

Building a Climate Resilient Long Beach



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#ResilientLB Outreach Booth



What do you LOVE most about Long Beach?



What can WE do to PROTECT what we Love?



A photograph of a flooded street with a dark-colored car driving through the water. In the background, there are trees and a building.

**Sea Level
Rise**
& Coastal Flooding

A close-up photograph of a yellow thermometer with red markings, set against a bright orange background.


**Extreme
Heat**

A dark grey arrow pointing to the right, with a white outline, containing the text 'Public Health & Social Vulnerability'.

**Public Health &
Social Vulnerability**

A close-up photograph of dried, brown leaves and grass, indicating a lack of water.

**Drought
& Water Scarcity**

A photograph of a cityscape with mountains in the background, heavily obscured by a thick layer of smog or haze.

**Worsening
Air Quality**

Local Impacts of Climate Change Threats



Coastal Flooding can lead to **Drinking Water Contamination** from **Sewage Overflows, Flood Damage, & Mold**



Drought has already led to \uparrow in **Food Costs & Water Rationing**, & can also lead to **Food & Water Contamination, & Vector-borne Diseases**



Heat can lead to **Cramps, Exhaustion, & Heat Stroke**



Deteriorating Air Quality worsens **Asthma & Cancer rates**





January 22, 2017

**LB Fire Department's Swift Water Rescue Team
deployed to the corner of Caspian Ave & PCH**

- Press Telegraph staff file photo

3.87"



Thanksgiving Day heat records shattered throughout Southern California

Cities across Southern California saw recording breaking high-temperature during Thanksgiving Day.

OCREGISTER.COM

Long Beach breaks heat record set in 1965, registers high of 104 degrees

Long Beach health officials Monday urged residents to take precautions in the midst of the searing heat spell, which is expected to last through Tuesday, when temperatures could...

PRESSTELEGRAM.COM

2017's Extreme Heat Wave



Long Beach schools call for minimum days due to triple-digit heat next week

Monday will approach record temperatures for this time of year at 98 degrees, and Tuesday is forecast to reach 100 degrees, breaking the record of 98 degrees set in 1965, according to...

PRESSTELEGRAM.COM

City of Long Beach

● K-12 School Locations

□ Census Tracts with the highest Diesel PM values in the state (164kg/day)

73% of LBC's population (351,544 people*) live in areas with Diesel PM values >36 kg/day

