City of South Pasadena
Alternate Compliance Plan

December 15, 2016

Revised 04/11/2017

Los Angeles River Watershed Trash TMDL

Prepared Pursuant to Resolution No. R15-006

Prepared By:

John L. Hunter AND ASSOCIATES, INC.

Executive Summary

This Alternate Compliance Plan has been prepared with specific application to the California Regional Board, Los Angeles Region Resolution R15-006, commonly referred to as the Los Angeles River Trash TMDL Amendment.

As documented in reports annually submitted to the Regional Board, South Pasadenda has demonstrated continued compliance with the Trash TMDL (R07-12) since the original effective date in 2008. The Trash TMDL Amendment, adopted in 2015, provides Los Angeles River MS4 permittees with several options to demonstrate compliance with the final WLA. As described in this Report, South Pasadena has achieved compliance for the reporting year in accordance with the Amendment.

Background

The Los Angeles Regional Water Quality Control Board (RWQCB) approved the Trash TMDL for the Los Angeles River watershed on September 19, 2001. This TMDL was subsequently rescinded on July 17, 2006. On September 3, 2008 the current Trash TMDL (Resolution 07-012) became effective. This TMDL established a nine-year schedule for reducing trash discharges from sources along the Los Angeles River to meet the numeric target of zero discharged by September 30, 2016.

An Amendment to the Trash TMDL (Resolution No. 15-006) was approved by the Regional Board on June 11, 2016, and was subsequently approved by the State Water Resources Control Board on November 17, 2015, and the USEPA on June 30, 2016. This Amendment provides five approaches for permittees subject to this TMDL to demonstrate compliance with the final zero trash waste load allocation (WLA). These approaches are:

1. 100% of all conveyances discharging to the Los Angeles River are retrofitted with trash "full capture" systems (FCSs).
2. 98% of all catch basins within the agency's jurisdictional land area in the watershed are retrofitted with FCSs[1]. This approach requires a report on the technical infeasibility for the remaining catch basins and a report documenting partial capture devices and institutional control effectiveness.
3. 99% or greater reduction of the baseline load attained through a combination of FCS, partial capture devices, and institutional controls, calculated using a mass balance approach based on a trash daily generation rate (DGR) study. This approach requires all FCSs, partial capture devices, and institutional controls be properly sized, operated, and maintained. Continued DGR studies are also required for compliance reassessment.
4. 97% or greater reduction of the baseline load for two or more consecutive years, attained through a combination of FCS, partial capture devices, and institutional controls, and calculated using a mass balance approach based on a trash daily generation rate (DGR) study. This approach requires an evaluation of institutional control effectiveness and any potential enhancements, and a demonstration that opportunities to implement partial capture devices have been fully exploited. Continued DGR studies are also required for compliance reassessment.
5. A scientifically based alternative as approved by the Regional Board.

[1] 98% of all catch basins within the agency's jurisdictional land area in the watershed are retrofitted with FCS or, alternatively, 98% of the jurisdiction's drainage area is addressed by FCS and at least 97% of the catch basins (or, alternatively, drainage are) within the agency's jurisdiction in the subwatershed (the smaller of the HUC-12 equivalent area or tributary subwatershed) are retrofitted with FCS.

Alternative approaches #2 through #5 also require responsible jurisdictions to 1) demonstrate that existing studies of institutional controls and partial capture devices are representative and transferable to the implementing area, 2) provide a schedule for periodic effectiveness demonstrations and evaluations and 3) properly size, operate, and maintain FCSs and partial capture devices consistent with sizing, operation, and maintenance schedules used to determine their effectiveness.

Compliance Approach

The completion of the City of South Pasadena's 2016 DGR study has demonstrated the City is in compliance with Approach #3. For the most recent reporting year of 2015-2016 South Pasadena reported a 99.51% percent compliance level.

Requirements for Compliance Approach #4 and City Compliance Status

Pursuant to the Amendment to the Los Angeles River Watershed Trash TMDL, responsible jurisdictions may achieve compliance with the final WLA when they:

"…employ institutional controls or a combination of full capture systems, partial capture systems, and institutional controls [which result in a] reduction of trash from the jurisdiction's baseline load…between 99% and 100% as calculated using a mass balance approach, and the [trash capture] devices are properly sized, operated, and maintained."

The City's WLA reduction is between 99% and 100%

City Status: For the most recent reporting year of 2015-2016 South Pasadena reported a 99.51% percent compliance level. This was determined through a DGR Study conducted during the summer of 2016, as explained in Attachment A.[2]

Summary of Full Capture Systems, Partial Capture Systems, and Institutional Controls

The results obtained during the 2016 DGR study indicated an effective implementation of institutional control measures such as anti-littering and illegal dumping statutes, street sweeping, trash/recycling pick-up, public outreach, and community clean-up programs. An enhancement to these institutional controls is the State's recently adopted ordinance banning single-use plastic bags. This Plastic Bag Ban Veto Referendum was approved on November 8, 2016. Details on this measure, as well as a quantification of its potential benefits, is included in Attachment B. Summaries of all remaining implemented institutional controls are also included in Attachment B[3]. The City of South Pasadena expects a similar reduction in waste discharged through the implementation of the plastic bag ban.

The city has installed full-capture screens in thirty-six (36) catch basins within the city. An additional fifteen (15) FCS are proposed and awaiting construction. This accounts for a 100% reduction within the Commercial land-use area. Attachment C[4] is a map that outlines the locations of the currently installed FCS.

