



LEADERS IN
ENVIRONMENTAL
PROTECTION

Wildfire Smoke Protection Program

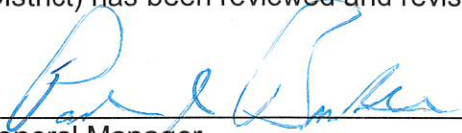


Firefighters tackle the Poinsettia fire in Carlsbad, California

September 2022

Contents	
1.0	Program Review and Certification..... 2
2.0	Purpose 2
3.0	Responsibilities 2
4.0	Program Components 3
5.0	Training Requirements..... 5
6.0	Recordkeeping..... 5
Attachments	
A	Definitions & Terminology 6
B	Revision Log 7
C	Air Quality Index (AQI)..... 8
D	Training Contents (5141.1 Appendix B) 9

I certify that the Wildfire Smoke Protection Program for the Leucadia Wastewater District (District) has been reviewed and revised as necessary.


General Manager


Date

1.0 Program Review and Certification

The Leucadia Wastewater (District) Wildfire Smoke Protection Program will be reviewed and revised as necessary to ensure compliance with applicable regulations. All revisions are documented on the Review and Certification Log (Attachment B).

2.0 Purpose

This program details the wildfire and other smoke risk reduction procedures used when working in areas where fine inhalable particles, with diameters 2.5 micrometers and smaller are [Particulate Matter (PM) 2.5] elevated. It includes action steps and trigger levels established in California Code of Regulations, Title 8 (8 CCR), Section 5141.1. This policy applies to all personnel, including temporary workers, performing duties where smoke risk factors are present.

3.0 Responsibilities

General Manager: The General Manager has the overall authority and responsibility for implementing the provisions of the Wildfire Smoke Protection Program for the District. Specific responsibilities include, but are not limited to:

- Responsibility and authority for ensuring this program is fully implemented.
- Ensuring that funding is provided to successfully implement the program requirements.
- Ensuring that the program and its requirements are enforced.
- Stopping all non-emergency work when and where the PM2.5 Air Quality Index (AQI) exceeds 500.

Managers and Supervisors: Managers and Supervisors are responsible for:

- Ensuring the program and procedures are fully implemented, relevant, current and effective.
- Revising and amending as needed to respond to changing workplace conditions and regulations.
- Monitoring the Wildfire Smoke Protection Program for effectiveness.
- Ensuring Wildfire Smoke Protection Program training is scheduled, tracked, and documented to meet recordkeeping requirements.
- Monitoring the Air Quality using a reputable near real-time data source such as the Air Now website at <https://www.airnow.gov>, alerts, or equivalent to get near real-time air quality index updates forecasts.
- When the PM2.5 AQI is greater than 150, alerting the General Manager, and employees that the smoke regulations are active and to take appropriate action.
- Informing exposed workers that they are encouraged to voluntarily wear N95 dust masks or avoid working outside of air filter areas exceeding 150 for more than for a total of one hour during a shift.
- Ensuring enough N95 dust masks are available for all workers.
- When the PM2.5 AQI is greater than 500, alerting the General Manager, and employees that the extreme emergency smoke regulations are active and to take appropriate action.
- When the PM2.5 AQI is greater than 500:
 - Immediately stop all outside work OR;
 - Require respirators with an assigned protection factor such that the PM2.5 levels inside the respirator correspond to an AQI less than 151 (Note: only those trained, fit tested, with a current medical evaluation may wear respirators other than N95 dust masks) OR;
 - Require workers to move into filtered air locations.

Employees: All employees are responsible for:

- Following the Wildfire Smoke Protection Program and procedures.
- Participating in safety meetings and attending all relevant training.
- Ensuring an adequate supply of N95 dust masks are reasonably close to their work area, or keeping N95 dust masks with them as needed.
- **When the PM2.5 AQI is between 150 and 500 in the work area:**
 - **N95 DUST MASK USE IS ENCOURAGED, BUT IS VOLUNTARY.**
- **When the PM2.5 AQI is above 500 in the work area:**
 - **RESPIRATOR USE IS MANDATORY in these AQI levels;**
 - Stop work or move to an area with better air quality (e.g. indoors).
 - Use respirators with an assigned protection factor such that the PM2.5 levels inside the respirator to an AQI less than 151 (Note: only those trained, fit tested, with a current medical evaluation may wear respirators other than N95 dust masks).
- Informing their supervisor if having respiratory troubles in such conditions.
- Calling emergency medical services (e.g., 911) in respiratory emergencies.

