2017 Ballona Creek Trash TMDL Annual Report for the City of West Hollywood

Prepared for the Los Angeles Regional Water Quality Control Board Submitted as part of the 2016-2017 Individual MS4 NPDES Annual Report

December 15, 2017

Individual Form

Reporting Year 2016 - 2017 City of West Hollywood Trash TMDL Annual Report

December 15, 2017

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1. Background

The City of West Hollywood (City) is seeking compliance with the Ballona Creek Trash TMDL (Trash TMDL) through an alternative compliance option, as allowed by the June 11, 2015, Los Angeles Regional Water Quality Control Board (Regional Board) Amendment to the Trash TMDL. The City is employing a combination of full capture systems, partial capture systems, and institutional controls—all properly sized, operated, and maintained—with the goal of achieving a reduction in trash discharge of 99% or greater from the baseline load. The percent reduction is determined through a mass balance approach, based on a daily generation rate (DGR) study as described in the Regional Board's August 9, 2007, Trash TMDL Staff Report for the Los Angeles River Watershed.

2. Compliance Status

The Regional Board's mass balance worksheets (Reporting Forms) were used to calculate the percent reduction in trash discharge for reporting year 2016-2017. They are discussed in Section 5 and included in Section 6 of this report.

The City will conduct a DGR study in 2018 and will continue to properly maintain its trash capture devices and its exceptional institutional controls as described in Section 3. In order to achieve loading reductions above 99% in future reporting years, the City is considering the installation of additional full capture devices in catch basins in high trash generating land uses, or partial capture devices in all feasible catch basins. If the 2018 study results in a 99% load reduction, the City will request the Executive Officer's concurrence to reduce the frequency of DGR studies from annually to once every five years. In this event the City will report annually on the continued implementation at the same level of capture devices and institutional controls and any drastic land use changes that occur.

3. Full Capture Systems, Partial Capture Systems, and Institutional Controls

Institutional controls include the following:

- The entire City is swept on an aggressive tiered schedule based on land use. Residential streets are swept at least once a week, and commercial streets are swept on schedules that range from two to seven days a week. The specific routes and schedules are included at the end of this Section 6.
- Litter is picked up by hand by four separate crews along commercial streets, and 50 feet up each side street, five days a week. On Santa Monica Blvd and its side streets litter is picked up by hand seven days a week. The specific routes and schedules are included at the end of Section 6.
- The City has installed street side trash receptacles on all commercial streets and at bus stops. This includes 22 Bigbelly solar self compacting street side trash receptacles.
- The City provides and produces stormwater pollution prevention outreach materials primarily through print and social media (brochures, newsletters, bill inserts) and through school outreach campaigns.
- The City provides residential curbside recycling, hazardous and electronic waste roundups, and bulky item collection for residents.

4. Daily Generation Rate (DGR) Study

The City's trash discharge for the reporting year was estimated using a mass balance approach based on a trash DGR calculated for land use areas within the City. The representative land use areas studied were residential, commercial, public/educational, and open space. There is no industrial land use area in the city. The DGR was calculated by weighing trash collected over a 30-day period in the summer along representative street sweeping collection routes within the study areas, then extrapolating that weight across the City. See Figures 1-7 for the designated routes. The results of the DGR study are included as part of the Regional Board Reporting Forms in Section 6.

4.1 Study method

Trash¹ was manually picked up with a reaching tool along the collection routes. (See Figure 8.) The manual pickup was conducted one day prior to street sweeping for each route. Catch basins along the study routes have curb screens to prevent trash from being swept into them. (See Figure 9.) Only trash a quarter of an inch or larger was collected. Collected trash in each area was weighed using a calibrated digital scale. (See Figure 10.) Five gallon buckets were used to estimate the volume. The trash was then separated and quantified by material type. A standard health and safety plan was followed at all times. The health and safety plan is available upon request.

4.2 Collection routes

Figures 1-7 show the collection routes for the DGR Study. Each figure includes a brief description.



Figure 1. High Density Residential Area Route. Collection occurred Tuesday. Route includes the side of the street swept Wednesday only.

¹ Following the Los Angeles River Trash TMDL, "trash" is defined in California Government Code Section 68055.1(g) as "...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 lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling or manufacturing."

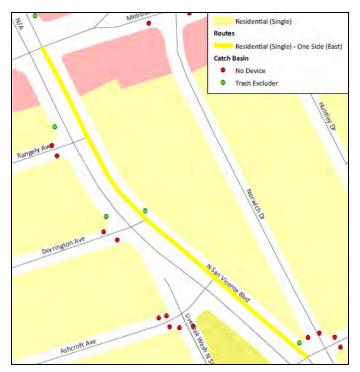


Figure 2. Low Density Residential Area Route. Collection occurred Wednesday. Route includes the side of the street swept Thursday only.

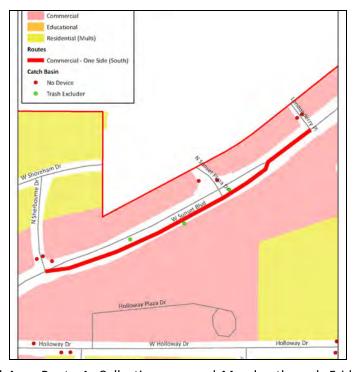


Figure 3. Commercial Area Route 1. Collection occurred Monday through Friday. Route includes the South side of the street only.