[2] Attachment A City of South Pasadena, Daily Generation Rate Study 2016
[3] Attachment B City of South Pasadena, Currently Implemented Institutional Controls 2016
[4] Attachment C City of South Pasadena, Full Capture Systems Installation Project Map

Daily Generation Rate

Characterization

The Daily Generation Rate (DGR) method is identified in the 2007 LAR Trash TMDL as a method for measuring the effectiveness of the institutional control measures. This method uses a mass balance approach based on a daily trash generation rate for representative drainage areas in the watershed. The DGR study is broken down into two phases, which consists of: 1) physically collecting the trash, and 2) quantifying the collected materials. Collection routes are selected in different designated land-use areas. Representative study areas are selected to include five priority land-use types:

- Commercial
- High/Low Density Residential
- Industrial
- Public Facilities and Educational Institutions
- Open Space and Recreation

At the conclusion of each route, the trash collected from the streets in the commercial, residential, industrial, public facilities/ educational institutions, and open space/recreation areas is delivered directly to a City facility where the trash is quantified per route.

Quantification

An estimate of the trash produced for each land-use area was calculated by taking the amount of trash collected and extrapolating that value to the remaining number of curb miles for that land-use area. Table 1 lists the DGRs by land use.

Table 1: Daily Generation Rates by Land Use

Land Usage	DGR per Curb Mile (lbs/mile)
Commercial	0.264
Residential	0.024
Industrial	0.180
Public Facilities/ Educational Institutions	0.076
Open Space/ Recreation	0.017

The 2016 DGR study showed an annual trash discharge into the City's storm drain system of 140 lbs. This equates to a 99.51% reduction of trash from the City's baseline WLA. Together, the mass balance approach coupled with structural catch basin compliance and institutional control measures demonstrate that the City has effectively met the compliance target of the Los Angeles River Trash TMDL.

Future Compliance

Following the recommendation in Section 2.2 of the June 15, 2015, LARWQCB Staff Report, *Reconsideration of Certain Technical Matters of the Trash TMDLs for the Los Angeles River Watershed and the Ballona Creek Watershed*, the City requests to "reduce the frequency of DGR calculations from annually to once every five years as long as there are no reductions in implementation of partial capture devices and institutional controls over the time period and no significant changes in land use that would render the last DGR calculation unrepresentative of current land uses and trash controls within the agency's jurisdiction."

The City will continue to properly maintain its trash capture devices and institutional controls and anticipates a continued compliance level above 99% in the future.

CITY OF SOUTH PASADENA

Attachment A: Daily Generation Rate Study 2016

CITY OF SOUTH PASADENA

DAILY GENERATION RATE 2016
December 15, 2016

Prepared by:

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CITY OF SOUTH PASADENA

DAILY GENERATION RATE 2016

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CITY OF SOUTH PASADENA

DAILY GENERATION RATE 2016

Executive Summary

This report summarizes the activities and findings of the Daily Generation Rate (DGR) study conducted in South Pasadena during the summer of 2016. The DGR was calculated in order to determine the effectiveness of the institutional control measures put in place to comply with this year's Trash Total Maximum Daily Loads (TMDLs) for the Los Angeles River Watershed. The TMDL requires that by 2016 all municipal permittees reduce trash discharges to the LA River to zero. However, the 2015 Los Angeles River Trash TMDL Amendment provides permittees several other options to demonstrate compliance. The City's strategy for compliance is based on Approach #3, which includes the following—99% or greater reduction of the baseline load attained through a combination of FCS, partial capture devices, and institutional controls, calculated using a mass balance approach based on a trash DGR. The results of the study discussed herein indicate that South Pasadena is in compliance with the Trash TMDL for this year.

TMDL Background

In August 2007, due to levels of trash in the LA River exceeding water quality objectives, the Los Angeles Regional Water Quality Control Board (RWQCB) adopted the LA River Trash Total Maximum Daily Loads (TMDLs). Subsequently, in December 2009 the RWQCB incorporated the LA River Trash TMDL into the Municipal Stormwater Permit, making the numerical trash limits enforceable. The Trash TMDL established a seven year schedule for reducing trash discharges from sources along the Los Angeles River to meet the numeric target of zero trash in the water. The baseline Waste Load Allocation (WLA) or starting point for reductions, assigned to the City by the Trash TMDL is 28,357 pounds—by September 30, 2016, the Trash TMDL required that all Permittees reduce their Waste Load Allocation (WLA) by 100%. However, an Amendment to the Trash TMDL (Resolution No. 15-006), approved by the Regional Board on June 11, 2016, provides alternate approaches to demonstrate compliance.

Daily Generation Rate

The DGR Study consisted of two phases: first the field collection of trash, and then its quantification. Collection routes were outlined in different designated land use areas. Representative study routes within five priority land type uses were selected at random. The land type uses were:

- High/Low density residential
- Commercial
- Industrial
- Open space and recreation
- Public/ Educational Facilities

Picture 1: Trash being collected

Field Collection:

Once the land use areas were designated, a manual pick-up was performed. To facilitate the process, a pick-up reaching tool was used. Only pieces of trash larger than a quarter of an inch were collected, since anything smaller is not subject to the trash TMDL. Manual

collection also prevented trash entering the catch basins nonetheless inlets were protected during the duration of the study. At the conclusion of each collection route, the trash collected from the commercial, residential, Public Facilities/ Educational Institutions, Open Space/Recreation areas was then delivered a designated area where the trash was quantified. The collected street litter was placed in separate piles to avoid mixing. Detailed maps and street sweeping routes are located on Pages 8-13, and summarized in the following table.

