR		2016	2016		
Sodexo @ Novartis NIBR	5300 CHIRON WAY	TBD	CONTRACT FOOD SERVICE		2016	2016		

Name	Address	Inspection Frequency	Category	Last inspector	FY beginning	FY next due	Last Inspection
U.S. Bionics DBA Xsuit	4512 HOLLIS ST	TBD	MANUFACTURING EXOSKELETONS		2016	2016	
Wally's Cafe	3900 San Pablo Ave	3	Food Service		2013	2016	1-Jan-13
Watergate Market	2390 Powell St	1	Mini-Market		2015	2016	5-Apr-16
Wee Nourish	5884 Vallejo St	TBD	Baby food maker		2016	2016	
Why Cook Inc.	2000 POWELL ST	TBD	CAFÉ		2016	2016	
Arizmendi Bakery & Pizzeria	4801 San Pablo Ave	5	Food Service		2012	2017	30-Jun-13
Bacchus Press, Inc	1287 66th St	3	Commercial		2014	2017	13-May-15
Burger King	5701 Christie Ave	3	Food Service		2014	2017	1-May-15
Coffee And Snack Shop	5980 Horton St	5	Food Service		2012	2017	26-Dec-12
Come Back Cafe	6009 Christie Ave	5	Food Service		2012	2017	30-Jun-13
Co-Op Kitchen	6613 Hollis St	5	Food Service		2012	2017	11-Dec-12
Diversified Properties	5890 Christie Ave	5	Property Management		2012	2017	30-Jun-13
Emery Bay Café	5857 Christie Ave	3	Food Service		2014	2017	11-May-15
Emery Bay/Emeryville Public Market	5959 Shellmound St	3	Food Service		2014	2017	20-Apr-15
Emeryville Market Place Tower	6001 Shellmound St	5	Property Management		2012	2017	30-Jun-13
Emeryville Shell	1800 Powell St	5	Gas Station		2012	2017	20-Dec-12
European Auto Salvage	4060 Harlan St	5	Vehicle Service		2012	2017	20-Dec-12
Grifols - Bldg F	1403 Starford Avenue	3	Laboratory		2014	2017	22-Apr-15
Grifols?	5327 Horton Street	3	Laboratory		2014	2017	31-Mar-15
Hilton Garden Inn	1800 Powell St	5	Property Management		2012	2017	20-Dec-12
Hyatt House	5800 Shellmound St	3	Property Management		2014	2017	20-Apr-15
Kyu Express	6485 Hollis Street	3	Food Service		2014	2017	5/14/2015
Los Moles	1320 65th St	5	Food Service		2012	2017	26-Dec-12
Mojos Motors, LLC	1316 67th Street, #6	3	Auto Dealer		2014	2017	13-May-15
Novartis - Bldg H	1400 53rd St	3	Laboratory		2014	2017	22-Apr-15
Paula Le Duc Catering	1350 Park Ave	5	Food Service		2012	2017	26-Dec-12
Pg&E - Emeryville Repair Shop	4525 Hollis St	5	Utility		2012	2017	4-Mar-13
Radiant Genomics	5858 Powell Street, #335	3	Laboratory		2014	2017	14-May-15
Rubicon Yachts	3300 Powell Street, #105	3	Boat Dealer		2014	2017	11-May-15
Scarlet City	3960 Adeline Street	3	Food Service		2014	2017	21-Apr-15
Seaward Coastal Ventures	3300 Powell Street	3	Boat Charter		2014	2017	11-May-15
Starbucks Coffee #5601	5767 Christie Ave	5	Food Service		2012	2017	30-Jun-13

