

## Did you know that smoke from “clean trash” is harmful??

Long-term exposure to fine particulates (“pm2.5” or smaller) may cause and contribute to lung cancer; respiratory disease, such as asthma, COPD, and pneumonia; heart disease; and death. Significant exposure to smoke contaminants can also cause and/or contribute to ill health. For example, dioxins can cause cancer, immune dysfunction, IQ deficit, and reproductive effects. The absorption of heavy metals has been linked to birth defects, kidney deterioration, loss of coordination, and more.

### What Can You Do?



Fortunately there is a lot you can do to protect your community's health from the smoke. Here are strategies that villages are trying all over Alaska. Select as many strategies as you can do. The more you do, in general the less your risk.

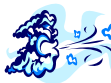
#### Preventing Folks From Smelling the Smoke:

**Don't Burn** - Evaluate first whether you really need to burn your waste. Do you have the space, operational features, or community involvement needed to not burn (or to burn less)?



**Burn hours** - Keep “burn hours”. Don't let the community enter the dump during that time.

**Burn at Night** - When people, especially children, are more likely inside.



**Burn downwind** - Burn when the wind is blowing away from town and other activities.

**Size for storage** - Calculate your volume well enough so that you can store wastes during unfavorable wind conditions.



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**Masked Operator** - No one should light the fire except the operator, and they should wear a mask.

**Siting**

- Locate your burning as far as possible from humans.



**Think mobile or mini burning station** - If your site is close to town or town is downwind a lot, consider locating your burnbox away from the dump. You can use a burnbox on track wheels or sled to move it to different places depending on the wind.

**Think high!** - At the dump, smoke at face level will create greater exposure. A high stack or elevated cage might help in diluting smoke in the air overhead. That is a reason factory stacks are so high!

#### Reducing Smoke Toxicity:



Exposed dump visitors

**Collect!** - A collection program is one of the best ways to reduce health risks. It keeps people away from the smoke source (so they breathe less), AND it gives collectors/operators a chance to make sure that really bad wastes don't get placed in the burnbox - like batteries, fluorescent lights, electronics, etc.

**Separate!** - Take out your toxic wastes. You can't get contaminants in the smoke if they weren't in the waste. It doesn't take care of the health risks from the smoke dirt/soot, but it does remove or reduce contaminant health risks.



**Reduce and Reuse** - Removing wastes from the wastestream helps too. If you have a smaller volume of waste, then you can burn less often. Try a “share shed” for everything usable-- clothes, leftover paints, toys, computers, etc.

**Don't use Used Oil as a starter** - Used oil contains lots of contaminants that can cause cancer and other diseases. It is much better to use a well-designed burnbox and dry wastes, such as paper and wood, as starters. If you still need to use the oil, use it sparingly.

**Educate!** - When all else fails, education can make perhaps the biggest difference in the health impacts your village faces. Convince folks to keep children away from the dumpsite, pay for a collection service, separate out their toxics, and reduce and reuse.



#### Burn Tips to further reduce smoke toxicity:

**Contain the waste** - Contained fires are more likely to produce less toxic smoke



**Burn hot** - a more complete burn generally creates less toxic smoke and the smoke is present for a shorter time. For hotter fires, use vents, allow ash to settle out through grates, and don't overfill.

**Cook quickly** - Temperatures between 300F to 1200F create substantial levels of dioxins and furans. If you can safely quench ash or otherwise cool, do so.

**Burn dry** - Dry wastes will become hot more quickly and not smolder -both will create less toxic smoke. Cover your wastes in the collection bins and burnbox to keep out snow and rain. Shovel any snow off.