

Residential: **SUBCOMMITTEE MEASURES**

Indoor Air Quality refers to the air quality within buildings and structures, especially as it relates to the health of building occupants. Some health effects may show up shortly after a single exposure or repeated exposures to a pollutant. These include irritation of the eyes, nose, and throat, headaches, dizziness, and fatigue. Such immediate effects are usually short-term and treatable. Sometimes the treatment is simply eliminating the person's exposure to the source of the pollution, if it can be identified. Soon after exposure to some indoor air pollutants, symptoms of some diseases such as asthma may show up, be aggravated, or worsened.

Outdoor air enters and leaves a building by: infiltration, natural ventilation, and mechanical ventilation. In a process known as infiltration, outdoor air flows into buildings through openings, joints, and cracks in walls, floors, and ceilings, and around windows and doors. In natural ventilation, air moves through opened windows and doors. Mechanical ventilation is the use of ducts and fans to circulate air.

Americans spend over 90 per cent of their time indoors, and poor indoor air quality is considered a top environmental health risk. Mitigation programs should focus on achieving measurable improvements in reducing risks from indoor pollutants.

Weatherization measures, such as installing weather-stripping and caulking around windows and doors, can reduce the amount of outdoor air infiltrating into a home and decrease energy costs associated with heating and cooling. In addition, using a portable air cleaner and/or upgrading the air filter in your furnace or central heating, ventilation, and air-conditioning (HVAC) system can help to improve indoor air quality. Portable air cleaners, also known as air purifiers or air sanitizers, are designed to filter the air in a single room or area. Central furnace or HVAC filters are designed to filter air throughout a home. Portable air cleaners and HVAC filters can reduce indoor air pollution; however, they cannot remove all pollutants from the air.

COMMUNITY CONCERNS AND COMMENTS

Community commenters have noted that providing community residents with information about existing weatherization programs, should be augmented with incentives to assist residents in improving indoor air quality through a residential air filtration program.

STRATEGIES DEVELOPED FOR IMPLEMENTATION IN COMMUNITY

Based on interest from the community and a growing understanding at the state level of the need to improve indoor air quality the following strategy has been developed for implementation as a part of the Stockton CERP.

IAQ.1: INCENTIVE PROGRAM FOR RESIDENTIAL AIR FILTRATION AND WEATHERIZATION

Overview: The goal of this strategy is to reduce the impact of and exposure to air pollution on community residents near sources of pollution within their homes. Indoor air filtration devices can be of assistance in improving indoor air quality in homes. While air cleaning devices alone cannot adequately remove all indoor pollutants from homes, they can be very helpful when large amount of pollution enter a home during unusual events, such as during a wildfire. Weatherization of a home (improving seals around doors and windows, increasing the amount of home insulation, and improving home HVAC systems) can reduce outside pollutants moving into the home and decrease the overall energy demand for residents.

Due to the ability for some residential air filtrations systems, such as electrostatic precipitator and ionizers, to generate ozone as a byproduct, which is a criteria air pollutant and causes lung irritation¹. In some cases, the use of these types of air filters can increase indoor ozone concentrations beyond public health standards. For this reason, this strategy will focus on the use of mechanical air filtration that relies on using filter media to remove indoor air pollution.

This strategy would establish an incentive program for residential air filtration for community residents near sources of air pollution, and increase outreach and access to programs available for low-income residents in Stockton to receive weatherization services.

Implementing Agency: SJVAPCD, partner agencies such as San Joaquin County Human Services Agency: Home Energy Assistance Program (HEAP)

Strategy Type: Incentive

Budgeted Amount: \$1,000,000

Quantifiable mitigation: Utilize CARB-approved guidelines and methodology.

¹Residential Air Cleaners – A Technical Summary – US EPA

(https://www.epa.gov/sites/production/files/2018-07/documents/residential_air_cleaners_-_a_technical_summary_3rd_edition.pdf)