Introduction and Background: The San Joaquin Valley Air Pollution Control District (SJVAPCD) is one of 35 outdoor air quality management districts (air districts) in California and is comprised of eight counties including Fresno, valley portion of Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Like many of the districts, the SJVAPCD does not currently meet federal or state standards for ozone and particulate matter (PM). As a result, the SJVAPCD is required by federal rules to provide the public with outdoor air quality information, usually in the form of the air quality index (AQI) developed by the US Environmental Protection Agency. The State of California requires in its Air Pollution Emergency Plan that local air districts notify school personnel when air pollutants reach, or are predicted to reach, specified levels.

The importance of better understanding the outdoor air quality information available from the air district directly relates to the decisions our schools must make regarding children's outdoor activities on poor outdoor air quality days. Through preparatory efforts the school districts can adapt to poor outdoor air quality days and still meet physical fitness goals for students.

Purpose of the Policy: The potentially adverse effects of unhealthful outdoor air quality on the health of students and employees are acknowledged. It is the purpose of this policy to: (I) establish a communications protocol from the local air district to the school district and school sites as well as to students and employees; (II) identify action levels based on State regulations and federal AQI levels reported by the air district; and (III) outline procedures aimed at reducing student exposures to unhealthy outdoor air.

I. Notification of Unhealthy Outdoor Air Quality

Receiving and transmitting air district information: It is the responsibility of the Superintendent/Principal, or his or her designee, to monitor outdoor air quality information available from the local air district on a daily basis. The prior day’s AQI forecast for the county can be verified on the morning of the effective date by viewing the air district’s Web page at www.valleyair.org, or by calling the SJVAPCD hot line at 1-800-SMOG INFO (1-800-766-4463). The School District and associated school sites will subscribe to the SJVAPCD’s automated email notification system for daily AQI forecasts, outdoor air quality alerts and Spare-the-Air announcements. The School District will provide the SJVAPCD with phone and facsimile numbers for receipt of State-required Health Advisory Notices and smog episode notifications. The appropriate colored-coded outdoor air quality flag will be raised every day at each school campus and used as visual alerts to changing outdoor air quality.

School District responsibilities:
• Upon notification by the SJVAPCD, the Superintendent, or his or her designee, shall confirm that their schools are located in the geographical area of the current or forecasted unhealthy outdoor air quality by viewing the air district’s Web page and confirm the valid time for the outdoor air quality alert or notification. School sites should implement the school district’s policies and procedures for reducing potential human exposures.

• Trainings may be conducted for school staff, including walk-on and part-time coaches and physical education personnel, about the outdoor air quality in the region and about school policies and practices for poor outdoor air quality days. Staff shall be included in the lesson-planning stages for poor outdoor air quality days and procedures to follow regarding sports practice sessions and games (both for days when the outdoor air quality is poor, and the special needs of ‘sensitive groups’). Local county asthma coalitions and the American Lung Association are available to conduct trainings.

• The School District or designated organization shall explain the AQI and school policies affecting outdoor activities on poor outdoor air quality days to parents.

• The School District or designated organization staff shall communicate with parents of children with asthma, or other respiratory or cardiac diseases that might limit their full participation in outdoor sports, on poor outdoor air quality days. Staff will strongly encourage the use of asthma management plans provided by designated agency.

• When a flag system for notification of daily forecasted outdoor air quality conditions is in use, the school district or designated agency shall explain to parents and children how it is used to make decisions about outdoor activities.

II. Cautionary Health Messages and Actions for Outdoor Air Quality Categories

There are two outdoor air quality programs that can affect outdoor activities at schools:

• The Smog Episode notification program that is mandated in the State’s Air Pollution Emergency Plan.

• The AQI alerting program developed for the general public by the local air districts. Under this program, the SJVAPCD provides Spare-the-Air public service announcements to encourage reduced vehicle use on unhealthy outdoor air quality days. The SJVAPCD also provides daily AQI email notifications to individual subscribers through its list serve. To subscribe to the list serve call 1-559-230-6000 or visit [www.valleyair.org](http://www.valleyair.org). The notification is a forecast for the next day and details the criteria pollutant of concern. The forecast is also made available on [www.valleyair.org](http://www.valleyair.org).
Five categories of AQI for ozone and particulate matter (PM):