*based on 2010 Census Data

Signal Hill

THUMS Oil Islands

Port of Long Beach

Middle Breakwater

Long Beach Breakwater

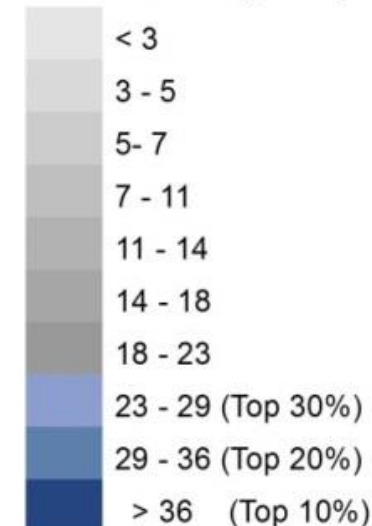
Port of LA

SanPedro Breakwater

0 1 2 3 4 5 Miles

Diesel Particulate Matter Emissions

Diesel PM emissions (kg per day) for a summer day in July 2010



No Monitor within 50km

data from CalEnviroScreen2.0



Becoming RESILIENT



Reducing Urban Flooding





**3 min
shower timer**


Shower Bucket



**Reusable
Straws**




**Energy & Water Efficient Dishwasher
that drains into a Gray Water Bucket**

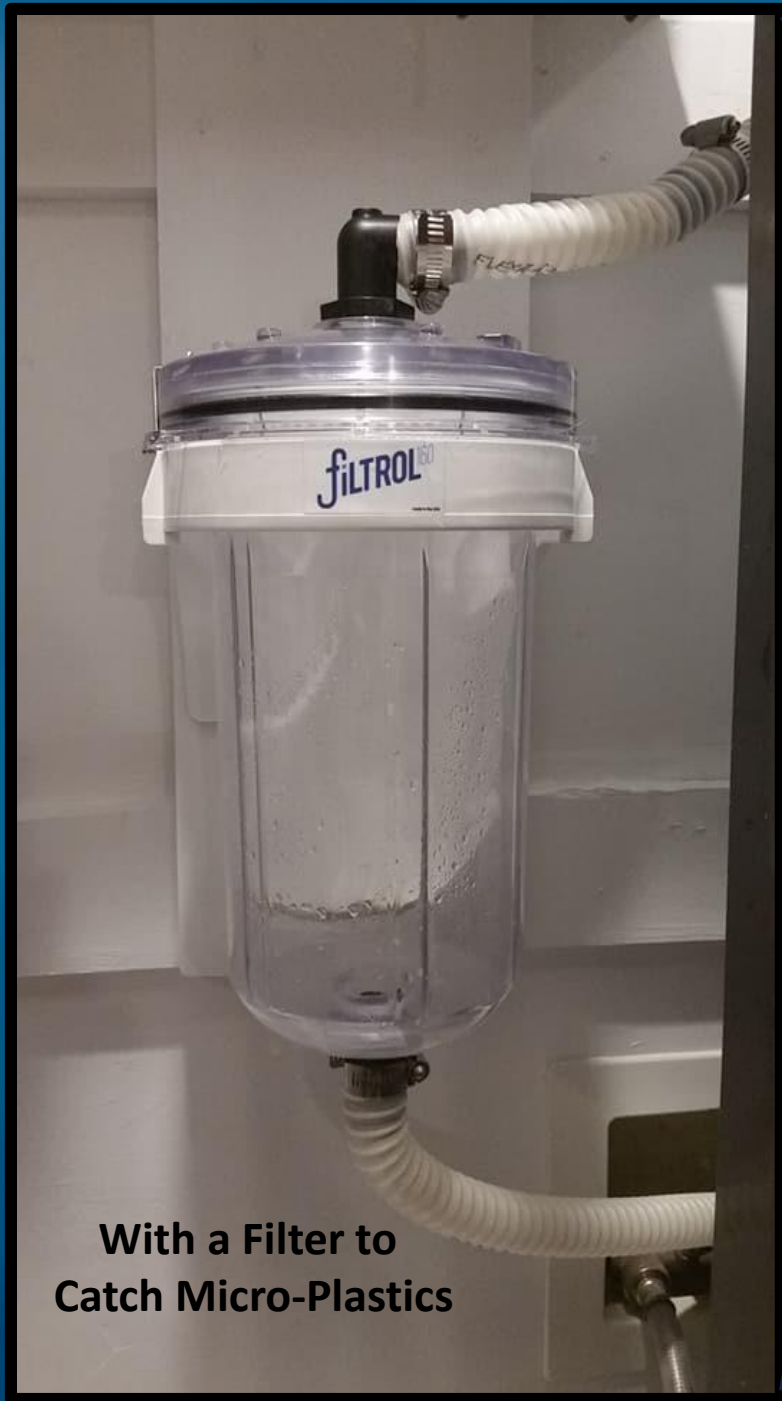
A photograph of a bathroom interior. A window is covered with brown wooden blinds. To the right of the window are three white shelves holding various items like a tissue box and a small jar. Below the shelves is a toilet with a white seat and a white tank. To the right of the toilet is a white pedestal sink. The wall is covered in light-colored wood paneling. A toilet paper roll is on a holder on the wall. A green patterned rug is on the floor.

