Be Aware of The Air We Share
And Help To Keep It Clean

It’s important to appreciate a valuable resource we need and share: clean air. Good air quality is vital to good health and to maintaining a healthy active lifestyle.

Air is a fragile resource that we impact in some way with our individual daily activities. From turning on lights to driving down the road, painting our houses, even using hairspray and cleaning products; all of these activities contribute some amount of pollutants into the air we breathe. So, it’s important to be conscious of them and understand that each of our contributions are multiplied 400,000 times by all the other people that live in Washoe County. There’s no simple solution to clean up the air when it gets dirty. We can filter water to drink, but we can’t all walk around wearing respirators. It’s important to protect the air that we breathe.

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The Air Quality Management Division of the Washoe County Health District requires businesses to control emissions under strict permit conditions. We’ve done a good job managing emissions from these sources. We also have a program which removes older, dirtier wood stoves from homes when they are sold, and almost everyone in the community is aware of the Green-Yellow-Red burn codes to reduce wood burning during wintertime pollution episodes.

We are embarking on another season of the Green-Yellow-Red program, which runs from November through February each year. During the late fall and winter, the Truckee Meadows experiences temperature inversions which trap air pollutants close to the ground and prevents them from dispersing. During these periods, we experience elevated levels of fine particulates which come primarily from fireplace and wood stove smoke, but also from vehicle emissions (primarily diesel). The most important thing that you can do to help preserve our air quality is to cease burning fireplaces, wood stoves and pellet stoves when the Health District issues a voluntary yellow burn code. When we issue a red burn code, during which burning is prohibited, air quality has already reached levels that are either unhealthy for sensitive groups, or unhealthy for us all.

We also experience summertime air pollution problems caused by ozone. Ozone is a reactive gas that forms when air pollutants mix in hot and sunny conditions. In the lower atmosphere, ground-level ozone is considered “bad” and is the primary constituent of smog. Elevated levels of particulate matter and ozone cause health impacts to people in our community. You will find more information about our air quality, these pollutants, and their health impacts, from the various articles in this special edition.

The largest man-made source of ozone precursors in Washoe County is exhaust from cars and trucks. Another major source is volatile organic compounds (VOCs) that come from paints, solvents and refueling our cars and lawn mowers. We can all help to keep our summertime ozone levels from reaching unhealthful levels by limiting car trips, refueling during the cooler evening hours, using electric vehicles and landscape equipment, and using low VOC products. Walking or riding a bike can provide multiple benefits of reducing air pollution and providing healthy exercise.

So, remember to be aware of the air we breathe. Breathe deep, enjoy our wonderful fall season, and remember to do your part to protect our air quality. Visit the Air Quality website (www.ourcleanair.com) for more air quality information, and call the Air Quality Hotline (775-785-4110) every day for the current Air Quality Index level. And, thank you for helping to Keep It Clean!
Know The Code

In 1987, the Washoe County Health District, Air Quality Management Division (AQMD) developed the Green-Yellow-Red Burn Code program to reduce the emissions from wood stoves and fireplaces during wintertime air pollution episodes. The Green-Yellow-Red Burn Code informs residents when burning is restricted or prohibited during the months of November through February.

One of three burn code colors is issued each day based on the current and forecasted air quality. The burn code lets you know if you can light your stove or fireplace. The burn code applies to all solid fuels including wood, pellets and fire logs. Burning coal is always prohibited.

Green

When the Air Quality Index (AQI) is in the good or low to mid moderate range, the burn code is green and that means it’s OK to light a fire in your stove or fireplace. But, keep in mind that you should always burn seasoned wood. Burning trash or unseasoned fire wood is never allowed.

Yellow

When the AQI reaches the upper end of the moderate range, the burn code switches to yellow. The Yellow Burn Code requests citizens to voluntarily stop burning wood or other solid fuels, or at least to reduce the amount of fuels being burned. This is a voluntary stage, but if you stop burning wood now, it may be possible to avoid unhealthy air pollution conditions. One of the most important contributions you can make to protect our air quality is to stop burning when a Yellow Burn Code is issued.

Red

When air quality becomes unhealthy for sensitive groups or for all of us, a Red Burn Code is issued. A Red Burn Code means you must stop all burning immediately. Once a Red Burn Code is issued, it remains in effect until conditions improve and a Yellow or Green Burn Code is issued. During Red Burn Codes, it is illegal to burn.

Driving your car less when the burn code is yellow or red also helps keep pollution out of the air we breathe. It is your responsibility to Know the Code. The AQMD provides four ways for you to find out the day’s burn status:

- Listen to television and radio weather forecasts.
- Call the air quality hotline at (775) 785-4110 for daily recorded burn status information.
- Check the Reno-Gazette Journal’s weather page.
- Visit the AQMD website at www.ourcleanair.com.
The Air Quality Index (AQI) provides a measure of how healthy or unhealthy the air quality is on a given day. The Air Quality Management Division collects hourly air quality information from a network of eight ambient air monitoring stations. It uses this data to calculate and issue a daily AQI. This is used to inform the public of how clean or polluted the air is, and what the associated health effects might be.

