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
Table of Contents

1. Background 2
2. Compliance Status 2
3. Full Capture Systems, Partial Capture Systems, and Institutional Controls 2
4. Daily Generation Rate (DGR) Study 3
   4.1 Study method 3
   4.2 Collection routes 3
   4.3 Field pictures 7
5. Mass Balance Approach 9
6. Trash TMDL Reporting Forms 9
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

Trash\(^1\) 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.

---

\(^1\) 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.
### Trash Collection for Calculation of Daily Generation Rate, DGR

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Total Area within Jurisdiction</th>
<th>Representative Area for DGR Calculation</th>
<th>Date of Last Street Sweeping</th>
<th>Date of DGR Sampling</th>
<th>Length of Collection Period</th>
<th>Trash Cleaned Out from Catchbasin(s) within the Representative Area (lb. or gal.)</th>
<th>Total Trash Generated in Representative Area</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Density Residential</td>
<td>32.95</td>
<td>0.93</td>
<td>8/03/17</td>
<td>8/16/17</td>
<td>0.13</td>
<td>0.13</td>
<td>Low Density Residential areas swept weekly. DGR sampling collected weekly (Wednesday) by hand, and prior to street sweeping activities (Thursdays). Thus a six-day period elapsed between sweeping and collection events.</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>27.49</td>
<td>0.65</td>
<td>8/03/17</td>
<td>8/16/17</td>
<td>2.75</td>
<td>2.75</td>
<td>Commercial areas swept weekly, higher priority areas swept even more frequently. DGR sampling collected daily and quantified on Wednesday.</td>
<td></td>
</tr>
<tr>
<td>High Density Residential</td>
<td>31.05</td>
<td>0.23</td>
<td>8/02/17</td>
<td>8/15/17</td>
<td>1.25</td>
<td>1.25</td>
<td>High Density Residential areas swept weekly. DGR sampling collected weekly (Tuesday) by hand, and prior to street sweeping activities (Wednesday). Thus a six-day period elapsed between sweeping and collection events.</td>
<td></td>
</tr>
<tr>
<td>Public Facilities / Educational Institutions</td>
<td>0.74</td>
<td>0.17</td>
<td>8/02/17</td>
<td>8/15/17</td>
<td>0.50</td>
<td>0.50</td>
<td>Public &amp; Educational areas swept weekly. DGR sampling collected weekly (Tuesdays) by hand, and prior to street sweeping activities (Wednesdays) thus a six-day period elapsed between sweeping and collection events.</td>
<td></td>
</tr>
<tr>
<td>Open Space / Recreation</td>
<td>0.86</td>
<td>0.21</td>
<td>8/03/17</td>
<td>8/16/17</td>
<td>0.63</td>
<td>0.63</td>
<td>Open Space &amp; Recreational areas swept weekly. DGR sampling collected weekly (Monday) by hand, and prior to street sweeping activities (Tuesdays), thus a six-day period elapsed between sweeping and collection events.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>82.86</td>
<td>1.49</td>
<td></td>
<td></td>
<td></td>
<td>Total Trash Cleaned Out from Catchbasin(s) within the Representative Area (lb. or gal.)</td>
<td>25.5</td>
<td>DGR (lbs/day) 38.39</td>
</tr>
</tbody>
</table>

**Notes:**
- Total collection period must equal 30 days for each representative land use area.
- 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.
- Total area of said land uses 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. 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.
- 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.
- Date of Last Street Sweeping - The DGR collection period(s) must fall between June 22nd and September 22nd of each year.
- Length of Collection Period in days - The DGR collection period must be 30 days, total, for each representative land use area.
- Trash Cleaned Out from Catchbasin(s) within the Representative Area (lb. or gal.) - Trash accumulated in the catchbasins during the DGR collection period must be included in the total trash generated.
- Where CWs are closed off such that no trash can enter them for the purpose of DGR sampling, this value will be zero (0).
- Total amount of trash generated in representative area (sum of Col. 7 and Col. 8), lb. or gal. - Where CWs are closed off such that no trash can enter them for the purpose of DGR sampling, this value will be zero (0).
- Total Trash Generated within Representative Area (estimated in 30 day period) - Where CWs are closed off such that no trash can enter them for the purpose of DGR sampling, this value will be zero (0).
## Institutional Controls

