

City of Long Beach
Working Together to Serve



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Vice Mayor

The Cost of Pollution

TEDx Presentation By:
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The Cost of Pollution

- Effects on Long Beach
- Los Angeles & San Gabriel Watershed
- Beach & River Clean Up Costs
- Cost of Source Control Strategies
- Legislation & Education
- Community Costs

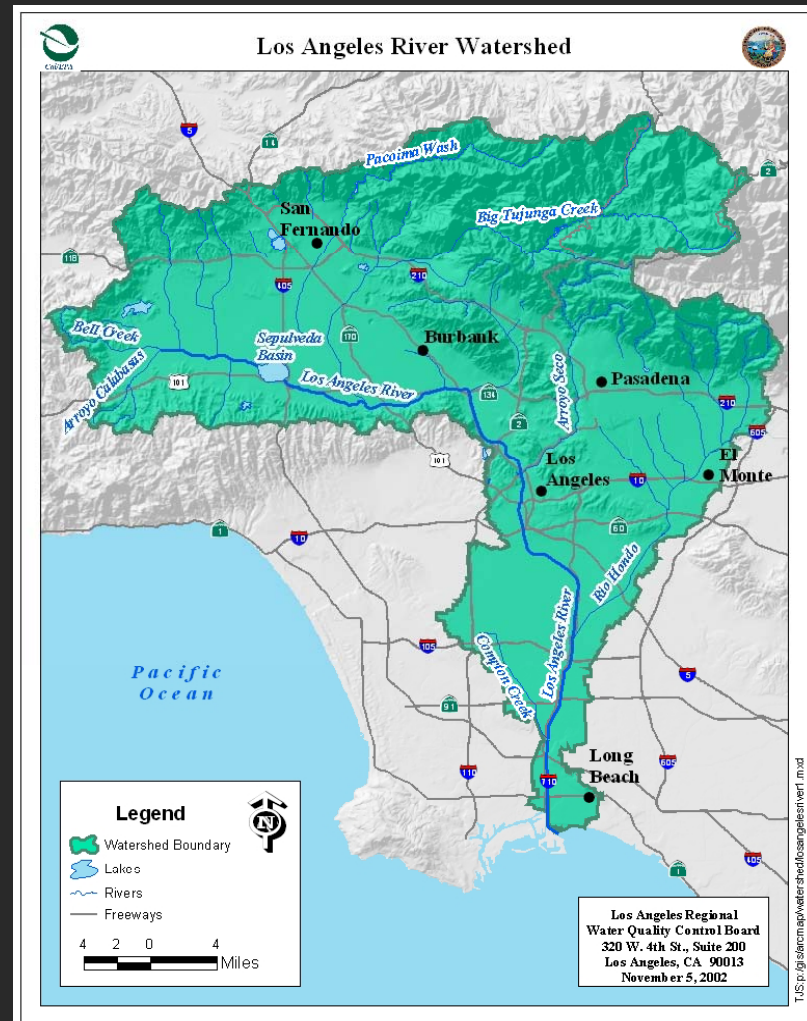


**“You Must Be The Change You Wish
To See In The World”
~ Mahatma Ghandi**



LA River Watershed

- Upstream pollution affects Long Beach, at the mouth of the LA River
- LA River
 - 824 square miles
 - 51 miles of river
 - 44% of City's drainage area
- San Gabriel River
 - 689 square miles
 - 75 miles of river
 - 7% of City's drainage area



Average 6,000 tons per year, Costing the City \$2.2 million



It is estimated that 95% of the debris that ends up in Queensway Bay and our beach comes from the LA River

