Member Agencies:

Alameda

Albany

Berkeley

Dublin

Emeryville

Fremont

Hayward

Livermore

Newark

Oakland

Piedmont

Pleasanton

San Leandro

Union City

Alameda County

Alameda County Flood Control and Water Conservation District (District)

Zone 7 of the District

City of Livermore

Fiscal Year 2014-2015 Annual Report of Stormwater Program Implementation

cleanwater PROGRAM

Submitted to:
California Regional Water Quality Control Board
San Francisco Bay Region

September 2015

LIVERMORE
CALIFORNIA

September 9, 2015

Bruce H. Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Attention: Selina Louie

Subject: Annual Report of Stormwater Program Implementation for FY 2014/2015

Dear Mr. Wolfe:

Enclosed is the City of Livermore's Annual Report of Stormwater Program Implementation for the FY 2014/2015.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance 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 directly responsible for gathering the information, the information submitted is, to the best of 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 of violations.

If you have questions regarding this report, please contact Steven Aguiar, Environmental Compliance Supervisor, at 925-960-8126.

Sincerely,

Helen Ling
Water Resources Division Manager
Water Resources Division, Public Works Department
Phone number: 925-960-8168
Fax number: 925-960-8105

cc: Darren Greenwood, Director of Public Works

ATTACHMENT B

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Section 1 – Permittee Information

Background Information					
Permittee Name:	City of Livermore				
Population:	84,852				
NPDES Permit No.:	CAS612008				
Order Number:	R2-2009-0074R				
Reporting Time Period (month/year):	July 2014 through June 2015				
Name of the Responsible Authority:	Helen Ling			**Title:**	Acting Water Resources Manager
Mailing Address:	101 W. Jack London Blvd.				
City:	Livermore	**Zip Code:**	94551	**County:**	Alameda
Telephone Number:	925-960-8100	**Fax Number:**			925-960-8105
E-mail Address:	hfling@cityoflivermore.net				
Name of the Designated Stormwater Management Program Contact (if different from above):	Steven Aguiar			**Title:**	Environmental Compliance Supervisor
Department:	Public Works- Water Resources Division				
Mailing Address:	101 W. Jack London Blvd				
City:	Livermore	**Zip Code:**	94551	**County:**	Alameda
Telephone Number:	925-960-8126	**Fax Number:**			925-960-8105
E-mail Address:	smaguiar@cityoflivermore.net				

Section 2 - Provision C.2 Reporting Municipal Operations

Program Highlights and Evaluation

Highlight/summarize activities for reporting year:

Summary:

The City of Livermore participates in the Alameda Cleanwater Program's Municipal Maintenance Subcommittee. Mike Wells, Collection System Supervisor represents the City in this area and regularly attends these committee meetings. Refer to the C.2 Municipal Operations section of the ACCWP FY 14-15 Annual Report for a description of activities implemented at the countywide and/or regional level.

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.

Y	Control of debris and waste materials during road and parking lot installation, repaving or repair maintenance activities from polluting stormwater
Y	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.
Y	Sweeping and/or vacuuming and other dry methods to remove debris, concrete, or sediment residues from work sites upon completion of work.

Comments: No additional 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: No additional 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: No additional comments.

C.2.d. ▶ Stormwater Pump Stations

Does your municipality own stormwater pump stations:	X	Yes		No

If your answer is **No** then skip to **C.2.e.**

Complete the following table for dry weather DO monitoring and inspection data for pump stations[1] (add more rows for additional pump stations). If a pump station is exempt from DO monitoring, explain why it is exempt .

Pump Station Name and Location	First inspection Dry Weather DO Data		Second inspection Dry Weather DO Data	
	Date	mg/L	Date	mg/L
Murietta Pump Station: Stanley Blvd. and Murietta Blvd.	Pump stations exempt from monitoring as the discharge remains in a stormwater collections system and/or infiltrates into a dry creek bed and does not reach stream flow.			
P Street Pump Station: Railroad Ave. and P Street				
North Livermore Pump Station: Railroad Ave. and North Livermore Ave.				

Summarize corrective actions as needed for DO monitoring at or below 3 mg/L. Attach inspection records of additional DO monitoring for corrective actions:

Summary: No additional comments
Attachments: None

Complete the following table for wet weather inspection data for pump stations (add more rows for additional pump stations):

Pump Station Name and Location	Date (2x/year required)	Presence of Trash (Cubic Yards)	Presence of Odor (Yes or No)	Presence of Color (Yes or No)	Presence of Turbidity (Yes or No)	Presence of Floating Hydrocarbons (Yes or No)
Murietta Pump Station: Stanley Blvd. and Murietta Blvd.	7/11/2014 9/30/2014	None None	No	No	No	No
P Street Pump Station: Railroad Ave. and P Street	7/11/2014 9/30/2014	None .10	No	No	No	No
North Livermore Pump Station: Railroad Ave. and North Livermore Ave.	7/11/2014 9/30/2014	.10 .15	No	No	No	No

[1] DO monitoring is exempted where all discharge from a pump station remains in a stormwater collection system or infiltrates into a dry creek immediately downstream.

C.2.e. ▶Rural Public Works Construction and Maintenance

Does your municipality own/maintain rural[2] roads:	Y	Yes		No
If your answer is **No** then skip to **C.2.f.**				

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 road-related erosion and sediment transport from road design, construction, maintenance, and repairs in rural areas
Y	Identification and prioritization of rural road maintenance based on soil erosion potential, slope steepness, and stream habitat resources
Y	No impact to creek functions including migratory fish passage during construction of roads and culverts
Y	Inspection of rural roads for structural integrity and prevention of impact on water quality
Y	Maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts and excessive erosion
Y	Re-grading of unpaved rural roads to slope outward where consistent with road engineering safety standards, and installation of water bars as appropriate
Y	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: No additional comments.

[2]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.

C.2.f. ►Corporation Yard BMP Implementation

Place an **X** in the boxes below that apply to your corporations yard(s):

	We do not have a corporation yard
	Our corporation yard is a filed NOI facility and regulated by the California State Industrial Stormwater NPDES General Permit
X	We have a **Stormwater Pollution Prevention Plan (SWPPP)** for the Corporation Yard(s)

Place an **X** in the boxes below next to implemented SWPPP BMPs to indicate that these BMPs were implemented in applicable instances.If not applicable, type **NA** 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:

X	Control of pollutant discharges to storm drains such as wash waters from cleaning vehicles and equipment
X	Routine inspection prior to the rainy seasons of corporation yard(s) to ensure non-stormwater discharges have not entered the storm drain system
X	Containment of all vehicle and equipment wash areas through plumbing to sanitary or another collection method
X	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
X	Cover and/or berm outdoor storage areas containing waste pollutants

Comments: No additional 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**
Livermore Maintenance Service Center	08/11/2014	BMPs are effectively implemented. Facility is in compliance with stormwater requirements	None

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

C.3.b.v.(2)(a) ►Green Streets Status Report

(All projects to be completed by December 1, 2015)

On an annual basis (if applicable), report on the status of any pilot green street projects within your jurisdiction. For each completed project, report the capital costs, operation and maintenance costs, legal and procedural arrangements in place to address operation and maintenance and its associated costs, and the sustainable landscape measures incorporated in the project including, if relevant, the score from the Bay-Friendly Landscape Scorecard.

Summary: The three Green Streets Pilot Projects located in Alameda County (in Albany, Emeryville, Unincorporated Alameda County) have been completed. The Green Street Pilot Project Summary Report submitted by BASMAA, on behalf of the MRP permittees, in BASMAA's MRP FY 12-13 Regional Supplement – New Development and Redevelopment included available information on the green street projects constructed within Alameda County, including capital costs, O&M costs, legal and procedural arrangements to address O&M and its associated costs, and sustainable landscape measures.

C.3.b.v.(1) ►Regulated Projects Reporting

Fill in attached table **C.3.b.v.(1)** or attach your own table including the same information.
See attached C.3.b.v.(1) Reporting Tables and Site Design Source Control Table.

C.3.e.v. ►Alternative or In-Lieu Compliance with Provision C.3.c.

(For FY 11-12 Annual Report and each Annual Report thereafter) Is your agency choosing to require 100% LID treatment onsite for all Regulated Projects and not allow alternative compliance under Provision C.3.e.?		**Yes**	X	**No**

Comments (optional):

C.3.e.vi ► Special Projects Reporting

1. 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)?		Yes	X	No
2. Has your agency granted final discretionary approval of a project identified as a Special Project in the March 15, 2015 report? If yes, include the project in both the C.3.b.v.(1)Table, and the C.3.e.vi. Table.		Yes	X	No

If you answered "Yes" to either question,

1) Complete Table C.3.e.vi .below.
2) Attach narrative discussion of 100% LID Feasibility or Infeasibility for each project.

C.3.h.iv. ► Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting

(1) Fill in attached table **C.3.h.iv.(1)** or attach your own table including the same information.

(2) On an annual basis, 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.

Summary:

The City of Livermore conducted 47 operation and maintenance verification inspection of facilities with stormwater treatment measures during this reporting period. Additionally, the City performed 10 initial inspections of newly installed stormwater treatment measures during this reporting period. Please refer to table C.3.h.iv.of this report for details regarding the findings and observations from these inspections.

(3) On an annual basis, provide a discussion of the effectiveness of the O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness program).

Summary:

The City of Livermore has been requiring new development projects to install stormwater treatment measures since approximately the year 2000. The initial stages of our O & M inspection program were focused on developing an inventory of these measures and their locations. Currently, with the adoption of the MRP, our efforts have been focused on performing the required inspections to comply with the MRP. During this reporting period, City staff performed a total of 57 inspections of stormwater treatment measures.

(4) During the reporting year, did your agency:						
• Inspect all newly installed stormwater treatment systems and HM controls within 45 days of installation?	X	**Yes**		**No**		**Not applicable. No new facilities were installed.**
• Inspect at least 20 percent of the total number of installed stormwater treatment systems or HM controls?[3]	X	**Yes**		**No**		**Not applicable. No treatment measures**
• Inspect at least 20 percent of the total number of installed vault-based systems?	X	**Yes**		**No**		**Not applicable. No vault systems.**
If you answered "No" to any of the questions above, please explain:						

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

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.

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:

- BASMAA's site design fact sheets
- C.3 Technical Guidance Manual Appendix M

[3] If there is only 1 treatment measure in the jurisdiction, the agency must inspect it every year.

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

Project Name Project No.	Project Location[10], Street Address	Name of Developer	Project Phase No.[11]	Project Type & Description[12]	Project Watershed[13]	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft²)[14]	Total Replaced Impervious Surface Area (ft²)[15]	Total Pre-Project Impervious Surface Area[16](ft²)	Total Post-Project Impervious Surface Area[17](ft²)
Private Projects Entitlement											
College Avenue TM 8030	College Avenue	Porter Development	None	7 Single Family Homes	G-Arroyo Mocho	38,000	17,293	11,105	12,709	12,709	23,814
Oaks Business Park – Trammel Crow PM 10266	Voyager Street/Discovery Drive	Trammel Crow	Phase 1-2	3 Commercial Buildings, 635,533 SF, 294,940 SF, 367,734 SF	H-Arroyo Las Positas	70.79 A	70.79 A	2,399,736	113,219	113,219	2,399,736
Oaks Business Park – Phantom Site Gillig	Voyager Street/Discovery Drive	Trammel Crow	None	1 Commercial Building	H-Arroyo Las Positas	37.2	37.2	1,371,147	0	0	1,371,147
Catalina Crossing TM 8145	Barcelona Avenue	Sunset Dev.	None	Homes	G-Arroyo Mocho	94,034	94,032	0	61,855	61,855	61,855
Garavanta Hills TM 8094	West of Bear Creek Drive	Lafferty	None	47 Residential Homes	H-Arroyo Las Positas	31.7	14.4	627264	0	0	0
Primrose	3101 Las Positas Road	Primrose School	None	Daycare	H-Arroyo Las Positas	3.26	2.16	58,762	0	0	58,762
Vines TM 8195	5915 &5945 East Ave.	Ponderosa Homes	None	49 residential Homes	H-Arroyo Las Positas	0.7	0.7	27,000	0	0	27,000
The Shoppes	Jack London Blvd.	Himsl	None	5 Commercial Buildings	H-Arroyo Las Positas	13	13	539,937	0	0	539,937
Airport FBO	700 Terminal Circle	Five Rivers	None	Hanger & Office	H-Arroyo Las	139,392	139,392	98,670	19,470	19,470	11,140

[10]Include cross streets
[11]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".
[12]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.
[13]State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.
[14]All impervious surfaces added to any area of the site that was previously existing pervious surface.
[15]All impervious surfaces added to any area of the site that was previously existing impervious surface.
[16]For redevelopment projects, state the pre-project impervious surface area.
[17]For redevelopment projects, state the post-project impervious surface area.

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

Project Name Project No.	Project Location[10], Street Address	Name of Developer	Project Phase No.[11]	Project Type & Description[12]	Project Watershed[13]	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft²)[14]	Total Replaced Impervious Surface Area (ft²)[15]	Total Pre-Project Impervious Surface Area[16](ft²)	Total Post-Project Impervious Surface Area[17](ft²)
				Bldgs.	Positas						
Home 2 Suites	2625 Constitution Dr.	Amrat Patel	None	100 room Hotel	H-Arroyo Las Positas	2.77	2.7	59,928	38,250	74,956	96,634
Old Town Village TM 8173	First & Inman	Brighton	Phase 3	27 High Density Residential Homes	G – Arroyo Mocho	1.74	1.74	4,956	67,048	67,048	72,004
Old Town Village TM 8184	First & Inman	Brighton	Phase 4	H8 igh Density Residential Homes	G – Arroyo Mocho	0.31	0.31	12,426	1,500	1,500	13,230
Tiffany Gardens	740 Holmes	DeBolt	None	Residential Care Facility	G – Arroyo Mocho	.4	.4	13,605	13,435	13,435	18,930
Shea Sage TM 8121	Portola Avenue	Shea Homes	None	476 Residential	H-Arroyo Las Positas	56.33	40.0	436,115	0	0	436,115

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

Project Name Project No.	Project Location[18], Street Address	Name of Developer	Project Phase No.[19]	Project Type & Description[20]	Project Watershed[21]	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft²)[22]	Total Replaced Impervious Surface Area (ft²)[23]	Total Pre-Project Impervious Surface Area[24](ft²)	Total Post-Project Impervious Surface Area[25](ft²)
Private Projects - Final Map											
Brisa Neighbor Plan TM 7870, TM 8199	Brisa Street	KB Homes	Phase 1-3	465 Residential	H-Arroyo Las Positas	34.96	34.96	930,000	0	0	930,000
Old Town Village – First & Inman T8114 &PM10307	2375 Old First Street	Taylor Morrison	Phase 1	94 High Density Residential Homes	G – Arroyo Mocho	218,946	218,946	132,449	24,080	24,080	156,529
Old Town Village TM 8146	2375 Old First Street	Taylor Morrison	Phase 2	10 High Density Residential Homes	G – Arroyo Mocho	50,094	50,094	28,254	4.000	4,000	32,254
First and Portola TM 7633	3800 First Street	Taylor Morrison	None	70 Multi-Family	G – Arroyo Mocho	163,992	1636,992	146,158	0	0	146,158
Morning Glory TM 8125	Morning Glory Circle	Ponderosa Homes	None	28 Single Family	H-Arroyo Las Positas	5.57	5.57	97,605	9,474	9,474	107,079
Premium II Expansion PM 10090	Livermore Outlets Drive	Simon Properties	None	200,000 SF Retail	H-Arroyo Las Positas	648,683	648,683	616,419	0	0	616,419
Positano TM 7840	North L and Chestnut	David Edgington Freedom LLC	None	10 Multi-Family Homes	G – Arroyo Mocho	24,829	24,829	17,250	17,250	4,311	17,250

[18]Include cross streets
[19]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".
[20]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.
[21]State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.
[22]All impervious surfaces added to any area of the site that was previously existing pervious surface.
[23]All impervious surfaces added to any area of the site that was previously existing impervious surface.
[24]For redevelopment projects, state the pre-project impervious surface area.
[25]For redevelopment projects, state the post-project impervious surface area.

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

Project Name Project No.	Project Location[26], Street Address	Name of Developer	Project Phase No.[27]	Project Type & Description[28]	Project Watershed[29]	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft²)[30]	Total Replaced Impervious Surface Area (ft²)[31]	Total Pre-Project Impervious Surface Area[32](ft²)	Total Post-Project Impervious Surface Area[33](ft²)
Private Projects – Final Map Con't.											
Sage TM 8121	Portola Avenue	Shea Homes	None	467 Residential Homes	H-Arroyo Las Positas	56.4	40.0	1,742,400	0	0	1,742,400
Artero TM 7724	Bluebell and Las Flores	KB Homes	None	Condominiums	H–Arroyo Las Positas	3.15	3.15	95,319	0	0	95,319
Gardella Gardens TM 7900	3134 Gardella Plaza	Vishva Homes	None	27 Townhomes	G- Arroyo Mocho	1.2	1.2	43,908	0	0	43,908
Orchid Ranch TM 7671	1130 Isabel	Pondersoa	None	18 Single Family	G – Arroyo Mocho	4.87	4.87	47,880	43,000	43,000	121,175
Private Projects – Building Permits											
Brisa Neighbor Plan TM 7870	Brisa Street	KB Homes	Phase 1-3	155 High Density Residential Homes	H-Arroyo Las Positas	34.96	34.96	930,000	0	0	930,000
Airport FBO	700 Terminal Circle	Five Rivers Aviation	None	Airport Fixed Base Operation Building	H–Arroyo Las Positas	3.2	3.2	118,140	19,480	26,659	125,319

[26]Include cross streets
[27]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".
[28]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.
[29]State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.
[30]All impervious surfaces added to any area of the site that was previously existing pervious surface.
[31]All impervious surfaces added to any area of the site that was previously existing impervious surface.
[32]For redevelopment projects, state the pre-project impervious surface area.
[33]For redevelopment projects, state the post-project impervious surface area.

C.3.b.v.(1) ►Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period											
Project Name Project No.	Project Location[34], Street Address	Name of Developer	Project Phase No.[35]	Project Type & Description[36]	Project Watershed[37]	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft²)[38]	Total Replaced Impervious Surface Area (ft²)[39]	Total Pre-Project Impervious Surface Area[40](ft²)	Total Post-Project Impervious Surface Area[41](ft²)
Private Projects – Building Permits Con't.											
Old Town Village – TM 8114 PM 10307	2375 Old First Street	Taylor Morrison	Phase 1	94 High Density Residential Homes	G – Arroyo Mocho	218,946	218,946	132,449	24,080	24,080	156,529
Old Town Village TM 8146	2375 Old First Street	Taylor Morrison	Phase 2	10 High Density Residential HOmes	G – Arroyo Mocho	50,094	50,094	28,254	4,000	4,000	32,254
First and Portola T7633	3800 First Street	Taylor Morrison	None	70 Multi - Family	G – Arroyo Mocho	163,992	163,992	146,158	0	0	146,158
Morning Glory T8125	Morning Glory Circle	Ponderosa Homes	None	28 Single Family	H-Arroyo Las Positas	5.57	5.57	97,605	9,474	9,474	107,079
Positano TM 7840	North L and Chestnut	David Edgington Freedom LLC	None	10 Multi-Family Homes	G – Arroyo Mocho	24,829	24,829	17,250	17,250	4,311	17,250
Premium II Expansion PM 10090	Livermore Outlets Drive	Simon Properties	None	200,000 SF Retail	H–Arroyo Las Positas	648,863	648,863	616,419	0	0	616,419

[34]Include cross streets
[35]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".
[36]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.
[37]State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.
[38]All impervious surfaces added to any area of the site that was previously existing pervious surface.
[39]All impervious surfaces added to any area of the site that was previously existing impervious surface.
[40]For redevelopment projects, state the pre-project impervious surface area.
[41]For redevelopment projects, state the post-project impervious surface area.

C.3.b.v.(1) ▶ Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period											
Project Name Project No.	Project Location[42], Street Address	Name of Developer	Project Phase No.[43]	Project Type & Description[44]	Project Watershed[45]	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft^2)[46]	Total Replaced Impervious Surface Area (ft^2)[47]	Total Pre-Project Impervious Surface Area[48](ft^2)	Total Post-Project Impervious Surface Area[49](ft^2)
Private Projects – Building Permits Con't.											
Crosswinds Church – PM 9747	1660 Freisman Road	Dave Nielson	Phase 1	Worship Center, Parking Lot, Vineyard Buffer	H–Arroyo Las Positas	1,547,725	256,568	89,391	75,108	75,108	164,499
Old Town TM 8114	2375 Old First Street	Taylor Morrison	Phase 1	94 High Density Residential Homes	G–Arroyo Mocho	218,946	218,946	132,449	24,081	24,080	156,529
Artero TM 7724	Bluebell Avenue	K B Homes	None	Condominiums	H–Arroyo Las Positas	3.15	3.15	95,319	0	0	95,319
Dante Robere Winery	Wetmore	Bossi	None	Tasting Room, Warehouse	G – Arroyo Mocho	2.12	2.12	23,822	0	0	23,822
Kiddy Academy	1400 N Vasco Road	Ferreri & Blau	No Phase	Day Care	H–Arroyo Las Positas	1.7	1.7	23,892	0	49,803	73,495
Clark Pest Control	2351 Research	Ted Brandrold	None	Building and Parking Addition	H–Arroyo Las Positas	40,000	22,811	22,811	0	0	22,811
Scenic Plaza	1801 N Vasco Road	Michael Blau	None	Commercial Building	H–Arroyo Las Positas	19,274	13,952	13,952	0	0	13,952

[42]Include cross streets
[43]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".
[44]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.
[45]State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.
[46]All impervious surfaces added to any area of the site that was previously existing pervious surface.
[47]All impervious surfaces added to any area of the site that was previously existing impervious surface.
[48]For redevelopment projects, state the pre-project impervious surface area.
[49]For redevelopment projects, state the post-project impervious surface area.

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

Project Name Project No.	Project Location[50], Street Address	Name of Developer	Project Phase No.[51]	Project Type & Description[52]	Project Watershed[53]	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft^2)[54]	Total Replaced Impervious Surface Area (ft^2)[55]	Total Pre-Project Impervious Surface Area[56](ft^2)	Total Post-Project Impervious Surface Area[57](ft^2)
Public Projects											
Airport Administration	Terminal Circle	City of Livermore	None	Airport Administration Building	H–Arroyo Las Positas	41,000	41,000	36,900	0	0	39,900
Fire Station #9	1919 Cordoba Street	City of Livermore	None	Fire Station	G – Arroyo Mocho	18,673	18,673	0	17,740	17,740	17,740
ECSP Phase 2A	Livermore Outlets Drive	City of Livermore	None	Public Road	H–Arroyo Las Positas	621,974	621,974	56,000	0	0	56,000
Freisman Park 2B	Jack London Blvd.	City of Livermore	None	Public Park	H–Arroyo Las Positas	500,000	500,000	50,000	0	0	50,000
Galaxy Ct. Flood Protection	Springtown Golf Course	City of Livermore	None	Culvert Replacement	H-Arroyo Las Positas	0.5	0.5	0	2,500	2,500	2,500

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

[50]Include cross streets
[51]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".
[52]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.
[53]State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.
[54]All impervious surfaces added to any area of the site that was previously existing pervious surface.
[55]All impervious surfaces added to any area of the site that was previously existing impervious surface.
[56]For redevelopment projects, state the pre-project impervious surface area.
[57]For redevelopment projects, state the post-project impervious surface area.

Project Name Project No.	Application Deemed Complete Date[58]	Application Final Approval Date[59]	Source Control Measures[60]	Site Design Measures[61]	Treatment Systems Approved[62]	Type of Operation & Maintenance Responsibility Mechanism[63]	Hydraulic Sizing Criteria[64]	Alternative Compliance Measures[65/66]	Alternative Certification[67]	HM Controls[68/69]
Private Projects – Planning Entitlement										
College Avenue Tr 8030	7-25-08	3-10-10	A,D, & G	a	Bio- Retention	O & M Agreement	Volume	NA	NA	Bio-Retention
Oaks Bus. Park –Trammel Crow PM 10266	7-16-14	12-31-14	A,D, & G	a	Bio- Retention	O & M Agreement	Volume	NA	NA	Bio-Retention
Oaks Bus. Park –Phantom Site Gillig	6-8-14	6-20-14	A,D, & G	a	Bio- Retention	O & M Agreement	Volume	NA	NA	Bio-Retention
Catalina Crossing Tr 8145	5-3-14	7-14-14	A,D, & G	a	Bio- Retention	O & M Agreement	Volume	NA	NA	Bio-Retention
Garavanta Hills Tr 8094	6-4-13	Not Yet	A,D, & G	a	Bio- Retention	O & M Agreement	Volume	NA	NA	Bio-Retention
Primrose School PM 10217	12-1-14	7-27-15	A,D, & G	a	Bio- Retention	O & M Agreement	Volume	NA	NA	Bio- Retention
Vines Tr 8195	4-18-14	Not Yet	A,D, & G	a	None Yet	O & M Agreement	Volume	NA	NA	Bio- Retention
The Shoppes	2-27-14	4-20-15	A,D, & G	a	None Yet	O & M Agreement	Volume	NA	NA	Bio- Retention
Home 2 Suites	4-18-14	10-7-14	A, D, G	a	None Yet	O & M Agreement	Volume	NA	NA	Bio- Retention

[58] For private projects, state project application deemed complete date. If the project did not go through discretionary review, report the building permit issuance date.
[59] 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.
[60] 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.
[61] 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.
[62] 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.).
[63] 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.
[64] 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).
[65] 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.
[66] 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.
[67] Note whether a third party was used to certify the project design complies with Provision C.3.d.
[68] If HM control is not required, state why not.
[69] 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), biodetention unit(s), regional detention basin, or in-stream control).

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

Project Name Project No.	Application Deemed Complete Date[70]	Application Final Approval Date[71]	Source Control Measures[72]	Site Design Measures[73]	Treatment Systems Approved[74]	Type of Operation & Maintenance Responsibility Mechanism[75]	Hydraulic Sizing Criteria[76]	Alternative Compliance Measures[77/78]	Alternative Certification[79]	HM Controls[80/81]
Private Projects – Planning Entitlement Con't.										
Old Town Village Tr 8173	2-7-14	12-30-14	A,D & G	a	Bio- Retention	None Yet	None Yet	NA	NA	None Yet
Old Town Village Tr 8184	3-25-14	1-6-15	A, D, G	a	Bio- Retention	None Yet	None Yet	NA	NA	None Yet
Tiffany Gardens	9-10-14	2-17-15	A,D & G	a	Bio- Retention	None Yet	None Yet	NA	NA	None Yet
Shea Sage Tr 8121	4-20-14	11-6-14	A, D, & G	a	Bio- Retention	None Yet	None Yet	NA	NA	None Yet
Private Projects – Final Map										
Brisa Neighborhood Plan – Phase 1-3 T7870	11-5-13	1-13-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Old Town Village First & Inman T8114	7-10-14	7-14-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention

[70] For private projects, state project application deemed complete date. If the project did not go through discretionary review, report the building permit issuance date.
[71] 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.
[72] 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.
[73] 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.
[74] 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.).
[75] 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.
[76] 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).
[77] 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.
[78] 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.
[79] Note whether a third party was used to certify the project design complies with Provision C.3.d.
[80] If HM control is not required, state why not.
[81] 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), biodetention unit(s), regional detention basin, or in-stream control).

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

Project Name Project No.	Application Deemed Complete Date[82]	Application Final Approval Date	Source Control Measures[83]	Site Design Measures[84]	Treatment Systems Approved[85]	Type of Operation & Maintenance Responsibility Mechanism[86]	Hydraulic Sizing Criteria[87]	Alternative Compliance Measures[88/89]	Alternative Certification[90]	HM Controls[91/92]
Private Projects – Final Map Con't.										
Old Town Village First & Inman T8146	12-1-13	6-8-15	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
First and Portola T7633	12-1-13	11-10-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Morning Glory T8125	12-24-13	7-14-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Premium II Outlet Expansion PM 10090	2-1-14	7-14-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Positano T7840	6-1-14	12-18-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Shea Sage T 8121	4-20-14	11-6-14	A, D, & G	a	Bio- Retention	None Yet	None Yet	NA	NA	None Yet
Artero BlueBell T 7724	6-30-14	7-14-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Gardella Gardens T 7900	12-16-08	2-9-9	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Orchid Ranch T 7671	11-17-9	1-11-10	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention

[82]For private projects, state project application deemed complete date. If the project did not go through discretionary review, report the building permit issuance date.
[83]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.
[84]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.
[85]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.).
[86]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.
[87]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).
[88]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.
[89]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.
[90]Note whether a third party was used to certify the project design complies with Provision C.3.d.
[91]If HM control is not required, state why not.
[92]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), biodetention unit(s), regional detention basin, or in-stream control).

C.3.b.v.(1) ►Regulated Projects Reporting Table (part 2) – Projects Approved During the Fiscal Year Reporting Period (private projects)										
Project Name Project No.	Application Deemed Complete Date[93]	Application Final Approval Date	Source Control Measures[94]	Site Design Measures[95]	Treatment Systems Approved[96]	Type of Operation & Maintenance Responsibility Mechanism[97]	Hydraulic Sizing Criteria[98]	Alternative Compliance Measures[99/100]	Alternative Certification[101]	HM Controls[102/103]
Private Projects – Building Permits										
Brisa Neighborhood Plan – Phase 1-3 T7870	11-5-13	1-13-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Airport FBO	1-8-14	4-15-14	A, D & G	a	Bio-retention	O&M Agreement	Volume	NA	NA	Bio-retention
Old Town Village First & Inman T8114	2-27-14	2-28-14	A, D & G	a	Bio-retention	O&M Agreement	Volume	NA	NA	Bio-retention
Old Town Village First & Inman T8146	12-1-13	6-8-15	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
First and Portola T7633	12-1-13	11-10-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Morning Glory T8125	4-24-14	2-28-14	A, D & G	a	Bio-retention	O&M Agreement	Volume	NA	NA	Bio-retention
Positano T7840	6-1-14	12-18-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention

[93]For private projects, state project application deemed complete date. If the project did not go through discretionary review, report the building permit issuance date.
[94]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.
[95]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.
[96]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.).
[97]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.
[98]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).
[99]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.
[100]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.
[101]Note whether a third party was used to certify the project design complies with Provision C.3.d.
[102]If HM control is not required, state why not.
[103]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), biodetention unit(s), regional detention basin, or in-stream control).

C.3.b.v.(1) ►Regulated Projects Reporting Table (part 2) – Projects Approved During the Fiscal Year Reporting Period (private projects)										
Project Name Project No.	Application Deemed Complete Date[104]	Application Final Approval Date	Source Control Measures[105]	Site Design Measures[106]	Treatment Systems Approved[107]	Type of Operation & Maintenance Responsibility Mechanism[108]	Hydraulic Sizing Criteria[109]	Alternative Compliance Measures[110/111]	Alternative Certification[112]	HM Controls[113/114]
Private Projects – Building Permits – Con't.										
Premium II Outlet Expansion PM 10090	2-1-14	7-14-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Crosswinds Church PM 9747	5-20-14	5-21-14	A, D & G	a	Bio-retention	O&M Agreement	Volume	NA	NA	Bio-retention
Old Town Village First & Inman T8114	2-27-14	2-28-14	A, D & G	a	Bio-retention	O&M Agreement	Volume	NA	NA	Bio-retention
Artero BlueBell Tr7724	6-30-14	7-14-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Dante Robere Winery	5-1-14	11-26-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Kiddy Academy	7-24-15	Not Yet	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Clark Pest Control	7-14-14	8-27-14	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention
Scenic Plaza	5-2-15	Not Yet	A, D & G	a	Bio-Retention	O&M Agreement	Volume	NA	NA	Bio-Retention

[104]For private projects, state project application deemed complete date. If the project did not go through discretionary review, report the building permit issuance date.
[105]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.
[106]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.
[107]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.).
[108]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.
[109]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).
[110]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.
[111]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.
[112]Note whether a third party was used to certify the project design complies with Provision C.3.d.
[113]If HM control is not required, state why not.
[114]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), biodetention unit(s), regional detention basin, or in-stream control).

C.3.b.v.(1) ▶ Regulated Projects Reporting Table (part 2) – Projects Approved During the Fiscal Year Reporting Period (public projects)

Project Name Project No.	Application Deemed Complete Date[115]	Application Final Approval Date[116]	Source Control Measures[117]	Site Design Measures[118]	Treatment Systems Approved[119]	Type of Operation & Maintenance Responsibility Mechanism[120]	Hydraulic Sizing Criteria[121]	Alternative Compliance Measures[122/123]	Alternative Certification[124]	HM Controls[125/126]
Public Projects										
Airport Administration	July -13	Jan -14	A,B,D,F,G,H, T, W	a,b,c,d,	Bio-Retention	Maintained by City Staff	Volume	NA	NA	Bio-Retention
Fire Station #9	Jul-14	Dec-14	A,D, G, Q, R, T	a,b,c,d	Bio-Retention	Maintained by City Staff	Volume	NA	NA	Bio-Retention
ECSP Phase 2A	Oct - 13	March-14	A,D,Q,R,T	c,d	Bio-Retention	Maintained by City Staff	Volume	NA	NA	Bio-Retention
Freisman Park 2B	Mar-14	Sept – 14	A,D,Q,R,T, W	c,d	Bio-Retention	Maintained by City Staff	Volume	NA	NA	Bio-Retention
Galaxy Ct. Flood Protection	Jan- 14	Aug-14	D	c	Infiltration	Maintained by City Staff	Volume	NA	NA	Bio-Retention

[115] For private projects, state project application deemed complete date. If the project did not go through discretionary review, report the building permit issuance date.
[116] 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.
[117] 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.
[118] 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.
[119] 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.).
[120] 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.
[121] 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).
[122] 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.
[123] 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.
[124] Note whether a third party was used to certify the project design complies with Provision C.3.d.
[125] If HM control is not required, state why not.
[126] 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), biodetention unit(s), regional detention basin, or in-stream control).

C.3.h.iv. ►Table of Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting

Fill in table below or attach your own table including the same information: The table is intended to (1) report on the inspections of installed stormwater treatment systems, and (2) provide a list of all newly installed treatment measures and HM controls to vector control agencies on an annual basis before the wet season, i.e., October 1. Countywide programs (or in some cases, individual permittees) will submit these tables to vector control agencies to fulfill this requirement.

Name of Facility/Site Inspected	Address of Facility/Site Inspected	Newly Installed? (YES/NO)[127]	Party Responsible[128] For Maintenance	Date of Inspection	Type of Inspection [129]	Type of Treatment/HM Control(s) Inspected[130]	Inspection Findings or Results[131]	Enforcement Action Taken[132]	Comments/Follow-up
Livermore Subaru	3600 Las Positas Road	No	Livermore Subaru	07/10/2014	Routine	Bioswales	Compliant	None	None
Livermore Honda	3200 Las Positas Road	No	Livermore Honda	07/10/2014	Routine	Bioswales/2 CDS Units	Compliant	None	None
Livermore Porsche	3100 Las Positas Road	No	Livermore Porsche	07/10/2014	Routine	Bioswale/Vortex Separator	Compliant	None	None
Livermore Audi	3400 Las Positas Road	No	Livermore Audi	07/10/2014	Routine	Bioswales/CDS Unit	Compliant	None	None
Livermore Jaguar	3500 Las Positas Road	No	Livermore Jaguar	07/10/2014	Routine	Bioswales	Compliant	None	None
Bridgelux/Toshiba	101 Portola Ave	No	Toshiba	07/21/2014	Routine	Bioswales	Compliant	None	None
Form Factor	501 Lawrence Road	No	Form Factor	08/26/2014	Routine	Bioswales (13)	Compliant	None	None
Form Factor	7545 Longard Road	No	Form Factor	08/26/2014	Routine	Bioswales (13)	Compliant	None	None
Sunbelt Rentals	4977 Southfront Road	No	Sunbelt Rentals	09/4/2014	Routine	Bioswales	Compliant	None	None
Costco	2800 Independence Drive	No	Costco	09/10/2014	Routine	Bioretention Area	Compliant	None	None

[127]Indicate "YES" if the facility was installed within the reporting period, or "NO" if installed during a previous fiscal year.
[128]State the responsible operator for installed stormwater treatment systems and HM controls.
[129]State the type of inspection (e.g., 45-day, routine or scheduled, follow-up, etc.).
[130]State the type(s) of treatment systems inspected (e.g., bioretention facility, flow-through planter, infiltration basin, etc...) and the type(s) of HM controls inspected, and indicate whether the treatment system is an onsite, joint, or offsite system.
[131]State the inspection findings or results (e.g., proper installation, improper installation, proper O&M, immediate maintenance needed, etc.).
[132]State the enforcement action(s) taken, if any.

C.3.h.iv. ►Table of Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting

Fill in table below or attach your own table including the same information: The table is intended to (1) report on the inspections of installed stormwater treatment systems, and (2) provide a list of all newly installed treatment measures and HM controls to vector control agencies on an annual basis before the wet season, i.e., October 1. Countywide programs (or in some cases, individual permittees) will submit these tables to vector control agencies to fulfill this requirement.

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National Food Laboratories	2441 Constitution Drive	No	Lyell Fork, LLC 1300 Industrial Road San Carlos, CA 94070	09/29/2014	Routine	Bioswales (3)	Compliant	None	None
Boatmasters	5162 Preston Ave.	No	Boatmasters	10/06/2014	Routine	Detention Basis	Invasive Weeds/Vegetation; Dead vegetation	None	Drought restrictions resulting in issues with vegetation.
LPFD Station #10	330 Airway Blvd.	No	City of Livermore	10/15/2014	Routine	Vegetated Swale	Compliant	None	None
Interstate Storage	1800 Sutter Street	No	Interstate Storage	10/21/2014	Routine	Detention Basin	Compliant	None	None
U.S. Foods	300 Lawrence Drive	No	U.S. Foods	10/22/2014	Routine	Bioretention Area	Compliant	None	None
Wheel Works	2868 Las Positas Road	No	Wheel Works	11/20/2014	Routine	Vegetated Swale	Compliant	None	None
Penske Truck Leasing	6215 Las Positas Road	No	Penske Truck Leasing	11/13/2014	Routine	Vegetated Swale	Compliant	None	None
Protein Research	1852 Rutan Drive	No	Protein Research	12/3/2014	Routine	Vegetated Swale	Compliant	None	None
Clark Pest Control	2313 Research Drive	No	Clark Pest Control	01/8/2015	Routine	Vegetated Swale (3)	Overgrown vegetation	None	Owner instructed to cut back/maintain vegetation
Zone 7 Water Agency	100 North Canyons Parkway	No	Zone 7 Water Agency	01/09/2015	Routine	Vegetated Swale	Compliant	None	None
Dun-Rite Excavating	5382 and 5380 Brisa Street	No	Dun-Rite Excavating	01/28/2015	Routine	Bioretention Area	Invasive Weeds/Ivy taking over vegetation	None	None
Livermore Toyota	6200 Northfront Road	No	Livermore Toyota	01/29/2015	Routine	Bioretention Area	Compliant	None	None

C.3.h.iv. ►Table of Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting

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D.K. Milovic Company	5640 La Ribera St	No	Tigard Investment Groum and Dunnigan Hills	02/11/2015	Routine	Bioswale	Compliant	None	None
Integraged Manufacturing Group	225 Mountain Vista Parkway	No	Field Properties, LP 1187 Camino Vallecito, Lafayette, CA 94549	02/27/2015	Routine	Bioswale	Compliant	None	"Swales are too small to be effective"
Livermore Amador Valley Transit Authority	875 Atlantis Court	No	Livermore Amador Valley Transit Authority	03/06/2015	Routine	Detention Basin	Compliant	None	Required owner to remove debris from catch basin
6200 Northfront Road#1	6200 Northfront Road	No	City of Livermore	06/16/2015	Routine	Filterra #4 located in front of Toyota Dealership	Compliant	None	None
6200 Northfront Road#2	6200 Northfront Road	No	City of Livermore	06/16/2015	Routine	Filterra #3 located in front of Toyota dealership	Compliant	None	None
6200 Northfront Road#3	6200 Northfront Road	No	City of Livermore	06/16/2015	Routine	Filterra #2 located in front of Toyota Dealership	Compliant	None	None
6200 Northfront Road#4	6200 Northfront Road	No	City of Livermore	06/16/2015	Routine	Filterra #1 located across street near eastbound lane near Toyota Dealership	Compliant	None	None

C.3.h.iv. ►Table of Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting

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6200 Northfront Road#5	6200 Northfront Road	No	City of Livermore	03/16/2015	Routine	Bioretention Area located across street near eastbound lane near Toyota Dealership	Compliant	None	None
Custom Gear and Machining	6459 Brisa Street	No	Bushwood Properties, LLC 427 Matthew Ct. Pleasanton, CA	03/10/2015	Routine	Infiltration Trench	Compliant	None	None
3142 Constitution Drive#1	3142 Constitution Drive	No	City of Livermore	03/11/2015	Routine	Filterra unit located near Southbound lane	Compliant	None	None
3142 Constitution Drive#2	3142 Constitution Drive	No	City of Livermore	03/11/2015	Routine	Filterra unit locate infront of charter school	Compliant	None	None
5699 Las Positas #3	5699 Las Positas	No	City of Livermore	03/18/2015	Routine	Filterra Unit locate on Las Posita Road near 5699 Las Positas Road	Compliant	None	None
5699 Las Positas #4	5699 Las Positas	No	City of Livermore	03/18/2015	Routine	Filterra Unit locate on Las Posita Road near 5699 Las Positas Road	Compliant	None	None
5699 Las Positas #5	5699 Las Positas	No	City of Livermore	03/18/2015	Routine	Filterra Unit locate on Las Posita Road near 5699 Las Positas Road	Compliant	None	None
5699 Las Positas #6	5699 Las Positas	No	City of Livermore	03/18/2015	Routine	Filterra Unit locate on Las Posita Road near 5699 Las Positas Road	Compliant	None	None

C.3.h.iv. ►Table of Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting

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5699 Las Positas #7	5699 Las Positas	No	City of Livermore	03/18/2015	Routine	Filterra Unit locate on Las Posita Road near 5699 Las Positas Road	Compliant	None	None
Contractors Common	4370-4382 Contractors Common	No	Contractors Common	03/19/2015	Routine	Bioretention Planter	Compliant	None	None
Livermore Subaru	3600 Las Positas Road	No	Livermore Subaru	04/10/2015	Routine	Bioswales	Compliant	None	None
Livermore Honda	3200 Las Positas Road	No	Livermore Honda	04/10/2015	Routine	Bioswales/2 CDS Units	Compliant	None	None
Livermore Porsche	3100 Las Positas Road	No	Livermore Porsche	04/10/2015	Routine	Bioswale/Vortex Separator	Compliant	None	None
Livermore Audi	3400 Las Positas Road	No	Livermore Audi	04/10/2015	Routine	Bioswales/CDS Unit	Compliant	None	None
Livermore Jaguar	3500 Las Positas Road	No	Livermore Jaguar	04/10/2015	Routine	Bioswales	Compliant	None	None
Livermore Sanitation	7000 National Drive	No	Livermore Sanitation	06/11/2015	Routine	Bioretention Area	Compliant	None	None
Livermore Gas & Shop	816 N. Vasco Road	No	Livermore Gas & Shop	06/16/2015	Routine	Extended Detention Basin	Trash/litter in basin	None	Owner required to pick up litter/trash
Penske Truck Leasing	6215 Las Positas Road	No	Penske Truck Leasing	06/16/2015	Routine	Vegetated Swale	Compliant	None	Compliant
The Grove Ph 2 APN: 099-137800305 Tr7552	Sonia St /N Mines Rd Old Hexcel Site	Yes	Northbrook Homes Gary Brooks	9-22-14	45-day	Swales	Installed Property	None	

C.3.h.iv. ►Table of Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting

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Name of Facility/Site Inspected	Address of Facility/Site Inspected	Newly Installed? (YES/NO)[127]	Party Responsible[128] For Maintenance	Date of Inspection	Type of Inspection [129]	Type of Treatment/HM Control(s) Inspected[130]	Inspection Findings or Results[131]	Enforcement Action Taken[132]	Comments/Follow-up
The Grove Ph 3 APN: 099-137800305 Tr7782	Sonia St /N Mines Rd Old Hexcel Site	Yes	Northbrook Homes Gary Brooks	4-27-15	45-day	Swales	Installed Property	None	
Northfront Road Parcel Map 9707	Northfront Road	Yes	Toyota	6-09-14	45-day	Swales	Installed Property	None	
Galaxy Ct. Flood Protection – Trail Culvert Replacement	Galaxy Court Proj. 2010-29	Yes	City of Livermore	2-9-15	45-day	Swales	Installed Property	None	
Airport Admin. Bldg. 2015-35	Terminal Circle	Yes	City of Livermore	4-13-15	45-day	Swales	Installed Property	None	
Cayetano Park Tr 7610	2580 Shea Center	Yes	City of Livermore	3-23-15	45-day	Swales	Installed Property	None	
Vinsanto Phase 1 T8045	Caldera and San Vicente Drive	Yes	Ponderosa Homes	6-8-15	45-day	Swales	Installed Property	None	
Vinsanto Phase 2 Tr 8091	Caldera and San Vicente Drive	Yes	Ponderosa Homes	6-8-15	45-day	Swales	Installed Property	None	
Magnolia APN: 099B-507500608	1000 Vasco Road North	Yes	Standard Pacific Aaron Ross-Swan	12-8-14	45-day	Swales	Installed Property	None	
Vineyard Ave. relocation Proj.1996-60	Vineyard Ave. @Vallecitos Road	Yes	City of Livermore	9-8-14	45-day	Swales	Installed Property	None	

C.3.e.vi.Special Projects Reporting Table

Reporting Period –January1 – June 30, 2015

Project Name & No.	Permittee	Address	Application Submittal Date[133]	Status[134]	Description[135]	Site Total Acreage	Density DU/Acre	Density FAR	Special Project Category[136]	LID Treatment Reduction Credit Available[137]	List of LID Stormwater Treatment Systems[138]	List of Non-LID Stormwater Treatment Systems[139]
There were no special projects during this reporting period												

[133]Date that a planning application for the Special Project was submitted.
[134] 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.
[135]Type of project (commercial, mixed-use, residential), number of floors, number of units, type of parking, and other relevant information.
[136] For each applicable Special Project Category, list the specific criteria applied to determine applicability. For each non-applicable Special Project Category, indicate n/a.
[137]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.
[138]: 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.
[139]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.

