

S.O.P. #: 400-29

SUBJECT: OZONE ALERT DAYS

DIVISION: EMERGENCY OPERATIONS

Objective: To establish a method of notifying employees of poor air quality days and outlining procedures for outdoor activities on Ozone Action Days.

Goal: To advocate and facilitate air pollution prevention on days when meteorologist predicts that weather is conducive to the formation of ground-level ozone.

Section 1: Definitions

- A. Ozone: An invisible gas found in the upper level of the atmosphere. It forms naturally and protects the earth from ultraviolet rays. The “ozone layer” is only about one-eighth of an inch thick.
- B. Ground Level Ozone: A highly reactive chemical that irritates the respiratory system. Ground level ozone is the main ingredient in urban smog. It is created when a mixture of air pollutants from a variety of sources such as the fumes from motor vehicles, lawn mowers, powerboats or emissions from power plants and industrial facilities react in sunlight. The main ozone causing pollutants are Volatile Organic Compounds (VOC’s) and Nitrogen Oxides (NOx). Heat and sunlight are important factors in ground level ozone formation. Ozone pollution is primarily a concern from April through October.
- C. Ozone Action Day: A day or days that the air quality has reached, or is close to reaching an unhealthy range. Ozone actions days are designated as Orange or Red days.
- D. Endzone Partners: A volunteer, non-profit public-private consortium. Endzone began as an informal organization in 1994. In 1997 Endzone was chartered as a semi-independent formal organization by the Metropolitan Washington Council of Governments (COG) and the Baltimore Metropolitan Council (BMC). The partnership seeks to improve health and the quality of life in the region.

Section 2: Ozone Day Codes

- A. Code Red Day: Air quality has reached unhealthy levels. Children should reduce outdoor activities. Healthy individuals should limit strenuous or prolonged outdoor work or exercise. Individuals with respiratory ailments, such as emphysema, asthma, or chronic bronchitis, should limit their outdoor activities.
- B. Code Orange Day: When air quality reaches levels that are unhealthy for sensitive groups. Children and adults who experience difficulty breathing outdoors and those with respiratory ailments should limit prolonged outdoor activities.
- C. Code Yellow Day: Air quality is in the moderate range.
- D. Code Green Day: Air quality is in the good range.

Section 3: Suggested Actions for Ozone Action Days

- A. Code Red Days:
 - All open burning is prohibited, unless mandated by federal law.

Example: Sparrows Point Ship Yard is required to burn any bug-infested materials that come into their port. A letter of exemption will be issued by EPA and be kept on file at Fire Dispatch.

- Training fires are prohibited.
- Physical training should be re-scheduled.
- Strenuous non-emergency activity may be discouraged.
- Routine in-service inspections may be postponed.
- Grass cutting may be postponed.
- Apparatus, vehicles, and small equipment should be refueled after sunset, when possible.
- Gasoline powered equipment should be checked (run) after sunset.
- Routine hydrant maintenance may be re-scheduled.
- Painting with oil-based paints should be postponed.
- Avoid using aerosol products.
- Employee carpooling is encouraged.
- Non-emergency use of vehicles may be restricted or limited.
- Shutdown unused apparatus on fireground.

B. Code Orange Days:

- Limit driving.
- Refuel vehicles, apparatus, and small gas-powered equipment after sunset.
- Avoid running small gasoline-powered equipment.
- Avoid using oil-based paints.
- Discourage open burning.
- Shutdown unused apparatus on fire ground.
- Encourage employee carpooling.
- Curbing polluting activities on Orange days may help to avert a Red alert the following day.

C. Code Yellow & Code Green:

- Normal operations, perform non-polluting activities.
- Code Yellow, moderate air quality.
- Code Green, good air quality.