Table 1: Land Usage Miles

Land Usage	Estimated Total Curb Miles	Designated Curb Miles	Field Collection Dates
Commercial	10.5	5.0	Aug. 19th–Sept. 16th
Residential	85	4.0	Aug. 16th–Sept. 13th
Industrial	0.5	0.3	Aug. 25th–Sept.22nd
Public Facilities/ Education Institutions	5	1.5	Aug. 23rd–Sept. 20th
Open Space/ Recreation	13	3.0	Aug. 26th–Sept. 22nd

Quantification:

This phase consisted of the evaluating and weighing the trash which took place at a designated area. The loads of trash were delivered from the routes and separated by individual land use area.

This study uses the definition of litter as defined by the California Government Code Section 68055.1(g):

> *"Litter means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the elands and water of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling or manufacturing."*

The collected trash from each individual land use area was then manually quantified and classified using the following procedures:

1. Gardening gloves were utilized to grab the trash, from only one specific load, and placed onto 5-gallon buckets.
2. The bucket was suspended from a hand-held device that measured total weight. The weight of the bucket was subtracted from the total weight.
3. The trash was sorted into five categories, according to material content/ type, and approximately quantified (by %).

Standard safety precautions were followed during the trash weighing process. This was repeated for the remainder of the unloaded trash. Trash collected from each area was quantified separately. All piles were kept separated to avoid combining the trash from the five different areas.

Picture 2: Trash sorted by composition

Measuring

A digital scale was used to weigh the trash, and a 5-gallon bucket was used to estimate its volume. Each full bucket of anthropogenic trash was weighed separately, concluding with a final characterization by different type of constituents.

Results

Data collected from the trash sorting is summarized in the following table:

Table 2:

Land Usage	Designated Curb Miles	Trash (lbs)	Days Since Last Sweeping
Commercial	5.0	39.8	6
Residential	4.0	3.8	13
Industrial	0.3	2.0	13
Public Facilities/Educational Institutions	1.5	4.5	13
Open Space/ Recreation	3.0	1.8	7
Total	**13.8**	**56.3**	

Characterization

The characterization of trash was done by separating it according to the following constituents.

- Green Waste: Orange rinds, banana peels
- Plastic: bags, bottles, jugs, Styrofoam
- Paper: bags, newspaper, scraps, wrappers
- Glass: bottles, scraps, broken windows
- Metal: aluminum, steel, copper
- Other: cigarette butts, food, cloth, miscellaneous

The estimated composition of the trash loads for each land use is summarized in the following table:

Table 3: Composition

Land Usage	Green	Plastic	Paper	Glass	Metal	Other
Commercial	0%	33%	62%	0%	3%	2%
Residential	0%	52%	40%	0%	8%	0%
Industrial	0%	30%	60%	0%	3%	7%
Public Facilities/Educational Institutions	0%	53%	43%	0%	1%	3%
Open Space/ Recreation	0%	35%	57%	0%	7%	1%

DGR per Land Use Area

An estimate of the trash produced for each land use area was calculated by taking the amount of trash collected for the study and extrapolating that value to the remaining number of curb miles for that land use area. The DGR was then determined by converting the trash per week (dependent on street sweeper's schedule) to trash collected per day. The final DGR value represents the amount of the trash generated for the entire city per day.

Table 4: DGR

Land Usage	DGR (lbs/day)
Commercial	0.00
Residential	2.04
Industrial	0.09
Public Facilities/Educational Institutions	0.38
Open Space/ Recreation	0.22
Total	**2.74**

Trash Discharge Levels

The annual amount of trash that is being discharged into the storm drain system on a yearly basis was determined using the DGR values and the number of rain events during the year.

The stormwater discharge for a given rain event was calculated by multiplying the number of days since the last street sweeping by the DGR. The estimated weight of trash draining to catch basins during raining events was obtained by multiplying the average number of days between a rain event and the last street sweeping by the already obtained DGR values. The annual weight of trash draining to the catch basins was estimated by multiplying calculated values by the total number of rain occurrences during the 2015-2016 season (9 rain events recorded[1]). These values were the estimated final discharge amount of trash being discharged into the storm drain system. The final discharge was considered to be the worst-case scenario for the maximum annual weight of trash draining to catch basins from rain events. Table 5 shows the calculated values of trash washed into the storm drain system in 2016.

Table 5: Stormwater Discharge

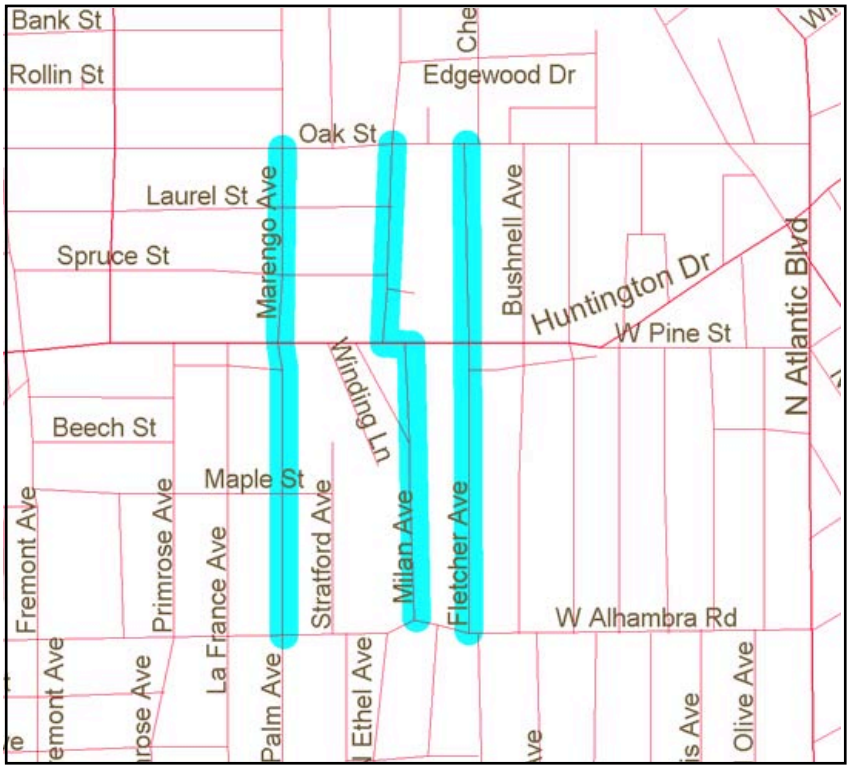
Land Usage	Discharge (lbs)
Commercial	0.00
Residential	104.3
Industrial	4.4
Public Facilities/Educational Institutions	19.6
Open Space/ Recreation	11.5
Total	**140**