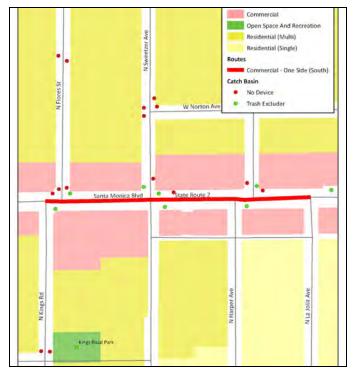


Figure 4. Commercial Area Route 2. Collection occurred Monday through Friday. Route includes the South side of the street only.

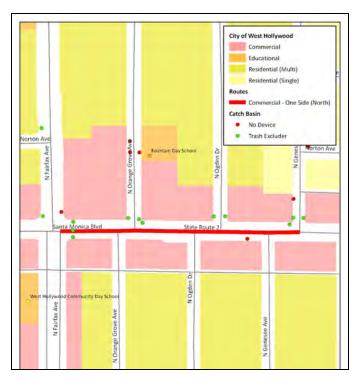


Figure 5. Commercial Area Route 3. Collection occurred Monday through Friday. Route includes the North side of the street only.

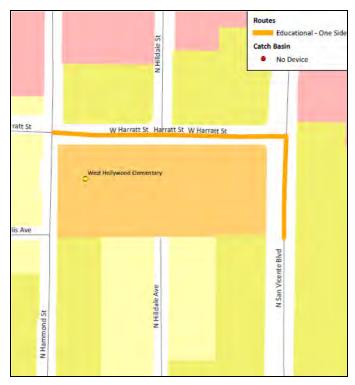


Figure 6. Public/Educational Area Route . Collection occurred Tuesday. Route includes the side swept Wednesday only.

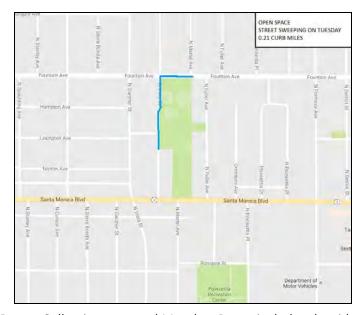


Figure 7. Open Space Route. Collection occurred Monday. Route includes the side of the street swept Tuesday only.

4.3 Field pictures

Figures 8-11 were taken during the 2017 DGR study. Each picture includes a brief description.



Figure 8. DGR crew member collecting trash using a reaching tool.



Figure 9. Catch basins along the study routes have curb screens to prevent trash from being swept into them.



Figure 10. DGR crew member weighing collected trash using a digital scale.



Figure 11. Sorted trash pile from the Public/Educational Area route on 8-15-17.

5. Mass Balance Approach

The mass balance Reporting Forms provided by the Regional Board were used to calculate total trash discharge. (See Section 6.) Deviations from the Reporting Forms are noted and explained in the comments sections. This includes the following:

- The City was unable to obtain catch basin clean-out data for the reporting year. It is possible that 715 lbs of trash or more was recovered from catch basins through this process. If subtracted from the "Storm Year Trash Discharge" weight for the reporting year, this would equate to 99.0% reduction or more.
- The entire City of West Hollywood is swept on an aggressive tiered schedule based on land use. Residential streets are swept at least once a week, and commercial streets are swept on schedules that range from two to seven days a week. Accounting for this effect results in fractional days of trash accumulation for a given storm event.

6. Trash TMDL Reporting Forms

The 2017 Trash TMDL Reporting Forms and Street Sweeping/Hand Pick-up Maps are included on the following pages.