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

Program Highlights

Provide background information, highlights, trends, etc.

Refer to the C.4. Industrial and Commercial Site Controls section of the countywide Program's FY 14-15 Annual Report for a description of activities of the countywide Program.

C.4.b.i. ► Business Inspection Plan

Do you have a Business Inspection Plan?	X	Yes		No

If No, explain:

C.4.b.iii.(1) ► 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.

The City of Livermore developed a 5-Year Inspection Plan in 2010 to comply with the requirements as prescribed in Section C.4.b of the Municipal Regional Stormwater Permit. Please refer to the attached document entitled "Stormwater Industrial and Commercial Inspection Plan" (Attachment C.4). Prior to the start of each fiscal year, City of Livermore Source Control Staff query the City's Business License Data Base to insure the most accurate facility inspection list for the specific types of facilities designated for inspection during the reporting period.

C.4.b.iii.(2) ► Facilities Scheduled for Inspection

List below or attach your list of facilities scheduled for inspection during the current fiscal year.

During the Fiscal Year 2015/2016, the City of Livermore plans to perform approximately 180 facility inspections comprised of the following:

1. All industrial/commercial facilities permitted under the City's Pretreatment Programs (98 facilities)
2. All NOI Facilities (20 total; 12 NOIs are also pretreatment program permitted facilities)
3. All facilities listed under SIC 7532 (Automotive Body Shops), SIC 7538 (Automotive Repair Shops), and SIC 5541 (Gasoline Service Stations)- (74 facilities)

C.4.c.iii.(1) ► Facility Inspections

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

X	Permittee reports multiple discrete violations on a site as one violation.
	Permittee reports the total number of discrete violations on each site.

	Number	Percent
Number of businesses inspected	113	
Total number of inspections conducted	138	
Number of violations (excluding verbal warnings)	3	
Sites inspected in violation	3	2.7%
Violations resolved within 10 working days or otherwise deemed resolved in a longer but still timely manner	3	100%
Comments: No additional comments		

C.4.c.iii.(2) ► 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)	2
Potential discharge and other	1
Comments: The two illicit discharges were from two different sites. Both discharges were minor discharges to a stormdrain inlet.	

C.4.c.iii.(2) ►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)[134]	Number of Enforcement Actions Taken	% of Enforcement Actions Taken[135]
Level 1	Verbal Warning	7	70%
Level 2	Warning Letter		
Level 3	Notice of Violation	2	20%
Level 4	Notice of Violation with an Administrative Citation (Fine)	1	10%
Total		10	100%

C.4.c.iii.(3) ►Types of Violations Noted by Business Category

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

Business Category[136]	Number of Actual Discharge Violations	Number of Potential/Other Discharge Violations
Commercial/Retail		1
Winery/Tasting Rooms	--	--
Industrial/Manufacturing		3
Construction/Maintenance Yards		1
Gasoline Station		2
Warehouse/Transportation		1
Food Service Establishment	--	--
Automobile Dealership/Auto Repair	2	

C.4.c.iii.(4) ►Non-Filers

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.

[134] Agencies to list specific enforcement actions as defined in their ERPs.
[135] Percentage calculated as number of each type of enforcement action divided by the total number of enforcement actions.
[136] List your Program's standard business categories.

C.4.d.iii ▶ Staff Training Summary

Training Name	Training Dates	Topics Covered	No. of Inspectors in Attendance	Percent of Inspectors in Attendance
Stormwater Business Inspectors Workshop Honing Your Inspection Skills	6/3/15	C.4 Overview; IGP Update; Facility Sources of BMPs; Using and understanding CASQA BMP Handbook for businesses; Mock inspections Urban runoff pollution prevention Inspection procedures BMPs at Industrial and Commercial Facilities PCBs or PCB-containing equipment.	2	50%
WEFTEC 2014	September 2014	Various stormwater topics covered at the conference	2	50%
CWEA P3S Conference	February 2015	Various stormwater topics covered at the conference	1	25%

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

Program Highlights

Provide background information, highlights, trends, etc.

See Section C.5, Illicit Discharge Detection and Elimination, of the ACCWP FY 14-15 Annual Report for a summary of Program activities.
The City of Livermore has established a priority screening list of outfalls to routinely inspect for illicit discharge activities. Inspections are documented using the City's "Storm System Screening Form". The following is the priority list of Outfalls to survey for illicit discharge activity:

OUTFALL ID#	SIZE	LOCATION
OF2G01	48"	N. Vasco / Garaventa Ranch
OF2G02	36"	Broadmoore St.
OF3C01	66" x2	Collier Canyon Rd. / Heligan Ln.
OF3F01	42"	Redwood Rd. / Autumn Oak Rd.
OF3G01	36"	Hollyhock St. / Golf Course
OF3G02	42"	Bluebell Dr. / Golf Course
OF3G03	36"	Central Ave. / Lobelia Wy.
OF3G04	54"	Vasco Rd.
OF3G05	42"	Vasco Rd.
OF3H01	48"	Northfront Rd.
OF4C01	72" x2	Collier Canyon Rd. / Portola Ave.
OF4C02	48"	Constitution Dr.
OF4C03	36"	Airway Blvd.
OF4C04	48"	Airway Blvd. / Kitty Hawk Rd.
OF4C05	36"	Airway Blvd. / Kitty Hawk Rd.
OF4C06	30"	Airway Blvd. / Starbucks
OF4C07	36"	Off Ramp of Airway Blvd.
OF4C08	24"	Off Ramp of Airway Blvd. / Zone 7
OF4D01	60"	Shea Center
OF4D02	48"	East Airway Blvd.
OD4D03	60"	Paseo Laguna Seco
OF4E01	48"	N. Livermore
OF4E02	42"	Las Positas / Kaiser Buiding
OF4E03	27"	Las Positas / Post Office
OF4F01	60"	First St. / Las Positas

OUTFALL ID#	SIZE	LOCATION
OF4G01	48"	Arroyo Vista
OF4G02	36"	Arroyo Vista
OF5G01	54"	Charlotte Way / Lucille St.
OF5G02	42"	Patterson Pass / Arlene Way
OF5G03	42"	Patterson Pass / Joyce St.
OF5G04	84"	Las Positas / Contractors
OF5G05	60"	Patterson Pass / Maureen Cir.
OF5G06	30"	Patterson Pass / Shelly St.
OF5G07	30"	Contractors / Railroad Bridge
OF5H01	60"	Patterson Pass / Vasco
OF5H02	48"	Vasco overpass at Patterson Pass
OF6D10	12"	Summer Tree Ct.
OF6D11	12"	Summer Tree
OF6D13	12"	Summer Tree / Cottonwood Ct.
OF6D16	12"	Summer Tree / Eucalyptus Ct.
OF7D01	54"	El Padro/ Ontario Dr.
OF7E03	30"	Robertson Park Rd.
OF7F01	48"	Robertson Park Rd.
OF9D01	36"	Siena Rd.

C.5.c.iii ▶Complaint and Spill Response Phone Number and Spill Contact List

List below or attach your complaint and spill response phone number and spill contact list.

Contact	Description	Phone Number
LWRP	Livermore Water Reclamation Plant	925-960-8100
LPFD/LPD	Emergency Services	911

C.5.d.iii ► Evaluation of Mobile Business Program

Describe implementation of minimum standards and BMPs for mobile businesses and your enforcement strategy. This may include participation in the BASMAA Mobile Surface Cleaners regional program or local activities.

Description:

See Section C.5, Illicit Discharge Detection and Elimination, of the ACCWP FY 14-15 Annual Report for a summary of related Program and BASMAA activities. The City of Livermore requires mobile cleaners to implement the BMPs recommended by the BASMAA Mobile Surface Cleaners Program. The City permits one local mobile washer through our Industrial Pretreatment Program.

C.5.e.iii ► Evaluation of Collection System Screening Program

Provide a summary or attach a summary of your collection screening program, a summary of problems found during collection system screening and any changes to the screening program this FY.

Description:

The City's collection screening program consists of (1) storm drain inlets, (2) channel sections and outfalls, and/or (3) an industrial/commercial area. Storm drain inlets throughout the city are routinely surveyed for illicit discharges by municipal maintenance staff through the course of their routine storm drain inlet maintenance activities. As a significant volume of our illicit discharges are identified by Source Control staff through routine inspections and surveys of industrial and commercial business parks, a decreased emphasis is placed on surveying belowground storm drain structures, channel sections, and outfalls. However, periodically these areas are surveyed for illicit discharges. As detailed in previous reports, the vast majority of illicit discharges are discovered to be occurring in industrial and commercial areas; as a result, the majority of staff time and resources for illicit discharge survey activities are concentrated in these areas. The City of Livermore documents all illicit discharges with the ACCWP Illicit Discharge Report form and track inspection data with the City's Illicit Discharge Report database

As noted in the previous annual Stormwater Reports, in November 2011, Maintenance staff preformed some "emergency work" at a creek outfall to prevent flooding in nearby neighborhoods. The affected neighborhoods had a history of flooding and its drainage outfall to the creek was obstructed due to the accumulation of vegetation and other debris. After performing the required maintenance to remove the obstruction and prevent upstream flooding, the RWQCB, The California Department of Fish and Wildlife, and the U.S. Fish and Wildlife service informed the City that they did not believe the potential for flooding met their definition of "emergency", and therefore, in these agencies' opinion, the City was in violation for the work performed at the creek outfall without the appropriate permits and approvals. In response to this incident, the City began working on a "Stream Maintenance Plan" with the SFRWQCB, Department of Fish and Wildlife, and U.S. Fish and Wildlife Services. Due to the enforcement actions resulting from this November 2011 incident, the City's Assistant Public Works Director and the City Engineer instructed staff not to enter or perform any activities within the creeks or creek outfalls until the "Stream Maintenance Plan" is approved by all the regulatory agencies involved. During this reporting period, City staff continued work on getting this plan approved. At the present time City staff is working on a mitigation plans and costs that are acceptable to all of the regulatory authorities involved. In August 2014, the City received approval to work one outfall project at Galaxy Court; however, the entire Stream Maintenance Plan has yet to be approved in its entirety. As final approval of the City's Steam Maintenance Plan has not been received, City staff did not perform Screening inspections during this reporting period and will not resume such inspections until this plan has received final approval from the RWQCB. It is anticipated that these exhaustive efforts in obtaining the required permits from the SFRWQCB, The California Department of Fish and Wildlife, and the U.S. Fish and Wildlife service shall be concluded with the actual issuance of a permit during the FY 2015/2016. If, and when this occurs, the City will resume inspections and maintenance of the outfalls detailed in this report.

C.5.f.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.f.iii.(1))	17	
Discharges reaching storm drains and/or receiving waters (C.5.f.iii.(2))	17	100%
Discharges resolved in a timely manner (C.5.f.iii.(3))	15	88.24%

Comments: 15 of the 17 illicit discharges were stopped immediately. The two discharges that we not stopped immediately were as follows:

1. Discharge of mineral oil substance that was traced to storm drain. Upon further investigation, the discharge was the result of pesticide application from Mosquito Abatement.
2. Discharge of swimming pool water to the storm drain system from apartment complex. The apartment complex did not have a sanitary sewer drain or an appropriate landscaped area to discharge. The discharge of non-chlorinated pool water was allowed to continue as there were no other viable discharge options.

C.5.f.iii.(4) ►Summary of major types of discharges and complaints

Provide a narrative or attach a table and/or graph.

Type of Discharge	Frequency	Percentage
Paint	0	
Concrete	1	5.88%
Construction Debris	0	
Sediment Mud	0	
Food Wastes	1	5.88%
Yard Waste	0	
Industrial Waste	0	
Concrete Cutting Slurry	1	5.88%
Vehicle Cleaning Washwater	1	5.88%
Bldg. Sidewalk Washwaters	1	5.88%
Other: Swimming Pool (3):Pesticide (1); Sewage (2); Shopping Cart Washing (1)	7	41.18%
Sewage	0	
Automotive Fluids	5	29.41%
Total	17	100%

Section 6 – Provision C.6 Construction Site Controls

C.6.e.iii.1.a, b, c ►Site/Inspection Totals

Number of High Priority Sites (sites disturbing < 1 acre of soil requiring storm water runoff quality inspection) (C.6.e.iii.1.a)	Number of sites disturbing ≥ 1 acre of soil (C.6.e.iii.1.b)	**Total number of storm water runoff quality inspections conducted (include only High Priority Site and sites disturbing 1 acre or more)** (C.6.e.iii.1.c)
1	9	59

Comments:
The City of Livermore had 7 sites that disturbed greater than one acre: Coventry by Ponderosa, Brighton Improvements, Ponderosa at Vinsanto, Portola, Brisa Station-Phase1, Orchid Ranch, Artero, Crosswinds Church, and Livermore Outlets. The City had 1 "High Priority" Site less than an acre: Galaxy Court Flood Protection. This site was deemed "High Priority" due to its proximity to the creek.

C.6.e.iii.1.d ►Construction Activities Storm Water Violations

BMP Category	Number of Violations[137] excluding Verbal Warnings	% of Total Violations[138]
Erosion Control	1	5%
Run-on and Run-off Control		
Sediment Control	12	60%
Active Treatment Systems		
Good Site Management	6	30%
Non Stormwater Management	1	5%
Total[139]	**20**	**100%**

[137]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.

[138]Percentage calculated as number of violations in each category divided by total number of violations in all six categories.

[139]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.1.e ►Construction Related Storm Water Enforcement Actions

	Enforcement Action (as listed in ERP)[140]	Number Enforcement Actions Issued	% Enforcement Actions Issued[141]
Level 1[142]	Verbal Warning	5	33%
Level 2	Written Warning	1	7%
Level 3	Administrative Action/Notice to Comply	9	60%
Level 4	Stop Work Order		
Total		**15**	**100%**

C.6.e.iii.1.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

[140]Agencies should list the specific enforcement actions as defined in their ERPs.
[141]Percentage calculated as number of each type of enforcement action divided by the total number of enforcement actions.
[142]For example, Enforcement Level 1 may be Verbal Warning.

C.6.e.iii.1.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)	14	100[143]
Violations (excluding verbal warnings) not fully corrected within 30 days after violations are discovered (C.6.e.iii.1.i)	0	
Total number of violations (excluding verbal warnings) for the reporting year[144]	14	100%
Comments: No additional comments		

C.6.e.iii.(2) ▶ 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: The City of Livermore utilizes the "Inspection Checklist for Construction Stormwater Controls" to document the stormwater inspections conducted by Building and Engineering staff. Completed inspection forms are entered into the Excel Construction Inspection Database/Spreadsheet developed by the SCVURPPP. In the future, these inspections will be tracked in the City's Building/Permit Center database system. Until that system is fully implemented, the City will continue to use the program developed by SCVURPPP to track and analyze this inspection data.

C.6.e.iii.(2) ▶ 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: The City consistently implements an inspection program compliant with MRP requirements. The City participates in the ACCWP New Development Subcommittee and workgroups to stay current will all stormwater regulations and MRP requirements. Please refer to the C.6 Construction Site Control Section of the Countywide Program's FY 14-15 Annual Report for a description of activities at the Countywide or Regional Level.

[143] 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.

[144] 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.

C.6.f ▶ Staff Training Summary

Training Name	Training Dates	Topics Covered	No. of Inspectors in Attendance	Percent of Inspectors in Attendance*
Inspecting C.6 BMPs & Installation Demonstration	3/5/15	Correct uses of specific BMPs Proper installation and maintenance of BMPs Permit requirements Copper Architectural BMPs.	4	17%
QSP Certification & Training	4/28/15-4/29/16	Stormwater Construction BMPS, SWPPP, General Construction Permit, etc	2	8%
QSP Technical Training/General Construction Permit	5/21/2015	Stormwater Construction BMPS, SWPPP, General Construction Permit, etc	7	29%
QSP Technical Training/General Construction Permit ***This figure is based on total number of Engineering Division and Building Division staff (24 employees)**	5/28/2015	Stormwater Construction BMPS, SWPPP, General Construction Permit, etc	10	42%

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

C.7.b.ii.1 ►Advertising Campaign

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

Summary:

The following separate report developed by BASMAA summarizes the activities of the Regional Youth Litter Campaign

- BASMAA Be the Street Campaign Report

C.7.b.iii.1 ►Pre-Campaign Survey

(For the Annual Report following the pre-campaign survey) Summarize survey information such as sample size, type of survey (telephone survey, interviews etc.). Attach a survey report that includes the following information. If survey was done regionally, refer to a regional submittal that contains the following information:

Information on the pre-campaign survey for the BASMAA Regional Youth Litter Campaign was provided in the FY 11-12 Annual Report.

Place an **X** in the appropriate box below:

	Survey report attached
X	Reference to regional submittal

C.7.b.iii.2 ►Post-Campaign Survey

(For the Annual Report following the post-campaign survey) Discuss the campaigns and the measureable changes in awareness and behavior achieved. Provide an update of outreach strategies based on the survey results. If survey was done regionally, refer to a regional submittal that contains the following information:

Information on the post-campaign survey for the BASMAA Regional Youth Litter Campaign was provided in the BASMAA FY 13-14 Annual Report.

Place an **X** in the appropriate box below:

	Survey report attached
X	Reference to regional submittal

C.7.c ▶Media Relations

Summarize the media relations effort. Include the following details for each media pitch in the space below, AND/OR refer to a regional report that includes these details:

- Topic and content of pitch
- Medium (TV, radio, print, online)
- Date of publication/broadcast

Summary:

The following separate report developed by BASMAA summarizes media relations efforts conducted during FY 14-15:

• BASMAA Media Relations Final Report FY 14-15

This report and any other media relations efforts conducted countywide is included within the C.7 Public Information and Outreach section of the Countywide Program's FY 14-15 Annual Report.

The City of Livermore Water Resources Division promotes pollution prevention messages on its web page www.cityoflivermore.net/citygov/pw/public_works_divisions/wrd/default.asp , and in its monthly, commercial and residential sewer and water bills. During FY 14-15, the Division's sewer bill messages reached 1,176 commercial customers and 113 residential customers, and its water bill messages reached 9,837 commercial and residential customers. The Division provided pollution prevention messages that included information on: proper Fats, Oil and Grease (FOG) disposal; proper flushable wipe; drug and household hazardous waste disposal; proper vehicle, pool, spa and fountain maintenance; alternatives to washing vehicles and pavement; and alternatives to using pesticides and chemical fertilizers.

The Division also promotes pollution prevention messages on Livermore Sanitation's website www.livermoresanitation.com/residential-resources.html , and in its monthly, Residential Newsletter. During FY 14-15, Livermore Sanitation's Newsletter reached 24,000 residential garbage customers, and included information on proper FOG disposal (April – June 2015 issue insert), properly maintaining your vehicle (January 2015 issue), and proper household hazardous waste disposal (April 2015 issue).

C.7.d ▶Stormwater Point of Contact

Summary of any changes made during FY 14-15:

No changes made during FY 14-15 to the City of Livermore Stormwater Point of Contact.

C.7.e ►Public Outreach 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
Stormwater Exhibit at the Alameda County Fair: July 1 through July 6, 2014 and June 17 through June 30, 2015. Setting up the exhibit and producing the outreach materials are Countywide Program efforts. Staffing the exhibit is an effort conducted by individual Permittees.	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.	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 14/15 Annual Report.
Livermore Valley Joint Unified School District (LVJUSD) Science Odyssey, 2/25/2015	Judging Science Odyssey Projects Water Resources Division staff judged middle and high school Clean Water Projects. Judges conducted an interview with the contestants as part of the judging process. The interview included a few questions regarding creek and pond pollutant sources and their effects on water quality, the environment and public safety. Two Clean Water projects were awarded 1st and 2nd place at the middle school level, and one Clean Water project 1st place at the high school level. Winners received a Certificate of Achievement, 2nd place winners received a $50 check, and 1st place winners received a $100 check.	Judging Science Odyssey Projects Positive interaction and feedback with approximately twelve middle and high school students. This is Water Resources Division staff's first time participating in the judging process.

Livermore Valley Joint Unified School District (LVJUSD) Science Odyssey, 2/26/2015	Outreach at Science Odyssey - 2/26 The Water Resources Division booth at the LVJUSD Science Odyssey was used to educate faculty members, students and their families about non-point source pollution, reducing non-point source pollution to Livermore storm drains and arroyos, and improving and protecting water quality and aquatic habitat in the Tri-Valley Creek Watershed. Informational materials distributed include: Alameda Creek Watershed Map, Stormwater Pollution and Pollution Prevention Brochures, Litter Prevention Brochure, and Clean Water Activity Booklet.	Outreach at Science Odyssey - 2/26 Positive interaction and feedback with approximately one-hundred (100+) residents and faculty members visiting the Water Resources Division's booth. More than one-thousand (1000+) residents and faculty members participated in the event.
Home Depot Water Conservation Plant & Gardening Event, 3/7/2015	The Water Resources Division booth at the Home Depot Water Conservation Plant & Gardening Event was used to educate residents about Integrated Pest Management and stormwater pollution prevention.	Positive interaction and feedback with approximately 50 residents visiting the Water Resources Division booth. This is Water Resources Division staff's first time participating in this event.
Qualified Water Efficient Landscaper Training, 4/ 21/2015 - 4/30/2015	The Water Resources Division booth at the Qualified Water Efficient Landscaper Training was used to educate landscape professionals and designers about Integrated Pest Management and stormwater pollution prevention.	Positive interaction and feedback with approximately 30 landscape professionals and designers visiting the Water Resources Division booth. This is Water Resources Division staff's first time participating in this event.

Livermore Wine Festival, 5/2 – 5/3/2015	The Water Resources Division booth at the Livermore Wine Festival was used to educate residents about proper FOG, flushable wipe and medicine disposal, Integrated Pest Management, litter prevention and creek clean-up, stormwater pollution prevention, etc. Informational materials distributed include: Think Before You Flush Brochure, Control It! Guide, Grow It! Guide, Healthy Home and Garden Booklet, Pest Bugging You? Pocket Guide, The 10 Most Wanted Bugs in Your Garden Brochure, Don't Plant a Pest Brochure, A Kid's Guide to Backyard Bug Guide, Pest or Pal? Activity Guide, Stormwater Pollution Prevention Brochure, Detain the Rain Brochure, and Clean Water Activity Booklets.	Positive interaction and feedback with approximately one-hundred (100+) residents visiting the Water Resources Division booth. More than four-thousand (4000+) residents participated in the event.
City of Livermore Health and Safety Fair, 6/3/2015	The Water Resources Division booth at the City of Livermore Health and Safety Fair was used to educate employees (and their families) about proper FOG, flushable wipe and medicine disposal, Integrated Pest Management, litter prevention and creek clean-up, stormwater pollution prevention, etc. Informational materials distributed include: Think Before You Flush Brochure, Control It! Guide, Grow It! Guide, Healthy Home and Garden Booklet, Pest Bugging You? Pocket Guide, The 10 Most Wanted Bugs in Your Garden Brochure, Don't Plant a Pest Brochure, A Kid's Guide to Backyard Bug Guide, Pest or Pal? Activity Guide, Stormwater Pollution Prevention Brochure, Detain the Rain Brochure, and Clean Water Activity Booklets.	Positive interaction and feedback with approximately sixty (50+) employees visiting the Water Resources Division booth. More than one-hundred (100+) employees participated in the event.

C.7.f. ►Watershed Stewardship Collaborative Efforts

Summarize watershed stewardship collaborative efforts and/or refer to a regional report that provides details. Describe the level of effort and support given (e.g., funding only, active participation etc.). State efforts undertaken and the results of these efforts. If this activity is done regionally refer to a regional report.

Evaluate effectiveness by describing the following:

- Efforts undertaken
- Major accomplishments

Summary: See Section C.7 (Public Outreach and Involvement) of the ACCWP FY 14/15 Annual Report for a summary of the *Bringing Back the Natives Garden* Tours that is sponsored by the Program.

C.7.g. ►Citizen Involvement Events

List the types of events conducted (e.g., creek clean up, storm drain inlet marking, native gardening etc.). Use the following table for reporting and evaluating citizen involvement events.

Event Details	Description	Evaluation of effectiveness
Community Stewardship Grants Program	The Countywide Program sponsors the Community Stewardship Grants (CSG) Program. The CSG Program provides approximately $25,000 annually in $1,000 to $5,000 increments to individuals and community groups to support stormwater improvement/outreach projects throughout the County.	See Section C.7 of the ACCWP FY14/15 Annual Report for a summary.

Tri-Valley Creeks to Bay Day, 9/20/2014 Creek Clean-up at seven Livermore Adopt a Creek Spots including: 1. Arroyo Las Positas @ Northfront Road (**Trash Hot Spot 4**: Arroyo Las Positas-Northfront Trailhead Park, ALP-NTP #4) 2. Arroyo Las Positas @ N. Livermore Avenue Bridge (**Trash Hot Spot 2**: Arroyo Las Positas @ Livermore Avenue Bridge, ALP@Livermore Bridge #2) 3. Arroyo Mocho in Robertson Park 4. Arroyo Mocho @ Holmes Street (**Trash Hot Spot 3**: Arroyo Mocho-Holmes-Mocho Park, AM-H-MP #3) 5. Altamont Creek and Arroyo Las Positas @ Bluebell Drive 6. Arroyo Las Positas @ Heather Lane 7. Arroyo Mocho @ Arroyo Road (new spot)	Tri-Valley Creeks to Bay Day not only helped to celebrate Coastal Cleanup Day, but also served as a kickoff event for a year-round effort coordinated by the Adopt a Creek Spot Program. Livermore sponsors providing supplies and refreshments for the event included Livermore Sanitation, Orchard Supply Hardware, Wal-Mart, Costco, and the Coastal Commission.	Over one-hundred and ninety-one (191+) Tri-Valley residents helped collect and properly dispose of 3,788.5 gallons of trash and 536.5 gallons of recyclables from seven Livermore Creek Spots (approximately 5.6 miles) in approximately 874 volunteer hours. Creek evaluations were not performed in the arroyos since Zone 7 Water Agency didn't perform any artificial stream recharge releases on the Arroyo Mocho and the Arroyo las Positas. A completed Tri-Valley Creeks to Bay Day Survey was received from eleven Livermore residents/groups. (Last year, a Survey was received from seven Livermore residents/groups.) Below is summary of their survey results as they pertain to stormwater pollution: 1. Eight of eleven residents/groups feel that creek pollution is a significant problem in the Tri-Valley. (Last year, three of seven residents/groups felt that creek pollution is a significant problem.) 2. Eleven of eleven residents/groups would participate in Tri-Valley Creeks to Bay Day next year. (Last year, seven of seven residents/groups felt that they would participate in next year's Creeks to Bay Day. Two of seven residents/groups participated in both events.) 5. Five of eleven residents/groups are interested in adopting a Creek Spot. (One of nine spots was available for adoption before the event. All ten spots were adopted after The event.)

Eighty-four (84) Adopt a Creek Spot Program Adoptee/Volunteer Creek Clean-ups at ten Livermore Adopt a Creek Spots including: 1. Arroyo Las Positas @ Northfront Road (Trash Hot Spot 4: Arroyo Las Positas-Northfront Trailhead Park, ALP-NTP #4) 2. Arroyo Las Positas @ N. Livermore Avenue Bridge (Trash Hot Spot 2: Arroyo Las Positas@ Livermore Avenue Bridge, ALP@Livermore Bridge #2) 3. Arroyo Seco @ First Street 4. Arroyo Mocho in Robertson Park 5. Arroyo Mocho @ Holmes Street (Trash Hot Spot 3: Arroyo Mocho-Holmes-Mocho Park, AM-H-MP #3) 6. Arroyo Mocho @ Granada Native Gardens 7. Arroyo Mocho @ Stanley Boulevard Bridge (Trash Hot Spot 1: Arroyo Mocho-Stanley Bridge-Pedestrian Bridge, AM-SB-PB #1) 8. Altamont Creek and Arroyo Las Positas @ Bluebell Drive 9. Arroyo Las Positas @ Heather Lane 10. Arroyo Mocho @ Arroyo Street	The Adopt a Creek Spot Program is a partnership between the Water Resources Division, Zone 7 Water Agency, Livermore Area Recreation and Park District, Alameda County Resource Conservation District, Alameda Creek Watershed Council, Livermore Valley Joint Unified School District and Friends of the Arroyos. The Program's mission is to promote healthy Tri-Valley creeks through active community participation and education. Adoptees are asked to sign up for a one year commitment with at least one work day to the adopted spot. In addition, Adoptees are provided the opportunity to perform Ongoing and/or Additional activities as detailed below. (Additional activities require training and authorization from the Adopt a Creek Spot Coordinator.) Ongoing Activities include: • Regularly picking up trash and other debris, and reporting total volume collected by June 1st • Photography and/or sketch mapping the adopted spot Additional Activities include: • Painting over graffiti • Marking storm drains • Removing weeds and other unwanted vegetation • Planting site-appropriate plants • Site monitoring • Special events The Program Coordinator provides Adoptees with clean-up supplies and/or services as appropriate, and recognizes Adoptee's commitment and hard work with a recognition sign at the adopted creek spot.	Over two-hundred and twenty-two (122+) Adopt a Creek Spot Program adoptees and volunteers helped collect and properly dispose of **1,973 gallons** of trash from ten Livermore Creek Spots (approximately 6.4 miles) in **approximately 672 volunteer hours.**

C.7.h. ▶School-Age Children Outreach

Summarize school-age children outreach programs implemented. A detailed report may be included as an attachment.
Use the following table for reporting school-age children outreach efforts.

Program Details	Focus & Short Description	Number of Students/Teachers reached	Evaluation of Effectiveness
See the Section C.7 of the ACCWP FY 14/15 Annual Report for a summary of the Program's School-Age Outreach Program			
Junction Avenue K-8 School Watershed Presentation- 1. 12/12/2014: twenty-three 5th graders 2. 12/12/2014: sixteen 5th graders	The Presentation includes information on the watershed and water cycle, the differences between storm and sewer drains, and information on non-point source pollution and pollution prevention. This information is presented with a Sewer versus Storm Display Board, Mr. Ball Video and a Watershed Diorama Activity.	29 students	Teacher Surveys are used to evaluate the effectiveness of outreach. Survey results have been submitted in previous FY reports for the same teachers. This year's "Great Program!" results are consistent with previous years.
Livermore High School Sewer Science (5-day) Laboratory- 1. 3/16-3/20/2015: eighteen 10th grade Biology students 2. 3/23-3/27/2015: twenty-eight 10th grade Biology students 3. 4/6/2015-4/7/2015: twenty-five Green Engineering students	Although the Lab focuses on the wastewater process and what not to put down the sewer drain, it does provide information on the watershed and water cycle, the differences between storm drains and sewers, and information on non-point source pollution and pollution prevention. The information is presented with a Where Does Our Water Go Poster and an Alameda County Watershed Map.	71 students	Student Pre-assessments and Post-tests are used to evaluate the effectiveness of outreach. Both Teacher Surveys and Student Assessments and Test results have been submitted in previous FY reports for the same teacher. This year's pre-assessment and post-test scores remain consistent with previous years.

Livermore Water Reclamation Plant Tours- 1. 7/2/2014: San Jose-Santa Clara Regional Wastewater Facility – four wastewater professionals 2. 7/10/2014: California State University, East Bay – sixty K-12th grade teachers 3. 7/11/2014: Yan Feng Academy Summer Camp – thirty 1st graders 4. 8/1/2014: Yan Feng Academy Summer Camp – thirty 4th graders 5. 9/24/2014: City Employee – one Recycling Specialist 6. 10/25/2014: PHCC Class – fifteen plumbing professionals 7. 12/11/2014: California Municipal Agency – sixteen agency members 8. 12/17/2014: Lawrence Livermore National Laboratory – three wastewater professionals	Although the Tour focuses on the wastewater treatment process and what not to put down the sewer drain, it does provide information on the differences between storm drains and sewers, and information on non-point source pollution and pollution prevention. Livermore Water Reclamation Plant Tours (continued)- 9. 1/9/2015: Dublin High School Special Day Class - thirteen students 10. 1/30/2015: Junior Girl Scout Troop – twenty 4th graders 11. 2/9/2015: Cub Scout Troop – fourteen 2nd graders 12. 4/21/2015: Tri-Valley Regional Occupational Program – twenty entry level operators 13. 4/22/2015: Girl Scout Troop – sixteen 2nd graders 14. 5/27/2015: five Livermore Residents 15. 6/2/2015: Stonebrae Elementary – twenty-six 5th graders 16. 6/24/2015: City employee – one Human Resources Director 17. 6/24/2015: Girl Scout Troop – two 4th graders	273 students, scouts chaperones, residents and professionals	Plant Tour Contact and Plant Tour Guide Surveys are used to evaluate the effectiveness of outreach. This year's "Great Program!" Tour Contact results and Tour Guide results are consistent with previous years.

Section 8 - Provision C.8 Water Quality Monitoring

C.8 ▶ Water Quality Monitoring

State below if information is reported in a separate regional report. Municipalities can also describe below any Water Quality Monitoring activities in which they participate directly, e.g. participation in RMP workgroups, fieldwork within their jurisdictions, etc.

Summary

During FY 14-15, the City of Livermore contributed through the Alameda Cleanwater Program to the BASMAA Regional Monitoring Coalition (RMC). In addition, we contributed financially to the Regional Monitoring Program for Water Quality in the San Francisco Estuary (RMP) and were represented at RMP committees and work groups. Monitoring efforts and results are documented in a separate report submitted March 15 of each year, as required in Provision C.8. For additional information on monitoring activities conducted by the Program, BASMAA RMC and the RMP, see the C.8 Water Quality Monitoring section of the Program's FY 14-15 Annual Report and the Integrated Monitoring Report.

Section 9 – Provision C.9 Pesticides Toxicity Controls

C.9.b ▶ Implement IPM Policy or Ordinance

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[145]

Pesticide Category and Specific Pesticide Used	Amount[146]					
	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15
Organophosphates				Refer to comments		
	None Used					
Pyrethroids: Talstar Professional- 7.9% Bifenthrin	Refer to Comments	7.0 oz	38.75 oz			
CyCick Aerosal- Cyfluthurin		1.5 oz	4.0 oz			
Cycick CS- 6% Cyfluthrin		3.0 oz	0.5 oz			
Talstar Granuals- 0.2% Bifenthrin		32.0 oz	16.0 oz			
Carbamates: Larvalur-2% Phenyl Methylcarbamate		19.5 oz	34.0 oz			
Fipronil: Maxforce Ant Bait Stations- 0.1% Fipronil		1 each	0			

The City of Livermore and its pest control contractor (Orkin) comply with the Department of Toxic Substance Control requirements with the submittal of "Pesticide Use Reports" for all pesticide applications at City owned facilities. In FY11/12, the City was able to obtain a summary spreadsheet from it pest control contractor (Orkin), which provided the data requested in this report for the FY 10/11 and FY 11/12. In subsequent years, Orkin was not able to provide this reporting service to us as detailed in the FY 13/14 Annual Report. The City did not have the staff time available to tabulate all of the data from the completed Pesticide Use Reports to provide this data for the annual report. While the City believes this level of detailed reporting is unnecessary and redundant, considering all of this information is submitted to the Department of Pesticides Regulations, the City shall incorporate this detailed/summarized reporting in future contracts with its Pest Control Contractor.

[145] Includes all municipal structural and landscape pesticide usage by employees and contractors.
[146] Weight or volume of the product or preferably its active ingredient, using same units for the product each year. 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: allethrin, bifenthrin, beta-cyfluthrin, bioallethrin, cyfluthrin, cypermethrin, cyphenothrin, deltamethrin, esfenvalerate, etofenprox, fenpropathrin, gamma-cyhalothrin, imiprothrin, lambda-cyhalothrin, metofluthrin, permethrin, phenothrin, prallethrin, resmethrin, sumithrin (d-phenothrin), tau-fluvalinate, tefluthrin, tetramethrin, tralomethrin, cis-permethrin, and zeta-cypermethrin.

C.9.c ►Train Municipal Employees

Enter the number of employees that applied or used pesticides (including herbicides) within the scope of their duties this reporting year.	8
Enter the number of these employees who received training on your IPM policy and IPM standard operating procedures within the last 3 years.	11
Enter the percentage of municipal employees who apply pesticides who have received training in the IPM policy and IPM standard operating procedures within the last three years.	100%

C.9.d ►Require Contractors to Implement IPM

Did your municipality contract with any pesticide service provider in the reporting year?		x	**Yes**		**No**
If yes, attach one of the following:				
	Contract specifications that require adherence to your IPM policy and standard operating procedures, OR			
x	Copy(ies) of the contractors' IPM certification(s) or equivalent, OR			
x	Equivalent documentation.			
If **Not attached**, explain:				

C.9.e ►Track and Participate in Relevant Regulatory Processes

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

Summary:

During FY 14-15, we participated in regulatory processes related to pesticides through contributions to the countywide Program, BASMAA and CASQA. For additional information, see the Regional Report submitted by BASMAA on behalf of all MRP Permittees.

C.9.f ▶ Interface with County Agricultural Commissioners

Did your municipal staff observe any improper pesticide usage or evidence of improper usage (e.g., pesticides in storm drain systems, along street curbs, or in receiving waters) during this fiscal year?		Yes	x	No

If yes, provide a summary of improper pesticide usage reported to the County Agricultural Commissioner and follow-up actions taken to correct any violations. A separate report can be attached as your summary.

C.9.h.ii ▶ 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 Program's FY 14-15 Annual Report for information on point of purchase public outreach conducted countywide and regionally.

C.9.h.vi ▶ 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); **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 14-15 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.