**Curtains & Blinds
To reduce heat**

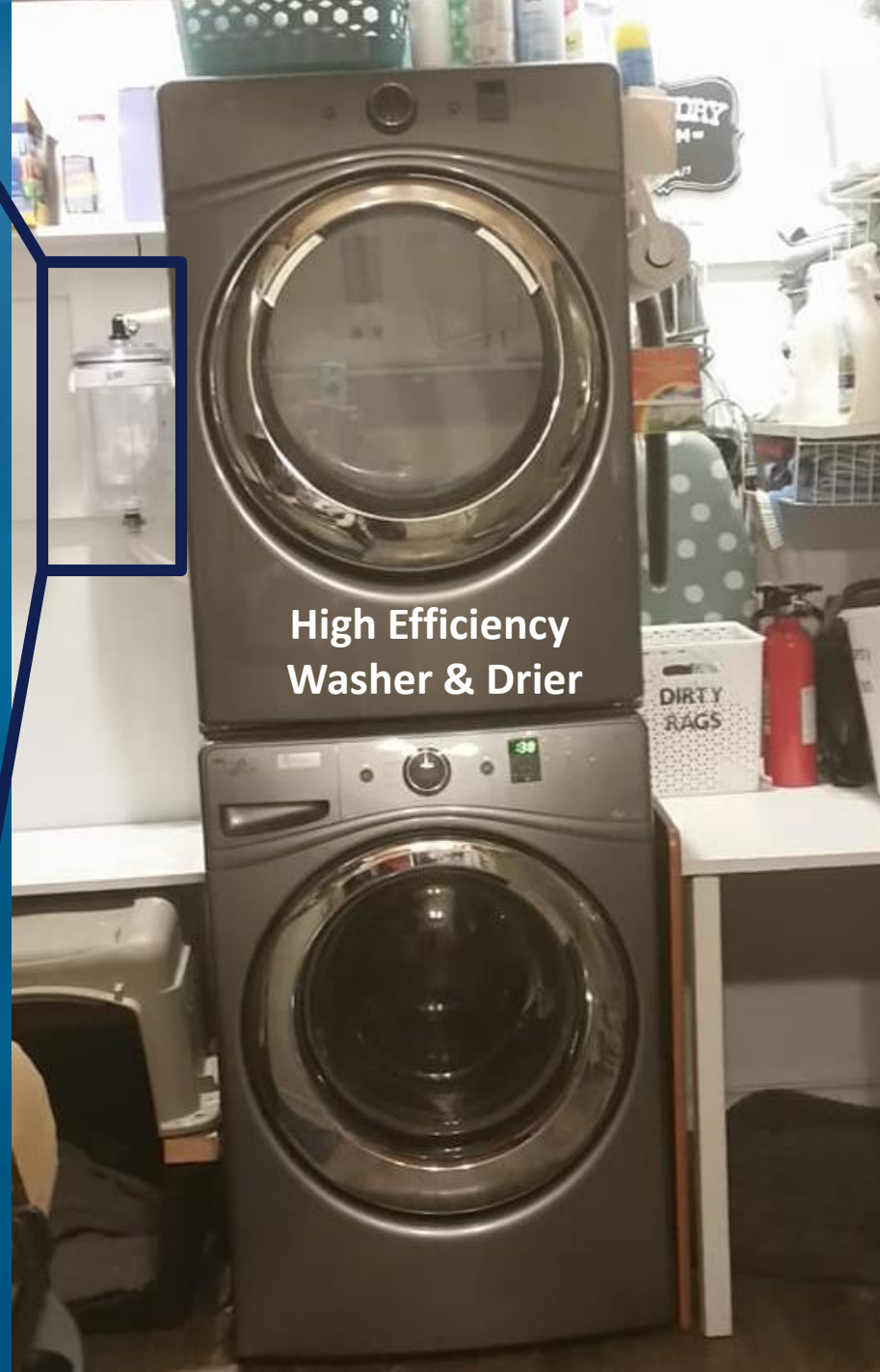
**High Efficiency
Dual Flush Toilette**

A photograph of a rain barrel storm-water catchment system. Five large red plastic barrels are lined up on a concrete foundation. A white downspout from a roof is connected to the first barrel. The barrels are situated next to a light blue wall. The ground in front of the barrels is grassy.

