

Costa Mesa Sanitary District  
Wastewater Maintenance Division

FY 2014-15	Measure Objective	Measure Actual	Achieved Yes/No
<b>Workload Indicators</b>			
1. Average linear feet of sewer mainline cleaned annually	1,158,432	1,158,432	Yes
2. Number of pump stations inspected annually	1040	1040	Yes
3. Number of manhole covers replaced without vent holes	200	36	No
4. Number of pump station wet wells cleaned	89	89	Yes
5. Total annual cleaning hours for hotspots	80	80	Yes
6. Number of before and after videos inspected for Sewer Lateral Assistance Program	314	368	Yes
7. Number of tailgate safety meetings	12	12	Yes
8. Hours per 100 miles of pipe performed planned maintenance	3,745	4,014	Yes
9. Total annual hours spent responding to after hour emergencies	12	130.5	No
10. Total annual hours spent testing emergency equipment	384	384	Yes
<b>Efficiency Indicators</b>			
11. Total annual O&M cost per account	\$314.00	\$97.60	Yes
12. Collection O&M cost per 100 miles of pipe	\$860,779	\$732,741	No
13. Cost per hour to clean wastewater main	\$297.33	\$181.0	Yes
14. Preventative maintenance cost per pump station	\$1,750	\$1,104	Yes
15. Average total hours to clean one hotspot	1	0.94	Yes
<b>Effectiveness Indicators</b>			
16. Number of public sanitary sewer overflows	0	3	No
17. Overflow events/100 miles of pipe	1.4	1.3	Yes
18. Number of pump station failures not caused by Southern California Edison	0	0	Yes
19. Percentage of repair work orders completed within two days	90%	NA	NA
20. Percentage responding to emergencies within one hour	90%	100%	Yes
21. Number of workplace related injuries	0	0	Yes
22. Percentage of rain ingress	≤2%	1.16%	Yes
23. Number of hot spots	≤40	34	Yes
24. Number of odor complaints from South Coast Plaza	0	0	Yes
25. Number of times emergency equipment failed or malfunctioned	0	3	No

## Workload Indicators

1. Clean entire wastewater system annually. 219.4 miles of gravity main = 1,158,432 feet  
CMSD cleaned approximately 507,594 feet of wastewater pipe and National Plant Service, a private contractor, cleaned approximately 650,838 feet. The total feet cleaned is 1,158,432.
2. 20 PS inspected weekly = 20 a week times 52 weeks = 1,040 inspections
3. Goal is to replace 1,000 plugged and sealed manhole covers with composite covers that do not have vent holes.
4. Stations with Godwin units (Elden, Victoria, and Mendoza) are cleaned twice a month and other stations are done once a year. The stations are snored and wet well walls are cleaned and if needed, the vac truck is used.  
Godwin PSs-  $3 \times 2 \times 12 = 72$   
All others-  $17 \times 1 = 17$   
 $17 + 72 = 89$
5. Hotspot locations that had cleaning frequencies ranging from twice a year to four times a year. As hotspot locations are reduced, so will the hours to clean hotspots.
6. The average SLAP applications approved in five years (2007-2012) is  $157 \times 2 = 314$ . 314 is the benchmark.  
In FY 2014-15, CMSD processed 184 SLAP applications for payment.  $184 \times 2 = 368$
7. One tailgate meeting a month.
8. American Water Works Association 2013 Benchmark. CMSD hours excludes leave and holiday hours.
9. After hour emergencies are for CMSD sewer system. Hours do not include private emergencies. Fewer after hour emergencies for CMSD system demonstrates maintenance effectiveness to preventing SSOs. Benchmark is one hour a month. The 130.5 hours reflect staff's response to three SSOs. 104 hours was for President Pump Station SSO.
10. The pump station crew tests the Godwins, generators and mobile bypass pumps  
Godwin-  $2.5 \text{ Hr} \times 3 \text{ (stations)} \times 4 \text{ (times a month)} \times 12 \text{ (months)} = 360$   
Gens -  $1 \text{ Hr} \times 12 \text{ (months)} = 12$   
Bypass Pumps-  $1 \text{ Hr} \times 12 \text{ (months)} = 12$   
 $360 + 12 + 12 = 384 \text{ hours}$

## Efficiency Indicators

11. American Water Works Association 2013 Benchmark. If below objective then indicator demonstrates District is not overspending on overhead and administrative costs.
12. American Water Works Association 2013 Benchmark. Compares O&M spending with industry standard. This indicator has a correlation with KPI No. 16. More O&M money may be needed to achieve zero SSOs
13. Average hourly rate of three private contractors surveyed by City of Newport Beach in 2015. Actual is CMSD's hourly rate. 10% administrative cost for creating work orders was added to CMSD's actual costs.

14. Xylem, a private contractor, cost \$35,000 to perform preventive maintenance on 20 pump stations. Actual is CMSD's cost to perform preventive maintenance on 20 pump stations.
15. The cleaning frequencies for hotspots vary from once every 9 months to four times a year.

#### Effectiveness Indicators

16. The following SSOs occurred in FY 2014-15
  - a. 12-4-14: President Pump Station – force main pipe failed
  - b. 1-1-15: Indus line caused by roots
  - c. 1-8-15: 16<sup>th</sup> Place & Orange Avenue caused by roots
17. American Water Works Association 2013 Benchmark
18. High number of electrical failures demonstrates District is not maintaining pump stations effectively.
19. Completing the majority of work orders within two days demonstrates wastewater system is being repaired and/or cleaned in a timely manner. Staff is updating Cityworks to calculate this key indicator.
20. Employees responding to emergencies within one hour demonstrates the District's quick response to protecting the public's health and the environment.
21. Zero work related injuries demonstrates a safe working environment.
22. This key indicator demonstrates the effectiveness of the District's Inflow Program. Orange County Sanitation District has a goal of rain ingress less than 2%.
23. The District's Board of Directors established this benchmark. Fewer hotspot locations means more time staff can spend cleaning the entire system on an annual basis.
24. Shoppers would complain about the "rotten egg" smell at South Coast Plaza. The odor could deter shoppers from returning. Also, high levels of hydrogen sulfide causes corrosion in wet wells. Receiving zero complaints demonstrates the District is being proactive to reducing hydrogen sulfide levels.
25. If equipment is malfunctioning on a regular basis, staff cannot effectively maintain the sewer system. The mobile bypass pump failed to operate during the President Pump Station emergency on December 4, 2015. The cleaning truck (Vac-Con) had a broken driveshaft and another time the axles went out.