Section 10 - Provision C.10 Trash Load Reduction

C.10.a.iii ▶ Minimum Full Trash Capture

Provide the following:

1) Total number and types of full capture devices (publicly and privately-owned) installed to-date;
2) Total land area (acres) and land areas within each trash generation category (i.e., very high, high, moderate and low) treated by full capture devices (or other types of devices for non-population based Permittees); and, compare with the total required in the permit.
3) A narrative summary of maintenance activities implemented for each device, group of devices, or device type, including descriptions of typical maintenance frequencies and issues associated with maintaining these devices. Describe, in particular, any devices that have trash or debris overflowed, bypassed or are not functioning properly in any other manner. Describe corrective actions.

Type of Device	# of Devices	Acres Treated in FY 14-15 by Trash Generation Category				
		Low	Moderate	High	Very High	Total
Public Connector Pipe Screens/Filters	168	190	200	47	0	437
Public Tree Well Filters	11	0	6	0	0	6
Private HDS	15	6	43	6	0	55
Private Inlet Filters	12	8	39	1	0	48
Private Media Filters	3	0	19	0	0	19
Private Tree Well Filters	2	10	16	0	0	26
Total for all Types	**211**	**213**	**325**	**54**	**0**	**592**
					Required by Permit	**127**

Maintenance Summary (Describe, in particular, any devices that have trash or debris overflowed, bypassed or are not functioning properly in any other manner. Describe corrective actions).

Public Connector Pipe Screens

The City of Livermore Collections Section inspected and cleaned 168 Connector Pipe Screens twice this reporting period. These devices were cleaned once in November 2014, December 2014 or January 2015, and once again in June 2015 or July 2015.

The City of Livermore Collections Section will continue to inspect and clean 164 Connector Pipe Screens twice a fiscal year and 4 Connector Pipe Screens (e.g., 52, 54, 56 and 57) three times a fiscal year. The updated Full Capture Device List and completed Trash Capture Device Maintenance Reports will be filed in the Full Trash Capture Device Maintenance Binder twice a fiscal year. The Full Trash Capture Device Maintenance Binder will be made available for review upon request.

Public Tree Well Filters

The City of Livermore Collections and Source Control Sections inspected eleven tree well filters once this reporting period. A few pieces of trash were removed from these devices in April 2015 and no further maintenance was required.

C.10.b.iii ▶ Trash Hot Spot Assessment

Provide the volume of material removed during each MRP-required Trash Hot Spot cleanup during each fiscal year, and the dominant types of trash (e.g., glass, plastics and paper) removed and their sources in FY 2014-15 to the extent possible. Also, provide additional information on creek cleanups conducted beyond those required.

Trash Hot Spot	FY 14-15 Cleanup Date(s)	Volume of Trash Removed (cubic yards)					Dominant Type(s) of Trash in FY 2014-15	Trash Sources in FY 2014-15 (where possible)
		FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15		
Arroyo Mocho-Stanley Bridge-Pedestrian Bridge AM-SB-PB #1	5/12/2015	1.25 Cubic Yards	2.5 Cubic Yards	0.76 Cubic Yards (9/15/2012 data)	1.6 Cubic Yards	1.38 Cubic Yards	Paper bags, Plastic and Glass Beverage Bottles, Beverage Cans, Caps/Lids, Clothing/Shoes, Cups/Plates/ Forks/Knives/Spoons/Napkins, Food Wrappers/Containers, Straws/Stirrers, Paper, Cigarette Filters and Lighters, Tobacco Packaging/Wrappers	Trail Pedestrians/Nearby Retail and Commercial Businesses/Moving Vehicles on Murrieta Blvd.

Arroyo Las Positas @ Livermore Avenue Bridge ALP@Livermore Bridge #2	9/20/2015	3.25 Cubic Yards	0.25 Cubic Yards	0.28 Cubic Yards (9/15/2012 data)	2.78 Cubic Yards	0.99 Cubic Yards	Paper bags, Plastic and Glass Beverage Bottles, Beverage Cans, Caps/Lids, Clothing/Shoes, Cups/Plates/ Forks/Knives/Spoons/Napkins, Food Wrappers/Containers, Straws/Stirrers, Paper, Plastic Sheeting/Tarps, Cigarette Filters and Lighters, Tobacco Packaging/Wrappers	Transients/Nearby Retail and Commercial Businesses/ Moving Vehicles on Highway 580

Arroyo Mocho-Holmes-Mocho Park AM-H-MP #3	9/20/2015	0.25 Cubic Yards	0.25 Cubic Yards	1.57 Cubic Yards (9/15/2012 data)	3.76 Cubic Yards	1 Cubic Yard	Paper Bags, Plastic and Glass Beverage Bottles, Beverage Cans, Caps/Lids, Clothing/Shoes, Cups/Plates/ Forks/Knives/Spoons/Napkins, Food Wrappers/Containers, Straws/Stirrers, Paper, Cigarette Filters and Lighters, Tobacco Packaging/Wrappers	Trail Pedestrians/ Transients/Nearby Apartment Complexes

Arroyo Las Positas-Northfront Trailhead Park ALP-NTP #4	9/20/2015	0.25 Cubic Yards	1.5 Cubic Yards	0.31 Cubic Yards (9/15/2012 data)	0.39 Cubic Yards	0.84 Cubic Yards	Paper Bags, Plastic and Glass Beverage Bottles, Beverage Cans, Caps/Lids, Clothing/Shoes, Cups/Plates/ Forks/Knives/Spoons/Napkins, Food Wrappers/Containers, Straws/Stirrers, Paper, Plastic Sheeting/Tarps, Cigarette Filters and Lighters, Tobacco Packaging/Wrappers	Trail Pedestrians/Near by Retail and Commercial Businesses/ Moving Vehicles on Northfront Rd.

Additional Receiving Water Cleanups – If claimed as load reductions described in C.10.d – part C, describe the number and frequency of receiving water cleanups conducted in addition to those reported above. Include locations, cleanup dates, and the total volume of trash removed. Describe the overall plan, if any, associated with these additional cleanups if meant to change the trash condition of certain reaches of creeks or shorelines.

The Adopt a Creek Spot Program is a partnership between the City of Livermore Water Resources Division, Zone 7 Water Agency, Livermore Area Recreation and Park District, Alameda County Resource Conservation District, Alameda Creek Watershed Forum, Livermore Valley Joint Unified School District and Friends of the Arroyos. The Program's mission is to promote healthy Tri-Valley creeks through active community participation and education.

The City of Livermore Water Resources Division's overall plan in designing this Program was to help address the City's trash load requirements; positively impact water quality, aquatic habitat, community aesthetics and property values; provide hands on, real life science experiences for students and the community; and establish/strengthen partnerships with agencies, community groups, businesses and the public. Please see Additional Receiving Water Clean-ups description below for further information:

Spot 1 – Arroyo Las Positas @ Northfront Road (Trash Hot Spot 4):

4/25/2015, 105 gallons

Subtotal: 1 clean-up; 105 gallons

Spot 4 – Arroyo Mocho in Robertson Park:

9/20/2014, 220.5 gallons; 7/25/2015, 35 gallons

Subtotal: 2 clean-ups; 255.5 gallons

Spot 5 – Arroyo Mocho @ Holmes Street (Trash Hot Spot 3):

7/13/2014, 84 gallons

Subtotal: 1 clean-up; 84 gallons

Spot 6 – Granada Native Gardens:

9/13/2014, 110 gallons; 9/14/2014, 141 gallons; 9/25/2014, 5 gallons; 10/15/2014, 5 gallons; 11/25/2014, 5 gallons; 12/9/2014, 12 gallons; 12/17/2014, 11 gallons; 12/27/2014, 20 gallons; 1/19/2015, 22 gallons; 1/25/2015, 5 gallons; 2/6/2015, 40 gallons; 2/25/2015, 5 gallons; 3/25/2015, 5 gallons; 3/29/2015, 20 gallons; 4/4/2015, 35 gallons; 4/23/2015, 60 gallons; 4/27/2015, 15 gallons; 5/21/2015, 35 gallons; 5/25/2015, 5 gallons; 6/15/2015, 20 gallons; 6/25/2015, 5 gallons

Subtotal: 21 clean-ups; 581 gallons

Spot 7 – Arroyo Mocho @ Stanley Boulevard (Trash Hot Spot 1):

7/5/2014, 4 gallons; 7/12/2014, 4 gallons; 7/19/2014, 4 gallons; 7/26/2014, 4 gallons; 8/2/2014, 4 gallons; 8/9/2014, 4 gallons; 8/16/2014, 4 gallons; 8/23/2014, 4 gallons; 8/30/2014, 4 gallons; 9/6/2014, 4 gallons; 9/13/2014; 4 gallons; 9/20/2014, 4 gallons; 9/27/2014, 4 gallons; 10/4/2014, 4 gallons; 10/11/2014, 4 gallons; 10/18/2014, 4 gallons; 10/25/2014, 45 gallons; 11/1/2014, 4 gallons; 11/8/2014, 10 gallons; 11/15/2014, 4 gallons; 11/22/2014, 4 gallons; 11/29/2014, 4 gallons; 12/6/2014, 4 gallons; 12/13/2014, 4 gallons; 12/20/2014, 4 gallons; 12/27/2014, 4 gallons; 1/3/2015, 4 gallons; 1/10/2015, 4 gallons; 1/17/2015, 4 gallons; 1/24/2015, 4 gallons; 1/31/2015, 4 gallons; 2/7/2015, 4 gallons; 2/14/2015, 4 gallons; 2/21/2015, 4 gallons; 2/28/2015, 4 gallons; 3/7/2015, 4 gallons; 3/14/2015, 4 gallons; 3/21/2015, 4 gallons; 3/28/2015, 4 gallons; 4/4/2015, 4 gallons; 4/11/2015, 4 gallons; 4/18/2015, 4 gallons; 4/25/2015, 4 gallons; 5/2/2015, 4 gallons; 5/9/2015, 4 gallons; 5/12/2015, 280 gallons; 5/23/2015, 4 gallons; 5/30/2015, 4 gallons; 6/6/2015, 4 gallons; 6/13/2015, 4 gallons; 6/20/2015, 4 gallons; 6/27/2015, 4 gallons

Subtotal: 52 clean-ups; 531 gallons

Spot 8 – Altamont Creek & Arroyo Las Positas @ Bluebell Drive:

9/20/2014, 175 gallons; 4/20/2015, 210 gallons; 5/15/2015, 62 gallons

Subtotal: 3 clean-ups; 447 gallons

Spot 9 – Arroyo Las Positas @ Heather Lane:

9/20/2014, 81 gallons; 12/16/2014, 84 gallons; 12/19/2014, 80 gallons; 3/15/2015, 100 gallons; 4/6/2015, 54 gallons

Subtotal: 5 clean-ups; 399 gallons

Spot 10 – Arroyo Mocho @ Arroyo Street:

9/20/2014, 3,318 gallons; 11/1/2015, 106 gallons

Subtotal: 2 clean-ups; 3,424 gallons

Total: 87 clean-ups; 5,826.5 gallons

C.10.c ► Long-Term Trash Load Reduction Plan

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.

Description of Significant Revision	Associated TMA
Trash Management Area #8 was delineated into Trash Management Areas #8A and #8B. The City of Livermore Landscape Section performs on-land clean-ups in Trash Management Area #8A on a daily basis. Trash Management Area #8's information in the Long-Term Trash Plan will be updated to reflect this change.	8

C.10.d ▶ PART A - Trash Control Measure Implementation and Assessment (Jurisdictional-wide Actions)

Provide a description of each jurisdictional-wide trash control measure implemented to-date. Identify the dominant trash source(s) and dominant type(s) of trash addressed by each control measure. For each jurisdictional-wide measure, identify the trash assessment method(s) used to demonstrate on-going reductions, summarize the results of the assessment(s), and estimate the associated reduction of trash within your jurisdictional area.

Control Measure	Summary Description of Control Measure & Dominant Trash Sources and Types	Assessment Method(s)	Summary of Assessment Results To-date	Estimated % Trash Reduced
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: http://reusablebagsac.org/ordinancetext.html	See Section C.10 of the ACCWP FY 14-15 Annual Report.	See Section C.10 of the ACCWP FY 14-15 Annual Report.	7% (See attach-ments)

Expanded Polystyrene Food Service Ware Ordinance or Policy	On July 1, 2011, the City of Livermore adopted an ordinance banning expanded polystyrene disposable foodservice ware by food vendors. The ordinance requires food vendors to use disposable service ware that is either recyclable or compostable. A copy of the ordinance is available on the City of Livermore's website: http://www.cityoflivermore.net/civicax/filebank/documents/6622/ See page 48, Section 3.2.18, of the City's Trash Long-term Reduction Plan for similar information.	See Section C.10 of the ACCWP FY 14-15 Annual Report.	See Section C.10 of the ACCWP FY 14-15 Annual Report. In November 2014, the City of Livermore Solid Waste and Recycling Section found two of the six noncompliant Food Service Establishments noncompliant. In December 2014, the City of Livermore Solid Waste and Recycling Section found the two noncompliant Food Service Establishments compliant. These Food Service Establishment include: 1. Hanabishi Japanese Cuisine, 979 E. Stanley Blvd. 2. 84 Terriyaki, 51 Wright Brothers Ave. In January 2015, the City of Livermore Solid Waste and Recycling Section found one of the twenty-one new Food Service Establishments moving into Livermore noncompliant. During FY 15-16, the City of Livermore Source Control Section will follow up with La Original, 124 Maple St.	5% (See attach-ments)

Public Education and Outreach Programs Targeted at Trash Reduction and Implemented post-MRP Adoption	Adopt a Creek Spot Program Outreach Efforts: The Adopt a Creek Spot Program is a partnership between the Water Resources Division, Zone 7 Water Agency, Livermore Area Recreation and Park District, Alameda County Resource Conservation District, Alameda Creek Watershed Council, Livermore Valley Joint Unified School District and Friends of the Arroyos. The Program's mission is to promote healthy Tri-Valley creeks through active community participation and education. The City of Livermore Water Resources Division and Adopt a Creek Spot (AACS) Program developed the City of Livermore's anti-litter message which specifically defined the City's trash problem, explained how long litter lasts, provided 12 easy ways to prevent litter, and described the City's efforts to keep litter out of waterways. The City's anti-litter message is presented in a City and AACS Program display at public events (i.e., Tri-Valley Creeks to Bay Day) and school presentations (i.e., LVJUSD Science Odyssey), and on the City of Livermore Water Resources Division's web page http://www.cityoflivermore.net/citygov/pw/wrd/pollution/keeping_litter_out_of_waterways/default.asp) and AACS Programs' website (www.trivalleycreeks.org). The City's general anti-litter outreach message about keeping litter out of storm drains and creeks is still provided in the City of Livermore Water Resources Division's monthly, sewer bill once a year. Also, the City and AACS Program developed the Program's Creek Assessment Activity Form and Creek Assessment Activity Pre and Post-test for middle and high school students. The Creek Assessment Activity helps science students assess creek health by measuring the pollution vulnerability, and the physical, biological and chemical properties of the AACS Spots. The Creek Assessment Pre and Post-test helps science teachers evaluate middle and high school students' knowledge of the City's anti-litter message, etc. The Creek Assessment and Pre and Post-test meet California Department of Education's Common Core State Standards for grades 6 through 12. Dominate trash sources include transients, trail pedestrians, nearby retail and commercial businesses, nearby apartment complexes and moving vehicles. Also, see Public and School Education and Outreach Program, pages 49 through 51, Section 3.2.18, of the City's Trash Long-term Reduction Plan for similar information.	2% (See attach-ments)

Public Education and Outreach Programs Targeted at Trash Reduction and Implemented post-MRP Adoption (Continued)	Livermore Police Department's Litter Bug Hotline Implementation Efforts: Individuals can report incidents of littering and illegal dumping using the Livermore Police Department's "Litter-Bug Hotline". Violators in question receive a letter providing the time/location of the violation and what was observed, clean-up cost information, and a warning stating that a citation would be issued for a second violation. The City of Livermore Water Resources Division started promoting the Livermore Police Department's Litter Bug Hotline on its web page. Dominate trash sources are parked and moving vehicles. Dominate trash types include cigarette filters, lighters and packaging/wrappers, tobacco packaging/wrappers, beverage bottles, beverage cans, caps, cups, lids, straws, stirrers, food wrappers and containers, plates, forks, knives, spoons and napkins. See Cigarette Butts, page 49, Section 3.2.18, of the City's Trash Long-term Reduction Plan for more information. Livermore Police Department's Litter Bug Hotline Assessment: The Livermore Police Department tracks the total number of Litter-Bug Hotline calls received and litter types thrown out of vehicle windows, etc. Fiscal year 2014-15, three Litter-Bug Hotline letters were sent to violators for throwing cigarette butts, trash from their trunk and food wrappers out the driver car window. Cal Trans and CHP's Litter Enforcement Event Outreach Efforts: The City of Livermore Police Department promoted covered load and anti-litter messages on its message board located on Vasco Road on March 18, 2015 in lieu of Cal Trans and CHP's Litter Enforcement Event on March 18, 2015.	

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

Complete the following trash control measure implementation and assessment summary for each primary trash management area (TMA) identified in your Long-term Plan. Include the following information:

- Identify the total jurisdictional area and the % of that area that generated very high (VH), high (H), moderate (M), or low (L) levels of trash in 2009, as depicted on trash generation maps;
- Identify the dominant trash source(s) and dominant type(s) of trash addressed or to-be addressed in the TMA;
- Provide the area currently treated by full capture devices, the quantity and type of devices installed to-date, and the % and acres of jurisdictional area in very high (VH), high (H), moderate (M), and low (L) generation categories that are currently treated by full capture devices in the TMA;
- Summarize control measures other than full capture devices implemented to-date, distinguishing between implementation that began pre- and post-MRP effective date. If not implemented in the entire TMA, describe generation category targeted and % of TMA addressed;
- Provide the acres of jurisdictional area in very high (VH), high (H), moderate (M), and low (L) generation categories in areas associated with actions other than full capture devices in the TMA;
- Describe the methods used to evaluate the effectiveness of control measures other than full capture devices, and any assessment results to-date. If the method was not implemented in the entire TMA, describe generation category targeted and %of TMA addressed.
- Provide the acres in VH, H, M or L generation categories after accounting for reduction associated with control measures other than full capture devices;
- Provide the acres in VH, H, M or L generation categories after accounting for reductions associated with ALL control measures (i.e., full capture and other actions) implemented to-date in the TMA
- Provide an estimate of the % of trash reduced in the TMA as a result of ALL control measures implemented to-date in the TMA, using the following formula:

$$\% \text{ Reduction} = 100\ [(12A_{VH(2009)} + 4A_{H(2009)} + A_{M(2009)}) - (12A_{VH} + 4A_{H} + A_{M})]/(12A_{VH2009} + 4A_{H2009} + A_{M2009})$$

where:

$A_{VH(2009)}$	=	total amount of the 2009 very high trash generation category in jurisdictional area
$A_{H(2009)}$	=	total amount of the 2009 high trash generation category in jurisdictional area
$A_{M(2009)}$	=	total amount of the 2009 moderate trash generation category in jurisdictional area
A_{VH}	=	total amount of very high trash generation category in jurisdictional area in the reporting year
A_{H}	=	total amount of high trash generation category in jurisdictional area in the reporting year
A_{M}	=	total amount of moderate trash generation category in jurisdictional area in the reporting year
12	=	Very High to Moderate weighing ratio
4	=	High to Moderate weighing ratio
100	=	fraction to percentage conversion factor

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

Comments:

The City of Livermore continues to have serious concerns over the trash management approach being required by San Francisco Bay Regional Water Quality Control Board in the C.10 provision of the MRP. The City believes that the C.10 provisions, as currently written, fail to incorporate some of the key concepts and lessons learned by the Bay Area Stormwater programs over the last 20 years. Moreover, not only do the requirements fail to incorporate key lessons learned by years of experience implementing stormwater regulations; they actually directly contradict those hard-fought lessons. In the early 1990's, the Alameda County Clean Water Program conducted a great deal of pollutant monitoring in local creeks and streams to characterize stormwater pollutants. One of the outcomes of this early creek monitoring work was a data evaluation to determine the efficacy of routine stream monitoring. One of the outcomes of this monitoring and data evaluation was an analysis by Woodward Clyde Consultants that showed that pollutant monitoring in local receiving waters was ineffective in determining the "progress" or "success" of pollutant control or removal efforts due to the variability in pollutant levels. The data analysis found that even if the stormwater programs were capable of reducing the level of a particular pollutant by 50%, we might only be able to identify that reduction 20% of the time based on pollutant sampling due to the variability of stormwater sampling, flow and antecedent dry period. The same concepts will hold true with a physical pollutant such as trash. Therefore, the goals of reducing trash by 40, 70, or 100 percent by a given date certain is not reasonable given the nature of stormwater pollutant sampling, or in this case, a period visual evaluation of trash management areas. It is simply not possible to use this type of period measurement to quantify trash management efforts, since one or several pieces of trash deposited on the day an assessment is done might skew weeks or months with "no" visible trash. Basically, the approach is overly-simplistic and unlikely to yield useful results.

The Municipal Regional Stormwater Permit Order No. R2-2009-0074 Section C.10. Trash Load Reductions states *"The Permittee shall demonstrate compliance with the Discharge Prohibition A.2 and trash related Receiving Water Limitations through the timely implementation of control measures and other action to reduce trash loads from municipal separate storm sewer systems (MS4s) by 40% by 2014, 70% by 2017, and 100% by 2022..."* On December 18, 2014, the City of Livermore submitted additional documentation to the San Francisco Regional Water Quality Control Board in response to Appendix A of the Staff Summary Report presented to the Board at the Trash Load Reduction Workshop on December 10, 2014 (See attachments C.10). In this response, Livermore submitted revised and updated Trash Control Measure Implementation and Assessment Tables, which detailed a 42% reduction relative to the baseline trash load. Thus, to date the City is in compliance with the load reduction of 40% that was required by 2014.

The City continues to work towards achieving compliance with the 70% load reduction by 2017. As part of this process, Livermore contracted with Schaaf & Wheeler to develop a long term trash plan to meet the MRP section C.10 requirements during the prior reporting period. The City of Livermore continues to evaluate the two options detailed in this report that enable Livermore to meet the 70% trash reduction requirement. Option #1 of this plan identifies key areas to install a variety of full trash capture devices within the City of Livermore's publicly owned storm drain system that will allow Livermore to calculate/demonstrate a 70% trash reduction under the current established methodology. Option #2 of this plan identifies a program in which owners of private property in Commercial, Retail and Industrial areas would be required to install full trash capture devices on their private storm sewer systems prior to connection to the City owned storm sewer system. Option #2 also allows Livermore to calculate/demonstrate a 70% reduction under the current established methodology. Please refer to **"Stormwater Trash Reduction Plan (Schaaf and Wheeler, September 2014)** contained in the C.10 attachments for complete details. The City continues to discuss and evaluate these options in its internal Water Policy staff meetings. Once the City selects an option to pursue, the City shall revise its "Long Term Trash Plan" accordingly and provide a program

implementation update to the RWQCB.

During this reporting period, the City conducted visual assessments of all of its trash management areas in April and June. Additionally, "targeted" visual assessments were conducted of a subset of one trash management areas in July. See C.10 attachments for copies of the visual assessment inspection reports along with photo documentation records. In total, 47 visual assessments were completed throughout the Trash Management Areas during the reporting period. The results of these inspections can be summarized as follows:

32 of the visual assessments resulted in the finding of the "Trash Condition Category" of LOW.
11 of the visual assessments resulted in the finding of the "Trash Condition Category" of LOW/MEDIUM.
3 of the visual assessments resulted in the finding of the "Trash Condition Category" of MEDIUM.
1 of the visual assessments resulted in the finding of the "Trash Condition Category" of MEDIUM/HIGH.

Thus, 94% of the visual assessments indicated the trash conditions in Livermore's Trash Management Areas as LOW or LOW/MEDIUM.

The total costs in staff time to perform these visual assessments were $5,247.27 or approximately $112.00 per assessment. Other than taking pictures and demonstrating to the RWQCB through these photographs that there is not a significant litter problem in a specific trash management area, there appears to be little to no other benefit in performing these assessments. Rather, they appear to be an egregious waste of resources.

While the MRP does not specifically require Permittees to install trash capture devices as the sole prescribed means to meet these trash reduction objectives, it has become quite clear over the term of the existing MRP that the only undebatable way for Permittee's to demonstrate compliance with this provision to the San Francisco Bay Regional Water Quality Board will be to install full trash capture devices. As detailed in the Stormwater Trash Reduction Plan (Schaaf and Wheeler, September 2014), this is the long term compliance plan the City of Livermore plans to pursue. As the San Francisco Bay Regional Water Quality Control Board gets ready to adopt MRP 2.0, the City encourages the Board to consider aligning the C.10 Trash Provision's compliance requirements and time frames with those established in the State Water Board's Trash Amendments to the Water Quality Control Plan for Ocean Waters of California that were proposed for consideration and adoption April 7, 2015. In doing so, Permittees would have 10 years from the effective date of the permit to install trash capture devices to comply with this provision. Alignment of this provision with the State Water Board's Ocean Plan would not only allow a reasonable time period for municipalities to plan and secure funding for the capital improvement projects necessary to demonstrate compliance, it would establish a fair and uniform regulatory environment in regards to Trash for all municipalities throughout the State.

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
1	328	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	3	324	1
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	0	150	0
150		This TMA has: 66 publicly-owned Connector Pipe Screens/Filters; 2 Private HDS; 1 Private Inlet Filter; 1 Private Media Filter; 2 Public Tree Well Filters						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	3	175	1
Anti-littering and Illegal Dumping Enforcement Activities – • Perform enforcement of high trash generating retail areas (TMA 1R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. • Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days. Activities to Reduce Uncovered Loads – Participate on Highway Patrol Litter Enforcement Committee to ensure uncovered loads on Interstate Highway 580 are cited during quarterly Enforcement Days.				Area after Accounting for Other Actions (based on assessment results)	0	3	163	13
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of N. Canyons Parkway (south side) near the intersection of N. Canyons Parkway and Constitution Drive using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of N. Canyons Parkway (south side) near the intersection of N. Canyons Parkway and Constitution Drive was "Low" on April 10, 2015 and "Low-Medium" on June 19, 2015.								
				Area After Taking into Account Full Capture Devices AND Other Actions	0	3	163	13
				Estimated % Trash Reduction in this TMA	48%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
2	105	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	55	50	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	16	14	0
30		This TMA has: 20 publicly-owned Connector Pipe Screens/Filters; 4 Private HDS						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	39	35	0
Anti-littering and Illegal Dumping Enforcement Activities – • Perform enforcement of high trash generating retail areas (TMA 1R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. • Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days. Activities to Reduce Uncovered Loads – Participate on Highway Patrol Litter Enforcement Committee to ensure uncovered loads on Interstate Highway 580 are cited during quarterly Enforcement Days.				Area after Accounting for Other Actions (based on assessment results)	0	27	47	0
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Las Positas Road (south side) near the intersection of Las Positas Road and N. Livermore Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Las Positas Road (south side) near the intersection of Las Positas Road and N. Livermore Avenue was "Low-Medium" on April 10, 2015 and "Low-Medium" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	27	47	30
				Estimated % Trash Reduction in this TMA	42%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
3	79	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	78	1	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	37	1	0
37		This TMA has: 20 publicly-owned Connector Pipe Screens/Filters						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	41	1	0
Anti-littering and Illegal Dumping Enforcement Activities – • Perform enforcement of high trash generating retail areas (TMA 1R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. • Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days. Activities to Reduce Uncovered Loads – Participate on Highway Patrol Litter Enforcement Committee to ensure uncovered loads on Interstate Highway 580 are cited during quarterly Enforcement Days.				Area after Accounting for Other Actions (based on assessment results)	0	29	13	0
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Las Positas Road (north side) near the intersection of Las Positas Road and First Street using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Las Positas Road (north side) near the intersection of Las Positas Road and First Street was "Low" on April 10, 2015 and "Low-Medium" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	29	13	37
				Estimated % Trash Reduction in this TMA	59%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
4	1,541	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	3	1,300	238
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices						
141		This TMA has: 13 publicly-owned Connector Pipe Screens/Filters; 7 Private HDS; 6 Private Inlet Filters; 2 Private Media Filters; 1 Private Tree Well; 5 Public Tree Well Filters		Area Treated by Full Capture Devices	0	0	134	7
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	3	1,166	231
Anti-littering and illegal Dumping Enforcement Activities – • Perform enforcement of high trash generating retail areas (TMA 1R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. • Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days. Activities to Reduce Uncovered Loads – Participate on Highway Patrol Litter Enforcement Committee to ensure uncovered loads on Interstate Highway 580 are cited during quarterly Enforcement Days.				Area after Accounting for Other Actions (based on assessment results)	0	3	1,166	231
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Las Positas Road (south side) near the intersection of Las Positas Road and First Street using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Las Positas Road (south side) near the intersection of Las Positas Road and First Street was "Low" on April 10, 2015 and "Medium-High" on June 19, 2015.								
Area After Taking into Account Full Capture Devices AND Other Actions					0	3	1,166	372
Estimated % Trash Reduction in this TMA					10%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
5	51	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	51	0	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	0	0	0
0		There are no full capture devices installed in this TMA.						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	51	0	0
On-land Trash Clean-up – In June 2015, contractor removed abated weeds and removed "very little" trash from the Diversion Channel for $4,255, the HMP Basin for $1,489 and Freisman Park Basin for $987. The contractor is required to clean-up as needed or at least once a year. The contractor is not required to track the amount of trash removed during the clean-up. Anti-littering, Illegal Dumping and Uncovered Load Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 5R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days. Participate on Highway Patrol Litter Enforcement Committee to ensure uncovered loads on Interstate Highway 580 are cited during quarterly Enforcement Days.				Area after Accounting for Other Actions (based on assessment results)	0	39	12	0
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of W. Jack London Boulevard (north side) near the intersection of W. Jack London Boulevard and El Charro Road using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of W. Jack London Boulevard (north side) near the intersection of W. Jack London Boulevard and El Charro Road was "Low" on April 10, 2015 and "Low-Medium" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	39	12	0
				Estimated % Trash Reduction in this TMA	18%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
6	41	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	41	0	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	0	0	0
0		There are no full capture devices installed in this TMA.						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	41	0	0
Multi-family Dwelling Litter Reduction Pilot - City worked with ACCWP to develop a litter reduction pilot targeting multi-family (condominium and apartment) complexes known to be sites with significant litter issues. City chose Livermore Garden Apartments (located at 5720 East Avenue) as the "Control Site" for this Pilot. This successful Pilot is in the process of being replicated at neighboring multi-family complexes located throughout the TMA.				Area after Accounting for Other Actions (based on assessment results)	0	29	0	12
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of East Avenue (north side) near the intersection of East Avenue and Charlotte Way using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of East Avenue (north side) near the intersection of East Avenue and Charlotte Way was "Low" on April 10, 2015 and "Low" on June 19, 2015.								
				Area After Taking into Account Full Capture Devices AND Other Actions	0	29	0	12
				Estimated % Trash Reduction in this TMA	29%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
7	240	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	108	131	1
Full Capture Devices								
Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	0	0	0
0		There are no full capture devices installed in this TMA.						
Actions other than Full Capture Devices								
Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	108	131	1
Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 7R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.				Area after Accounting for Other Actions (based on assessment results)	0	96	131	13
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Pacific Avenue (north side) near the intersection of Pacific Avenue and S. Livermore Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Pacific Avenue (north side) near the intersection of Pacific Avenue and S. Livermore Avenue was "Low" on April 10, 2015 and "Low" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	96	131	14
				Estimated % Trash Reduction in this TMA	9%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
8A	81	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	48	31	2
Full Capture Devices								
Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	0	0	0
0		This TMA has: 1 Private Tree Well						
Actions other than Full Capture Devices								
Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	48	30	2
Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 8AR) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. On-land Clean-up Activities- One Landscape Section staff member performed on-land clean-up activities seven days a week for four hours a day. During this reporting period, staff member removed 128 gallons of trash (four 32-gallon trash bags) for a total of $1,600 per week.				Area after Accounting for Other Actions (based on assessment results)	0	0	0	80
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of First Street (north side) near the intersection of First Street and Holmes Street using EOA's On-land Visual Assessment Protocol and Data Collection Form. On July 31, 2015, Source Control Section staff performed fourteen targeted On-land Assessments (approximately 10% of TMA 8A) to prove the effectiveness of daily, on-land clean-up activities. Four "Medium" trash generating areas and ten "High" trash generating areas were assessed. See attachments for more information.								
Summary of Assessment Results								
Using the On-land Visual Assessment Protocol a total of 79 acres were assessed in this TMA that have Moderate, High or Very High generation rates. Of the areas assessed 100% were assessed as Low, 0% were assessed as Moderate, 0% were assessed as High, and 0% were assessed as Very High.								
				Area After Taking into Account Full Capture Devices AND Other Actions	0	0	0	81
				Estimated % Trash Reduction in this TMA	100%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
8B	222	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	78	131	13
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	0	10	0
10		This TMA has: 1 Private HDS						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	77	121	13
Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 8BR) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. Multi-family Dwelling Litter Reduction Pilot- City worked with ACCWP to develop a litter reduction pilot targeting multi-family (condominium and apartment) complexes known to be sites with significant litter issues. City chose Castilleja del Arroyo Condos (located at 1001 & 1009 Murrieta Boulevard) as the "Outreach Site", and La Castilleja Condominiums (located at 975 Murrieta Boulevard) as the "Norming Site" for this Pilot. This successful Pilot is in the process of being replicated at neighboring multi-family complexes located throughout the TMA.				Area after Accounting for Other Actions (based on assessment results)	0	65	121	25
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of First Street (north side) near the intersection of First Street and Holmes Street using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of First Street (north side) near the intersection of First Street and Holmes Street was "Low" on April 10, 2015 and "Low" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	65	121	35
				Estimated % Trash Reduction in this TMA	13%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
9	251	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	13	235	3
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices						
0		There are no full capture devices installed in this TMA.		Area Treated by Full Capture Devices	0	0	0	0
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	13	235	3
Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 9R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.				Area after Accounting for Other Actions (based on assessment results)	0	1	235	15
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of N. Murrieta Boulevard (west side) near 1the intersection of N. Murrieta Boulevard and Portola Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of N. Murrieta Boulevard (west side) near the intersection of N. Murrieta Boulevard and Portola Avenue was "Low" on April 10, 2015 and "Low" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	1	235	15
				Estimated % Trash Reduction in this TMA	17%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
10	121	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	13	107	0
Full Capture Devices	**Area Treated by Full Trash Capture Devices (Acres)**	**Quantity and Type of Full Trash Capture Devices**						
	0	There are no full capture devices installed in this TMA.		Area Treated by Full Capture Devices	0	0	0	0
Actions other than Full Capture Devices	**Summary Description of Other Actions Implemented in the TMA Since MRP Adoption**			Area Not Treated by Full Capture Devices	0	13	107	0
	Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 10R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.			Area after Accounting for Other Actions (based on assessment results)	0	13	107	0
	Assessment Methods for Control Measures Other than Full Capture Devices							
	On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Junction Avenue (south side) near the intersection of Junction Avenue and Chestnut Street using EOA's On-land Visual Assessment Protocol and Data Collection Form.							
	Summary of Assessment Results							
	The trash condition category of Junction Avenue (south side) near the intersection of Junction Avenue and Chestnut Street was "Low-Medium" on April 10, 2015 and "Medium" on June 19, 2015.							
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	13	107	0
				Estimated % Trash Reduction in this TMA	0%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
11	184	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	12	172	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	0	0	0
0		There are no full capture devices installed in this TMA.						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	12	172	0
Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 11R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.				Area after Accounting for Other Actions (based on assessment results)	0	12	160	12
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Rickenbacker Circle (south side) near the intersection of Rickenbacker Circle and Kitty Hawk Road using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Rickenbacker Circle (south side) near the intersection of Rickenbacker Circle and Kitty Hawk Road was "Low" on April 10, 2015 and "Low" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	12	160	12
				Estimated % Trash Reduction in this TMA	5%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
12	113	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	31	81	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	1	0	0
1		This TMA has: 2 Private Inlet Filters						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	30	81	0
Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 12R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.				Area after Accounting for Other Actions (based on assessment results)	0	18	93	0
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Scenic Avenue (north side) near the intersection of Scenic Avenue and N. Vasco Road using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Scenic Avenue (north side) near the intersection of Scenic Avenue and N. Vasco Road Way was "Low" on April 10, 2015 and "Low-Medium" on June 19, 2015.								
				Area After Taking into Account Full Capture Devices AND Other Actions	0	18	93	0
				Estimated % Trash Reduction in this TMA	19%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
13	50	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	0	50	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices						
0		There are no full capture devices installed in this TMA.		Area Treated by Full Capture Devices	0	0	0	0
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	0	50	0
No control measures implemented in this TMA since MRP adoption.				Area after Accounting for Other Actions (based on assessment results)	0	0	38	12
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Research Drive (west side) near the intersection of Research Drive and East Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Research Drive (west side) near the intersection of Research Drive and East Avenue was "Low" on April 10, 2015 and "Low" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	0	38	12
				Estimated % Trash Reduction in this TMA	24%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
14	80	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	0	80	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices						
8		This TMA has: 1 Private Inlet Filter		Area Treated by Full Capture Devices	0	0	8	0
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	0	72	0
No control measures implemented in this TMA since MRP adoption.				Area after Accounting for Other Actions (based on assessment results)	0	0	60	12
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Concannon Boulevard (north side) near the intersection of Concannon Boulevard and Holmes Street using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Concannon Boulevard (north side) near the intersection of Concannon Boulevard and Holmes Street was "Low" on April 10, 2015 and "Low" on June 19, 2015.								
				Area After Taking into Account Full Capture Devices AND Other Actions	0	0	60	20
				Estimated % Trash Reduction in this TMA	25%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
15	287	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	0	287	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	0	6	0
6		This TMA is partially treated by devices within neighboring TMAs.						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	0	282	0
No control measures implemented in this TMA since MRP adoption.				Area after Accounting for Other Actions (based on assessment results)	0	0	282	0
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Maple Street located in front of Livermore High School parking lot using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Maple Street near the Livermore High School parking lot was "Low" on April 10, 2015 and "Medium" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	0	282	6
				Estimated % Trash Reduction in this TMA	2%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
16	344	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	0	344	0
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices		Area Treated by Full Capture Devices	0	0	1	0
1		This TMA is partially treated by devices within neighboring TMAs.						
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	0	343	0
No control measures implemented in this TMA since MRP adoption.				Area after Accounting for Other Actions (based on assessment results)	0	0	343	0
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Wetmore Road located in front of Sycamore Grove Park parking lot using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Wetmore Road near the Sycamore Grove Park parking lot was "Low" on April 10, 2015 and "Low" on June 19, 2015.								
				Area After Taking into Account Full Capture Devices AND Other Actions	0	0	343	1
				Estimated % Trash Reduction in this TMA	0%			

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		Area (Acres) in Each Trash Generation Category			
					VH	H	M	L
17	11,096	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation Areas (2009)	0	0	0	11,096
Full Capture Devices: Area Treated by Full Trash Capture Devices (Acres)		Quantity and Type of Full Trash Capture Devices						
207		This TMA has: 49 Connector Pipe Screens/Filters; 1 Private HDS; 2 Private Inlet Filters; 4 Public Tree Well Filters		Area Treated by Full Capture Devices	0	0	0	207
Actions other than Full Capture Devices: Summary Description of Other Actions Implemented in the TMA Since MRP Adoption				Area Not Treated by Full Capture Devices	0	0	0	10,889
No control measures implemented in this TMA since MRP adoption.				Area after Accounting for Other Actions (based on assessment results)	0	0	0	10,889
Assessment Methods for Control Measures Other than Full Capture Devices								
On April 10, 2015 and June 19, 2015, Source Control Section staff performed On-land Visual Assessments of Concannon Boulevard (south side) near the intersection of Concannon Boulevard and Isabel Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results								
The trash condition category of Concannon Boulevard (south side) near the intersection of Concannon Boulevard and Isabel Avenue was "Low" on April 10, 2015 and "Low-Medium" on June 19, 2015.								
				Area After Taking Into Account Full Capture Devices AND Other Actions	0	0	0	11,096
				Estimated % Trash Reduction in this TMA	0%			

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

Dominant Types
All Trash Types* include the following: Paper Bags, Plastic and Glass Beverage Bottles, Beverage Cans, Caps/Lids, Straws/Stirrers Cups/Plates/Forks/Knives/Spoons/Napkins, Food Wrappers/Containers, Paper, Plastic Film/Sheeting/Tarps, Cigarette Filters and Lighters, Tobacco Packaging/Wrappers, Clothing/Shoes, Batteries, Building Materials, Styrofoam Packaging Materials, Oil/Lube Bottles, Tires, Car Parts, Toys, Bicycles, Home Appliances, Furniture, Shopping Carts

C.10.d ► PART C – Estimated Overall Trash Load Reduction

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.d – Parts A and B and receiving water cleanups not reported in C.10.b.iii.

Discussion of Trash Reduction Estimate (including Receiving Water Cleanups):

Additional Receiving Water Clean-ups -
During eighty-seven creek clean-ups, eight Adoptees (e.g., individuals, couples and groups) removed 5,826.5 gallons of trash and debris from 5.88 miles of arroyo and creek on City of Livermore, Zone 7 Water Agency, Livermore Area Recreation and Park District, and Livermore Valley Joint Unified School District properties. The estimated trash reduction due to additional receiving water clean-ups remains consistent at 7%. For more information regarding these clean-ups, please see "Additional Receiving Water Clean-ups" at the end of C.10.b.iii.

Estimated % Trash Reduction due to Jurisdictional-wide Actions (as Reported in C.10.d – Part A)	14%
Estimated % Trash Reduction in All TMAs due to Trash Full Capture Devices (as Reported in C.10.d. – Part B)	10%
Estimated % Trash Reduction in all TMAs due to Control Measures Other than Trash Full Capture Devices in All TMAs) (as Reported in C.10.d. – Part B)	11%
SubTotal for Above Actions	**35%**
Estimated % Trash Reduction due to Receiving Water Cleanups (All TMAs)	7%
Total Estimated % Trash Reduction FY 14-15	**42%**

Section 11 - Provision C.11 Mercury Controls

C.11.a.i ►Mercury Recycling Efforts

List below or attach lists of efforts to promote, facilitate, and/or participate in collection and recycling of mercury containing devices and equipment at the consumer level (e.g., thermometers, thermostats, switches, bulbs).

