

Waffle Forest's 'Smart Tree' Forest To Use Native Desert Species To Reduce Plant-Produced Ozone, Particulates In Phoenix

Because some trees produce compounds that make smog worse, the Phoenix non-profit will plant only the healthiest trees to tackle air pollution

PHOENIX, ARIZONA, UNITED STATES, August 24, 2022 /EINPresswire.com/ -- Living trees are known to help remove carbon and other pollutants from the air, but recent studies show that some trees produce compounds that can actually make air pollution worse. [Waffle Forest](#), a Phoenix-based non-profit, is committed to reclaiming waste land and planting a 'tech forest' using only native species that help rather than hinder air quality.



Palo verde trees in bloom. Arizona's state tree, palo verde are among the healthiest trees, producing very low BVOCs and efficiently capturing carbon dioxide and particulates to clean the air.

“Surprisingly, many trees produce dangerous volatile organic compounds that can actually make air pollution worse,” said [Waffle Forest Founder and CEO Ernest Lerma](#). “Our team is committed to selecting only trees that clean the air and reduce carbon and nitrogen dioxide.”

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*Ernest Lerma, Waffle Forest
Founder & CEO*

According to the Arizona Community Tree Council, native species like Western cottonwood, desert acacia, and several species of willow top the list of trees that produce large amounts biogenic volatile organic compounds (BVOC) which increase ozone pollution levels. Many ornamental trees and shrubs favored in the Phoenix area - including red bottlebrush, feather bush, Chinese banyan, and

Mediterranean fan palms – are the worst offenders when it comes to ozone emissions and potentially dangerous BVOCs.

"Top scientists have been studying BVOCs for many years now, and their reports will allow us to select trees with the lowest emissions and the best air-cleaning capabilities," Lerma explained. "Ozone air pollution in the Phoenix metro area is the fifth worst in the nation, so it's extremely important to add only trees that help fight air pollution. Our plan to plant 10,000 trees will reduce air pollution by naturally filtering carbon and nitrogen dioxide, capturing particulates and producing oxygen. These trees will also help reduce temperatures and offer a green park-style atmosphere in an area that has too many polluting industries and landfills."

The non-profit organization aims to rehabilitate a contaminated former landfill and tackle air pollution with "smart trees" and direct-air-capture infrastructure. A pilot program using patented TreeTalker technology to measure the pollution each tree absorbs is being funded by donations from Phoenix businesses and individuals, and more new technology will be used to water the forest without tapping precious groundwater.

"We plan to install hydropanels that use sunlight to collect moisture from the air and store it nearby to water the trees. Each tree will be equipped with a TreeTalker, a high-tech device that reports data to a dedicated server every hour, including the amount of water used and carbon absorbed," he said.

Waffle Forest's name derives from plans for rows upon rows of 15-by-15-foot-square "smart tree" installations laid out in a waffle pattern, using mature native desert species like mesquite, desert willow, evergreen elm, palo verde, and other desert species recommended by Desert Botanical Gardens specialists, and data from Arizona State University's School of



Waffle Forest Founder/CEO Ernest Lerma



Artist conception of an individual "waffle" with smart tree technology

Sustainability and the Urban Forest Ecosystem Institute.

"It's only been in the past 25 year or so that we realized that the trees we've planted to add shade and clean the air have actually been adding to our air pollution problems," Lerma reported. "We plan educate people attracted to our Waffle Forest's park-like atmosphere to, and hopefully reduce new plantings of the wrong species. We know people care about reducing pollution, and this provide a way they can do their part to help, by removing high-BVOC trees and replacing them with species that help instead of hurt. It's fitting that Arizona's official state tree is the palo verde, one of the healthiest in terms of air pollution."

The 501(c)3 non-profit organization is funded solely from grants, donations, and "waffle" sponsorship opportunities. To learn more about Waffle Forest, visit [WaffleForest.org](https://waffleforest.org). To make a donation or sponsor a waffle square, contact Lerma at ernest@waffleforest.org.

Ernest Lerma
Waffle Forest
+1 602-339-7703

[email us here](#)

Visit us on social media:

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