Conclusion

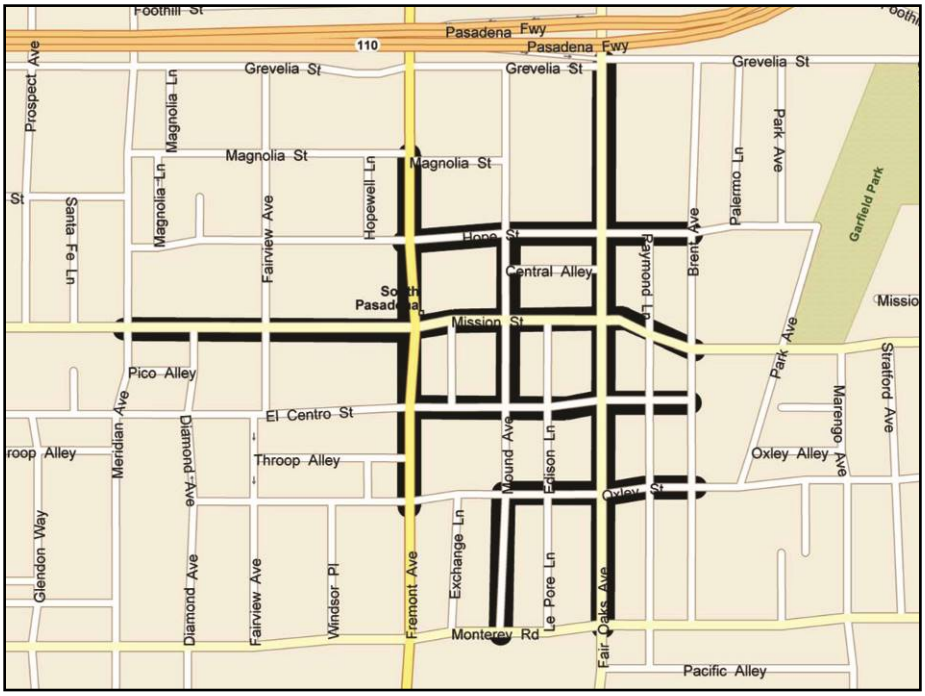
The results of this DGR study provide an estimated daily generation rate of 2.74 pounds of trash per day in the City, yielding a Total Storm Year Trash Discharge of 140 pounds for the 2015-2016 season. The baseline waste load allocation for South Pasadena is 28,357 pounds, this accounts for a WLA reduction of 99.51%.

[1] Value obtained from the National Oceanic and Atmospheric Administration (NOAA) National Weather Service. Only rain events greater than 0.25 inch and not within 3 days of another event where considered

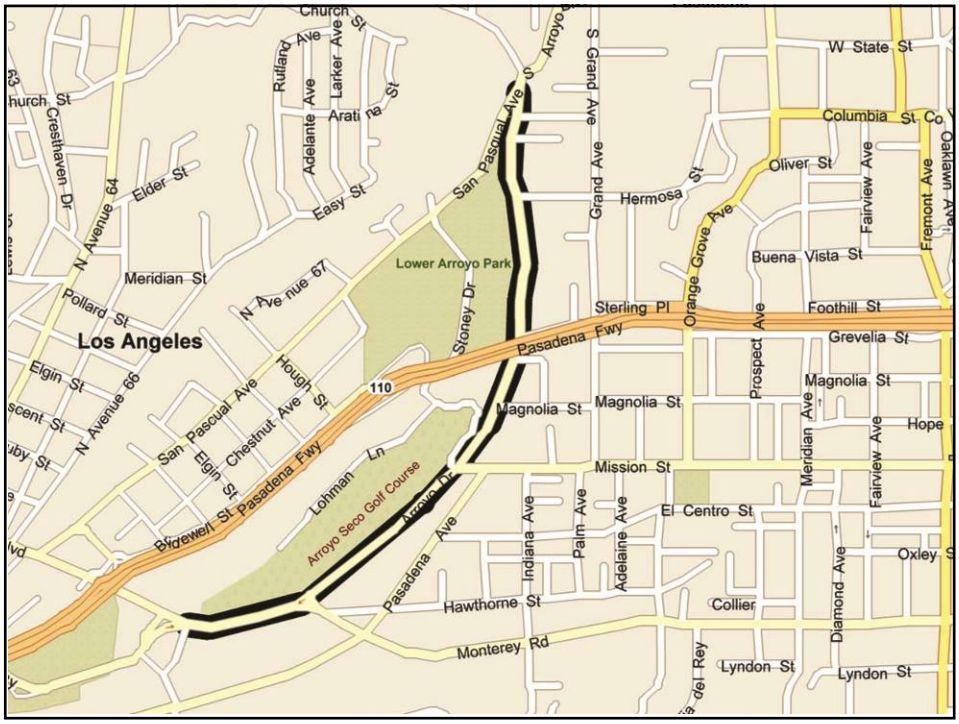
Residential Area (Street Sweeping on Wednesday)



