



WILDCAT CANYON COMMUNITY SCHOOL
blossoming from East Bay Waldorf School

WILDFIRE SMOKE POLICY

August 22, 2021

I. PURPOSE

The purpose of the Wildcat Canyon Community School Wildfire Smoke Policy is to protect the health and safety of our community during unhealthy air quality days due to wildfire smoke. It is our goal and intention to keep the school open as much as possible during such emergency events without compromising the wellbeing of our staff, students, and volunteers.

We are navigating these unprecedented times with no reference point from the past. Balancing safety measures concerning COVID-19 and wildfire smoke simultaneously is extremely challenging, and the two goals can often be counterproductive. Community support and understanding of these efforts is valuable beyond measure, as we navigate these challenges in common cause with flexibility and goodwill.

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II. BACKGROUND

Wildfires in California can create smoke conditions leading to extended periods of unhealthy and hazardous air quality days. Because of these conditions, the schools are forced to modify its programming such as moving activities indoors, allowing early pickups, and even complete school closure. Our school is in a unique position of needing to ensure healthy air quality in both indoor and outdoor environments. Free movement of children between indoors and outdoors is central to the Waldorf curriculum we teach, and our campus and facilities are built to enable this. However, our buildings' air handling system is not capable of circulating fresh filtered air in and carbon dioxide out, making us dependent on open outdoor air circulation in order to safely operate our school. In addition, current COVID-19 guidelines heavily emphasis reliance on outdoor air as a measure to prevent the spread of the virus. Nonetheless, actions outlined in this policy will ensure that we maintain a balance of providing a safe environment for our community without compromising the quality and quantity of education we strive for.

This policy is based on the following guidance documents developed by various Federal, State, and local agencies.

[Get Smart about Wildfire Smoke - Clear Guidelines for Schools and Wildfire Smoke](#). July 2019. CA Department of Education et al.

[Guidance for Schools During Wildfire Smoke Events](#). December 2019. CA Environmental Protection Agency.

[Marin County Air Quality Outdoor Activity Overview and Communication Protocols for Schools](#). May 2021. Marin County.

III. ROLES and RESPONSIBILITIES

Board of Trustees

The Board of Trustees is responsible for ensuring that all necessary school functions are in place and functional. Specifically, the school's Operations Circle is responsible for creating this policy and keeping in up to date. The circle is also responsible for making sure that teachers and parents are well aware of this policy and its implementation requirements.

Teachers

The teachers are responsible for being intimately familiar with the policy and its implementation as described herein.

Parents

The teachers are responsible for being intimately familiar with the policy and its implementation as described herein.

IV. GENERAL CONSIDERATIONS

The following general considerations were used as the lens through which this policy was developed.

- A. Children are considered more sensitive to smoke because their developing lungs and heightened activity make them more sensitive to the negative impacts of smoke.
- B. When air is unhealthy, the best protection is to reduce physical activity and stay indoors with windows and doors closed, in a location with well-filtered air.

- C. Masks provide limited protection against smoke. N95 respirators are not recommended for children. Masks can exacerbate breathing difficulty for sensitive breathers or potentially cause deeper breathing, which draws particulates deeper into the lungs if they are not fitted correctly.
- D. Families always have the right to keep their children home if they are concerned for their child's health.
- E. Socioeconomically disadvantaged families may not have options for alternate childcare. Working parents and guardians are disproportionately affected by school closure and could suffer significant professional or economic consequences.
- F. The school has considered impacts to families from prolonged school closures, and we have extended our 2021-2022 school year by one week of programming to account for this possibility.

V. KEEPING CLASSROOMS SAFE

The following measures were designed to ensure that the air quality inside each classroom stays below AQI 101 and CO2 levels below 1,000 ppm.

- A. Each furnace in a classroom will be outfitted with a minimum of MERV 13 filter.
- B. Each classroom will also have a portable properly sized HEPA air filter.
- C. Each classroom will have a real time air quality sensor constantly monitoring CO2 and PM 2.5. levels.
- D. If all activities are moved inside classrooms due to poor outdoor air quality, each teacher will monitor the levels of CO2 and P 2.5 every 30 minutes and record the readings using the "Air Quality Monitoring Log" found in Appendix A to this policy.
- E. If the teacher makes a decision to close classroom windows/doors and the air quality reaches CO2 levels of 1,000 ppm, the teacher will open the exterior doors or windows until CO2 levels falls to at least below 800 ppm.
- F. If the interior air quality cannot be consistently maintained below AQI of 101 (35 µg/m³ of PM 2.5), all school activities will be canceled and parents notified about early dismissal and school closure.