Institutional Controls Worksheet - DGR Sampling Data

Reporting Year: 2016-2017 Prepared: by City of West Hollywood

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	
	Total Area	Representative	Date of Last		Lenath of	Trash Collection from	Trash Cleaned Out from Catchbasin(s) within the Representative	Total Amount of Trash Generated in			
Land Use	within	Area for DGR	Street	Date of DGR		Representative	Area (lb. or	Representative	Total Trash Generated within		
Category	Jurisdiction	Calculation	Sweeping	Sampling	Period	Area (lb. or gal.)	gal.)	area	Representative Area	Comments	
Low Density	22.92	0.23				· · · · · · · · · · · · · · · · · · ·	J ===-/				
	1		08/03/17	8/9/17	6	0.13	0	0.13		Low Density Residential areas swept weekly. DGR sampling collected weekly (Wednesday) by hand, and prior to street sweeping activities	
			08/10/17		6	0.31		0.31		(Thursdays). Thus a six-day period ellapsed between sweeping and collection events.	
			08/17/17	0/20/17	6	0.31	0	0.31			
			08/24/17		6	0.13	0	0.13			
			08/31/17		6	0.13	0	0.13	3.35		
	07.10			Total Days:	30		l				
Commercial	27.49	0.65	00/00/47	0/0/47	6	lo 75	lo.	2.75		6	
			08/03/17 08/10/17	0/3/1/	6	2.75 4.25	0	4.25		Commercial areas swept weekly, higher priority areas swept even more frequently. DGR sampling collected daily and quantified on Wednesday.	
			08/17/17		6	3.25		3.25		wednesday.	
			08/24/17		6	0.50	ľ	0.50		†	
					6	2.75		2.75	19.03	†	
				Total Days:	30					†	
High Density	31.05	0.23									
					6	1.25		1.25		High Density Residential areas swept weekly. DGR sampling collected weekly (Tuesday) by hand, and prior to street sweeping activities	
					6	0.25		0.25		(Wednesday). Thus a six-day period ellapsed between sweeping and collection events.	
					6	0.50	0	0.50		<u> </u>	
			08/23/17 08/30/17	0, -0,	6	0.31	0	0.31	12.94	<u> </u>	
			06/30/17	Total Days:	30	0.30	U	0.50	12.94	- 	
Educational Institutions	0.74	0.17			6	0.50		0.50		Public & Educational areas swept weekly. DGR sampling collected weekly (Tuesdays) by hand, and prior to street sweeping activities	
					6	1.13	0	1.13		(Wednesdays) thus a six-day period ellapsed between sweeping and collection events.	
			08/16/17		6	0.44	0	0.44			
			08/23/17		6	1.13		1.13			
			08/30/17		6	2.13	0	2.13	0.77	<u> </u>	
Open Space / Recreation	0.66	0.21		Total Days:							
					6	0.63	0	0.63		Open Space & Recreational areas swept weekly. DGR sampling collected weekly (Monday) by hand, and prior to street sweeping activities	
		1			6	1.44	0	0.31		(Tuesdays), thus a six-day period ellapsed between sweeping and collection events.	
		 	08/15/17 08/22/17	0/21/11	6	0.31	U	0.31		-{	
		 	08/29/17		6	0.13		0.13	0.29		
		<u> </u>	00/20/1/	Total Days:		0.10		0.10	0.20	1	
Total Area	82.86	1.49		,			Total Trash (lbs)	25.5			
							DGR (lbs/day)		36.39		
Notes:		ction period must									
Col. 1										e type as designated by the City.	
Col. 2										approved measurement units, e.g. curb miles.	
Col. 3									rea may be accounted for using		
Col. 4		urb miles. Collecti street sweepina	vely, the areas	used for DGF	calculation	snould be represe	entative, proportio	nally, of the land	uses within the jurisdiction and i	must be approved by the EO prior to the 30-day collection period.	
Col. 4 Col. 5			measurement	of denocited t	rach) The	DCP collection no	riod(e) must fall b	otween lune ??n	d and September 22nd		
Col. 6										†	
Col. 6	Length of Collection Period in days - The DGR collection period must be 30 days, total, for each representative land use area Trash collection from representative area through street sweeping or other method, lb. or gal.										
Col. 7								CBs during the Di	R collection period must be inc	Suided in the total trash generated	
331. 0	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						and Col. 8), lb. or		20 2010 (0).		1	
Col. 10		Generated within					ľ				
Col. 11		ments, if necessa									
Note: Sampling mu	ist be conduct	ted during any 30	-day period, st	arting June 22	nd through S	September 22nd o	f each year.				

Part 7.1.C(1)(b)(2) -L.A. County MS4 Permit City of West Hollywood Annual Report: Dec 2017

Institutional Controls Individual Storm Event Total Storm Year Trash Discharge

Date: 12/15/2017 Reporting year: 2016-2017

	Los Angeles 2.6 arged by Storm Ev						
		Col. 3	0-1-4	0.1.5	0-1-0	0-1-7	0.1.0
Col. 1	Col. 2		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
36.4	11/18/16	11/21/2016	0.92	2.65	HOITI Catchbashis		* Rainfall data was collected from the
	12/14/16	12/16/2016	1.64	1.47			closest rainfall station.
36.4 36.4	12/20/16	12/22/2016	0.65	1.47		60.0	-
36.4	12/22/16	12/24/2016	1.7	1.03			** The City of West Hollywood is swept
36.4	12/29/16	12/31/2016	0.25	1.12			on an aggressive tiered schedule base
36.4	01/03/17	1/5/2017	0.23	1.77			on land use. Residential streets are
36.4	01/03/17	1/9/2017	0.34	1.89			swept at least once a week, and
36.4	01/10/17	1/11/2017	0.71	0.94			commercial streets are swept on
36.4	01/10/17	1/11/2017	0.34	0.94			schedules that range from two to seven
36.4	01/11/17	1/13/2017	0.73	0.53			days a week. The specific routes and
36.4	01/17/17	1/19/2017	0.66	1.65			schedules are included at the end of th
36.4	01/19/17	1/21/2017	1.14	1.12			section. As such during any given rain
36.4	01/22/17	1/23/2017	2.17	0.29			event, different parts of the City were
36.4	02/03/17	2/6/2017	0.5	2.65			swept between 1 to 7 days previously.
36.4	02/06/17	2/7/2017	0.37	0.53			Accounting for this effect results in
36.4	02/09/17	2/11/2017	0.54	1.83			fractional days of trash accumulation fo
36.4	02/16/17	2/18/2017	2.37	1.77			a given storm event.
50.4	02/10/17	2/10/2017	2.01	1.77		04.0	a given storm event.
Total Storm Yea	r Trash Discharg	e				870.4	
		, -					

Part 7.1.C(1)(b)(2) -L.A. County MS4 Permit City of West Hollywood Annual Report: Dec 2017

Institutional Controls Individual Storm Event Total Storm Year Trash Discharge

Date: 12/15/2017 Reporting year: 2016-2017

Rainfall Statio	n Los Angeles 2.6	NW, CA US											
Total Trash Dis	charged by Storm Ev	ent											
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						
Notations:													
Form	Add additional rows for storm events, if necessary												
Rainfall Station	Name of rainfall sta	Name of rainfall station used, indicate only the L.A. County station number											
Total Storm Year	Trash Discharge = Su	ım of individual stoı	m event discharg	es for reporting	period (October 1 - September 30	0).							
Col. 1	DGR for Jurisdiction	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 n											
Col. 4	Depth of rainfall taken from nearest rainfall station (in.)												
Col. 5	Number of days bet	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 f	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 rec	Amount of trash recovered from catchbasins, if any (lb. or gal.)											
Col. 7	Storm Event Discha	Storm Event Discharge = Col. 1 x Col. 5 - Col. 7 [trash discharged by the storm event], lbs. or gal.											
Col. 8	Provide comments, if necessary												