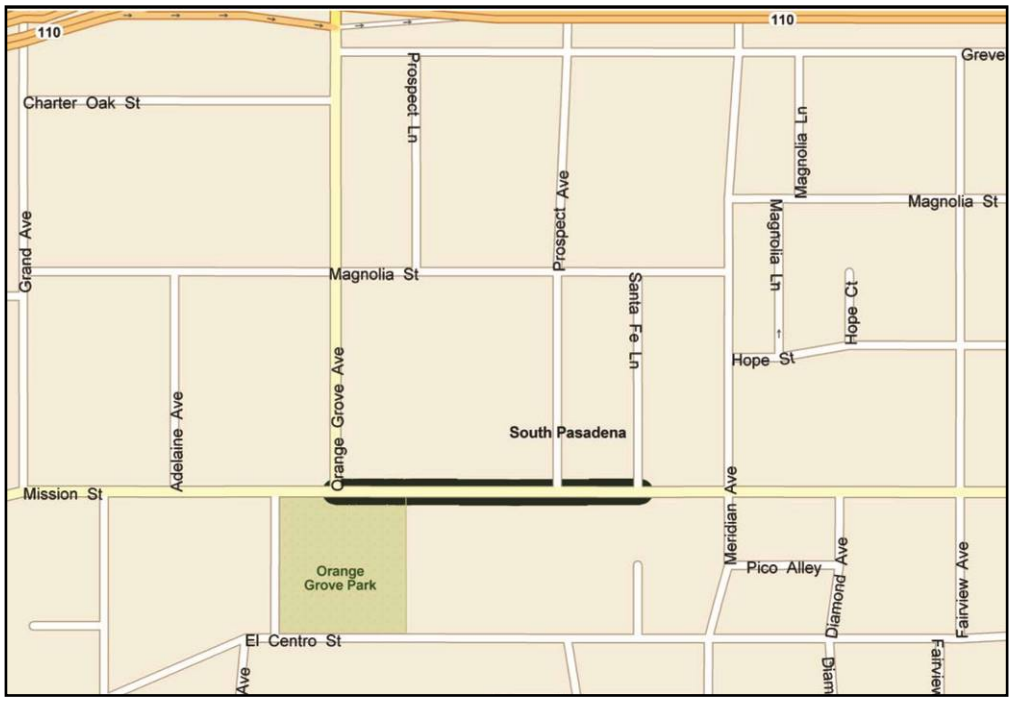
Commercial/ Downtown Area



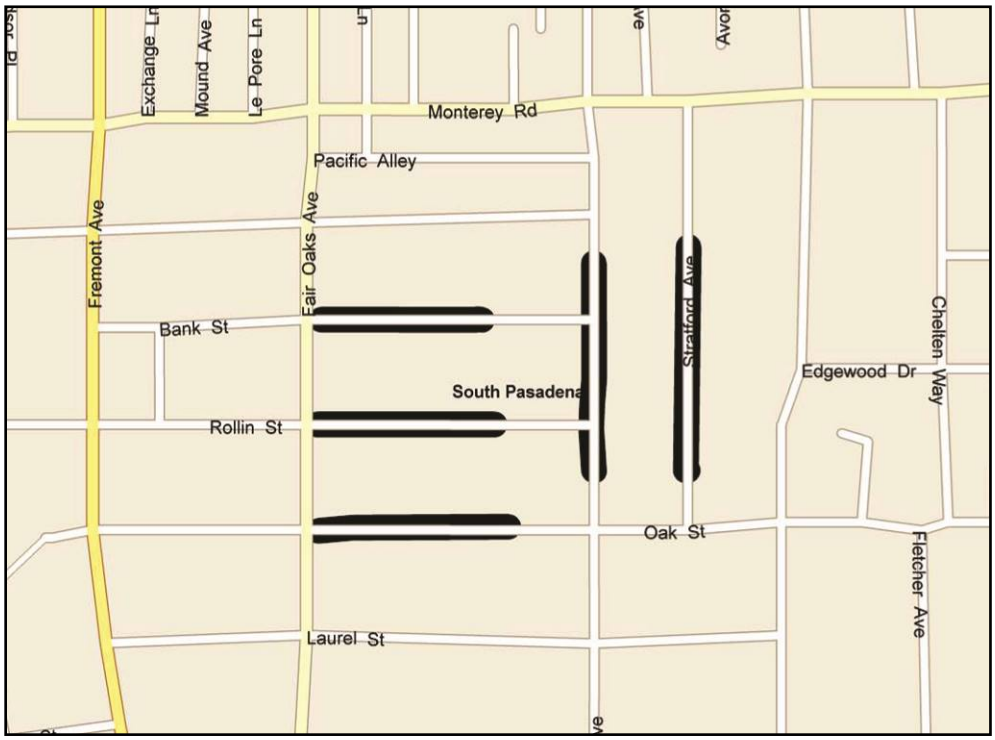
Open Space/ Recreational Area



Industrial Area



Public/Educational Areas



CITY OF SOUTH PASADENA

Attachment B: Currently Implemented Institutional Controls

Attachment B-
Currently Implemented Institutional Controls

Currently Implemented Institutional Controls

Compliance Approach #3 requires "institutional controls shall be deemed in compliance with the final WLA when the reduction of trash from the jurisdiction's baseline load is between 99% and 100%". Listed below is an inventory of currently implemented institutional controls. The effectiveness of these institutional controls is demonstrated through the City's 2016 Daily Generation Rate Study.