VI. COMMUNICATION ALERTS

It is imperative to ensure that the information about school closures and modified school programming gets to the parents and guardians in a timely manner. See Table 1 for a summary of modified activities and school closures based on the air quality conditions.

During wildfire events, school's operations circle will daily monitor air quality forecasts via www.Airnow.gov. Daily forecasts are usually available by 4 PM. For real time readings, the school will employ data from www.purpleair.com. The school owns and operates a "low cost" sensor (PA78067) enabling us to make decisions based on local conditions. When taking readings from www.purpleair.com website, the US EPA conversion factor will be used. This conversion factor is based on USEPA Office of Research and Development correction equation from the US wide study validated for wildfire and woodsmoke.

In those cases where the forecast shows AQI of more than 201, each family will be notified by 6 PM of next day emergency closure. No follow up alerts should be expected (next day alert will be sent out by 6 PM the following day).

In those cases where the forecast shows AQI of more than 151 but less than 201, each family will be notified by 6 PM of potential next day emergency closure. If the morning of, the real time air quality conditions (via www.purpleair.com) at the school are below AQI of 201, an alert will be sent out by 7 AM of in-person school session. If the real time air quality is over AQI of 201, an alert will be sent by 7AM of emergency school closure.

When the school is in session during the wildfire events, front office volunteer will conduct monitoring of outdoor air quality every 30 minutes via www.purpleair.com. Air quality readings will be recorded in the "Air Quality Monitoring Log" found in Appendix A to this policy.

Whenever the local sensor records AQI above 101, the front office will notify each teacher about appropriate restrictions in place per Table 1: School Air Quality Activity Recommendations.

If the school is not able to maintain classroom air quality below CO2 levels of 1,000 ppm and AQI of 101, each teacher will notify the front office who will in turn notify each family about early dismissal.

VII. SCHOOL AIR QUALITY ACTIVITY RECOMMENDATIONS

The following recommendations were modified, to meet our school's specific needs and conditions, from the [guidance](#) developed for the California school districts.¹

¹ <https://www.cde.ca.gov/ls/ep/documents/airqualityguidance.pdf>

Table 1: School Air Quality Activity Recommendations

AIR QUALITY INDEX	RECOMMENDED ACTIVITIES	SCHOOL ACTION	PARENTAL ALERT
<p>LEVEL 1 0-50 PM2.5 0-12 µg/m³</p>	<ul style="list-style-type: none"> • Great day to be outside. 	<ul style="list-style-type: none"> • No Restrictions on Outdoor Activities 	<p>None.</p>
<p>LEVEL 2 51-100 PM2.5 13-35 µg/m³</p>	<ul style="list-style-type: none"> • Good day to be outside. • Students who are unusually sensitive² to air pollution could exhibit symptoms. 	<ul style="list-style-type: none"> • Teachers will closely monitor for any symptoms. • If symptoms observed, all activities will be brought inside (class specific). 	
<p>LEVEL 3 101-150 PM2.5 36-55 µg/m³</p>	<ul style="list-style-type: none"> • Early childhood or classes with sensitive individuals will move all activities inside. • Grade students should avoid vigorous outdoor activities and consider moving all activities inside. 	<ul style="list-style-type: none"> • Inform all school staff that restrictions are in place. • Classroom air quality monitoring is activated. 	<ul style="list-style-type: none"> • If classroom air is not able to stay below AQI of 101, parents will be alerted about early dismissal and class cancelation.
<p>LEVEL 4 151-200 PM2.5 56-150 µg/m³</p>	<ul style="list-style-type: none"> • All activities are held inside. • Early dismissal is optional. 	<ul style="list-style-type: none"> • Inform all school staff that restrictions are in place. • Classroom air quality monitoring is activated. 	<ul style="list-style-type: none"> • If classroom air is not able to stay below AQI of 101, parents will be alerted about early dismissal and class cancelation.
<p>LEVEL 5 201 or higher PM2.5 151-500 µg/m³</p>	<p>The school is closed. Parents will be alerted the day before.</p>		

² Sensitive Individuals include all those with asthma or other heart/lung conditions.

APPENDIX A: AIR QUALITY MONITORING LOG

Date	Time	Classroom	CO2 Levels (ppm)	PM 2.5 Levels	PM 2.5 Exterior Reading	Comments