

Air Quality Permitting

UCCE Prescribed Fire on Private Lands Workshop 10-18-19

NORTHERN SIERRA AIR QUALITY MANAGEMENT DISTRICT (NSAQMD), 2019

Air Pollution Permits

- Required for non-residential open burning and residential burning in excess of one acre. Single or two-family dwellings do not require an air pollution permit for maintenance burning.
- Valid for one year from date of issue.
- There is a fee. The current base fee (through June 30, 2020) is \$72.95. There may be an additional fee per acre.

Agricultural and Prescribed Burning

Air Pollution Permits are required for the following types of burns:

- **Forest Management – includes, but is not limited to, timber harvest slash burning and prescribed fire. Burns greater than 10 acres in size require a Smoke Management Plan.**
- Land Clearing for Development
- Agricultural
- Range Improvement
- Ditch, Road and Right-of-Way Maintenance
- Hazard Reduction

CCR, Title 17, Sections 80100-80330 and CA H&SC 39011 and 41850

No Burn Day

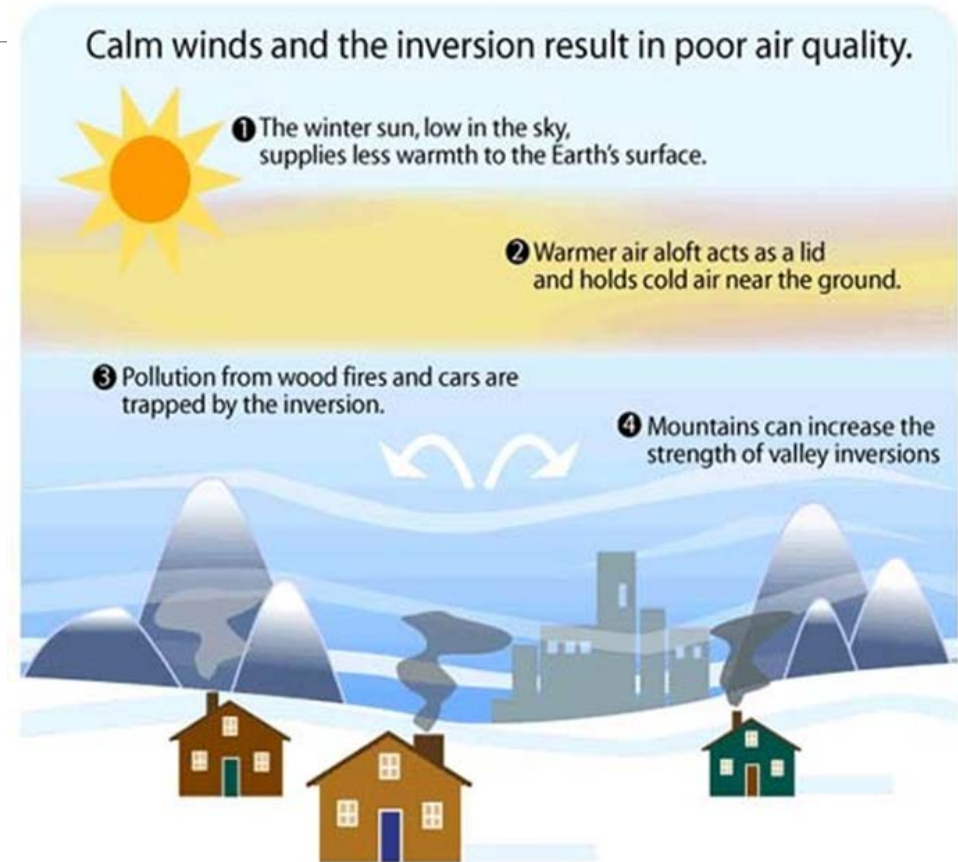
Two agencies have authority to determine whether open burning is permitted or banned on a daily basis:

- California Air Resources Board determines if burning will be allowed based on weather forecasts and smoke dispersion. This decision is posted at 3:00PM daily. If an inversion is expected to keep smoke in the breathing zone, a No Burn Day will be decided.
- CALFIRE determines if burning will be allowed based on anticipated fire danger (or reduced resources).

