



Guidance for Childcare Programs during COVID-19 and Poor Air Quality Conditions **September 18, 2020**

Alameda County's Shelter in Place Order remains in effect and childcare programs are subject to coronavirus disease 2019 (COVID-19) restrictions, even during poor air quality events.

For guidance on COVID-19, refer to: <https://covid-19.acgov.org/covid19-assets/docs/childcare-schools-colleges/childcare-faq-eng-2020.06.24.pdf> and follow the Centers for Disease Control and Prevention (CDC) guidance for child care programs to prevent the spread of COVID-19: <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/guidance-for-childcare.html>.

Factors to address include:

- Implementing physical distancing strategies
- Intensifying cleaning and disinfection efforts
- Modifying drop-off and pick-up procedures
- Implementing screening procedures upon arrival
- Maintaining an adequate ratio of staff to children to ensure safety
- Planning ahead, and recruiting those with childcare experience to ensure a roster of substitute caregivers who can fill in if staff members are sick or stay home to care for sick family members
- When feasible, staff members and older children should wear masks within the facility. Masks should NOT be put on babies and children under the age of two because of the danger of suffocation.
- Implementing a Site-Specific Protection Plan according to the [Alameda County Health Officer's Order](#)

Addressing air quality is critical in reducing the risk of exposure to coronavirus and wildfire smoke. Follow the County's guidance on [ventilation in schools](#). Additional guidance is provided below to help childcare programs navigate COVID-19 and poor air quality during wildfires.

- During poor outdoor air quality due to wildfire smoke, children should remain indoors. Children are especially at risk for health effects from exposure to wildfire smoke and ash, mostly because their lungs are still growing. Children with asthma, allergies, or chronic health issues may have more trouble breathing when smoke or ash is present.



- Children should not wear N95 or P100 masks to protect from smoke – they do not fit properly and can impede breathing. Children over the age of two are strongly encouraged to wear cloth or surgical masks to protect from COVID-19 but should be supervised for safety. Cloth and surgical masks used for COVID-19 protection provide very little protection against smoke. N95 masks are prioritized for health care workers during the COVID-19 pandemic and should only be used for wildfire smoke protection by those who do not have the option to stay indoors.
- Facilities should be sealed as much as possible, with windows and doors closed. Building air management/air conditioning and filtration should be adjusted to limit outdoor air intake during poor air quality and protect from COVID-19. Ideally, high-efficiency filters rated MERV 13 or higher would be used, which assist with both COVID-19 and smoke protection.
- For residential facilities or those without central air conditioning or filtration, the United States Environmental Protection Agency (USEPA) offers [tips for reducing smoke exposure](#) during Shelter-In-Place by creating a clean room.
- Watch for signs of heat illness, including headache, dizziness, or nausea, and consider medical attention. Learn more from our [Heat Pocket Guide](#), provided in 6 languages.
- Implement COVID-19 precautions and additional protocols for wildfire smoke/poor air quality. If your facility cannot accommodate both COVID-19 and wildfire smoke protection, consider notifying parents early to keep children at home. Being prepared is key in protecting the health of children, staff, and our communities.

Managing Child Care Programs and Closure During Poor Air Quality Conditions

Determine Outdoor Air Quality

- Visit www.baaqmd.gov or www.airnow.gov to monitor local air quality. Air quality can change throughout the day and we recommend checking several times a day and checking forecasts to help plan for the next day.
- CA Department of Education (<https://www.cde.ca.gov/ls/ep/documents/airqualityguidance.pdf>) and CA Environmental Protection Agency's Office of Environmental Health Hazard Assessment (<https://oehha.ca.gov/media/downloads/air/fact-sheet/wildfiresmokeguideschoolsada.pdf>) have provided guidance on recommended actions in poor air quality conditions. ACPHD has used this guidance to make recommendations for childcare.



