


CASE STUDY: MANDATED TRASH REDUCTION COMPLIANCE

EPA MARINE DEBRIS
Opportunities For Action
March 16, 2010

DON'T TRASH
CALIFORNIA


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Overview

- Don't Trash California Public Education
- Lessons Learned
- Mandated Trash Reductions in LA Region Coastal Watersheds
- Application to Total Maximum Daily Loads (TMDLs)



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www.dot.ca.gov



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Litter Bugs.

Who wants to look at mile after mile of litter-filled freeways and highways? Roads are covered in cigarette butts, fast food wrappers, soda and coffee cups...But litter is more than ugly—it's actually harmful to our waterways including lakes, rivers and beaches.

Many people don't know that litter and pollution from our freeways and highways can wind up in the storm drains. While the storm drains are meant to carry clean rainwater off the roads, any litter and debris that ends up in them can actually flow directly into public bodies of water. This means that the water we swim in, sail in and surf in can get more and more polluted with each piece of litter that is tossed onto the roadways.

Find out what you can do to prevent litter

HIGH COST OF LITTER

California Department of Transportation, Division of Maintenance spends a total of approximately 60 million* dollars on litter removal.

Littering can also cost you personally as well because you can be fined up to \$1,000 each time you litter.

For more about Litter Abatement, go to www.dot.ca.gov.

**Litter removal costs are provided by Caltrans Maintenance Program.*

www.dontrashcalifornia.info

Purpose of Campaign

- Don't Trash California campaign targets primary offenders of highway littering, as well as the general public, to create a social mindset in California that this State does not tolerate polluting our freeways and highways.
 - media advocacy
 - special events
 - Partnerships
 - paid media
 - community outreach

DTC Past and Current

- Fresno Metropolitan Area Campaign
 - A study to determine the effectiveness of public education as a Best Management Practice (BMP)
- Statewide Campaign Launched
 - Districts continue anti-litter campaign
- Focused Campaign
 - Los Angeles Region
 - Total Maximum Daily Loads (TMDLs) for trash

DTC Lessons Learned

- Focus on 18+ age target audience
- Public Opinion Survey results
- Changes in Behavior
- Maintain effectiveness
 - Changes in population
 - Partnerships
 - Collaboration



