



**BAY AREA REGIONAL AIR QUALITY
MESSAGING TOOLKIT**

FINAL – READY FOR MESSAGING TRANSLATION

August 2019

TOOLKIT OVERVIEW

This Bay Area Regional Air Quality Messaging Toolkit has been developed in partnership with the Bay Area Regional Air Quality Messaging Steering Committee, with membership from the Bay Area Joint Information System, the Association of Bay Area Health Officials (ABAHO), Bay Area Air Quality Management District (BAAQMD), and regional public health, emergency management, public information, and elected officials' staff. This toolkit has been developed with funding and support from the Bay Area Urban Areas Security Initiative (UASI).

The toolkit's purpose is to serve as a unified resource to enable public information officers to provide messaging related to air quality incidents throughout the Bay Area. While templates provided herein are customizable to jurisdictions, the use of consistent structure and content advances a more coordinated messaging campaign over the affected region. Consistency among messaging partners throughout the Bay Area is especially important to limit public confusion. Air quality can change quickly from one jurisdiction to the next. People may live in one region of the Bay Area, but commute to and work in another, making the need for maximum messaging consistency very important.

This toolkit should be used before air quality incidents to guide the public on preparedness actions and to raise awareness of community resources, such as Cleaner Air Centers, as well as during air quality incidents.

This toolkit is organized in four sections:

Section 1: Core Guidance for Air Quality Messaging

This section provides core guidance that underlies the messaging resources in this toolkit, and could be used to develop additional materials, as needed. This includes protective health measures endorsed by the Association of Bay Area Health Officials (ABAHO) and the Air Quality Index (AQI), developed by the U.S. Environmental Protection Agency (EPA) to help the public better understand air pollution concentrations. Together, these resources can help individuals and organizations take steps to protect health during air quality events.

Section 2: AQI-Level Messaging Templates

This section is organized by AQI level, providing short messages, longer messages, and links to additional templates and graphics that can be used when air quality reaches particular levels. Bay Area agencies can customize these materials and use them to communicate with the public before, during, or after an air quality incident.

Section 3: Additional Messaging Resources

This section provides messaging resources that may be used during air quality events at a variety of AQI levels. Resources include FAQs, sample media announcements, air quality guidance for schools, and messages from employers to employees. AQI levels identified in Section 2 are linked to resources that would be appropriate for that AQI level.

Section 4: Guidance for Communicating with the Whole Community

This section provides considerations, guidance, and tools for identifying and communicating with traditionally hard-to-reach populations, such as people with access and functional needs, including, but not limited to people with disabilities, older adults, immigrant populations, and people with limited English proficiency. A checklist for Air Quality Messaging to Vulnerable Populations is included at the beginning of this section.

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SECTION 1: CORE GUIDANCE FOR AIR QUALITY MESSAGING

The recent unprecedented fires and dense smoke are the result of years of impacts brought on by climate change. The best public health strategy is to be aware that heavy smoke will be in our future, and to prepare yourself, your home, your loved ones, and your community for smoke events.

During an air quality event, individuals may wonder if they should avoid certain activities. Employers, schools, or event hosts may wonder about when it is advisable to close offices, cancel classes, or cancel events. It is helpful to provide information that empowers people to knowledgeably make decisions that can protect health during air quality incidents.

Sources for Core Messaging Guidance

The Association of Bay Area Health Officers (ABAHO) has endorsed the protective health measures outlined in this section of the Bay Area Regional Air Quality Messaging Toolkit. These protective health measures are the principles that guide the public information messaging found in Section 2: AQI-Level Messaging Templates.

The U.S. Environmental Protection Agency (EPA) monitors air quality. The EPA developed the Air Quality Index (AQI) and associated color-coded levels of severity to help the public better understand air pollution concentrations. Together, the EPA's AQI and protective health measure guidance from the ABAHO can help individuals and organizations take steps to protect health during air quality events.

DECISION MAKING DURING AIR QUALITY EVENTS

Air quality events require many individuals and organizations to make decisions about how to respond and continue to re-evaluate those decisions as conditions change.

- County Health Officers are responsible for providing guidance to protect health in their jurisdiction.
- Many organizations – including school districts, employers, and event organizers – are responsible for making decisions about how they will implement this guidance and how they will operate during times of poor air quality.
- Individuals must make decisions about what they feel is best for themselves and their families. For example, even if a school district decides that classes will continue, some parents might decide to keep their children home from school.

Clear, actionable guidance from Health Officers enables organizations and individuals to make informed decisions to protect health during air quality events.

CONSIDERING VULNERABLE POPULATIONS

Some populations are particularly vulnerable to health effects due to poor air quality. Elderly persons, pregnant individuals, children, and individuals with respiratory illnesses are particularly susceptible to elevated air pollution levels and should take extra precautions to avoid exposure. This toolkit includes guidance and messaging for these vulnerable populations.

Traditionally hard-to-reach populations are at risk of not receiving the information they need to protect their health. This includes people with access and functional needs, such as to people with disabilities, older adults, immigrant populations, and people with limited English proficiency, among others. Section 4 of this toolkit provides guidance and tools for reaching these populations.

Guiding Principles from the Association of Bay Area Health Officials (ABAHO)

The Association of Bay Area Health Officers (ABAHO) has endorsed the protective health measures outlined in Section 1 of this toolkit. These protective health measures are the principles that guide the public information messaging found in Section 2. The protective measures outlined in Section 1 may not be changed, modified, or edited in any form without the approval of the ABAHO.

AIR QUALITY EVENTS GUIDANCE

The recent unprecedented fires and dense smoke are the result of years of impacts brought on by climate change. The best public health strategy is to be aware that heavy smoke will be in our future and for people to prepare themselves, their home, their loved ones, and community for smoke events. When heavy, dense smoke blankets the region, there is no one public health solution that can be widely applied.

PREPAREDNESS

- Identify locations in the community that have cleaner, filtered air spaces, such as:
 - indoor shopping malls
 - local libraries
 - cooling centers
 - community centers
 - civic centers
 - local government buildings
- Plan to go to a cleaner air location if you are unable to seal your home or if dense smoke occurs during hot weather events and you cannot stay in your home. Heat takes precedent over smoke.
- Stay informed by signing up for alerts from Cal Fire, your city or county, local air quality district, or local public health department.
- Weatherize homes and buildings in preparation for wildfires by replacing or refurbishing old leaky windows and doors; use caulking to seal the openings.
- Consider purchasing a non-ozone-producing air purifier (HEPA) to create a cleaner air room in your home, or consider purchasing a MERV 13 or greater filter for your HVAC system to be used when experiencing a heavy smoke event.
- Consider upgrading to an HVAC system that allows for both heating and cooling. Be sure it includes a mechanism to switch to “recirculate” to prevent smoke from entering the space.
- There is no clear evidence that N-95 respirator use by members of the general public is beneficial to an individual’s health during wildfire smoke air quality events, and there could be harms.
- Create a personal, family, or group emergency plan, gather emergency supplies, and be ready to evacuate.

INDIVIDUALS WITH HEALTH CONDITIONS

- Individuals with health conditions should talk to their physicians to develop a personal plan for dealing with smoke.
- Elderly persons, pregnant individuals, children, and individuals with respiratory illnesses are particularly susceptible to elevated air pollution levels and should take extra precautions to avoid exposure.
- Those with heart or lung disease, older adults, pregnant individuals, and children should avoid prolonged or heavy exertion, and should either reschedule outdoor activities or move them to another location.
- Elevated particulate matter in the air can trigger wheezing in those who suffer from asthma, emphysema, Chronic Obstructive Pulmonary Disease (COPD), or other respiratory conditions.
- Asthmatics should follow their asthma management plan.
- Keep up to two weeks' worth of extra medication on hand. Be ready with plans to treat asthma or diabetes when there is smoke.
- Individuals should contact their physician if they have cough, shortness of breath, or other symptoms believed to be caused by smoke. Concerned individuals should consult their physician for personalized recommendations.

DURING SMOKE EVENTS

- Shelter in place. Staying indoors with windows and doors closed, where air quality is better, is the best way to protect your health. During high heat and heavy smoke events, keep indoor air cool or visit an air-cooling center.
- Set air conditioning units and car vent systems to re-circulate to prevent outside air from moving inside.
- Smoke can irritate the eyes and airways, causing cough, a dry scratchy throat, runny nose, trouble breathing, and irritated sinuses. **Stay hydrated by drinking water during heavy smoke events.**
- Avoid adding additional air pollution by curtailing activities, such as wood burning, lawn mowing, leaf blowing, driving, barbecuing, smoking, or other dust-producing activities. Avoid using hairspray and painting indoors. If possible, use the stove fan when cooking.
- Leave the affected area if possible, for the duration of the heavy smoke event.

ABOUT MASKS

- Masks may not provide you with the protection needed.
- Bandanas and typical surgical masks do nothing to protect against wildfire smoke particles.
- There is no clear evidence that N-95 respirator use by members of the general public is beneficial to an individual's health during wildfire smoke air quality events, and there could be harms.
- Masks, even when worn properly, can become uncomfortable and hot.
- A properly fitted N-95 respirator makes it difficult to breathe and is difficult to use for long periods of time.
- Taking a mask on and off can cause fine particulate matter to build up in the mask, which the wearer will breathe when it is put back on the face.
- If an individual desires a mask, only N-95 or N-100 respirators should be worn.
- Wearing an ill-fitted mask can lead to a false sense of security and to over exertion.
- Do not save and reuse N-95 respirators.
- N-95 respirators may be dangerous for certain persons with lung or heart conditions and may lead to

- increased heart rate
- increased respiratory rate
- labored breathing
- increased heat-related illness
- Certified N-95 respirators are not available for children. Children should not wear these masks – they do not fit properly and can impede breathing.

EPA's Air Quality Index (AQI)

The U.S. Environmental Protection Agency (EPA) developed the [Air Quality Index \(AQI\)](#) and associated color-coded levels of severity to help the public better understand air pollution concentrations. AQI “translates” daily air pollution concentrations into a number on a scale between 0 and 500. This scale consists of six color-coded ranges to indicate air quality, and to provide guidance on what measures people can take to protect themselves according to the severity of compromised air quality.

While the EPA's Air Quality Index (AQI) provides guidance, employers, organizations, schools, and individuals, should use their best judgment to decide what activities are appropriate during air quality events.

0-50
Good

A green or "good" AQI is 0 to 50. Air quality is considered satisfactory and air pollution poses little or no risk.

51-100
Moderate

A yellow or “moderate” AQI is 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. For example, people who are unusually sensitive to ozone may experience respiratory symptoms.

101-150
Unhealthy for Sensitive Groups

An orange or “unhealthy for sensitive groups” AQI is 101 to 150. Although the general public is not likely to be affected at this AQI range, people with lung disease, older adults, and children are at a greater risk from exposure to ozone, whereas persons with heart and lung disease, older adults, and children are at greater risk from the presence of particles in the air.

151-200
Unhealthy

A red or “unhealthy” AQI is 151 to 200. Everyone may begin to experience some adverse health effects, and members of the sensitive groups may experience more serious effects.

201-300
Very Unhealthy

A purple or “very unhealthy” AQI is 201 to 300. This would trigger a health alert, signifying that everyone may experience more serious health effects.

301-500
Hazardous

A maroon or “hazardous” AQI is greater than 300. This would trigger a health warning of emergency conditions. The entire population is more likely to be affected.

The EPA's “Air Quality Index Basics” were last updated in June 2019, and are available here: <https://airnow.gov/index.cfm?action=aqibasics.aqi>

SECTION 2: AQI-LEVEL MESSAGING TEMPLATES

Air quality core messages have been used to create sample public information materials of a wide variety to address air quality incidents. Bay Area agencies can customize these materials and use them to communicate with the public before, during, or after an air quality incident.

Templates are organized in the following manner:

- AQI Level
 - Short Forms Messages (Text Alerts, Tweets)
 - Long Form Messages (Web Copy, Blog, Facebook, Nextdoor)
 - Links to Additional Resources in Section 3, such as Frequently Asked Questions (FAQs), sample media announcements, other messaging templates, and graphics.

In the templates, agencies may customize the text in **[blue, bold, and brackets]** with information specific to their jurisdictions or the incident. Agencies can customize the information but are strongly encouraged to adhere closely to guidance and language contained in this toolkit for greater messaging consistency and coordination among all Bay Area jurisdictions.

Note: The color of the page header is changed to correspond to the AQI color indicated.

AQI: Orange – Unhealthy for Sensitive People

Note: Do not exceed 138 characters for text messages. Do not exceed 280 characters for Twitter. All spaces, symbols, letters, and numerals are included in the character count.

SAMPLE SHORT MESSAGES (TEXT ALERTS, TWEETS)

Air Quality-Unhealthy/Sensitive Groups: Active youth/adults/people w/respiratory diseases should reduce prolonged outdoor exertion. [\[insert URL\]](#) (132 characters, without URL.)

Air Quality-Unhealthy/Sensitive Groups: Active youth/adults/people with respiratory diseases should reduce prolonged outdoor exertion. It's OK to be active outside, but take more breaks. Watch for symptoms. Visit [\[insert URL\]](#) for more information. (235 characters, without URL.)

Check on others. Older adults/pregnant individuals/children/people w/respiratory illness are at risk when air quality is poor. [\[insert URL\]](#) (127 characters, without URL.)

SAMPLE LONGER MESSAGES (WEB COPY, BLOG, FACEBOOK, NEXTDOOR)

Air quality in [\[insert JURISDICTION\]](#) is considered unhealthy for sensitive people. Active youth, adults, and people with respiratory diseases should reduce prolonged outdoor exertion. It is okay to be active outside, but take more breaks. Watch for symptoms.

Keep Yourself and Others Safe

- Check on friends, family and neighbors. Older adults, pregnant individuals, children, and people with respiratory illness are susceptible to elevated air pollution levels and should take precautions to avoid exposure.
- Smoke can irritate the eyes and airways, causing cough, a dry scratchy throat, runny nose, trouble breathing, and irritated sinuses. Stay hydrated by drinking water during heavy smoke events.
- Avoid adding additional air pollution by curtailing activities such as wood burning, lawn mowing, leaf blowing, driving, barbecuing, smoking, or other dust producing activities. Avoid using hairspray and painting indoors. If possible, use the stove fan when cooking.
- Local smoke levels can rise and fall rapidly, depending on weather factors, including wind direction. Sign up for alerts in your area by [\[insert\]](#).

ADDITIONAL RESOURCES (SEE SECTION 3)

- [FAQs – The Air Quality Index \(AQI\)](#)
- [FAQs – School Activities During Air Quality Events](#)
- [Air Quality Guidance for Schools](#)
- [Graphic – Air Quality and Physical Activity, What You Need to Know](#)
- [Graphic – Air Aware](#)
- [Graphic - Air Pollution](#)
- [Graphic – Air Quality Flag Program](#)
- [Web Resources to Support Air Quality Messaging](#)

AQI: Red – Unhealthy

Note: Do not exceed 138 characters for text messages. Do not exceed 280 characters for Twitter. All spaces, symbols, letters, and numerals are included in the character count.

SAMPLE SHORT MESSAGES (TEXT ALERTS, TWEETS)

Air Quality-Unhealthy: Active youth/adults/people w/respiratory diseases should avoid prolonged outdoor exertion. [\[insert URL\]](#) (114 characters, without URL.)

Air Quality-Unhealthy: Active youth/adults/people with respiratory diseases should avoid prolonged outdoor exertion. Everyone else, especially children, should limit outdoor exertion. Visit [\[insert URL\]](#) for more information. (212 characters, without URL.)

Check on others. Older adults/pregnant individuals/children/people w/respiratory illness are at risk when air quality is poor. [\[insert URL\]](#) (125 characters, without URL.)

Staying indoors is the best defense against poor air quality. Staying home, indoor malls, cleaner air centers are best. [\[insert URL\]](#) (120 characters, without URL.)

Staying indoors with windows/doors closed is the best defense against poor air quality. Staying home, indoor malls, libraries, cleaner air centers are best. [\[insert URL\]](#) (157 characters, without URL.)

N-95 respirators are no substitute for being indoors. Not an option? N-95s may be helpful if used properly but increase the work of breathing. [\[insert URL\]](#) (141 characters, without URL.)

N-95 respirators are no substitute for being indoors. Not an option? Here's what you need to know: N-95s must be fitted/worn properly. N-95s are not certified for children. N-95s may be dangerous for people with heart/lung conditions. [\[insert URL\]](#) (229 characters, without URL.)

If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone. [\[insert URL\]](#) (101 characters, without URL.)

SAMPLE LONGER MESSAGES (WEB COPY, BLOG, FACEBOOK, NEXTDOOR)

Air quality in [\[insert JURISDICTION\]](#) is unhealthy. Active youth, adults, and people with respiratory diseases should avoid prolonged outdoor exertion. Everyone else, especially children, should limit outdoor exertion. Take more breaks during outdoor activities.

Keep Yourself and Others Safe

- Check on friends, family, and neighbors. Older adults, pregnant individuals, children, and people with respiratory illness are susceptible to elevated air pollution levels and should take precautions to avoid exposure.
- Smoke can irritate the eyes and airways, causing cough, a dry scratchy throat, runny nose, trouble breathing, and irritated sinuses. Stay hydrated by drinking water during heavy smoke events.
- Avoid adding additional air pollution by curtailing activities such as wood burning, lawn mowing, leaf blowing, driving, barbecuing, smoking, or other dust producing activities. Avoid using hairspray and painting indoors. If possible, use the stove fan when cooking.
- Sign up for alerts in your area by [\[INSERT\]](#). Local smoke levels can rise and fall rapidly, depending on weather factors, including wind direction.

Avoid Poor Air Quality

- Staying indoors with windows and doors closed is the best way to protect your health.
- Set air conditioning units and car vent systems to re-circulate to prevent outside air from moving inside,
- Go to a cleaner air location if you are unable to seal your home, or if dense smoke occurs during hot weather events and you cannot stay in your home. **Heat is very dangerous immediately.** Heat can kill rapidly if a person overheats. If you are concerned about both heat and air quality, heat takes precedent over smoke as the most immediate danger. Locations that may have cleaner air include:
 - Indoor shopping malls
 - Local libraries
 - Cooling centers
 - Community centers
 - Civic centers
 - Local government buildings
 - Designated Cleaner Air Centers
- Leave the affected area, if possible, for the duration of the heavy smoke event.

Designated Cleaner Air Centers (if available):

[\[Insert JURISDICTION\]](#) has established Cleaner Air Centers in the following locations.

- [\[Insert LOCATION, ADDRESS, HOURS OF OPERATION, WEBSITE/PHONE NUMBER FOR MORE INFORMATION\]](#)

Respirators and Masks

N-95 respirators are no substitute for being indoors. Not an option? Here is what you need to know:

- N-95 respirators may not be helpful for all people and may be dangerous for certain people with lung or heart conditions.
- Certified N-95s are not available for children. Children should not wear these masks; they do not fit children properly and can impede breathing.
- If you choose to wear an N-95 respirator, follow the manufacturer’s recommendations for proper fit.
- Wearing an ill-fitted respirator can lead to a false sense of security and to over exertion.

- Taking a respirator on and off can cause fine particulate matter to build up in the respirator, which the wearer will breathe when it is put back on the face.
- Use a new respirator. Old or reused N-95 respirators are not effective.
- Masks, even when worn properly, can become uncomfortable and hot.
- Bandanas and typical surgical masks do nothing to protect against smoke particles.
- If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone.

ADDITIONAL RESOURCES (SEE SECTION 3)

- [FAQs – The Air Quality Index \(AQI\)](#)
- [FAQs – Air Quality and Outdoor Events and Activities](#)
- [FAQs – School Activities During Air Quality Events](#)
- [FAQs – Cleaner Air Centers](#)
- [Sample Media Announcement – \[AGENCY\] Announces Opening of Cleaner Air Centers](#)
- [Sample Media Announcement – Cleaner Air Centers Are Open](#)
- [Air Quality Guidance for Schools](#)
- [Graphic – Air Quality Flag Program](#)
- [Graphic – Protect Yourself on Smoky Days](#)
- [How to Prepare and Maintain a Cleaner Air Home or Clean Air Room](#)
- [Web Resources to Support Air Quality Messaging](#)

AQI: Purple – Very Unhealthy

Note: Do not exceed 138 characters for text messages. Do not exceed 280 characters for Twitter. All spaces, symbols, letters, and numerals are included in the character count.