### Individual Storm Event

#### Total Storm Year Trash Discharge

<table>
<thead>
<tr>
<th>Rainfall Station</th>
<th>Los Angeles 2.6 NW, CA US</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Trash Discharged by Storm Event</strong></td>
<td></td>
</tr>
<tr>
<td>Col. 1</td>
<td>Col. 2</td>
</tr>
<tr>
<td>DGR</td>
<td>Date of Last Street Sweeping</td>
</tr>
<tr>
<td>36.4</td>
<td>11/18/16</td>
</tr>
<tr>
<td>36.4</td>
<td>12/14/16</td>
</tr>
<tr>
<td>36.4</td>
<td>12/20/16</td>
</tr>
<tr>
<td>36.4</td>
<td>12/22/16</td>
</tr>
<tr>
<td>36.4</td>
<td>12/29/16</td>
</tr>
<tr>
<td>36.4</td>
<td>01/03/17</td>
</tr>
<tr>
<td>36.4</td>
<td>01/07/17</td>
</tr>
<tr>
<td>36.4</td>
<td>01/10/17</td>
</tr>
<tr>
<td>36.4</td>
<td>01/11/17</td>
</tr>
<tr>
<td>36.4</td>
<td>01/12/17</td>
</tr>
<tr>
<td>36.4</td>
<td>01/17/17</td>
</tr>
<tr>
<td>36.4</td>
<td>01/19/17</td>
</tr>
<tr>
<td>36.4</td>
<td>01/22/17</td>
</tr>
<tr>
<td>36.4</td>
<td>02/03/17</td>
</tr>
<tr>
<td>36.4</td>
<td>02/06/17</td>
</tr>
<tr>
<td>36.4</td>
<td>02/09/17</td>
</tr>
<tr>
<td>36.4</td>
<td>02/16/17</td>
</tr>
</tbody>
</table>

**Total Storm Year Trash Discharge:** 870.4
### Institutional Controls

**City of West Hollywood**

**Annual Report: Dec 2017**

**Part 7.1.C(1)(b)(2) - L.A. County MS4 Permit**

**Individual Storm Event**

**Total Storm Year Trash Discharge**

<table>
<thead>
<tr>
<th>Rainfall Station</th>
<th>Los Angeles 2.6 NW, CA US</th>
</tr>
</thead>
</table>

### Total Trash Discharged by Storm Event

<table>
<thead>
<tr>
<th>Col. 1</th>
<th>Col. 2</th>
<th>Col. 3</th>
<th>Col. 4</th>
<th>Col. 5</th>
<th>Col. 6</th>
<th>Col. 7</th>
<th>Col. 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGR</td>
<td>Date of Last Street Sweeping</td>
<td>Date of Storm Event</td>
<td>Precipitation Depth</td>
<td>Days **</td>
<td>Amount of Trash Recovered from Catchbasins</td>
<td>Storm Event Trash Discharge</td>
<td>Comments</td>
</tr>
</tbody>
</table>

**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], lbs. or gal.

Col. 8: Provide comments, if necessary
<table>
<thead>
<tr>
<th>Reporting Period</th>
<th>Total Trash Discharged (lbs.)</th>
<th>Effluent Limitation</th>
<th>Equivalent Compliance</th>
<th>Total # CBs served by FCDs and PCDs</th>
<th>% of CBs served by FCDs / PCDs</th>
<th>Required Trash Abatement (%)</th>
<th>Total Combined Compliance</th>
<th>Compliance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>31-Oct-11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-Oct-12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-Oct-13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-Oct-14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-Oct-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-Oct-16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-Oct-17</td>
<td>870</td>
<td>134</td>
<td>93.5%</td>
<td>110</td>
<td>15.2%</td>
<td>99.0%</td>
<td>94.5%*</td>
<td>Within 4.5%*</td>
<td></td>
</tr>
</tbody>
</table>

* 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.

**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
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
Crescent 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 containers 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 alley.
Crew 1 Sunset 7 am to 12:30
5 Days

Service Locations

Phyllis from Doheny to Sunset.
Sunset from Doheny to La Cienega
Fountain from La Cienega 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 containers 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 further instruction for that day.

If no projects go onto doing Fairfax and Crescent Heights from fountain to willoughby.

Sunset from Doheny to crescent Heights to be completed every Tuesday and Wednesday.

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.