Nuisances and Property Maintenance Ordinance

The South Pasadena Municipal code has broad provisions prohibiting the dumping of miscellaneous trash, debris, junk, and/or lumber on one's property. Additionally, City Law Enforcement Officers are monitoring residential areas for illegal dumpers.

Plastic Bag Ban Ordinance

The City of South Pasadena amended Chapter 16 of their Municipal Code, regarding garbage and waste, to include a ban on single-use plastic bags at large grocery stores, pharmacies and convenience stores. The newly State adopted plastic bag ban veto referendum reinforces this city amendment.

There is quantitative evidence of the effectiveness of these bans on decreasing trash discharge to the storm drain system. The City of Los Angeles' "Quantification Study of Institutional Measures for Trash TMDL Compliance 2012-2013" is an assessment of the City of Los Angeles' institutional measures and their effectiveness. The study discusses the decrease in the percentage of plastics during trash clean-up events since 2009. The ban on plastic bags is believed to have had a substantial impact; "During Year 1 of this Study (summer 2012), over 1,700 single use plastic grocery bags were collected; however, in Year 2 (summer 2013), just over 850 plastic bags were found within the Study areas, representing a 51 percent reduction in number of items. This number is expected to continue to drop as the City complies with the new ordinance."

The City of South Pasadena expects a similar reduction through the continued implementation of its plastic bag ban.

Catch Basin Cleaning

Due to the importance of maintenance to the proper functioning of structural insert BMPs, South Pasadena will continue to inspect, clean and maintain the structural trash capture systems. The current schedule is to inspect and maintain as necessary these 4 times per year (three times during the wet season and once during the dry season as adjusted as the city gains experience in working with this systems.

Public Outreach

The City has provided and will continue to provide stormwater pollution prevention outreach materials addressing trash pollution through the following: print and social media (brochures, newsletters, bill inserts, and City website), environmental booths during City-sponsored events, and annual business and K-12 school outreach campaigns. During outreach events, staff demonstrates an interactive enviroscape display that allows residents to see how pollutants such as trash, oils, and pet waste drain to our waterways. Stormwater materials are also distributed annually to local businesses and to all K-12 schools during Earth Day.

Attachment B-
Currently Implemented Institutional Controls

Sweeping

The City contracts with Athens Services to provide street sweeping services. Streets are swept three times a week throughout South Pasadena.

Recycling/Garbage

Garbage: The City utilizes Athens Services as the authorized collection agency to provide trash and recycling service for all residential and commercial customers in South Pasadena. Trash is collected once per week.

Recycling: In addition to Athens Services recycling collection and green waste recycling programs, the City promotes recycling through the distribution of prints that provide a list of sustainable practices and waste reduction tips. Additionally, the City provides a "Reduce, Reuse, Recycle Directory" for residences to dispose based on commodity. All prints and brochures are available on the City's website.

Household Hazardous Waste (HHW) Disposal

Household Hazardous Waste Roundups are one-day events hosted by the Sanitation Districts of Los Angeles County (LACSD) and the Los Angeles County Department of Public Works at the South Pasadena Unified School District Parking Lot, among various locations. A schedule of upcoming roundup events is available on the City's website.

S.A.F.E. (Solvents / Automotive / Flammables / Electronics) Collection Centers are permanent facilities that are open every weekend to all Los Angeles County residents. The center nearest to South Pasadena is located at the Los Angeles-Glendale Treatment Plan at 4600 Colorado Boulevard in Los Angeles.

CalRecycle encourages the recycling of used motor oil by certifying used oil recycling collection centers.

Bulky Items Disposal

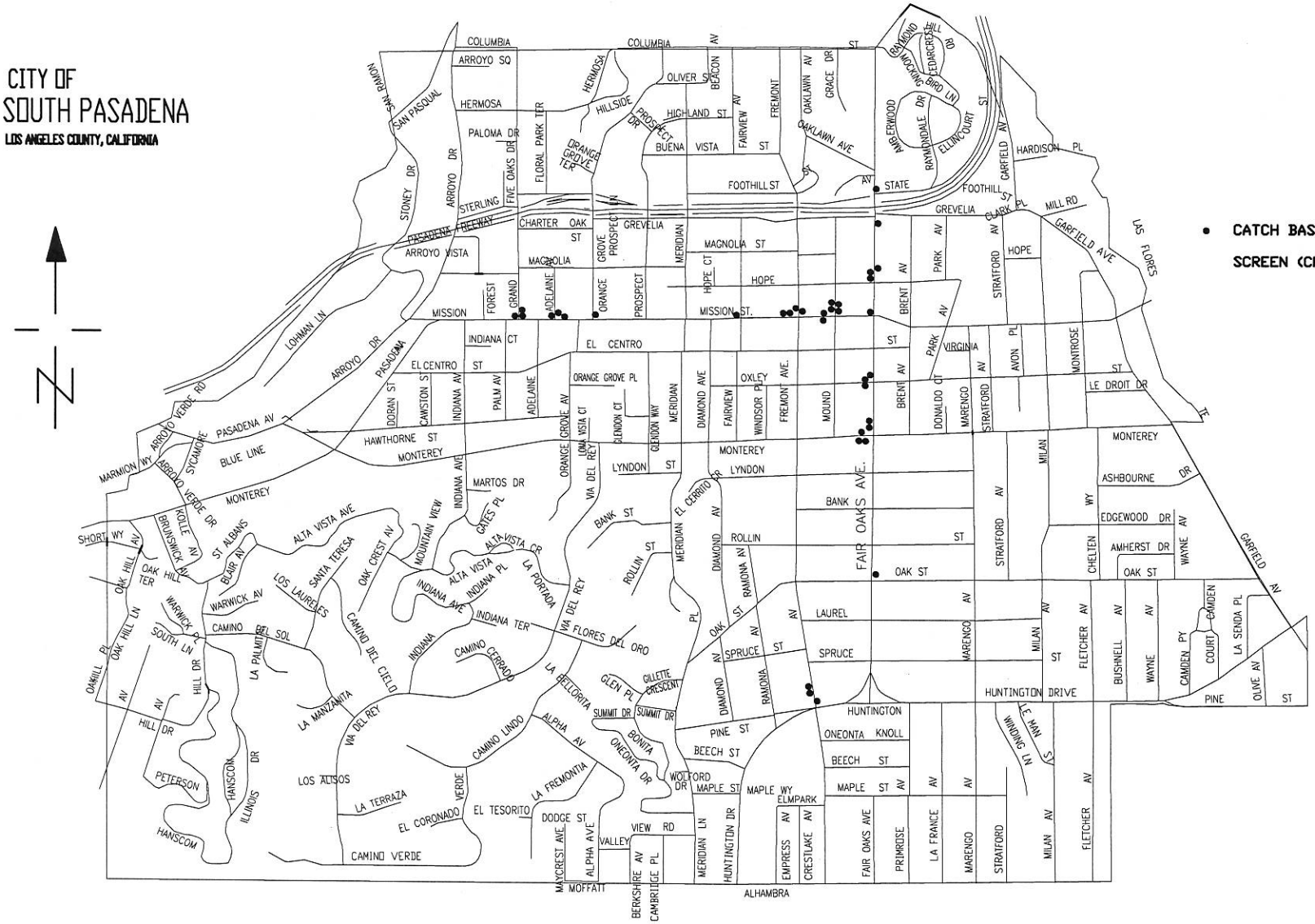
Residents of South Pasadena are encouraged to dispose of large, bulky items at one-day event located on Arroyo Drive, south of Mission Street. Athens Services will accept garbage and reusable items.