SAMPLE SHORT MESSAGES (TEXT ALERTS, TWEETS)

Air Quality-Very Unhealthy: Active youth/adults/people w/respiratory diseases should avoid prolonged outdoor exertion. [\[insert URL\]](#) (114 characters, without URL.)

Air Quality-Very Unhealthy: Active youth/adults/people with respiratory diseases should avoid prolonged outdoor exertion. Everyone else, especially children, should limit outdoor exertion. Visit [\[insert URL\]](#) for more information. (212 characters, without URL.)

Check on others. Older adults/pregnant individuals/children/people w/respiratory illness are at risk when air quality is poor. [\[insert URL\]](#) (125 characters, without URL.)

Staying indoors is the best defense against poor air quality. Staying home, indoor malls, cleaner air centers are best. [\[insert URL\]](#) (120 characters, without URL.)

Staying indoors with windows/doors closed is the best defense against poor air quality. Staying home, indoor malls, libraries, cleaner air centers are best. [\[insert URL\]](#) (157 characters, without URL.)

N-95 respirators are no substitute for being indoors. Not an option? N-95s may be helpful if used properly but increase the work of breathing. [\[insert URL\]](#) (141 characters, without URL.)

N-95 respirators are no substitute for being indoors. Not an option? Here's what you need to know: N-95s must be fitted/worn properly. N-95s are not certified for children. N-95s may be dangerous for people with heart/lung conditions. [\[insert URL\]](#) (229 characters, without URL.)

If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone. [\[insert URL\]](#) (101 characters, without URL.)

Bandanas and typical surgical masks do nothing to protect against smoke particles. (82 characters)

SAMPLE LONGER MESSAGES (WEB COPY, BLOG, FACEBOOK, NEXTDOOR)

Air quality in **[insert JURISDICTION]** is unhealthy. Active youth, adults, and people with respiratory diseases should avoid prolonged outdoor exertion. Everyone else, especially children, should limit outdoor exertion. Take more breaks during outdoor activities.

Keep Yourself and Others Safe

- Check on friends, family, and neighbors. Older adults, pregnant individuals, children, and people with respiratory illness are susceptible to elevated air pollution levels and should take precautions to avoid exposure.
- Smoke can irritate the eyes and airways, causing cough, a dry scratchy throat, runny nose, trouble breathing, and irritated sinuses. Stay hydrated by drinking water during heavy smoke events.
- Avoid adding additional air pollution by curtailing activities such as wood burning, lawn mowing, leaf blowing, driving, barbecuing, smoking, or other dust producing activities. Avoid using hairspray and painting indoors. If possible, use the stove fan when cooking.
- Sign up for alerts in your area by **[INSERT]**. Local smoke levels can rise and fall rapidly, depending on weather factors, including wind direction.

Avoid Poor Air Quality

- Staying indoors with windows and doors closed is the best way to protect your health.
- Set air conditioning units and car vent systems to re-circulate to prevent outside air from moving inside.
- Go to a cleaner air location if you are unable to seal your home, or if dense smoke occurs during hot weather events and you cannot stay in your home. **Heat is very dangerous immediately.** Heat can kill rapidly if a person overheats. If you are concerned about both heat and air quality, heat takes precedent over smoke as the most immediate danger. Locations that may have cleaner air include:
 - Indoor shopping malls
 - Local libraries
 - Cooling centers
 - Community centers
 - Civic centers
 - Local government buildings
 - Designated Cleaner Air Centers
- Leave the affected area, if possible, for the duration of the heavy smoke event.

Designated Cleaner Air Centers (if available):

[Insert JURISDICTION] has established Cleaner Air Centers in the following locations.

- **[Insert LOCATION, ADDRESS, HOURS OF OPERATION, WEBSITE/PHONE]**

Respirators and Masks

N-95 respirators are no substitute for being indoors. Not an option? Here is what you need to know:

- N-95 respirators may not be helpful for all people and may be dangerous for certain people with lung or heart conditions.
- Certified N-95s are not available for children. Children should not wear these masks; they do not fit children properly and can impede breathing.
- If you choose to wear an N-95 respirator, follow the manufacturer’s recommendations for proper fit.
- Wearing an ill-fitted respirator can lead to a false sense of security and to over exertion.

- Taking a respirator on and off can cause fine particulate matter to build up in the respirator, which the wearer will breathe when it is put back on the face.
- Use a new respirator. Old or reused N-95 respirators are not effective.
- Masks, even when worn properly, can become uncomfortable and hot.
- If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone.
- Bandanas and typical surgical masks do nothing to protect against smoke particles.

ADDITIONAL RESOURCES (SEE SECTION 3)

- [FAQs – The Air Quality Index \(AQI\)](#)
- [FAQs – Air Quality and Outdoor Events and Activities](#)
- [FAQs – School Activities During Air Quality Events](#)
- [FAQs – Cleaner Air Centers](#)
- [Sample Media Announcement – \[AGENCY\] Announces Opening of Cleaner Air Centers](#)
- [Sample Media Announcement – Cleaner Air Centers Are Open](#)
- [Air Quality Guidance for Schools](#)
- [Graphic – Air Quality Flag Program](#)
- [Graphic – Protect Yourself on Smoky Days](#)
- [How to Prepare and Maintain a Cleaner Air Home or Clean Air Room](#)
- [Web Resources to Support Air Quality Messaging](#)

AQI: Maroon – Hazardous

Note: Do not exceed 138 characters for text messages. Do not exceed 280 characters for Twitter. All spaces, symbols, letters, and numerals are included in the character count.

SAMPLE SHORT MESSAGES (TEXT ALERTS, TWEETS)

Air Quality-Hazardous: Avoid all physical activity outdoors. Sensitive groups: Remain indoors & keep activity levels low. [\[insert URL\]](#) (120 characters, without URL.)

Air Quality-Hazardous: Avoid all physical activity outdoors. Sensitive groups: Remain indoors & keep activity levels low. Visit [\[insert URL\]](#) for more information. (150 characters, without URL.)

Check on others. Older adults/pregnant individuals/children/people w/respiratory illness are at risk when air quality is poor. [\[insert URL\]](#) (127 characters, without URL.)

Staying indoors is the best defense against poor air quality. Staying home, indoor malls & cleaner air centers are best. [\[insert URL\]](#) (121 characters, without URL.)

Staying indoors with windows & doors closed is the best defense against poor air quality. Staying home, indoor malls, libraries & cleaner air centers are best. [\[insert URL\]](#) (160 characters, without URL.)

N-95s are no substitute for being indoors. Not an option? N-95s may be helpful if used properly, but increase the work of breathing. [\[insert URL\]](#) (116 characters, without URL.)

N-95 respirators are no substitute for being indoors. Not an option? Here is what you need to know: N-95s must be fitted & worn properly. N-95s are not certified for children. N-95s may be dangerous for people with heart/lung conditions. [\[insert URL\]](#) (232 characters, without URL.)

If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone. [\[insert URL\]](#) (101 characters, without URL.)

SAMPLE LONGER MESSAGES (WEB COPY, BLOG, FACEBOOK, NEXTDOOR)

Air quality in [\[insert JURISDICTION\]](#) is hazardous. Everyone should avoid all physical activity outdoors. Sensitive groups including people with heart or lung disease, older adults and children and teenagers should remain indoors and keep activity low.

Keep Yourself and Others Safe

- Check on friends, family and neighbors. Older adults, pregnant individuals, children and people with respiratory illness are susceptible to elevated air pollution levels and should take precautions to avoid exposure.
- Smoke can irritate the eyes and airways, causing cough, a dry scratchy throat, runny nose, trouble breathing, and irritated sinuses. Stay hydrated by drinking water during heavy smoke events.
- Avoid adding additional air pollution by curtailing activities such as wood burning, lawn mowing, leaf blowing, driving, barbecuing, smoking, or other dust producing activities. Avoid using hairspray and painting indoors. If possible, use the stove fan when cooking.
- Sign up for alerts in your area by [\[insert\]](#). Local smoke levels can rise and fall rapidly, depending on weather factors, including wind direction.

Avoid Poor Air Quality

- Staying indoors with windows and doors closed is the best way to protect your health.
- Set air conditioning units and car vent systems to re-circulate to prevent outside air from moving inside.
- Go to a cleaner air location if you are unable to seal your home, or if dense smoke occurs during hot weather events and you cannot stay in your home. **Heat is very dangerous immediately.** Heat can kill rapidly if a person overheats. If you are concerned about both heat and air quality, heat takes precedent over smoke as the most immediate danger. Locations that may have cleaner air include:
 - Indoor shopping malls
 - Local libraries
 - Cooling centers
 - Community centers
 - Civic centers
 - Local government buildings
 - Designated Cleaner Air Centers
- Leave the affected area, if possible, for the duration of the heavy smoke event.

Designated Cleaner Air Centers (If Available):

[\[insert JURISDICTION\]](#) has established Cleaner Air Centers in the following locations.

- [\[insert LOCATION, ADDRESS, HOURS OF OPERATION, WEBSITE/PHONE NUMBER FOR MORE INFORMATION\]](#)

Respirators & Masks

N-95 respirators are no substitute for being indoors. Not an option? Here is what you need to know:

- N-95 respirators may not be helpful for all people and may be dangerous for certain people with lung or heart conditions.
- Certified N-95s are not available for children. Children should not wear these masks; they do not fit properly and can impede breathing.
- If you choose to wear an N-95 respirator, follow the manufacturer’s recommendations for properly fitting an N-95 respirator.
- Wearing an ill fitted respirator can lead to a false sense of security and to over exertion.

- Taking a respirator on and off can cause fine particulate matter to build up in the respirator, which the wearer will breathe when it is put back on the face.
- Use a new respirator. Old or reused N-95 respirators are not effective.
- Masks, even when worn properly, can become uncomfortable and hot.
- If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone.
- Bandanas and typical surgical masks do nothing to protect against smoke particles.

FREQUENTLY ASKED QUESTIONS FOR EVENT ORGANIZERS WHEN AQI IS MAROON

When should an organization consider altering a planned outdoor event?

- Contact your local health department, or look for advisory alerts recommending that events be rescheduled or cancelled. Some higher risk events for participants and audiences include strenuous sporting events, or outdoor events that include a high proportion of vulnerable populations such as older adults.
- A maroon or “hazardous” AQI is greater than 300. This indicates that everyone is likely to be affected by the air quality.

What if the planned event includes a barbeque or campfires?

- It is advisable to avoid adding additional air pollution during air quality events by curtailing activities such as wood burning, driving, barbecuing, or other dust producing activities.

What if face coverings are used?

- **Do not rely on dust masks or bandanas** for protection from smoke. They do nothing to protect against smoke particles.
- **Do not rely on N-95 respirators** for protection from smoke.
 - N-95 respirators are no substitute for being indoors. Not an option? Know this:
 - N-95 respirators may not be helpful for all people and may be dangerous for certain people with lung or heart conditions.
 - Certified N-95s are not available for children. Children should not wear these masks; they do not fit properly and can impede breathing.
 - If you choose to wear an N-95 respirator, follow the manufacturer’s recommendations for properly fitting an N-95 respirator.
 - Wearing an ill-fitted respirator can lead to a false sense of security and to over exertion.
 - Taking a respirator on and off can cause fine particulate matter to build up in the respirator which the wearer will breathe when it is put back on the face.
 - Use a new respirator. Old or reused N-95 respirators are not effective.
 - Masks, even when worn properly, can become uncomfortable and hot.
 - If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone.

What if the event is in a mall or other indoor venue?

- In addition to designated cleaner air centers, event venues, such as indoor shopping malls, local libraries, cooling centers, community centers, civic centers, and local government buildings may present viable options for holding an event.

How do I find out where the Cleaner Air Centers are in my community?

- **[Insert JURISDICTION]** has established Cleaner Air Centers in the following locations.
 - **[Insert LOCATION, ADDRESS, HOURS OF OPERATION, WEBSITE/PHONE NUMBER FOR MORE INFORMATION]**

Where can I find more information on AQI and its health impacts?

- More information on AQI and its impacts on health can be found at [Bay Area Air Quality Management District’s Spare the Air website](#) or at the [EPA’s AirNow.gov website](#).

ADDITIONAL RESOURCES (SEE SECTION 3)

- [FAQs – The Air Quality Index \(AQI\)](#)
- [FAQs – School Activities During Air Quality Events](#)
- [FAQs – Cleaner Air Centers](#)
- [Sample Media Announcement – \[AGENCY\] Announces Opening of Cleaner Air Centers](#)
- [Sample Media Announcement – Cleaner Air Centers Are Open](#)
- [Air Quality Guidance for Schools](#)
- [Graphic – Air Quality Flag Program](#)
- [Graphic – Protect Yourself on Smoky Days](#)
- [Air Quality and Work – Messaging from Employers to Employees](#)
- [How to Prepare and Maintain a Cleaner Air Home or Clean Air Room](#)
- [Web Resources to Support Air Quality Messaging](#)

SECTION 3: ADDITIONAL MESSAGING RESOURCES

These templates can be customized by Bay Area agencies to communicate with the public before, during, or after an air quality incident. These resources, referenced in Part 2, include:

- Frequently Asked Questions (FAQs)
- Sample Media Announcements
- Air Quality Guidance for Schools
- Messages from Employers to Employees
- How to Prepare and Maintain a Cleaner Air Home or Cleaner Air Room
- Graphics
- Web Resources to Support Air Quality Messaging

In the templates, agencies may customize the text in **[blue, bold, and brackets]** with information specific to their jurisdictions or the incident. Agencies can customize the information, but are strongly encouraged to adhere closely to guidance and language contained in this toolkit for greater messaging consistency and coordination among all Bay Area jurisdictions.

Frequently Asked Questions (FAQs)

FAQS ABOUT THE AIR QUALITY INDEX

What is the Air Quality Index (AQI)?

The AQI is a numeric, color-coded index for reporting daily air quality. It indicates how clean or polluted air is and what associated health effects may be of concern. 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) calculates the AQI for five major air pollutants regulated by the federal Clean Air Act: ground-level ozone; particle pollution (also known as particulate matter); carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, the EPA has established national air quality standards to protect public health.

0-50
Good

A green or "good" AQI is 0 to 50. Air quality is considered satisfactory, and air pollution poses little or no risk.

51-100
Moderate

A yellow or "moderate" AQI is 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. For example, people who are unusually sensitive to ozone may experience respiratory symptoms.

101-150
Unhealthy for Sensitive Groups

An orange or "unhealthy for sensitive groups" AQI is 101 to 150. Although the general public is not likely to be affected at this AQI range, people with lung disease, older adults, and children are at a greater risk from exposure to ozone, whereas persons with heart and lung disease, older adults, and children are at greater risk from the presence of particles in the air.

151-200
Unhealthy

A red or "unhealthy" AQI is 151 to 200. Everyone may begin to experience some adverse health effects, and members of the sensitive groups may experience more serious effects.

201-300
Very Unhealthy

A purple or "very unhealthy" AQI is 201 to 300. This would trigger a health alert, signifying that everyone may experience more serious health effects.

301-500
Hazardous

A maroon or "hazardous" AQI is greater than 300. This would trigger a health warning of emergency conditions. The entire population is more likely to be affected.

For more information on AQI and its impacts on health, visit the [Bay Area Air Quality Management District's Spare the Air website](#) or the [EPA's AirNow.gov website](#).

Where can AQI readings be found for a particular area?

Visit baaqmd.gov for the current AQI in the Bay Area, or the [EPA's AirNow.gov website](#) to enter a zip code for real-time air quality information. (Sources: BAAQMD, EPA)

FAQS ABOUT AIR QUALITY AND OUTDOOR EVENTS AND ACTIVITIES

When should an organization consider altering a planned outdoor event?

- Event planners should consult the Air Quality Index (AQI), which has been developed by the U.S. Environmental Protection Agency (EPA), and make decisions based on these guidelines. The AQI is a series of numeric, color-coded ranges that reflect the quality of outdoor air. Each color-coded range is associated with specific guidance relative to potential health impacts associated with outdoor activities.
- An orange or “unhealthy for sensitive groups” AQI signifies that active children and adults, and people with respiratory diseases (e.g., asthma) should limit outdoor exertion.

What if the planned event includes a barbeque or campfires?

- It is advisable to avoid adding additional air pollution during air quality events by curtailing activities, such as wood burning, driving, barbecuing, or other dust producing activities.

What if face coverings are used?

- N-95 respirators are no substitute for being indoors. Not an option? Here is what you need to know:
 - N-95 respirators may not be helpful for all people, and may be dangerous for certain people with lung or heart conditions.
 - Certified N-95s are not available for children. Children should not wear these masks; they do not fit properly and can impede breathing.
 - If you choose to wear an N-95 respirator, follow the manufacturer’s recommendations for properly fitting an N-95 respirator.
 - Wearing an ill-fitted respirator can lead to a false sense of security and to over exertion.
 - Taking a respirator on and off can cause fine particulate matter to build up in the respirator, which the wearer will breathe when it is put back on the face.
 - Use a new respirator. Old or reused N-95 respirators are not effective.
 - Masks, even when worn properly, can become uncomfortable and hot.
 - Bandanas and typical surgical masks do nothing to protect against smoke particles.
 - If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone.

What if the event is in a mall or other indoor venue?

- In addition to designated cleaner air centers, event venues such as indoor shopping malls, local libraries, cooling centers, community centers, civic centers, and local government buildings may present viable options for holding an event.

Where can I find more information on AQI and its health impacts?

More information on AQI and its impacts on health can be found at [Bay Area Air Quality Management District's Spare the Air website](#) or at the [EPA's AirNow.gov website](#).

FAQS ON SCHOOL ACTIVITIES DURING AIR QUALITY EVENTS

How long can students stay outside when the air quality is unhealthy?

There is no exact amount of time students can stay outside when the air quality is considered unhealthy. The worse the air quality, the more important it is to take breaks, do less intense activities, and watch for symptoms. Remember that students with asthma will be more sensitive to unhealthy air.

Why should students take breaks and do less intense activities when air quality is unhealthy?

Students breathe harder when they are active for a longer period of time or when they do more intense activities. More pollution enters the lungs when a person is breathing harder. It helps to reduce the amount of time students are breathing hard (e.g., take breaks; rotate players frequently) and reduce the intensity of activities, so students are not breathing so hard (e.g., walk instead of run).

Are there times when air pollution is expected to be worse?

Ozone pollution is often worse on hot sunny days, especially during the afternoon and early evening. Plan outdoor activities in the morning, when air quality is better and it is not as hot. Particle pollution can be high any time of day. Since vehicle exhaust contains particle pollution, limit activity near idling cars and buses, as well as near busy roads, especially during rush hours. Also, limit outdoor activity when there is smoke in the air.

How can I find out the daily air quality?

Go to www.airnow.gov. Many cities have an Air Quality Index (AQI) forecast that tells you what the local air quality will be later today or tomorrow, and a current AQI that tells you what the local air quality is now. The AirNow website also tells you whether the pollutant of concern is ozone or particle pollution. Sign up for emails, download the free AirNow app, or install the free AirNow widget on your website. You can also find out how to participate (and register your school) in the School Flag Program (www.airnow.gov/schoolflag).

AirNow and the Bay Area Air Quality Management District are the official sources of air quality data. PurpleAir is another air quality monitoring system. PurpleAir and AirNow use different methods to measure and report air quality data, so air quality reports from these two different systems can look different. To learn more about PurpleAir and how to compare that data with AirNow, visit: <https://www2.purpleair.com/community/faq#!hc-how-do-purpleair-sensors-compare-to-regulatory-particulate-matter-sensors>

If students stay inside because of unhealthy outdoor air quality, can they still be active?