Section 4: Method of Notification of Ozone Action Days

- A. Air pollution is influenced by the weather. It is possible to predict when conditions will exist for our area to have high ozone pollution. An ozone mapping system gathers data from 1400 air monitoring facilities in 32 states. A team of meteorologists provides forecasts for both the Baltimore and Washington areas.
- B. When the air quality is expected to be poor, the Maryland Department of the Environment will notify Fire Dispatch. This notification will be between 1400-1500 hours, via fax. The notification will provide ozone action day information for the following day.
- C. Notification by Fire Dispatch will be as follows: (Code Orange) the ADO will send an e-mail via the Fire Messaging System informing the stations of the Code Orange status (Code Red) the ADO will send an e-mail via the Fire Messaging System informing the stations of the Code Red status. Fire Dispatch will announce over Channel One that an ozone action day is in effect, further advising all stations to refer to the S.O.P. 400-29. Fire Dispatch will make announcements at 0700, 1200, and 1700 hours.
- D. Stations will fly the OZONE (appendix A) flag on Orange and Red ozone action days. The OZONE flags have been donated to the County by the Endzone Partnership, a volunteer, nonprofit, public-private consortium. The flag will serve as a method of alerting the public of poor air quality. On Orange and Red ozone days, the Ozone flag will be flown with, but below the American and State flags. Ozone flags will not be flown when either the State or American flag is being flown at half -mast.
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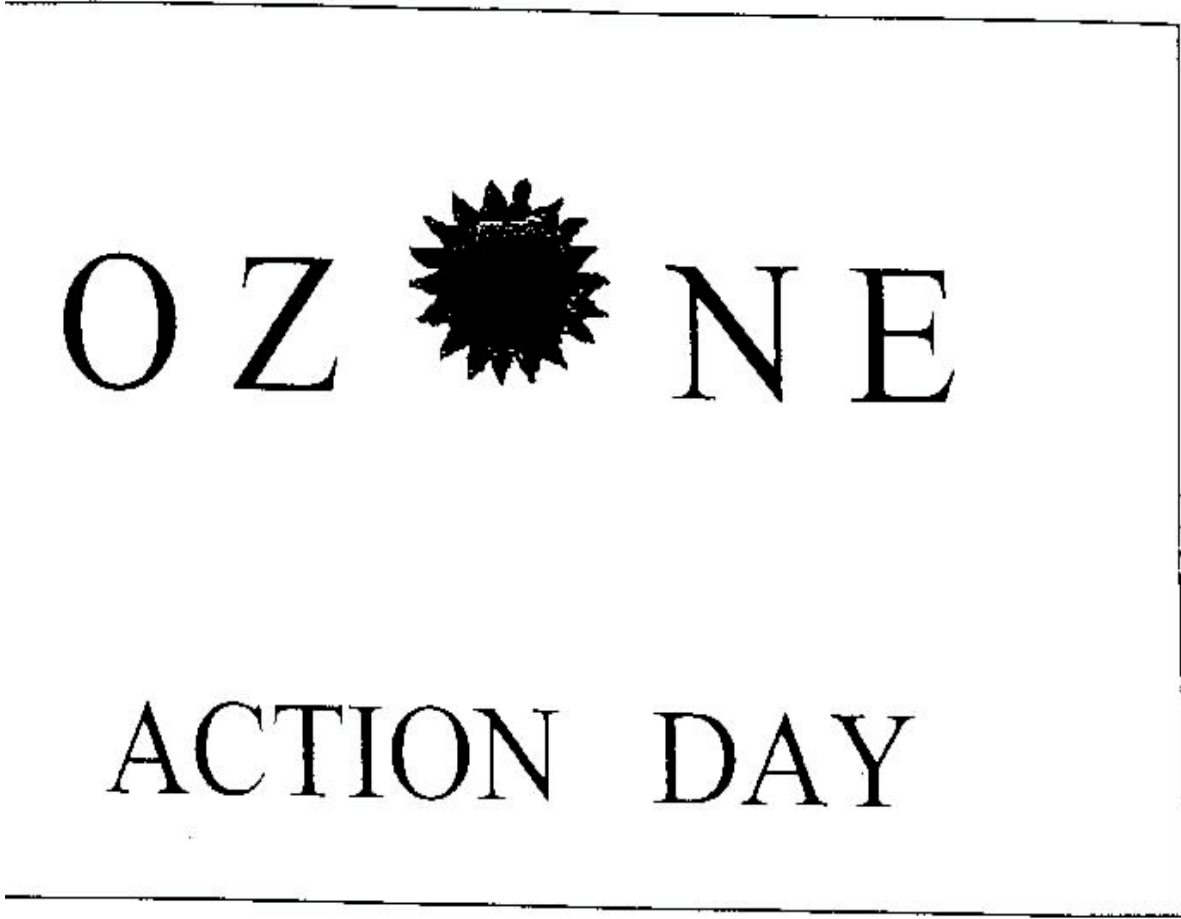
Section 5: Station /Battalion Responsibilities:

- A. Refer to Section 3 of this S.O.P. for suggested actions
- B. Fly the Ozone Alert Flag, 0700- 2000 hours, on Orange and Red Alert Days (Appendix A).
- C. Address questions from public.
- D. Station officers are to monitor activities and ensure reasonable compliance within their respective battalions.

Section 6: Interesting Facts About Ground Level Ozone:

- Air quality in Maryland exceeds the federal health standard for ozone on numerous days each summer.
- In Maryland, the ground level ozone problem is considered to be one of the worst in the country.
- Ozone can lower resistance to colds and pneumonia, damage lung tissue, intensify heart and lung disease.
- People most sensitive to ozone include the young, and those with pre-existing lung problems.
- On ozone action days, mowing your lawn for one hour is equal to driving a late-model car from Baltimore to Hartford, CT.
- Scientists estimate that as much as sixty percent of the gases that form ozone come from the exhausts of motor vehicles, primarily automobiles.

Appendix A



Ozone Action Day Flag
Typical of both sides