If either of these agencies determines that open burning should be curtailed, the Northern Sierra AQMD will inform the public of a No Burn Day on the District's website and via burn status recorders. Updates are made between 3-5:00PM for the following day.

Meteorology Matters

- When the atmosphere is **STABLE**, smoke dispersion is **POOR**
- **STABLE** atmosphere is characterized by:
 - Strong inversions; poor mixing
 - Light winds and fog
- During an inversion, smoke is trapped in the breathing zone.



Source: Environmental Protection Agency

Meteorology Matters

- Weather forecast general discussion for Zones 271 (CAZ271) and 268 (CAZ268) for ~24 hours:

<https://www.wrh.noaa.gov/fire2/?wfo=rev>

- Click on ‘Spot Forecast Request’ in yellow at the top of the page to see what spot forecasts have recently been issued.
- www.windy.com is a great site for wind direction forecasts for any location.

NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Local Forecast for: Enter location

Forecasts Hazards Status Fuels Tools Admin Contact Search

Fire Weather Zones

Spot Forecast Request Activity Planner

Surrounding Offices: Boise | Elko | Las Vegas | Medford | Pendleton | Sacramento | Monterey | Hanford
Fire Weather Planning Forecast last issued: Wed Oct 16 4:35 PDT 2019

Fire Weather Zones: OR Lat: 40.05 Lon: -120.79

Map Updated: 10/15/2019 10:44 AM (local)

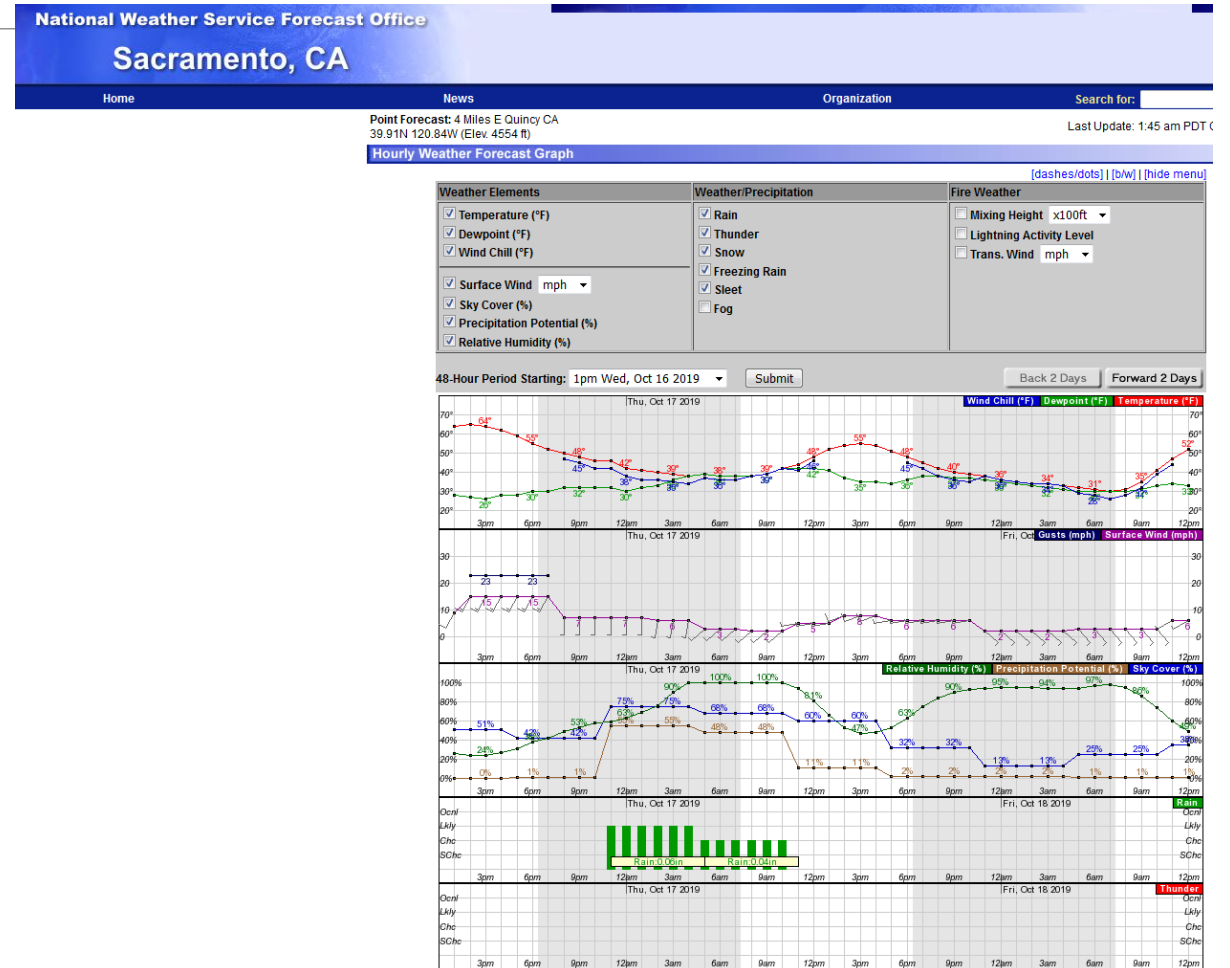
EPA, NPS, FAO, NOAA, USGS, DeLorme, HERE, Esri

