



Stormwater Trash Capture

Public Works Department

Utility Services/Land Use/Energy Development Committee
September 11, 2017

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BACKGROUND – CITY COUNCIL

The City Council met on August 22, 2017 to consider the State Trash Amendments. After discussion, the Council voted to bring this issue back to the Utility Services/Land Use/Energy Development Committee for discussion and recommendations



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BACKGROUND

1. April 7, 2015 – State Water Board adopted amendments to two statewide Water Quality Control Plans:
 - a. California Ocean Plan
 - b. Inland Surface Waters Plan
2. Collectively referred to as the “Trash Amendments”
3. Goal: Fully capture trash from Priority Land Uses by 2030



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TRASH AMENDMENTS

1. Require all agencies with regulatory authority over ‘Priority Land Uses’ to fully capture all trash from storm drains
2. Definitions:

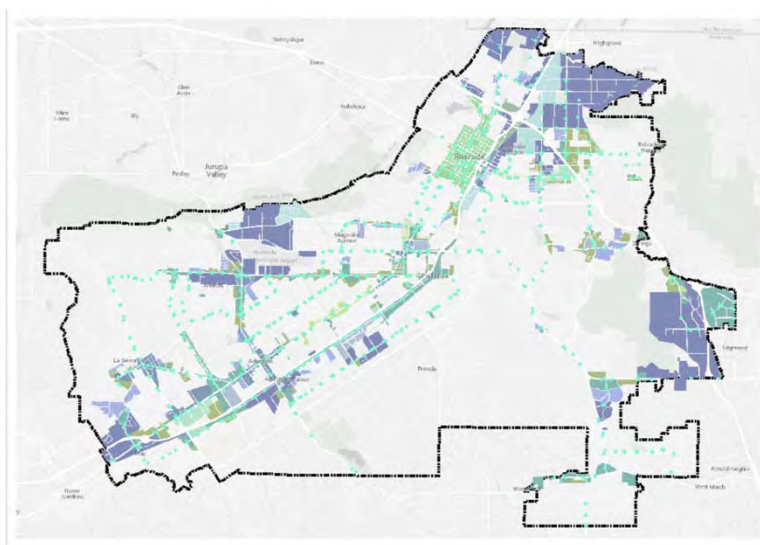
Term	Definition
Priority Land Use	High density residential (≥ 10 du/acre), industrial, commercial, mixed urban, public transportation stations
Full Capture System	Treatment control, series of controls that trap all particles ≥ 5 mm with capacity not less than peak flow from 1 year, 1 hour storm OR designed to carry same flows as storm drain
Full Capture System Equivalency	The trash load that would be reduced if FCS were installed for all storm drains that capture runoff from PLUs



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PRIORITY LAND USES



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EXAMPLES OF FULL CAPTURE SYSTEMS

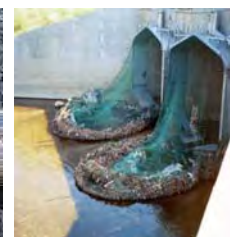
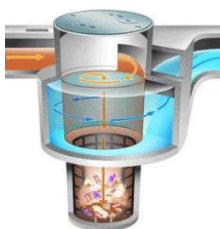
1. Smaller (Inlet-based) Devices

- Connector Pipe Screens
- Inlet Filters



2. Larger (High Flow Capacity) Devices

- Hydrodynamic Separators
- Gross Solid Removal Devices
- Netting Devices



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REGIONAL BOARD ORDER

1. June 2, 2017 - Regional Board Order to notify selected method of compliance by August 31, 2017
2. Track 1 or Track 2
3. August 23, 2017 – City requested extension of 90 days



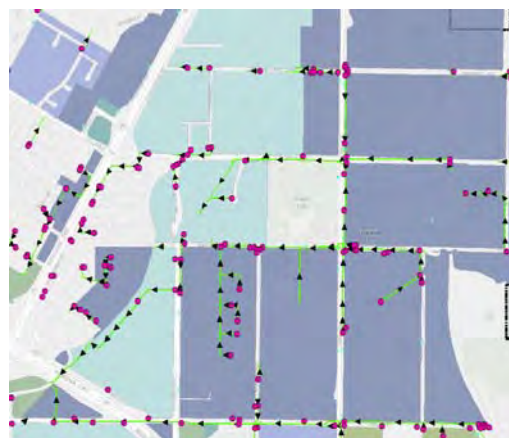
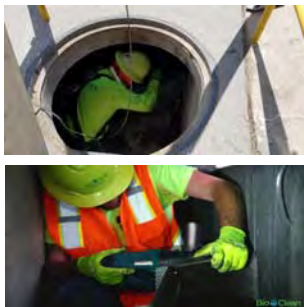
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TRACK 1

1. Install, operate, and maintain Full Capture Systems in Priority Land Use areas
2. 10% a year for 10 years
3. High certainty of compliance



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TRACK 1 ESTIMATED COST

1. Cost will vary depending on mix of small and large scale devices
2. Small Devices
 - a. State Water Board Report estimated average cost of a catch basin insert as \$800
 - b. Estimated annual operation & maintenance cost of \$324
3. Large Devices
 - a. Cost per device depending on size ranges from \$5,000 to >\$100,000
 - b. Maintenance costs vary depending size of device from \$1,000 to > \$10,000

Example if small devices installed in each catch basin (actual cost w/ mix of large devices expected to be lower):

TRASH POLICY CAPITAL COSTS	FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25	FY25/26	FY26/27	FY27/28
Inlet Filters Installed Annually	255	255	255	255	255	255	255	255	255	255
Purchase and Install (each)	\$800	\$800	\$800	\$800	\$800	\$800	\$800	\$800	\$800	\$800
Total Purchase and Install cost	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000	\$204,000
TRASH POLICY MAINT. COSTS										
Total Inlet Filters	255	510	765	1020	1275	1530	1785	2040	2295	2550
Inlet Filter Maint. Cost	\$324	\$324	\$324	\$324	\$324	\$324	\$324	\$324	\$324	\$324
Total Maint. Cost	\$82,620	\$165,240	\$247,860	\$330,480	\$413,100	\$495,720	\$578,340	\$660,960	\$743,580	\$826,200
TOTAL ANNUAL COST	\$286,620	\$369,240	\$451,860	\$534,480	\$617,100	\$699,720	\$782,340	\$864,960	\$947,580	\$1,030,200

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TRACK 2

1. Combination of Full Capture Systems, multi-benefit projects, institutional controls, and/or other treatment controls
2. Options:
 - a. Increased sidewalk trash bins
 - b. Enhancement and enforcement of litter laws
 - c. Increased street sweeping
 - d. Public Education Programs



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TRACK 2

3. Full Capture System Equivalency
 - a. Determine amount of trash captured by Track 1 approach
 - b. Implement programs to remove an equivalent amount of trash
 - c. Demonstrate equivalency through technically acceptable approach subject to approval
 - d. Report Annually
4. Lower certainty of compliance



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TRACK 2

5. Develop and submit implementation plan by November 30, 2018
6. Up front costs estimated to be lower
7. Long term cost of monitoring estimated to be significant



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OPTIONS FOR COMPLIANCE

Track 1

1. May have higher up front costs
2. Defined level of effort
3. High certainty of compliance

Track 2

1. May have lower up front costs
2. Flexibility in program types to control trash
3. Uncertainty on cost of monitoring programs
4. Challenging to demonstrate compliance



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RECOMMENDATION

That the Committee review the options for complying with the State Trash Amendments and consider recommending selection of Track 1 or Track 2 to the City Council.



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