The AQI focuses on health effects that may be experienced within a few hours or days after breathing polluted air. The U.S. Environmental Protection Agency (EPA) developed the AQI equations for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter, such as smoke and fine dust), carbon monoxide, sulfur dioxide and nitrogen dioxide. For each of these pollutants, EPA has established National Air Quality Standards (NAAQS) to protect public health. Ground-level ozone and

### Air Quality Index Levels of Health Concern

<table>
<thead>
<tr>
<th>Level</th>
<th>Numerical Value</th>
<th>Meaning</th>
</tr>
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<tbody>
<tr>
<td>Good</td>
<td>0 to 50</td>
<td>Air quality is considered satisfactory, and air pollution poses little or no risk</td>
</tr>
<tr>
<td>Moderate</td>
<td>51 to 100</td>
<td>Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.</td>
</tr>
<tr>
<td>Unhealthy for Sensitive Groups</td>
<td>101 to 150</td>
<td>Members of sensitive groups may experience health effects. The general public is not likely to be affected.</td>
</tr>
<tr>
<td>Unhealthy</td>
<td>151 to 200</td>
<td>Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.</td>
</tr>
<tr>
<td>Very Unhealthy</td>
<td>201 to 300</td>
<td>Health warnings of emergency conditions. The entire population is more likely to be affected.</td>
</tr>
<tr>
<td>Hazardous</td>
<td>301 to 500</td>
<td>Health alert: everyone may experience more serious health effects</td>
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Airborne particles are the two air pollutants that pose the greatest direct threat to human health in the United States.

The AQI is based on a calculated numerical score that ranges from 0 to 500. The higher the AQI value, the greater the level of air pollution and the higher concern for the health. The purpose of the AQI is to help the public understand what local air quality means to their health. To make it easier to understand, the AQI is divided into six categories (see page 4).

These categories make it easier for Washoe County residents to understand whether air pollution is reaching elevated levels and what the health implications to them may be.

The Truckee Meadows experiences conditions during wintertime temperature inversions that can lead to elevated levels of particulate matter. In the summertime, high temperatures can lead to elevated ozone concentrations (smog). Wildfires can also cause elevated levels of fine particulate matter and sometimes high ozone levels. In 2011, the Washoe County Health District, Air Quality Management Division (AQMD) reported 254 days in the Good AQI range, 102 days in the Moderate AQI range and 9 days in the Unhealthy for Sensitive Groups AQI range.

The AQMD reports the AQI daily to the public through media as well as the Air Quality Hotline. The public can receive a daily update of the AQI by calling (775) 785-4110. The AQI is updated each day, and more often if there are events or episodes occurring that cause the AQI to reach the higher categories. For more information on the AQI, as well as criteria pollutant information, visit the AQMD page on the Health District website at www.ourcleanair.com.

### Did You Know?
There are several ways the public can help reduce air pollution, as well as protect your family’s health when ozone levels are high:

- Conserve energy — home, at work, everywhere. Turn off lights you are not using.
- Carpool or use public transportation.
- When air quality is healthy, bike or walk instead of driving.
- Combine errands to reduce vehicle trips.
- Limit engine idling.
- When refueling: Stop when the pump shuts off. Putting more fuel in is bad for the environment and can damage your vehicle. Avoid spilling fuel. Always tighten your gas cap securely.
- Keep your car, boat and other engines tuned up.
- Inflate your car’s tires to the recommended pressure.
- Use environmentally safe paints and cleaning products whenever possible.
- Follow manufacturers’ recommendations to use and properly seal cleaners, paints and other chemicals so smog-forming chemicals can’t evaporate.
- Refuel cars and trucks after dusk, when emissions are less likely to produce ozone.
- Delay using gasoline-powered lawn and garden equipment or household and garden chemicals when air quality is unhealthy.
The natural bowl created by the Sierra Nevada Mountains on the west, and the Pah Rah Mountains and the Virginia Range on the east (as illustrated here) can present serious air quality issues. During winter when the ground is cold and winds are light, temperature inversions can act like a lid in the valley to trap air pollution from fireplaces, woodstoves, and motor vehicles. This photo was taken from the National Weather Service office near Truckee Meadows Community College. On this day, air pollution levels were in the “Unhealthy for Sensitive Groups” range and the burn code was Red. Remember to Keep it Clean and Know the Code.

Peavine Peak to Virginia City

GRAPH BY DIXIE RUDERBUSCH, WASHOE COUNTY TECHNOLOGY SERVICES-GIS

Approximate Distance (miles)

Peavine Peak
8215

Reno-Tahoe Airport
4415

Virginia City
6150

Geiger Grade Summit
6789