Meteorology Matters

➤ Hourly Weather Forecasts:

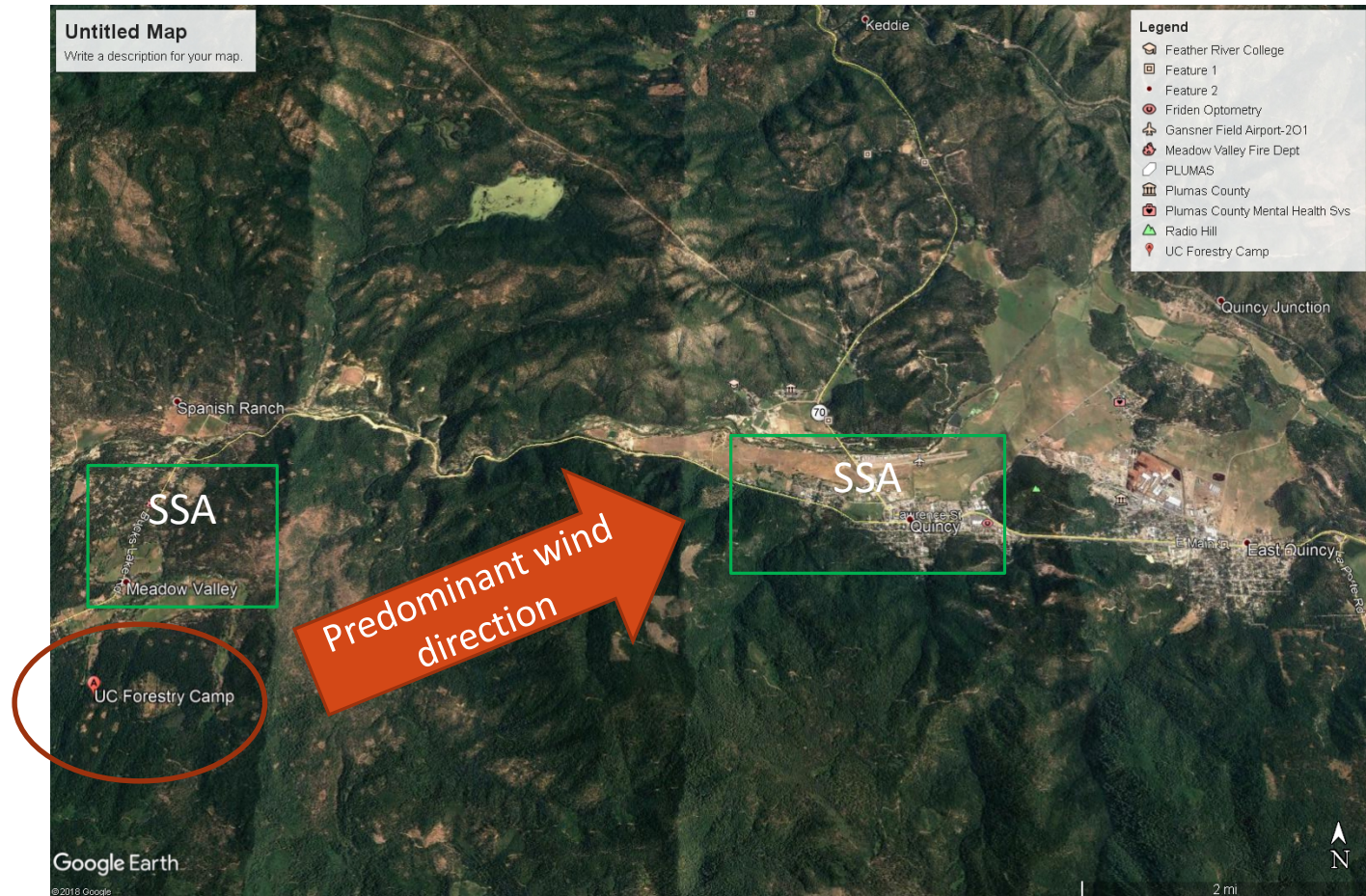
<https://www.weather.gov/>

- Enter zip code or city in search box at top left
- Click on 'Hourly Weather Forecast' under 'More Information' at the right of the screen



Smoke Sensitive Areas (SSA)

- Special attention should be paid to schools, hospitals, camps, etc.
- Must be called out in a Smoke Management Plan (if an SMP is required)
- Wind direction is important



Smoke Management Plans

- Required for any prescribed burn over 10 acres (or emitting more than one ton of particulate matter).
- Must be submitted to NSAQMD and be approved before project commences.
 - PFIRS: <https://ssl.arb.ca.gov/pfirs/>
 - NSAQMD fillable pdf: <http://myairdistrict.com/index.php/forms/>
 - Print pdf and fill out a hardcopy and fax to NSAQMD at 530-274-7546.
- Required for naturally ignited wildland fires, as well. Plans must be completed and submitted within 72 hours of the start of the fire if the size is expected to exceed 10 acres.

Minimize Smoke Impacts

- Whether an SMP has been submitted or not, the burner is responsible for smoke impacts!
- All outdoor burning must be conducted in such a way as to prevent smoke from creating a smoke nuisance or endanger public health.
- Check burn status each morning before ignition.
- If a burn (including smoldering) could persist more than one day, please contact the Air District for assistance with a longer term burn day status outlook.

