



## VI. Recommendations

### Recommendations for the Federal Government

- The federal government should adopt stricter wood-smoke standards. The current air standards are not strict enough to protect the public's health, with long-term exposures to PM<sub>2.5</sub> causing an increased risk of harm, even at levels below the current air standards. The Clean Air Act requires that the Environmental Protection Agency (EPA) set air quality standards that protect even sensitive populations. The current laws clearly fail to protect human health as required by the Clean Air Act.
- The federal government should be required to test new wood-burning appliances for both their efficiency and emission levels before they are allowed to enter the marketplace. An example of such a failure are the outdoor wood furnaces that entered the marketplace without adequate testing, but which have proven to be harmful to both the environment and human health.
- The federal government should make clear what is allowed to be burned and what is not. Pressure-treated wood, plastics, building debris, and wood containing waxes, adhesives, and other dangerous additives should be banned from use in wood-burning appliances.
- The federal government should increase their education about wood smoke and its harms so that the public is more fully informed and can better protect their health.
- The federal government should require wood-burning appliances to contain a warning that wood smoke may be dangerous to health. Labeling requirements for tobacco products have proven to be effective in educating the public about the dangers of cigarette smoke; the same should be required for wood smoke.



## Recommendations for States

- State governments should enact laws that clearly state that wood smoke entering another person's property is against the law, and violations are enforceable by shutting down the offending wood-burning appliance.
- States should use visual smoke passing onto neighbors' properties as proof of harm. Wood-smoke emissions that harm people should be recognized as proof of harm by the designated agency that inspects offending wood-smoke appliances.
- States should make clear to the public which state agencies are empowered to enforce laws to protect those being harmed by other people's wood-smoke emissions. In some states, local health departments are the agencies empowered to enforce these laws.
- States should include wood smoke in their nuisance clauses to better prevent and enforce wood smoke issues.
- States should install enough PM2.5 monitors to adequately reflect where wood-smoke emissions actually occur. For instance, although monitoring data from 2008 through 2012 show that Connecticut meets EPA's PM2.5 standards, there are only eight PM2.5 monitors in the state, and they are not located in areas where wood burning is the most common.
- States should enact wood burning bans when air quality does not meet EPA's health standards for either ozone or particulate levels. Communities that have done so have experienced significant improvements in air quality.
- State websites should include: why wood smoke is harmful to health; why wood smoke regulations should be enforced; and which state, county, or town agency enforces laws on harmful wood-smoke emissions.



## Recommendations for City, Town, and County Governments

- City, town, and county governments should enact ordinances that clearly state that wood smoke entering another person's property is against the law, and is enforceable by shutting down the offending wood-burning appliance.
- City, town, and county governments should empower their local health departments to be the agency to enforce wood-smoke offenses, and encourage them to shut down wood-burning appliances when wood-smoke emissions harm other people.
- City, town, and county governments should ban outdoor wood furnaces, as they cannot be made safe for the environment or for people who live within half a mile of outdoor wood furnaces. Wood-smoke emissions from outdoor wood furnaces travel for half a mile and can enter all the homes within that area.
- The websites of city, town and county governments should include why wood smoke is harmful to health; why wood smoke regulations should be enforced; and which city, town or county government agency enforces the laws relating to harmful wood-smoke emissions.

## Recommendations for Individuals

- Individuals need to understand that wood smoke is dangerous to their health. Individuals should protect themselves and their families from wood-smoke exposures. Pregnant women, infants, children, older adults, and people with pre-existing respiratory or cardiac diseases, diabetes, and breast cancer should avoid all wood-smoke exposures.

# THE HARMFUL EFFECTS OF WOOD SMOKE AND



- Individuals should use natural gas-burning appliances instead of wood-burning ones. Even a cleaner or newer wood-burning stove will not necessarily improve the PM levels in your home. The U.S. Department of Energy found that about a third of homes that replaced their wood-burning device did not see indoor air quality improvements. A natural gas stove, if properly vented, will reduce emissions.
- Individuals should avoid burning wood. If they must, they should burn only clean, dry wood. Never burn trash. Most household waste is primarily comprised of plastics, which emit highly toxic compounds. Do not burn building debris, pressure-treated wood, or wood containing waxes, adhesives, or other dangerous additives. Synthetic logs should also be avoided.
- Individuals need to make sure that their wood-smoke emissions are not harming others. If their wood burning is harming others, they need to shut down the wood-burning appliance.
- Individuals should reduce all wood-smoke exposures. If wood smoke enters your home on a regular basis, you and your family need to get out of the smoke. Ask your neighbors to reduce the wood-smoke emissions that are harming you. If that fails, ask your local health department for enforcement help. If others are being harmed by the wood smoke, invite them to join you in asking for enforcement. If all fails, you may consider moving your residence. Obviously, nothing is more important than your family's health.
- Individuals who are experiencing wood smoke in their homes should purchase a HEPA filter while waiting for enforcement. A 2016 study by the Department of Energy found significant benefits from using high-efficiency HEPA air filters to reduce PM from wood smoke in homes. These filters, if properly sized for the volume of space you normally occupy, can reduce indoor particle pollution by as much as 60%.<sup>264</sup>
- Individuals should work to get their towns to pass ordinances that better protect people from being harmed by other people's wood burning.