Part 7.1.C(1)(a) -L.A. County MS4 Permit City of West Hollywood Annual Report (Dec-2017)

Date: 12/15/2017 Prepared by City of West Hollywood

Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
Institutional Control		Aeasure Structi		al Control				
Total Trash Discharged (lbs.)	Effluent Limitation	•	served by FCDs and	served by	Trash Abatement	Total Combined Compliance	Compliance	Comments
970	424	03.5%	110	15 20/	00.0%/	04.59/*		* The City was unable to obtain catch basin clean-out data for the reporting year. It is possible that 715 lbs of trash or more was recovered from catch basins through this process. If subtracted from the "Storm Year Trash Discharge" weight for the reporting year, this would equate to 99.0% reduction or more.
	Institution Total Trash Discharged (lbs.)	Total Trash Discharged (lbs.) Effluent Limitation	Total Trash Discharged (lbs.) Effluent Compliance	Institutional Control Measure Total Trash Discharged (lbs.) Effluent Limitation Compliance PCDs Structur Total # CBs served by FCDs and PCDs	Institutional Control Measure Structural Control Total # CBs served by FCDs and PCDs FCDs / PCDs Total # CBs served by FCDs / PCDs FCDs / PCDs	Institutional Control Measure Structural Control Total Trash Discharged (lbs.) Effluent Limitation Compliance Compliance Structural Control Total # CBs served by FCDs / FCDs / PCDs PCDs Required Served by FCDs / PCDs PCDs Required Served by FCDs / PCDs Note: Total # CBs served by FCDs / PCDs Total # CBs served by FCDs / PCDs Total # CBs served by FCDs / PCDs Note: Total # CBs served by FCDs / PCDs / PCDs Note: Total # CBs served by FCDs / PCDs / PCDs Note: Total # CBs served by FCDs / PCDs	Institutional Control Measure Structural Control Total Trash Discharged (lbs.) Equivalent Limitation Compliance Equivalent Compliance Equivalent Compliance FCDs and PCDs FCDs PCDs Required Trash Abatement (%) Total Combined Compliance Compliance	Institutional Control Measure Structural Control Total # CBs served by FCDs and PCDs FCDs and PCDs Required Trash Abatement (%) Compliance Compliance Compliance

Notations:

Form Structural Control Measure: Report compliance using land area served by FCD/PCDs or number of catchbasins served by FCD/PCDs.

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 = 1-(Col. 2 / Baseline Waste Load Allocation)

Column 5: Total number of catchbasins, total number of (CBs) served by FCD/PCDs within jurisdiction

Part 7.1.C(1)(a) -L.A. County MS4 Permit City of West Hollywood Annual Report (Dec-2017)

Institutional and Structural Controls Combined WLA Reduction Calculation

Date: 12/15/2017 Prepared by City of West Hollywood

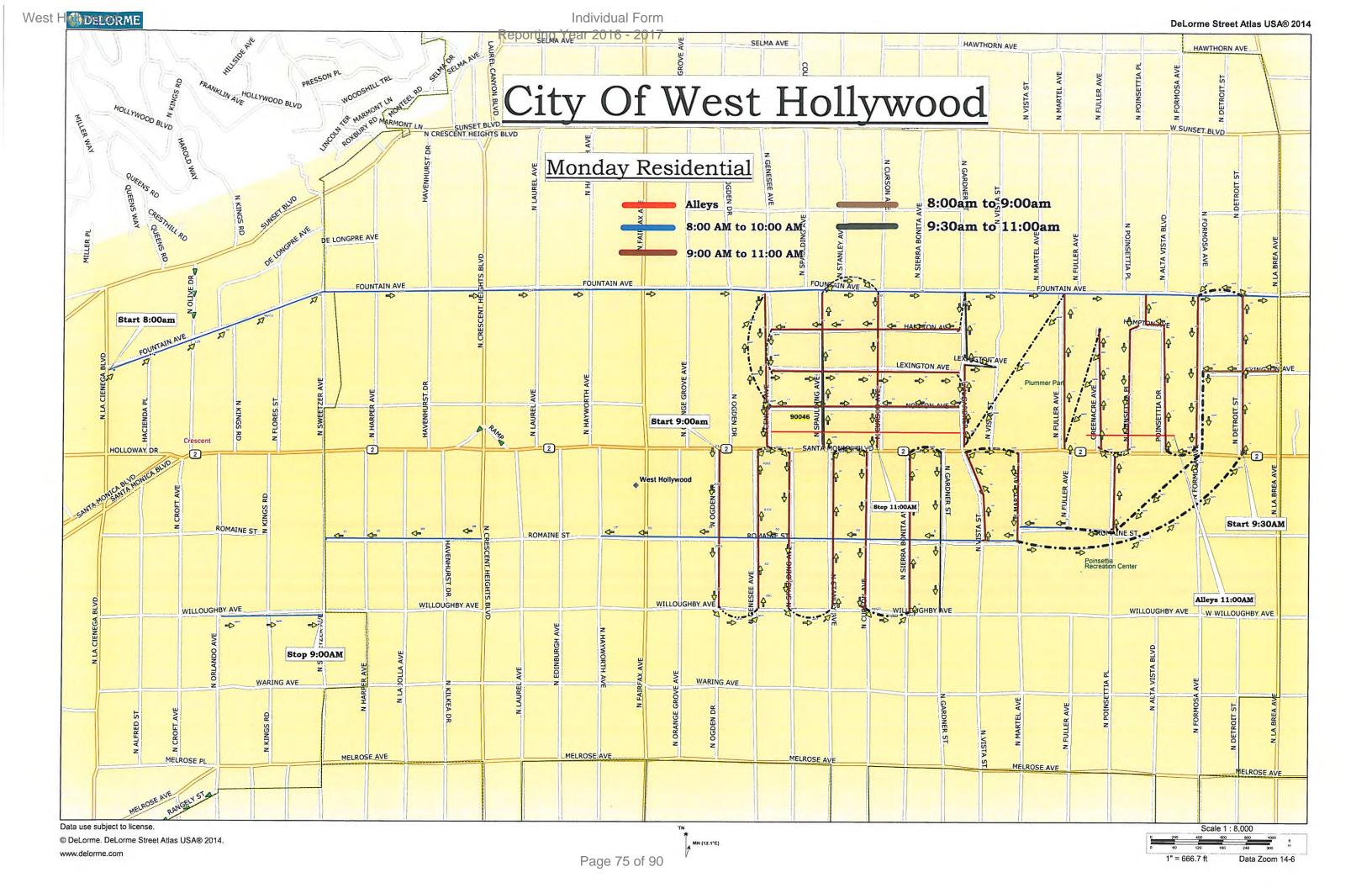
Column 6: Percentage of CBs served by FCD/PCDs within jurisdiction