**Rain Barrel
Storm-Water
Catchment System**

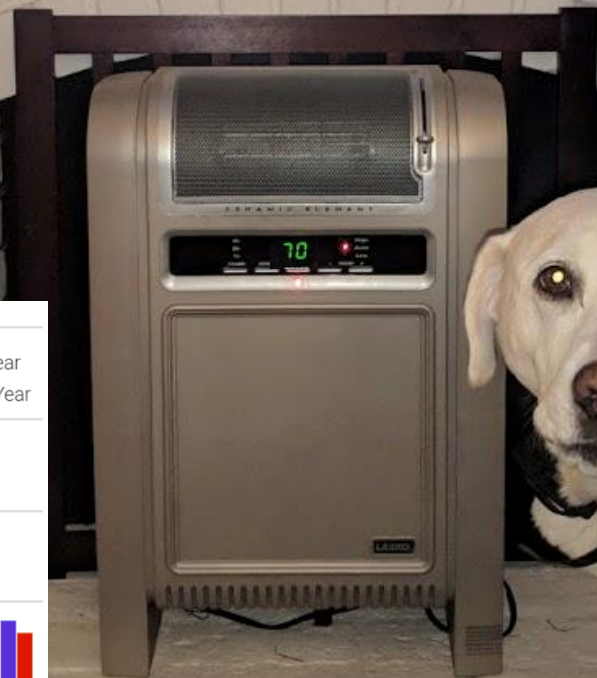


**With a Filter to
Catch Micro-Plastics**



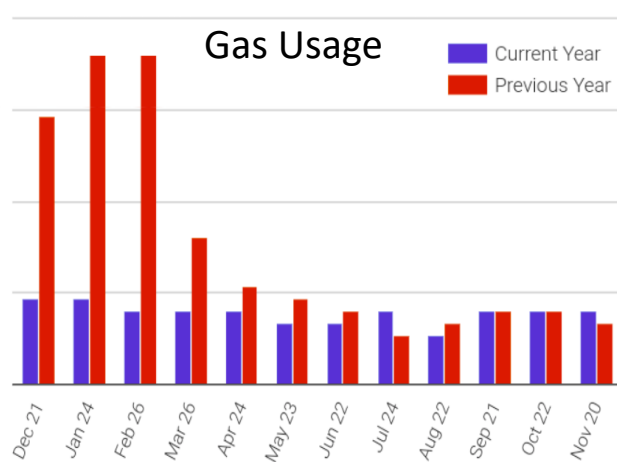
**High Efficiency
Washer & Drier**

Using Safe Efficient Space Heaters to only heat the spaces we're in ↓ Gas & Saves \$\$\$