It depends on which pollutant is causing the problem:

- **Ozone pollution:** If windows are closed, the amount of ozone should be much lower indoors, so it is OK to keep students moving.
- **Particle pollution:** If the building has a forced air heating or cooling system that filters out particles, the amount of particle pollution should be lower indoors and it is OK to keep students moving. It is important that the particle filtration system is installed properly and is well maintained.

What physical activities can students do inside?

Encourage indoor activities that keep all students moving. Plan activities that include aerobic exercise, as well as muscle- and bone-strengthening components (e.g., jumping, skipping, sit-ups, pushups). If a gymnasium or open space is accessible, promote activities that use equipment, such as cones, hula hoops, and sports balls. If restricted to the classroom, encourage students to come up with fun ways to get everyone moving (e.g., act

out action words from a story). Teachers and recess supervisors can work with physical education teachers to identify additional indoor activities.

What is an asthma action plan?

An asthma action plan is a written plan developed with a student’s doctor for daily management of asthma. It includes medication plans, control of triggers, and how to recognize and manage worsening asthma symptoms. See www.cdc.gov/asthma/actionplan.html for a link to sample asthma action plans. When asthma is well managed and well controlled, students should be able to participate fully in all activities. For a booklet on “[Asthma and Physical Activity in the School](#),” see https://www.nlm.nih.gov/files/docs/public/lung/phy_asth.pdf

FAQS ON CLEANER AIR CENTERS

What are Cleaner Air Centers?

Cleaner Air Centers are indoor spaces with cleaner air that are available to the public to help protect the health and well-being of people who do not have air conditioning.

How do I find out where the Cleaner Air Centers are in my community?

- **[INSERT JURISDICTION]** has established Cleaner Air Centers in the following locations.
 - **[INSERT LOCATION, ADDRESS, HOURS OF OPERATION, WEBSITE/PHONE NUMBER FOR MORE INFORMATION]**

FAQS ABOUT WILDFIRE SMOKE AND RISKS

(Source: <https://www.cdc.gov/features/wildfires/index.html>, last reviewed 2018)

Who is at greatest risk from wildfire smoke?

- **People who have heart or lung diseases** are at higher risk of health impacts associated with wildfire smoke.
- **Older adults** are more likely to be affected by smoke. This may be due to their increased risk of heart and lung diseases.
- **Children** are more likely to be affected by health threats associated with smoke. Children's airways are still developing, and they breathe more air per pound of body weight than adults. Also, children often spend more time outdoors engaged in physical activity and play.
- **Pregnant individuals** and their unborn child are at higher risk of smoke effects.
- **Neighbors who live alone, the elderly, and those who cannot easily shelter-in-place indoors** should be checked on regularly throughout the duration of air quality events.

For more information, contact [\[insert agency name\]](#) at [\[insert phone\]](#), go online to [\[insert agency website\]](#), or visit the CDC website at www.cdc.gov/features/wildfires/index.html

What is particulate matter (PM)?

Particulate matter (PM or also known as particle pollution) is the term for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke are large or dark enough to be seen with the naked eye. Others are so small they can only be detected using an electron microscope.

Wildfire smoke is a mixture of gas and tiny bits of matter, called particulate matter. The size of particles is directly linked to their potential for causing health problems, including those associated with exposure to smoke. Small particles less than 10 micrometers in diameter pose the greatest problems, because they can get deep into the lungs and even the bloodstream. Larger particles are of less concern, although they can irritate the eyes, nose, and throat.

Will we continue to experience wildfires?

The recent unprecedented fires and dense smoke are the result of years of impacts brought on by climate change. The best public health strategy is to be aware that heavy smoke will be in our area and to prepare your home and your family for smoke events.

FAQS ON HOW TO REDUCE SMOKE EXPOSURE AND RISK OF HEALTH PROBLEMS

(Source: EPA at https://www3.epa.gov/airnow/smoke_fires/reduce-your-smoke-exposure.pdf)

How can I reduce smoke exposure indoors?

- **Stay inside** with the doors and windows closed. Whether you have a central air conditioning system or a room unit, use high efficiency filters to capture fine particles from smoke. Ask an air conditioning professional what type of high efficiency filter your air conditioner can accept.
- **Seek shelter elsewhere** if you do not have an air conditioner and it is too warm to stay inside with the windows closed.
- **Do not add to indoor air pollution.** Do not burn candles or use gas, propane, woodburning stoves, fireplaces, or aerosol sprays. Do not fry or broil meat, smoke tobacco products, or vacuum. All of these can increase air pollution indoors.
- **Use a portable air cleaner** to reduce indoor air pollution. Make sure it is sized for the room and that it does not make ozone, which is a harmful air pollutant. Portable air cleaners can be used along with efficient central air systems with high-efficiency filters to further reduce indoor particles.
- **Create a “clean room”** in your home. Choose a room with no fireplace and as few windows and doors as possible, such as a bedroom. Use a HEPA non-ozone producing air cleaner in the room.
- Long-term smoke events usually have periods when the air is better. When air quality improves, even temporarily, **air out your home** to reduce indoor air pollution.

How can I reduce smoke exposure outdoors?

- **Take it easier during smoky times** to reduce how much smoke you inhale. If it looks or smells smoky outside, avoid strenuous activities such as mowing the lawn or going for a run.
- **Know your air quality.** Smoke levels can change a lot during the day, so wait until air quality is better before you are active outdoors. Check airnow.gov for air quality forecasts and current air quality conditions. On AirNow.gov, you can also sign up to get email notifications, download an air quality app, or check current fire conditions.
- **Have enough food and medication** on hand to last several days, if possible, so you don't have to go out for supplies. If you must go out, avoid the smokiest times of day.
- **Reduce smoke in your vehicle** by closing the windows and vents and running the air conditioner in “recirculate” mode. Slow down when you drive in smoky conditions.
- **Do not rely on dust masks or bandanas for protection from smoke.** They do nothing to protect against smoke particles.
- **Do not rely on N-95 respirators** for protection from smoke.
 - N-95 respirators are no substitute for being indoors. Not an option? Know this:
 - N-95 respirators may not be helpful for all people and may be dangerous for certain people with lung or heart conditions.
 - Certified N-95s are not available for children. Children should not wear these masks; they do not fit properly and can impede breathing.
 - If you choose to wear an N-95 respirator, follow the manufacturer's recommendations for properly fitting an N-95 respirator.
 - Wearing an ill-fitted respirator can lead to a false sense of security and to over exertion.
 - Taking a respirator on and off can cause fine particulate matter to build up in the respirator which the wearer will breathe when it is put back on the face.
 - Use a new respirator. Old or reused N-95 respirators are not effective.
 - Masks, even when worn properly, can become uncomfortable and hot.
 - If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone.

How can I reduce my risk of health problems during an air quality event?

- Have enough medication and food on hand (enough for more than 5 days, if possible).
- Follow your health care provider’s advice about what to do if you have heart or lung disease.
- If you have asthma, follow your asthma management plan.
- If you feel sick, reduce your exposure to smoke and contact your health care provider.
- Pay attention to public service announcements, health advisories, and air quality advisories.

Sample Media Announcements

SAMPLE MEDIA ANNOUNCEMENT: COMBINED HEAT AND WILDFIRE AIR QUALITY EVENTS

[Insert Jurisdiction] – Health officials urge people across the region to take precautions as temperatures and air quality reach potentially unhealthy levels.

The National Weather Service is predicting weather that could bring prolonged wildfire smoke to communities in the **[jurisdiction affected]**. Smoke levels can rise and fall, depending on weather factors, including wind direction.

“The combination of high temperatures and wildfire smoke in the **[jurisdiction affected]** may increase the risk of serious illness, especially for older adults, young children, pregnant individuals, and people with heart conditions and respiratory problems,” said **[insert Health Officer]**.

Public health officials encourage people to take the following precautions to avoid health problems during hot, smoky conditions.

- Be aware of smoke concentrations in your area. Residents can get the latest information by visiting the **[insert website]** or call **[2-1-1, 3-1-1 or 5-1-1]**.
- Avoid outdoor activities when air quality is unhealthy and hazardous. People with heart or lung problems, as well as young children and pregnant individuals, are especially vulnerable.
- Avoid smoke by staying indoors, closing all windows and doors, and turning the air conditioner on in recirculation mode, or leaving the area.
- Reduce other sources of indoor air pollution. Avoid using hairspray; burning cigarettes, incense, and candles; avoid gas, propane, and wood-burning stoves and furnaces; and skip vacuuming until air quality improves.
- Individuals with heart disease or respiratory issues should follow their healthcare providers’ advice about prevention and treatment of symptoms.
- Do not rely on dust masks or bandanas for protection from smoke. They do nothing to protect against smoke particles.
- N-95 respirators are no substitute for being indoors. Not an option? Here is what you need to know: N-95s must be fitted & worn properly. N-95s are not certified for children. N-95s may be dangerous for people with heart/lung conditions. If an N-95 makes you feel better, wear it. If you feel worse, don't! N-95s are not meant for everyone.

For more information:

- Up to date air quality information is available from the EPA's [AirNow.gov](https://www.airnow.gov) website.
- **[Insert agency website and key URLs for advisory information]**
- Learn how to reduce particulate matter using [air cleaners](#) and [Indoor Air Tips](#).
 - Air cleaner info can be found at California Air Resources Board at <https://ww2.arb.ca.gov/our-work/programs/air-cleaners-ozone-generating-products> and is available in English and Spanish.
 - Indoor air tips from CDC can be found at the California Department of Public Health at <https://www.cdph.ca.gov/Programs/CCDC/DEOD/EAH/Pages/AirCleaners.aspx> and is available in over 100 languages.
- [Wildfire Safety Tips](#) are available from the [Bay Area Air Quality Management District](#) in five languages.
- Air quality forecasts and health advisories are also available from the [Bay Area Air Quality Management District](#) in five languages.

SAMPLE MEDIA ANNOUNCEMENT: TAKE PRECAUTIONS DUE TO WILDFIRE SMOKE

[Insert Jurisdiction] – **[Agency]** is offering people ways to identify poor air quality conditions and tips to stay healthy and safe during fire season. **[Name of wildfires]** are creating hazardous and smoky conditions. Wind direction can redirect smoke and quickly change air quality conditions from community to community.

"People with chronic lung or heart conditions, older adults, pregnant individuals, and children are at higher risk of health problems from the fine particles in wildfire smoke," said **[Health Officer]**. "People who suffer from asthma or other respiratory conditions should follow their breathing management plans, keep medications on hand, and contact their healthcare provider, as necessary."

[Agency] urges residents to take the following precautions to avoid breathing problems or other symptoms from smoke:

- Be aware of smoke concentrations in your area and avoid the places with highest concentrations. Enter your zip code at airnow.gov for real-time air quality status from the U.S. Environmental Protection Agency or call **[2-1-1, 3-1-1, or 5-1-1]**.
- Sign up for local alerts at **[enter agency site]**.
- Avoid outdoor activities when air quality is unhealthy and hazardous.
- To avoid smoke, either leave the area or protect yourself by staying indoors, closing as many windows and doors as possible without letting your home overheat, and using a filter in your heating or cooling system that removes very fine particulate matter.
- Find a designated Cleaner Air Center in your community. **[Insert JURISDICTION]** has established Cleaner Air Centers in the following locations. **[Insert LOCATION, ADDRESS, HOURS OF OPERATION, WEBSITE/PHONE]**
- Avoid strenuous outdoor activities in smoky conditions. Young children, pregnant individuals, and persons with heart or lung problems are especially vulnerable.
- People with asthma or other respiratory problems should follow their breathing management plans or contact their healthcare provider, as needed.

For more information:

- Up to date air quality data is available from the EPA's AirNow.gov website.
- **[Insert agency website and key URLs for advisory information]**
- Learn how to reduce particulate matter using [air cleaners](#) and [Indoor Air Tips from the CDC](#).
- [Wildfire Safety Tips](#) are available from the Bay Area Air Quality Management District.
- Air quality forecasts and health advisories are also available from the [Bay Area Air Quality Management District](#).

SAMPLE MEDIA ANNOUNCEMENT: [\[AGENCY\]](#) ANNOUNCES OPENING OF CLEANER AIR CENTERS

According to the Bay Area Air Quality Management District, unhealthy air quality levels in [\[insert name\]](#) are expected to remain through [\[insert date\]](#).

“[\[Agency\]](#) is partnering with cities to make Cleaner Air Centers available to those who need respite from being outdoors or do not have proper indoor air filtering. These Cleaner Air Centers will help to protect the health and well-being of people who are living outside and others who cannot safely shelter-in-place,” said [\[insert name, title\]](#).

Cleaner Air Centers will be open from [\[insert days/hours\]](#) in the cities of [\[insert city names\]](#). A list of Cleaner Air Centers and shelters is available on the [\[agency website\]](#).

For more information:

- [\[Insert agency website and key URLs for advisory information\]](#)
- Learn how to reduce particulate matter using [air cleaners](#) and [Indoor Air Tips from the CDC](#).
- [Wildfire Safety Tips](#) are available from the Bay Area Air Quality Management District.
- Air quality forecasts and health advisories are also available from the [Bay Area Air Quality Management District](#).
- Up-to-date air quality information is available from the EPA's [AirNow.gov](#) website.

SAMPLE MEDIA ANNOUNCEMENT: CLEANER AIR CENTERS ARE OPEN

(Source: City of Campbell, Santa Clara County)

[Insert jurisdiction] Announces Cleaner Air Centers to Prevent Exposure to Wildfire Smoke and Air Pollution

According to the Bay Area Air Quality Management District, unhealthy air quality levels in [insert jurisdiction] are expected to remain through [insert date]. Individuals who do not have air conditioning that can be switched to the “recirculate” mode and those who do not have access to a cleaner air environment and need respite from being outdoors are advised to go to a Cleaner Air Center throughout [insert jurisdiction] until further notice. These Centers will help to protect the health and well-being of people who are living outside and are continually exposed to very unhealthy air quality.

Cleaner Air Centers will be open during the day in the [insert cities]. A list of Cleaner Air Centers is available at [insert name of website]. In addition, [insert name of county] libraries are available as Cleaner Air Centers during regular business hours.

- For more information on Cleaner Air Centers, visit [insert website] or call [insert phone number].
- For up to date air quality information from U.S. Environmental Protection Agency, visit [AirNow.gov](https://www.airnow.gov).
- Air quality forecasts, additional health advisories, and wildfire safety tips are available from [Bay Area Air Quality Management District](#).
- For more information on reducing particles using air cleaners and for indoor air tips, visit the [California Department of Public Health](#).

Air Quality Guidance for Schools

It is important to coordinate with school districts as they figure out how to best support their students and staff during an air quality incident. It is often helpful to encourage schools to stay open, keeping in mind that the air quality in schools may be better than the air quality conditions that children might experience outside of school. It is also important that parents do what they think is best for their children, regardless of whether schools are open or not.

This section includes guidance for schools from the California Air Pollution Control Officers Association (CAPCOA), as well as school closure considerations provided by the Association of Bay Area Health Officers (ABAHO).

GUIDANCE FOR SCHOOLS FROM CAPCOA

The California Air Pollution Control Officers Association (CAPCOA) is a non-profit association of the air pollution control officers from all 35 local air quality agencies throughout California and promotes unity and efficiency, while encouraging consistency in methods and practices of air pollution control. CAPCOA issued this guidance for schools in June 2019.

ABOUT THE GUIDELINES

The following air quality guidelines for schools are based on the U.S. EPA and the CDC's [Air Quality and Outdoor Activity Guidance for Schools](#) and [Wildfire Smoke: A Guide for Public Health Officials](#). The guidelines and associated template are designed to assist schools in decision-making when air quality is poor and are modifiable following consultation with local education entities.

School closure and event cancellations are ultimately determined by each individual school district based on local conditions. This guidance and template are not intended to supersede existing guidelines and policies developed by local authorities, including the school districts or air districts.

The impact of smoke depends on the sensitivity of the person and the length of exposure. Children with respiratory or heart conditions are vulnerable to poor air quality and may require extra precautions. School districts should advise parents to consult with their family health care provider.

USING THE GUIDELINES

School districts will need to monitor local air quality conditions using air quality tracking tools recommended by their local air district. One example of such a tool is U.S. EPA's air quality index (AQI) available at [AirNow.gov](#). However, because other air quality tracking methodologies may be used in a jurisdiction, it is highly recommended to contact the local air district for advice on the most appropriate tools to use for the region.

School districts should make decisions about school activities and closures based on air quality measurements and local conditions, such as the availability and quality of school building air filtration and direct observation of onsite indoor/outdoor air quality.

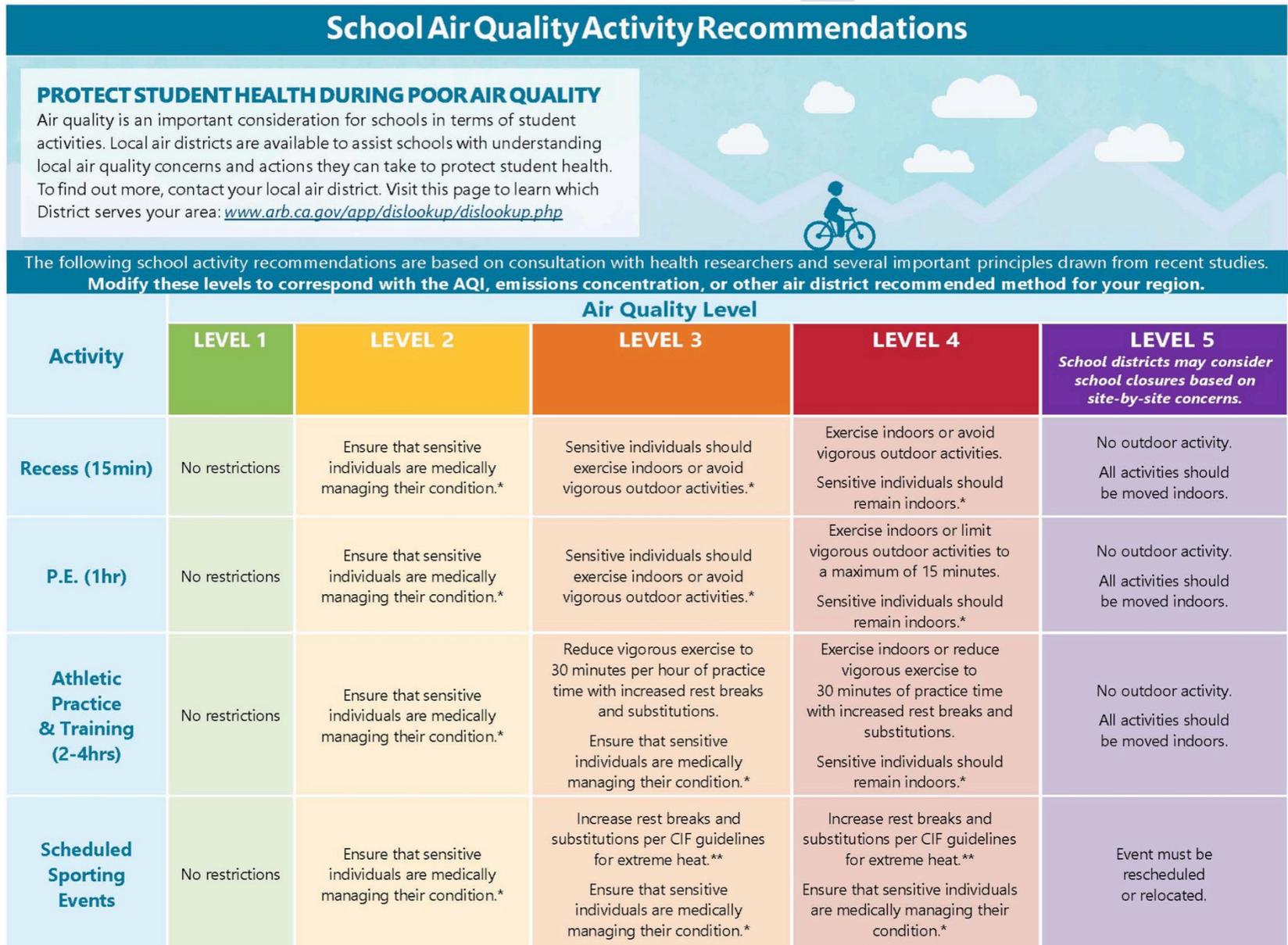
School districts may wish to consult with their local air district regarding outdoor air and their local public health official regarding indoor air before making a final determination.