CA H&SC 42400 (penalties)

***"Preserving air quality and protecting the public health and public welfare in Nevada, Plumas and Sierra counties."
Northern Sierra Air Quality Management District (NSAQMD) mission statement***

Public Health – Why Air Quality Matters

- NSAQMD Mission: *Preserving air quality and protecting the public health and public welfare in Nevada, Plumas and Sierra Counties.*

The Northern Sierra Air Management District was formed in 1986 by the merging of the Air Pollution Control Districts of Nevada, Plumas and Sierra Counties. The District is required by state law to achieve and maintain the federal and state Ambient Air Quality Standards, which are air quality standards set at levels that will protect the public health. The District is composed of three primary entities, each with a specific purpose: District staff, Governing Board of Directors, and Hearing Board.

- Particulate Matter with an aerodynamic diameter of 2.5 microns or less (PM_{2.5}) is linked with premature death, work and school absences, and significant health problems including aggravated asthma, acute respiratory symptoms (such as chest pain and coughing), chronic bronchitis, decreased lung function and heart disease.
- Wood smoke is made up of particulate matter as well as carcinogenic compounds – polycyclic aromatic hydrocarbons (PAHs), benzene, aldehydes, carbon monoxide (CO₂), nitrogen dioxide (NO₂) and other free radicals.