See Section C.11 of the ACCWP FY 14-15 Annual Report for a summary of countywide recycling efforts.

C.11.a.ii ►Mercury Collection

Provide an estimate of the mass of mercury collected through these efforts, or provide a reference to a report containing this estimate.

Please refer to the FY 14-15 Countywide Program Annual Report for an estimate of the mass of mercury collected through collection and recycling efforts in the Countywide Program area.

C.11.b ► Monitor Methylmercury
C.11.c ► Pilot Projects to Investigate and Abate Mercury Sources in Drainages
C.11.d ► Pilot Projects to Evaluate and Enhance Municipal Sediment Removal and Management Practices
C.11.e ► Conduct Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit
C.11.f ► Diversion of Dry Weather and First Flush Flows to POTWs
C.11.g ► Monitor Stormwater Mercury Pollutant Loads and Loads Reduced
C.11.h ► Fate and Transport Study of Mercury In Urban Runoff
C.11.i ► Development of a Risk Reduction Program Implemented Throughout the Region
C.11.j ► Develop Allocation Sharing Scheme with Caltrans

State below if information is reported in a separate regional report. Municipalities that participate directly in regional activities to can provide descriptions below.

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 14-15 Annual Report, Integrated Monitoring Report.

Section 12 - Provision C.12 PCBs Controls

C.12.a.ii,iii ▶ Ongoing Training

(For FY 10-11 Annual Report and Each Annual Report Thereafter) List below or attach description of ongoing training development and inspections for PCB identification, including documentation and referral to appropriate regulatory agencies (e.g. county health departments, Department of Toxic Substances Control, California Department of Public Health, and the Water Board) as necessary.

Description:

The City of Livermore participates on the ACCWP's "PCB Reduction Strategy Work Group". Geonsyntec has been hired as a consultant to work with ACCWP member to develop a PCB inspection and reduction plan. Currently, the city is evaluating 28 parcels that were identified as "old industrial" parcels according to the Alameda County Source Property Database as part of ACCWP's "Hunting for PCB Hotspots: Screening for Potential PCB Source Properties (Geosyntec, July 22, 2014). Many of these sites have been eliminated as potential sites for further PCB investigation as they have been redeveloped after 1980.

See the FY 14-15 Program Annual Report for a description of training conducted by the Program.

C.12.b ▶ Conduct Pilot Projects to Evaluate Managing PCB-Containing Materials and Wastes during Building Demolition and Renovation Activities
C.12.c ▶ Pilot Projects to Investigate and Abate On-land Locations with Elevated PCB Concentrations
C.12.d ▶ Conduct Pilot Projects to Evaluate and Enhance Municipal Sediment Removal and Management Practices
C.12.e ▶ Conduct Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit
C.12.f ▶ Diversion of Dry Weather and First Flush Flows to POTWs
C.12.g ▶ Monitor Stormwater PCB Pollutant Loads and Loads Reduced
C.12.h ▶ Fate and Transport Study of PCBs In Urban Runoff
C.12.i ▶ Development of a Risk Reduction Program Implemented Throughout the Region

State below if information is reported in a separate regional report. Municipalities that participate directly in regional activities to can provide descriptions below.

Summary

A summary of countywide Program and regional accomplishments for these sub-provisions are included within the C.12 PCB Controls section of Program's FY 14-15 Annual Report, Integrated Monitoring Report.

Section 13 - Provision C.13 Copper Controls

C.13.a.iii.(2) ►Training, Permitting and Enforcement Activities

(FY 11-12 Annual Report and each Annual Report thereafter) Provide summaries of activities implemented to manage waste generated from cleaning and treating of copper architectural features, including copper roofs, during construction and post-construction including. :

- Development of BMPs on how to manage the water during and post construction
- Requiring the use of appropriate BMPs when issuing building permits
- Educating installers and operators on appropriate BMPs
- Enforcement actions taken again noncompliance

See the FY 14/15 Countywide Annual Report for a summary of the training/efforts provided throughout the county.

C.13.d.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

The City of Livermore annually conducts pretreatment (sanitary sewer) and stormwater inspection of facilities that are identified as a potential copper source. Additionally, the City requires all facilities that wash vehicles or have drains in the vehicle service bays to plumb all fixtures to a sand/oil interceptor and connect to the sanitary sewer system. All such facilities are required to obtain a wastewater discharge permit and wastewater discharges to the sanitary sewer system are routinely monitored for compliance with all local discharge limits for heavy metals (including copper).

Section 14 - Provision C.14 PBDE, Legacy Pesticides and Selenium Controls

Note: There are no reporting requirements in the FY 14-15 Annual Report for Section C.14.

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

C.15.b.iii.(1), C.15.b.iii.(2) ► Planned and Unplanned Discharges of Potable Water

Is your agency a water purveyor?	x	Yes		No
If **No**, skip to C.15.b.vi.(2):				
If **Yes**, Complete the attached reporting tables or attach your own table with the same information. Provide any clarifying comments below.				

Comments:
Due to the continue drought, the City of Livermore has significantly reduced its routing maintenance (flushing) of its potable water system during this reporting period.

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:
Refer to the C.3 New Development and Redevelopment, C.7. Public Information and Outreach and C.9. Pesticide Toxicity Control sections of Program's FY 14-15 Annual Report.

Additionally, the City's requirements for new development projects include the following requirements:
All new development projects are required to address the following, and implement when feasible, the following:

Landscaping shall be designed to both minimize irrigation and the runoff of irrigation waters. It shall also be designed to promote surface infiltration where appropriate. Landscaping plans should also consider measures and/or planting selections, which serve to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.

If a landscaping plan is required as part of a development project application, the plan shall meet the following conditions related to reduction of pesticide use on the project site:

Where feasible, landscaping shall be designed and operated to treat stormwater runoff by incorporating elements that collect, detain, and infiltrate runoff. In areas that provide detention of water, plants that are tolerant of saturated soil conditions and prolonged exposure to water shall be specified.

Plant materials selected shall be appropriate to site specific characteristics such as soil type, topography, climate, amount and timing of sunlight, prevailing winds, rainfall, air movement, patterns of land use, ecological consistency and plant interactions to ensure successful establishment.

Existing native trees, shrubs, and ground cover shall be retained and incorporated into the landscape plan to the maximum extent practicable.

Unless otherwise specified, proper maintenance of landscaping shall be the responsibility of the property owner.

Integrated pest management (IPM) principles and techniques shall be encouraged as part of the landscaping design. Some examples of IPM principles and techniques include the following:
Select plants that are well adapted to soil conditions at the site.

Select plants that are well adapted to sun and shade conditions at the site. Consider future conditions when plants reach maturity. Consider seasonal changes and time of day.

Provide irrigation appropriate to the water requirements of the selected plants.

Select pest and disease resistant plants.

Plant a diversity of species to prevent a potential pest infestation from affecting the entire landscaping plan.

Use "insectary" plants in the landscaping to attract and keep beneficial insects.

Landscaping shall also comply with City of Livermore's "Water Efficient Landscape Ordinance". However, areas of a site used for bioswales or other landscaped areas that function as a stormwater treatment measure shall be exempt from the Water Efficient Landscaping requirements.

The City as part of its Public Outreach events provides and promotes the following information to the public:
Promotional items and informational materials described IPM and its controls mechanisms, the benefits of using IPM products, and the OWOW Program. The product included labels that identified the control mechanism, active ingredient(s), and the OWOW local store of purchase
Stormwater Pollution Brochure, Bay Begins Brochure, Home Maintenance Tips for a Cleaner Bay Brochure, Grow It! Guides, Control It! Guides, Healthy Home and Garden Booklet, Pest Bugging You? Pocket Guides, The 10 Most Wanted Bugs in Your Garden Brochure, A Kid's Guide to Backyard Bug Guides, and Pest or Pal? Activity Guides.

The information detailed below summarizes The City of Livermore's Water Conservation efforts:

Conservation Program	Description	Implemented	Terminated
ULF/HET Rebates	Current program offers a rebate of up to $100 for replacement of 3.5 gpf toilet with a HET. This program replaced ULF program. Rebates for high-efficiency urinals also are available.	1994 Updated 2008	On-going
HEW Rebates	Rebate program in conjunction with Z7 & PG&E. Rebate amounts have ranged from $50-$150 for water portion of rebate. Rebate is dependent on many factors, including model and water efficiency level.	1999 Updated 2014	On-going
Conservation Pricing	The City utilizes several financial disincentives and penalties to discourage excessive use and encourage responsible water conservation.	1991 Updated 2014	On-going
School Education-COL	Educational programs are offered to the schools in the Livermore Municipal Water service area. This includes support of the Z7 School program and classroom presentations provided by City of Livermore Water Resources Division (WRD) staff.	2005-06	On-going
Conservation Coordinator	The City has designated one or more staff to meet the function of Conservation Coordinator since 1988. Currently three staff members play key roles in the City's conservation efforts.	1988	On-going
Water Waste Prohibition/Water Shortage Contingency Plan	The plan includes water conservation stages of action in response to shortages up to 50%, estimates of minimum 3-year available water supply, preparations for water during catastrophic supply interruptions, mandatory prohibitions and consumption reduction methods, penalties and charges for excessive use, analysis of potential revenue impacts from Plan implementation, and mechanisms for determining water use reductions. A comprehensive revision of the Plan was included as part of the 2010 UWMP.	1991 Updated 1996 Updated 2005 Updated 2011	On-going
Water Use Reduction Plan	Part of the 1990 UWMP. Enacted water conservation measures to address the 20 percent reduction in per capita water use required by the Water Conservation Bill of 2009. Also establishes voluntary and mandatory water conservation practices to address water supply shortages and required demand reductions.	1990	On-going

Conservation Program	Description	Implemented	Terminated
Public Outreach	Methods include, but are not limited to, Earth Day, Livermore Wine Country Festival, Plant tours, Farmer's Market, Safety Fair, advertising, bill inserts, brochures, presentations, notices, social media, dedicated Drought hotline, and dedicated web pages on City website. During the current drought, advertising methods also included solar message boards, cable, radio, social media and print ads.	1989 2014	On-going
WELO	Establishes standards and specifications for water efficient landscaping and landscape irrigation to encourage conservation and limit water use.	1992 Updated in 2012 Updated in 2015	On-going
Water leak audits	Water resources staff monitors monthly water purchases and monthly water sales in order to quickly detect any system irregularities or excessive water loss. The Water Resources Division contracts with outside vendors for emergency repairs, including leaks, with a 24 hour response time. Smaller leaks are assessed on a case by case basis and repaired by Water Resource Division staff.	1990's	On-going
Large Landscape Irrigation Survey	The highest 20% of non-residential water users are identified and offered a free irrigation survey on their existing landscape. A list of recommended improvements is provided to the customer along with an offer of up to $4,500 in matching funds as an incentive to implement the recommendations.	2009 Updated 2014	On-going
California Youth Energy Services (CYES)	Residents are offered a free CYES house call providing renters and homeowners with a free energy and water conservation assessment, education and mini-retrofit. WRD provides kitchen and bathroom aerators and low flow shower heads for Livermore Municipal Water customers.	2009	2012
Water Efficient Lawn Rebates	Offering up to $750 in rebates to replace lawn with water-wise alternatives. Rebates are split into a two phase 40/60 split rebate to encourage proper conversion to drip irrigation, and planting drought tolerant plants in the fall.	2012 Updated 04/2015	On-going
Schools Program-Indoor Outdoor	Provides funding for large landscape surveys, irrigation hardware replacement, indoor water use surveys, and plumbing fixture replacement for schools in the Tri-Valley water retailers' service area.	2010	On-going

Conservation Program	Description	Implemented	Terminated
Eco Blue Cube	This program is offered to qualifying CII customers to implement this water conservation strategy by converting their water-using urinals to waterless using the Ecoblue Cube microbial technology.	2009	On-going
Direct Install Toilet	This program is offered to residential, commercial and industrial customers. The program includes the direct installation and replacement of older high volume toilets with a HET and/or HEU.	2012	2013
Civic Bay Friendly Landscape Ordinance	This ordinance requires civic projects to incorporate guidelines to achieve the benefits of a Bay-Friendly landscaping including the promotion of water and resource efficiency, and environmental health.	2009	On-going
Recycled water for irrigation	The City has been producing and distributing recycled water and since 1963 and has a relatively well-developed recycled water program that currently distributes an average of about 2 million gallons of recycled water per day. During current drought free recycled water is being made available to City of Livermore residents. Permits are issued and the term of this offer is subject to change.	1963 2014	On-going Temporary
Tri-Valley Water Conservation Group	City staff actively participates in this group that provides planning and direction for a variety of regional public outreach efforts.	1980's	On-going
Water Supplier Nursery Council	This committee was created by Stopwaste.org with the goal to encourage residential water conservation by expanding point-of-purchase awareness of comprehensive Bay-Friendly practices and related products and to expand recycled content supply channels for compost and mulch.	2010	On-going
Monthly billings	Monthly bills provide another method for the City to reach out to its water customers with information about their water use and to promote water conservation. The monthly bills include a graph comparing current to previous year consumption and water conservation related notices.	1991	On-going
Water-Wise Gardening Website	Website to promote and encourage water-wise landscaping practices.	2005-06	On-going

Conservation Program	Description	Implemented	Terminated
Weather Based Irrigation	Rebates of $75 for single-family homes, $100 for multi-family and $3,000 for CII properties to replace standard clock-type controllers with qualifying, self-adjusting weather based "smart" controllers. During the drought these rebates are only offered to commercial, industrial and institutional customers.	2011 2014	On-going
Centralized Computer Irrigation System	WRD encourages water-efficient landscape irrigation by utilizing a centralized computer irrigation system.	1998	On-going
Residential Water Audits	WRD staff is utilizing a self-water audit residential program. This program includes a water survey and customizable water-saving kit.	2014	On-going
Green Business	Working with the Alameda Green Business program on the water conservation audit portion of the program.	Est. 2002	On-going

C.15.b.iii.(1) ▶ Planned Discharges of the Potable Water System

Site/ Location	Discharge Type	Receiving Waterbody(ies)	Date of Discharge	Duration of Discharge	Estimated Volume (gallons)	Estimated Flow Rate (gallons/minute)	Chlorine Residual (mg/L)	pH (standard units)	Discharge Turbidity[147] (NTU)	Implemented BMPs & Corrective Actions
2F4-4H1	Flushing	Altamont Creek	02/19/2015	289 minutes	252,112	872 GPM	0.01	8.85	Not Feasible	Dechlorination/Inlet Protection
4H3	Flushing	Arroyo Seco	02/14/2015	55 minutes	50,445	917 GPM	0.00	7.85	Not Feasible	Dechlorination/Inlet Protection
5H1-5G3-6G4	Flushing	Arroyo Seco	02/11/2015	80 minutes	73,160	915 GPM	0.02	7.58	Not Feasible	Dechlorination/Inlet Protection

[147] Monitor the receiving water for turbidity if necessary and feasible. Include data in this column if available.

C.15.b.iii.(2) ▶ Unplanned Discharges of the Potable Water System[148]

Site/ Location	Discharge Type	Receiving Waterbody(ies)	Date of Discharge	Discharge Duration	Estimated Volume (gallons)	Estimated Flow Rate (gallons/day)	Chlorine Residual (mg/L)[149]	pH (standard units)[52]	Discharge Turbidity (Visual) [52],	Implemented BMPs & Corrective Actions	Time of discharge discovery	Regulatory Agency Notification Time[150]	Inspector arrival time	Responding crew arrival time
Isabel/Hwy 84	Water Line Break	Arroyo Las Positas	03/12/15	30 minutes	234,872	--	0.90	7.90	Not analyzed	First responders immediately turned off water preventing further discharge @1100	1051	Yes		

[148]This table contains all of the unplanned discharges that occurred in this FY.
[149]Monitoring data is only required for 10% of the unplanned discharges. If you monitored more than 10% of your unplanned discharges, report all of the data collected.
[150]. Notification to Water Board staff is required for unplanned discharges where the chlorine residual is >0.05 mg/L and total volume is ≥ 50,000 gallons. Notification to State Office of Emergency Services is required after becoming aware of aquatic impacts as a result of unplanned discharge or when the discharge might endanger or compromise public health and safety.

C.4-Attachments

Stormwater Industrial and Commercial Inspection Plan

I. On an annual basis, the City shall performs stormwater inspections of all NOI facilities, Categorical Industrial Users permitted under the City's Pretreatment Program (CIU), General Industrial/Commercial Users permitted under the City's Pretreatment Program (GEN), Photo Processor Users permitted under the City's Pretreatment Program (PHOTO), and Wash Rack User permitted under the City's Pretreatment Program. The following table provides a specific list of these facilities:

Table 1.0

Facility Name	Type	Frequency
Harris Salinas Rebar	NOI/CIU	Annually
Inphenix	NOI/CIU	Annually
Packaging Innovators	NOI/CIU	Annually
Livermore Dublin Disposal	NOI/CIU	Annually
Livermore Municipal Airport	NOI/WR	Annually
Livermore Transit Authority	NOI/WR	Annually
Fenestra Winery	NOI	Annually
FormFactor	NOI/CIU	Annually
FormFactor	NOI/CIU	Annually
Wente Vineyards Estate Winery	NOI	Annually
Fabco Automotive Corporation	NOI	Annually
Schiffenhaus CA	NOI/GEN	Annually
U.S. Foods Service	NOI/WR	Annually
USP Structural Connectors	NOI	Annually
Integrated Manufacturing Group	NOI	Annually
Sanmina SCI	NOI	Annually

Facility Name	Type	Frequency
Ames Taping Tool Systems	GEN	Annually
Astro Pak	GEN	Annually
Culligan Water	GEN	Annually
Arrowhead Mountain Springs	GEN	Annually
Heritage Paper	GEN	Annually
National Food Laboratory	GEN	Annually
Packaging Innovators	GEN	Annually
Protein Research	GEN	Annually
E. Turman & Company	GEN	Annually
Golden Bear Packaging	GEN	Annually
Schiffenhaus	GEN	Annually
Costco	PHOTO	Annually
Rite Aid-1350 N. Vasco Rd.	PHOTO	Annually
SAVE Mart	PHOTO	Annually
Budget Car and Truck Rental	WR	Annually
California Landscape Dimensions, Inc.	WR	Annually
Clark Pest Control	WR	Annually
Cresco Equipment	WR	Annually
Enterprise Rent-A-Car	WR	Annually
Lassiter Excavating	WR	Annually
LAVTA	WR	Annually

Facility Name	Type	Frequency
Las Positas Golf Course	WR	Annually
Les Schwab Tire Center #647	WR	Annually
Livermore Chevron	WR	Annually
Livermore Municipal Airport	WR	Annually
MidCoast Transportation	WR	Annually
Penske Truck Leasing	WR	Annually
Power Washing Services	WR	Annually
Top Grade Construction	WR	Annually
Wal-Mart Tire & Lube Express	WR	Annually
Yamaha Golf Cars of CA	WR	Annually
Zone 7 Water Agency	WR	Annually
B & S Hacienda	WR	Annually
Bernard's Mini Mart	WR	Annually
Cactus Car Wash	WR	Annually
Cal Trans	WR	Annually
First Street-Henderlong	WR	Annually
Groth Brothers	WR	Annually
Harris Salinas Reinforcing	WR	Annually
Hawthorne LLC	WR	Annually
LPFD Fire Station 6	WR	Annually
LPFD Fire Station 7	WR	Annually

Facility Name	Type	Frequency
LPFD Fire Station 8	WR	Annually
LPFD Fire Station 10	WR	Annually
L Street Car Wash	WR	Annually
Las Positas Shell	WR	Annually
Livermore Audi	WR	Annually
Livermore Car Wash	WR	Annually
Livermore Dublin Disposal	WR	Annually
Livermore Honda	WR	Annually
Livermore Jaguar	WR	Annually
Livermore Porsche	WR	Annually
Livermore Subaru	WR	Annually
Livermore Police Department	WR	Annually
Mathew's Machinery	WR	Annually
Boat Masters	WR	Annually
City of Livermore, MSC	WR	Annually
Dun-Rite	WR	Annually
Hertz Equipment Rental	WR	Annually
Interstate Storage	WR	Annually
JCs RVs	WR	Annually
Livermore Auto Group-2232 Kitty Hawk	WR	Annually
Livermore Auto Group-2266 Kitty Hawk	WR	Annually

Facility Name	Type	Frequency
Livermore Auto Group-2304 Kitty Hawk	WR	Annually
Mountain Cascade	WR	Annually
Olympic Boat Centers	WR	Annually
Quentin Bammer/Moeller Bros.	WR	Annually
R. Lance & Sons	WR	Annually
SAB Stanley Shell	WR	Annually
SpeeDee Wash	WR	Annually
Sunbelt Rentals	WR	Annually
U.S. Foodservice	WR	Annually
Vasco 76	WR	Annually
Vasco Road Chevron	WR	Annually
White Oak Landscaping	WR	Annually

II. The 5-Year inspection plan detailed below outlines how the City of Livermore will prioritize it's inspection to adequately address the requirements of Provision C.4.b.:

Fiscal Year 2014/2015: All Pretreatment and NOI Facilities identified in Table 1.0 (91 Facilities)

All Facilities Listed under SIC 3599, Industrial and Commercial Machinery and Equipment (19 Facilities)

All Facilities Listed under SIC 3679, Electronic Components Manufacturing (5 Facilities)

All Facilities Listed under SIC 3089, Plastic Products (3 Facilities)

FY 2014/2015: Goal-99 Facility Inspections

Fiscal Year 2015/2016: All Pretreatment and NOI Facilities identified in Table 1.0 (91 Facilities)

All Facilities Listed under SIC 7532, Automotive Body Shops, and

All Facilities Listed under SIC 7538, Automotive Repair Shops (47 Facilities)

All Facilities Listed under SIC 5541, Gasoline Service Stations (27 Facilities)

FY 2015/2016- 165 Facility Inspections

Fiscal Year 2016/2017: All Pretreatment and NOI Facilities identified in Table 1.0 (91 Facilities)

All Facilities Listed under SIC 5812, (149 Facilities)

FY 2016/2017- 240 Facility Inspections

Fiscal Year 2017/2018: All Pretreatment and NOI Facilities identified in Table 1.0 (91 Facilities)

All Facilities Listed under SIC 8711, Engineering Services (17 Facilities)

All Facilities Listed under SIC 8731, R&D Labs-Commercial (5 Facilities)

All Facilities Listed under SIC 8734, Testing Labs (2 Facilities)

All Facilities Listed under SIC 5093, Scrap & Waste Materials (2 Facilities)

All Facilities Listed under SIC 4212, Local Trucking (5 Facilities)

All Facilities Listed under SIC 5261, Retail Nurseries (4 Facilities)

All Facilities Lister under SIC 5211, Lumber and Other Building Material Dealers (7 Facilities)

FY 2017/2018- 133 Facility Inspections

Fiscal Year 2018/2019: All Pretreatment and NOI Facilities identified in Table 1.0 (91 Facilities)

All Facilities Listed under SIC, Restaurant with a Grease Trap or No Grease Removal Device (102 Facilities)

FY 2018/2019- 193 Facility Inspections

The "number" of facilities listed under each SIC in this 5-Year Inspection plan is based upon a query of the City's Business License Database performed in January 2010. Prior to each fiscal year, a new query of the database shall be performed to get the most updated figure for that year's facility type scheduled to be inspected.

C.9-Attachments

GREEN PRO CERTIFIED
Eco-Effective Pest Control

GREENPRO

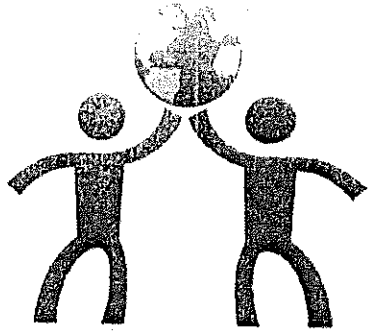
Eco-Effective Pest Control

Presenting this certificate of excellence to

Orkin Pest Control

in acknowledgment of your continuing efforts toward professional excellence and environmental awareness in the pest management industry. You have met the GreenPro testing requirements for eco-effective pest control.

official signature



Orkin Commercial Services understands your strict need for highly effective and environmentally responsible pest control. We take a proactive approach to help keep pests out. Here is a summary of our proposed program, which can help you achieve pest management excellence:

Services: Interior and exterior pest management in accordance with the principles of Integrated Pest Management (IPM). Including attention to the Stipulated Injunction ordered by the U.S. District Court for the Northern District of California, restricting the use of 75 pesticides in eight San Francisco Bay area counties to protect 11 federally listed threatened or endangered species. IPM is an environmentally responsible approach to pest management that relies on a combination of practices, starting with non-chemical techniques (minimizing any hazards to people, property, or the environment). Orkin will inspect the property and work with the designated property manager to investigate the source of the problem – and eliminate it – before applying pesticides by providing recommendations to address education, sanitation/maintenance, exclusion, and trapping where needed. This approach is in accordance with EcoWise, Greenshield, and GreenPro strategies for managing specific pests.

Pesticides: In the rare event that all other methods of pest control have been exhausted and a pesticide must be utilized to eliminate an infestation, pesticides that may be used are in accordance to the San Francisco Reduced Risk Pesticide List, Tier III (least toxic). A list of these pesticides is included below for your reference. All pesticides are applied according to the product label and any pertinent state and federal regulations. Pesticide products are the responsibility of Orkin and are not stored at any client location. At no time shall a pesticide be applied in a waterway or within 100 ft. of a waterway that may subject the waterway to become contaminated by drift or runoff.

Quality Assurance: Orkin's IPM program is backed by our Quality Assurance program, which guarantees the service you receive meets Orkin's high quality standards, GreenPro program standards – and your own. Our service specialists and operations management are licensed by the State of California Structural Pest Control Board. Orkin is certified under the Greenpro standard and is a gold member of the US EPA Pesticide Environmental Stewardship Program. Service specialists at our location are in the process of completing their individual Greenpro certifications at this time.

Documentation: Orkin will provide a copy of a Service Report at each service. This report will include all of the details of the service performed (actions taken, pesticides applied (if any), structural/maintenance/sanitation recommendations to address pest conducive conditions, etc.). We will also provide a quarterly summary of the pesticides used at the following service locations:

Livermore Public Library
1188 S. Livermore Ave.
Livermore, CA 94550

Livermore Police Department
1110 S. Livermore Ave.
Livermore, CA 94550

Livermore City Hall
1052 S. Livermore Ave
Livermore, CA 94550

Livermore Water Treatment Plant
101 W. Jack London Blvd.
Livermore, CA 94551

Fire Station #6
4550 East Ave.
Livermore, CA 94550

Livermore Airport
636 Terminal Circle
Livermore, CA 94551

Livermore Chamber of Commerce
2157 1st St.
Livermore, CA 94550

Fire Station #9
1919 Cordoba St.
Livermore, CA 94550

Springtown Library
998 Bluebell Dr.
Livermore, CA 94551

Old Public Library
1000 S. Livermore Ave.
Livermore, CA 94550

Maintenance Service Center
3500 Robertson Park Rd.
Livermore, CA 94550

City of Livermore
2388 2nd St.
Livermore, CA 94550

City of Livermore
725 Rincon Ave.
Livermore, CA 94550

Fire Station #7
951 Rincon Ave.
Livermore, CA 94550

Fire Station #8
5750 Scenic Ave.
Livermore, CA 94551

Fire Station #10
330 Airway Blvd.
Livermore, CA 94551

Council Chambers
3575 Pacific Ave.
Livermore, CA 94550

Multi Service Center
3311 Pacific Ave.
Livermore, CA 94550

Livermore Gateway Business
101 Pullman St.
Livermore, CA 94551

San Francisco Reduced Risk Pesticide List, Tier III

- **Dupont Advion Ant Bait Arena**, Indoxacarb 0.1%, EPA: 352-664
- **Dupont Advion Ant Gel**, Indoxacarb 0.05%, EPA: 352-746
- **Dupont Advion Cockroach Bait Arena**, Indoxacarb 0.5%, EPA: 352-668
- **Dupont Advion Cockroach Gel Bait**, Indoxacarb 0.6%, EPA: 352-652
- **Prentiss EcoExempt G**, Eugenol (clove oil) 2.9%, EPA: exempt
- **Wellmark Gentrol Point Source Roach Control Device**, Hydroprene 96%, EPA: 2724-469
- **Bayer Maxforce FC Professional Insect Control Roach Killer Bait Gel**, Fipronil 0.01%, EPA: 432-1259
- **Nisus Niban Granular Bait**, Boric Acid 5%, EPA: 64405-2
- **Victor Poison Free Flying Insect Killer**, Mint Oil 4.0%, Sodium Lauryl Sulfate 0.1%, EPA: exempt
- **Victor Poison Free Wasp and Hornet Killer**, Mint Oil 8.0%, Sodium Lauryl sulfate 1.0%, EPA: exempt
- **Zoecon Gentrol IGR Concentrate**, Hydroprene 9%, EPA: 2724-351

C.10-Attachments

LIVERMORE
CALIFORNIA

December 18, 2014

Mr. Bruce Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 500
Oakland, CA 94612

Subject: Revised C.10 Trash Load Reductions in FY 2013/14 Annual Report and Request for Change in Compliance Category

Dear Mr. Wolfe,

In Appendix A to the Staff Summary Report presented to the Water Board in the Trash Load Reduction Workshop on December 10, 2014, the City of Livermore's compliance status was listed as "non-compliant". City staff strenuously disagrees with this conclusion and submit this letter to further clarify and demonstrate our compliance with the 40% trash load reduction requirements of Provision C.10 of the Municipal Regional Stormwater NPDES Permit (MRP). It is our request that we be placed in the compliance category, but if that is not possible, that we be placed in a mitigated compliance category as suggest by Board members at the workshop.

The requirements and criteria for determination of compliance with Provision C.10 are clearly set forth in the MRP. MRP Provision C.10 requires that "Permittees shall demonstrate compliance with Discharge Prohibition A.2 and trash-related Receiving Water Limitations through the timely implementation of control measures and other actions to reduce trash loads from municipal separate storm sewer systems (MS4s) by 40% by 2014" as specified further in Provision C.10. Trash reduction ordinances are specifically mentioned in this provision. Provision C.10.a.ii. provides that each Permittee "shall determine the baseline trash load from its MS4 to establish the basis for trash load reductions and submit the determined load level to the Water Board...." Provision C.10.d. then requires that in the Annual Report, each Permittee shall provide a summary of its trash load reduction actions as further specified.

In response to the December 10, 2014 Trash Load Workshop, Livermore staff conducted a comprehensive review of our FY 2013-14 Annual Report, as well as a review and comparison of Livermore's efforts to comply with the C.10 Trash Provisions with those of other co-permittees to the MRP. Based on these efforts, staff has concluded that the City of Livermore was extremely overly conservative in both reporting and taking credit for many of the trash management activities implemented during this reporting period.

For example, Livermore took a significantly lower percentage reduction in trash loading than many other agencies did for both the single-use plastic bag ban and the expanded polystyrene food service ware ordinance, despite the fact that Livermore staff implemented the polystyrene ordinance and conducted follow-up facility inspections and other actions to enforce the measures. Many agencies assumed reductions of 7% and 6% for single-use plastic bag and Styrofoam bans, respectively. Livermore also took a more conservative approach in taking credit for regional Public Education and Outreach Programs than many other agencies, taking a zero percent reduction in our initial submittal, despite the fact the Livermore conducted additional local outreach via newspapers and social media regarding trash and the Adopt-a-Creek-Spot Program. Based on these findings, the City is submitting revised data for these three categories of control measures with removal percentages of 7% for single-use plastic bags bans and enforcement actions, 5% for the Styrofoam ban and enforcement actions, and 2% for Public Education and Outreach.

However, the most significant area of under-reporting in the original City of Livermore 2013-14 Annual Report was in the area of Visual Assessments, where the City estimated zero reduction for Other Trash Control Measures as confirmed by Assessments. Both Regional Board staff and the Baykeeper comments noted the lack of Visual Assessments as a major flaw in the City's trash efforts.

However, as noted on pages 10-14 through 10-31 our original 2013-14 Annual Report the City completed Visual Assessments of all of the City's 17 Trash Management Areas (TMA) using the EOA Rapid Trash Assessment Protocol in June 2014. These assessments were conducted at the end of the reporting period after implementation of all enhanced trash measures and educational efforts, and were in addition to the Visual Assessments previously completed by staff to verify the baseline trash generation categories in each of the City's 17 TMA's. The data from the June 2014 Assessments demonstrated that 13 of the 17 Management Areas showed a decrease in trash generation category from the baseline levels; with 9 of the areas dropping by one generation category (High to Medium or Medium to Low) and 4 of the areas dropping by two categories (High to Low). Only 4 of the 17 management areas showed no change from the baseline, and one of these areas started out in the "low" generation category and therefore could not be reduced any further.

Despite these valid Visual Assessments, Livermore staff was reluctant to take credit for wholesale trash reductions due to Other Control Measures across each TMA based on the Assessments alone. Due to the variability of Visual Assessments and the potential for transient or one-time conditions to skew the assessment data, Livermore has focused more staff efforts on education, enhanced enforcement, extensive one-time and on-going trash clean-up programs, and limited use of full-trash capture devices. Additional efforts during this reporting period included the completion of a full-trash capture study by Schaaf & Wheeler Consulting Civil Engineers demonstrating how the City might meet the 70% and 100% reduction levels using public or private full-trash capture devices.

The decision to minimize the reliance on visual assessments in favor of methods to more effectively and permanently change the trash generation category of each TMA (like full capture devices) was made based on staff's belief that a very rigorous and complicated program of Visual Assessments would be needed for each of the TMA's to ensure each Assessment was both representative of the TMA and was statistically valid. Based on these concerns, staff did not enter the Visual Assessment results in the database reporting tool and took zero percent reduction for Other Trash Control Measures.

However, after reviewing the 2013-14 Annual Reports submitted by the other co-permittees, it appears the City was extremely over-conservative in not taking credit for its Visual Assessments and Other Trash Control Measures. Most of the agencies who claimed a reduction for Other Trash Control Measures did not implement significantly more-rigorous or more frequent assessment procedures than those used for the Livermore assessments.

Based on these findings, staff reviewed Livermore's reported data for all of the TMA's and included the results under the "Other Control Measures Implemented since MRP Adoption other than Full Capture Devices" as verified by the June 2013 Visual Assessments in the data reporting tool.

A variety of different Control Measures were implemented as listed for each TMA in the City's original 2013-14 Annual Report, including:

- Enforcement of high trash generating retail areas;
- Participating in California Highway Patrol Litter Enforcement Committee to ensure on-land clean-ups and litter enforcement for Livermore off-ramps;
- On-land clean ups of stormwater detention basins;
- Coordinating with CHP to increase enforcement on uncovered loads;
- Implementing a Multi-Family Litter Reduction Pilot Project in two TMA's

In updating the City's 2013/14 C.10 Annual Report information to include reductions for Other Control Measures based on Visual Assessments, staff is also choosing a very conservative approach. Most of the agencies reviewed seem to have applied the results of Visual Assessment to 100% of the acreage in each TMA and lowered the entire trash generation category. For example, if a TMA was rated as a "High" generation category and a visual assessment found a "Medium" level, most agencies changed 100% of the acreage of the TMA from High to Medium. However, Livermore is choosing to apply the data from the June 2014 Visual Assessments to only 25% of the acreage within a given trash management area. We believe this is a more valid and defensible approach based on the number and area included in a typical visual assessment. Using this approach, the results of the June 2014 Visual Assessments yielded an 11% reduction in trash load over all TMA's. Had City staff chosen to apply the assessment results to 100% of the

TMA's as many agencies did, the reduction from Other Control Measures would have been as high as approximately 40%.

In reviewing reported data for other agencies who included a reduction for "Other Control Measures", staff found estimated reductions ranging between 2% and 89%, with an average reduction of about 20%. Therefore, Livermore's proposed reduction of 11% from Other Control Measures verified by Visual Assessments seems very reasonable based on not only on the results obtained during the assessments, but also in comparison to values reported by other agencies. However, based on this data, even the 40% reduction obtained by applying the assessment data to 100% of the acreage in each TMA would have been within the range of reported reductions.

In reviewing annual reports from other co-permittees, staff noted that Livermore has installed significantly more full-capture devices than most agencies, with only 4 co-permittees installing more devices than Livermore; but has received a lower removal credit for those devices. Livermore has installed 168 full trash capture devices compared to an average of only 70 among other co-permittes, however the average percent-reduction for other co-permitttes is 18 percent compared to only 10 percent for Livermore. This is due to the fact that Livermore's initial purchase and installation of trash capture devices was to comply with MRP permit requirement C.10.a.iii, which states *"population-based Permittees shall install and maintain a mandatory minimum number of full trash capture devices by, July 1, 2014, to treat runoff from an area equivalent to 30% of Retail/Wholesale Land that drains to MS4s within their jurisdiction"* rather than targeting the location and installation of devices strategically within specific TMAs. Additionally, other agencies may have installed larger devices capable of treating the drainage from larger areas. The above-referenced Trash Reduction Plan developed by the City with Schaff & Wheeler includes targeted installation of additional devices to maximize the removal percentage obtained within each TMA. This analysis was completed to demonstrate the City of Livermore's level of effort with regard to full-trash capture devices.

In addition to the above efforts, the City also implemented an extensive Adopt a Creek Spot program that included weekly creek clean-up activities and on-going, informal assessments by volunteer adoptees. In addition to this on-going program, the City also conducted an additional, large clean up event on Coastal Cleanup Day. While the City did take some credit for these activities under Creek and Shoreline Cleanups and Public Education, it seems the City was somewhat limited in receiving additional credit for these programs compared to some agencies due to the fact that there is less trash and litter to clean up in Livermore. For example, based on the staff report and Board staff comments at the Trash Load Reduction Workshop, some large agencies were rated as being in "mitigated non-compliance" based in part on the overwhelming volume of trash collected during clean-up activities. However, Livermore received no such "extra credit" or "mitigation" for cleanups, despite having as well developed, publicized, and robust a volunteer clean-up program as almost any agency in Alameda County.

Due to the relatively low level of trash in Livermore to begin with, in addition to the repeated cleanups of local creeks, volunteers in Livermore are picking up smaller bits of trash than many/most agencies to have something to show for their efforts. This is evidenced by the City being included in a Save the Bay campaign as a "tobacco pollution hotspot" because of the number of cigarette butts collected and reported during Coastal Cleanup Day. Staff is confident that this apparent "hotspot" is caused by skewed data because Livermore volunteers are coming back with ever-smaller bits of trash, while many larger agency cleanup events are still pulling mattresses and shopping carts out of the storm channels and creeks.

Livermore staff are not requesting or claiming any additional reductions or credits on our revised C.10 reporting for cleanups; rather this item is included for information, and to reinforce the fact that Livermore does not have a significant trash problem yet has still been implementing aggressive programs for trash control.

Based on the revised reduction percentages for Single-use Plastic Bags, Expanded Polystyrene Food Service Ware Ordinances, Public Education and Outreach, and Other Trash Control Measures, the Total Estimated Percent Trash Reduction in FY 2013-14 for the City of Livermore would increase to 42%. As noted above, if the City had chosen to apply the reductions from Other Control Measures to 100% of the Trash Management Area acreage as many co-permittees elected to do, the City's Total Estimated Percent Trash Reduction would have increased to well over 50%. Revised reporting sheets for C.10.d Part B, pages 10-14 through 10-30 showing the revised trash generation categories for each of the City's Trash Management Areas are attached to this letter. An updated reporting form for C.10.d, Pat C – Estimated Overall Trash Load Reduction which includes all of the revisions resulting from the review and comparison of Livermore's Annual Report as discussed above is also attached to this letter.

Livermore Water Resources Division staff would like to thank Board staff for the opportunity to review and provide additional comments regarding the City's activities and compliance status under the C.10 Trash requirements. While Livermore staff strongly disagreed with the non-compliance rating and took issue with some Board Member and Staff comments at the December 10, 2014 Trash Load Reduction Workshop, the workshop *did* provide the impetus and opportunity for Livermore to go back and review the information we had submitted. After that review it was clear that our initial reporting and quantification of reductions was extremely over-conservative compared to most other co-permittees; and therefore the problem was not one of Board staff failing to recognize Livermore's efforts, but rather a problem of Livermore failing to adequately *take credit* for all of the valid activities that staff has implemented. Since the C.10 Trash requirements and the associated reporting and quantification of loadings and reductions is difficult and far from straight-forward, this opportunity to review and compare our methodology to other agencies was very helpful.

Based on the information presented above and in the attached document, Livermore staff believe that the City has clearly demonstrated compliance with the specific permit criteria set forth above, standards that we have relied on in our programs to address trash control. It is essential that compliance be judged by the permit criteria, not by other criteria developed after the permit was adopted. I request that you reassess the City of Livermore's compliance status and change our compliance status as we request.

I look forward to your response. If you need additional information, do not hesitate to contact me at (925) 960-8100.

Sincerely,

Darren Greenwood
Assistant Public Works Director
City of Livermore

Cc: (without attachments)
Marc Roberts, Livermore City Manager
Dan McIntyre, Public Works Director

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
1	328	People (Pedestrians and Vehicles)	All Trash Types*	Baseline Generation (Pre-MRP)	0	1	99	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	1	53	46
Total Area (Acres)	150	66 Publicly-owned Connector Pipe Screen Devices installed by West Coast Storm, Inc.						
% of TMA	46							
% of VH/H/M	46							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	1	40	59
Anti-littering and Illegal Dumping Enforcement Activities – • Perform enforcement of high trash generating retail areas (TMA 1R) without existing full trash capture devices. Enforcement includes inspection of retail areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. • Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days. Activities to Reduce Uncovered Loads – Participate on Highway Patrol Litter Enforcement Committee to ensure uncovered loads on Interstate Highway 580 are cited during quarterly Enforcement Days.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of N. Canyons Parkway near the intersection of N. Canyons Parkway and Constitution Drive using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of N. Canyons Parkway near the intersection of N. Canyons Parkway and Constitution Drive was "Low" during the On-land Visual Assessment performed on June 30, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	58
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	4

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
2	105	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	53	47	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	38	34	28
Total Area (Acres)	29	20 publicly-owned Connector Pipe Screen Devices installed by West Coast Storm, Inc.						
% of TMA	28							
% of VH/H/M	28							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	29	33	38

Anti-littering and Illegal Dumping Enforcement Activities –

- Perform enforcement of high trash generating retail areas (TMA 2R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.
- Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days.