4.0 Program Components Provisions for respirators

- Provide personnel with an adequate supply of N95 dust masks.

- Place dust masks as close as practical to employee work areas.
- Employees expected to work when the PM2.5 AQI exceeds 500 must be trained, fit tested, and have a current medical evaluation for using respirators with an assigned protection factor such that the PM2.5 levels inside the respirator correspond to an AQI less than 151.

Communications

- The District must have an effective system to alert all employees either directly or in near real time via supervisors and managers.
- Air quality alerts (e.g. AQI \geq 150) should include the protections available for worker use (e.g. voluntary use of N95 dust masks).
- Remind workers to alert their supervisor if:
 - Air quality conditions worsen; or
 - They have adverse symptoms from air quality exposure, such as asthma, difficulty breathing, or chest pain.

Air Quality Index and Monitoring

- Supervisors will monitor air quality using the Air Now app. Additionally, Supervisors may monitor air quality using its website at <https://www.airnow.gov> or equivalent monitoring tools including alerts to get near real-time air quality updates and forecasts.

Base Smoke Regulations (PM2.5 AQI 150 to 500)

- Whenever possible, the District shall use engineering or administrative controls to reduce the employee exposure to below PM2.5 AQI 150.
- Supervisors and managers must:
 - Alert the General Manager and employees that the PM2.5 AQI is at or above 150.
 - Ensure all employees have easy access to N95 dust masks.
 - Encourage their employees to voluntarily use N95 dust masks.

Extreme Smoke Regulations (PM2.5 AQI above 500)

- Supervisors and managers must:
 - Alert their employees that the PM2.5 AQI is above 500.
 - Stop work or relocate work to an enclosed building.
 - **For emergency and other critical work only** - Continue working with workers wearing respirators with an assigned protection factor such that the PM2.5 levels inside the respirator correspond to an AQI less than 151.
 - **Respirator use is mandatory when working in areas with a PM2.5 AQI greater than 500.**
 - Only workers with current medical evaluations, fit tests and training may wear respirators other than N95 dust masks.

Exceptions

The following are exempt from the wildfire smoke regulations:

- Exposures of less than one hour.
- Workers inside buildings with Filtered Air HVAC Systems:
 - Provided the system is able to filter the air to an acceptable level (e.g. resulting PM2.5 level below 151 at all times).
 - During periods of low air quality, all building doors and windows should remain closed or be closed immediately after entry/exit to limit unfiltered air from entering the building.

- Workers inside vehicles with Filtered Cabin Air provided windows are closed and the air is in recirculation mode (no outside air).

5.0 Training Requirements

Employees will receive Wildfire Smoke Protection training before working in areas with the potential for high PM2.5 AQI (see Attachment D for training contents).

6.0 Recordkeeping

The Administrative Services Supervisor will maintain the following Safety files:

- The Wildfire Smoke Protection Program.
- Employee training records will be kept in the certifications folder located on server W: in accordance with the District record retention policy, which is no less than three years.

Attachment A – Definitions & Terminology

Terminology

- **Must/Shall** - Imposes an obligation, indicates a necessity to act.
- **Should** - Denotes a recommendation.
- **May** - Denotes a permission; neither a requirement nor a recommendation.
- **Will** - Denotes that something is required or mandatory but allows the responsible employee or party some discretion as to when, where, and how.

General Definitions & Abbreviations

- **AQI** - Air Quality Index ranges from 0 to 500. The higher the AQI value, the greater the level of air pollution and the greater the health concern.
- **Current Air Quality Index (Current AQI)** - The method used by the U.S. Environmental Protection Agency to report air quality on a real-time basis. Current AQI represents data collected over time periods of varying length in order to reflect present conditions as accurately as possible. The current AQI is divided into six categories as shown in Appendix C.
- **N95 Dust Mask** - Is a respiratory protective device designed to achieve a very close facial fit and very efficient filtration of airborne particles. When properly worn, the mask blocks at least 95 percent of very small (0.3 micron) test particles. All workers may voluntarily wear a dust mask and do not need specific training, fit testing or medical evaluations for such use.
- **NIOSH** - The National Institute for Occupational Safety and Health of the U.S. Centers for Disease Control and Prevention. NIOSH tests and approves respirators for use in the workplace.
- **PM2.5** - Fine inhalable particles, with diameters 2.5 micrometers and smaller.
- **Respirator** - a device worn over the mouth and nose to protect the respiratory tract by filtering out dangerous substances (such as dusts or fumes) from inhaled air. For the purposes of this regulation, a respirator is considered to be a tight-fitting air filtering respirator or SCBA system that may be worn only by those approved trained, fit tested, with a current medical evaluation.
- **Wildfire Smoke** - Emissions from fires in "wildlands," as defined in Title 8, Section 3402, or in adjacent developed areas.