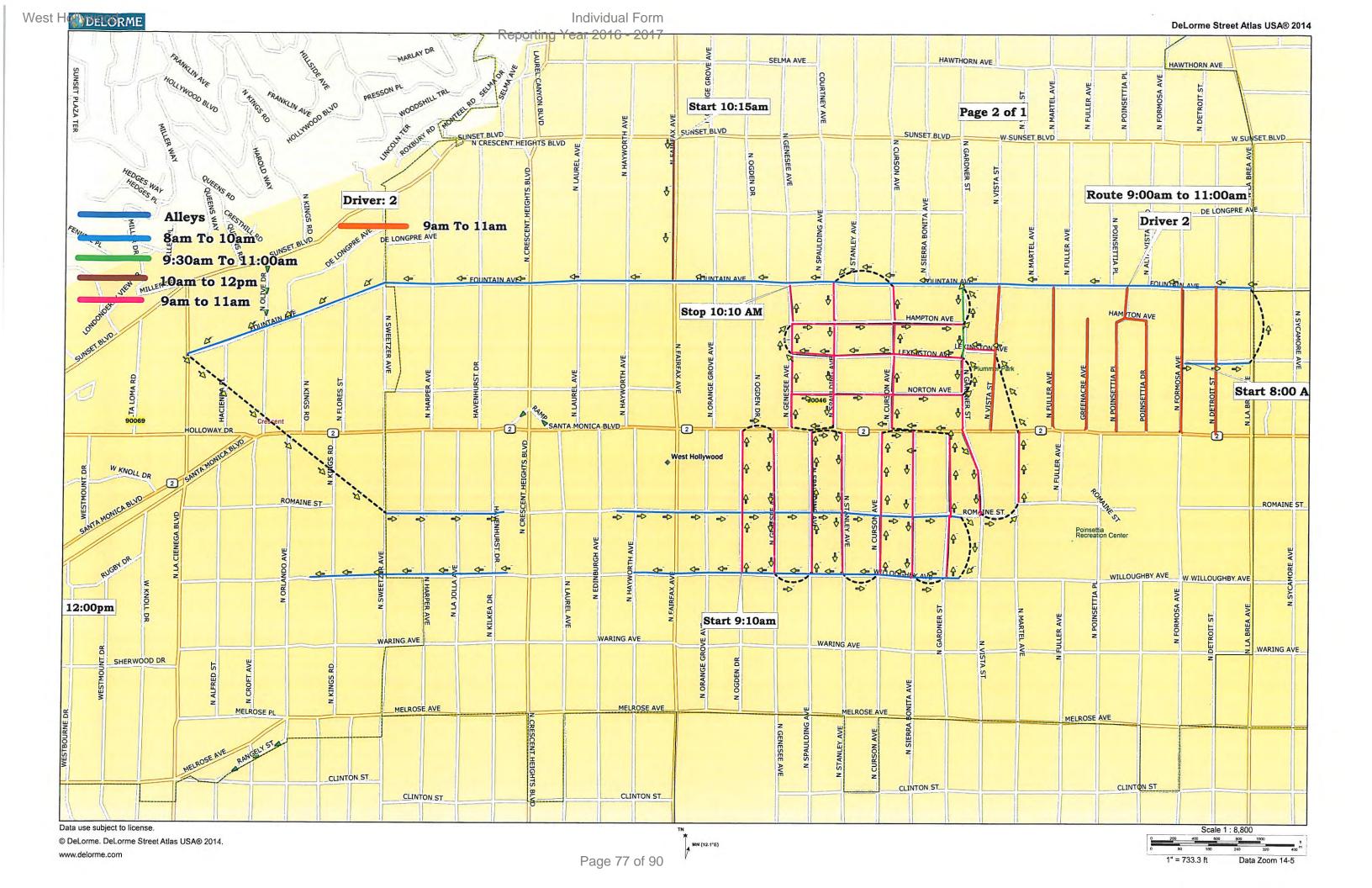
Column 7: Required Trash Abatement: Part 7.1, Appendix 7-1 of Order No. 01-182 as amended by Order No. R4-2009-0130