School districts should report any school closures to the respective County Office of Education for media notification, and announce closures to families using normal school closure procedures.

RECOMMENDATIONS TO ENSURE CLEANER AIR AT SCHOOL

- Install and maintain HVAC air conditioning system with medium or high-efficiency filtration. Install high efficiency particulate air (HEPA) filters if possible. See U.S. EPA recommendations for air filtration. https://www3.epa.gov/airnow/smoke_fires/indoor-air-filtration-factsheet-508.pdf
- Install portable HEPA filters in classrooms where possible. Approved filters: <https://www.arb.ca.gov/research/indoor/aircleaners/certified.htm>
- Be sure that portable filters are sized correctly for the room.
- Ensure doors and windows are sealed tightly. Minimize air movement in and out of rooms.

GRAPHIC: SCHOOL AIR QUALITY ACTIVITY RECOMMENDATIONS (CAPCOA)



* Sensitive Individuals include all those with asthma or other heart/lung conditions ** California Interscholastic Federation

SCHOOL CLOSURE CONSIDERATIONS

This guidance was issued by the Association of Bay Area Health Officials (ABAHO) in November 2018.

The responsibility for decisions regarding school dismissal and closures generally falls upon school administrators. The following provides guidance for Public Health officials and school leaders in navigating these choices.

Factors to consider in decisions regarding school closures include:

- There is no established cut-off level for air quality, as measured by the Air Quality Index (AQI), for school dismissals or closures. Current and forecast air quality for the Bay Area can be found at www.baaqmd.gov.
- There is no clear evidence that children are safer from wildfire smoke at home than at school. Air quality in homes may be similar to that in schools.
- Schools can provide a measure of security by ensuring recommendations are being followed, where children are avoiding outdoor physical activity and are being monitored together.
- School closures and dismissals often mean a working parent must stay home, and not all families have the same ability to meet this need. Unsupervised children are less likely to follow health recommendations.
- Some students may have longer outdoor transit times to and from school, where they may have greater exposure.
- The duration of poor air quality and wildfire events may be prolonged, and school closures may set a precedent that extends for weeks.
- As always, parents should navigate these choices depending on the circumstances of each child. If a school remains open, a parent can decide to keep their child home.

At school, the following measures to reduce exposure can help to protect children when air quality is poor:

- Outdoor activities should be limited.
- When arriving at school, students should go directly indoors.
- Windows and doors should be kept shut as much as possible.
- When air quality is the “very unhealthy” range outdoor activities should be moved indoors, cancelled or rescheduled.
- [Additional recommendations for appropriate activity levels based on air quality](https://www.airnow.gov/index.cfm?action=flag_program.index) can be found at https://www.airnow.gov/index.cfm?action=flag_program.index
- Schools are encouraged to work with facilities staff to ensure that school air filtration systems are working properly.
- Air conditioners should be set to re-circulate indoor air.
- Filters should be replaced prior to the fire season.
- More information on ensuring clean indoor air can be found at (https://www3.epa.gov/airnow/wildfire_may2016.pdf):

Common symptoms include eye and throat irritation, and mild coughing. If symptoms occur, the student might need to take a break, do a less intense activity, stop all activity, go indoors, or use quick-relief medicine as prescribed. If symptoms don't improve, get medical help. Students with asthma should follow their asthma action plans and keep their quick-relief medicine close at hand.

For up to date information about air quality in the Bay Area go to: www.baaqmd.gov/ or www.airnow.gov/.

Messages from Employers to Employees

AIR QUALITY AND WORK: MESSAGING FROM EMPLOYERS TO EMPLOYEES

Management, human resources, and risk management should consider organizational policy decisions on air quality events resulting from wildfire. If respirators are provided, decisions should be made about fit testing. Employers should modify the messaging below based on their organization policy.

During an air quality event, employers will likely issue guidance and policies consistent with employee handbooks. It is always best to start there. Some may close offices; others may offer a variety of leave options or flex policies. Some work offices' air quality may actually be better than what it is at home for some workers.

Employers should be prepared to issue alerts and guidance to employees regarding their air quality and work policies and practices. Below is a sample template. Information that is [\[bracketed in blue\]](#) signifies where an individual jurisdiction can add its own content.

Air Quality Notice to Employees

The Air Quality Index (AQI) in [\[name of jurisdiction\]](#) has reached the "Unhealthy for All" level. This means everyone may experience negative health effects, and schools in [\[name of jurisdiction\]](#) and the surrounding Bay Area [\[insert open/closed status\]](#). The [\[name of agency or organization\]](#) cares about its employees and encourages those who work outdoors to collaborate with their departments to ensure they are taking the right steps to stay healthy. [\[Name of jurisdiction or agency\]](#) is postponing non-critical outdoor work until the air quality is better.

Wearing a N-95 respirator is not a substitute for limiting outdoor activity. However, if you work outdoors and feel that wearing an N-95 respirator helps, you may ask your supervisor to provide you with one or request availability of masks from [\[insert agency\]](#). Employees that use respiratory protection are advised to read and follow California Department of Public Health (CDPH) and Cal/OSHA guidelines. Employees voluntarily wearing CDPH-recommended N-95 or N-100 disposable respiratory protection while at work must read and comply with (1) the manufacturer's instructions for proper use and maintenance; and (2) [Appendix D](#) of the Cal/OSHA Regulation 5144. The use of other types of respiratory protection may be subject to more restrictive Cal/OSHA requirements.

Consistent with [\[name of agency or organization\]](#) handbook, employees may use sick leave or other accrued paid leave if you become ill at work because of the air quality. Anyone who must go home, and who does not have paid accrued leave available, may go home on unpaid status.

[\[Name of agency or organization\]](#) employees are expected to come to work on time and perform your customary duties. You may even find the air quality in [\[name of agency's or organization's\]](#) buildings to be better than your air quality at home.

If you cannot work because of the fires, follow absence protocols or flexible schedules established by [\[department, unit, agency, organization, etc.\]](#). Updates and information about air quality can be found at [\[agency/organization/other websites\]](#).

SAMPLE EMAIL ON WHEN TO CLOSE OFFICES / CANCEL EVENTS

Below is a sample message to share with organizations that might inquire about closing offices or cancelling events. Information that is [\[bracketed in blue\]](#) signifies where an individual jurisdiction can add its own content. Along with this guidance, jurisdictions may want to provide additional resources about steps people can take to protect their health during air quality events, such as:

- [FAQs – Air Quality and Outdoor Events and Activities](#)
- [FAQs – How to Reduce Smoke Exposure and Risk of Health Problems](#)
- [Graphic – Protect Yourself on Smoky Days](#)

Air Quality Notice on Closing Offices/Cancelling Events

Dear [Colleague, Community Partner, Associate]:

The Air Quality Index (AQI) in [\[name of jurisdiction\]](#) has reached the [\[insert AQI level by description, e.g., Very Unhealthy\]](#) level. The AQI level was established by the U.S. Environmental Protection Agency. This AQI level means that [\[insert description and short guidance, e.g., active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit outdoor exertion.\]](#)

Some employers or organizations may be wondering if they should close offices or cancel planned events. The [\[name of jurisdiction\]](#) advises that [\[insert recommendation based on employee handbook, flex schedules, etc.\]](#). It is important to recognize that some work offices' or scheduled event venues' air quality may actually be better than what it may be at home for some employees and event participants.

The Association of Bay Area Health Officials (ABAHO) suggests that individuals with health conditions should talk to their physicians to develop a personal plan for smoke. Elderly persons, pregnant individuals, children, and individuals with respiratory illnesses are particularly susceptible to elevated air pollution levels and should take extra precautions to avoid exposure. ABAHO also recommends that susceptible individuals leave the affected area, if possible, for the duration of the heavy smoke event. If that is not possible, seek indoor locations with cleaner air.

It is always advisable to check in on neighbors, particularly those who may ordinarily be home alone for extended periods of time or who are not easily able to shelter indoors in a cleaner air environment.

How to Prepare and Maintain a Cleaner Air Home or Cleaner Air Room

This messaging on preparing a “cleaner air room” is provided from [Wildfire Smoke: A Guide for Public Health Officials](https://www3.epa.gov/airnow/wildfire_may2016.pdf) (https://www3.epa.gov/airnow/wildfire_may2016.pdf). This document was originally developed by the California Air Resources Board and the California Department of Public Health (CDPH) and was last updated in 2016.

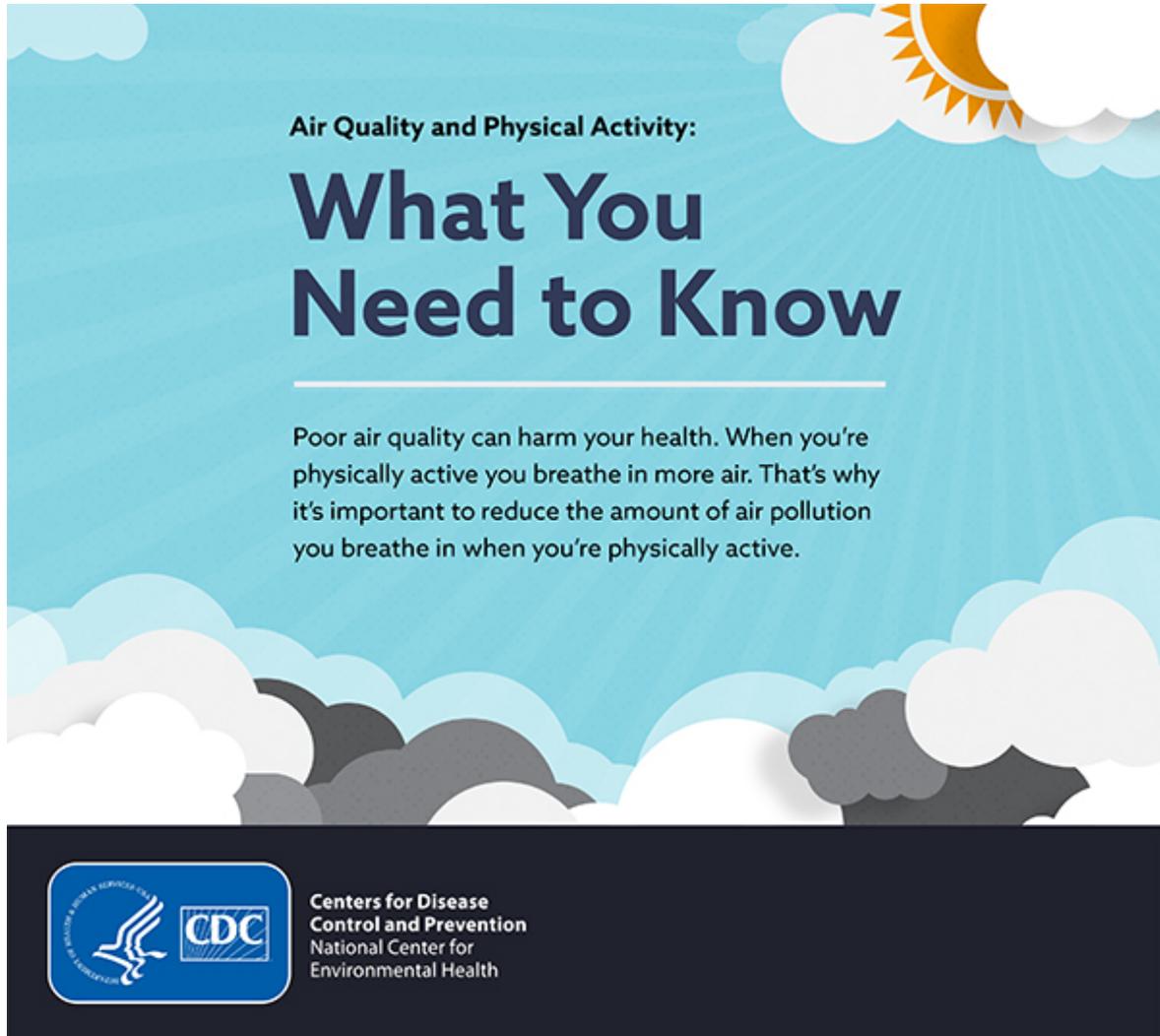
HOW TO PREPARE AND MAINTAIN A CLEAN AIR HOME OR CLEAN AIR ROOM

- Keep windows and doors closed (unless this leads to a dangerous heat-stress situation);
- Set up a properly sized portable air cleaner to help remove particulate matter from indoor air, while emitting no or minimal levels of ozone
- Run the air conditioning system if you have one. If the air conditioner provides a fresh air option, keep the fresh-air intake closed to prevent smoke from getting inside. Make sure the filter is clean enough to allow good airflow.
- Do not vacuum in the house and clean room, unless using a HEPA-filter-equipped vacuum. If necessary, clean by damp mopping or dusting
- Do not smoke or burn anything in the house, including candles or incense
- Long-term smoke events usually have periods when the air quality is better. When air quality improves, even temporarily, air out your home to reduce indoor air pollution.
- If it is too warm to stay inside with the windows closed, or if you are especially sensitive to smoke, consider temporary re-location by seeking shelter elsewhere, including Cleaner Air Centers.
- Some particulate matter will enter a home even if efficient filtration and air cleaners are employed.

Graphics

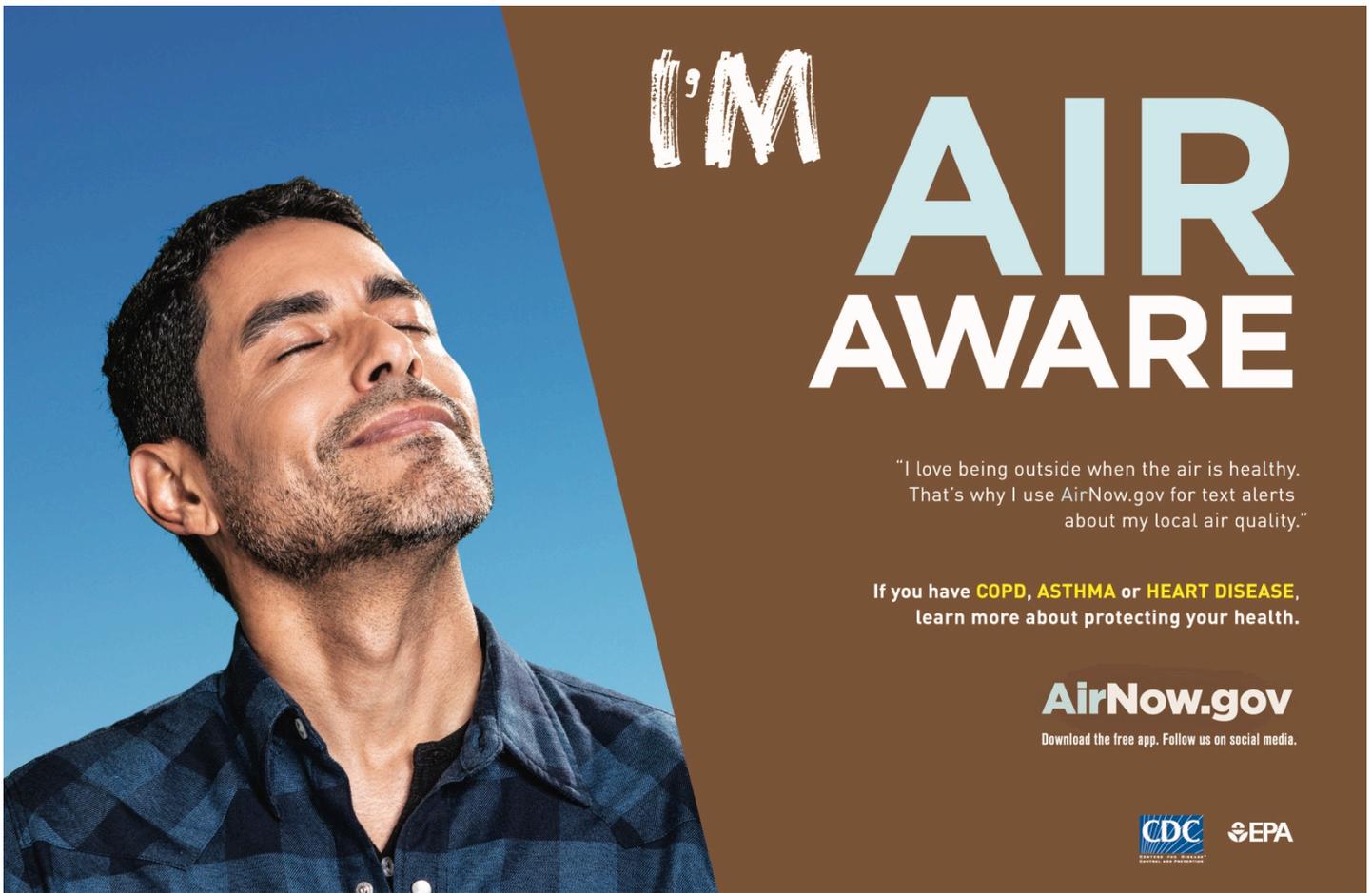
Note: To download these graphics, visit the website noted below each graphic.

GRAPHIC: AIR QUALITY AND PHYSICAL ACTIVITY – WHAT YOU NEED TO KNOW



Source: [CDC](http://www.cdc.gov/nceh/multimedia/air_pollution_asthma_infographics.html) (www.cdc.gov/nceh/multimedia/air_pollution_asthma_infographics.html)

GRAPHIC: AIR AWARE



Source: [CDC](http://www.cdc.gov/air/air_health.htm) (www.cdc.gov/air/air_health.htm)

Note: this graphic is available in depictions of a variety of demographic audiences.

GRAPHIC: AIR POLLUTION

Particulate Matter
 Airborne particles such as *smoke, dust, dirt, soot, and salt*. The sources of these particles are numerous—including vehicles, factories, fires, and any other natural or human activity resulting in the addition of particulates into the air.

Ground Level Ozone
 Ground level ozone is not directly emitted into the air, but forms when *nitrogen oxides (NOx)* emissions react with other *volatile organic compounds (VOCs)* in the presence of heat and sunlight.

Emissions from industrial facilities and electric utilities, motor vehicle exhaust, and chemical solvents are some of the major sources of NOx and VOCs.

Air Pollution



weather.gov/airquality

Source: [NOOAA](http://www.weather.gov/airquality) (www.weather.gov/airqualit)

GRAPHIC: AIR QUALITY FLAG PROGRAM

The Air Quality Flag Program alerts school communities to local air quality forecasts so they can take actions to protect children, especially those with asthma.

Outdoor air pollution can trigger asthma attacks

1 in 12 children aged 0–17 years has asthma

Visit AirNow.gov to learn more about air quality and EPA's Air Quality Flag Program



Sources: CDC/EPA

GRAPHIC: PROTECT YOURSELF ON SMOKY DAYS (CUSTOMIZABLE, MULTI-LINGUAL)

Note: There are two versions of this graphic in multiple languages. One version can be used without adding any additional content (non-customized version). The other version is customizable, enabling the addition of up to 3-4 lines of text and/or a small logo. To download these graphics, visit the web links noted at each language listed below.

Both versions (non-customized and customizable) are provided in the following languages, which are available at the links indicated:

- English [INSERT LINK](#)
(An example of the non-customized English version can be seen on the next page.)
- Chinese (traditional) [INSERT LINK](#)
- Spanish [INSERT LINK](#)
- Tagalog [INSERT LINK](#)
- Russian [INSERT LINK](#)
- Vietnamese [INSERT LINK](#)

To customize downloaded graphics:

- Copy and paste the downloaded graphic into a Word document, or right click on the graphic and save it as a picture.
- In Word or in a PDF, add a text box in the white space under “When in Doubt, Seek Shelter Indoors.”
- In that text box, add text and/or a logo specific to your jurisdiction.
- When adding a logo, a transparent PNG file is recommended.