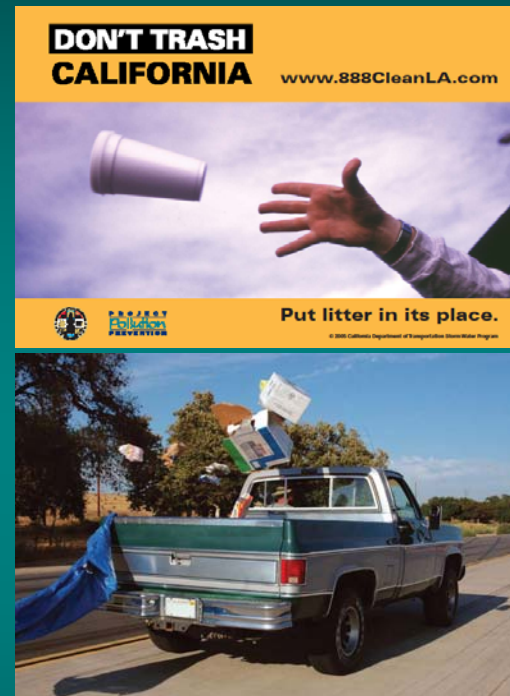


Partnerships

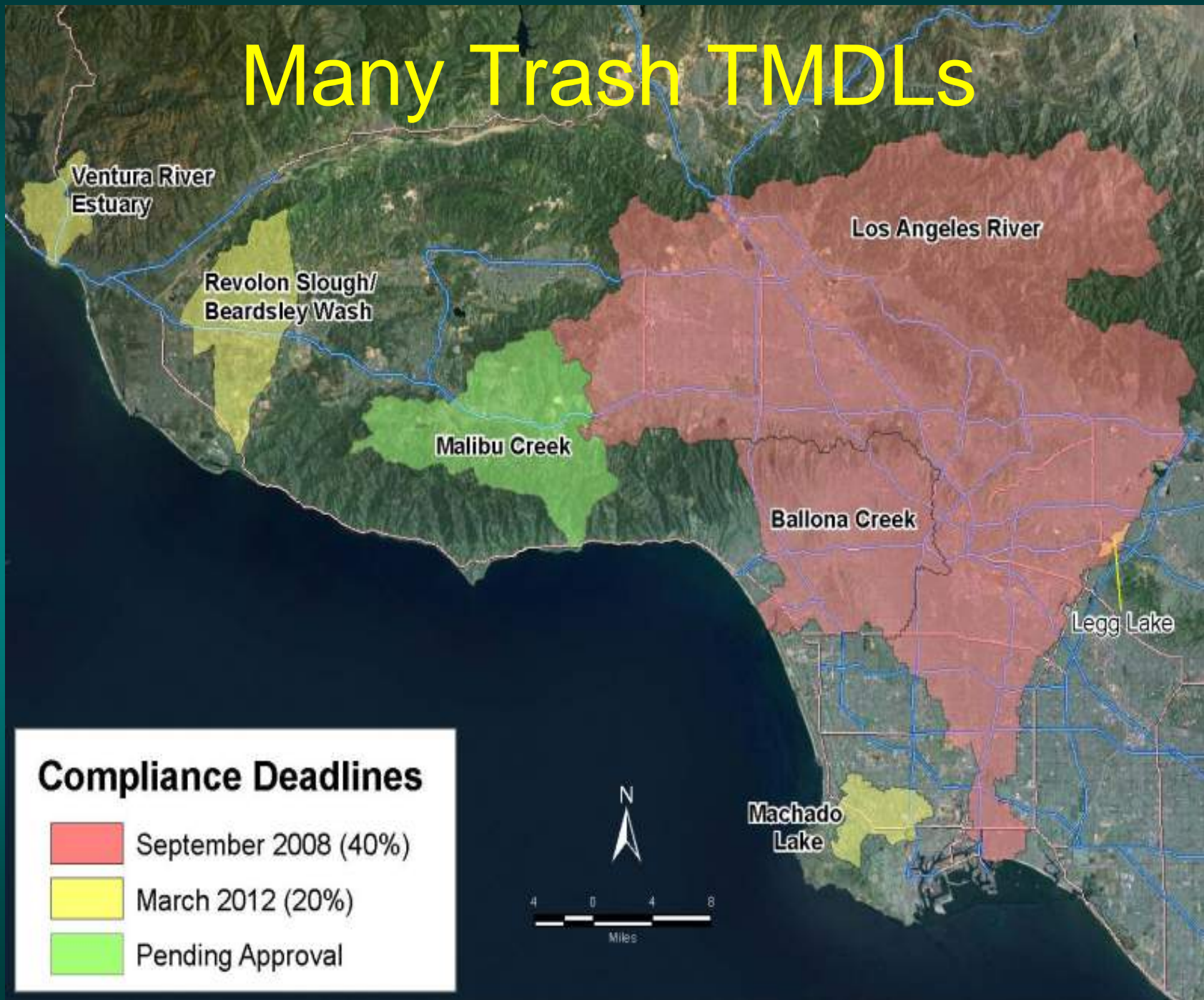
- Anaheim Angels
- California Bag and Film Alliance
- California Restaurant Association
- California Water Board – Erase the Waste Campaign
- City of Mission Viejo
- Cone Zone
- County of Los Angeles Department of Public Works
- Enterprise Rent-a-Car
- Fresno Grizzlies
- Jiffy Lube
- Keep California Beautiful
- Los Angeles Galaxy
- Los Angeles Lakers
- Oakland Athletics
- Sacramento Raceway
- Sacramento River Cats
- San Mateo County Pollution Prevention Program
- Skyline College in San Bruno
- A + N Liquor, Los Angeles
- Adam’s Liquor Store, Los Angeles
- AM/PM, San Bernardino
- Arcade Market, Sacramento
- ATM Market, Fresno
- Bestway Liquors, Los Angeles
- Box Springs Stations, Riverside
- Brooklyn Liquor, Los Angeles
- Captain Don’s Liquor, Downey
- Circle S Market, San Bernardino
- Civic Groceries Liquor, San Jose
- Country Cousin Market, Fresno
- E Street Market, San Bernardino
- Easy Shop Market, Rancho Cucamonga
- Eddie’s Liquor, Long Beach
- El Monte Liquor, El Monte
- Food Care Market, Fresno
- Food Empire, Fresno
- Friendly Liquor and J + Y Liquor, Los Angeles
- Gage Liquor, Bell
- Gin’s Liquor, South Gate
- Gold Key Liquor, El Monte
- Hal’s Liquor, Huntington Park
- J & B Liquor, Long Beach
- J & J Liquor, Bellflower
- KNC Market, Fresno
- La Fiesta Market, Fresno
- Las Nieves, Inc., Fresno
- Larry’s Liquor, Long Beach
- Marc’s Liquor, Long Beach
- Marengo Liquor, Alhambra
- Mike & Judie’s Grocery Warehouse, San Bernardino
- MJ’s Market, San Bernardino
- N2 Dirt
- Plaza Liquor, Long Beach
- Regency Liquor, Los Angeles
- Rocky Market, San Bernardino
- Rubin Market, Fontana
- S. & H. Bros. Ent., Fresno
- Sacramento Foods Co-op
- San Rafael Clean campaign
- Save-A-Lot, San Bernardino
- Seven Eleven (7-11), Chula Vista
- Siete Dias Market, National City
- Sky Way Market, San Diego
- South Area Market, Sacramento
- Star Liquor, South El Monte
- Sunrise Liquor, Downey
- Super Store #2, Alhambra
- Tapatio Brothers Mexican Market, Sacramento
- Third Avenue Mini Mark, Chula Vista
- Vic’s IGA, Sacramento
- Winn’s Liquor, Los Angeles
- Xpress Food & Liquor, Chula Vista