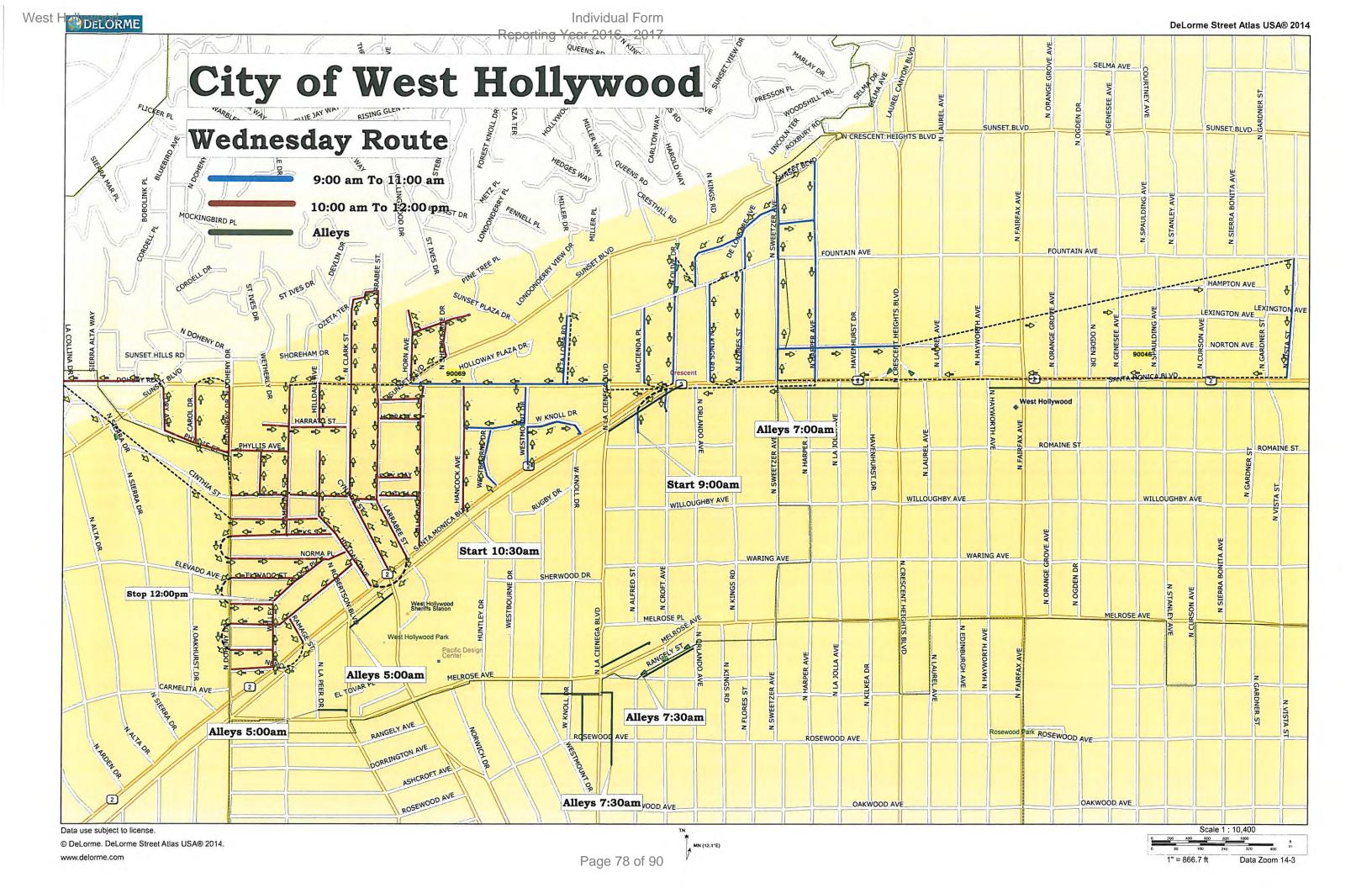
Column 8: Total Combined Compliance = (Col. 6) + (1.0-Col.6)*(Col.4)