Name	Address	Inspection Frequency	Category	FY beginning	FY next due	Last Inspection
Subway #25529	5858 Horton St	5	Food Service	2012	2017	30-Jun-13
Subway #36635	6475 Hollis St	5	Food Service	2012	2017	30-Jun-13
Togos Eatery	5751 Christie Ave	5	Food Service	2012	2017	30-Jun-13
4th Street Woodworking Company	1266 45th St	3	Manufacturing	2015	2018	3-May-16
59th & Peladeau LP, AKA Branchline	5885 Hollis St	3	BAR W/FOOD	2015	2018	4/1/2016
Amtrak Train Station	5885 Horton Street	3	Fleet Operations	2015	2018	5-Apr-16
At Printing	5515 Doyle St	5	Commercial	2013	2018	1-Jan-13
City Of Emeryville Senior Center	4321 Salem St	5	Food Service	2013	2018	1-Jan-13
Emeryville Sportfishing	3310 Powell St	3	Commercial	2015	2018	20-Apr-16
Four Points Hotels By Sheraton	1603 Powell St	3	Property Management	2015	2018	14-Apr-16
Grifols - Bldg E	4560 Horton St	3	Food Service	2015	2018	20-Apr-16
Grifols - Bldg V	4225 HORTON STREET	3	Warehouse	2015	2018	20-Apr-16
Grifols - Bldg X	5400 Hollis	3	Offices/Receiving	2015	2018	20-Apr-16
IHOP	4101 San Pablo Ave	3	Food Service	2015	2018	4/20/2016
Novartis, Bldg E (Chiron Circle Cafe)	4560 Horton St	5	Food Service	2013	2018	1-Jan-13
Novi, LLC	5885 Hollis St, #100	3	Industrial/Oil	2015	2018	4/1/2016
Panda Express #2385	1151 40th St, #100	3	CHINESE FAST FOOD RESTAURANT	2015	2018	5/3/2016
Rotten City Pizza	6613 Hollis Street	3	Food Service	2015	2018	4/14/2016
Salt Pepper Sugar	1607 63rd St	3	CATERING	2015	2018	5/5/2016
Summer Summer Thai	5885 Hollis Street	3	Food Service	2015	2018	4/1/2016
Taco Bell	3839 Emery St	5	Food Service	2013	2018	1-Jan-13
Townhouse Bar And Grill	5862 Doyle St	5	Food Service	2013	2018	1-Jan-13
Trader Joes	5700 Christie Ave	5	Grocery Store	2013	2018	1-Jan-13
Trader Vics	9 Anchor Dr	3	Food Service	2015	2018	4/20/2016
Acrylic Art Inc	1290 45th St	5	Commercial	2014	2019	28-Mar-15
Amc Bay Street 16 Theater	5614 Bay St	5	Commercial	2014	2019	22-Apr-15
Emery Bay 76	1700 Powell St	5	Gas Station	2014	2019	20-Apr-15
Gasket Specialists	6200 Hollis St	5	Commercial	2014	2019	22-Apr-15
Grifols - BLDG D	4510 HORTON ST BLDG D	4	Laboratory	2015	2019	20-Apr-16
Grifols? - Bldg Z	5650 Hollis St Building Z	5	Food Service	2014	2019	31-Mar-15
Julie Holcomb Printers	1601 63rd St	5	Commercial	2014	2019	26-Apr-15
Pan Pacific Commercial Link	1900 Powell Street, #6044	5	Auto Dealer	2014	2019	14-May-15