GRAPHIC: PROTECT YOURSELF ON SMOKY DAYS - ENGLISH VERSION (NON-CUSTOMIZED)

Protect Yourself on Smoky Days

BEFORE AN EVENT



Make a Plan.

Identify public places in your community that will have cleaner, cooler air. Remember heat is dangerous too.



Consider Your Health.

Have a health condition? Talk with your doctor about how to protect yourself on smoky days.



Prepare Living Space.

Replace leaky windows and seal openings with caulk. Consider purchasing a HEPA air purifier.

DURING AN EVENT



Stay Indoors.

This is the best defense against poor air quality. Keep windows and doors closed. Stay home, or go someplace with cleaner air.



Stay Informed.

Sign up for alerts in your area. Local smoke levels can rise and fall rapidly.



What About Masks?

N95 respirators are no substitute for being indoors. Not an option? **Here are some facts to consider:**



N95s must be fitted and worn properly.



N95s are not safe for children.



N95s may be dangerous for people with heart or lung conditions.

If an N95 makes you feel better, wear it. If you feel worse, don't! N95s are not meant for everyone.

When in Doubt, Seek Shelter Indoors.

Brought to you by The Bay Area Air Quality Management District, The Association of Bay Area Health Officials, and The Bay Area Urban Areas Security Initiative

GRAPHIC: HOW TO USE A RESPIRATOR - ENGLISH

How to Properly Put on and Take off a Disposable Respirator

WASH YOUR HANDS THOROUGHLY BEFORE PUTTING ON AND TAKING OFF THE RESPIRATOR. Inspect the respirator for damage. If your respirator appears damaged, DO NOT USE IT. Replace it with a new one. Do not allow facial hair, hair, jewelry, glasses, clothing, or anything else to prevent proper placement or come between your face and the respirator. While wearing the respirator if you feel short of breathe, dizzy, faint - REMOVE the respirator.

Putting On The Respirator



Position the respirator in your hands with the nose piece at your fingertips.



Cup the respirator in your hand allowing the straps to hang below your hand. Hold the respirator under your chin with the nosepiece up.



The top strap goes over and rests at the top back of your head. The bottom strap is positioned around the neck and below the ears. Do not crisscross straps.



Place your fingertips from both hands at the top of the metal nose clip (if present). Slide fingertips down both sides of the metal strip to mold the nose area to the shape of your nose.

Checking Your Seal



Place both hands over the respirator, take a quick breath in to check whether the respirator seals tightly to the face.



Place both hands completely over the respirator and exhale. If you feel leakage, there is not a proper seal.



If air leaks around the nose, readjust the nosepiece. If air leaks at the edges, fix the straps along the sides of your head until a proper seal is achieved.



If you cannot achieve a proper seal due to air leakage, ask for help.

Removing Your Respirator



DO NOT TOUCH the front of the respirator! It may be contaminated!



Remove by pulling the bottom strap over back of head, followed by the top strap, without touching the respirator.



Throw it out.
WASH YOUR HANDS!



GRAPHIC: HOW TO USE A RESPIRATOR – SPANISH

Cómo ponerse y quitarse adecuadamente un respirador desechable

LÁVESE BIEN LAS MANOS ANTES DE PONERSE Y QUITARSE EL RESPIRADOR.

Revise si el respirador está en buenas condiciones. Si el respirador parece estar dañado, NO LO USE. Reemplácelo con uno nuevo.

Evite que haya vello facial, hebras de cabello, joyas, lentes, prendas de vestir o cualquier otra cosa entre el respirador y su cara o que esté previniendo la colocación adecuada del respirador.

Colocación del respirador



Coloque el respirador en la palma de su mano con la parte que se coloca sobre la nariz tocando los dedos.



Agarre el respirador en la palma de la mano (con la mano ahuecada), dejando que las bandas caigan sobre la mano. Sostenga el respirador debajo de la barbilla con la parte que se coloca sobre la nariz mirando hacia arriba.



La banda superior se coloca sobre la cabeza, descansando en el área superior de la parte de atrás de la cabeza. La banda inferior se coloca alrededor del cuello y debajo de las orejas. ¡No cruce las bandas una sobre la otra!



Coloque los dedos de ambas manos en la parte superior del gancho de metal que cubre la nariz (si tiene gancho). Deslice hacia abajo los dedos por ambos lados del gancho de metal que cubre la nariz para moldear el área y que tome la forma de la nariz.

Revisión del ajuste



Coloque ambas manos sobre el respirador y aspire un poco de aire para revisar si el respirador se ajusta totalmente a su cara.



Con las manos todavía tapando completamente el respirador, bote el aire por la nariz y la boca. Si siente que el aire se filtra, no hay un ajuste adecuado.



Si el aire se filtra alrededor de la nariz, reajuste la pieza de la nariz según lo indicado. Si el aire se filtra por los lados, reajuste las bandas a lo largo de la cabeza hasta que obtenga un ajuste adecuado.



Si no puede obtener un ajuste y sello adecuado, pida ayuda.

Para quitarse el respirador



¡NO TOQUE la parte de adelante del respirador! ¡Puede estar contaminada!



Quítese el respirador halando la banda inferior sobre la parte de atrás de la cabeza sin tocar el respirador y haciendo lo mismo con la banda superior.



Bote el respirador ¡LÁVESE LAS MANOS!



CS 207843
DHHS (NIOSH) Publication No. 2010-133p

GRAPHIC: RED FLAG WARNING

Source: [NOOAA](https://www.weather.gov/airquality) (weather.gov/airquality)

Red Flag Warning

The NWS issues a Red Flag Warning, in conjunction with land management agencies, to alert people to an ongoing or expected **critical fire weather** pattern.

Critical fire conditions are either **occurring now, or will shortly**.

Be extremely careful with open flames.

Take action.

[weather.gov/fire](https://www.weather.gov/fire)



Video

VIDEO: PROTECT YOURSELF FROM WILDFIRE SMOKE

- [California Air Resources Board wildfire safety video, “Protect Yourself from Wildfire Smoke,”](#) provides information on N-95 or P-100 respirators.

Factsheet

WILDFIRE SMOKE FACTSHEET: PROTECT YOUR LUNGS FROM WILDFIRE SMOKE OR ASH

- EPA factsheet: https://www3.epa.gov/airnow/smoke_fires/respiratory-protection-508.pdf

Web Resources to Support Air Quality Messaging

The following websites are resources and social media accounts that agencies may use to support regional public information coordination during wildfire-related air quality incidents in the Bay Area.

REGIONAL CALIFORNIA AIR QUALITY WEBSITES

Note: Some counties and cities in the Bay Area use AirNow.gov and BAAQMD as a source for air quality.

- [AirNow California Air Quality](https://airnow.gov/index.cfm?action=airnow.local_state&stateid=5) (https://airnow.gov/index.cfm?action=airnow.local_state&stateid=5)
- [Bay Area Air Quality Management District Current Air Quality](http://www.baaqmd.gov/about-air-quality/current-air-quality) (<http://www.baaqmd.gov/about-air-quality/current-air-quality>)
- [Spare the Air](http://www.sparetheair.org/stay-informed/jurisdiction-information) (<http://www.sparetheair.org/stay-informed/jurisdiction-information>)
- [California Map for Local Air District Websites](https://www.arb.ca.gov/capcoa/dismap.htm) (<https://www.arb.ca.gov/capcoa/dismap.htm>)
- [Contra Costa County Air Quality](http://www.co.contra-costa.ca.us/4980/Air-Quality) (<http://www.co.contra-costa.ca.us/4980/Air-Quality>)
- [Napa County Air Quality](https://www.countyofnapa.org/2246/Air-Quality-in-Napa-County) (<https://www.countyofnapa.org/2246/Air-Quality-in-Napa-County>)
- [Northern Sonoma County Air Pollution Control District](https://www.nosocoair.net/) (<https://www.nosocoair.net/>)
- [San Francisco City and County Performance Scorecards](https://sfgov.org/scorecards/environment/days-epa-air-quality-index-rating-good) (<https://sfgov.org/scorecards/environment/days-epa-air-quality-index-rating-good>)
- [San Rafael, Marin County, California Air Pollution](https://aqicn.org/city/california/marin/san-rafael/) (<https://aqicn.org/city/california/marin/san-rafael/>)

AIR QUALITY WEBSITES

- [CA Air Districts: www.capcoa.org](http://www.capcoa.org)
- [California Air Resources Board: https://ww2.arb.ca.gov/homepage](https://ww2.arb.ca.gov/homepage)
- [CalFire incidents: http://calfire.ca.gov/index](http://calfire.ca.gov/index)
- [InciWeb Incident Information System](https://inciweb.nwcg.gov/) (status of current wildfire incidents): <https://inciweb.nwcg.gov/>
- [Prescribed Fire Information Reporting System](https://ssl.arb.ca.gov/pfirs/) (online interagency tool to track prescribed burning in CA) <https://ssl.arb.ca.gov/pfirs/>
- [California Air Response Planning Alliance](https://ww2.arb.ca.gov/node/1013/about) (air emergency response information and Resources, including fire/air quality information): <https://ww2.arb.ca.gov/node/1013/about>
- [U.S. Forest Service Active Fire Mapping Program](https://fsapps.nwcg.gov/): <https://fsapps.nwcg.gov/>
- [U.S. EPA's AirNow](http://www.airnow.gov/) (national online resource for air quality information and data) www.airnow.gov/
- [CA and NV Smoke and Air Committee](http://www.cefa.dri.edu/COFF/cofframe.php) (meteorological modeling products for smoke) www.cefa.dri.edu/COFF/cofframe.php
- [U.S. Forest Service Air Fire Research Team](http://www.airfire.org/) (Bluesky smoke modeling) <http://www.airfire.org/>

SOCIAL MEDIA ACCOUNTS (TO FOLLOW AND RESHARE/REPOST)

- BAAQMD: <https://www.facebook.com/bayareaairdistrict/>
- CalFire Official Social Media channels: <http://calfire.ca.gov/communications/socialmedia>

EMERGENCY ALERTS

- **Bay Area Emergency Text Alerts** - Text zip code to 888-777 to receive real time emergency alerts.

PUBLIC INFORMATION APPS

- **Ready for Wildfire App:** To download the app, visit the App Store or the Google Play Store – search for CAL FIRE and install.
- **For Wildfire Evacuees:** People can reconnect with loved ones through both the Red Cross Safe and Well website at redcross.org/safeandwell and by using the “I’m Safe” feature of the Red Cross Emergency App. The Safe and Well site allows individuals and organizations to register and post messages to indicate that they are safe, or to search for loved ones. The site is always available, open to the public, and available in English and Spanish. Registrations and searches can be done directly on the website. Registrations can also be completed by texting SAFE to 78876.

HOME AIR CLEANERS AND DEVICES

Information about home air cleaners: <https://www.epa.gov/indoor-air-quality-iaq/guide-air-cleaners-home>

Information on certified air cleaning devices: <http://www.arb.ca.gov/research/indoor/aircleaners/certified.htm>

GUIDE FOR PUBLIC OFFICIALS

Wildfire Smoke, A Guide for Public Health Officials: https://www3.epa.gov/airnow/wildfire_may2016.pdf

SECTION 4: GUIDANCE FOR COMMUNICATING WITH THE WHOLE COMMUNITY

This section provides considerations, guidance, and tools for identifying and communicating with traditionally hard-to-reach populations, such as people with access and functional needs, including, but not limited to people with disabilities, older adults, immigrant populations, and people with limited English proficiency. It includes a checklist of tasks to support air quality message development targeting these populations. For purposes of this document, the terms hard-to-reach populations, vulnerable populations, at-risk populations, and people with access and functional needs are used interchangeably.

Section 4 begins with a task checklist for message development to vulnerable populations. This summarizes the resources provided in this section. This section also includes guidance on how to define, locate, and reach these populations, along with tools to help ensure communications about air quality incidents and other types of emergencies are accessible.

Under the [Americans with Disabilities Act \(ADA\)](#), communication barriers must be eliminated that prevent individuals with disabilities from enjoying equal opportunity to participate in and benefit from:

- programs, services and activities of state and local governmental entities;
- goods, services or activities offered by public accommodations; and
- employment opportunities in both the public and private sectors.

The obligation to communicate effectively with people who have disabilities, in particular, applies to the presentation and exchange of information in all forms, including sound, print, graphics, and voice.

Resources:

- Air Quality Messaging to Vulnerable Populations Task Checklist
- Defining, Locating, and Connecting with Hard-to-Reach Populations
- Principles of Community Engagement
- Developing and Testing Messages for Cultural and Linguistic Competence
- Culturally CAPABLE: A Mnemonic for Developing Culturally Capable Materials
- Planning for Language Interpretation/Translation Services
- When Mainstream Media is Not an Option
- The Categories Checklist
- Focus Group, Interview, or Roundtable Discussion Template
- Tips to Ensure Accessible Communications
- People First Language

Air Quality Messaging to Vulnerable Populations Task Checklist

PURPOSE

There are times when weather, area fires, and/or other environmental hazards result in changes in the Air Quality Index (AQI). This task checklist provides considerations, guidance, and tools to communicate with traditionally hard-to-reach populations, such as people with access and functional needs, including, but not limited to people with disabilities, older adults, immigrant populations, and people with limited English proficiency. This task checklist summarizes guidance provided in greater detail in Section 2 of this air quality messaging toolkit.

The purpose of implementing this task checklist is to support communications to prepare for and respond to air quality incidents identified as Unhealthy, Very Unhealthy, or Hazardous, based on notices from **[INSERT JURISDICTION]** or other sources, and may be activated for multiple days. AQI can vary throughout the day and night. The highest anticipated range for the day will be considered for this task checklist.

ACTIONABLE TASKS

Consider Five Broad Target Audiences

- Economically Disadvantaged
- Language and Literacy (culturally and linguistically appropriate and accessible)
- Medical Issues and Disability (physical, mental, cognitive, or sensory)
- Isolation (cultural, geographic, or social)
- Age (older adults or infants and children under the age of 18)

Community Engagement Principles

These key principles can help public health professionals and community leaders promote common understanding, and encourage actions for health protection:

- Be clear.
- Be concise.
- Be correct.
- Be confident.
- Be connected.
- Be transparent.
- Be a role model.

Develop Culturally Capable Messages

- C**olors (Colors may convey different meanings for different groups, religions, cultures, and communities.)
- A**rt (Images should reflect targeted audiences.)
- P**aper (Some may have difficulty reading certain colors.)
- A**ccess (Consider physical distribution points and height placement of messages to enable easily accessible materials.)
- B**uy-In (Communicate why this matters to them.)
- L**anguage (The message's language should be written for audience appropriateness, i.e., age, culture.)
- E**valuation (Help readers or listeners to understand the impact of changes.)

Message Delivery Channels

Channels for delivering messages are varied and will depend on availability, accessibility, and how well they reach your populations. Delivery channels, when electricity has not been affected or limited, can include:

- Mass media (television, radio, newspaper)
- Ethnic media
- Podcast
- Internet
- Radio
- Satellite radio
- Your Community Network
- National Oceanic and Atmospheric Administration Weather Radio All Hazards (NWR)
- 2-1-1 or 3-1-1 website

Delivery channels during a blackout or when electricity is not available to all areas could include:

- Cell phone/text messaging
- Battery-powered radio
- Reverse 9-1-1
- Battery-powered walkie talkies
- 2-1-1 telephone
- Ham radio networks
- Telephone calling trees/networks (using landline phones that do not require electricity)
- Door-to-door information (door hangers and pamphlets)
- Information distribution to a pre-determined emergency information point (churches, libraries, grocery stores, post offices, schools, restaurants, markets, shelters)
- Peer ambassadors designated to help neighbors receive information

Police tools to reach vulnerable populations may include:

- Picture books
- Braille and alternative language handouts
- Closed-captioned videos
- Audiotapes

ACCESSIBLE DIGITAL COMMUNICATIONS

- Develop or provide accessible formats to disseminate alerts and information.
 - Use a variety of formats (text, audio, video, image).
 - Use a variety of methods of information dissemination (broadcast, wireless, internet, social media, apps).
 - Consider various devices (cell phones, tablets, computers, TVs, radios).
- Use software/hardware solutions and interoperable networks.
 - Receive alert feeds from multiple sources.
 - Transition to a next generation 9-1-1 system.

DOCUMENTATION PREPARATION

Follow these guidelines to make content accessible to a wider range of people with access and functional needs and all audiences, in general:

- Use system fonts
- Make forms electronically fillable
- Choose an accessible technology platform
- Present text as text
- Include alternative text
- Use styles
- Include tables of contents
- Use short titles in headings
- Use logical heading order
- Use meaningful hyperlink text
- Increase visibility for colorblind viewers
- Use simple tables
- Avoid repeated blank characters
- Avoid floating objects
- Create Closed Captions
- Print files in large text
- Battery-powered radio

MULTIMEDIA GUIDELINES

Multimedia refers to any presentation that contains more than one type of media. Multimedia typically includes both audio and visual information. For accessible multimedia, consider these options:

- Provide visual representations of audible elements for people who are deaf or hard of hearing.
- Include text transcripts for posted videos or multimedia presentations.
- Text equivalent for every non-text element.
- Audio descriptions of all visual information.
- YouTube will automatically caption the text on videos

SOCIAL MEDIA

Social media message relies on its accessibility to individuals who receive the messages. Use the following guidelines to effectively share messages on social media:

- Place #hashtags or @mentions at the end of the tweet.
- Avoid using unfamiliar acronyms.
- Use “CamelCase” (upper and lowercase) for multiple words in hashtags.
- If your post contains photos, video, or audio, use prefixes for people who use screen readers.
- Make your post serve as a description caption by providing context for video or audio element.
 - Include all photo and video descriptions.
 - Provide a link back to the organization webpage that hosts an accessible version of that photo or video.
 - Rather than uploading videos directly to each platform, upload videos to YouTube and enable closed captions.
 - Post YouTube video links to other platforms as status updates. This will ensure that visitors will be taken to the accessible version on YouTube.

PEOPLE WHO HAVE HEARING OR SPEECH DISABILITIES

- Telecommunication Relay Service (telephone service that allows people with hearing or speech disabilities to place and receive telephone calls)
- Text-to-Voice TTY-based TRS
- Voice Carry Over (VCO)
- Hearing Carry Over (HCO)
- Speech-to-Speech (STS)
- Shared Non-English Language Relay Services
- Captioned Telephone Service (CTS)

PEOPLE WHO ARE BLIND OR HAVE LOW VISION

- Convert written documents to audio conversion
 - Record materials into an audio file or onto a CD or DVD
- Consider document text for screen readers use
- Convert paper documents into Braille
 - Compose the information in a Microsoft Word-accessible document
 - Import your document into Braille translation software
 - Use Braille embosser

WEBSITE CONSIDERATIONS

- Ensure webpages have appropriate metadata descriptions (i.e., text equivalent to every image).
- Always provide documents in an alternative text-based format (HTML or RTF (Rich Text Format)).
- Websites should be designed with the color and font sizes set in users’ web browsers and operating systems.
- Users with low vision must specify the text and background colors, as well as the font.

— END OF TASK CHECKLIST —

Defining, Locating, Communicating with Vulnerable Populations

The following guidance describes how agencies can identify and develop trusted partnerships with traditionally hard-to-reach populations and their service providers. The process and explanation are adapted and summarized from the [*Public Health Workbook: To Define, Locate, and Reach Special, Vulnerable, and At-risk Populations in an Emergency*](#), published by the Department of Health and Human Services, Centers for Disease Control and Prevention's Office of Public Health Preparedness and Response and from the suggestions of Bay Area government agencies, advocates, and community-based organizations. For greater detail on the processes and guidance in this section, please refer to the CDC workbook.

This guidance describes broad categories of traditionally hard-to-reach populations and outlines a process for connecting with those populations. These processes and guidance will support communications before, during, and after air quality incidents or for any type of emergency.

The goal of emergency health communication is to rapidly get the right information to the entire population so that they are able to make the right choices for their health and safety. To do this, a community must know what subgroups make up its population, where the people in these groups live and work, and how they best receive information.