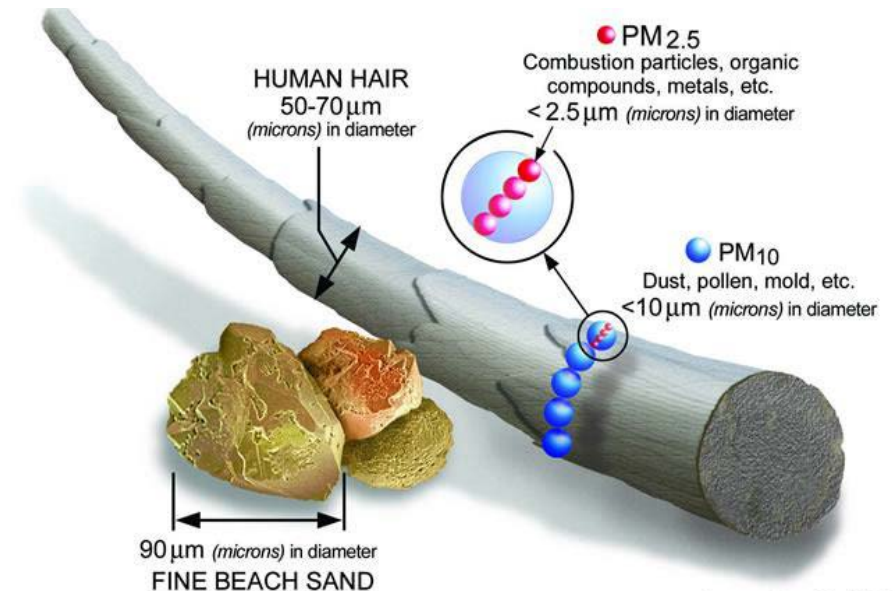


Image courtesy of the U.S. EPA

Air District Resources

www.myairdistrict.com

- NSAQMD Rules - <http://myairdistrict.com/index.php/rules/>
- Open Burning Tips - <http://myairdistrict.com/index.php/burning-info/open-burning/>
- Burn Day Status - <http://myairdistrict.com/index.php/burning-info/burn-day-status/>
- Julie Ruiz, APCS, Portola Office,
530-832-0102, Julie@myairdistrict.com
 - Permitting, monitoring, enforcement
- Joe Fish, Deputy Air Pollution Control Officer, Grass Valley Headquarters,
530-274-9360, joe@myairdistrict.com
 - Smoke management plans, no burn day authorization, permitting

Resources (cont.)

- To see 'real-time' air quality data, go to www.myairdistrict.com. Click on the desired location (Quincy, Chester, Portola, Truckee or Grass Valley) in the scrolling mid-page banner. The data is actually delayed about an hour.
- To sign up for health advisories, go to www.myairdistrict.com. Select 'email lists' from the top black banner on the home page.

Air Quality Index	Who Needs to be Concerned?	What Should I Do?
Good 0-50		It's a great day to be active outside.
Moderate 51-100	Some people who may be unusually sensitive to particle pollution.	Unusually sensitive people: Consider reducing prolonged or heavy exertion. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier. Everyone else: It's a good day to be active outside.
Unhealthy for Sensitive Groups 101-150	Sensitive groups include people with heart or lung disease, older adults, children and teenagers.	Sensitive groups: Reduce prolonged or heavy exertion. It's OK to be active outside, but take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath. People with asthma should follow their asthma action plans and keep quick relief medicine handy. If you have heart disease: Symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your health care provider.
Unhealthy 151 to 200	Everyone	Sensitive groups: Avoid prolonged or heavy exertion. Move activities indoors or reschedule to a time when the air quality is better. Everyone else: Reduce prolonged or heavy exertion. Take more breaks during all outdoor activities.
Very Unhealthy 201-300	Everyone	Sensitive groups: Avoid all physical activity outdoors. Move activities indoors or reschedule to a time when air quality is better. Everyone else: Avoid prolonged or heavy exertion. Consider moving activities indoors or rescheduling to a time when air quality is better.
Hazardous 301-500	Everyone	Everyone: Avoid all physical activity outdoors. Sensitive groups: Remain indoors and keep activity levels low. Follow tips for keeping particle levels low indoors.

Source: AirNow.gov