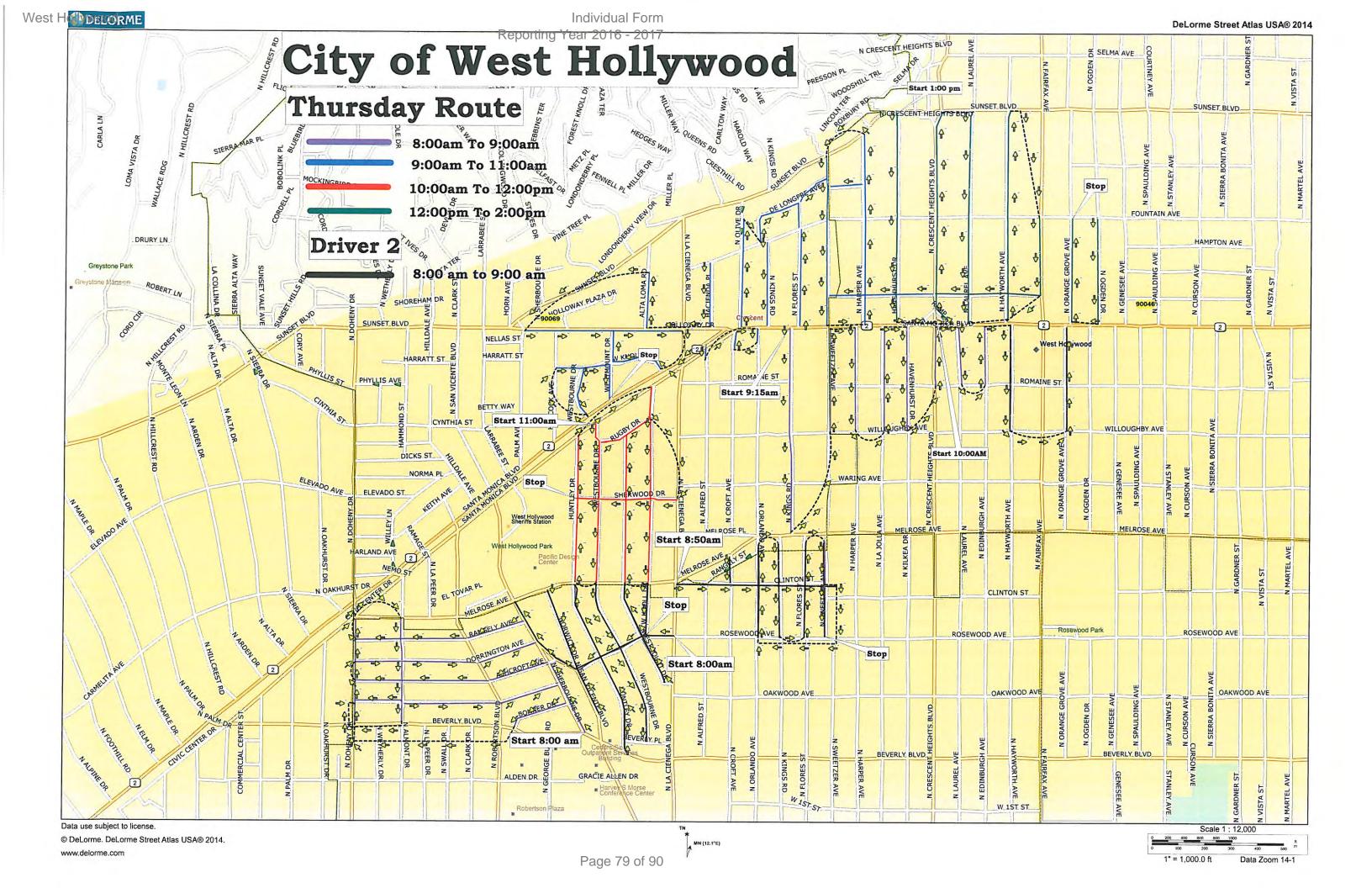
Column 9: FCD Compliance: Yes, if Col. 8 is greater than Col. 7

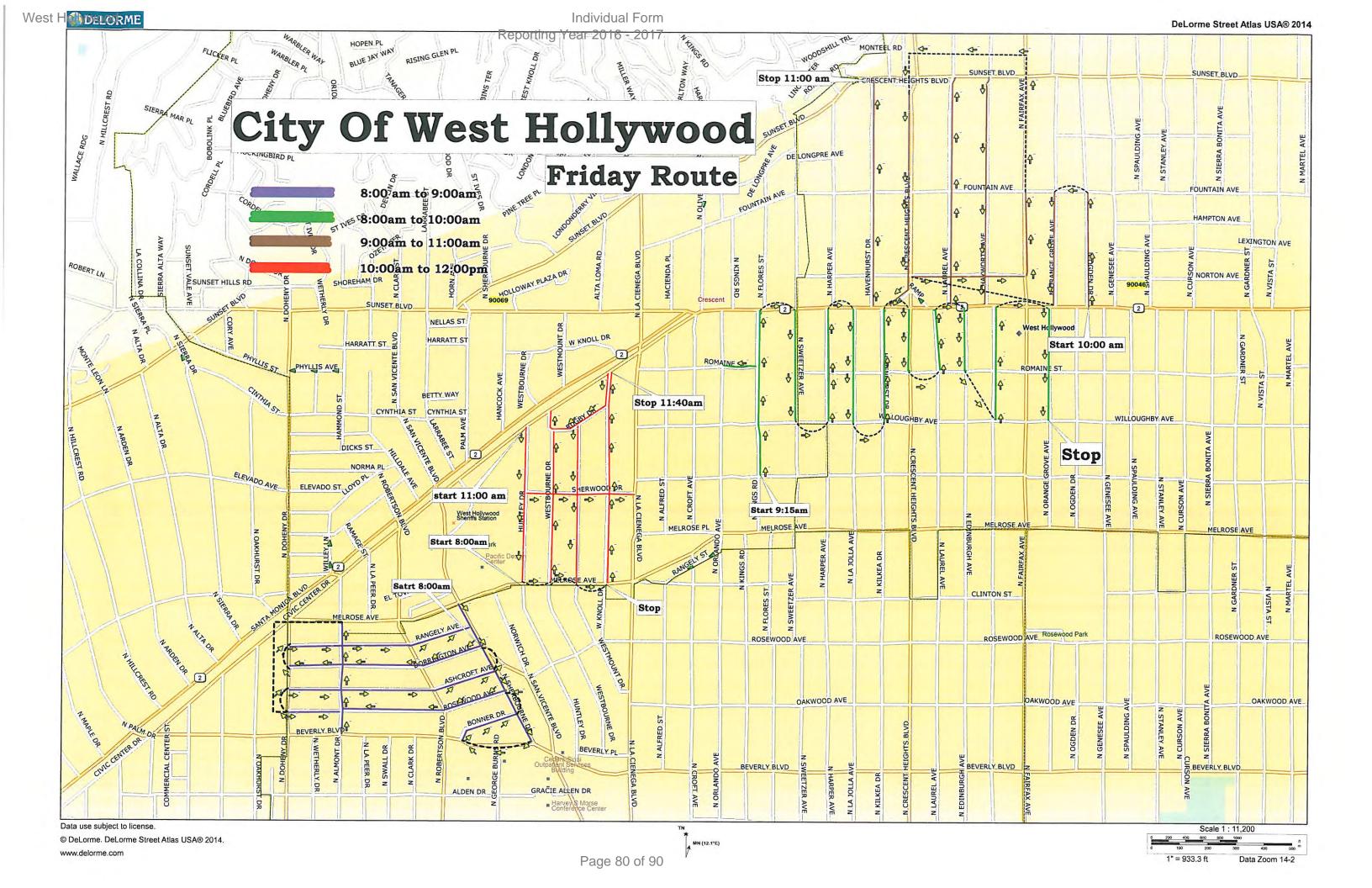
Column 10: Provide comments, if necessary