Trash Sources from Highway

- vehicle users (intentional)
- truck beds (unintentional)
- Wind blown from adjacent properties
- Homeless Encampments



Many Trash TMDLs



Approach for Trash TMDLs

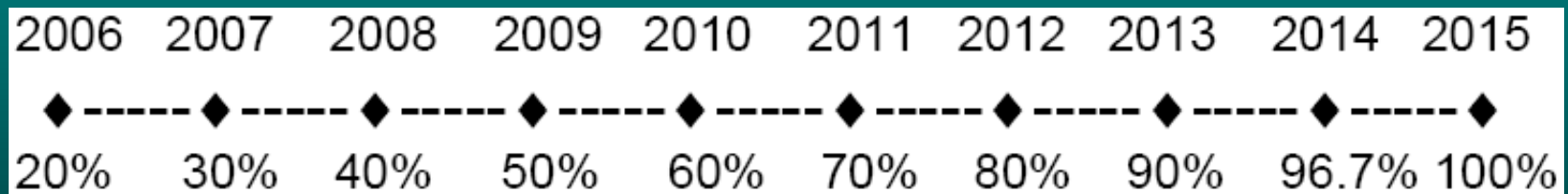
- Achieved through Structural and Institutional Controls
 - Public Education
 - Adopt-a-Highway
 - Enhanced Institutional Controls
 - Full Capture BMPs
 - GSRDs, Media Filters, Infiltration, Detention