CITY OF SOUTH PASADENA

Attachment C: Full Capture Systems Installation Project Map

CITY OF SOUTH PASADENA

LOS ANGELES COUNTY, CALIFORNIA



Trash TMDL Compliance Reporting Forms

Reporting Period	Total Trash Discharged (lb. or gal.)	Effluent Limitation (lb. or gal.)	Compliance	Comments
31-Oct-10	1,024	14,179	YES	
31-Oct-11	2,748	11,343	YES	
31-Oct-12	987	8,507	YES	
31-Oct-13	1,165	5,671	YES	
31-Oct-14	422	2,836	YES	
31-Oct-15	649	936	YES	
31-Oct-16	140	0	99.51%	This year's study indicates that the City is within a 99.51 percent compliance level. See attached Alternative Compliance Plan.
Baseline Waste Load Allocation		***28,357***		
Notations:				
Form	Continue to add to this form for each annual reporting period			
Column 1:	Reporting Period: Part 7.1.(C)(1) of Order No. 01-182 as amended by Order No. R4-2009-0130			
Column 2:	As calculated pursuant to Part 7.1.(B)(1)(b)(2) of Order No. 01-182 as amended by Order No. R4-2009-0130			
	Alternative approaches per Part 7.1.(B)(1)(b)(3) must be approved in advance by the Executive Officer			
Column 3:	Effluent Limitation per Part 7.1, Appendix 7-1, Table 1a or 1b, of Order No. 01-182 as amended by Order No. R4-2009-0130			
Column 4:	Compliance - Yes, if total storm year trash discharge is less than or equal to applicable Interim or Final Effluent Limitation			
Column 5:	Provide comments, if necessary			

Rainfall Station	San Gabriel Fire Dept					
Total Trash Discharged by Storm Event						
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
DGR	Date of Last Street Sweeping	Date of Storm Event	Precipitation Depth	Days	Amount of Trash Recovered from Catchbasins	Storm Event Trash Discharge	Comments
2.7	09/25/15	10/05/15	0.5	10	0	27.4	Like most cities, the entire City of South Pasadena is not swept in one day. Approximately equal parts of the City are swept Monday, Wednesday, and Friday, once every two weeks, excluding the commercial area that is swept three times a week (Monday, Wednesday, Friday). Thus during any given rain event, different parts of the City were swept between 1 to 14 days previously. Rainfall data was obtained from the closest National Oceanic and Atmospheric Administration preceipitation station. Using the DGR of 2.74 lbs, and accounting for the bi-weekly process to clean all areas of the City, the storm event trash discharge equates to an approximate discharge of 15.5 lbs per rain event. This accounts for a total storm year trash discharge of 140 lbs.
2.7	01/04/16	01/05/16	2.07	1	0	2.7	
2.7	01/04/16	01/06/16	0.82	2	0	5.5	
2.7	01/25/16	01/31/16	0.25	6	0	16.4	
2.7	02/12/16	02/17/16	0.46	5	0	13.7	
2.7	02/29/16	03/06/16	0.62	6	0	16.4	
2.7	02/29/16	03/07/16	0.28	7	0	19.2	
2.7	02/29/16	03/11/16	0.36	11	0	30.1	
2.7	05/03/16	05/06/16	1.76	3	0	8.2	
Total Storm Year Trash Discharge						**140**	