<table>
<thead>
<tr>
<th>Air Quality</th>
<th>AQI</th>
<th>Health Statement</th>
<th>Outdoor Activity Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>0-50</td>
<td>The air is considered healthy for everyone.</td>
<td>Outdoor activities will be permitted for all students.</td>
</tr>
<tr>
<td>Moderate</td>
<td>51-100</td>
<td>The air is unhealthy only for extremely sensitive children and adults.</td>
<td>Outdoor activities will be permitted for all students. *</td>
</tr>
<tr>
<td>Unhealthy for Sensitive Groups</td>
<td>101-150</td>
<td>The air is unhealthy for sensitive individuals such as those with respiratory and cardiac conditions, those under the age of 18 and over the age of 55.</td>
<td>June-August: Outdoor activities permitted before 10:00</td>
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<td>September: No outdoor activities</td>
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<td>October-February: Outdoor activities permitted between 10:00 – 4:00</td>
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<td>Ozone: Outdoor activities permitted before 10:00</td>
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<td></td>
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<td></td>
<td>March-May: Particulate Matter: Outdoor activities permitted between 10:00 – 4:00</td>
</tr>
<tr>
<td>Unhealthy</td>
<td>151-200</td>
<td>The air is unhealthy for everyone.</td>
<td>All students will participate in indoor activities.</td>
</tr>
<tr>
<td>Very Unhealthy/Hazardous</td>
<td>201-400</td>
<td>The air is unhealthy and/or hazardous for everyone.</td>
<td>All students will participate in indoor activities.</td>
</tr>
</tbody>
</table>

Additional Instructions

It is always recommended that school staff watch children carefully for signs of distress and ensure immediate access to medications for students with asthma.

If the AQI reaches Very Unhealthy levels a red flag may be used if a purple flag is not provided.
*Specific Considerations and Actions to Reduce Exposures*

Ozone affects each individual differently. Children with asthma or other respiratory diseases are more susceptible to the health effects of ozone. Each child may show symptoms at different levels of ozone. The best way to monitor activities during periods of high ozone levels is to ask children to report any symptoms related to difficulty breathing to a staff member (teacher, nurse, coach). If a child is particularly affected by ozone, or has been in the past, take steps to ensure their exposure or activity level is reduced to decrease the chance of symptoms. Alternatively, children could be moved indoors for continued exercise (indoor environments can have 20-80 percent less ozone). Children with asthma should have an asthma management plan on file in the school office so that symptoms can be treated immediately and appropriately. Instructors should work with students to assure pre-medication, and/or any directives for activity modifications are followed, for students with exercise-induced asthma.

**CA State Emergency Air Pollution Plan for Smog Episodes (Ozone)**

School Districts shall be notified by government officials in the event of any of the following:

- Health Advisory Episode
- Stage 1 Episode
- Stage 2 Episode (Stage 2 Smog Episodes for ozone have been relatively rare)
- Stage 3 Episode (Stage 3 Smog Episodes for ozone have been relatively rare)

In the event of any of the above episodes being declared all outdoor activity will be suspended.

**III. Reducing Student Exposure to Unhealthy Air**

**Physical Education Classes and Recesses on Poor Outdoor Air Quality Days**

What would normally be safe for eight hours of exposure (“safe” means not likely to result in adverse health effects in the general population) becomes less so with increased breathing rates and the duration of exposures. Therefore, an exposure risk reduction strategy involves reducing intensity (breathing rates) and duration (time) of vigorous outdoor activities.

Physical education instructors are encouraged to develop lesson plans in accordance with the outdoor activity schedule outlined in Part II of this policy. Instructors should be prepared with alternative sports and exercises that can be performed on poor outdoor air quality days. Exercise is important to lung development, heart health, physical fitness, and weight management.

*Note: Permitting no physical activity should be the last consideration.*

Children with asthma action plans developed in conjunction with their physician, parents, and school nurse should always follow their plan.
It is recommended that the School District provide appropriate staff with a copy of the Active Indoor Recess (A.I.R.) curriculum created in conjunction with this policy for use on poor outdoor air quality days.

Athletic Programs

Practices

Possible ways to reduce health risks from higher exposures to outdoor air pollutants on poor outdoor air quality days:

1. Reduce intensity of the activities:
   a. Switch out players more often during practice and games
   b. Focus on skill development versus endurance training
   c. Take frequent rest and water breaks
2. Spend part of practice indoors and part outdoors
3. Split practice into two parts: one before and one after school
4. During weeks or months of high ozone, move practices to before school
5. During weeks or months of high PM, hold practices between 10:00 am – 4:00 pm
6. Shorten the length of practices
7. Move inside when practical

Games

Possible ways to reduce health risks from higher exposures to outdoor air pollutants on poor outdoor air quality days:

1. Work with the California Interscholastic Federation in coordinating sporting events that may be subject to cancellation due to poor outdoor air quality
2. Work with neighboring school districts and schools on policies for canceling and rescheduling sporting events on poor outdoor air quality days (include with inclement weather policies).

** For this policy, outdoor air quality is considered “poor” when AQI levels reach 101 and higher.

CONTACT INFORMATION

The following organizations can provide free materials and educational trainings as needed:

American Lung Association of Central CA  Merced/Mariposa County Asthma Coalition
Susie Rico  Mary-Michal Rawling
(559) 222-4800  (209) 384-6759
This Policy was developed by:

American Lung Association of Central California

Merced/Mariposa County Asthma Coalition
Controlling asthma through awareness and education

Atwater Elementary School District
A Tradition of Excellence

California Border Health and Education Training Centers

Fresno County Office of Education

San Joaquin Valley Air Pollution Control District