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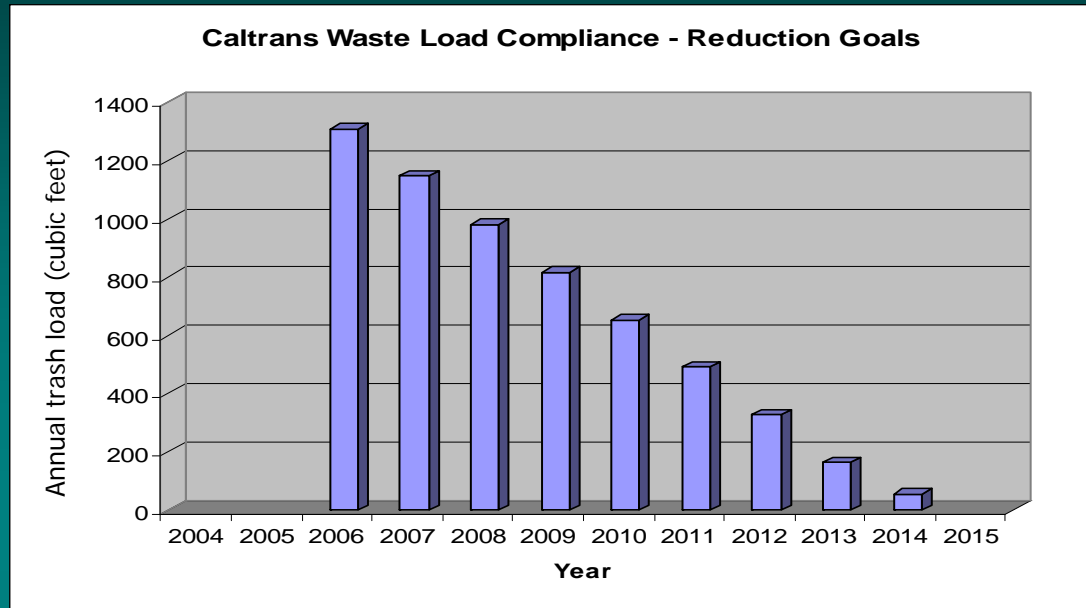


Trash Waste Load Allocations

- WLA for all stakeholders = Zero trash by September 2015 (end of implementation)
- 10% Reduction Compliance per year



Caltrans Waste Load Allocation



Date	Waste Load Allocation	Compliance Point
9/30/04	1,472 cubic feet (90% of WLA)	NA
9/30/05	1,308 cubic feet (80% of WLA)	NA
9/30/06	1,146 cubic feet (70% of WLA)	1,308 cubic feet (80% of WLA)
9/30/07	981 cubic feet (60% of WLA)	1,146 cubic feet (70% of WLA)
9/30/08	818 cubic feet (50% of WLA)	981 cubic feet (60% of WLA)
9/30/09	654 cubic feet (40% of WLA)	818 cubic feet (50% of WLA)
9/30/10	491 cubic feet (30% of WLA)	654 cubic feet (40% of WLA)
9/30/11	327 cubic feet (20% of WLA)	491 cubic feet (30% of WLA)
9/30/12	164 cubic feet (10% of WLA)	327 cubic feet (20% of WLA)
9/30/13	0 cubic feet (0% of WLA)	164 cubic feet (10% of WLA)
9/30/14	0 cubic feet (0% of WLA)	54 cubic feet (3.3% of WLA)
9/30/15	0 cubic feet (0% of WLA)	0 cubic feet (0% of WLA)

Caltrans Compliance: Ballona Creek Trash TMDL

- Structural Controls
- Institutional Controls
 - Enhanced Maintenance Activities
- Public Education
- Municipal Coordination

Trash Devices were implemented Gross Solids Removal Devices (GSRD)



Constructed GSRDs: Ballona Creek Watershed

- 19 GSRD devices
- 53.3 acres of Department drainage area treated
- 74.1 cubic feet of trash removed
- 4.5% reduction
 - Based on Department baseline 1635 cubic feet

Planned GSRDs: Ballona Creek Watershed

- 47 GSRD devices in construction
- 131.96 acres of additional Department drainage area to be treated
- 184.05 cubic feet of trash removed
- 11.3% reduction
 - Based on Department baseline 1635 cubic feet

Non-Structural Controls

- Public Education

“Enhanced Institutional Controls”

- Adopt-A-Highway Program
- Trash Collection
- Sweeping – if possible
- Drain Inlet Cleaning



Public Education

- Print Advertising
- Radio & Television
- Online Advertising
- Public Outreach (Special Events)

We remind you not to litter items purchased here. Please properly dispose of your wrappers, cans, bottles and cigarette butts.

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WWW.DONTTRASHCALIFORNIA.INFO

FACT: Cigarette butts are the #1 littered item on California freeways.

Litter bugs.

Litter on freeways and highways can pollute California waterways. Litter that finds its way into highway storm drains could end up harming the area's water system including lakes, rivers and beaches.