Address Indoor Air Quality

- **Building Air Management, Ventilation and Filtration.** COVID-19 protections can be enhanced with proper ventilation. During poor air quality conditions, indoor air quality can be improved by filtering out particulate matter. For buildings with heating, ventilation, and air conditioning (HVAC) systems, see “Guidance on Ventilation in School Buildings During the COVID-19 Pandemic” (attached), “Indoor Air Measures Table Smoke and COVID” (attached), and EPA’s Wildfire Smoke: A Guide for Public Health Officials (<https://www.cde.ca.gov/ls/ep/documents/airqualityguidance.pdf> , pages 20-22) for more guidance. Ideally, high-efficiency filters rated MERV 13 or higher would be appropriately installed and used, which assist with both COVID-19 and smoke protection.
- **Creating a “Clean Room”.** For facilities without central HVAC, or in a residential setting, consider a room air cleaner or portable filtration (\$90-\$900). Room air cleaners should be sized appropriately for the space – see the attached “Guidance on Ventilation” and EPA guidance (<https://www3.epa.gov/airnow/wildfire-smoke/wildfire-smoke-guide-revised-2019.pdf> , pages 22-23 and 25-26) to create a room or rooms with cleaner air.
- Most portable units will state on the package the unit’s airflow rate, the room size it is suitable for, its particle removal efficiency, and perhaps its Clean Air Delivery Rate (CADR). The CADR is a rating that combines efficiency and airflow. For wildfire smoke, choose a unit with a tobacco smoke CADR at least 2/3 of the room’s area. Portable air cleaners are rated by the Association of Home Appliance Manufacturers. Determine the appropriate device according to the room dimensions and the CADR of the device to reach a desired air exchange rate in air changes per hour (ACH) of at least 5 using the following equation^{9,10}.

$$\text{ACH} = \text{CADR (cubic feet per minute)} \times 60 \text{ (minutes per hour)} \div \text{room volume (cubic feet)}$$

It is important to select a device that does not emit ozone into the room. California-certified air cleaning devices have met the ozone emissions limit and can be found here: <https://ww2.arb.ca.gov/our-work/programs/air-cleaners-ozone-products/california-certified-air-cleaning-devices>

Evaluate capability of facility to remain open while addressing COVID-19 and an Air Quality Index (AQI) above 100.

- To reduce risk of exposure from potential coronavirus that may be spread in indoor air, activities at childcare programs are recommended to be performed outdoors as much as possible. However, during days of unhealthy outdoor air quality, these outdoor activities may have to be moved indoors.



- Improvements to indoor air quality including ventilation and filtration and other COVID-19 precautions must be in place to continue childcare program activities indoors.

ACPHD RECOMMENDATIONS FOR CHILDCARE		
Air Quality Index	Meaning	Childcare
101 - 150 Unhealthy for Sensitive Groups	Air Quality is Unhealthy for Sensitive Groups. Children, older adults and those w/ breathing or heart issues should limit outdoor activities.	Consider moving lunch and other outdoor activities indoors. If engaging in vigorous outdoor activities, limit to a maximum of 15 minutes. Excuse children with sensitivity to air pollution (e.g., asthma) from outdoor physical education activities.
151 - 200 Unhealthy	Air Quality is Unhealthy. Everyone, especially children, older adults and those w/ breathing or heart issues, should limit outdoor activities.	Limit outdoor activities.
201- 300 Very Unhealthy	Air Quality is Very Unhealthy. Stay indoors with windows and doors closed to avoid poor air quality.	Move all activities indoors or re-schedule outdoor events. Consult below guidance if considering closure.
301 - 500 Hazardous	Air Quality is Hazardous. Avoid all activity outdoors. Sensitive groups: remain indoors & keep activity levels low.	Move all activities indoors or re-schedule outdoor events. Consult below guidance if considering closure.