One lesson learned from events since 2001, especially Hurricane Katrina in 2005, is that traditional methods of communicating health and emergency information often fall short of the goal of reaching everyone in a community.

Trust plays a critical role in reaching hard-to-reach populations. Reaching people through trusted channels has shown to be much more effective than through mainstream channels. For some people, trusted information comes more readily from within their communities than from external sources.

If you follow the process outlined in this document, you will begin to develop a Community Outreach Information Network (COIN)—a grassroots network of people and trusted leaders who can help with emergency response planning and delivering information to hard-to-reach populations in emergencies.

Building a strong network of individuals who are invested in their community's well-being, who are prepared and willing to help, and who have the ability to respond in an emergency is just the start. You must also include network members in your emergency preparedness planning, test the capacity of your COIN to disseminate information through preparedness exercises, and make changes to your preparedness plans based on the evaluation of those exercises.

CATEGORIES OF VULNERABLE POPULATIONS

As planners and communities embark on the process of defining, locating, and reaching their hard-to-reach populations, there are advantages to beginning with very broad categories. Working in broad categories can be an effective and manageable starting point. The key advantage of this approach is that it allows you to examine the nature of the vulnerability that might put someone at higher risk in an emergency.

Five broad, descriptive categories will help you identify people who are at risk:

- **Economic disadvantage** can significantly affect an individual's ability to follow a public health directive if the individual does not have the resources or means to do what is being asked.
 - Living at or under the poverty line, including those who have been in poverty for at least two generations
 - Experiencing homelessness
 - Medicaid recipients
 - Working poor with limited resources, often working multiple jobs
 - Single parents and sole caregivers
 - Low-wage workers in multiple jobs
 - Ethnic and racial minorities
- **Language and literacy** - To ensure that everyone can understand the information and follow public health directives, information must be culturally and linguistically appropriate and accessible to everyone.
 - LEP (limited English proficiency) or low literacy
 - Spanish
 - Russian
 - Asian and Pacific Island languages (Chinese, Korean, Japanese, Vietnamese, Hmong, Khmer, Lao, Thai, Tagalog, Dravidian, Polynesian and Micronesian languages)
 - Other Indo-European languages (Germanic, Scandinavian, Slavic, French, Italian), Indic, Celtic, Baltic, Iranian, and Greek languages).
 - All other languages (Uralic and Semitic languages as well as indigenous languages of the Americas)
 - Sign Languages/American Sign Language (ASL)
 - Limited language proficiency (read, write) in native language
 - Foreign visitors
 - Undocumented immigrants
 - Immigrants/refugees
- **Medical issues and disability** (physical, mental, cognitive, or sensory)
 - Blind and visually impaired
 - Deaf and hard of hearing
 - Developmentally disabled
 - Mobility impaired
 - Medically dependent (life support/medical equipment)
 - Chronic disease/infirm
 - Diagnosed with HIV/AIDS
 - Immunocompromised
 - Drug and/or alcohol dependent (perhaps not in treatment)
 - Diagnosed with mental illness and substance abuse
 - Mentally ill or having brain disorders/injuries
 - Chronic pain

- Non-hospitalized patients:
 - Require renal dialysis
 - Require supplemental oxygen
 - Require daily medication (e.g., insulin, antihypertensive agents, narcotics, antipsychotics)
 - Receiving chemotherapy for cancer treatment
 - Clinically depressed individuals who may be unable to follow directions
 - Stroke patients with limited mobility and additional care requirements
- Pregnant individuals
- People recuperating at home from acute injury (e.g., broken bones, recent surgery, back injury, burns)
- Individuals who do not identify as visually impaired, but would be impaired if they were to lose their glasses during an emergency.
- **Isolation** (cultural, geographic, or social) - There are many ways in which people might be considered isolated, including:
 - Elderly, particularly those who are largely home-bound and have limited movement.
 - Rural populations in sparsely populated communities, where individuals often depend on satellite television and canned commercial radio feeds that do not always communicate local emergency information
 - Urban areas where people can be isolated because of language, lack of education, cultural practices, chronic health problems, fear, lack of transportation or access to public transit systems, unemployment, and homelessness.
 - Temporary residents, such as people living on a military base, students, tourists, or seasonal farm workers,
 - Undocumented immigrants, including people who might consciously avoid interaction with social and public agencies
 - Single parents/caregivers who may not be able to share their responsibilities to care for those who are dependent on them.
 - Religious and cultural practices may reduce the likelihood of certain groups receiving communications, for example, if they do not have access to a television or radio.
- **Age** - Chronic health problems, limited mobility, blindness, deafness, social isolation, fear, and reduced income put older adults at an increased risk during an emergency. Infants and children under the age of 18 can also be at-risk, particularly if they are separated from their parents or guardians.
 - Elderly with limited strength, but are not disabled
 - Infants
 - Mothers with newborns
 - Teens, school-age children, latchkey children
 - Families with children who have health care needs
 - Grandparents who are guardians of grandchildren

Many individuals do not typically fall neatly into one category or population group or they might fall into more than one. In some cases, an individual might not fall into one of these categories but could have a family member who does.

CONNECTING WITH VULNERABLE POPULATIONS

Every community's goal is to reach all individuals who live, work, or travel within its boundaries with emergency information. To ensure that happens regardless of barriers, officials must first know who is in their communities at any given time, and how best to reach them with messages that will motivate action.

The process to accomplish this mission is divided into three phases: **define, locate, and reach**. Community organizations, such as community-based organizations, faith-based organizations, and local service providers should be involved in emergency preparedness planning from the beginning and engaged at every step of the way.

Define

Defining hard-to-reach populations will require investigation to build an understanding of the unique demographics represented in your community. You will need to learn about the spoken languages, cultural practices, belief systems, and the physical and mental limitations of the residents.

Step 1 – Collect Population Information and Data

Begin by investigating and analyzing available data gathered by others to shed light on different population groups in your community. Some resources that are available to help you with creating this snapshot include:

- U.S. Census data
- Information provided by state/local health departments
- Snapshots of Data for Communities Nationwide (SNAPS)
- Chambers of Commerce
- United Way
- Public Health Foundation's database on counties, the National Public Health Performance Standards Program (NPHPSP)

Step 2 – Estimate Number of People in Hard-to-Reach Populations in Your Community

Once you have collected information, establish baseline criteria to define groups within your community. As you consider the data you are gathering, identify the categories that are significant to your community. You can then synthesize the data into a brief report to estimate the number of people in different population segments within your community. This will help you gain a greater understanding of the scope of the outreach required.

Step 3 – Identify Overarching Organizations/Agencies and Key Contacts to Help You

Many organizations and agencies in communities across the country have extensive knowledge about the needs of various hard-to-reach populations. Overarching organizations that fund or partner with smaller, direct service providers are often the best place to start engaging your community. In many areas, this would be an organization such as the United Way. These organizations provide a direct link to community-based organizations and faith-based organizations that serve many different populations. Public libraries can also serve as excellent resources with information about community service providers, particularly in very small communities that do not have a community foundation or local United Way. As you identify these organizations, determine the most appropriate representative with whom you can work and the best approach (personal appointment, phone, mail, e-mail, etc.) to reach them.

Step 4 – Facilitate Discussions with Key Contacts

Make an appointment to meet the key contacts at the overarching organizations and agencies to introduce yourself and explain the critical role this organization will play in the process of reaching hard-to-reach populations during an emergency.

Offer reciprocal assistance to the organizations and agencies that you ask for help. You might be able to help these potential partners by offering to share information or resources. Remember that they may also have concerns about spreading resources too thin.

Arrange a time to meet with several key contacts at a location most convenient for the attendees. If time and travel constraints make face-to-face meetings impractical, consider alternative means of getting together, such as a conference call. Regardless of meeting format, your role will be to facilitate the discussions and brainstorming on topics such as:

- Sharing the results of data collection to identify hard-to-reach populations
- Long-term goals and objectives
- Other people who should be part of this discussion and their contact information
- How partner organizations might contribute to reaching hard-to-reach populations with critical information in an air quality incident or other emergency

Step 5 – Stay in Touch

Sustaining community engagement is as important as building relationships. It is important to stay in touch—not only to update your partners on your activities, but also to stay updated on staff turnover and transitions in partner organizations. It is important to communicate with your contacts on a regular basis and build in a mechanism to maintain updated contact information.

Agencies can use **Table 1** on the next page to maintain a list of contacts at each community partner organization.

PARTNER CONTACT LIST

Table 1: Community Network Contact List

PARTNER CONTACT LIST			
PARTNER CONTACT INFO	TYPES OF RESOURCES/SERVICES	DATE OF CONTACT/COMMITMENT	NOTES
Organization:			
Name:			
Title:			
Cell:			
Email:			
Organization:			
Name:			
Title:			
Cell:			
Email:			
Organization:			
Name:			
Title:			
Cell:			
Email:			
Organization:			
Name:			
Title:			
Cell:			
Email:			

Consider providing regular, brief updates on the progress of your work through e-mail, mail, or telephone calls, or via a newsletter.

LOCATING HARD-TO-REACH POPULATIONS

In most jurisdictions, a good approach to locating hard-to-reach populations is to combine geographic information system (GIS) technology with information acquired through community collaboration, and networking in the data collection process.

In this phase, you will map gathering places and trusted sources within your community. Developing this system will help you get a visual representation of the network you are developing. Eventually this will allow you to identify gaps in coverage.

Step 1 – Assess Existing Processes to Locate Hard-to-Reach populations

You probably already know who some hard-to-reach populations are and how to reach them because they are enrolled in programs and receive services from your agency. State and local public health departments, for example, know women who are connected through the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and generally know how to get in touch with them; or they know how to contact daycare providers who can help locate parents and guardians in an emergency.

To avoid duplicating efforts, you might find it helpful to conduct an inventory of local agencies' current activities that include techniques and abilities to locate people. Interview others in your jurisdiction about the successes and barriers they have experienced in locating people who use their services. You might want to ask questions such as:

- Who are the hard-to-reach populations served by the department?
- Where are their gathering places?
- What is the department's process for locating these people?
- What data are available to use in the mapping efforts?
- How do hard-to-reach populations receive information from the department?
- Who are their trusted sources?
- What other community and religious organizations serve these same groups?
- What other links do these hard to reach population groups have to the community?
- What privacy rules could impact efforts to locate hard to reach population groups?

This type of intra-departmental assessment can provide locating strategies as well as data that can be used in the mapping process. You might also consider asking your community partners to gather this information from their networks.

Step 2 – Choose Digital Mapping or Alternate Methods

GIS captures and stores data which are then displayed on a map for analysis. These systems can include a wide variety of information including geographic, social, political, environmental, and demographic data.

LOCATE AND MAP GATHERING PLACES FOR IDENTIFIED HARD-TO-REACH POPULATIONS

Collaborate with your partners to find the places where your identified populations gather. This will help you to locate individuals and groups within these populations. People who share important aspects of their lives gravitate socially and geographically to traditional gathering places or venues where they feel comfortable. Obvious examples are soup kitchens for populations experiencing homelessness, or day-worker sites that attract undocumented immigrants.

Step 1 – Identify and Map Trusted Sources

People are more likely to receive information and act on it when the message comes from a trusted source they view as credible. Some examples of trusted sources or non-traditional leaders in your community may be the PTA president, local pastor, and respected schoolteacher.

Spokespersons in authority are not always perceived as the credible, trusted sources we hope they will be in delivering information to the general public and might even be less credible for the populations you are trying to reach. This lack of credibility underscores why it is so important to build your network of trusted spokespersons with whom your hard-to-reach populations will identify and trust. These individuals might not serve in an official capacity, or be known to emergency officials yet, but they can serve as a channel of information and become a cadre of leaders in emergencies. The same qualities that make them leaders in their communities often make them willing to serve as a liaison between emergency professionals and hard-to-reach populations before and during an emergency.

Your network might also include members of the media, especially those who have closer connections to hard-to-reach populations, such as the local ethnic media outlets. These media outlets can be a very powerful voice and provide a close connection to the populations they serve. Another trusted source might be the director of a multicultural community center or a community health worker (CHW). In addition to having the confidence of the people the center serves, this person might also have a good network already in place to reach community members through an e-mail listserv, telephone tree, mailing list, or simple word of mouth.

Include trusted sources in meetings and planning sessions with other community organizations and service providers. Add them to your database, capturing their contact information and how they prefer to be reached. As you build your network of trusted sources, map their locations in your community so you can begin to get a visual representation of the network you are developing.

Step 2 – Facilitate Discussions with Representatives from Community Organizations

Talking with representatives of community organizations that serve hard-to-reach populations, including those that address human service needs as well as community needs, is essential to determine which organizations can help you the most.

Ask community collaborators to explain:

- The populations they serve
- How they distribute and receive information
- Their classification as an overarching organization or a direct service provider
- What their potential outreach could be – the number of organizations and/or individuals this collaborator or partner could reach with ordinary and crisis communications

Step 3 – Expand Your Network

As you expand your list of organizations and contacts, the following tips might be helpful:

- Many of these organizations are listed in telephone directories or can be found online through a keyword search on the Internet, using words such as “disability,” “blind,” “deaf,” “developmental disability,” and “mental health.”
- People might self-select into groups based on their particular disability or need:
 - University students who have mobility impairments often form organizations that provide support and advocacy.
 - People who belong to various cultural and ethnic groups might form close bonds with other individuals in the same groups.
 - People who speak a common language, share a common country of origin, or a common religion might join together in informal ways. The church, the mosque, or other houses of worship are often the places where community needs, political opinions, and employment options are discussed. In some ethnic populations, community storefronts are the gathering and information centers.
 - These groups might not show up on an official list as they do not have national charters or oversight, and are usually informal and private, often without scheduled meetings or agendas. Leaders of these groups, whether they are the matriarch of the family, community elder, religious leader, or the club president, can provide pertinent information about the groups they represent. These leaders also serve as valuable links in the process of building a network of collaborators and sustaining community engagement.
- You might locate these affinity groups by asking the representatives of the overarching organizations if they are aware of any of these types of unofficial groups in your community. Be sure to ask for names and best ways to contact the leaders.
- If there is a college or university in your area, you can contact the student affairs department to ask for information. Often a person belonging to the group will be the best source of information.

As you continue to build and develop the network, maintaining the trust and anticipating possible concerns of your members will ensure the future success of your COIN.

Develop policies and procedures for the information you gather and maintain confidentiality of contact information for your COIN members. As you continue building and updating your database, the information you collect will likely become very attractive to other partners (including federal and state agencies), and you might get requests to share contact information for your network members.

The success of your network is built upon trust. Demonstrate your commitment to COIN members by having clear policies for how contact information will be used and by clearly defining confidentiality issues at the start of your relationship with each member. As keeper of this important contact information, decide ahead of time if you would be willing to disseminate messages on behalf of other partners during normal, non-emergency times, and include policies and procedures for non-emergency communications.

Expand and update your database. You will want to continue expanding the database you created in the Define phase by adding contact information for community collaborators and program partners. As the work to locate and reach hard-to-reach populations continues over time, members of your COIN might change, or their contact information might change. Keeping your database current will be extremely important as your work moves forward.

Reach

Step 1 – Survey Partners to Learn About Their Successes and Failures

The best way to learn what works well is to ask people who are already in the business of reaching hard-to-reach populations. You can conduct a simple interview or survey with people in and outside your agency who routinely communicate with members of hard-to-reach populations. This might include professionals such as first responders (fire, police, and emergency medical services), people who are in charge of programs such as Meals on Wheels, tribal elders, instructors in English-as-a-second-language classes, ethnic media representatives, and health care practitioners at clinics. You will be able to use this information to start planning appropriate ways to augment your existing communication plan to include hard to reach population outreach.

A written survey, whether administered in-person or through the Internet, does not have the qualitative capability of assessing perceptions, attitudes, and behaviors through interpersonal communication and interaction. However, it can provide statistical data that reveal recurring themes, best communication methods and practices, media outlets used most often, and information sources that are trusted by the populations you are trying to reach.

Step 2 – Conduct Focus Groups or Community Roundtables

Focus groups and community roundtables allow you to talk directly with members of the populations you want to reach. Your community partners can help you in establishing and facilitating these focus groups. Their existing relationships could be beneficial to you as you recruit participants, pose appropriate questions, and gather information. This information can give you a better understanding of your populations by delving into topics such as:

- Barriers to receiving information based on past experiences
- Preferred methods of communication
- Key spokespersons and trusted sources for public health messages
- Media usage/habits
- Primary languages spoken
- Developing culturally competent messages

This information can be obtained by asking leading questions, such as:

- In the past, what types of barriers have kept you from receiving important information?
- What sources do you usually use to get news and other information?
- Whom do you trust to give you information about health care and other health-related issues?
- When there is an emergency, how do you get information?
- If there were a public health emergency, where would you go for information?
- How do you prefer information to be communicated (e.g., in what language, verbal, or written)?

Before you conduct focus groups or community roundtables, check with your community partners and within your own agency to determine if these have already been done. Also consider the best ways to access your intended population. For example, if your target demographic is the elderly, conducting a focus group might not be effective because elderly people might have transportation or mobility issues that prohibit them from attending a focus group.

If you plan focus groups for your intended population, schedule them at convenient times and at locations such as multi-cultural community centers, churches, schools, or senior centers that are easily accessible. You might need to arrange for interpreter services, depending on the specific population you are inviting.

Step 3 – Analyze Data

As you review your findings from the define and locate phases of this process, along with your recent focus groups and surveys, you might see common characteristics and needs that will enable you to create a list of key findings for each population. Look for common themes and emerging patterns that relate to reaching hard-to-reach populations with messages they understand and to which they can respond.

Your findings might show that some cultural groups are less trustful of official government messages than the population as a whole and that they desire communication materials that are culturally relevant to their group. Community-based organizations (CBOs) and Faith-based Organizations (FBOs) can serve an important role in reinforcing and validating information for these groups who might receive information through mainstream channels first. The messages disseminated through these trusted sources will be consistent and reinforce the messages through the mainstream channels.

Step 4 – Collaborate with Community Organizations

Your assessment provides the basis for understanding the cultural and linguistic characteristics of your community and the communication barriers faced by hard-to-reach populations. Such findings will serve as the basis for developing communication strategies that overcome communication barriers and convey information that is understandable and relevant to members of the diverse populations.

Community collaborators who have become a part of your network will bring their experiences in implementing communication strategies to the process. Ask your collaborators to share their strategies. In an emergency, public information must meet the needs of hard-to-reach populations to be effective. Some communication tactics include:

- Keep messages simple and concise by using short sentences and plain language to allow for easy translation of materials (consider using sixth grade reading level or lower).
- Provide written materials in bilingual or multi-lingual form.
- Include visual aids such as pictures and maps to reinforce key messages.
- Repeat key information.
- Include directions and phone numbers.
- Use large fonts.
- Identify preferred communication methods (face-to-face, door-to-door, word-of-mouth), and develop messages accordingly.
- Identify preferred media through which messages are delivered. Is it the local newspaper, ethnic radio station, or the church pastor?

As part of your ongoing efforts to strengthen your local community's capacity to respond to a public health emergency, you can conduct workshops with representatives of hard-to-reach populations and community leaders who are already committed to participating in your agency's outreach work. The workshops:

- Help sustain relationships with members of your network.
- Provide an avenue for them to participate in decisions and actions that directly affect their communities and reinforce their sense of dignity.
- Increase their awareness of cultural and social diversity in your jurisdiction.
- Demonstrate your long-term commitment to the network.

Depending on the size of your jurisdiction, you might choose to have a series of workshops in different locations. Activities at these sessions might include:

- Viewing a basic “train-the-trainer” video on disaster-related communication, the leaders’ roles and responses, and techniques for conveying information quickly and accurately to members of the intended populations.
- Reviewing materials produced specifically for hard to reach population groups.
- Gathering input on how existing materials can be adapted or new materials developed to better meet the needs of various populations.