Caltrans is responsible for highway storm water runoff

Caltrans is the steward of our state highways and freeways and is committed to meeting state and federal requirements for storm water runoff from its facilities. The National Pollution Discharge Elimination System (NPDES) permits for storm water require all Caltrans activities to reduce pollutants, such as litter, that can enter our waterways through the storm drain system.

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Find out about the Caltrans Storm Water Program on the Web at www.DontTrashCalifornia.info or call 916-652-2119

www.dot.ca.gov/hq/env/stormwater

1-800-ADOPT-A-ENV
(1-800-262-3626)

DON'T TRASH CALIFORNIA

Caltrans is taking action to find safe and cost-effective solutions for reducing highway storm water pollution.

The Caltrans Storm Water Management Program

The Caltrans Storm Water Management Program is leading one of the nation's largest and most proactive research-based programs to reduce pollutants in highway storm water. The program is committed to improving water quality in California by providing cost-effective solutions for reducing or preventing adverse effects of storm water runoff from California freeways, highways and other facilities.



ent this kind of pollution:

round window.

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www.DontTrashCalifornia.info

Public Education Trash Reduction Summary

- Phone Poll – 6% behavior change due to DTC campaign
- 6% behavior change = 96,000 people
- .008 cubic feet per capita (pop 1.6 Million)
- .008 cubic feet • 96,000 = 768 cubic feet (removed)
- 47% reduction
 - Based on Department baseline of 1635 cubic feet

Adopt-A-Highway: Ballona Creek Watershed

Adopted Route	PM Start	PM End	Miles	Frequency
1	29.2	32.2	3.0	2/mo
2	12.7	13.1	0.4	2/mo
10	2.2	4.2	2.1	2/mo
10	6.1	8.1	2.0	2/mo
10	12.1	14.1	2.0	2/mo
90	0.9	3.3	2.4	2/mo
101	3.9	10.0	6.1	2/mo
405	22.0	25.3	3.3	2/mo
405	26.8	28.8	2.0	2/mo
405	30.0	32.1	2.1	2/mo
405	33.0	35.0	2.0	2/mo
405	35.0	36.6	1.6	2/mo
Total:			28.9	



- Increase in litter pick up from 1 to 2x per month = 13% reduction
- Increased litter pick up from 1 to 2 times per month in 65% of Ballona Creek Watershed
- Reduction of trash of 13% for 65% of the watershed is a 8.4% reduction (137.5 cubic feet)

Enhanced Trash Collection: Ballona Creek Watershed

- Routes:

Contracted Route	PM Start	PM End	Miles	Frequency
10	2.2	12.1	9.9	3/mo
90	0.9	3.3	2.4	2/mo
405	25.3	27.0	1.7	2/mo
405	31.9	33.2	1.3	2/mo
405	34.8	36.6	1.8	2/mo

- Increase in litter pick up from 1 to 2x per month = 13% reduction
- Increase in litter pick up from 1 to 3x per month = 26% reduction
- Increased litter pick up from 1 to 2 times per month in 18% of Ballona Creek Watershed
- Increased litter pick up from 1 to 3 times per month in 25% of Ballona Creek Watershed
- Reduction of trash of 13% for 18% of the watershed is a 2.3% reduction & a reduction of 26% for 25% of the watershed is a 6.5% reduction.
- Total reduction enhanced trash collection of 8.8% (143.94 cf)

Which BMPs will reduce the pollutant?



Infiltration basin



Media Filter



Detention basin



Biofilter Strip/Infiltration Trench



Media Filter - Earthen

Caltrans Compliance Overview: Ballona Creek Trash TMDL

- Structural Controls (GSRDs)
 - 4.5% reduction
- Institutional Controls
 - Public Education (“Don’t Trash California”)
 - 47% reduction
 - Adopt-A-Highway (Increased litter pickup)
 - 8.4% reduction
 - Enhanced Trash Collection
 - 8.8% reduction
- 2006 Total = **22.8%** reduction of trash (goal 20%)
- 2007 Total = **24.6%** (goal 30%)
- 2008 Total = **39.3%** (goal 40%)
- More difficult to comply beyond 2009

Questions?

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Caltrans

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