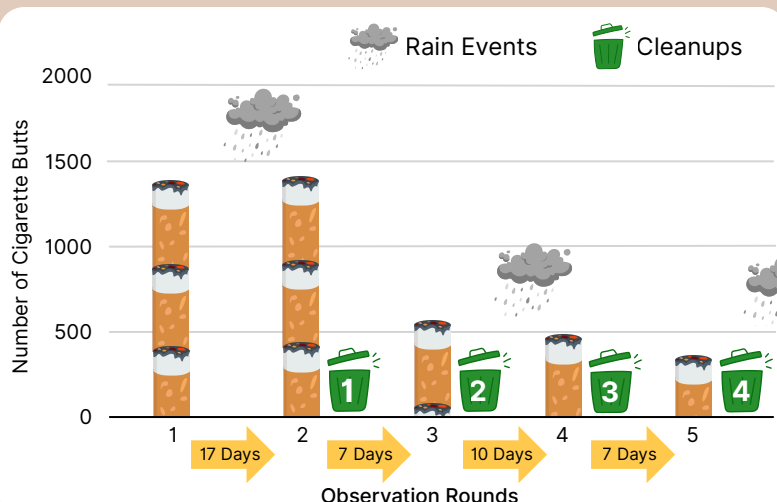


Tobacco Product Waste Found on the Streets Near Storm Drains Flowing into the Wetlands of Northern Mission Bay

Tobacco Product Waste Collection Results

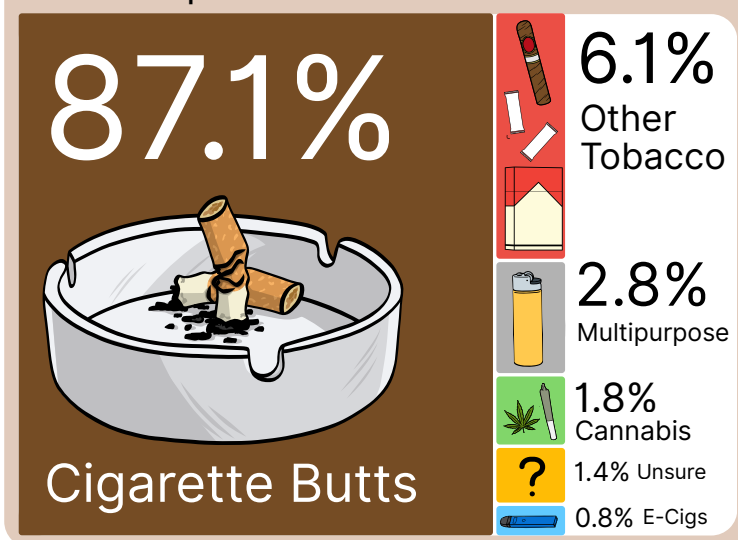
Total Cigarette Butts Counted Per Round



Approximately **1,400 cigarette butts** were observed during the first two observations, which established a baseline. Seven days after the first cleanup, we conducted a second cleanup and found and removed 570 new butts. We returned 10 days later for our third cleanup and removed 477 new butts. We came back 7 days later for the fourth cleanup and found and removed another 355 cigarette butts.

Over the entire period, **4,201 cigarette butts were identified near the 29 storm drains**. One week after the first cleanup, the cigarette butt count (570) returned to 40% of the average baseline level (1,400). **After each subsequent cleanup, the cigarette butts reaccumulated on average to 80% of the previous level.** Counts varied with land use types, with larger amounts along Balboa, Grand, and Garnet Avenues.

Makeup of Tobacco Product Waste Found



Projections

Based on the tobacco product waste found, we project:

80 cigarette butts

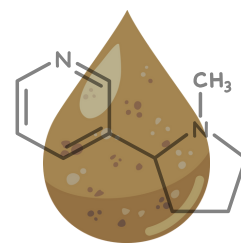


discarded each day near the 29 storm drains

29,200 cigarette butts discarded near the 29 storm drains each year
x 5 to 7 mg of nicotine estimated in each cigarette butt

~140-200 grams

of nicotine may leach into the environment every year from butts near the 29 storm drains



Conclusions

- Cleanups would have to be conducted every other day to achieve a 90% reduction of current levels.
- Within 8 weeks of a complete cleanup, more than 90% of tobacco product waste returns.
- Cleanups are an impractical and prohibitively costly strategy to significantly reduce tobacco product waste.
- To have a more permanent impact, upstream solutions need to be implemented, such as banning plastic filters in cigarettes, denormalizing littering of tobacco products, and requiring corporate social responsibility for the prevention and removal of tobacco product waste.

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