Name	Address	Inspection Frequency	Category	FY beginning	FY next due	Last Inspector	Next due	Last Inspection
Best Coast Burritos Emeryville	1400 Powell # C	5	Fast Food	2015	2020			5/3/2016
Grifols - BLDG 12A	5353 Horton Street	5	Parking garage	2015	2020			20-Apr-16
Grifols - Bldg F	1403 Stanford	5	?	2015	2020			20-Apr-16
Grifols - Bldg H	5301 Horton St	5	?	2015	2020			20-Apr-16
Grifols - Bldg O	5745 Peladeau	5	Offices	2015	2020			20-Apr-16
Grifols - Building CMF	5350 Horton Street	5	?	2015	2020			20-Apr-16
Hataguchi Collective	1529 63rd St	5	PRODUCE STATIONERY AND IMPORT FROM INDIA	2015	2020			4/14/2016
Imperfect Foods, SPC	1385 63rd St	5	WHOLE SALE PRODUCE	2015	2020			4/14/2016
Jamba Juice	5761 Christie Ave	5	Food Service	2015	2020			4/14/2016
P F Chang	5633 Bay St	5	Food Service	2015	2020			14-Apr-16
Plum Screen Printing	1308 63rd St	5	Commercial	2015	2020			29-Mar-16
Ripple Foods, PBC	5900 Hollis St, Suite P	5	R&D DAIRY PRODUCTS	2015	2020			5/3/2016
Siba Ramen Corporation	5959 Shellmound #13	5	Fast Food	2015	2020			4/14/2016
Star Machining	5835 Doyle St	5	Vehicle Service	2015	2020			4/5/2016
Starbucks #8912	1405 65th St	5	Food Service	2015	2020			4/14/2016
Teka Painting	4333 Holden St, #56	5	ARTIST	2015	2020			5/3/2016
ISP2 Emeryville Inc. (Ike's)	1333 Powell St, #A-105	5	Food service	2016	2021			3-May-16
So Real Factory	4245 Halleck A1	5		2016	2021			5/24/2016

Appendices C and D: Screenshot of Website

C: Central Contact Point for Reporting Discharges

(Section C.5.c.iii)

D: Link to Watershed Map

(Section C.5.f.iii)

## Stormwater

### Reporting a spill or discharge into the storm drain?

If spill is underway, call 911, to get it contained. To report imminent, repeat or suspected releases call the City's Environmental Programs staff at 510-596-3728.

Or use "Engage Emeryville":



### Resources for Business:

**If you need more information about Best Management Practices, follow the appropriate links below:**

[Restaurants](#)

[Tip on preventing storm water pollution](#)

### Stormwater Treatment Requirements

Effective February 15, 2005 , City of Emeryville Stormwater issues or concerns, call 510-596-4330:

- [City of Emeryville Storm Water Permit Application](#)
- [Impervious Surface and Stormwater Treatment Measures Worksheet](#)
- [Worksheet, Impervious Surface Area and Storm Water Treatment Measures](#)
- [Impervious Surface and Stormwater Treatment Measures Worksheet FAQs](#)
- [Alameda Countywide Clean Water Program, Storm Water Treatment Requirements For New Development and Redevelopment](#)

For a guide to East Bay creeks and more information go to the [Alameda County Clean Water Program website](#)

Find your watershed! Alameda County Flood Control & Water Conservation District [Watersheds Interactive Maps](#)

Check out these [Creek and Watershed Maps](#) from the Oakland Museum of California

## **Flood Zone Designation for the City of Emeryville, County of Alameda, State of California**

Pursuant to the letter from the Department of Housing and Urban Development, Federal Insurance Program, dated April 28, 1978, the January 16, 1976, Flood Hazard Boundary Map was rescinded effective April 21, 1978. The City of Emeryville no longer has a Flood Hazard Boundary Map. The entire City of Emeryville is designated as Zone C in the [National Flood Insurance Program](#). In Zone C, flood insurance is on a voluntary basis.

Signed,  
Maurice Kaufman, Sr. Civil Engineer  
December 15, 2006

CALIFORNIA

### **HELPFUL LINKS**

[Site Map](#)

[Accessibility](#)

[Copyright / Privacy](#)

[Legal Notice](#)