Collaborate with community organizations or bring members to the planning table to address the needs of hard-to-reach populations in your agency’s all-hazards emergency preparedness plan by:

- Asking them to identify the information needs of their community.
- Asking them for ideas about how best to reach them or address their needs in an emergency.
- Inviting them to review and make suggestions to the public health emergency preparedness plan that address specific strategies to use with hard-to-reach populations.
- Working together to include this information in your preparedness plans and testing the plans in your preparedness exercises.
- Inviting them to participate in your exercises and including them in post-exercise evaluations and after-action reporting activities.
- Ensuring you complete the process by updating your preparedness plans based on what you learn from your exercises.

Step 5 – Identify Appropriate, Trusted Messengers

Hard-to-reach populations might respond differently to a message depending on the messenger. For many groups, the person delivering the message is often better received if he or she is from a similar racial or ethnic group or is in a similar situation as the intended audience. Doors are more likely to open for peers who deliver health care messages to their neighbors than for someone from a different background who lives outside the neighborhood. Even when members of a group have access to the mainstream media, they might be more responsive (and therefore more willing to follow directions) if someone they know, or trust delivers the message. For instance, elderly persons might watch television and listen to the radio, but might be more easily persuaded to take action if encouraged to do so by family or caregivers. For non-English speakers, a family member or representative of their faith community might have the most influence in delivering information.

People to consider as messengers include:

- ***Trusted persons within hard-to-reach populations.*** Such persons are essential conduits of information to and from those groups. They must be identified, invited to the process, and their needs and concerns met so they are willing to be active participants in the emergency preparedness process prior to a public health emergency. The network you have been building throughout this process contains names of the community leaders considered credible by specific hard-to-reach populations.
- ***Religious leaders, barbers, and hair stylists.*** Such persons can be trusted sources of information about health care and the community.
- ***Community and neighborhood leaders who are perceived as credible.*** Such persons are more likely to be believed by hard-to-reach populations than official government spokespersons.
- ***Reporters, editors, announcers, and news directors in media outlets that serve your community.*** Such persons can be considered traditional messengers that will have a broad reach into most hard-to-

reach populations. Remember to include the ethnic media outlets as methods to disseminate your messages.

- ***The matriarch of a family.*** For many populations, the matriarch is the most respected and trusted source of information, while in other cultural groups, elders are the respected and trusted sources of information. As you meet with community members to build your network, ask representatives from the different groups whom they consider to be the best person to disseminate messages to their community. Avoid making assumptions about whom the trusted person might be based upon your interactions with other groups.

Enhance your communication plan to communicate with hard-to-reach populations. Using key findings from your surveys, focus groups, and other searches, along with the information in your database, you can enhance your existing communication plan to include hard to reach population groups and to designate the appropriate, trusted spokespersons. Include members of the hard-to-reach populations in your planning sessions. Encourage them to provide input so that your communication plan is feasible and appropriate.

Your plan could be a supplement to or incorporated into your organization's existing crisis and emergency risk communication plan. Elements to address in your communication plan include:

- Identifying the roles played by state, local, and tribal officials and staff, public agencies and service providers, CBOs, and members of your community network. This element is often overlooked in communication plans and can lead to confusion, duplication of effort, and turf issues.
- Defining your hard to reach population groups.
- Finding these intended audiences and their gathering places.
- Developing strategies to describe your approach to achieve your goals and objectives around reaching hard-to-reach populations.
- Developing specific tools and tactics to address gaps.

PRINCIPLES OF COMMUNITY ENGAGEMENT

Principles of Community Engagement (CDC, 1997) represents the first time the relevant theory and practical experience of community engagement has been synthesized and presented as practical principles for this important work. It defines key concepts and insights from the literature that support and influence the activities of community engagement. This publication, available online at www.cdc.gov/phppo/pce, sets the standard and continues to be used nationally and internationally.

Principles of Community Engagement provide science based and practical guidelines for engaging the public in community decision-making and action for health promotion, health protection, and disease prevention. These guidelines can help public health professionals and community leaders improve communication, promote common understanding, and strengthen coordination, collaboration, and partnership efforts among themselves and community members and institutions.

Key principles forming the core of the document hold true across public health disciplines regardless of the initiating organizations:

- Be clear about the purposes or goals of the engagement effort and the populations and/or communities you want to engage.
- Become knowledgeable about the community in terms of its economic conditions, political structures, norms and values, demographic trends, history, and experience with engagement efforts. Learn about the community's perceptions of those initiating the engagement activities.

- Go into the community, establish relationships, build trust, work with the formal and informal leadership, and seek commitment from community organizations and leaders to create processes for mobilizing the community.
- Remember and accept that community self-determination is the responsibility and right of all people who comprise a community. You should not assume that you can bestow on a community the power to act in its own self-interest.
- Partnering with the community is necessary to create change and improve health.
- You must recognize and respect community diversity. Awareness of the various cultures of a community and other factors of diversity must be paramount in designing and implementing community engagement approaches. (Engaging these diverse populations will require the use of multiple engagement strategies).
- Community engagement can only be sustained by identifying and mobilizing community assets, and by developing capacities and resources for community decisions and action.
- You must be prepared to release control of actions or interventions to the community and be flexible enough to meet the changing needs of the community.

Community collaboration requires long-term commitment on the part of the engaging organization and its partners. To earn public trust and the trust of your partners:

- **Be clear.** People want direction.
- **Be concise.** Too much information is a barrier to understanding.
- **Be correct.** Check facts. Update frequently.
- **Be connected.** Know the people to reach in key communities and build relationships with them.
- **Be confident—but don't confuse confidence with control.** People trust the confidence shown by real leaders, not the control tactics of authority figures.
- **Be transparent.** Make your goals, values and priorities evident.
- **Be a role model.** Practice these principles as a model for your partners.

DEVELOPING AND TESTING MESSAGES FOR CULTURAL AND LINGUISTIC COMPETENCE

Remember, your perception of the messages you develop might not be the same as your audience's perception. While you want them to understand and respond to the information you provide, they are first listening to hear that 1) you respect them, 2) their needs have been considered, and 3) they are included in emergency plans.

Linguistic and cultural competence means understanding the most effective ways to convey information to members of diverse populations. Often the main form of communicating public health information is through written materials, such as brochures, newsletters, and flyers. If you are trying to reach a population or community with limited English proficiency, then materials might need to be translated into that community's native language or presented visually in a picture format. Also consider that for those who are not literate in their native language, these written materials will not be effective, and recorded audio messages might be more appropriate.

Consider the cultural relevancy of photographs, images, and other visual features when creating messages and materials. You might need to consider the reading and comprehension level of your intended audience and use simple sentences, plain language, and avoid technical and medical terms. Most successful communications to the general public are produced at a sixth grade reading level. Studies show that even

sophisticated readers are subjected to so much information in a day that they now require this level of simplicity for full comprehension, particularly during emergencies.

After you have worked with the community to develop sample messages and materials, you can conduct a series of focus groups with members of different hard-to-reach populations. Ask their opinion on the content, the presentation, whether the materials are sensitive toward their needs and culture, and if the message increases their awareness, changes their opinion and motivates them to change. Work with them to make appropriate changes to these materials so that they meet these goals.

CULTURALLY CAPABLE: A MNEMONIC FOR DEVELOPING CULTURALLY CAPABLE MATERIALS

You can pose these questions to focus group members to ensure that the materials you are testing are appropriate for the audiences you are trying to reach.

Colors: Certain colors may convey different meanings for different groups, religions, cultures and communities.

- Do the colors in the document have any cultural significance (positive or negative) for you or members of your community?
- Do you feel that the colors in this document should be changed?

Art: Certain images may or may not be appropriate for the target audience. Ideally, images should be used that are reflective of the readers.

- Are the pictures and artwork representative of your community?
- What message does this art/picture/logo send to you?

Paper: Some groups may have difficulty reading information on certain colors and holding certain paper types. Some paper sizes and binding formats are also more or less common for specific groups.

- Is the paper easy to handle/read?
- Is the paper size appropriate for your community?

Access: Materials should be placed in locations that can be easily accessed, and at physical distribution points and height placement that will enable easy access for all members of a community.

- Where should we place these materials for ease of access?
- Should we make these materials available electronically, and if so, what is the best way to distribute them?

Buy-In: It may be helpful to have multiple members of the community review the materials to create buy-in and awareness. If the reviewers grant permission to be acknowledged on a final version of the material that has been reviewed by them, their status within the community may in turn increase the level of buy-in from the community at large.

- Would other individuals/organizations be willing to review the materials?
- May we print an acknowledgement directly on the final version of the material, to enable other individuals from your community to see that you have supported us?

Language: Words should be easy to read and understand, and the content should be written in a way that is most appropriate for the target community.

- Are the words easy to read, in a font size that the majority of readers will be able to read?
- Is the content easy to understand, appropriate for the community being served and written at a reading level that will be understood by the majority of readers?

Evaluation: To make a final assessment regarding materials, it is important to understand the impact of the changes proposed by the reviewers.

- What would be the consequences of the material being distributed “as is”?
- Would you be willing to evaluate the material again after changes have been implemented?

PLANNING FOR LANGUAGE INTERPRETATION/TRANSLATION SERVICES

About Translation

In popular usage, the terms “translator” and “translation” are frequently used for conversion of either oral or written communications. Within the language professions, translation is distinguished from interpreting according to whether the message is produced orally or in writing.

Translation: The conversion of a written text into a corresponding written text in a different language.

Interpreting: The process of understanding and analyzing a spoken or signed message and re-expressing that message faithfully, accurately, and objectively in another language, taking the cultural and social context into account.

Translation Services Professional translation services are the first choice when converting any important written information into another language. To ensure quality, ask if the provider uses certified and/or accredited translators, and if the provider has insurance to protect against omissions and errors. Experienced translation providers often offer “translation memory” or “terminology management” services that reduce costs by recording recurring terms and phrases in a database and leveraging these over time, so that you do not have to pay multiple times for the same text to be translated in different documents. This can significantly decrease costs, especially when departments pool resources and decide to use the same text with slight variations through the same translation provider.

Checklist: Things to Look for in a Translation Provider

- Uses accredited/certified translators.
- Employs a quality process flow that includes a separate editor and proofreader.
- Has desktop publishing capabilities (to translate text on brochures directly in native file formats).
- Can provide translation of websites.
- Offers cultural adaptation as well as linguistic adaptation of content, images, etc.
- Is willing to provide samples of similar work and/or testimonial.
- Utilizes translation memory or terminology management services.
- Has an insurance policy that covers errors and omissions.
- Can assist with other language needs, such as multilingual voice recording, for non-written communication needs.

Delivery Channels

Channels for disseminating and delivering the messages are varied and your selection of which ones to use will depend on availability, access, and how well they reach your different populations. Some methods to consider include:

- Television, in particular, is considered the preferred medium among all populations for receiving emergency information such as weather alerts and news about disease outbreaks and prevention.
- The ethnic media community is usually underestimated. Few communication plans emphasize ethnic media, although one in four adults use ethnic media daily. Even when members of an intended audience have access to the mainstream media, they are far more responsive to messages delivered by a person from a similar cultural or ethnic group. Most organizational communication plans do not include in-depth use of ethnic media.
- Internet access is an important source of information for many in America. Even people experiencing homelessness have access at public libraries and regularly use the Internet for information. Many state government websites have been translated and are available in languages other than English. For people who are deaf or hard of hearing, electronic messaging is an invaluable communication tool. Blogging and other types of online bulletin boards with direct posting to an electronic network community at large provide additional dissemination of underutilized possibilities. Also consider podcasting as an information dissemination channel for those who are visually impaired or those who prefer to listen to, rather than read, information.
- The use of cell phone/text messaging technology has dramatically increased. Text messaging is a main access point for young people and is a resource for the people in deaf and hard of hearing communities. Newer cell phones also allow for Internet access.
- Reverse 911 is a mechanized phone system technology that can dial and deliver a pre-recorded message to homes with phones in a particular jurisdiction. Some form of it is currently used in many communities to give neighborhood announcements and crime alerts. It is not available in all areas of the country.
- Telephone calling trees are effective ways to reach remote rural populations. Often, these trees are self-initiated by residents of these areas. During blizzards, for example, rural neighbors will call or use ham radios to check on each other.
- 2-1-1 is an easy to remember telephone number that, where available, is answered by live operators and referral specialists who can connect people with important community services and volunteer opportunities. As the public becomes more and more familiar with using 2-1-1, they might think to call this number in an emergency. Both telephone 2-1-1 and the 2-1-1 website www.211.org might be available to assist with providing public health information, tailored by location for your community. Services that are offered through 2-1-1 will vary from community to community, so contact your local 2-1-1 to see what capabilities are available in your jurisdiction.

WHEN MAINSTREAM MEDIA IS NOT AN OPTION

Channels for delivering the messages are varied and will depend on availability, access, and how well they reach your populations. In certain emergencies, a loss of power will severely limit options. Delivery channels, when the electricity has not been affected or limited, can include:

- Emergency Alert System/s (EAS)
- Television/radio/newspaper/community bloggers
- Public service announcements (radio/television)
- Ethnic media
- Podcast
- Agency websites
- Agency social media platforms
- Satellite radio
- Community networks (e.g., Nextdoor)
- National Oceanic and Atmospheric Administration Weather Radio All Hazards (NWR)
- 2-1-1 or 3-1-1 website

Delivery channels during a blackout or when electricity is not available to all areas could include:

- Emergency Alert System/s (e.g., Nixle, Everbridge, Code Red, etc.)
- Cell phone/text messaging
- Battery-powered radio
- Reverse 911
- Battery-powered walkie talkies
- 2-1-1 telephone
- Ham radio networks
- Telephone calling trees/networks (using landline phones that do not require electricity)
 - Plans for message delivery should be set up in advance of a disaster so that a telephone calling tree is available when disaster strikes. Other tactics for reaching hard-to-reach populations include:
- Door-to-door information distribution including door hangers and pamphlets
- Information distribution to a pre-determined emergency information point (churches, libraries, grocery stores, post offices, schools, restaurants, markets)
- Peer ambassadors designated to help neighbors receive information
- Police alerts
- Tools for reaching hard-to-reach populations include:
 - Picture books
 - Braille and alternative language handouts
 - Closed-captioned videos
 - Audiotapes

FOCUS GROUP, INTERVIEW, OR ROUNDTABLE DISCUSSION TEMPLATE

The purpose of a focus group is to reveal the in-depth attitudes, perceptions, and behaviors of hard-to-reach populations in your community.

This information can be used to augment the existing emergency communication plans. In-depth information can be obtained by asking leading questions such as:

- What sources do you usually use to get news and other information?
- Who gives you the most reliable information about health care and other health-related issues?
- What forms of communication are most effective (e.g., door-to-door, face-to-face, or written materials)?
- When there is an emergency, how do you get information?
- If there were a public health emergency, where would you go for information?
- How do you prefer information to be communicated to you?
- In the past, what has kept you from receiving important information?

TIPS TO ENSURE ACCESSIBLE COMMUNICATIONS

It is imperative that public agencies ensure documents are accessible to all audiences.

The California Department of Rehabilitation provides a summary of accessibility requirements and resources:

- Information and Electronic Technology: <https://www.dor.ca.gov/Home/GpeInfoandElectronicTech>
- Laws for Public Entities: <https://www.dor.ca.gov/Home/GovernmentPublicEntities>
- Accessibility Laws and Regulations: <https://www.dor.ca.gov/Home/Laws>
- Disability Laws and Regulations: <https://www.dor.ca.gov/Home/DisabilityLawsandRegulations>

The [U.S. Department of Health and Human Services](https://www.hhs.gov/) (HHS) also offers a wide variety of tools to help in the preparation of Section 508-compliant, electronic documents.

- Making Files Accessible (includes PDFs, HTML, Microsoft Office formats, audio, video and email: <https://www.hhs.gov/web/section-508/making-files-accessible/index.html>)

Further details on federal law can be found here:

- Americans with Disabilities Act of 1990, As Amended: <https://www.ada.gov/pubs/ada.htm>
- United States Access Board: Information and Communication Technology (ICT) Final Standards and Guidelines: <https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-ict-refresh/final-rule>

Digital Communications

(Source: Rehabilitation Engineering Research Center for Wireless Technologies, Atlanta, Georgia)

1. Develop or provide accessible formats to disseminate alerts and information.

Emergency messaging should be disseminated in a variety of formats (text, audio, video, image) to reach the whole community. Multiple methods of information dissemination should be used (broadcast, wireless, Internet, social media, apps) to a variety of devices (cell phones, tablet, TVs, radios).

2. Use software/hardware solutions and interoperable networks for (1) receiving alert feeds from multiple sources and (2) transitioning to a next generation 9-1-1 system.

Emergency alerts can be received as text messages, video, voicemails and/or e-mails in accessible formats; emergency managers should adopt wireless emergency alerts (WEAs) as part of their communications plan; Public Safety Answering Points (PSAPs) should upgrade call centers to receive text and video calls for assistance.

DOCUMENT PREPARATION (PRINT AND DIGITAL)

(Source: This content has been excerpted directly from [Web Content Accessibility Guidelines 2.0](#))

Developed by the [Worldwide Web Consortium](#) (W3C), Web Content Accessibility Guidelines (WCAG) 2.0 covers a wide range of recommendations for making web content more accessible. Following these guidelines will make content accessible to a wider range of people with access and functional needs and all audiences in general.

According to W3C, when information technology and communications are accessible, they are:

- Perceivable – users can perceive information and user interface components,
- Operable – user interface components and navigation must be operable,
- Understandable - information and operation of the user interface must be understandable,
- Robust – content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.

1. Use system fonts.

- Avoid custom fonts, because assistive technology often does not read them properly.

2. Make forms electronically fillable.

- Paper forms are inaccessible to some individuals with disabilities. Forms that can be completed using a computer, smart phone, or other digital technology are more likely to be accessible for people with disabilities and may still be printed after being electronically completed.

3. Choose an accessible technology platform.

- When adopting information and communications technology, be sure it follows accessibility standards and meets the [Web Content Accessibility Guidelines \(WCAG\) 2.0](#). Many technology vendors who sell their products to the public sector provide a voluntary disclosure to document the accessibility of their product and identify specific accessibility issues.

4. Present text as text.

- Word Art, bmp files, jpg files, png files, and scanned documents of text are images, not text. Assistive technology cannot read image-based files.

5. Include alternative text.

- Alternative text, also known as “alt text,” appears when you move your cursor over a picture or object in an electronic document. Alt text helps people who use screen readers understand the content of images in your document. For many readers, alt text is the only available information they can access about the images and objects in your document.
- Because screen readers cannot interpret images, a person who is blind would have no way of knowing whether the image is a decorative element, logo, artwork, link to another page, or something else. Adding a line of hidden computer code to label the photograph “Photograph of Mayor Jane Smith” allows the user to make sense of the image. (Note: The Adobe Design Suite enables this.)
- Include alt text for any of the following objects in your document that convey important information:
 - photos or illustrations
 - clip art, SmartArt or other graphics charts
 - tables
 - digital handwriting
 - shapes (that don’t contain text and are not in groups)
 - groups (all objects in this list, with the exception of shapes, should also have alt text when in groups)
 - embedded objects
 - [This video demonstrates how to create alt text in Word 2013 and 2016.](https://www.youtube.com/watch?v=q0EwOvqRwN4&feature=plcp) (<https://www.youtube.com/watch?v=q0EwOvqRwN4&feature=plcp>)

6. Use styles.

- Differentiate sections of text by using heading and paragraph styles. These styles make it easier for all readers of your document to follow. In longer documents, these elements add structure for users who use a screen reader or who rely on the visual cue of section headings to navigate as they read.

7. Include tables of contents.

- Like heading styles, tables of contents help readers of long documents follow the document’s structure and make it easier to navigate.

8. Use short titles in headings.

- Document headings should be kept short (fewer than 20 words). In general, headings should be no more than one line long. This makes it easier for readers to quickly navigate the document.

9. Use logical heading order.

- Use heading levels in a logical order to help users navigate the document to find information. For example, Heading 4 should be visually subordinate to Heading 3, not Heading 2. This structure provides navigational cues for people with disabilities as they use assistive technology.