Clean Up Efforts



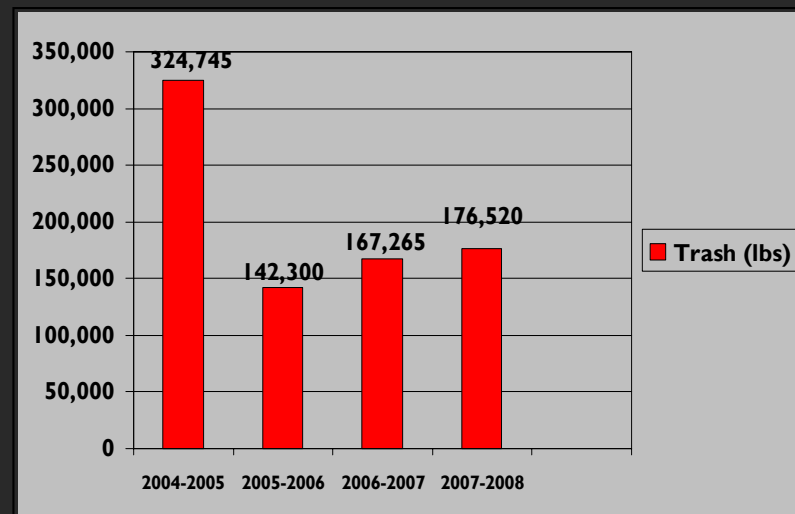
The Predator



The Beach Rake

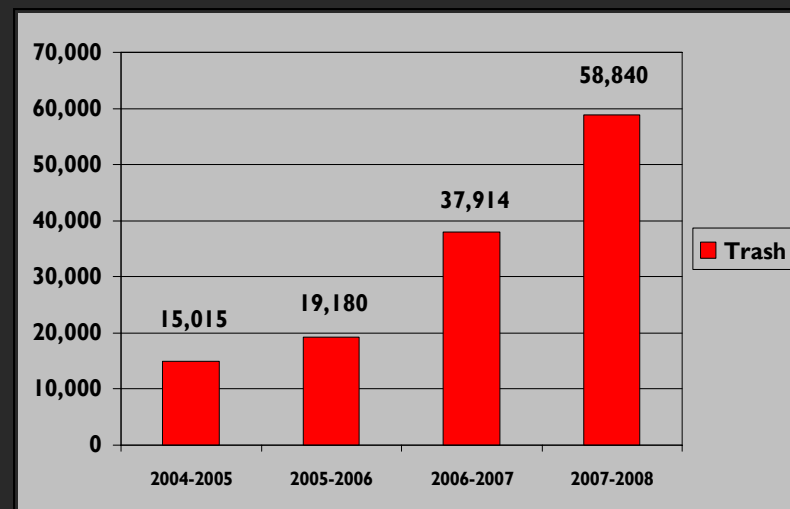
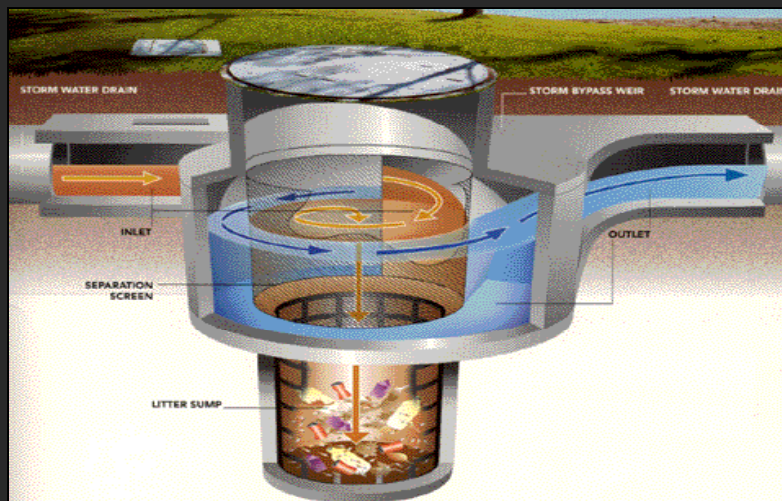
Trash Net Systems

- Trash nets are installed on the channels of the LA River to capture trash and debris
- Between the 2004 - 2008 storm seasons, collected 810,830 lbs of debris



Vortex Separation Systems

- Between the 2004 - 2008 storm seasons, collected 130,949 lbs of debris
- Located at 2 locations feeding LA River, collecting trash, debris and sediment



Catch Basin Debris Diverters: 3 remedies called a 'Treatment Train'

- Debris Excluder prevents trash and greenwaste
- Smart Sponge captures trash, oils/gas, bacteria
- Outfall Pipe Screen captures remaining trash, debris
- Located at 151 locations feeding LA River
- Collecting trash, debris, greenwaste, oils/gas and bacteria



Clean Up Costs

- Average Cost
 - Pothole Filled ~ \$53
 - Per Mile of Road Repaved ~ \$1,900,800 per mile
 - Per Mile of Bike Lane ~ \$27,500 per mile
- Cost of an additional Police Officer ~ \$125,000
- Cost of an additional Fire Fighter ~ \$128,000
- Cost of Park staff ~ \$28,000

Measure	Total Cost
Beach Clean Up	(Annual) \$2,200,000
Trash Net Systems	\$18,625,185 (Annual) \$180,000
Vortex Separation Systems	\$1,045,023 (Annual) \$72,000
Treatment Train Catch Basins	\$377,500
Total Invested	\$20,047,708
Annual Cost	\$2,452,000

Legislation and Education

- Litterfree Long Beach
- Litter Lizard Program
- Brag About Your Bag
- Plastic Bag Ban



Change Starts With Changing Behavior



Change Starts With Each Of Us



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~ Mahatma Gandhi