Gas Usage

Current Year
Previous Year



Black-out curtains

Removable Window Film





10-3-2017



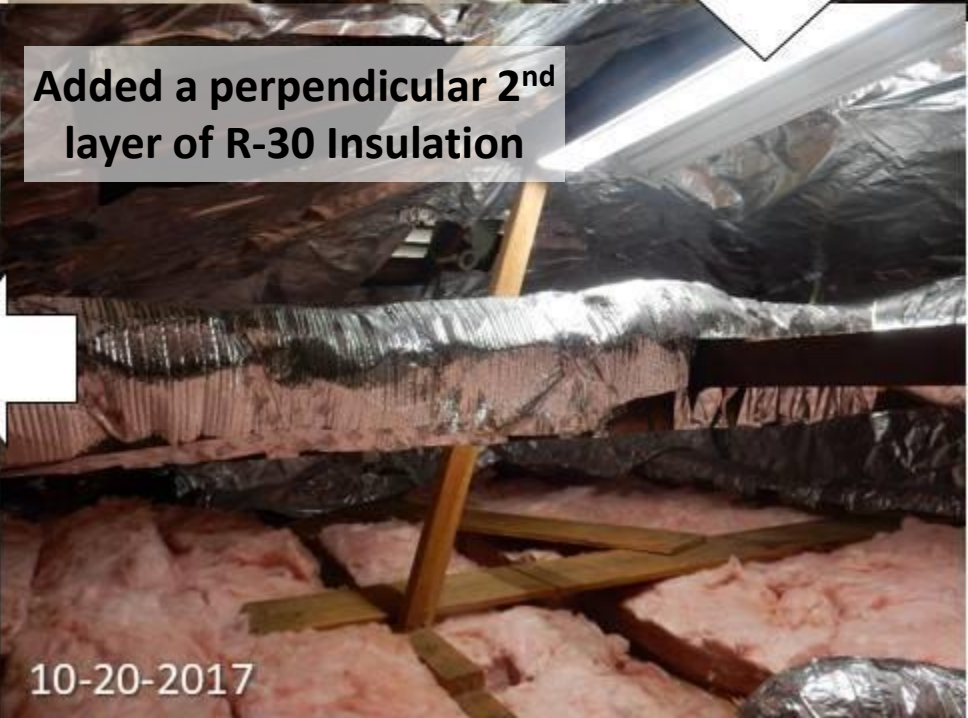
10-15-2017



Finished with a layer of Radiant Barrier

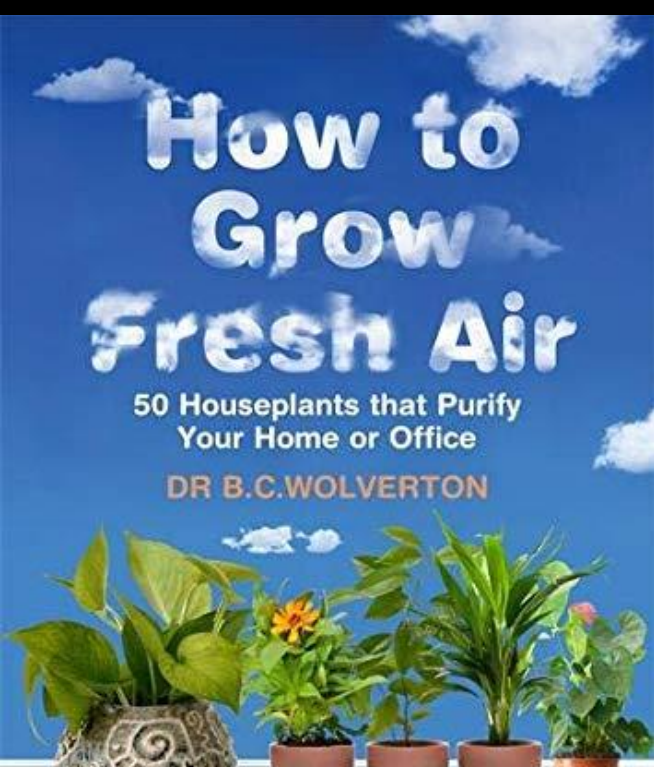


Added a perpendicular 2nd layer of R-30 Insulation



10-22-2017

10-20-2017





Simple Changes can Save Water, Energy, & \$\$\$

Mowed weekly using a gas powered mower & clippings thrown away
Watered for 20+ min 3 times a week

Mowed monthly using a hand-powered mower with clippings left in place, & aerated
Watered for 30 min once a week
(once a month in winter)





I DIG



LONG BEACH

6,000
trees by
2020



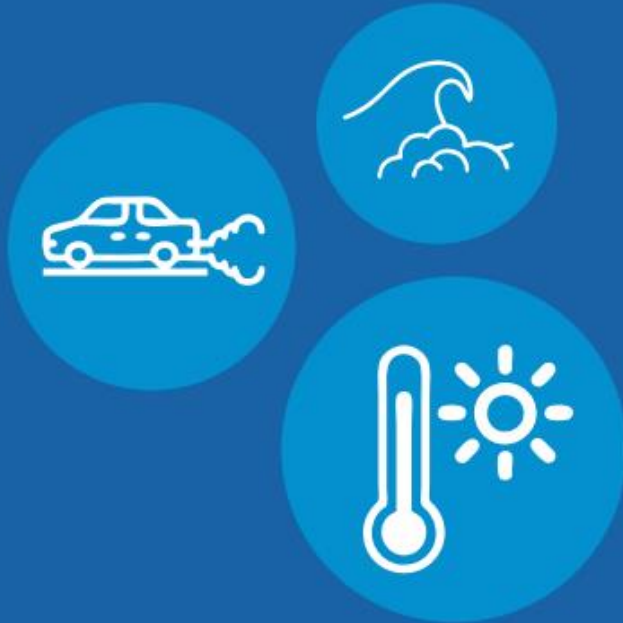
Additional Resources

Follow our hashtag:
#ResilientLB

Follow us on
Twitter & Facebook:
@resilientLBaop

Check out our resources:
<http://pacific.to/resilientLBaop>

Email us:
Resilient@LBaop.org



A Personal Action Guide

HOW CAN YOU BECOME CLIMATE-RESILIENT?

An Aquarium Report prepared by Bowman Change, Inc. and the
Aquarium of the Pacific



AOP



Thank You