Notations:		
Form	Add additional rows for storm events, if necessary	
Rainfall Station	Name of rainfall station used, indicate only the L.A. County station number	
Total Storm Year Trash Discharge = Sum of individual storm event discharges for reporting period (October 1 - September 30).		
Col. 1	DGR for Jurisdiction from DGR Sampling Data worksheet	
Col. 2	Date of last street sweeping	
Col. 3	Date of storm event with 0.25 inch or more of rainfall	
Col. 4	Depth of rainfall taken from nearest rainfall station (in.)	
Col. 5	Number of days between date of last street sweeping and storm event. For each day of a storm event that generates precipitation greater than 0.25 inch, the Permittee shall calculate a storm event discharge. When more than one storm event occurs prior to the next street sweeping the discharge shall be calculated from the date of the last storm event discharge calculation.	
Col. 6	Amount of trash recovered from catchbasins, if any (lb. or gal.)	
Col. 7	Storm Event Discharge = Col. 1 x Col. 5 - Col. 7 [trash discharged by the storm event]	
Col. 8	Provide comments, if necessary	

Trash Collection for Calculation of Daily Generation Rate, DGR

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11
Land Use Category	Total Area within Jurisdiction	Representative Area for DGR Calculation	Date of Last Street Sweeping	Date of DGR Sampling	Length of Collection Period	Trash Collection from Representative Area (lb. or gal.)	Trash Cleaned Out from Catchbasin(s) within the Representative Area (lb. or gal.)	Total Amount of Trash Generated in Representative area	Total Trash Generated within Representative Area	Comments
Commercial	10.5	5								
			8/13/2016	8/19/2016	6	3.1	0	3.1		Commercial areas swept 3 days per week (Monday, Wednesday, Friday). DGR samples evaluated at City Yard where the street swee
			8/20/2016	8/26/2016	6	11.8	0	11.8		deposited each sweeping event (i.e. 3x/week), and quantified and categorized weekly by hand on Friday.
			8/27/2016	9/2/2016	6	6.7	0	6.7	2.78	
			9/3/2016	9/9/2016	6	8.9	0	8.9	Reduced by 100% FCS	
			09/10/16	9/16/16	6	9.4	0	9.4	0.00	
				Total Days:	30					
High/Low Density Residential	85	4								
			08/03/16	8/16/16	13	1.4	0	1.4		Residential areas swept bi-weekly. DGR sampling collected bi-weekly (Tuesdays), by hand, and prior to street sweeping activities
			08/17/16	8/30/16	13	0.3	0	0.3		(Wednesday), thus a two-week period ellapsed between sweeping and collection events.
			08/31/16	9/13/16	13	2.1	0	2.1		
							0	0.0	2.04	
				Total Days:	39					
Industrial	0.5	0.3								
			08/12/16	8/25/16	13	0.6	0	0.6		Industrial areas swept bi-weekly. DGR sampling collected bi-weekly (Thursday) by hand, and prior to street sweeping activities (Friday
			08/26/16	9/8/16	13	0.0	0	0.0		thus a two-week period ellapsed between sweeping and collection events.
			09/09/16	9/22/16	13	1.4	0	1.4		
							0	0.0	0.09	
				Total Days:	39					
Public Facilities / Educational Institutions	5	1.5								
			08/10/16	8/23/16	13	3.1	0	3.1		Public & Educational areas swept bi-weekly. DGR sampling collected bi-weekly (Tuesday) by hand, and prior to street sweeping activi
			08/24/16	9/6/16	13	0.9	0	0.9		(Wednesday), thus a two-week period ellapsed between sweeping and collection events.
			09/07/16	9/20/16	13	0.6	0	0.6		
							0	0.0	0.38	
				Total Days:	39					
Open Space / Recreation	13	3						4.5		
			08/12/16	8/26/16	7	0.3	0	0.3		Open Space & Recreational areas swept bi-weekly. DGR sampling collected weekly by hand, and prior to street sweeping activities
			08/26/16	9/2/16	7	0.6	0	0.6		(Fridays).
			09/02/16	9/9/16	7	0.4	0	0.4		
			09/09/16	9/16/16	7	0.3	0	0.3		
			09/16/16	9/22/16	7	0.3	0	0.3	0.22	
				Total Days:	35					
Total Area	114	13.8					**Total Trash (lbs)**	56.3		
							DGR (lbs/day)		**2.74**	

Notes: * Total collection period must equal 30 days for each representative land use area.

Col. 1	Land Use Category - Categories based on Baseline Monitoring Program conducted by LACDPW baseline monitoring group. Alternatively, describe land use type as designated by the City.
Col. 2	Total area of said land use within jurisdiction (fill in once in gray-highlighted row for each land use category). Total area may be accounted for using other approved measurement units, e.g. curb miles.
Col. 3	Representative area for DGR calculation (fill in once in gray-highlighted row for each land use category). Representative area may be accounted for using other approved measurement units, e.g. curb miles. Collectively, the areas used for DGR calculation should be representative, proportionally, of the land uses within the jurisdiction and must be approved by the EO prior to the 30-day collection period.
Col. 4	Date of last street sweeping
Col. 5	Date of DGR sampling (direct measurement of deposited trash) - The DGR collection period(s) must fall between June 22nd and September 22nd
Col. 6	Length of Collection Period in days - The DGR collection period must be 30 days, total, for each representative land use area
Col. 7	Trash collection from representative area through street sweeping or other method, lb. or gal.
Col. 8	Trash cleaned out from catchbasins within the representative area (lb. or gal.). Trash accumulated in the CBs during the DGR collection period must be included in the total trash generated. Where CBs are closed off such that no trash can enter them for the purpose of DGR sampling, this value will be zero (0).
Col. 9	Total amount of trash generated in representative area (sum of Col. 7 and Col. 8), lb. or gal.

Col. 10	Total Trash Generated within Representative Area (estimated in 30 day period)				
Col. 11	Provide comments, if necessary				
Note: Sampling must be conducted during any 30-day period, starting June 22nd through September 22nd of each year.					