Activities to Reduce Uncovered Loads –

- Participate on Highway Patrol Litter Enforcement Committee to ensure uncovered loads on Interstate Highway 580 are cited during quarterly Enforcement Days.

Assessment Methods for Control Measures Other than Full Capture Devices

On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Las Positas Road near the intersection of Las Positas Road and N. Livermore Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form

Summary of Assessment Results To-date

The trash condition category of Las Positas Road near the intersection of Las Positas Road and N. Livermore Avenue was "Low" during the On-land Visual Assessment performed on June 30, 2014. The last monthly street sweeping event of this "High" trash generating retail and commercial area was performed on June 27, 2014.

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	43
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	2

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
3	79	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	98	2	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	52	1	47
Total Area (Acres)	37	20 publicly-owned, Connector Pipe Screen Devices installed by West Coast Storm, Inc.						
% of TMA	47							
% of VH/H/M	47							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	38	8	53

Anti-littering and Illegal Dumping Enforcement Activities –

- Perform enforcement of high trash generating retail areas (TMA 2R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.
- Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days.

Activities to Reduce Uncovered Loads –

- Participate on Highway Patrol Litter Enforcement Committee to ensure uncovered loads on Interstate Highway 580 are cited during quarterly Enforcement Days.

Assessment Methods for Control Measures Other than Full Capture Devices

On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Las Positas Road near the intersection of Las Positas Road and First Street using EOA's On-land Visual Assessment Protocol and Data Collection Form.

Summary of Assessment Results To-date

The trash condition category of Las Positas Road near the intersection of Las Positas Road and First Street was "Medium" during the On-land Visual Assessment performed on June 30, 2014.

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	60
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	3

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
4	1,541	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	0	84	15
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	0	76	24
Total Area (Acres)	137	13 publicly-owned, Connector Pipe Screen Devices installed by West Coast Storm, Inc.						
% of TMA	9							
% of VH/H/M	10							

Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices

Anti-littering and Illegal Dumping Enforcement Activities –

- Perform enforcement of high trash generating retail areas (TMA 2R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.
- Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days.

Activities to Reduce Uncovered Loads –

- Participate on Highway Patrol Litter Enforcement

Assessment Methods for Control Measures Other than Full Capture Devices

On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Las Positas Road near the intersection of Las Positas Road and First Street using EOA's On-land Visual Assessment Protocol and Data Collection Form.

Summary of Assessment Results To-date

The trash condition category of Las Positas Road near the intersection of Las Positas Road and First Street was "Medium" during the On-land Visual Assessment performed on June 30, 2014.

After taking into account all New or Enhanced (post-MRP) Control Measures	0	0	76	24

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	10
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	2

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
5	51	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	100	0	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	100	0	0
Total Area (Acres)	0	No devices located in TMA#5						
% of TMA	0							
% of VH/H/M	0							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	73	0	28
On-land Trash Clean-up (of Detention Basin) – In June 2014, contractor removed abated weeds and removed "very little" trash from Southern Diversion Channel for $5,580.00 and HMP Basin #1 for $1,675.00. Anti-littering and Illegal Dumping Enforcement Activities – Perform enforcement of high trash generating retail areas (TMA 5R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. Participate on Highway Patrol Litter Enforcement Committee to ensure clover leafs off of Interstate Highway 580 in Livermore are cleaned and litter bugs are cited during quarterly Enforcement Days. Participate on Highway Patrol Litter Enforcement Committee to ensure uncovered loads on Interstate Highway 580 are cited during quarterly Enforcement Days.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of W. Jack London Boulevard near the intersection of W. Jack London Boulevard and El Charro Road using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of W. Jack London Boulevard near the intersection of W. Jack London Boulevard and El Charro Road was "Medium" during the On-land Visual Assessment performed on June 30, 2014. The next weekly street sweeping event of this "High" trash generating retail area will be performed on June 30, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	27
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	1

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
6	41	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	100	0	0
Trash Full Capture Devices		**Summary Descriptions of Full Trash Capture Devices (Quantity and Type)**		After taking into account Full Capture Devices	0	100	0	0
Total Area (Acres)	0	No devices located in TMA#6						
% of TMA	0							
% of VH/H/M	0							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	76	0	24
Multi-family Dwelling Litter Reduction Pilot - City worked with ACCWP to develop a litter reduction pilot targeting multi-family (condominium and apartment) complexes known to be sites with significant litter issues. City chose Livermore Garden Apartments (located at 5720 East Avenue) as the "Control Site" for this Pilot. This successful Pilot will be replicated at neighboring multi-family complexes located throughout the TMA pending property manager/owner support. See attached Project Report from Gigantic Ideas to ACCWP Project Manager, Jim Scanlin, regarding "Synthesis of MFD Litter Pilot Results & Recommendations" for more detailed information under C.10 Attachments.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of East Avenue near the intersection of East Avenue and Charlotte Way using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of East Avenue near the intersection of East Avenue and Charlotte Way was "Low" during the On-land Visual Assessment performed on June 30, 2014. The last monthly street sweeping event of this "High" trash generating multi-family dwelling area was performed on June 4, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	24
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	1

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
7	240	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	45	55	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	45	55	0
Total Area (Acres)	0	No devices located in TMA#7						
% of TMA	0							
% of VH/H/M	0							

Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices

Anti-littering and Illegal Dumping Enforcement Activities –

- Perform enforcement of high trash generating retail areas (TMA 7R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.

Assessment Methods for Control Measures Other than Full Capture Devices

On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Pacific Avenue near the intersection of Pacific Avenue and S. Livermore Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form.

Summary of Assessment Results To-date

The trash condition category of Pacific Avenue near the intersection of Pacific Avenue and S. Livermore Avenue was "High" during the On-land Visual Assessment performed on June 30, 2014. The next monthly street sweeping event of this "High" trash generating retail area will be performed on July 9, 2014. Source Control Section staff confirmed that trash bin/container (waste storage) areas from nearby shopping center businesses were being maintained on July 10, 2014.

After taking into account all New or Enhanced (post-MRP) Control Measures

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	0
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	0

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
8	300	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	42	53	5
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	42	49	9
Total Area (Acres)	13	No publicly-owned full capture devices located in TMA#8.						
% of TMA	4							
% of VH/H/M	4							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	31	49	20
Anti-littering and Illegal Dumping Enforcement Activities –: Perform enforcement of high trash generating retail areas (TMA 8R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property. Multi-family Dwelling Litter Reduction Pilot: City worked with ACCWP to develop a litter reduction pilot targeting multi-family (condominium and apartment) complexes known to be sites with significant litter issues. City chose Castilleja del Arroyo Condos (located at 1001 & 1009 Murrieta Boulevard) as the "Outreach Site", and La Castilleja Condominiums (located at 975 Murrieta Boulevard) as the "Norming Site" for this Pilot. This successful Pilot will be replicated at neighboring multi-family complexes located throughout the TMA pending property manager/owner support. See attached Project Report from Gigantic Ideas to ACCWP Project Manager, Jim Scanlin, regarding "Synthesis of MFD Litter Pilot Results & Recommendations" for more detailed information under C.10 Attachments.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of First Street near the intersection of First Street and Holmes Street on June 30, 2014 using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of First Street near the intersection of First Street and Holmes Street was "Low" during the On-land Visual Assessment performed on June 30, 2014. The last weekly street sweeping event of this "High" trash generating retail and commercial area was performed on June 25, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	21
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	3

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
9	254	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	5	94	1
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	5	94	1
Total Area (Acres)	0	No publicly-owned full capture devices located in TMA#9.						
% of TMA	0							
% of VH/H/M	0							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	5	70	25
Anti-littering and Illegal Dumping Enforcement Activities – • Perform enforcement of high trash generating retail areas (TMA 9R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of N. Murrieta Boulevard near the intersection of N. Murrieta Boulevard and Portola Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of N. Murrieta Boulevard near the intersection of N. Murrieta Boulevard and Portola Avenue was "Low" during the On-land Visual Assessment performed on June 30, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	20
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	1

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
10	121	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	11	89	0
Trash Full Capture Devices		**Summary Descriptions of Full Trash Capture Devices (Quantity and Type)**		After taking into account Full Capture Devices	0	11	89	0
Total Area (Acres)	0	No publicly-owned full capture devices located in TMA#10.						
% of TMA	0							
% of VH/H/M	0							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	11	89	0
Anti-littering and Illegal Dumping Enforcement Activities – • Perform enforcement of high trash generating retail areas (TMA 10R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Junction Avenue near the intersection of Junction Avenue and Chestnut Street using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of Junction Avenue near the intersection of Junction Avenue and Chestnut Street was "Medium" during the On-land Visual Assessment performed on June 30, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	1
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	0

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
11	184	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	7	93	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	7	93	0
Total Area (Acres)	0	No publicly-owned full capture devices located in TMA#11.						
% of TMA	0							
% of VH/H/M	0							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	7	70	23
Anti-littering and Illegal Dumping Enforcement Activities – • Perform enforcement of high trash generating retail areas (TMA 11R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Rickenbacker Circle near the intersection of Rickenbacker Circle and Kitty Hawk Road using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of Rickenbacker Circle near the intersection of Rickenbacker Circle and Kitty Hawk Road was "Low" during the On-land Visual Assessment performed on June 30, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	20
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	1

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
12	113	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	28	72	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	27	72	1
Total Area (Acres)	1	No publicly-owned full capture devices located in TMA#12.						
% of TMA	1							
% of VH/H/M	1							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	20	72	9
Anti-littering and Illegal Dumping Enforcement Activities – • Perform enforcement of high trash generating retail areas (TMA 12R) without existing full trash capture devices. Enforcement includes inspection of areas' waste storage area, parking lot and any partial trash capture device (i.e., CDs unit, vortex unit, large interceptor) located on private property.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30 2014, Source Control Section staff performed an On-land Visual Assessment of Scenic Avenue near the intersection of Scenic Avenue and N. Vasco Road using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of Scenic Avenue near the intersection of Scenic Avenue and N. Vasco Road Way was "Low" during the On-land Visual Assessment performed on June 30, 2014. The last monthly street sweeping event of this "High" trash generating retail area was performed on June 2, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	18
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	1

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
13	50	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	0	100	0
Trash Full Capture Devices		**Summary Descriptions of Full Trash Capture Devices (Quantity and Type)**		After taking into account Full Capture Devices	0	0	100	0
Total Area (Acres)	0	No publicly-owned full capture devices located in TMA#13.						
% of TMA	0							
% of VH/H/M	0							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	0	100	0
No control measures implemented in TMA since MRP adoption.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Research Drive near the intersection of Research Drive and East Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of Research Drive near the intersection of Research Drive and East Avenue was "High" during the On-land Visual Assessment performed on June 30, 2014. There was evidence of construction workers and HBW Building workers depositing beverage bottles/cans, food packaging wrappers/containers, and a plastic spoon near 2011 Research Drive. Source Control Section staff provided outreach to Southwhite Road Church of Christ construction site manager to provide to his workers and HBW Building property manager on July 7, 2014 to provide to his tenants. The next monthly street sweeping event of this "Medium" trash generating industrial area will be performed on July 2, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	0
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	0

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
14	80	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	0	100	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	0	90	10
Total Area (Acres)	8	No publicly-owned full capture devices located in TMA#14.						
% of TMA	10							
% of VH/H/M	10							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	0	67	33
No control measures implemented in TMA since MRP adoption.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Concannon Boulevard near the intersection of Concannon Boulevard and Holmes Street using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of Concannon Boulevard near the intersection of Concannon Boulevard and Holmes Street was "Low" during the On-land Visual Assessment performed on June 30, 2014.								

Estimated % Trash Reduction In TMA due to New or Enhanced Post-MRP actions	33
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	0

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
15	287	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	0	100	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	0	98	2
Total Area (Acres)	6	No publicly-owned full capture devices located in TMA#15.						
% of TMA	2							
% of VH/H/M	2							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	0	73	27
No control measures implemented in TMA since MRP adoption.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Maple Street located in front of Livermore High School parking lot using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of Maple Street near the Livermore High School parking lot was "Low" during the On-land Visual Assessment performed on June 30, 2014.								

Estimated % Trash Reduction In TMA due to New or Enhanced Post-MRP actions	27
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	1

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
16	344	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	0	100	0
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	0	100	0
Total Area (Acres)	1	No publicly-owned full capture devices located in TMA#16.						
% of TMA	0							
% of VH/H/M	0							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	0	86	14
No control measures implemented in TMA since MRP adoption.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Wetmore Road located in front of Sycamore Grove Park parking lot using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of Wetmore Road near the Sycamore Grove Park parking lot was "Low" during the On-land Visual Assessment performed on June 30, 2014.								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	14
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	1

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types		% TMA in Each Trash Generation Category			
					VH	H	M	L
17	11,096	People (Pedestrians and Vehicles)	All Trash Types	Baseline Generation (Pre-MRP)	0	0	0	100
Trash Full Capture Devices		Summary Descriptions of Full Trash Capture Devices (Quantity and Type)		After taking into account Full Capture Devices	0	0	0	100
Total Area (Acres)	189	49 publicly-owned, Connector Pipe Screen Devices installed by West Coast Storm, Inc.						
% of TMA								
% of VH/H/M	2							
Summary Descriptions of Control Measures Implemented Since MRP Adoption, Other than Full Capture Devices				After taking into account all New or Enhanced (post-MRP) Control Measures	0	0	0	100
No control measures implemented in TMA besides Full Capture Devices since MRP adoption.								
Assessment Methods for Control Measures Other than Full Capture Devices								
On June 30, 2014, Source Control Section staff performed an On-land Visual Assessment of Concannon Boulevard near the intersection of Concannon Boulevard and Isabel Avenue using EOA's On-land Visual Assessment Protocol and Data Collection Form.								
Summary of Assessment Results To-date								
The trash condition category of Concannon Boulevard near the intersection of Concannon Boulevard and Isabel Avenue was "Low".								

Estimated % Trash Reduction in TMA due to New or Enhanced Post-MRP actions	<1
Estimated % Trash Reduction Jurisdiction-wide due to New or Enhanced Post-MRP actions	0

C.10.d ▶ PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)

Dominant Types	
All Trash Types* include the following: Paper and Plastic Bags, Plastic and Glass Beverage Bottles, Beverage Cans, Caps/Lids, Straws/Stirrers Cups/Plates/Forks/Knives/Spoons/Napkins, Food Wrappers/Containers, Paper, Plastic Film/Sheeting/Tarps, Cigarette Filters and Lighters, Tobacco Packaging/Wrappers, Clothing/Shoes, Batteries, Building Materials, Styrofoam Packaging Materials, Oil/Lube Bottles, Tires, Car Parts, Toys, Bicycles, Home Appliances, Furniture, Shopping Carts	

C.10.d ▶ PART C – Estimated Overall Trash Load Reduction

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.d – Parts A and B and creek/shoreline cleanups not reported in C.10.b.iii. Provide a statement regarding the confidence in the estimate and challenges and/or successes in measuring progress towards the 40% trash reduction target described in provision C.10.

Discussion of Trash Reduction Estimate:

- Estimated % Trash Reduction due to Jurisdictional-wide Actions -
  See Section C.10 of the ACCWP FY 13-14 Annual Report for the discussion of the confidence and uncertainty associated with the estimate.
- Estimated % Trash Reduction due to Creek/Shoreline Clean-ups -
  The City of Livermore is confident with the estimated % trash reduction of 7% due to Creek/Shoreline Clean-ups since 2,846 gallons of trash was collected from nine Livermore Creek Spots.

Estimated % Trash Reduction due to Jurisdictional-wide Actions	14%
Estimated % Trash Reduction due to Trash Full Capture Devices (All TMAs)	10%
Estimated % Trash Reduction due to Other Control Measures (All TMAs)	11%
SubTotal for Above Actions	**35%**
Estimated % Trash Reduction due to Creek/Shoreline Cleanups (All TMAs)	7%
Total Estimated % Trash Reduction in FY 13-14	**42%**

C.10 Additional Comments:

City of Livermore staff continues to have serious concerns over the trash management approach being required by Regional Board staff in the C.10 provision of the MRP. Staff believes that the C.10 provisions, as currently written, fail to incorporate some of the key concepts and lessons learned by the Bay Area Stormwater programs over the last 20 years. Moreover, not only do the requirements fail to incorporate key lessons learned by years of experience implementing stormwater regulations; they actually directly contradict those hard-fought lessons. In the early 1990's, the Alameda County Clean Water Program conducted a great deal of pollutant monitoring in local creeks and streams to characterize stormwater pollutants. One of the outcomes of this early creek monitoring work was a data evaluation to determine the efficacy of routine stream monitoring. One of the outcomes of this monitoring and data evaluation was an analysis by Woodward Clyde Consultants that showed that pollutant monitoring in local receiving waters was ineffective in determining the "progress" or "success" of pollutant control or removal efforts due to the variability in pollutant levels. The data analysis found that even if the stormwater programs were capable of reducing the level of a particular pollutant by 50%, we might only be able to identify that reduction 20% of the time based on pollutant sampling due to the variability of stormwater sampling, flow and antecedent dry period. The same concepts will hold true with a physical pollutant such as trash. Therefore, the goals of reducing trash by 40, 70, or 100 percent by a given date certain is not reasonable given the nature of stormwater pollutant sampling, or in this case, a period visual evaluation of trash management areas. It is simply not possible to use this type of period measurement to quantify trash management efforts, since one or several pieces of trash deposited on the day an assessment is done might skew weeks or months with "no" visible trash. Basically, the approach is overly-simplistic and unlikely to yield useful results.

Also, the C.10 provisions in the MRP ignores the concept of "starting at the source", which has been a key to addressing numerous stormwater pollution sources. The focus on "full-trash capture" in the MRP requirements ignores the "start at the source concept", or the idea of preventing litter in the first place, and instead focuses on "end of pipe capture" which is likely to be much less effective and contradicts years of stormwater regulatory experience. A better approach would be to focus on source reduction, education or outreach rather than on end-of-pipe treatment. The lack of emphasis on source control in the C.10 requirements is likely to doom the programs to failure, or worse, might actually *increase* the amount of litter once the public realize that cities have installed a "trash-can" in every catch basin or at the end of every storm drain pipe. There is little incentive for residents to NOT litter if the City is installing devices to remove and dispose of it later.

The City of Livermore originally submitted its "Short Term Trash Plan" as required on February 1, 2012. This plan was based on the methodology created by BASMAA and the Clean Water Programs at that time. Under this methodology, a Preliminary Trash Baseline Load of 26,359 gallons for Livermore was identified. Livermore's planned trash actions under this version resulted in 54.8% calculated trash reduction. Subsequently,

this methodology and its assumptions were changed after discussions amongst BASMAA, the Cleanwater Programs, and NGOs. At that time, the RWQCB staff advised the Cleanwater Programs to focus their efforts on developing their "Long Term Trash Reduction Plan". The substantial changes adopted with this revised methodology resulted in a new higher Preliminary Trash Baseline Load and decrease in the percentage of trash reduction given for implementing specific trash reducing measures. For example, under the 2012 established methodology, a Single-Use Carryout Bag Policy resulted in 10% load reduction, a Polystyrene Foam Food Service Ware Policy resulted in and 8% load reduction, and a Public Education and Outreach Program resulted in and 8% reduction. However, after these changes were made, Livermore's new Preliminary Trash Baseline Load increased from 26,359 gallons to 40,968 gallons and the reduction for a Single-Use Carryout Bag policy and a Polystyrene Foam Food Service Ware Policy were reduced to 4% respectively.

As can be seen from Table 10.D Part C of this report, Livermore has an "estimated" 25% trash reduction based on the evaluation of its current efforts using the current calculation methodology provided by BASMAA. This falls short of the required "reduction" of "40%" by 2014, however, Livermore is focusing its efforts on developing a "Long Term Trash Reduction Plan" to meet the long-term trash reduction requirements as advised by RWQCB staff. During this reporting period, Livermore contracted with Schaaf & Wheeler" to develop a long term trash plan to meet the MRP section C.10 requirements. The City of Livermore is currently evaluating the two options identified in this report that will enable Livermore to meet the 70% trash reduction requirement. Option #1 identifies key areas to install a variety of full trash capture devices within the City of Livermore's publicly owned storm drain system that will enable Livermore to calculate/demonstrate a 70% trash reduction under the current established methodology. Option #2 identifies a program in which owners of private property in Commercial, Retail and Industrial areas would be required to install full trash capture devices on their private storm sewer systems prior to connection to the City owned storm sewer system. Option #2 also enables Livermore to calculate/demonstrate a 70% reduction under the current established methodology. Please refer to **"Stormwater Trash Reduction Plan (Schaaf and Wheeler, September 2014)** contained under C.10 attachments for complete details. Once the City selects an option to pursue, the City shall revise its "Long Term Trash Plan" accordingly and provide an update to the RWQCB.

Once the City has firmly identified its long term plan and establishes an implementation plan, it is very likely that the City will cease or greatly reduce its efforts for all other trash related measures that do not result in recognizable or "calculated reductions" under the current assessment methodology. Given the structure that is set up under the MRP and the methodology to quantify trash reductions with a "real" numerical value adopted by BASMAA, one should question, "Why would any municipality engage in an activity that does not result in a recognizable or "calculated reduction" for trash reduction? For example, no reduction is identified for Public Education and Outreach unless the municipality can come up with a defensible, "calculated" value. As it is almost impossible to quantify the effectiveness of public education and outreach in terms of "gallons of trash" reduced or a "trash reduction percentage" in real meaningful numbers, a municipality that is taking a conservative

approach in calculating its trash reduction cannot obtain any "credit" for these efforts. Livermore has taken a conservative approach in quantifying its trash reductions reported in this Annual Report. If pressed, the City could certainly identify a number, provide some supportive dialogue on how this number was established, but in reality any such number is just a "number" that is, at best, an educated guess. Regrettably for these reasons, the City will reduce its efforts on public outreach. Programs such as the "Adopt A Creek Spot Program" which actively engages the community in our litter efforts will be greatly scaled back. For years, many Cleanwater Programs operated under the primary guiding principle of "Start at the Source". The most effective long term solution to stormwater pollution was to educate and change behavior. The source of litter is the result of a behavioral issue. Product bans will not stop litter. They may change the nature of the items littered; however, they will not reduce or stop litter. The installation of trash capture devices will retain and catch some of the litter, but littering will still persist. The only way to effect, real, long term, and measurable change is educating the populous and changing behavior. The MRP, however, places a greater emphasis on end of pipe solutions and treating the resulting "symptoms" of the litter issue. While we still believe Public Outreach and Education is important and is actually more important and effective than installing trash capture devices, we most focus out time, money, and efforts on those measures that equate to permit compliance.

The City of Livermore has made a good faith effort with the development of this "Long Term Trash Reduction" plan to meet the MRP requirements; however, if the methodologies and the goals continue to change, the City of Livermore cannot guarantee meeting compliance with regulations/requirements that seem to be a moving target.

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LIVERMORE
CALIFORNIA

Stormwater Trash Reduction Plan

October 2014

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

City of Livermore
Department of Public Works

FINAL

Stormwater Trash Reduction Plan

for

City of Livermore, California

LIVERMORE
CALIFORNIA

October 27, 2014

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

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1. Introduction

This report is to provide a multi-year plan to reduce trash entering channels within the City of Livermore from the municipal separate stormwater system (MS4), with the goal of meeting trash reduction requirements as outlined in the Regional Water Quality Control Board (RWQCB) NPDES Municipal Permit section C.10.

The NPDES permit includes the following deadlines for trash reduction milestones (items in grey have been completed):

- Progress report detailing whether baseline trash load and trash load reduction tracking method are being determined individually or collaboratively due by February 1, 2011. Compliance obtained by BASMAA letter entitled *Progress Report: Trash Baseline Loads and Load Reduction Tracking – MRP Provision C.10.a(ii)*.
- Short-term trash reduction load plan due by February 1, 2012. Compliance obtained by City of Livermore *Baseline Trash Load and Short-Term Trash Load Reduction Plan*.
- Establish baseline trash load and trash load reduction tracking method by February 1, 2012. Compliance obtained by BASMAA reports: *Trash Load Reduction Tracking Method Technical Report* and *Preliminary Baseline Trash Generation Rated for San Francisco Bay Area MS4s Technical Memorandum*.
- Installation of full trash capture devices (meeting NPDES criteria for mesh screen and capacity) treating a minimum of 20 acres runoff area by July 1, 2014. Compliance obtained through inlet filters.
- Long-Term Trash Load Reduction Plan due by February 1, 2014. Compliance obtained by the City of Livermore *Trash Long-Term Reduction Plan and Progress Assessment Strategy*.
- 40% reduction in baseline trash load by July 1, 2014. Short term trash reduction compliance has been obtained as described in the *Baseline Trash Load and Short-Term Trash Load Reduction Plan* by City of Livermore dated 2/1/2012.
- 70% reduction in baseline trash load by Jul 1, 2017.
- 100% reduction in baseline trash load by July 1, 2022 (long term trash reduction).

This Stormwater Trash Reduction Plan (Plan) has been designed to guide compliance with both the 2017 and 2022 trash reduction deadlines. The Plan includes a schedule for implementation, a description of proposed control measures and proposed best management practices (BMPs). This Plan supplements the Trash Long-Term Reduction Plan and Progress Assessment Strategy developed by the City to meet the NPDES deadline of February 2, 2014. This Stormwater Trash Reduction Plan is intended to provide detailed guidance on how the reduction goals will be obtained through the installation of full trash capture devices. The Plan provides the City with a 'road map' to follow between now and 2022 to meet the NPDES trash reduction requirements.

2. Trash Generation and Management Areas

2.1 Trash Generation

Trash generation rates are based on land use, income level and visual assessment. The City of Livermore, with Bay Area Stormwater Management Agencies Association (BASMAA), has developed trash generation rates and categories for all land within the City limits. Trash generation rates and categories (very high, high, medium, low) are explained in detail in the Long-Term Trash Load Reduction Plan, and summarized herein.

2.1.1 BASMAA Baseline Trash Generation Rates

Generation rates published by BASMAA in the February 1, 2012 technical memorandum *Preliminary Baseline Trash Generation Rates for San Francisco Bay Area MS4s* were used to develop a range based on land use and are summarized in Table 1.

Table 1: San Francisco Bay Area Trash Generation Rates by Land Use

Land Use	Rate (gallons/acre/year)
Commercial & Services	6.2
Industrial	8.4
Residential	0.5 - 87.1
Retail	1.8 - 150.0
K-12 Schools	6.2
Urban Parks	5.0

2.1.2 Livermore Trash Generation Rates

The City of Livermore developed a Preliminary Generation Trash Load based on the generation rates in Table 1, land-use and effective loading area. Activities already undergone by the City to reduce trash in the Municipal Separate Storm Sewer System (MS4) were tabulated and used to create the Preliminary Baseline Trash Load.

Table 2: Baseline Trash Load for the City of Livermore

Category	Annual Load (gallons)
Preliminary Generation Trash Load	40,968
Load Removed via Baseline Street Sweeping	10,954
Load Removed via Baseline Storm Drain Inlet Maintenance (5% of generation)	2,048
Load Removed via Baseline Stormwater Pump Station Maintenance	0
Preliminary Trash Baseline Load	**27,966**

2.3 Trash Management

The City is tasked with removing trash which can make its way to the creeks and ultimately to the San Francisco Bay via the City's MS4. BASMAA has developed a number of means by which to track the reduction in trash load, both quantitatively and qualitatively.

2.3.1 Implemented Enhanced Trash Management

The City has created ordinances and enhanced control measures to reduce the volume of trash making it into the waterways annually. Estimated reduction percentages for the ordinance bans on plastic bags and polystyrene foam are based on guidance provided by BASMAA. 168 West Coast Storm connector pipe screen inlet filters were installed by the City in 2012 capturing over 450 acres to meet the 2014 40% trash baseline reduction goal. The calculated trash load reduction is based on generation rates from Table 1 and watershed delineations for each of the existing inlet filter. See Figures 1-3 for existing treatment device watersheds and trash generation levels. Media filters, inlet filters and hydrodynamic separators installed on private properties to meet the MRP Section C.3 for post-construction stormwater quality also meet the requirements of full trash capture. The reduction in trash provided by these devices is tabulated below.

The City has also implemented currently non-quantifiable trash reduction measures. These include public education and outreach, activities to reduce trash from uncovered loads and anti-littering and illegal dumping enforcement activities.

Table 3 is a summary of the quantifiable trash management measures implemented at the time of this Plan.

Table 3: Implemented Enhanced Trash Control Measures

Trash Control Measure	Estimated Reduction %	Trash Load Reduced (gal/year)	Cumulative Estimated Reduction % (Compared to Baseline)
Single-Use Carryout Plastic Bag Ordinance	4	1,119	4
Polystyrene Foam Food Service Ware ban	4	1,119	8
City Owned Full-Capture Treatment Devices (168 inlet filters)*	-	2,573	17.2
Private Full-Capture Treatment Devices**	-	1,065	21.0
Creek/Channel/Shoreline Cleanups***	-	2,846	31.2
Total		**8,721**	**31.2%**

**Value differs from the Baseline Trash Load and Short-Term Trash Load Reduction Plan due to detailed device catchment analysis completed by Schaaf & Wheeler.*
***Devices installed on private property to meet C.3 Water Quality Treatment requirements which also meet full-trash capture.*
****Based on updated cleanup reduction values from the Adopt A Creek Spot Program implementation in 2012.*

In order to reach the 2017 goal of 70% reduction, the City must capture an additional 10,855 gallons of trash per year over the baseline in Table 3. To obtain 100% reduction in baseline, Livermore must capture an additional 19,244 gallons per year over the baseline in Table 3.

2.3.2 Existing Full Trash Capture Devices

Trash management areas (TMA) are defined in the City's *Trash Long-Term Reduction Plan and Progress Assessment Strategy* based on geographical distribution of trash generating areas, types of trash sources, and current or planned control measure locations. Refer to the City's Long-Term Reduction Plan for detailed explanation and delineation.

The City has installed 168 West Coast Storm Connector Pipe Screen Inlet Filters. Below is a summary of the existing City owned full trash capture device locations and capture rate within the trash management areas.

Table 4: Existing City Owned Full Trash Capture Devices

TMA	Trash Load Reduction (gal/year)	Number of Existing Inlet Filters			
		Very High	High	Medium	Low
1	20			1	
1C	528			30	
1I	468	6		18	
1R	97			10	
2C	22			9	1
2I	8			2	
2R	195		8		
3R	472		19		
4	377			13	
17	386	4			47
Total	**2,573**	**10**	**27**	**83**	**48**

The City has required private developments to install water quality treatment measures to meet section C.3 of the MRP. Some of those devices also meet the requirements of section C.10 full trash capture. These devices include media filters, hydrodynamic separators and inlet filters. The private properties cover approximately 136 acres of the City and capture 1,065 gallons of trash per year in addition to the volume captured by the City owned devices. The capture volumes are based on the generation rates developed by the City for each parcel based on land use. Details regarding these private parcels are included in the Appendix.

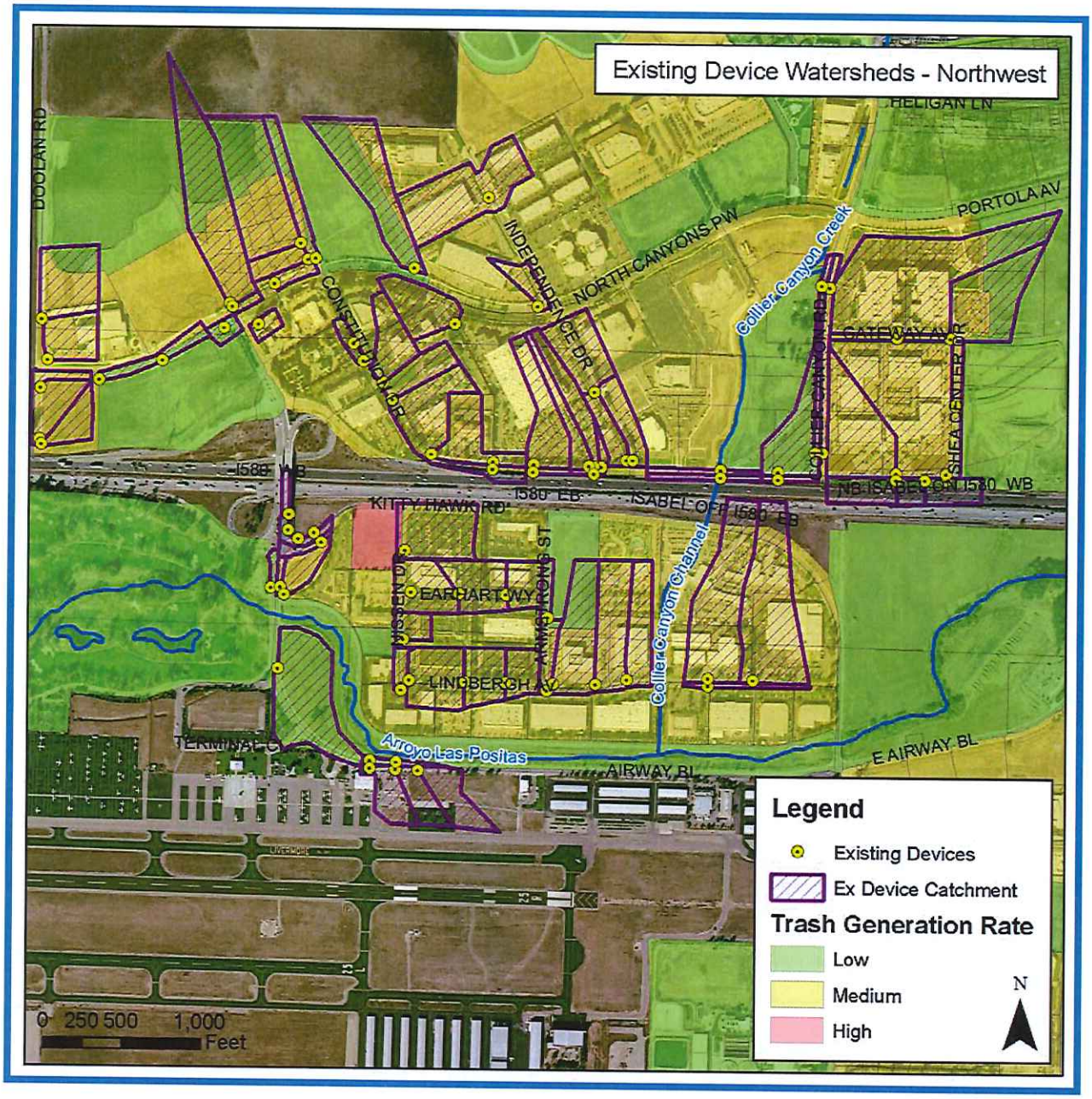

Figure 1: Existing City Owned Trash Capture Device Watersheds – City Northwest

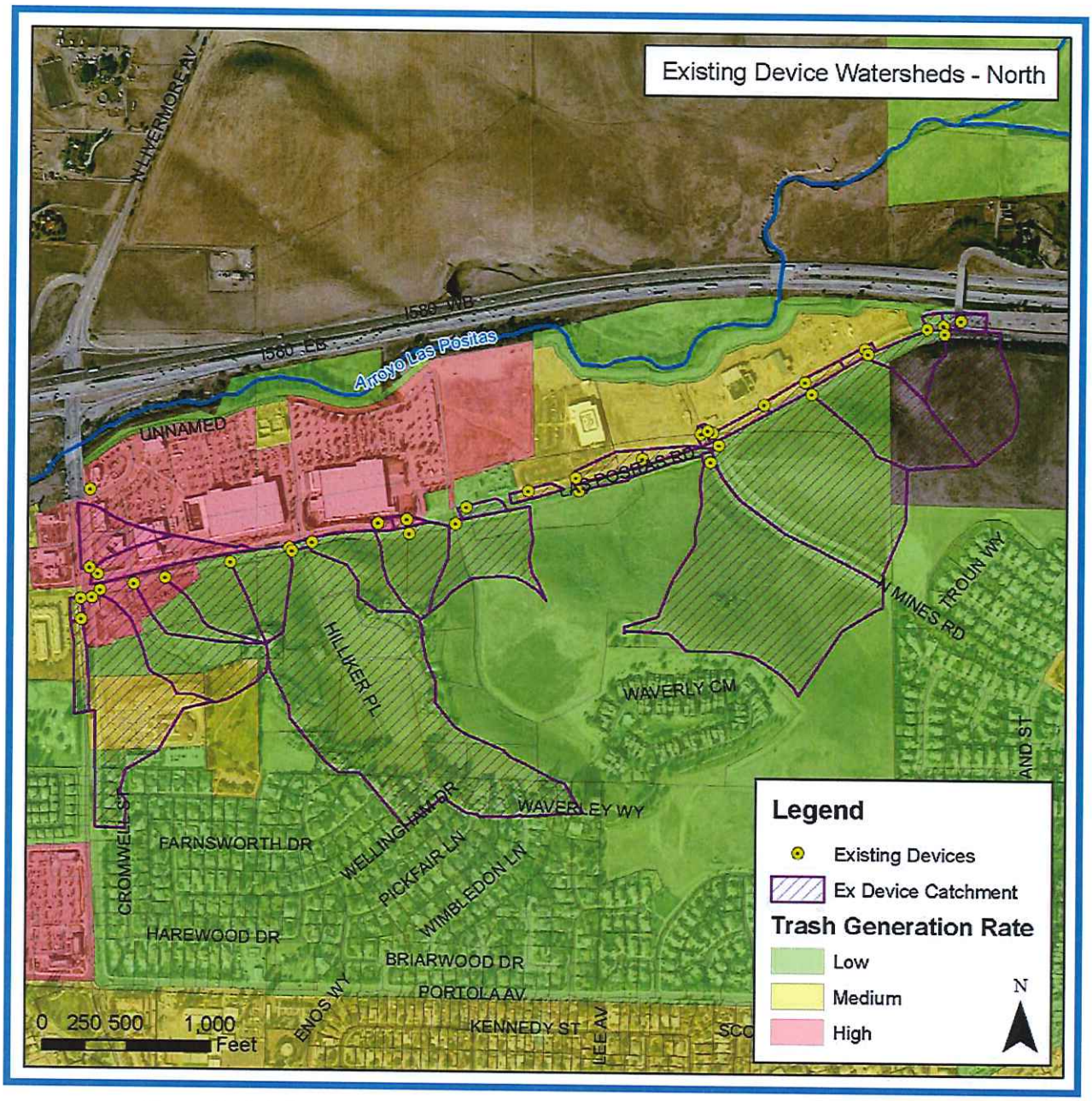

Figure 2: Existing City Owned Trash Capture Device Watersheds – City North

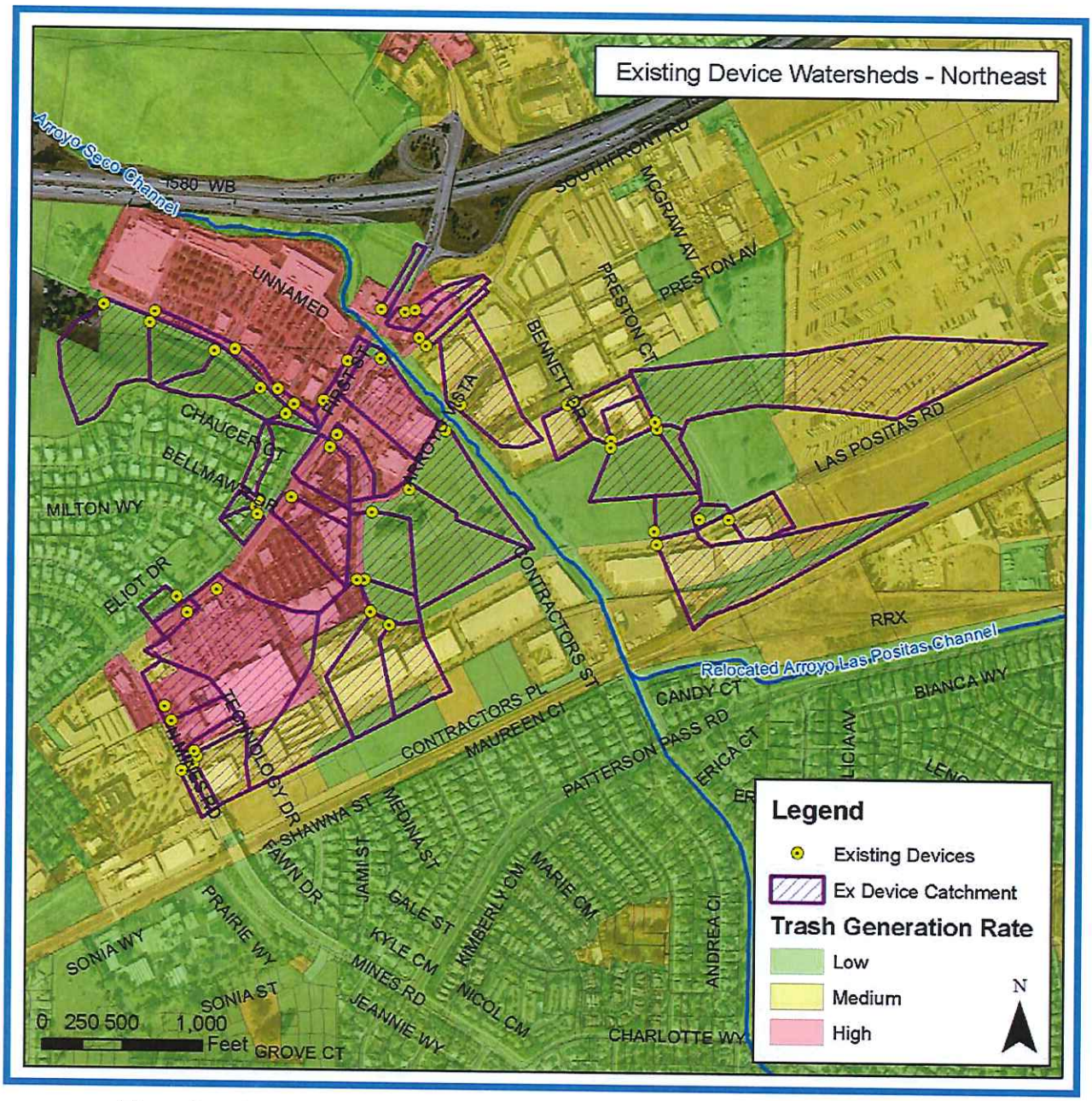

Figure 3: Existing City Owned Trash Capture Device Watersheds – City Northeast

3. Trash Capture Plan – No Additional Ordinances

3.1 Capital Improvement Projects

In order to meet the 2017 and 2022 reduction goals, the City may install additional full trash capture devices. There are a variety of devices available to meet these goals:

1. Catch basin inlet filters
2. End of pipe netting or structures serving an entire drainage network
3. Inline netting or structures on a storm drain trunk line

When selecting a device it is important to consider drainage area, hydraulic losses across the system when full, permitting requirements in open channels, device maintenance and access, property rights and utility clearance. All of these factors should be weighed against the device, installation and maintenance costs to ensure maximum capture volume per dollar spent.