10. Use meaningful hyperlink text.

- Hyperlink text should provide a clear description of the link destination, rather than only providing the URL. Avoid hyperlink text such as “click here” or “read more.” Instead, use descriptive phrases.

11. Increase visibility for colorblind viewers.

- Colorblindness is the inability to distinguish one or several colors. Colorblindness is independent of the capacity for distinguishing light and shade. It affects a significant number of people, most often as an inability to distinguish between red and green, or seeing red and green differently.

- When creating documents and presentations, it's important to choose elements that increase visual contrast so viewers who cannot rely on color distinction can still understand what they're seeing. Avoid using color alone to distinguish meaning.
- A common example is "All items marked in red are required." Instead, indicate "All items marked with an asterisk are required." People who are colorblind understand symbols more accurately than colored text.
- Some things you can do when creating a document include:
 - Avoid the use of orange, red, and green.
 - Use texture instead of color in graphs or to highlight points of interest.
 - Keep the overall contrast in your presentation high.

12. Use simple tables.

- Make your data predictable and easy to navigate by avoiding nested tables and merged or split cells inside of tables. Complicated tables are difficult for users to navigate with a screen reader because the order of the table cells is unpredictable.

13. Avoid repeated blank characters.

- Extra spaces, tabs and empty paragraphs may be perceived as blanks by people using screen readers. After hearing "blank" several times, those users may think that they have reached the end of the information. Instead, use formatting, indenting, and styles to create whitespace.

14. Avoid floating objects.

- Objects that are not in line with text are challenging to navigate, and they might be inaccessible to users with vision impairments. Set text-wrapping around objects to **Top and Bottom** or **In Line with Text** to make it easier for people with screen readers to follow the structure of your document.

15. Create closed captions.

- If you use additional audio or video components in a document or workbook, ensure that the content is available in alternative formats such as closed captions, transcripts or alternative text equivalents for users with disabilities.

16. Print files in large text

- Provide a standard-text and large-text version of the message. For the large-text version, use the following guidelines:
 - Use 20 pt. or larger Verdana, Arial (in which this document is prepared) or a san serif font.
 - Exaggerate color, saturation, and contrasting colors between foreground and background.
 - When printing, consider using a contrasting background color, such as off-white.

Modifications for Excel and Tables

1. Name sheet tabs.

- In Excel, worksheet names should provide information about what the worksheet contains. Naming worksheets makes workbook navigation easier. Remove any blank sheets in a workbook.

2. Avoid blank cells, rows, columns.

- Using blank cells, rows, or columns to format your table or spreadsheet can mislead someone using a screen reader. Blank areas can imply that the table contains no more information. You can fix this by deleting unnecessary blank cells, rows or columns. If your table is used specifically to layout content within your document, you can clear all table styles.

3. Identify column headers.

- Create descriptive column headings to provide context and assist users navigating the table's contents.

4. Zebra stripe alternate rows.

- Help people navigate across table rows by color-stripping alternate rows. Use a shading color that maintains enough contrast with the font color to ensure visibility of the text.

Modifications for PowerPoint Files

In addition to the techniques for all document types, incorporate these strategies when building PowerPoint presentations. If they include audio, video, or embedded information.

1. Title each slide.

- Slide titles are used for navigation and selection by people who are not able to view the slide.

2. Ensure logical slide reading order.

- People who cannot view the slide will hear slide text, shapes, and content read back in a specific order. If you are using objects that are not part of the slide template, it is important that a screen reader reads them in logical order.

3. Highlight information effectively.

- Circle or use animation to highlight information. Laser pointers or color highlights are not as effective, because they might not be visible to people who are colorblind.

File Format Considerations**1. Word and PowerPoint versions**

- The ".docx" and ".pptx" formats are the default file format for documents and files created in Word or PowerPoint 2007 versions 2007 and newer. The formats have some advantages (such as smaller file size), but may not be supported as widely as the old ".doc" or ".ppt" formats.
- Converting the new formats to the old can destroy some content. Consider saving files in both the old and the new versions to ensure that more people can open them.

2. Convert Word to PDF

- Converting Word documents to PDF files is a convenient way to preserve formatting and accessibility information. Follow [these steps](#) to convert the document correctly. (Source: webaim.org)

3. Convert PowerPoint to PDF.

- If you want to display PowerPoint presentations on the web, convert them to PDF format. PDFs are better than PowerPoints because:
 - the file size is relatively small;
 - distracting slide transitions are removed; and
 - most people have PDF readers.
 - Heading structure and other accessibility information will remain intact on correct export.

4. Test Office documents' accessibility.

- Beginning with 2010 versions, Word, Excel, and PowerPoint include accessibility checkers that allow you to check for accessibility problems. The accessibility checker makes it much easier to identify and repair accessibility issues.
- To run the accessibility checker, select File > Info > Check for Issues > Check Accessibility.

- If you have Word, Excel or PowerPoint from Office 2016, you will find the Accessibility Checker on the Review tab of the Ribbon.
- The Accessibility Checkers will show:
 - accessibility errors (for example, images with no alternative text),
 - warnings (for example, unclear link text),
 - tips (for example, slide reading order).
 - The Accessibility Checker provides feedback about the importance of each item and tips about how to repair it.

Modifications for Websites

- For forms, text, and image-based content on websites, HTML provides the most support and is the easiest format to make accessible for all.
- The [Web Content Accessibility Guidelines 2.0](#) (WCAG 2.0) define how to make Web content more accessible to people with disabilities. WCAG 2.0 is a commonly used and understood International accessibility standard that applies to all technologies deployed through the web including Office documents and PDFs.
- Avoid layout tables when creating websites and emails. Layout tables make it hard for screen readers to access the information in them.

Multimedia Guidelines

Multimedia refers to any presentation that contains more than one type of media. Multimedia typically includes both audio and visual information. Videos are a common example. For multimedia to be accessible, you must create equivalent alternatives. Equivalent alternatives provide audio descriptions of essential visual elements for vision-impaired users. Audio description is performed by a narrator who describes what is happening in the film so that people who are blind can perceive the content of the film. Equivalent alternatives also provide visual representations of audible elements for people who are deaf or hard of hearing. Captioning for videos is a good example.

A note about text equivalents: If you post videos or a multimedia presentation, including text transcripts of these files alone does not fulfill accessibility requirements. Accessible multimedia presentations contain:

- a text equivalent for every non-text element, synchronized to the presentation (for example, include the text equivalent in the content or use alt text);
- open or closed captioning;
- audio descriptions of all visual information necessary for the comprehension of the content, including descriptions of action or expressions;
- media that does not cause a screen to flicker with a frequency between 2 Hz and 55 Hz. (If you have media that contains this type of flashing, strobe lighting, or optical illusions, do not post it. Blinking objects may cause photosensitive epileptic seizures. If you must post this media, include a warning on your web page and do not automatically play the media or show the graphic when your page loads—allow your users to start and stop the media or click to access the graphic if they want to view it.)

Media Players

- To display videos on your website, you must have a media player. Embedding a YouTube video into your website is a simple way to incorporate a media player. You must ensure that the YouTube video is accessible, however.
- To be accessible, media players should follow [these guidelines](#) presented at DigitalGov.

Captioning

Captioning is a necessary accommodation for people who are unable to hear the audio portion of a video. It is also helpful for people with cognitive disabilities. Captions transcribe speech and describe sound effects, music or laughter. Captions also identify multiple speakers. Two types of captioning are available: open captioning and closed captioning.

- Open captions are words that appear automatically on your video when you hit play; you cannot turn them off.
- Closed captions do not appear unless you turn them on. You can also turn them off.

Closed Captioning for Videos

All videos should have closed captioning. The caption text must be synchronized to the video. YouTube has a feature that will automatically caption many videos. However, the quality of this automatic captioning is often poor. To ensure your captions are correct, review automatic captions or enter manually.

Use your own text to create YouTube captions.

- Upload your video to YouTube.
- Make the video unlisted.
- Turn off the automatically created translation.
- Upload your text transcript.
- Let YouTube sync the text to the video.
- Review the captioning to ensure its timing matches the video. Edit, if necessary.
- Once the video has captions, consider downloading the captioned version to use on other websites.
- After downloading, consider finding an online converter to convert your file to the format your media player supports.
- Make the video public if you will host it on YouTube.
- [YouTube offers help with making videos accessible.](#)

Software to Play Audio and Multimedia

If you make PDFs available for download, link to the [Adobe Reader download page](#).

Social Media Guidance

The success of a social media message relies on its accessibility to individuals who receive the messages. Social media communications should use plain language and be developed in accessible formats to support the devices and tools used by the public. As new social media tools are developed, you should also review their accessibility capabilities. Work with community partners, including disability representatives, to test accessibility.

Some social networking sites that are widely used by the public are not fully accessible. However, your organization might want to use them to provide information to the public anyway. Many agencies have found that a practical approach to providing accessible content on social media is to post videos and presentations on these sites and also link to the same content posted in an accessible manner on their own sites. Agencies and jurisdictions should follow the guidance below when creating social media messages.

This section provides tips, resources and applications to assist with the accessibility challenges of social media.

Social media posts

1. **Place hashtags or @mentions at the end of the post.** This allows a screen reader to voice the main content of the tweet more clearly in the beginning, saving the social media syntax, which can sound confusing, for the end.
2. **Avoid using unfamiliar acronyms** that would sound strange if read by a screen reader. If space allows, spell out the acronyms or use a different way to convey the information. If the acronym is well-known and sounds the same when we speak as it's intended to sound (for example, NASA), you don't need to spell out "National Aeronautics and Space Administration."
3. **Use "CamelCase" for multiple words in hashtags;** that is, capitalize the first letters of compound words (use #SocialGov, not #socialgov).
4. **If your post contains photos, video, or audio,** put the following prefixes. This allows people using screen readers to know what to expect before the post is read out loud. Uppercase formats add further clarity to sighted users.
5. **Make your post serve as a descriptive caption** to provide context for the visual or audio element, and link to your organization's website for fully accessible content.
 - **Include all photo and video descriptions** to serve as a text alternative.
 - **Provide a link back to the organization webpage** that hosts an accessible version of that photo or video.
 - **Upload videos to YouTube and enable closed captions,** if possible, rather than uploading videos directly to each platform.
 - **Post a YouTube video link to other platforms as a status update.** This will ensure that visitors will be taken to the accessible version on YouTube.

Audio files

Recording program materials in an audio file or onto an audio CD is a good accommodation to providing written material. Some people who are blind or have visual disabilities cannot or prefer not to read braille and might find audio more useful. Providing an accessible computer document is often the fastest way to allow people to use a screen reader or other device that allows the document to be read. Electronic documents provide an efficient and simple means of converting print information to audible communication. Many people have computers, tablets, and phones that provide recording and speech output from these documents.

If, however, you choose to create audio files, you can send them to people electronically via email or on discs via the postal service. Agencies and jurisdictions can use staff members to create audio formats in-house. These techniques create the best audio files:

- Record in a room where there is no background noise.
- Read at a moderate pace and articulate words clearly.
- Speak any visible information provided, such as phone numbers, addresses, website URLs, etc.
- Describe images, charts and drawings; (For example, “This pie chart shows that 75 percent...” or “This bar graph shows...”).
- Speak slowly and clearly.
- Identify the reader at the end of the recording.
- If the recording has chapters or sections, ensure that the user can navigate them using fast forward and rewind functions.

Charts, graphics, maps, images

When using visual images in your communication, take the following steps to ensure that they are accessible:

- Use high quality pictures that aren't stretched or blurry.
- Use pictures that match and reinforce the text.
- Avoid symbols with unclear meanings.
- Include [alt text](#) or a caption to describe what each picture is communicating.

Increase visibility for colorblind viewers

Choose a color pallet that increases visual contrast between foreground and background colors so that viewers can more easily read and understand content. Some things you can do when developing your materials include:

- Use texture in graphs, instead of color, to highlight points of interest.
- Circle or use animation to highlight information, rather than relying on laser pointers or color.
- Keep the overall contrast in your material high.
- Avoid image watermarks. (If you must use a watermark, make sure that the information it contains is also included elsewhere in your document.)

People Who Have Hearing or Speech Disabilities

Telecommunication Relay Services (TRS)

Telecommunications Relay Service (TRS), established under Title IV of the Americans with Disabilities Act, is a telephone service that allows people with hearing or speech disabilities to place and receive telephone calls. TRS is available for local and/or long-distance calls in all 50 states, the District of Columbia, Puerto Rico and U.S. territories. TRS is regulated by the Federal Communications Commission and there is no cost to the TRS user.

Agencies and jurisdictions should respond to TRS calls as they would any other telephone call. TRS uses operators, called communications assistants (CAs), to facilitate telephone calls between people with hearing and speech disabilities and others. Either a person with a hearing or speech disability or a person without such a disability may initiate a TRS call.

There are several forms of TRS, depending on the particular needs of the user and the equipment available.

1. **Text-to-Voice TTY-based TRS**—This type of TRS is the “traditional” method for people with speech or hearing disabilities to communicate over the phone. To use it, a person with a hearing or speech disability uses a Text Telephone (TTY) to call the CA at the relay center. TTY users type both the number they wish to call and their telephone conversations onto the TTY’s keyboard. The attendant at the relay center then makes a voice telephone call to the other party, and relays the call back and forth between the parties by speaking what the text user types, and typing what the voice telephone user speaks. The text is displayed on a screen or printed on paper for the TTY user to read.
2. **Voice Carry Over (VCO)**—VCO is technology for people with hearing disabilities who speak using their own voices. They can speak directly to the called party and receive responses in text from the call attendant. The party who is deaf or hard of hearing does not type when using VCO. This service is particularly useful for senior citizens who have lost their hearing but can still speak.
3. **Hearing Carry Over (HCO)**—HCO is for people with speech disabilities who are able to hear. They listen to the party without a hearing disability and type their parts of the conversation on a TTY. The call attendant then reads these words to the other party.
4. **Speech-to-Speech (STS)**—STS is for people who have speech disabilities. A call attendant who is trained in understanding a variety of speech disorders repeats what the person with a speech disability says in a manner that makes his or her words clear and understandable to the other party. No special telephone is needed. For more information regarding STS, visit the [FCC guidance](#) to speech-to-speech relay.
5. **Shared Non-English Language Relay Services**—Due to the large number of Spanish speakers in the United States, the FCC requires interstate TRS providers to offer Spanish-to-Spanish traditional TRS. Although Spanish language relay is not required for intrastate (within a state) TRS, many states with large numbers of Spanish speakers offer this service on a voluntary basis. Texas is one of those states.
6. **Captioned Telephone Service (CTS)**—CTS, like VCO, is used by people with hearing disabilities who have some residual hearing. CTS telephones have text screens that display captions of what the people they are speaking to say. A CTS telephone allows the user to both speak to and listen to the other party to the extent they are able and, at the same time, read captions of what the other party is saying.
7. For more information on IP captioned telephone service, visit [Internet Protocol Captioned Telephone Service](#).

People Who Are Blind or Have Low Vision

Audio conversion of written documents

1. **Recording materials into an audio file or onto a CD or DVD** is a good alternative to providing written material. Some people who are blind or have visual disabilities cannot or prefer not to read Braille or large print, and find audio files more useful. These can be sent via mail or digitally.
 - Record in a room where there is no background noise.
 - Read at a moderate pace and articulate words clearly.
 - If the recording has chapters or sections, ensure that the user can navigate them.

Screen readers for electronic documents

A screen reader or other device can read these documents and make them accessible. Screen readers are software programs that allow users who are blind or have low vision to read the text that is displayed on the computer screen with a speech synthesizer or braille display. A screen reader is the interface between the computer's operating system, its applications, and the user. Visit the [American Foundation for the Blind](#) for more information.

Braille conversion for paper documents

Braille is a form of effective communication with people who are blind. Not all people who are blind can read Braille, however. If you need emergency documents in braille, print them in advance of the incident, as it is a time-consuming process. Braille documents are longer than printed text because the size of Braille letters is larger than printed letters.

1. Compose the information in a Microsoft Word-accessible document.
2. Import your document into Braille translation software, such as [Duxbury](#).
3. Use a Braille embosser to create the Braille document.

Website Considerations

1. **Ensure webpages have appropriate metadata descriptions** for graphics and visuals (i.e., text equivalent to every image).
2. **Always provide documents in an alternative text-based format**, such as HTML or RTF (Rich Text Format), in addition to PDF. Text-based formats are the most compatible with assistive technologies.
3. **Websites should be designed** so they can be viewed with the color and font sizes set in users' web browsers and operating systems.
4. **Users with low vision** must be able to specify the text and background colors as well as the font.

PEOPLE FIRST LANGUAGE

People first language is a way of framing communications with people with access and functional needs. It puts the person first – before their disability. Below is a poster for use in training the PIO team in people first language. For more information, visit www.disabilityisnatural.com.

EXAMPLES OF PEOPLE FIRST LANGUAGE

BY KATHIE SNOW; VISIT WWW.DISABILITYISNATURAL.COM TO SEE THE COMPLETE ARTICLE

Remember: a disability descriptor is simply a medical diagnosis.
 People First Language respectfully puts the person before the disability.
 A person with a disability is more *like* people without disabilities than different.

SAY:	INSTEAD OF:
People with disabilities.	The handicapped or disabled.
He has a cognitive disability/diagnosis.	He's mentally retarded.
She has autism (or a diagnosis of...).	She's autistic.
He has Down syndrome (or a diagnosis of...).	He's Down's; a mongoloid.
She has a learning disability (diagnosis).	She's learning disabled.
He has a physical disability (diagnosis).	He's a quadriplegic/is crippled.
She's of short stature/she's a little person.	She's a dwarf/midget.
He has a mental health condition/diagnosis.	He's emotionally disturbed/mentally ill.
She uses a wheelchair/mobility chair.	She's confined to/is wheelchair bound.
He receives special ed services.	He's in special ed.
She has a developmental delay.	She's developmentally delayed.
Children without disabilities.	Normal or healthy kids.
Communicates with her eyes/device/etc.	Is non-verbal.
People we serve	Client, consumer, recipient, etc.
Congenital disability	Birth defect
Brain injury	Brain damaged
Accessible parking, hotel room, etc.	Handicapped parking, hotel room, etc.
She needs... or she uses...	She has problems with/has special needs.

Keep thinking—there are many other descriptors we need to change!

Excerpted from Kathie's People First Language article, available at www.disabilityisnatural.com.

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References

This section contains tools and resources that provide additional information for local agencies. Many of these resources have been integrated into this toolkit.

[*A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action*](#)

(FEMA)

[*Alerting the Whole Community – People with Disabilities and Others with Access and Functional Needs*](#)

(FEMA)

[*Americans with Disabilities Act*](#)

[*Americans with Disabilities Act Best Practices Toolkit for State and Local Governments*](#) (ADA)

[American Foundation for the Blind](#)

[*General Effective Communication Requirements Under Title II of the Americans with Disabilities Act*](#)

(CAL OES)

[*People-First Language*](#) (disabilityisnatural.com)

[*Web Content Accessibility Guidelines 2.0*](#) (W3C.com)

[*PDF Accessibility*](#) (webaim.org)

[*PDF File 508 Compliance Checklists, U.S. Department of Health and Human Services*](#)

(<https://www.hhs.gov/web/section-508/making-files-accessible/checklist/pdf/index.html>)

[*508 Accessible Videos – Use a 508-Compliant Video Player*](#) (Digital.gov)

[*10 YouTube Fundamentals: Accessibility*](#) (youtube.com)

[*Speech-to-Speech Relay Service*](#), Federal Communications Commission (fcc.gov)

[*Internet Protocol \(IP\) Captioned Telephone Service*](#), Federal Communications Commission (fcc.gov)

[*Screen Readers and Screen Magnifiers*](#), American Foundation for the Blind (afb.org)

[*Duxbury Braille Translation Services*](#) (duxburysystems.com)

[*Federal Plain Language Guidance*](#) (plainlanguage.gov)

[*Information and Communication Technology \(ICT\) Standards and Guidelines*](#) (access-board.gov)

END DOCUMENT