

Sacramento Urban Forest For Clean Air Project

This project will calculate Sacramento's urban forest impacts on air quality and develop an air quality improvement strategy using up to 5 million new trees.

The Project

The Center for Urban Forest Research is working with the Sacramento Tree Foundation (STF), and the Sacramento Air Quality Management District to evaluate the effectiveness of large-scale tree planting on the future air quality of the Sacramento Region.

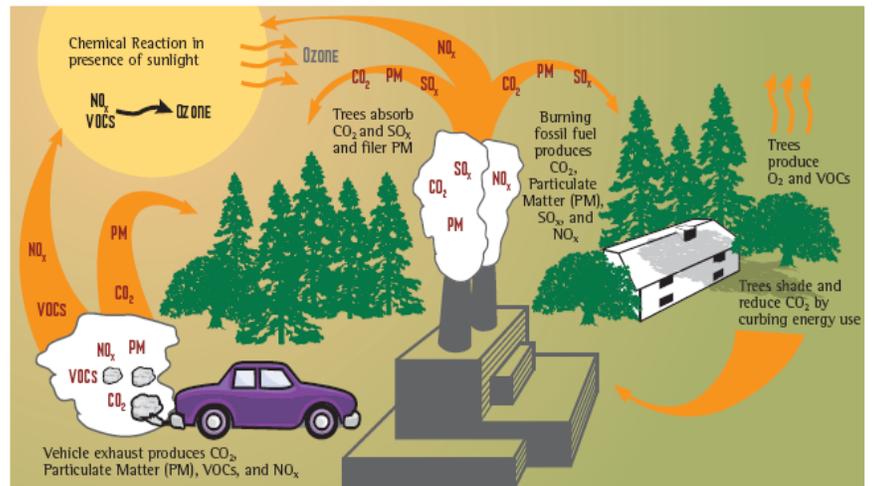
Using this information, we are developing a preliminary revision to the State Implementation Plan (SIP) that includes tree planting as an ozone reduction strategy. The U.S. Environmental Protection Agency (EPA) will evaluate this revision from a policy and technical perspective and a more detailed study may result from their findings.

If large-scale tree planting is accepted in the SIP, a new source of funds for tree planting and stewardship will become available for implementation of the regional Greenprint (www.sactree.com/aboutUs/programsServices/greenprint/greenprintOverview.html).

Why We Should Do This

- The Sacramento Metropolitan Area is among the 10 most ozone-polluted regions in the United States.
- The Sacramento Region is designated as a serious ozone "non-attainment area" by the EPA.
- The Sacramento region is also among the worst polluted areas for short-term particle pollution (24-hour $PM_{2.5}$), with diesel exhaust being a primary culprit.
- Children in Sacramento breathe in such a large amount of toxic air contaminants that they will have exceeded the EPA acceptable level more than 178 times by age 18.
- The six million existing trees in the Sacramento region are removing approximately 1,600 tons of air pollutants annually. However, this "tree effect" addresses only 2% of the air pollutants emitted every year.
- Scientific studies have identified a significant number of air quality improvements that can be expected from the urban forest.

A key outcome will be a better understanding of the effects of the urban forest on air quality.



What the USDA Forest Service is Doing

- The Center for Urban Forest Research is calculating the impacts of trees on air quality using existing models and statistical analyses.
- We are developing air quality estimates for different planting scenarios that include various levels of canopy cover increase, high and low mortality rates, and several tree species mixes.
- Regional GIS databases showing existing and future development are being used to develop realistic future canopy cover projections.
- Our models are providing initial estimates of other benefits associated with selected tree planting scenarios.

What the Sacramento Tree Foundation, Our Community Partner, is Doing

- The Sacramento Tree Foundation's Greenprint has been adopted by 26 local communities as a shared vision for increasing the region's tree canopy cover.
- STF is helping to develop realistic tree planting scenarios that optimize urban forest composition to maximize air quality benefits while maintaining a diverse mix of species.
- STF is considering implementation strategies and developing methods for tracking progress in order to verify that projected ozone reductions are being obtained.