It is important to recognize that much of the City of Livermore drains directly into the creeks, without first entering the MS4. This includes some industrial, commercial and high density residential properties. These areas could be managed through privately owned and maintained full trash capture devices. Continued creek cleanups and educational outreach to the public may also reduce the trash from entering the waterways from these Sites.

3.1.1 Device Locations

The following procedure was used to determine optimal treatment device types and locations:

1. Identify high generation areas based on Livermore's *Baseline Trash Load.*
2. Define the inlets that intercept the high generation areas and delineate catchments. Where there are many inlets which drain to a common outfall consider a large treatment device along the trunk line. Large system scale devices were not considered in drainage basins which have existing City owned inlet filters.
3. Calculate treatment rate of each device. Consider only devices which obtain a capture rate of at least 20 gallons/year.
4. "Ground Truth": Only consider devices which treat a real development (i.e. do not treat open space, vacant parcels, etc.)
5. To the greatest extent practicable, do not consider devices in areas heavily impacted by flooding based on the SDMP. If necessary, consider off-line treatment.
6. Group devices based on location to streamline maintenance.

In order to meet the 70% reduction goal by the year 2017, the City may install two (2) new off-line large scale trash capture devices to treat the downtown area and seventy (70) new inlet filters. These devices will capture the trash flowing through the existing pipe network from the dense commercial and retail areas downtown before it is conveyed to Arroyo Mocho and will result in 10,900 gallons captured per year.

Table 5: 70% Goal Planned Full Trash Capture Devices

TMA	Trash Load Reduction (gal/year)	Area Treated (acres)	Number of Planned Inlet Filters	Number of Planned Large Trash Capture Devices
1	47	4	1	
4	308	42	5	
6	300	27	2	
8	3422	273	5	1
9	1368	177	22	
10	781	139	13	
11	238	46	12	
15	35	6	2	
16	200	66	6	
17	4202	880	2	1
Sum	**10,900**	**1,638**	**70**	**2**

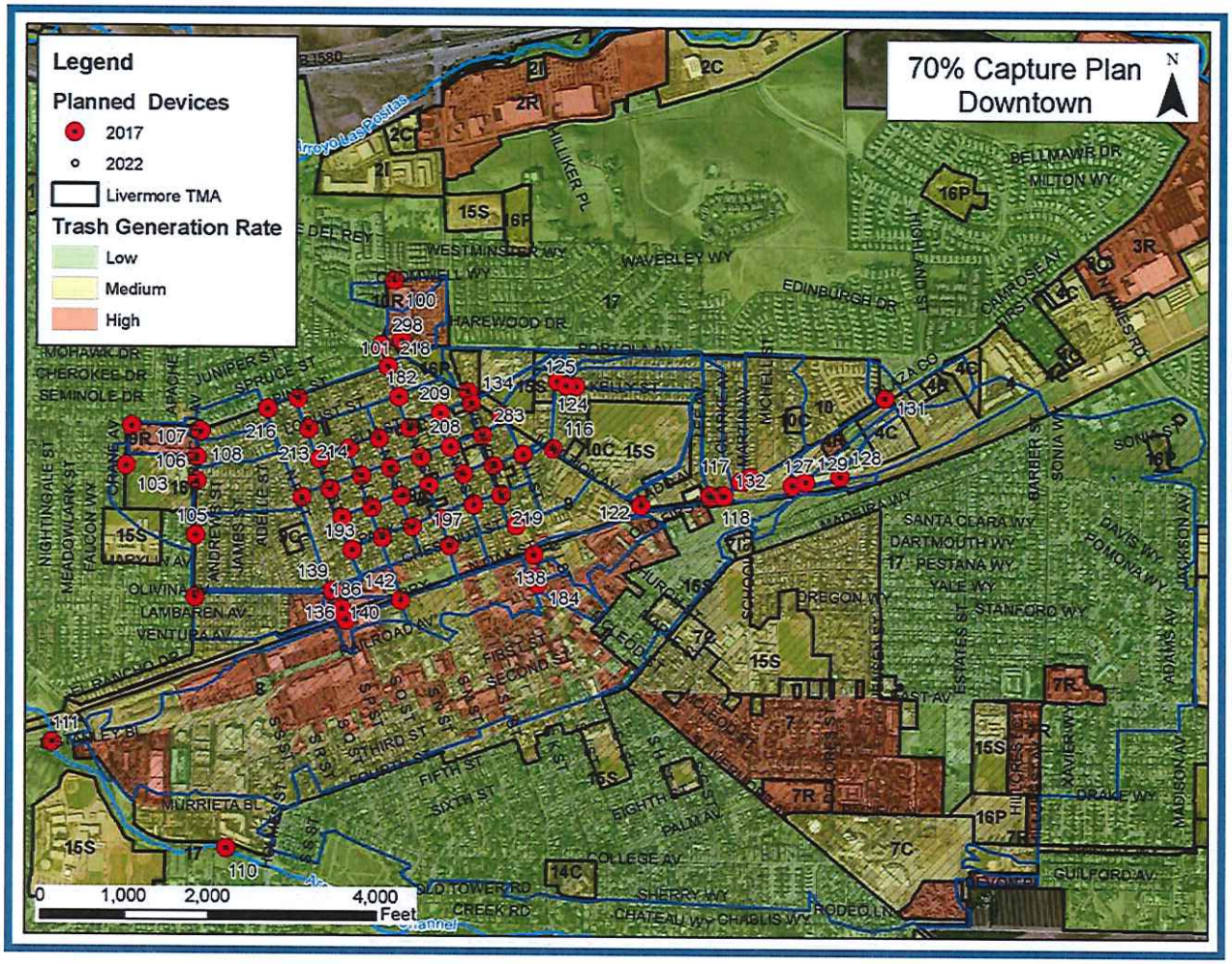

Figure 4: 70% Goal Proposed Full Capture Device Locations - Downtown

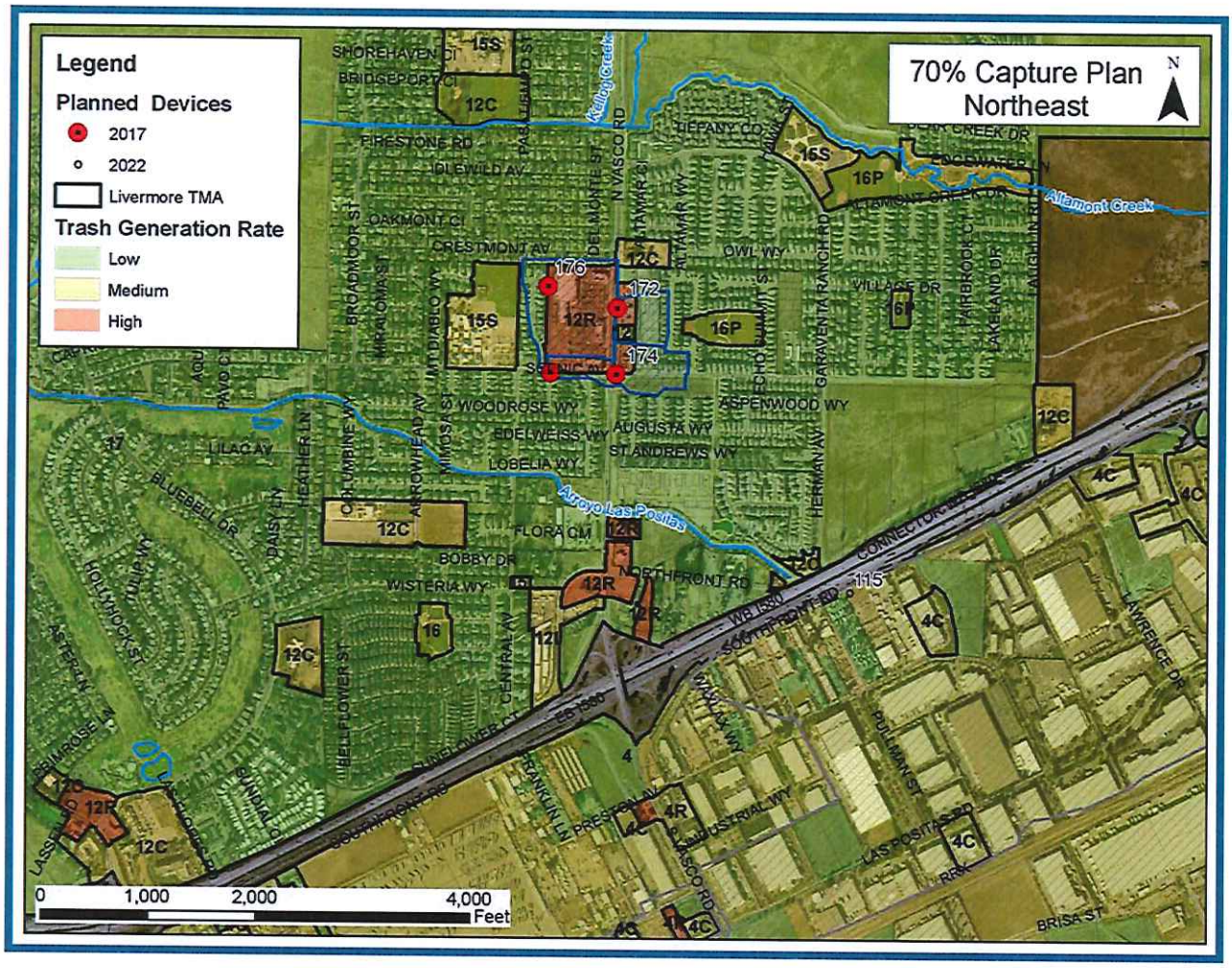

Figure 5: 70% Goal Proposed Full Capture Device Locations - Northeast

To reduce trash in the waterways a minimum additional 8,344 gallons per year over the proposed 70% devices to achieve 100% reduction in the baseline, a combination of new inlet filters and large scale in-line and off-line systems may be installed.

Table 6: 100% Goal Planned Full Trash Capture Devices

TMA	Trash Load Reduction (gal/year)	Area Treated (acres)	Number of Planned Inlet Filters	Number of Planned Large Trash Capture Devices
4	3389	468		1
6	80	3	1	
9	4212	604	7	2
11	496	57		1
12	34	4	1	
16	166	9	4	
Sum	**8,377**	**1,144**	**13**	**4**

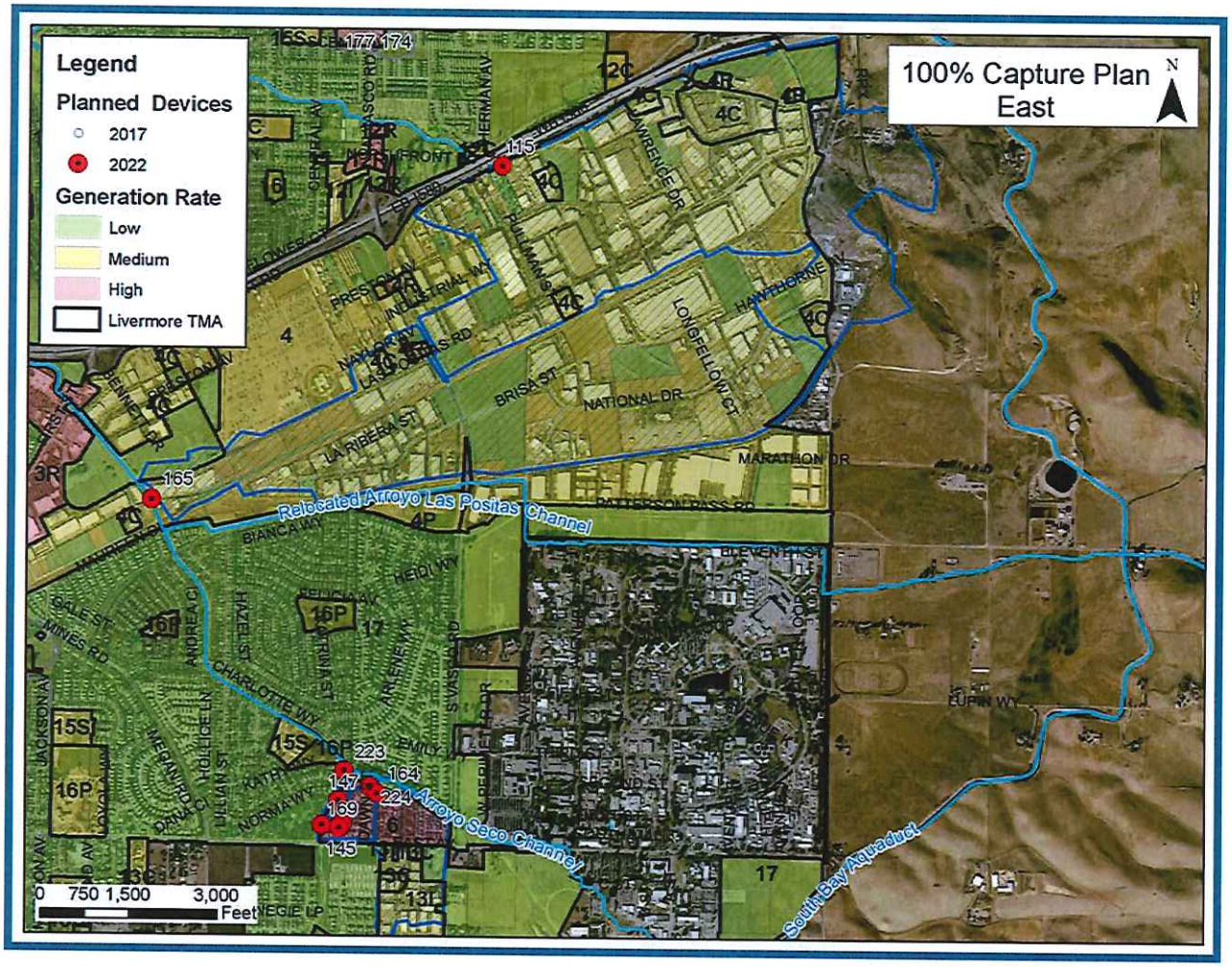

Figure 6: 100% Goal Proposed Full Capture Device Locations – East

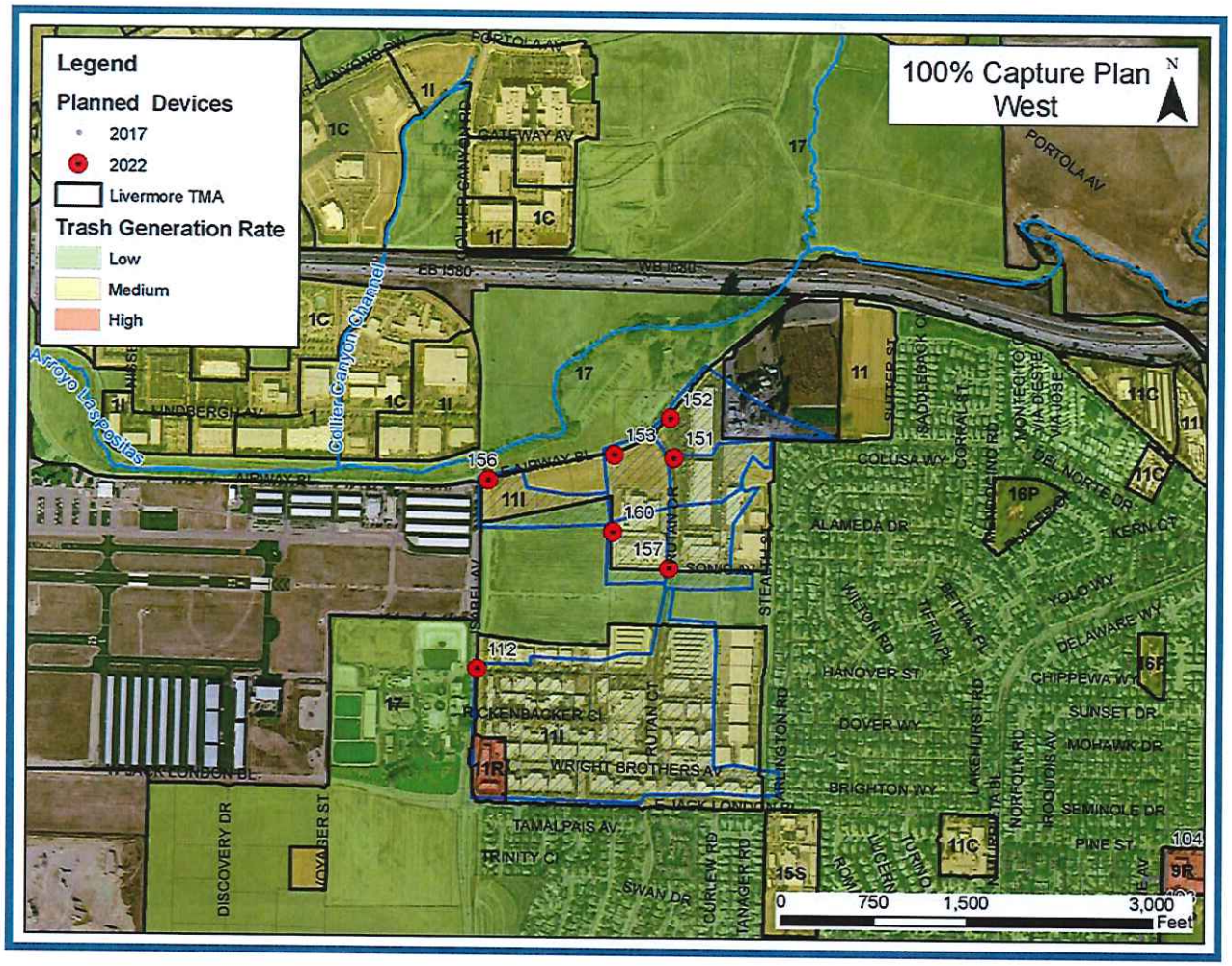

Figure 7: 100% Goal Proposed Full Capture Device Locations – West

3.1.2 System Hydraulics

Due to flooding as indicated in the City's Storm Drain Master Plan, it is imperative that the installation of the new in-line and outfall trash capture devices consider the potential loss in head across the structure when full or partially full with trash. It will be necessary to install the large scale devices off-line from the main trunk with a diversion structure to re-direct the treatment flow rate. This also has the advantage of optimizing the treatment devices since they will not have to have the overflow capacity equal to the capacity of the existing storm drain line.

Catch basin inlet filters capture trash before it enters the City system thereby not significantly impacting the hydraulics of the system as a whole. However, localized ponding can occur at individual inlets during rain events if the inserts are not routinely maintained. All capture devices must be cleaned and maintained at least two times a year based on manufacturer's recommendations and frequency of storm events.

3.1.3 Device Options

The Regional Water Quality Control Board has produced a list of approved full trash capture devices (updated May 2014) which may be used to comply with the NPDES permit. Full trash capture devices must trap all particles retained by a 5 mm mesh screen and have a design treatment capacity of not less

than the peak flow rate resulting from a one-year, one-hour storm event per the MRP Section C.10.a.iii. The Regional Water Quality Control Board has been utilizing a storm intensity of 0.5 inches per hour for smaller drainage basins and 0.2 inches per hour for larger basins where there are tailwater and flooding constraints to determine the treatment rate. A storm intensity of 0.5 inches per hour will be utilized in this study. Rational method runoff coefficients were taken from the City of Livermore Facilities Planning Guidelines dated August 1995 Table 3-3 based on land use.

Table 7: Runoff Coefficients for Device Sizing

Land Use	Runoff Coefficient (C)
Commercial/Retail	0.95
Light Industrial	0.80
Residential - Rural	0.40
Residential – Low Density	0.50
Residential – Medium Density	0.60
Residential – High Density	0.70
Residential/Commercial Mixed Use	0.75
K-12 Schools	0.60
Urban Parks	0.35
Agriculture/Rangeland/Urban Open	0.30
State Facilities/Utilities/Transportation	0.90

3.2 Cost Estimates

The following assumptions were made in determining construction costs for each proposed device:

- For large scale full capture devices, the device cost would be $2000 for each cubic feet per second treated. Based on an average of device-only costs for large devices (treatment rates greater than 40 cfs) provided by Fresh Creek Technologies and Contech;
- Catch basin inlet filters were assumed to be 24" x 36" and cost $500 each;
- Installation costs for full-scale devices are assumed to be 2 times the cost of the device plus any diversion structures;
- Installation costs for inlet filters are assumed to be 1 times the cost of the device;
- The devices are located in areas which do not require major utility relocation, property or easement acquisition or environmental permitting;
- The 50% contingency includes 20% design costs and administration and 30% construction contingencies;
- Large scale devices were assumed to have a lifetime of 50-years while inlet filters were assumed to be replaced every 25 years;
- Estimates include an inflation rate of 2.54% and a discount rate of 6.25%;
- Total Base Cost is presented in the construction year dollars and includes installation, diversion structure and the device. It does not include maintenance or device replacement.

For cleaning, replacement and maintenance, the following assumptions were made:

- Large scale devices are cleaned twice a year, requiring 1 hour of a team of two maintenance workers at $105/hour and a vacuum truck at $230/hour;
- Inlet filters are cleaned two times a year, requiring 15 minutes of a team of two maintenance workers and vacuum truck;

For more detailed costs estimates, including lifetime costs at present value, refer to Appendix B.

3.3 Schedule for Implementation

In order to meet the 2017 goal, 2 large scale and 70 inlet filter devices should be installed in the dry season of 2016, allowing for design and product ordering in 2015. Devices must be constructed before July 1, 2017.

To meet the 2022 goal, 13 trash inlet filters and 4 large scale devices should be installed. For estimating purposes, the devices were phased over the course of four years from 2018 to 2020. Device installation can vary based on available funds, provided that all are in place by July 1, 2022.

Table 8: 2017 70% Reduction Goal Cost Estimate

ID	Device Type	Acres	Load Reduction (gal/yr)	Treatment Q (cfs)	Device Cost (2014)	Diversion Structure Cost (2014)	Installation Cost (2014)	Yearly Maintenance Cost (Const Year)	Construction Year	Total Base Cost (Constr. Year)
100	Inlet Filter	6.5	95	2.8	$500		$500	$220	2016	$1,050
101	Inlet Filter	8.4	171	3.9	$500		$500	$220	2016	$1,050
103	Inlet Filter	21.0	98	4.5	$500		$500	$220	2016	$1,050
104	Inlet Filter	6.3	144	3.0	$500		$500	$220	2016	$1,050
105	Inlet Filter	31.1	161	8.5	$500		$500	$220	2016	$1,050
106	Inlet Filter	16.4	85	4.5	$500		$500	$220	2016	$1,050
107	Inlet Filter	7.2	39	2.0	$500		$500	$220	2016	$1,050
108	Inlet Filter	8.4	23	1.2	$500		$500	$220	2016	$1,050
110	Off-Line	864.3	4109	243	$486,000	$20,000	$1,012,000	$880	2016	$1,595,100
111	Off-Line	243.1	3062	98	$196,000	$13,000	$418,000	$880	2016	$658,900
116	Inlet Filter	38.6	43	2.2	$500		$500	$220	2016	$1,050
117	Inlet Filter	9.1	51	2.3	$500		$500	$220	2016	$1,050
118	Inlet Filter	9.2	53	2.7	$500		$500	$220	2016	$1,050
119	Inlet Filter	21.5	120	6.0	$500		$500	$220	2016	$1,050
122	Inlet Filter	10.4	68	3.3	$500		$500	$220	2016	$1,050
123	Inlet Filter	8.8	49	2.2	$500		$500	$220	2016	$1,050
124	Inlet Filter	3.8	17	0.7	$500		$500	$220	2016	$1,050
125	Inlet Filter	5.3	29	1.3	$500		$500	$220	2016	$1,050
127	Inlet Filter	6.9	57	2.8	$500		$500	$220	2016	$1,050
128	Inlet Filter	22.0	158	8.8	$500		$500	$220	2016	$1,050
129	Inlet Filter	4.4	34	1.9	$500		$500	$220	2016	$1,050
131	Inlet Filter	11.1	70	4.3	$500		$500	$220	2016	$1,050
132	Inlet Filter	5.0	42	2.0	$500		$500	$220	2016	$1,050
133	Inlet Filter	10.7	48	2.9	$500		$500	$220	2016	$1,050
134	Inlet Filter	5.3	31	1.7	$500		$500	$220	2016	$1,050
136	Inlet Filter	3.9	59	2	$500		$500	$220	2016	$1,050
137	Inlet Filter	1.5	29	0.7	$500		$500	$220	2016	$1,050
138	Inlet Filter	11.9	207	6.3	$500		$500	$220	2016	$1,050
139	Inlet Filter	4.5	98	2.0	$500		$500	$220	2016	$1,050
140	Inlet Filter	1.0	21	0.5	$500		$500	$220	2016	$1,050
142	Inlet Filter	17.3	257	7.3	$500		$500	$220	2016	$1,050
172	Inlet Filter	5.3	24	2.0	$500		$500	$220	2016	$1,050
174	Inlet Filter	6.4	22	2.2	$500		$500	$220	2016	$1,050
176	Inlet Filter	17.3	175	7.2	$500		$500	$220	2016	$1,050
177	Inlet Filter	3.1	31	1.3	$500		$500	$220	2016	$1,050
181	Inlet Filter	4.7	27	1.5	$500		$500	$220	2016	$1,050
182	Inlet Filter	6.7	34	1.9	$500		$500	$220	2016	$1,050
184	Inlet Filter	5.3	105	2.4	$500		$500	$220	2016	$1,050
186	Inlet Filter	2.4	35	1.0	$500		$500	$220	2016	$1,050
191	Inlet Filter	3.9	47	1.4	$500		$500	$220	2016	$1,050
193	Inlet Filter	3.1	17	1.0	$500		$500	$220	2016	$1,050
194	Inlet Filter	3.3	17	1.0	$500		$500	$220	2016	$1,050
195	Inlet Filter	3.0	15	0.9	$500		$500	$220	2016	$1,050
196	Inlet Filter	3.5	18	1.1	$500		$500	$220	2016	$1,050
197	Inlet Filter	3.1	16	0.9	$500		$500	$220	2016	$1,050
198	Inlet Filter	3.1	16	0.8	$500		$500	$220	2016	$1,050
199	Inlet Filter	3.3	17	1.0	$500		$500	$220	2016	$1,050
200	Inlet Filter	3.2	17	1.0	$500		$500	$220	2016	$1,050
201	Inlet Filter	3.4	17	1.0	$500		$500	$220	2016	$1,050
202	Inlet Filter	3.5	18	1.1	$500		$500	$220	2016	$1,050
203	Inlet Filter	10.1	51	2.8	$500		$500	$220	2016	$1,050
204	Inlet Filter	3.7	19	1.0	$500		$500	$220	2016	$1,050

ID	Device Type	Acres	Load Reduction (gal/yr)	Treatment Q (cfs)	Device Cost (2014)	Diversion Structure Cost (2014)	Installation Cost (2014)	Yearly Maintenance Cost (Const Year)	Construction Year	Total Base Cost (Constr. Year)
205	Inlet Filter	3.3	17	0.9	$500		$500	$220	2016	$1,050
206	Inlet Filter	3.2	17	1.1	$500		$500	$220	2016	$1,050
207	Inlet Filter	3.1	17	1.0	$500		$500	$220	2016	$1,050
208	Inlet Filter	3.1	18	1.3	$500		$500	$220	2016	$1,050
209	Inlet Filter	3.6	19	1.1	$500		$500	$220	2016	$1,050
210	Inlet Filter	3.3	18	1.1	$500		$500	$220	2016	$1,050
211	Inlet Filter	3.4	18	0.9	$500		$500	$220	2016	$1,050
212	Inlet Filter	3.2	16	0.8	$500		$500	$220	2016	$1,050
213	Inlet Filter	3.3	17	0.8	$500		$500	$220	2016	$1,050
214	Inlet Filter	6.7	33	1.7	$500		$500	$220	2016	$1,050
215	Inlet Filter	10.5	53	2.7	$500		$500	$220	2016	$1,050
216	Inlet Filter	9.5	49	2.7	$500		$500	$220	2016	$1,050
218	Inlet Filter	4.0	20	1.1	$500		$500	$220	2016	$1,050
219	Inlet Filter	3.8	19	1.3	$500		$500	$220	2016	$1,050
220	Inlet Filter	3.3	18	1.3	$500		$500	$220	2016	$1,050
283	Inlet Filter	3.8	20	1.3	$500		$500	$220	2016	$1,050
284	Inlet Filter	9.0	27	1.4	$500		$500	$220	2016	$1,050
285	Inlet Filter	9.6	43	2.7	$500		$500	$220	2016	$1,050
298	Inlet Filter	4.3	23	0.9	$500		$500	$220	2016	$1,050
489	Inlet Filter	18.1	172	5.9	$500		$500	$220	2016	$1,050
Subtotal										**$2,328,000**
50% Contingency										**$1,164,000**
Total										**$3,491,000**

Table 9: 2022 100% Reduction Goal Cost Estimate

ID	Device Type	Acres	Load Reduction (gal/yr)	Treat-ment Q (cfs)	Device Cost (2014)	Diversion Structure Cost (2014)	Install-ation Cost (2014)	Yearly Maintenance Cost (Const Year)	Construction Year	Total Base Cost (Constr. Year)
112	In-Line	56.7	496	23	$45,162		$90,323	$925	2018	$149,300
115	Off-Line	468	3389	180	$359,700	$20,000	$719,400	$925	2018	$1,210,800
145	Inlet	2.7	80	1.50	$500		$500	$237	2019	$1,130
147	Inlet	4.5	34	0.59	$500		$500	$237	2019	$1,130
151	Inlet	6.4	28	1.33	$500		$500	$237	2019	$1,130
152	Inlet	11.1	52	2.54	$500		$500	$237	2019	$1,130
153	Inlet	6.8	53	2.59	$500		$500	$237	2019	$1,130
156	Inlet	7.8	37	2.31	$500		$500	$237	2019	$1,130
157	Inlet	9.4	58	3.14	$500		$500	$237	2019	$1,130
160	Inlet	6.1	24	1.18	$500		$500	$237	2019	$1,130
164	In-Line	60.9	530	18	$35,997		$71,995	$998	2021	$127,200
165	Off-Line	484.1	3293	191	$382,021	$20,000	$764,043	$998	2021	$1,373,400
169	Inlet	11.5	136	1.85	$500		$500	$243	2020	$1,150
221	Inlet	2.2	46	0.5	$500		$500	$243	2020	$1,150
222	Inlet	2.9	62	0.7	$500		$500	$243	2020	$1,150
223	Inlet	2.4	37	0.6	$500		$500	$243	2020	$1,150
224	Inlet	1.1	21	0.3	$500		$500	$243	2020	$1,150
Subtotal										**$2,876,000**
50% Contingency										**$1,438,000**
Total										**$4,313,000**

4. Trash Capture Plan – With Ordinance

4.1 Capital Improvement Projects

Based on the trash management areas defined in the Long Term Trash Reduction Plan by the City, the Commercial, Retail and Industrial properties generate a cumulative 23,964 gallons of trash per year. If you exclude the areas which are currently being captured by the existing City owned and private treatment devices, there is a remaining 20,943 gallons of trash generated on these private properties. If the City were to require these property owners to install trash capture devices on their sites, the 70% and 100% trash capture goals of 10,855 and 19,244 gallons per year would be met and exceeded.

Table 10: Commercial, Retail and Industrial Trash Capture

Land Use	Trash Load Generation (gal/year)	Existing Load Reduction (gal/year)	Trash Load Remaining (gal/year)
Commercial	3,867	680	3,187
Retail	7,209	824	6,385
Industrial	12,888	1517	11,371
Total	**23,964**	**3,021**	**20,943**

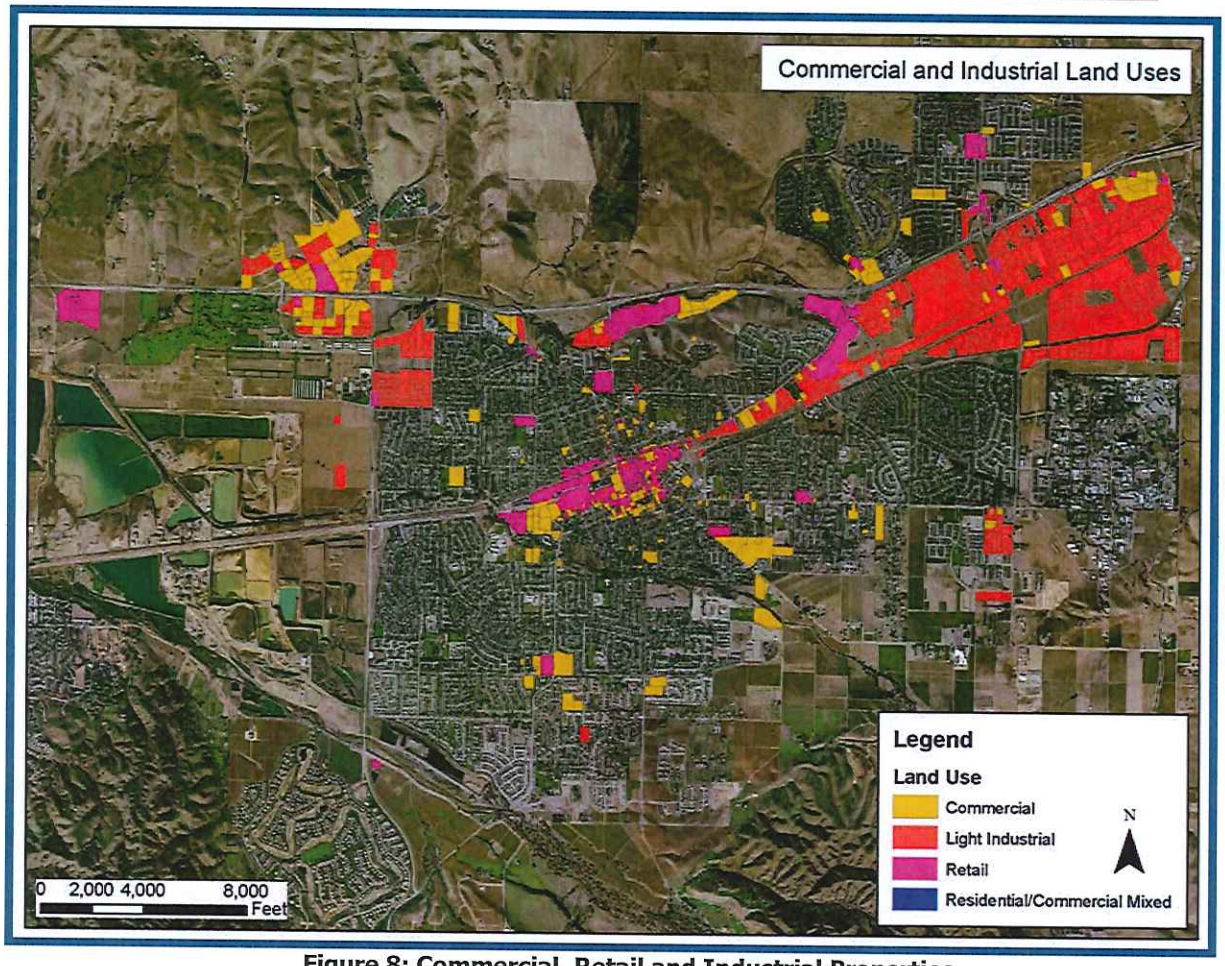

Figure 8: Commercial, Retail and Industrial Properties

4.1.1 Device Locations

If the City were to enact an ordinance to require private commercial, industrial and retail properties to install full-trash capture devices this could result in one of two installation types.

- For properties with an onsite storm drainage system this would be in the form of inlet filters or in-line devices on the private storm system prior to connection to the City drainage pipe. It was assumed for this estimate that properties greater than 0.5 acres have on-site storm drainage systems with inlet filters at a rate of 0.8 inlets per acre (1 inlet per 1.25 acres).
- For properties without an on-site storm drainage system, on-site full trash capture devices may not be feasible. It was assumed for this estimate that owners with properties less than 0.5 acres do not have on-site storm drainage systems and will work with the City to install inlet filters on nearby City owned inlets. These parcels are expected to contribute a portion of the installation of an inlet filter in a City catch basin based on the percentage of trash generation the property contributes to the inlet. Field observation and spot checking was used to verify these assumptions.

4.1.2 System Hydraulics

Since approximately 2016 of 2144 (94%) of the devices would be located on private property the flow from these properties would be treated before connecting to the City storm drainage system. The existing public system will not be adversely impacted by the installation of the full trash capture devices on private property. It will be important for the City to implement detailed operation and maintenance agreements with the property owners to ensure that the devices do not fail and cause overland release of trash and stormwater. If devices do fail, this may increase surface flow until the flow re-enters the City system via a downstream catch basin.

The approximately 128 privately funded devices within the City right-of-way would be owned and maintained by the City as an extension of their existing operations and maintenance program. This program may be additionally funded through continued agreements with property owners contributing trash and drainage to the devices. The City should consider development of these agreements if a City Ordinance solution is selected.

4.2 Cost Estimates

City Costs

The cost for implementing the trash capture would be born by the individual property owners. The City will experience an increase in inspections required to ensure the devices are properly installed and maintained. There are 1,321 parcels which will require trash capture devices (147 parcels are already being captured by the existing inlet filters). The City building inspector would inspect the device after installation. After initial inspection it is recommended that the devices be inspected every two years by a qualified staff member, for an estimated average duration of 1 hour per parcel. At ultimate build-out it is assumed that the City will require 660 hours/year of additional inspection time, which equates to 0.3 additional staff members. At a rate of $105/hour, the yearly cost will be $69,300.

Private Costs

The cost anticipated to the private owners is summarized in the tables herein. The following assumptions were made:

- Catch basin inlet filters were assumed to be 24" x 36" and cost $500 each;
- Installation costs for inlet filters are assumed to be 1 times the cost of the device;

- 50% contingency includes 20% design and administration and 30% construction contingencies;
- Inlet filters were assumed to be replaced once every 25 years. Lifetime project costs are based on 50-years (to allow for comparison to the Trash Capture Reduction Plan costs);
- Estimates include an inflation rate of 3.62% and a discount rate of 4.0% based on ENR construction cost index for capital project cost inflation 10-year average figure;
- Total Base Cost is presented in the construction year dollars and includes installation and the device. It does not include maintenance or device replacement;
- Costs do not include maintenance agreements or encroachments required for maintenance and installation in the City right-of-way;
- Inlet filters are cleaned two times a year, requiring 15 minutes cleaning per device for a team of two maintenance workers and vacuum truck. Total rate of $440 per hour.

Detailed cost estimating can be found in Appendix B.

Table 11: Private Cost Summary Table

Total Lifetime Cost (Present Value)	$	38,534,000
Total Initial Cost (Present Value)	$	3,216,000
Average Initial Cost per Parcel	$	2,600
Average Initial Cost per Acre	$	1,200
Average Lifetime Cost per Parcel	$	31,500
Average Lifetime Cost per Acre	$	14,700

4.3 Schedule for Implementation

The City would need to enforce a volume reduction of at least 10,855 gallons per year by 2017 and 19,244 gallons per year by 2022. It may be practicable to allow for exemptions for certain properties whose activities can be proven to produce little or no trash. Presuming that property owners are allowed 2 years to implement the design, installation and maintenance agreements; the City must have the Ordinance in place by July 1, 2015.

5. Conclusion

The significantly larger lifetime costs associated with enacting a private retail-commercial-industrial trash capture ordinance can be explained by maintenance costs and lack of detailed engineering. The ordinance option assumes that only inlet filters will be installed. Although they have relatively low capital costs, inlet filters have very high maintenance costs when compared to the larger scale inline or outlet devices. Additionally, the ordinance requires all inlets within private high-generation land uses to have filters. This means that some devices which accept runoff from very small drainage areas will be installed at the same cost as inlets which receive runoff from large areas with a significant volume of trash. The public infrastructure option uses trash generation calculations and drainage basin delineation to optimize inlet filter and large scale trash capture device locations.

It is recommended that infrastructure as described in Chapter 3 be installed to meet the 2017 and 2022 trash reduction goals. The City generates a total of 40,968 gallons per year. The high-generation land uses generate 23,964 gallons per year (58% of the total). To help fund the installations, the City should enact an ordinance which requires industrial, retail and commercial properties (high generation land uses) to contribute to the total cost based on their trash generation percentage.