- **Considerations for School Districts from California Department of Education (CDE): Before You Make a Decision to Close a School.**

Outdoor air quality is one factor local educational agencies (LEAs) need to consider when making a school closure decision. LEAs should consider the factors on page 5 in the below resource, in addition to any other relevant local conditions or concerns, when deciding to close school. <https://www.cde.ca.gov/ls/ep/documents/airqualityguidance.pdf>

Prepare parents on COVID-19 and unhealthy air quality protocols

- Consider accepting and rotating a smaller number of children according to the facility's indoor air quality during unhealthy outdoor air days
- Arrange a notification procedure with parents when a smaller pod rotation schedule needs to be implemented or the facility must close during unhealthy outdoor air days

Additional Resources

CA Department of Education Air Quality Guidance

<https://www.cde.ca.gov/ls/ep/documents/airqualityguidance.pdf>

CA Environmental Protection Agency's Office of Environmental Health Hazard Assessment Guidance for Schools

<https://oehha.ca.gov/media/downloads/air/fact-sheet/wildfiresmokeguideschoolsada.pdf>

Protective Actions for Fire Season – good resources to share with families/guardians

- Air Now: <https://www.airnow.gov/sites/default/files/2020-06/prepare-for-fire-season.pdf>
- ACPHD: <http://www.acphd.org/wildfire-smoke.aspx> - See FAQ flyer

Reducing Exposure to Wildfire Smoke during COVID-19 Pandemic (CDC):

https://www.cdc.gov/disasters/covid-19/reduce_exposure_to_wildfire_smoke_covid-19.html

Wildfire Smoke and COVID-19 FAQs (CDC): <https://www.cdc.gov/coronavirus/2019-ncov/php/smoke-faq.html>

Wildfire Smoke: A Guide for Public Health Officials (EPA):

<https://www3.epa.gov/airnow/wildfire-smoke/wildfire-smoke-guide-revised-2019.pdf>

Creating a Clean Room (EPA): <https://www.epa.gov/indoor-air-quality-iaq/create-clean-room-protect-indoor-air-quality-during-wildfire>



Wildfire Smoke and COVID-19 resources from CDC:

- https://www.cdc.gov/disasters/covid-19/wildfire_smoke_covid-19.html
- <https://www.cdc.gov/coronavirus/2019-ncov/php/smoke-faq.html>

Monitoring Air Quality Conditions Affected by Wildfire Smoke

Current Data: AirNow: Entering zip code will show current air quality, brief recommendations for protective actions given current air quality, and five-day air quality forecast. <https://www.airnow.gov/>

Notifications: EnviroFlash allows signups to receive air quality notifications via email when an Air Quality Action Day is declared. <http://www.enviroflash.info/>

Twitter Accounts for Up to Date Regional Information:

- Alameda County Fire: <https://twitter.com/AlamedaCoFire>
- Alameda County Office of Emergency Services: <https://twitter.com/AlamedaCoAlert>
- Alameda County Public Health Department: <https://twitter.com/Dare2BWell>
- Bay Area Air Quality Management District:
- National Weather Service Bay Area: <https://twitter.com/NWSBayArea>

More detailed maps, history, and projections:

- AirNow Fire and Smoke Map: Map includes data layers on air quality from permanent monitors and low-cost sensors and smoke plumes. Additional layers include large fire incidents and satellite detections of fires. <https://fire.airnow.gov/>
- BAAQMD Current & Historical Air Quality Data: Can be viewed on hourly or daily basis. Historical information is available. <https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/#/aqi-highs>
- National Weather Service Air Quality Forecast Guidance for Northern California: Hour-by-hour predictions for surface smoke. Pull down menu: <https://airquality.weather.gov/sectors/northcaliforniaLoop.php#tabs>
- Spare the Air Five-Day Air Quality Forecast: Entering city will show air quality forecast. Note that in past major fire events, forecasts have sometimes not predicted full extent of ongoing poor air quality. <https://www.sparetheair.org/understanding-air-quality/air-quality-forecast>