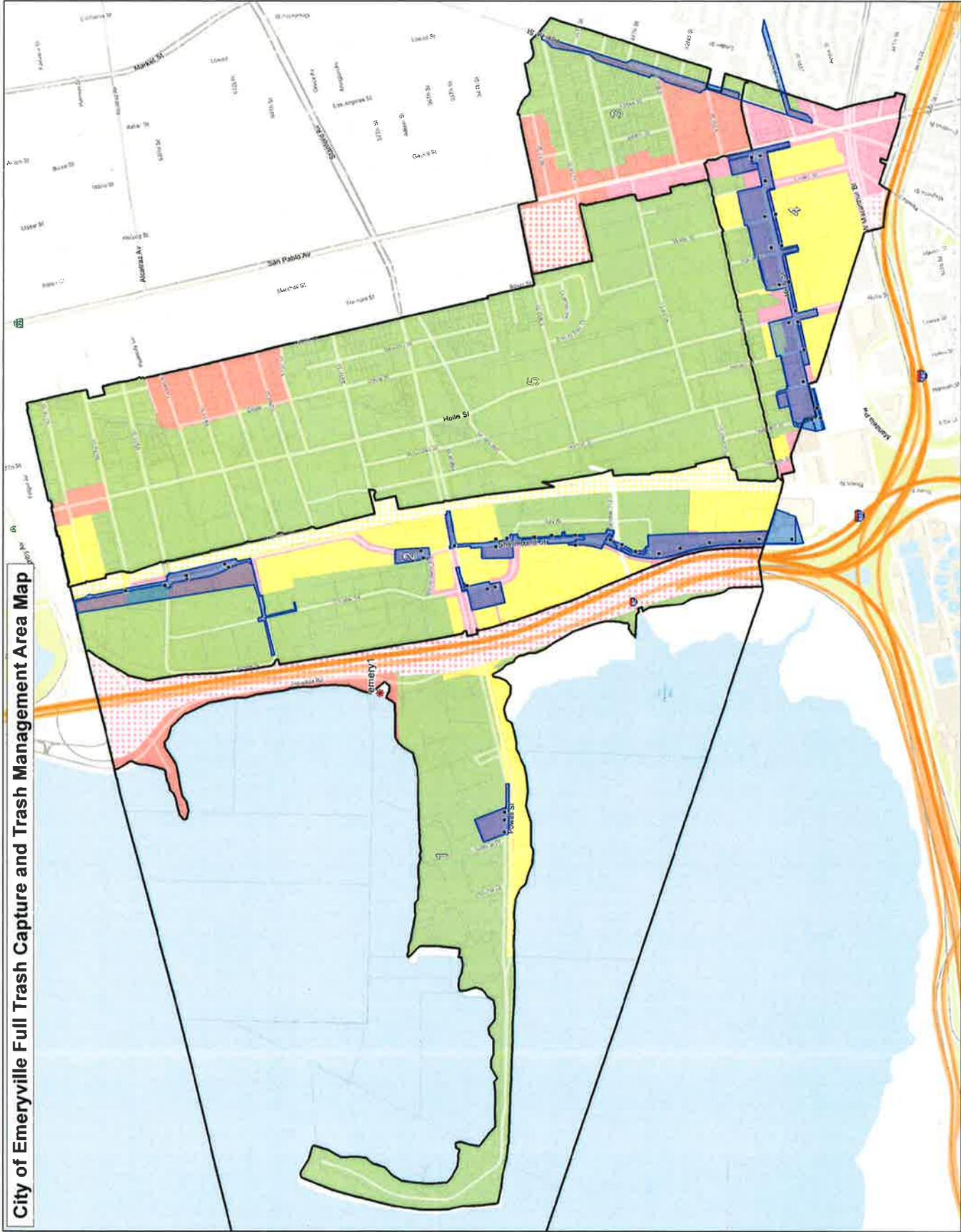
[Government Websites by](#)

[CivicPlus®](#)

Appendix E: Updated Baseline Trash Generation Map with New TMA Boundaries

(Section C.10.d)

# City of Emeryville Full Trash Capture and Trash Management Area Map



- Legend**
- Trash Generation Category**
- Low
  - Moderate
  - High
  - Very High

- \* Creek/Shoreline Hotspot
- Full-Capture Location
- Trash Management Area
- Non-Jurisdictional (Dot color = Generation Category)

- Streets
- Freeway
- Creeks
- Parcel Boundary



**Data Sources:**  
 Roads: Alameda County  
 City Boundaries: Alameda County  
 Creeks: Alameda County  
 Parcels: Alameda County  
 Background: ESR1 World Topographic Map

Map Created By:  
 EOA, Inc.

Date:  
 August 31st, 2016

Baseline Conditions Map Updated August 2016