Appendix A: Treatment Tables

A-1: Proposed Public Device Treatment Calculations

Device ID	Device Type	TMA	Catchment Area (ac)	Trash Capture Rate (gal/yr)	Weighted C Value	Treatment Intensity (in/hr)	Treatment Flow Rate (cfs)
100	Inlet	10R	6.5	95	0.85	0.50	2.75
101	Inlet	10R	8.4	171	0.94	0.50	3.94
103	Inlet	16P	21.0	98	0.43	0.50	4.53
104	Inlet	9R	6.3	144	0.94	0.50	2.97
105	Inlet	9	31.1	161	0.55	0.50	8.50
106	Inlet	9	16.4	85	0.55	0.50	4.49
107	Inlet	9	7.2	39	0.54	0.50	1.95
108	Inlet	9	8.4	23	0.28	0.50	1.18
110	Off-line	17	864	4109	0.56	0.50	243
111	Off-line	8	243	3062	0.79	0.50	98.2
112	In-line	11I	56.7	496	0.80	0.50	22.6
115	Off-line	4	468	3389	0.77	0.50	180
116	Inlet	10	38.6	43	0.12	0.50	2.22
117	Inlet	10	9.1	51	0.52	0.50	2.33
118	Inlet	10	9.2	53	0.59	0.50	2.70
119	Inlet	10	21.5	120	0.56	0.50	6.03
122	Inlet	10	10.4	68	0.63	0.50	3.28
123	Inlet	10	8.8	49	0.50	0.50	2.20
124	Inlet	10	3.8	17	0.40	0.50	0.75
125	Inlet	10	5.3	29	0.50	0.50	1.31
127	Inlet	4	6.9	57	0.82	0.50	2.83
128	Inlet	4	22.0	158	0.81	0.50	8.85
129	Inlet	4	4.4	34	0.85	0.50	1.88
131	Inlet	17	11.1	70	0.77	0.50	4.25
132	Inlet	4	5.0	42	0.82	0.50	2.03
133	Inlet	10	10.7	48	0.55	0.50	2.94
134	Inlet	9	5.3	31	0.65	0.50	1.74
136	Inlet	8	3.9	59	0.89	0.50	1.74
137	Inlet	8	1.5	29	0.92	0.50	0.69
138	Inlet	8	11.9	207	0.91	0.50	6.28
139	Inlet	9	4.5	98	0.87	0.50	1.98
140	Inlet	9	1.0	21	0.93	0.50	0.48
142	Inlet	6	17.3	257	0.84	0.50	7.29
145	Inlet	6	2.7	80	1.10	0.50	1.50
147	Inlet	12R	4.5	34	0.26	0.50	0.59
151	Inlet	9	6.4	28	0.42	0.50	1.33
152	Inlet	9	11.1	52	0.46	0.50	2.54
153	Inlet	9	6.8	53	0.76	0.50	2.59
156	Inlet	9	7.8	37	0.59	0.50	2.31
157	Inlet	9	9.4	58	0.67	0.50	3.14
160	Inlet	9	6.1	24	0.39	0.50	1.18
164	In-line	9	60.9	530	0.59	0.50	18.0
165	Off-line	4	484	3293	0.71	0.50	191
169	Inlet	9	11.5	136	0.32	0.50	1.85
172	Inlet	9	5.3	24	0.77	0.50	2.04
174	Inlet	9	6.4	22	0.67	0.50	2.15

Device ID	Device Type	TMA	Catchment Area (ac)	Trash Capture Rate (gal/yr)	Weighted C Value	Treatment Intensity (in/hr)	Treatment Flow Rate (cfs)
176	Inlet	9	17.3	175	0.83	0.50	7.18
177	Inlet	9	3.1	31	0.80	0.50	1.26
181	Inlet	9	4.7	27	0.66	0.50	1.54
182	Inlet	9	6.7	34	0.58	0.50	1.95
184	Inlet	9	5.3	105	0.92	0.50	2.44
186	Inlet	9	2.4	35	0.82	0.50	0.98
191	Inlet	1I	3.9	47	0.73	0.50	1.42
193	Inlet	11I	3.1	17	0.65	0.50	1.00
194	Inlet	11I	3.3	17	0.58	0.50	0.97
195	Inlet	11I	3.0	15	0.62	0.50	0.94
196	Inlet	11I	3.5	18	0.65	0.50	1.14
197	Inlet	11I	3.1	16	0.56	0.50	0.85
198	Inlet	11I	3.1	16	0.55	0.50	0.84
199	Inlet	11I	3.3	17	0.58	0.50	0.96
200	Inlet	11I	3.2	17	0.62	0.50	1.00
201	Inlet	11I	3.4	17	0.60	0.50	1.02
202	Inlet	11I	3.5	18	0.62	0.50	1.08
203	Inlet	11I	10.1	51	0.55	0.50	2.77
204	Inlet	11I	3.7	19	0.54	0.50	1.00
205	Inlet	4	3.3	17	0.55	0.50	0.89
206	Inlet	16P	3.2	17	0.66	0.50	1.07
207	Inlet	15S	3.1	17	0.63	0.50	0.99
208	Inlet	15S	3.1	18	0.85	0.50	1.30
209	Inlet	10	3.6	19	0.63	0.50	1.14
210	Inlet	9	3.3	18	0.66	0.50	1.11
211	Inlet	10C	3.4	18	0.55	0.50	0.95
212	Inlet	8	3.2	16	0.50	0.50	0.79
213	Inlet	9	3.3	17	0.52	0.50	0.84
214	Inlet	9	6.7	33	0.51	0.50	1.71
215	Inlet	9	10.5	53	0.52	0.50	2.71
216	Inlet	8	9.5	49	0.58	0.50	2.74
218	Inlet	9	4.0	20	0.55	0.50	1.09
219	Inlet	16P	3.8	19	0.66	0.50	1.25
220	Inlet	16P	3.3	18	0.78	0.50	1.30
221	Inlet	16P	2.2	46	0.50	0.50	0.55
222	Inlet	16P	2.9	62	0.50	0.50	0.73
223	Inlet	16P	2.4	37	0.50	0.50	0.59
224	Inlet	16P	1.1	21	0.48	0.50	0.25
283	Inlet	16P	3.8	20	0.71	0.50	1.35
284	Inlet	16P	9.0	27	0.32	0.50	1.44
285	Inlet	6	9.6	43	0.57	0.50	2.73
298	Inlet	17	4.3	23	0.41	0.50	0.88
489	Inlet	9	18.1	172	0.66	0.50	5.94

A-2: Existing City Owned Device Treatment Calculations

Existing Device Name	Area (ac)	Location	TMA	Trash Gen Rate	Trash Load (gal/yr)
4C1TC202	1.1	Constitution Dr & N Canyons Pkwy	1C	Medium	6.8
4C1TC204	0.6	3142 N Canyons Pkwy	1C	Medium	3.7
4C1TC205	7.1	Constitution Dr & N Canyons Pkwy	1C	Medium	23.5
4C1TC207	1.8	Constitution Dr & N Canyons Pkwy	1C	Medium	5.2
4C1TC300	0.3	2882 Constitution Dr	1C	Medium	2.1
4C1TC308	0.3	Airway Blvd & N Canyons Pkwy	1C	Medium	1.7
4C1TC313	7.8	Airway Blvd & N Canyons Pkwy	1C	Medium	21.5
4C1TC400	1.8	2801 Constitution Dr	1C	Medium	11.3
4C1TC404	0.6	Doolan Rd & N Canyons Pkwy	1C	Medium	3.5
4C1TC413	0.2	Kitty Hawk Rd & Airway Blvd	1C	Medium	1.3
4C1TC416	2.3	2929 Constitution Dr	1C	Medium	15.7
4C1TC523	3.7	82 Constitution Drive	1C	Medium	23.3
4C1TC529	1.5	Doolan Rd & Collier Cyn	1C	Medium	9.4
4C1TC536	2.0	Doolan Rd & Collier Cyn	1C	Medium	11.4
4C2TC501	5.5	Constitution Dr & Shea Center Dr	1C	Medium	41.4
4C2TC505	0.6	Cotton Wood Creek And Constitution Drive	1C	Very High	16.4
4C2TC506	0.5	Cotton Wood Creek And Constitution Drive	1C	Medium	2.4
4C2TC522	1.8	Independence Dr & Collier Canyon	1C	Medium	11.0
4C3TC200	4.1	2383 Nissen Dr	1C	Medium	29.6
4C3TC224	1.2	Earhart Way & Nissen Dr	1C	Medium	10.5
4C3TC408	3.3	2333 Nissen Dr	1C	Medium	23.2
4C3TC505	2.1	Lindbergh Ave & Nissen Dr	1C	Medium	5.2
4C4TC216	2.8	419 Earhart Way	1C	Medium	17.7
4C4TC403	3.9	274 Lindbergh Ave	1C	Medium	27.0
4C4TC406	4.3	Lindbergh Ave & Armstrong St	1C	Medium	17.7
4C4TC408	1.5	335 Lindbergh Ave	1C	Medium	9.4
4C4TC410	0.5	170 Lindbergh Ave	1C	Medium	4.3
4C4TC415	7.6	135 Lindbergh Ave	1C	Medium	82.4
4C4TC418	2.1	405 Lindbergh Ave	1C	Medium	13.6
4D1TC501	10.9	Constitution Dr & Shea Center Dr	1C	Medium	75.6
4C1TC312	3.7	1815 Doolan Rd	1I	Medium	21.6
4C1TC407	2.3	N Canyon Pkwy & Doolan Rd	1I	Medium	19.0
4C2TC103	6.3	477 Independence Dr	1I	Medium	52.6
4C2TC210	0.2	2649 Collier Cyn Rd	1I	Medium	1.6
4C2TC211	0.2	2648 Collier Cyn Rd	1I	Medium	1.1
4C2TC300	0.7	2694 Gateway Ave	1I	Medium	5.1
4C2TC301	13.2	2694 Gateway Ave	1I	Medium	97.3
4C2TC304	2.8	455 North Canyons Pkwy	1I	Medium	20.6
4C2TC312	1.0	North Canyons Pkwy & Independence Dr	1I	Medium	8.1
4C2TC514	1.2	Collier Cyn Rd & Constitution Dr	1I	Medium	8.9
4C2TC525	1.0	466 Collier Canyon	1I	Very High	33.4
4C3TC109	0.3	Airway Blvd & Kitty Hawk Rd	1I	Very High	16.3
4C3TC110	0.3	Kitty Hawk Rd & Airway Blvd	1I	Very High	12.4

Existing Device Name	Area (ac)	Location	TMA	Trash Gen Rate	Trash Load (gal/yr)
4C3TC114	0.1	Airway Blvd & Kitty Hawk Rd	1I	Very High	6.2
4C3TC115	0.2	Kitty Hawk Rd & Airway Blvd	1I	Very High	10.0
4C3TC202	0.4	Kitty Hawk Rd & Airway Blvd	1I	Very High	14.7
4C3TC206	0.2	Airway Blvd & Kitty Hawk Rd	1I	Medium	1.5
4C3TC401	6.7	Airway Blvd & Kitty Hawk Rd	1I	Medium	6.3
4C3TC506	1.5	472 Lindbergh Ave	1I	Medium	3.8
4C4TC300	0.6	349 Earhart Way	1I	Medium	2.0
4C4TC414	8.1	122 Lindbergh Ave	1I	Medium	93.0
4C4TC419	1.1	Lindbergh Ave & Armstrong St	1I	Medium	6.4
4D1TC303	5.1	Gateway Ave & Shea Center Dr	1I	Medium	22.2
4D1TC402	0.6	2580 Shea Center Dr	1I	Medium	4.2
4C1TC311	0.5	Airway Blvd & N Canyons Pkwy	1R	Medium	3.2
4C2TC401	3.1	2854 Independence Dr	1R	Medium	19.1
4C2TC508	0.3	Collier Canyon & Independence Dr	1R	Medium	1.7
4C2TC509	1.5	Collier Canyon & Independence Dr	1R	Medium	8.8
4C2TC515	1.3	Independence Dr & Collier Canyon	1R	Medium	8.0
4C2TC517	0.2	Collier Canyon & Independence Dr	1R	Medium	2.2
4C2TC518	2.1	Collier Canyon & Independence Dr	1R	Medium	12.4
4C2TC519	0.2	444 Collier Canyon	1R	Medium	4.3
4C2TC523	3.3	445 Collier Canyon	1R	Medium	19.4
4C2TC524	2.9	467 Collier Canyon	1R	Medium	18.0
4C4TC400	2.7	201 Lindbergh Ave	1	Medium	20.4
4E4TC202	1.0	3000 Las Positas Rd	2C	Medium	6.1
4E4TC309	0.4	3000 Las Positas Rd	2C	Medium	2.1
4F1TC508	0.3	3400 Las Positas Rd	2C	Medium	1.8
4F3TC101	2.2	3400 Las Positas Rd	2C	Low	0.7
4F3TC102	0.4	3400 Las Positas Rd	2C	Medium	2.3
4F3TC104	0.5	3200 Las Positas Rd	2C	Medium	2.3
4F3TC204	0.5	North Mines Rd & Las Positas Rd	2C	Medium	2.7
4F3TC206	0.4	3100 Las Positas Rd	2C	Medium	2.6
4F3TC207	0.1	North Mines Rd & Las Positas Rd	2C	Medium	0.7
4F3TC208	0.1	North Mines Rd & Las Positas Rd	2C	Medium	0.4
4E3TC401	0.2	N Livermore Ave & Las Positas Rd	2I	Medium	2.0
4E3TC504	1.0	N Livermore Ave & Las Positas Rd	2I	Medium	5.9
4E3TC402	10.5	N Livermore Ave & Las Positas Rd	2R	High	60.3
4E3TC411	6.3	Las Positas Rd & N Livermore Ave	2R	High	28.2
4E3TC415	2.6	Las Positas Rd & N Livermore Ave	2R	High	39.3
4E3TC417	2.4	N Livermore Ave & Las Positas Rd	2R	High	35.2
4E4TC304	0.2	2792 Las Positas Rd	2R	High	2.9
4E4TC305	0.2	2826 Las Positas Rd	2R	High	3.4
4E4TC401	3.8	2301 Las Positas Rd	2R	High	10.5
4E4TC402	2.6	2301 Las Positas Rd	2R	High	15.1
4F4TC202	0.5	4514 Las Positas Rd	3R	High	5.3
4F4TC203	0.7	4300 Las Positas Rd	3R	High	8.2

Existing Device Name	Area (ac)	Location	TMA	Trash Gen Rate	Trash Load (gal/yr)
4F4TC303	0.5	First St & Las Positas Rd	3R	High	7.0
4F4TC305	0.3	Las Positas Rd & First St	3R	High	3.5
4F4TC308	0.2	Las Positas Rd & First St	3R	High	1.5
4F4TC310	0.5	First St & Southfront	3R	High	7.8
4F4TC420	2.2	Las Positas Blvd & First St	3R	High	29.6
4F4TC423	1.4	Las Positas Blvd & First St	3R	High	19.6
4F4TC525	2.9	First St & Bellmawr Dr	3R	High	38.7
4G3TC219	1.2	4849 South Front Rd	3R	High	13.3
4G3TC226	0.6	South Front Ln & First St	3R	High	7.2
4G3TC230	0.6	4700 First St	3R	High	3.4
4G3TC233	0.5	4707 First St	3R	High	7.0
4G3TC412	1.4	South Front Ln & First St	3R	High	11.9
5F2TC102	0.7	First St & N Mines Rd	3R	High	8.6
5F2TC116	8.4	4676 Las Positas Rd	3R	High	76.3
5F2TC124	12.9	4273 First St	3R	High	170.8
5F2TC316	1.6	N Mines Rd & Technology Dr	3R	High	21.3
5F2TC317	2.6	N Mines Rd & Technology Dr	3R	High	31.4
4G3TC221	0.6	4849 South Front Rd	4	Medium	5.1
4G3TC300	1.8	4749 Bennett Dr	4	Medium	14.8
4G3TC303	19.1	4741 Bennett Dr	4	Medium	112.7
4G3TC307	1.4	4771 Arroyo Vista	4	Medium	11.3
4G3TC315	4.8	4740 Bennett Dr	4	Medium	61.3
4G3TC505	1.7	Las Positas Rd & Bennett Dr	4	Medium	14.5
4G3TC520	10.1	4647 C Las Positas Rd	4	Medium	58.7
5F2TC401	0.8	Technology Dr & N Mines Rd	4	Medium	9.0
5F2TC402	2.5	Technology Dr & N Mines Rd	4	Medium	21.1
5F2TC408	0.4	N Mines Rd & Technology Dr	4	Medium	3.6
5F2TC411	0.5	N Mines Rd & Technology Dr	4	Medium	4.0
5G1TC106	4.6	4555 Las Positas Rd	4	Medium	33.5
5G1TC201	3.8	4569 Las Positas Rd	4	Medium	27.2
4C1TC203	5.7	455 North Canyons Pkwy	17	Low	12.9
4C1TC307	0.6	N Canyons Pkwy & Airway Blvd	17	Low	0.5
4C1TC405	0.6	952 N Canyons Pkwy	17	Low	1.4
4C1TC410	0.6	N Canyons Pkwy & Republic Dr	17	Low	2.5
4C2TC502	1.7	Constitution Dr & Shea Center Dr	17	Very High	68.5
4C2TC510	0.3	Collier Canyon Rd & Constitution Dr	17	Very High	6.9
4C2TC511	3.4	Collier Canyon Rd & Constitution Dr	17	Low	4.3
4C2TC513	0.8	Collier Canyon Rd & Constitution Dr	17	Low	2.6
4C3TC204	0.3	Airway Blvd & Kitty Hawk Rd	17	Low	1.5
4C3TC439	0.6	Airway Blvd & Clubhouse Dr	17	Low	3.5
4C3TC507	1.7	448 Airway Blvd	17	Low	4.3
4C3TC508	0.2	464 Airway Blvd	17	Low	0.2
4C3TC510	0.2	550 Airway Blvd	17	Low	0.2
4C4TC200	2.7	465 Airway Blvd	17	Low	19.7

Existing Device Name	Area (ac)	Location	TMA	Trash Gen Rate	Trash Load (gal/yr)
4C4TC203	1.5	550 Airway Blvd	17	Low	12.8
4C4TC304	0.9	Armstrong St & Earhart Way	17	Low	5.6
4D1TC503	1.4	Constitution Dr & Shea Center Dr	17	Very High	44.4
4D1TC505	0.7	Constitution Dr & Shea Center Dr	17	Very High	27.2
4E4TC300	30.4	Las Positas Rd & Hilliker Pl	17	Low	39.7
4E4TC301	2.9	Las Positas Rd & Hilliker Pl	17	Low	3.5
4E4TC302	3.8	2825 Las Positas Rd	17	Low	4.7
4E4TC308	0.8	3031 Las Positas Rd	17	Low	1.3
4E4TC313	4.9	2881 Las Positas Rd	17	Low	2.5
4E4TC314	0.5	2904 Las Positas Rd	17	Low	0.5
4E4TC403	3.1	2500 Las Positas Rd	17	Low	3.1
4E4TC404	0.1	Las Positas Rd & Hilliker Pl	17	Low	0.1
4F1TC500	0.4	3600 Las Positas Rd	17	Low	NOT IN CITY
4F1TC501	0.2	Missing	17	Low	0.2
4F1TC502	7.0	3600 Las Positas Rd	17	Low	0.0
4F1TC506	0.2	Missing	17	Low	0.2
4F3TC103	7.5	31 Las Positas Rd	17	Low	0.8
4F3TC201	21.0	N Mines Rd & Las Positas Rd	17	Low	0.2
4F3TC205	17.3	Las Positas Rd & N Mines Rd	17	Low	0.1
4F4TC200	2.5	4440 Las Positas Rd	17	Low	0.0
4F4TC205	2.7	4300 Las Positas Rd	17	Low	0.8
4F4TC206	6.9	4290 Las Positas Rd	17	Low	1.5
4F4TC306	0.4	Las Positas Rd & First St	17	Low	0.1
4F4TC307	1.0	4526 Las Positas Rd	17	Low	0.0
4F4TC503	0.8	First St & Bellmawr Dr	17	Low	1.3
4F4TC509	0.4	Bellmawr Dr & First St	17	Low	0.6
4F4TC511	0.9	Bellmawr Dr & First St	17	Low	1.4
4G3TC305	6.0	4749 Bennett Dr	17	Low	50.4
4G3TC413	4.3	4749 Bennett Dr	17	Low	4.8
4G3TC418	5.1	4747 Arroyo Vista	17	Low	10.1
4G3TC420	0.8	4749 Bennett Dr	17	Low	0.8
4G3TC502	1.5	4659 C Las Positas Rd	17	Low	1.8
4G3TC507	0.5	4671 Las Positas Rd	17	Low	0.9
4G3TC509	4.1	Las Positas And Arroyo Vista	17	Low	16.0
4G3TC512	7.4	Arroyo Vista & Las Positas Rd	17	Low	14.0
5F2TC111	0.7	4250 First St	17	Low	1.2
5G1TC111	1.5	4676 Las Positas Rd	17	Low	3.9
Total	**459**				**2573**

A-3: Existing Private Device Treatment Calculations

Street Number	Street Name	Tree Well Filter	Hydrodynamic Separator	Water Quality Inlets	Media Filters	Other Device	ID	Area (ac)	Trash Captured (minus ex City device catchments) (gal/year)
50	Contractors Street		x				0	2.34	14.53
2500	Las Positas Road		x				13	5.58	83.50
5489	Las Positas Road	x					14	21.22	178.91
100	North Canyons Parkway		x				21	3.31	20.53
6049	Northfront Road			x			20	0.68	5.76
6061	Northfront Road			x			19	0.69	5.22
2330	Railroad Avenue		x				22	1.89	11.45
3560	Robertson Park Road			x			23	8.22	51.06
1860	Second Street	x					24	0.70	4.46
6850	Brisa Street			x			5	6.35	53.55
800	East Stanley Boulevard		x				30	10.06	86.66
200	Greenville Road		x				9	2.44	11.88
7770	Hawthorne Avenue			x			8	4.96	41.78
3100	Las Positas Road		x				10	4.69	29.10
3200	Las Positas Road		x				11	3.21	19.64
3400	Las Positas Road		x				12	1.86	11.44
6211	Las Positas Road		x				15	6.07	51.13
6475	Las Positas Road		x				16	3.14	26.49
7480	Las Positas Road			x			17	4.61	38.84
6553-6589	Las Positas Road		x				18	2.99	18.59
6650	National Drive			x			6	6.22	52.39
7600-7648	National Drive		x				7	2.43	19.26
5750	Scenic Avenue			x			25	0.70	1.38
355	South Vasco Road			x	x		28	11.70	98.66
6153	Southfront Road					x	26	2.91	24.51
6175	Southfront Road			x			27	3.55	29.93
3102-3278	Constitution Drive		x				1	0.30	1.40
3103-3197	Independence Drive				x		3	4.62	28.67
2282	Kitty Hawk Road					x	4	2.56	15.22
101	Vineyard Avenue		x				29	4.20	14.61
4542	Contractors Pl.		x				2	1.71	14.23
Totals								**136**	**1,065**

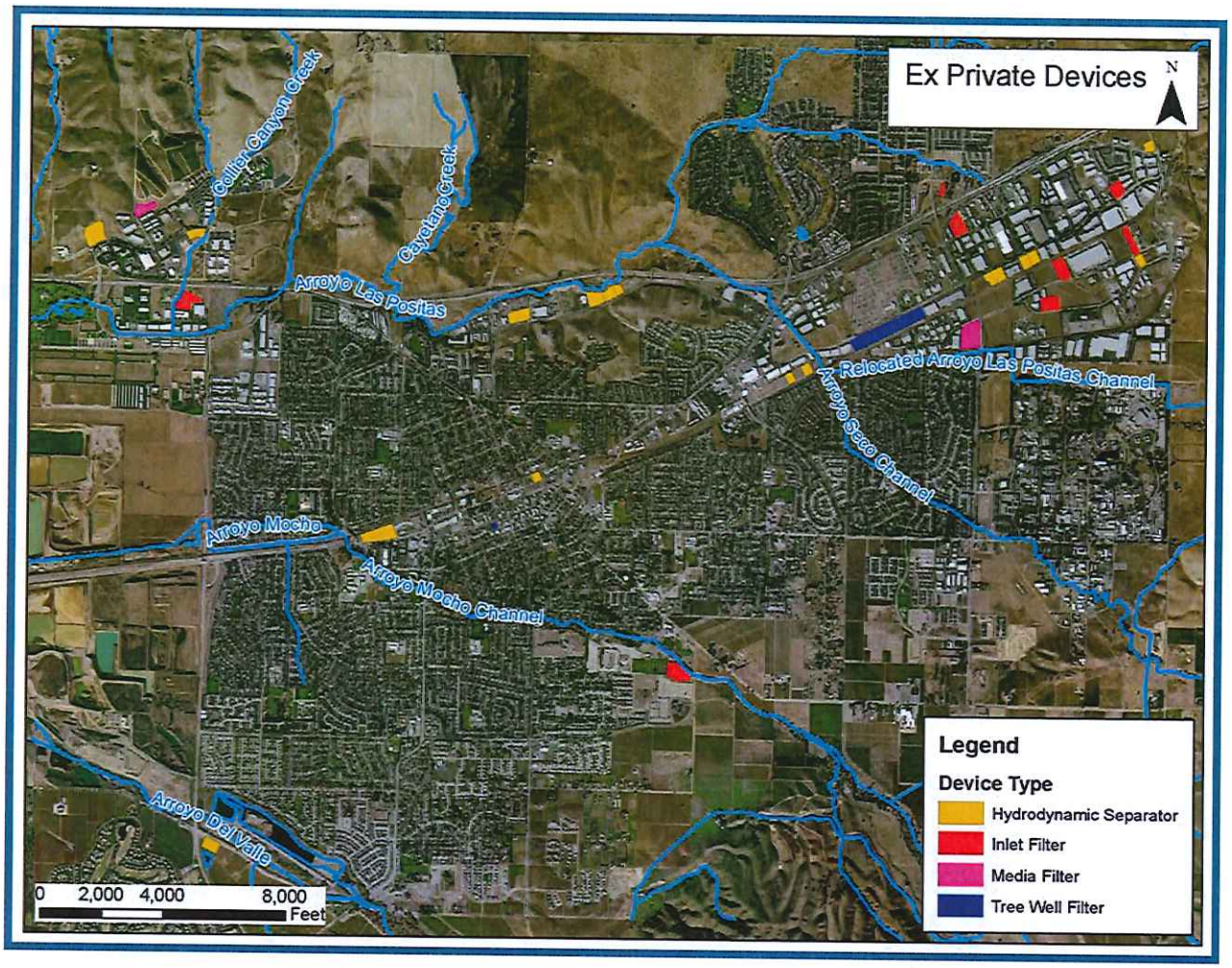

Figure A-1: Existing Private Devices

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On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #1	Near intersection of N. Canyons Parkway & Constitution Drive on N. Canyons Parkway (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

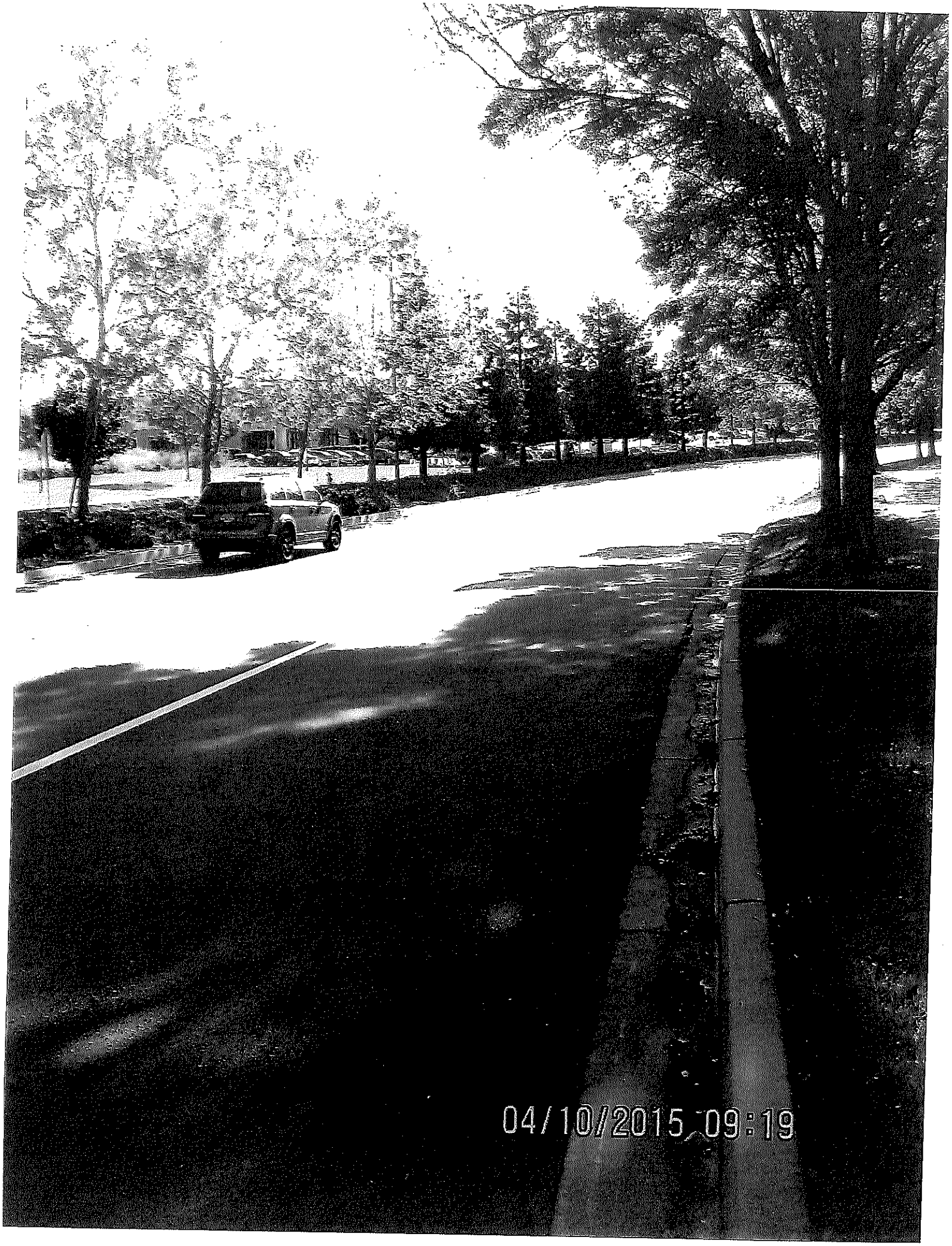
☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.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On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

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TMA #2	Near intersection of Las Positas Road & N. Livermore Ave. on Las Positas Rd. (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☒ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

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C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

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04/10/2015 10:15

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jaroberts@cityofliverm.ore

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	
TMA #3	**Assessment Area:** Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable). Near intersection of Las Positas Rd. & First St. on Las Positas Rd. (northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

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04/10/2015 10:23

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

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TMA #4	Near intersection of Las Positas Rd & Vasco Rd. on Las Positas Rd. (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☑ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

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04/10/2015 10:39

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermor.net

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TMA #5	near intersection of W. Jack London Blvd. & El Charro Rd. on W. Jack London Blvd. (northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

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Photographs: ☑ Number of photographs taken: 1

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04/10/2015 09:06

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #6	Near intersection of East Ave. and Charlotte Way on East Ave. (Northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

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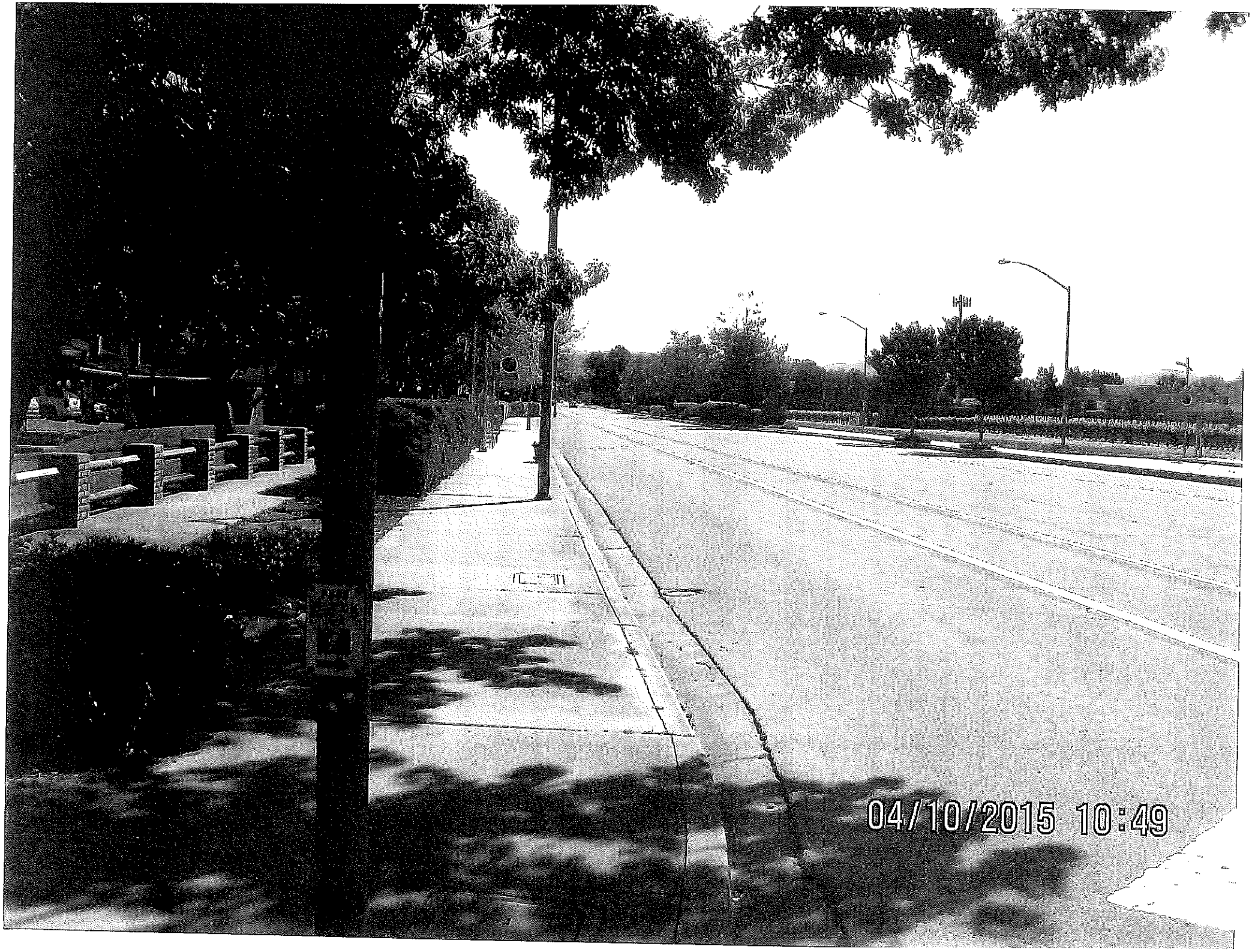
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On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliver.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #7	Near intersection of Pacific Ave and S. Livermore Ave. on S. Livermore Ave

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

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04/10/2015 09:54

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jroberts@cityofLivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #8	Near intersection of First St. & Holmes St. on First St (northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

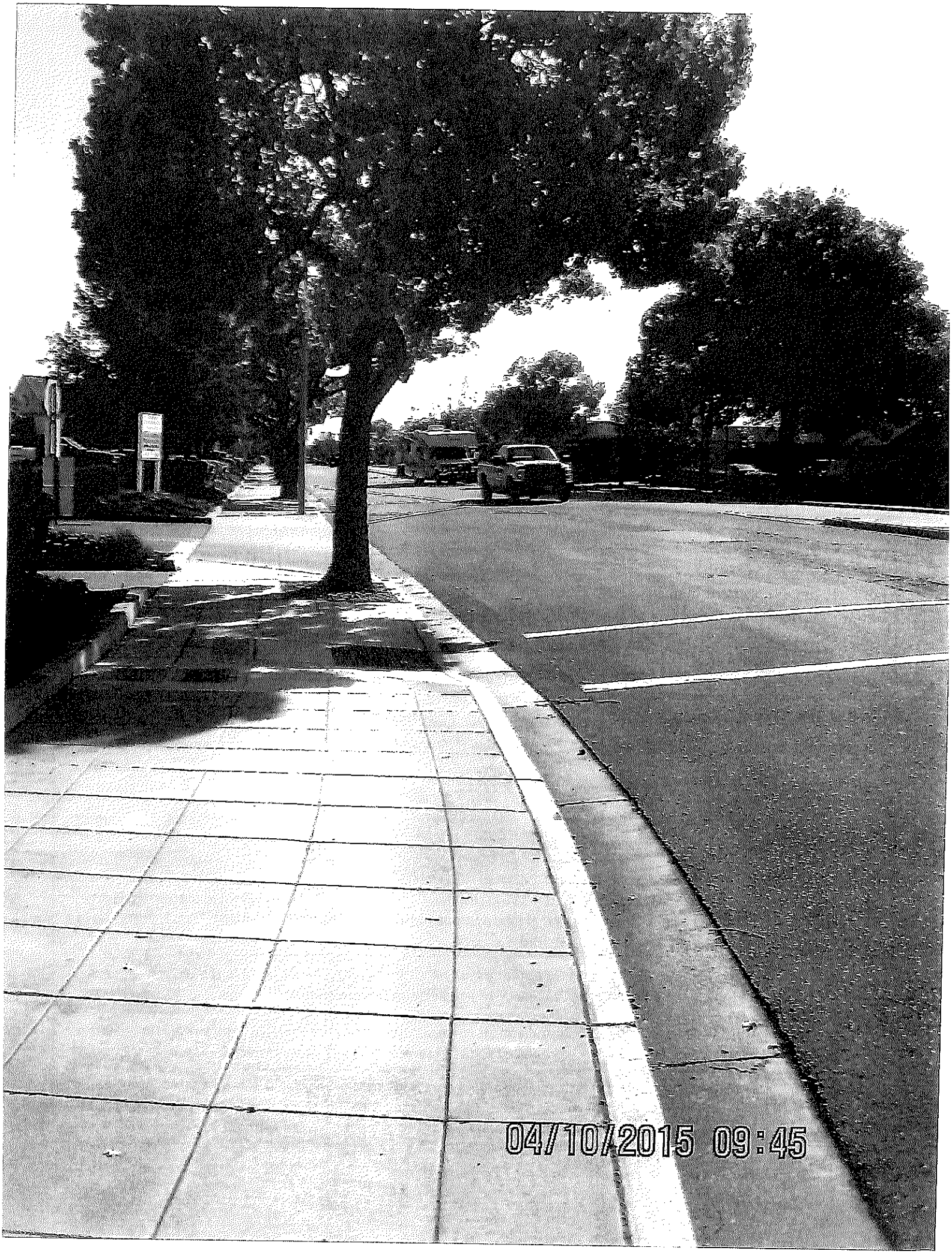
☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.


04/10/2015 09:45

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.n

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #9	Near intersection of N. Murietta Boulevard and Portola Ave. on N. Murrieta Boulevard (westside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☑ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

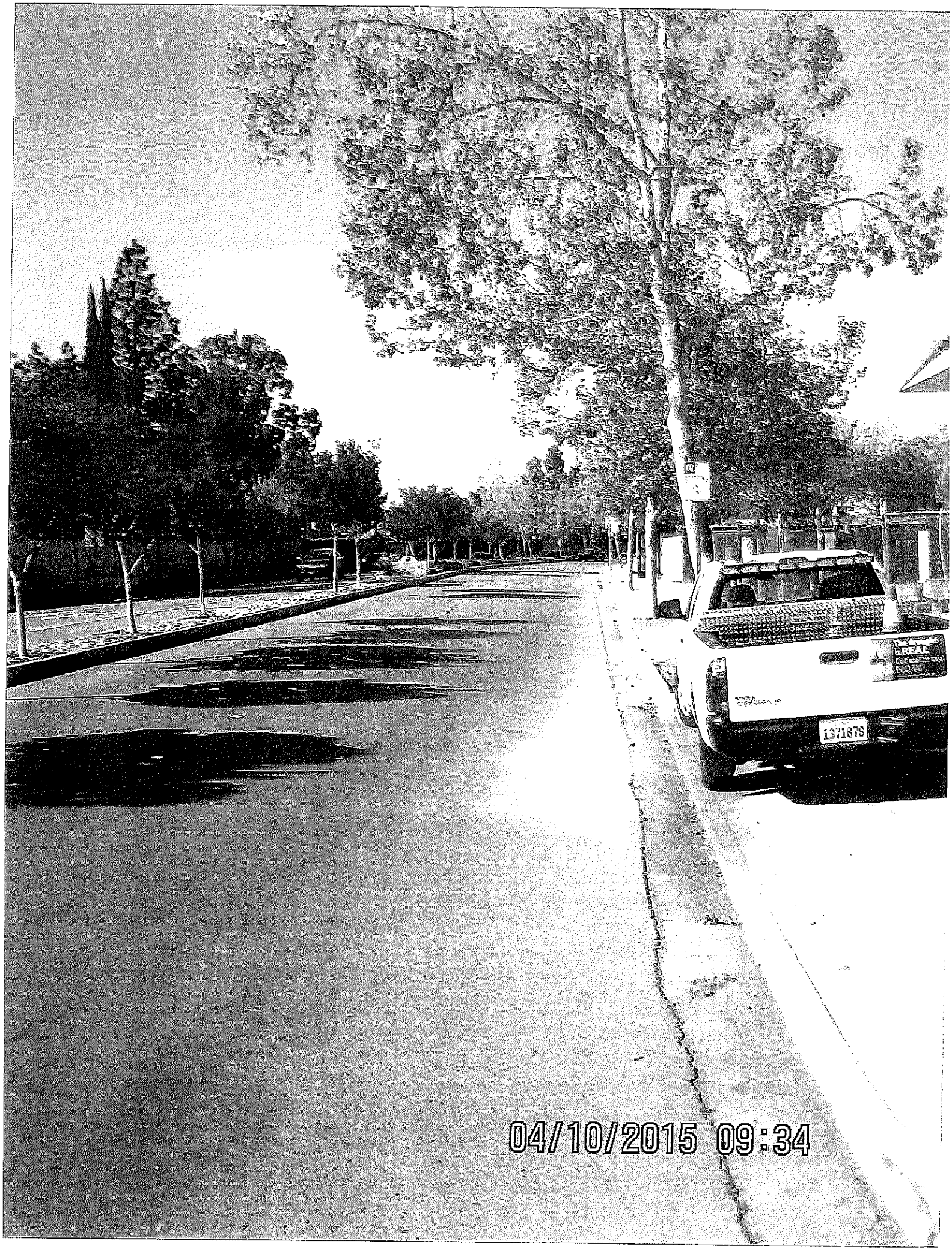
☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☑ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.