Attachment B – Revision Log

<i>Wildfire Smoke Protection Program Review and Certification Log</i>		
Date	Identify the Sections/Attachments Revised	Initial
9/7/2022	Initial Draft	LWD

Attachment C – Air Quality Index (AQI)

The AQI indicates the pollution level contained in the air and provides a metric by which to measure the health effects. Additionally, the Environmental Protection Agency has assigned a specific color to each AQI category to indicate air pollution levels in the air.

Air Quality	Air Quality Index	Description
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51 to 100	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
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Health warnings of emergency conditions. The entire population is more likely to be affected.
Very Unhealthy	201 to 300	Health alert: everyone may experience more serious health effects.
Hazardous	301 to 500	Health warnings of emergency conditions. The entire population is more likely to be affected.

Note: Values above 500 are considered Beyond the AQI. Follow recommendations for the "Hazardous category."

Attachment D – Training Contents

Employee training must cover the Leucadia Wastewater District Wildfire Smoke Protection Program for complying with Emergency Regulations (California Code of Regulations, Title 8, and Section 5141.1 Appendix B). The training must cover the following topics:

The health effects of wildfire smoke including:

- The hazardous chemicals typically found in wildfire smoke;
- Symptoms and effects of exposure including the effects on the lungs;
- Effects of age and existing health issues in relation to exposure.

The right to obtain medical treatment without fear of reprisal:

- Employees should alert their supervisor if they are suffering from any symptoms due to the air quality, without fear of reprisal.

How to obtain the current Air Quality Index for PM2.5:

- Access to accurate near-real-time air quality data;
- Understanding the reliability of AQI forecasts.

The requirements in Cal/OSHA's regulation about wildfire smoke:

- What PM2.5 AQI means and the AQI trigger points (150 & 500);
- Using administrative and engineering controls to reduce exposure;
- Supervisors/managers must be able to:
 - Find out what the current AQI is at the location;
 - Lower exposures, provide respirators, and encourage use;
 - Provide training to employees.

The employer's communication system:

- Discuss District systems to alert employees at the AQI trigger points;
- Discuss the District two-way communication systems used by employees;
- Importance of alerting their supervisor when suffering from any symptoms due to the air quality, without fear of reprisal.

The employer's methods to protect employees from wildfire smoke:

- PM2.5 AQI is between 150 and 500 employers must limit exposure:
 - Using administrative controls (e.g. move work into areas with better air quality such as filtered-air buildings or filtered-air vehicles);
 - Using engineering controls (e.g. filtered-air ventilation);
 - Provide workers with proper personal protective equipment (voluntary use of N95 respirators).
- PM2.5 AQI is above 500 employers must:
 - Stop work if possible;
 - Locate work in structures, vehicles, or areas where the air is filtered;
 - Enforce use of respirators with an assigned protection factor such that the PM2.5 levels inside the respirator correspond to an AQI less than 151 (Note: only those trained, fit tested, with a current medical evaluation may wear respirators other than N95 dust masks).

The importance, limitations, and benefits of using a respirator when exposed to wildfire smoke:

- Respirators can effectively protect employee health by reducing exposure to

- wildfire smoke when they are properly selected and worn;
- Respirator use can be beneficial even when the PM2.5 AQI is less than 150, to provide additional comfort and protection;
- Keep respirators clean or replace disposable respirators frequently.

The following precautions must be taken:

- Choose NIOSH certified respirators for the contaminant of concern;
- Surgical masks or items worn over the nose and mouth such as scarves, T-shirts, and bandannas will not provide protection against smoke;
- Read and follow all manufacturer instructions provided for respirator use, maintenance, cleaning and care, and other warnings;
- Do not wear a respirator into atmospheres containing contaminants for which the respirator is not designed;
- Used respirators (disposable type) must be disposed of after use; or workers must keep track of their individual respirator as to not mistakenly use someone else's respirator.
- Employees who have a heart or lung problem should ask their doctor before using any respirator.

How to put on, use, and maintain respirators:

- The importance of good respirator fit to ensure effective performance;
- Proper respirator use (e.g. on/off);
- How to clean (or dispose of) respirators;
- Checking the respirator seal;
- If you have symptoms such as difficulty breathing, dizziness, or nausea, go to an area with cleaner air, take off the respirator, and get medical help.