Crew 3 SMB 7 am to 2:30 7 days a week



Service Locations

Santa Monica Blvd from Doheny Dr to 100 yards past La Brea Ave.

Veterans Park Holloway and Santa Monica

Cresent Heights Triangles East and West

Orange Grove Parking Lot Spaulding Parking Lot

La Brea Blvd from Fountain to Romain.

Alleys south of Santa Monica from Fairfax to Martel

Alleys north of Santa Monica from Gardner to Genesee

Job Duties

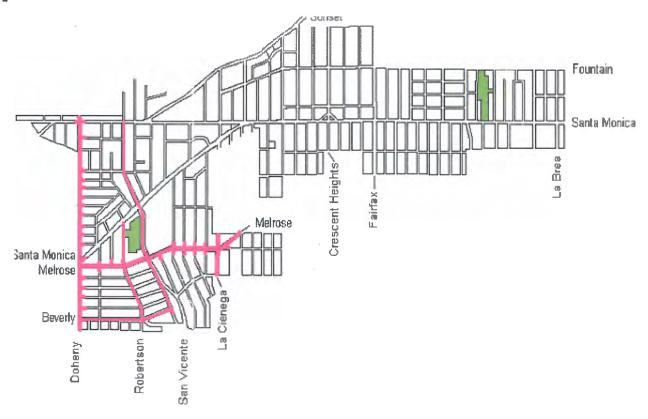
Pick up all loose trash, leaf litter, and animal waste.

Take down all stickers and posters , remove Graffiti

Wipe down tops of trash caontainers and bus benches.

All routes are to include going 50 feet up ALL side streets and alleys .

Crew 2 7 am to 12:30 5 days



Service Locations

Robertson from Santa Monica Blvd to Beverly Blvd.

Melrose from Doheny Blvd to Croft.

Beverly From San Vicente to Doheny.

Doheny From Beverly Blvd to Sunset Blvd East side only .

Job Duties

Pick up all loose trash, leaf litter, and animal waste.

Take down all stickers and posters , remove Graffiti .

Wipe down tops of trash containers and bus benches.

All routes are to include going 50 feet up all side streets and alleys .

Crew 1 Sunset 7 am to 12:30 5 Days



Service Locations

Phyllis from Doheny to Sunset.

Sunset from Doheny to La Cieniga

Fountain from La Cieniga to La Brea.

Formosa, Detroit, Lexington from Fountain to santa Monica Blvd.

Job Duties

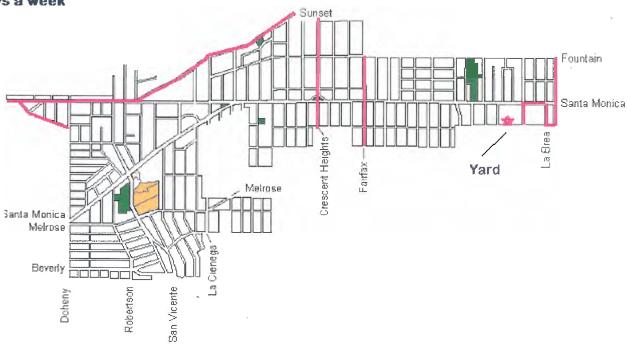
Pick up all loose trash , leaf litter ,and animal waste .

Take down all stickers and posters, remove Graffiti

Wipe down tops of trash caontainers and bus benches.

All routes are to include going 50 feet up ALL side streets and alleys .

Crew # 5 7am to 1:30 pm 5 days a week



Service Locations

La Brea from fountain to Romain.

Once La Brea is complete check in with Raymond or Scott for for further instruction for that day .

If no projects go onto doing Fairfax and Cresent Heights from fountain to willougby .

Sunset from Doheny to cresent Heights to be completedd every tuesday and Wensday.

Job Duties

Pick up all loose trash, leaf litter, and animal waste.

take down all stickers and posters , romove Graffiti .

Wipe down all trash containers lids and bus benches.

All routes are to include going 50 Ft up all side streets .