04/10/2015 09:34

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliver mor net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #10	Near intersection of Junction Ave & Chestnut St. on Junction Ave. (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☒ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

04/10/2015 10:08

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	
TMA #11	**Assessment Area:** Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable). Near intersection of Rickenbacker Circle & Kitty Hawk Rd on Rickenbacker Circle (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
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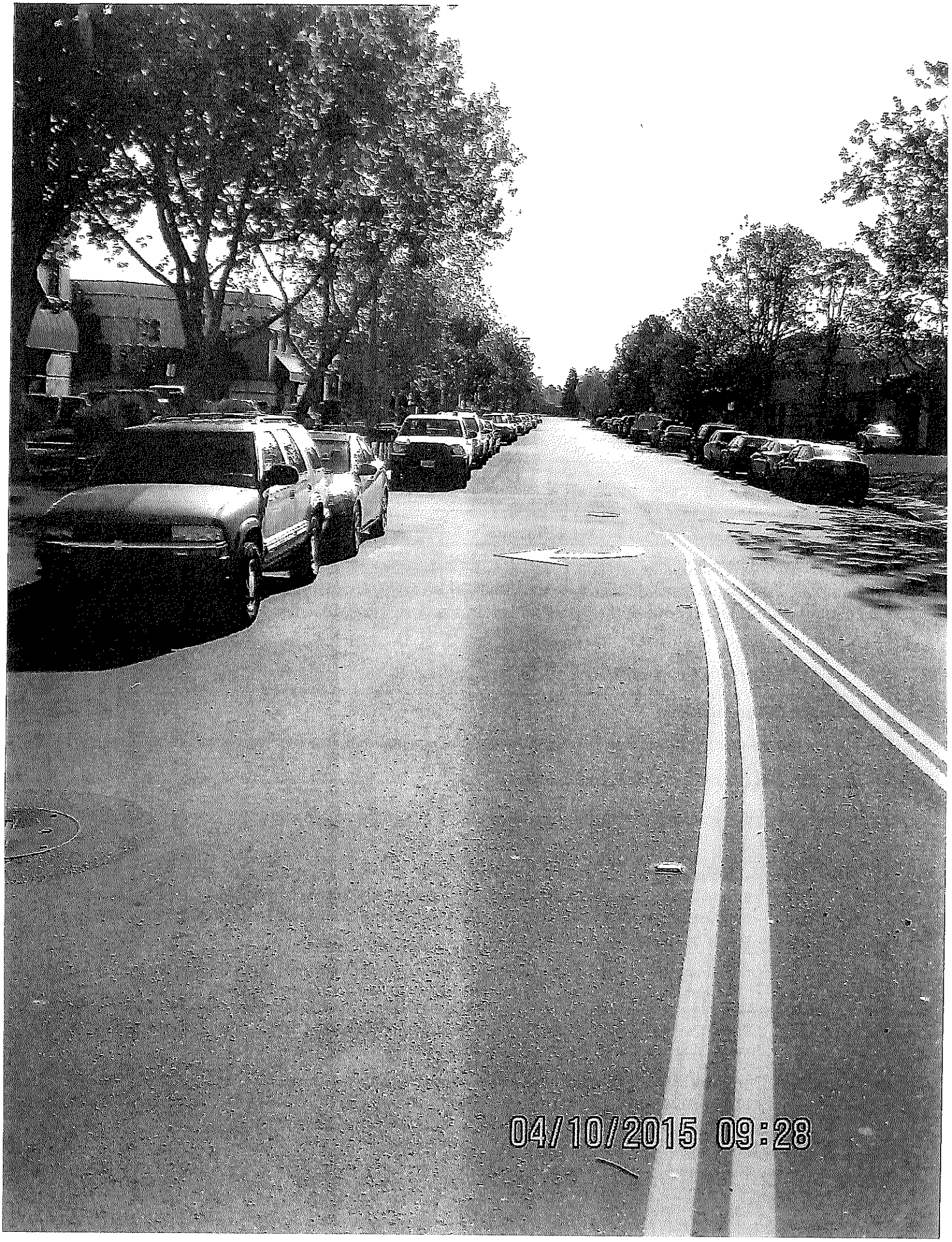
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.


04/10/2015 09:28

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofLivermore.n

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #12	Near intersection of Scenic Ave & N. Vasco Rd. On Scenic Ave. (Northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
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C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

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04/10/2015 10:34

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.n

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #13	Near Intersection of Research Dr. and East Ave on Research Dr. (Westside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☑ Number of photographs taken: 1

Trash Condition Category	Definition
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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

SPEED
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04/10/2015 10:54

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Robert **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #14	Near Intersection of Concannon Blvd. & Holmes St. on Concannon Blvd. (Northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
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XING
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04/10/2015 11:15

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #15	In front of Livermore High School

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
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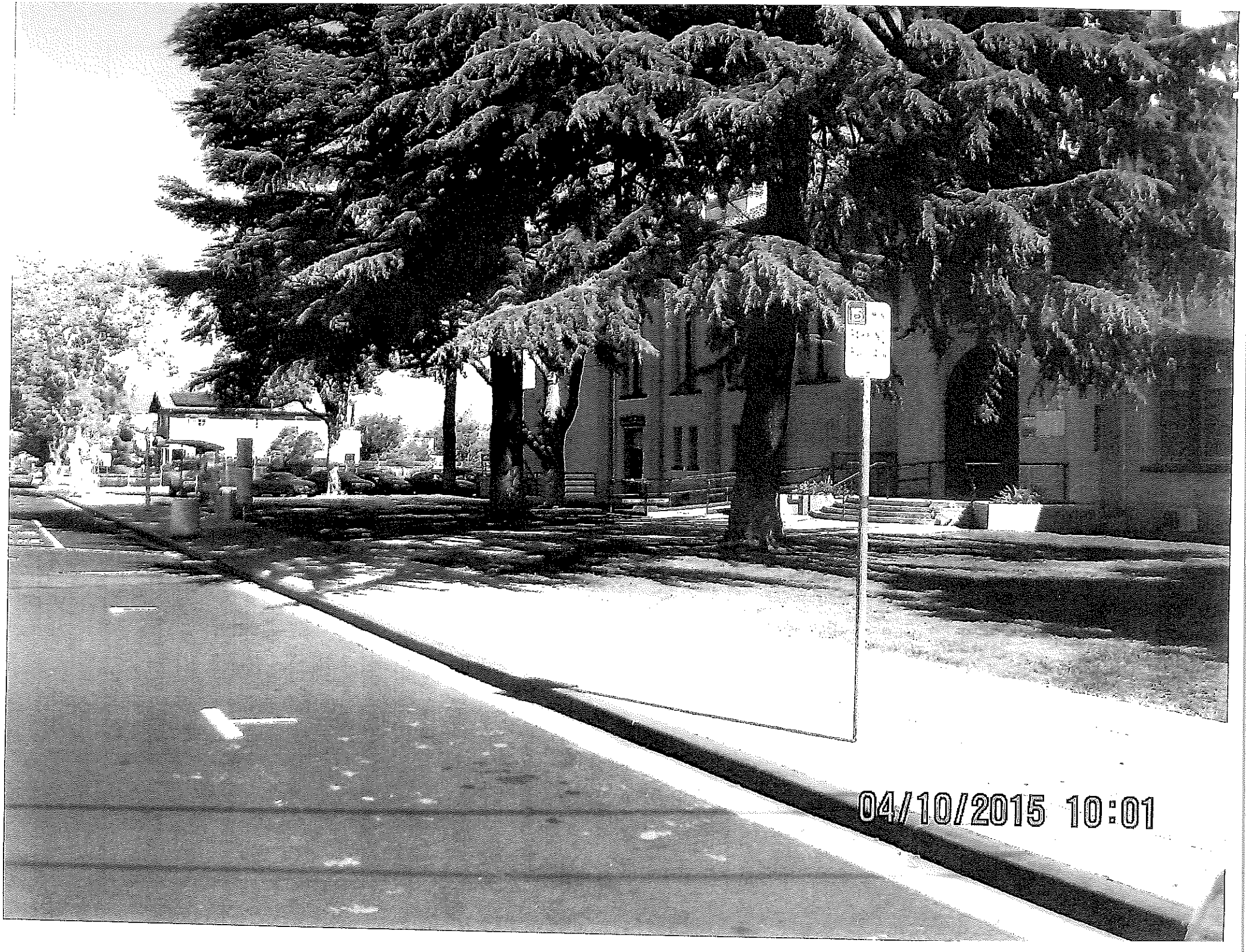
04/10/2015 10:01

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jroberts@cityofliverm
.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #16	In front of Sycamore Grove Parking lot

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

04/10/2015 11:23

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 4/10/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliverm.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #17	Near intersection of Concannon Blvd. & Isabel Ave. on Concannon Blvd.

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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04/10/2015 11:30

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	**Assessment Area:** Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #1	Near Intersection of N. Canyons Parkway & Constitution Drive on N. Canyons Parkway (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☐ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☒ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☐ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
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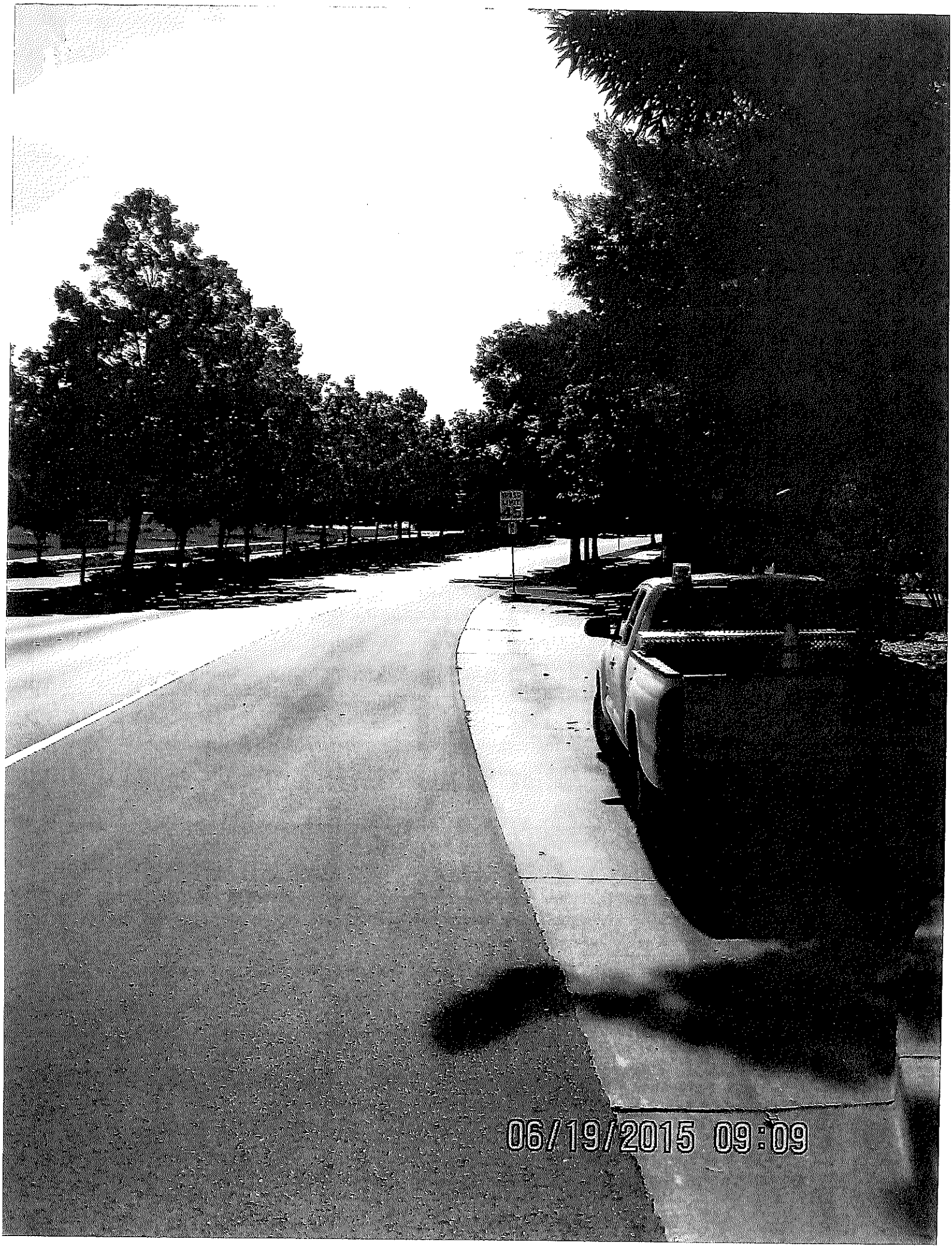
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.


06/19/2015 09:09

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #2	Near intersection of Las Positas Rd. & N. Livermore Ave. on Las Positas Rd. (Southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☒ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

BIKE
LANE
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LANE
06/19/2015 10:39

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #3	Near intersection of Las Positas Rd. & First St. on Las Positas Rd. (Gamblside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☒ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

06/19/2015 11:11

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** ~~[illegible]~~ 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliver.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #4	Near intersection of Las Positas Rd. & Vasco Rd. on Las Positas Rd. (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☐ Low/Medium (**A/B**)
- ☒ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

06/19/2015 11:50

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #5	Near intersection of W. Jack London Blvd. & El Charro Rd. on W. Jack London Blvd. (northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☑ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☑ Number of photographs taken: 1

Trash Condition Category	Definition
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C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

06/19/2015 10:27

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliverm net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #6	Near intersection of East Ave. and Charlotte Way on East Ave. (northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

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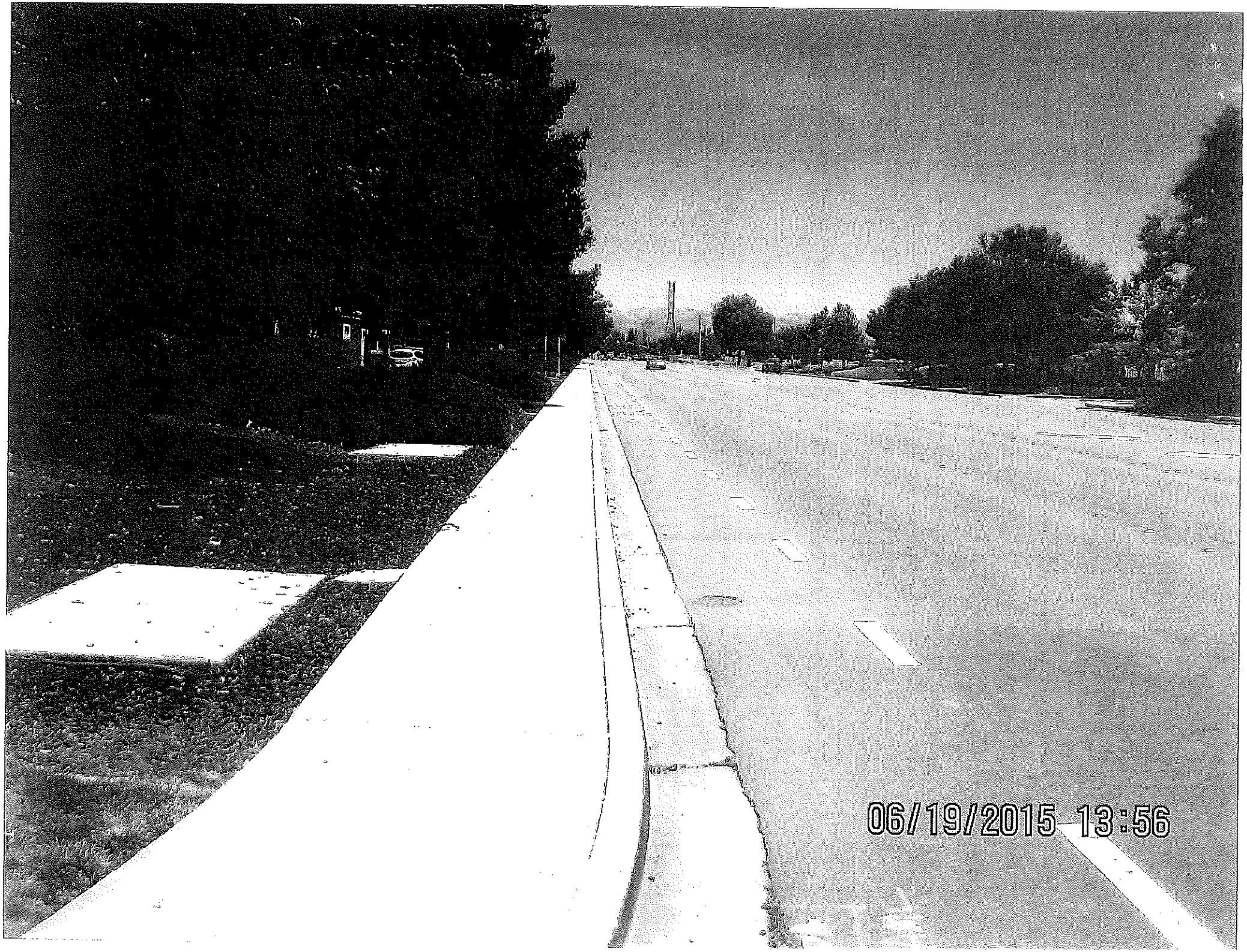
06/19/2015 13:56

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jroberts@cityofliverme.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #7	Near intersection of Pacific Ave. and S. Livermore Ave. on S. Livermore Ave.

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
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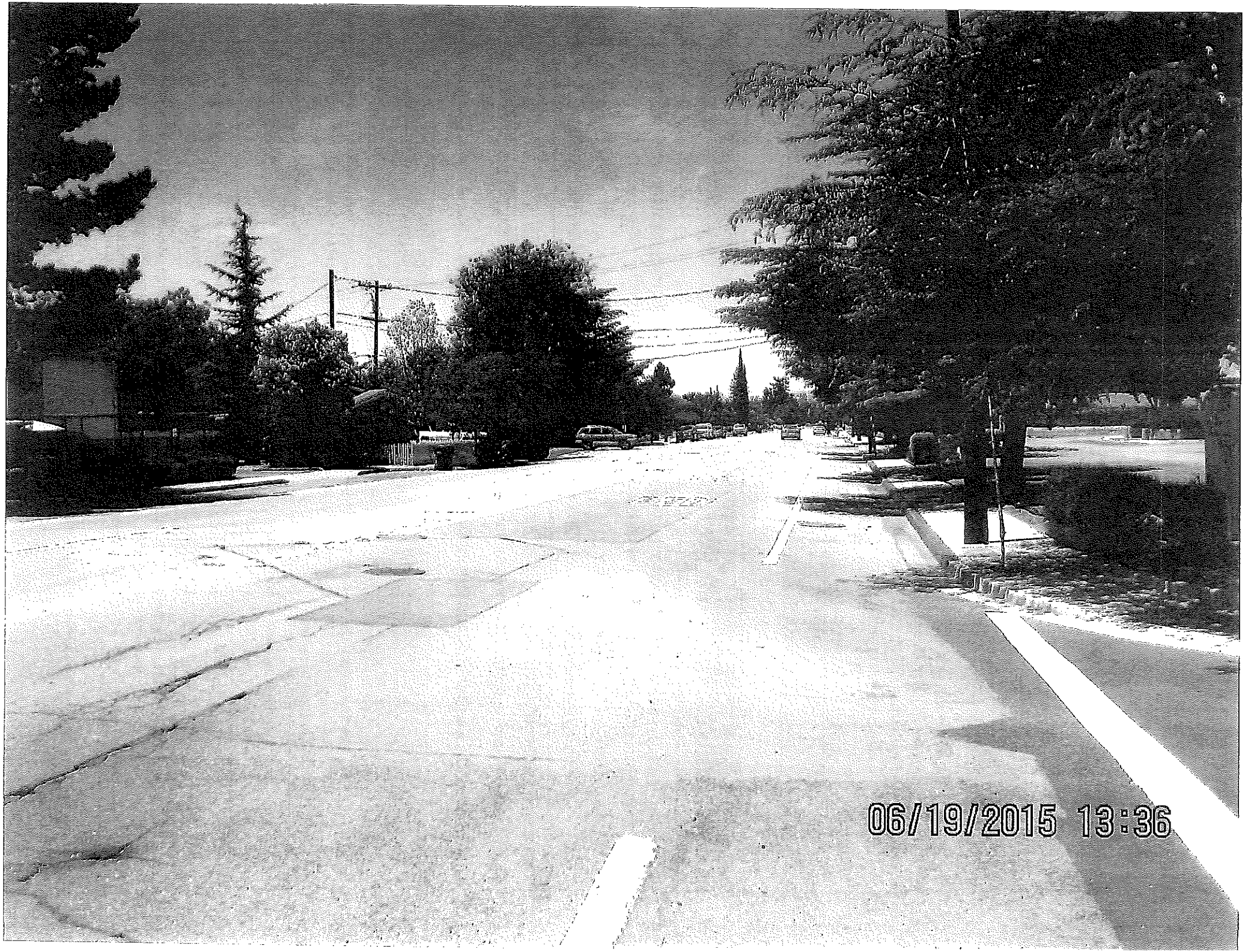
06/19/2015 13:36

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliver more.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #8	Near intersection of First St. & Holmes St. on First St. (northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

06/19/2015 13:45

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliverm.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #9	Near intersection of N. Murietta Blvd. & Portola Ave. on N. Murietta Blvd. (Westside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
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C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

NO
STOPPING
ANY
TIME
06/19/2015 09:00

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliverm.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 10	Near intersection of Junction Ave. & Chestnut St. on Junction Ave. (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☑ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☐ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

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06/19/2015 13:25

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliverm.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #11	Near intersection of Rickenbacker Circle & Kitty Hawk Rd. on Rickenbacker Circle (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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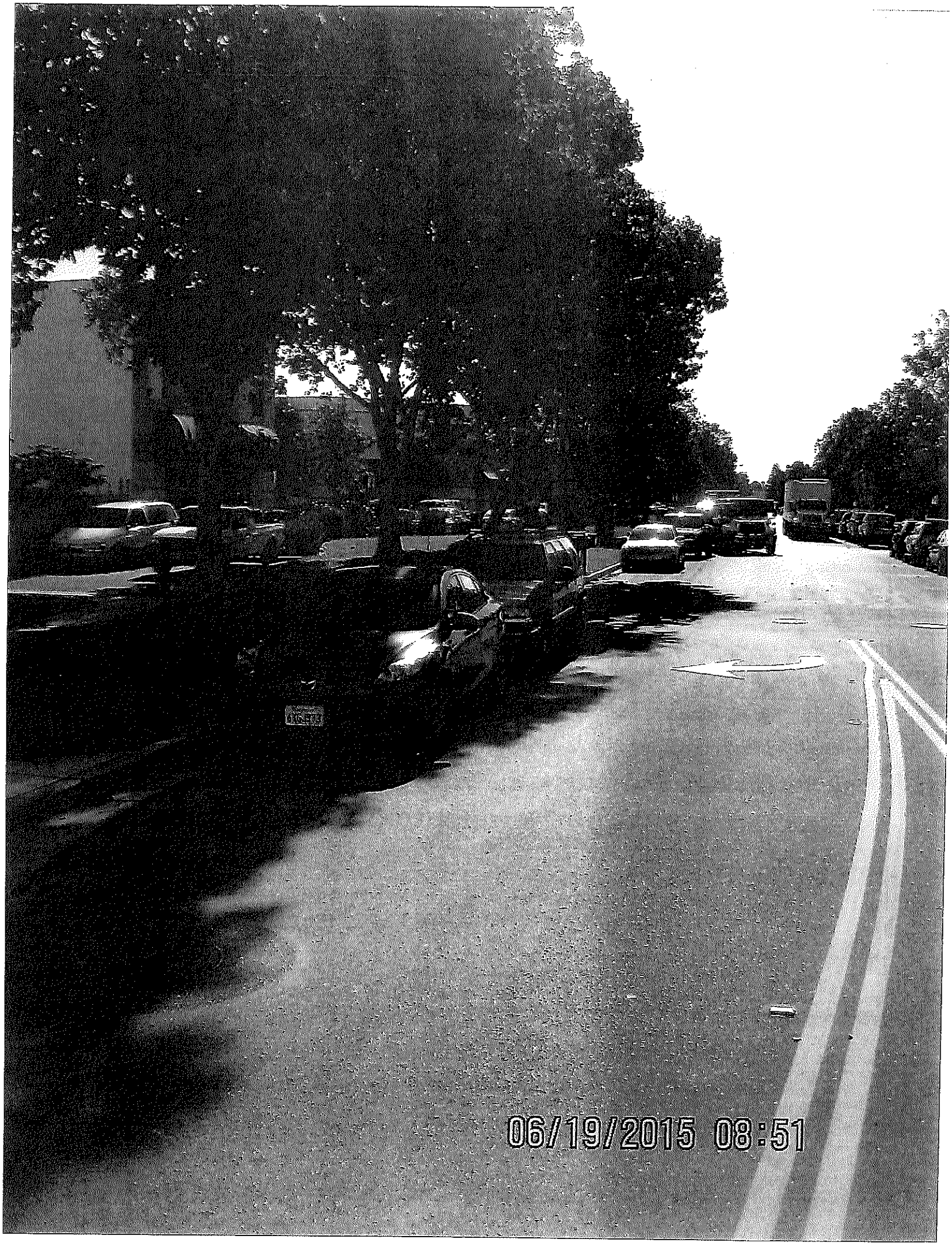
06/19/2015 08:51

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/12/15

Team Members: John Roberts **Contact E-mail:** jroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TM A # 12	Near intersection of Scenic Ave. & N. Vasco Rd. on Scenic Ave (Northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☒ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

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06/19/2015 11:28

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliveremore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #13	Near Intersection of Research Dr. and East Ave. on Research Dr. (~~East~~ westside).

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☒ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☐ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

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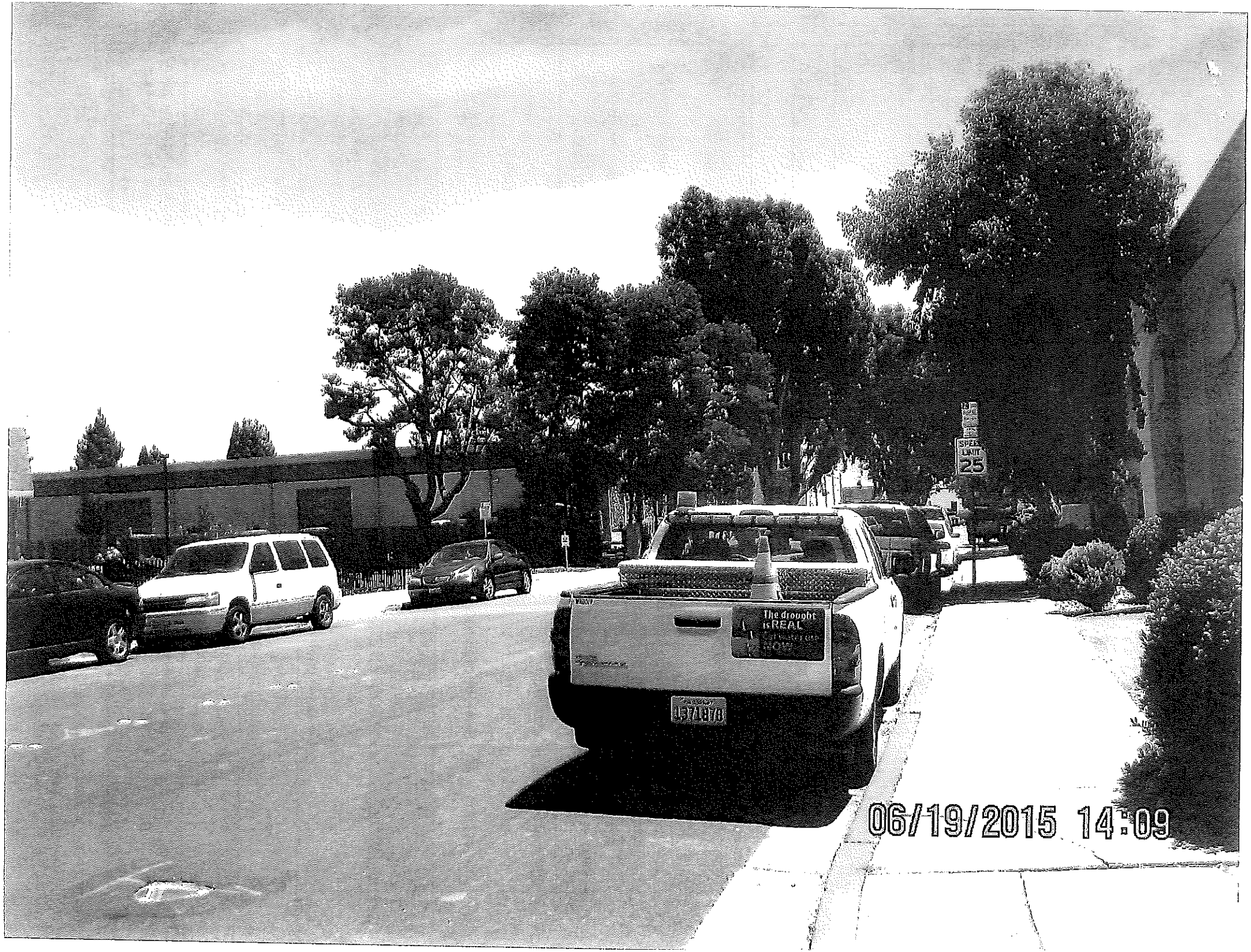
SPEED LIMIT 25
The drought is REAL
06/19/2015 14:09

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/14/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofliverme.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #14	Near Intersection of Concannon Blvd. & Holmes St. on Concannon Blvd. (Northside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☑ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

PED
PED
LANE
06/19/2015 09:51

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofLivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #15	In front of Livermore High School

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☒ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☐ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
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Trash Condition Category	Definition
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15 MIN
PARKING
8AM - 4PM
06/19/2015 13:32

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.ne

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #16	In front of Sycamore Grove Parking Lot

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Trash Condition Category	Definition
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06/19/2015 14:31

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 6/19/15

Team Members: John Roberts **Contact E-mail:** jroberts@cityofliveremore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #17	Near intersection of Concannon Blvd & Isabel Ave. on Concannon Blvd.

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☒ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

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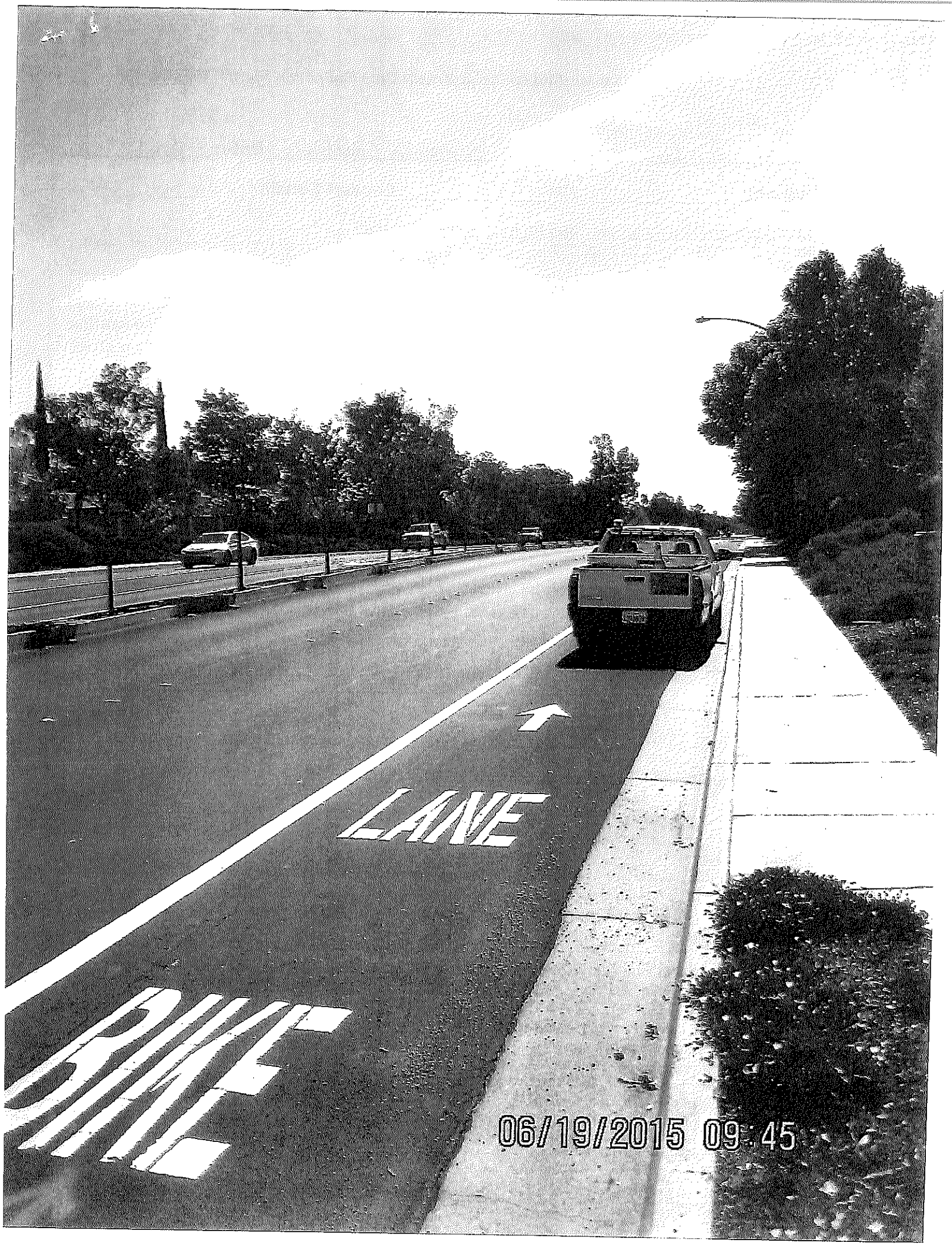
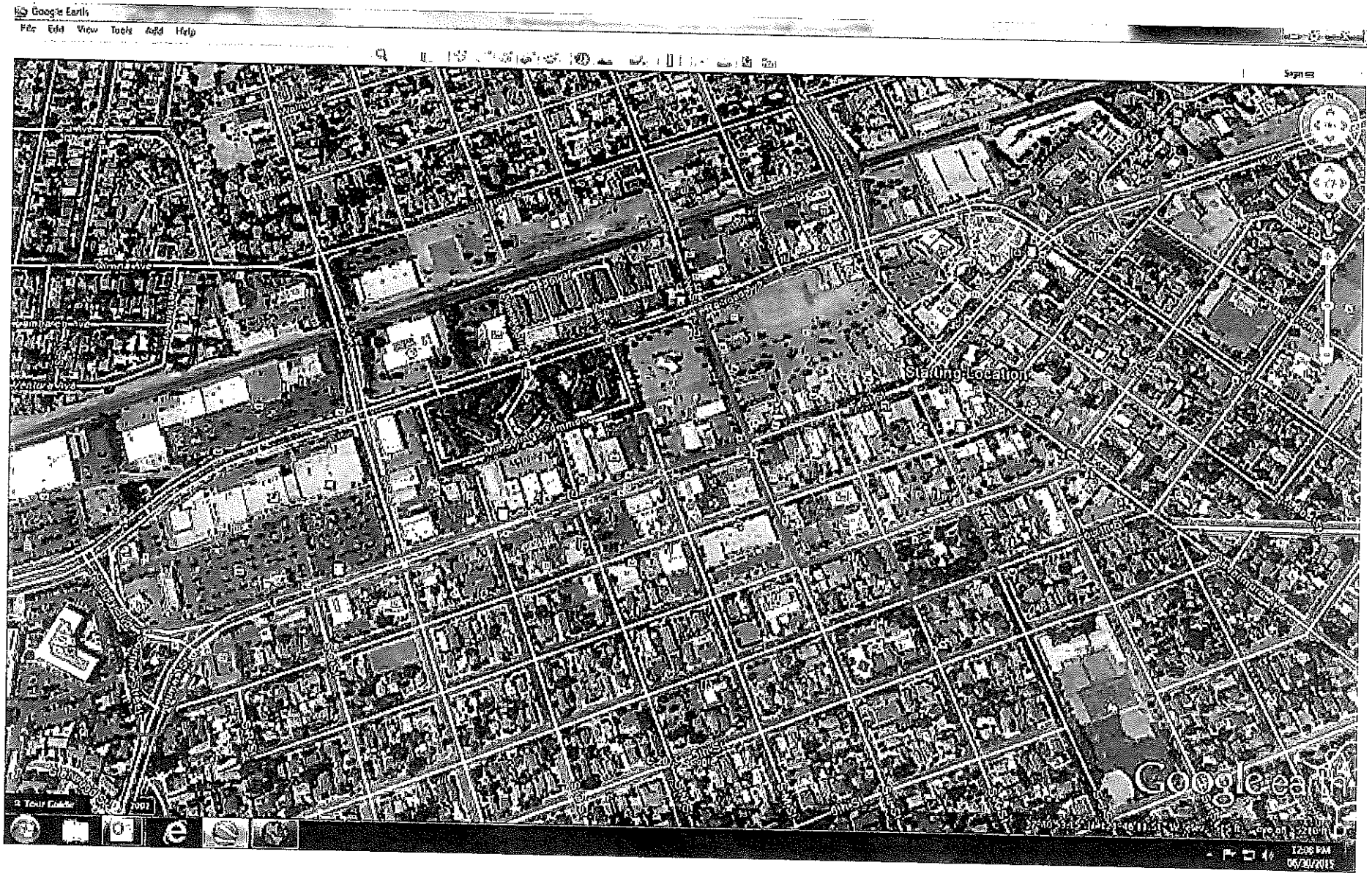
Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.


LANE
06/19/2015 09:45


Google Earth
File Edit View Tools Add Help
Starting Location
Tour Guide
Google earth
12:08 PM
06/30/2015

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore..

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 2A	South S St. between Fourth St & First St. Streets surrounding Hansen Park & Centennial Park

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

07/31/2015 11:40

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A	North side of First St. between E. Stanley and South P St.
2)	

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

07/31/2015 09:36

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A	North side of First St. between S. P St. & S. L St.
3)	

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (A) ☐ Medium (B) ☐ High (C) ☐ Very High (D)

☐ Low/Medium (A/B) ☐ Medium/High (B/C) ☐ High/Very High (C/D)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☐ Number of photographs taken: _____

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

07/31/2015 09:40

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.ne

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A (4)	South L St. between Railroad Ave & First St (eastside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (A) ☐ Medium (B) ☐ High (C) ☐ Very High (D)

☐ Low/Medium (A/B) ☐ Medium/High (B/C) ☐ High/Very High (C/D)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

07/31/2015 10:07

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.n

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A 5	Railroad Ave. between S. L St & N. Livermore Ave (South side)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (A)
- ☐ Medium (B)
- ☐ High (C)
- ☐ Very High (D)
- ☒ Low/Medium (A/B)
- ☐ Medium/High (B/C)
- ☐ High/Very High (C/D)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

SPEED
LIMIT
25
NO
PARKING
ANY
TIME
07/31/2015 10:07

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A 6	North Livermore Ave between Chestnut St & Railroad Ave.

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☒ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☐ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

SPEED LIMIT
30
07/31/2015 10:19

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A	Parking Garage on Railroad Ave & N. I St.

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (A)
- ☐ Medium (B)
- ☐ High (C)
- ☐ Very High (D)
- ☒ Low/Medium (A/B)
- ☐ Medium/High (B/C)
- ☐ High/Very High (C/D)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

Parking Structure
Parking Structure
07/31/2015 10:22

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A	First St between Maple & intersection with Second St. Around 2 open space areas bordering Old First St

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☒ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

07/31/2015 10:33

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.n

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A (9)	First St between Maple St. & S. Livermore Ave (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

07/31/2015 10:43

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #8A	South Livermore Ave. between First St & Third St. (eastside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

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Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
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D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

07/31/2015 11:03

On-land Visual Assessment Data Collection Form – Version 1.0

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.n

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A 11)	Third St between S. Livermore Ave & S. J St. (southside) and S. J St. between Third St. & Fourth St. (westside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

07/31/2015 11:04

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityofLivermore.n

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 84 12)	Fourth St. between S. J St. & S. K St. (northside) and S. K St. between Fourth St. & Third St. (eastside) and Third St. between S. K St & S. L St. (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

07/31/2015 11:07

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.n

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA # 8A 13)	S. L St. between Third St & First St. (eastside) and First St. between S. N St & S. L St. (southside)

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

☒ Low (**A**) ☐ Medium (**B**) ☐ High (**C**) ☐ Very High (**D**)

☐ Low/Medium (**A/B**) ☐ Medium/High (**B/C**) ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
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TIMES
07/31/2015 11:12

Agency: City of Livermore Water Resources Division **Date:** 7/31/15

Team Members: John Roberts **Contact E-mail:** jmroberts@cityoflivermore.net

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area

MAP ID	Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).
TMA #84	First St between Holmes & S. N St. (southside)
141	

II. Condition Category Assignment

Trash Condition Category

Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.

- ☐ Low (**A**)
- ☐ Medium (**B**)
- ☐ High (**C**)
- ☐ Very High (**D**)
- ☒ Low/Medium (**A/B**)
- ☐ Medium/High (**B/C**)
- ☐ High/Very High (**C/D**)

Photograph Documentation

Check the box below to indicate that photographs were taken and are maintained by your agency.

Photographs: ☒ Number of photographs taken: 1

Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

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