

What You Can Do

- **Reduce.** You can reduce the amount of waste you generate by using durable, long-lasting goods and avoiding disposable items; buying products in bulk; and looking for products with less packaging.
- **Reuse.** Reusing items is another way to reduce the amount of waste you generate. Repair, sell, or donate used or unwanted items or organize a community swap event. One person's trash is another person's treasure!
- **Compost.** In certain climate zones composting can be a great way to dispose of yard trimmings and food scraps, while creating a natural, free fertilizer. Some tribes offer classes on how to compost, and some even provide composting bins at a reduced cost or show you how to building your own.
- **Recycle.** Talk with your tribal government or other community groups about recycling programs that might be possible.
- **Properly Dispose of Waste.** Don't litter or dump illegally. Use a waste collection service, if available, or take your waste to a transfer station or landfill.

The Removal of Home Barrel Burning in the Native Alaskan Villages *Air Quality and Solid Waste Management Success Stories*





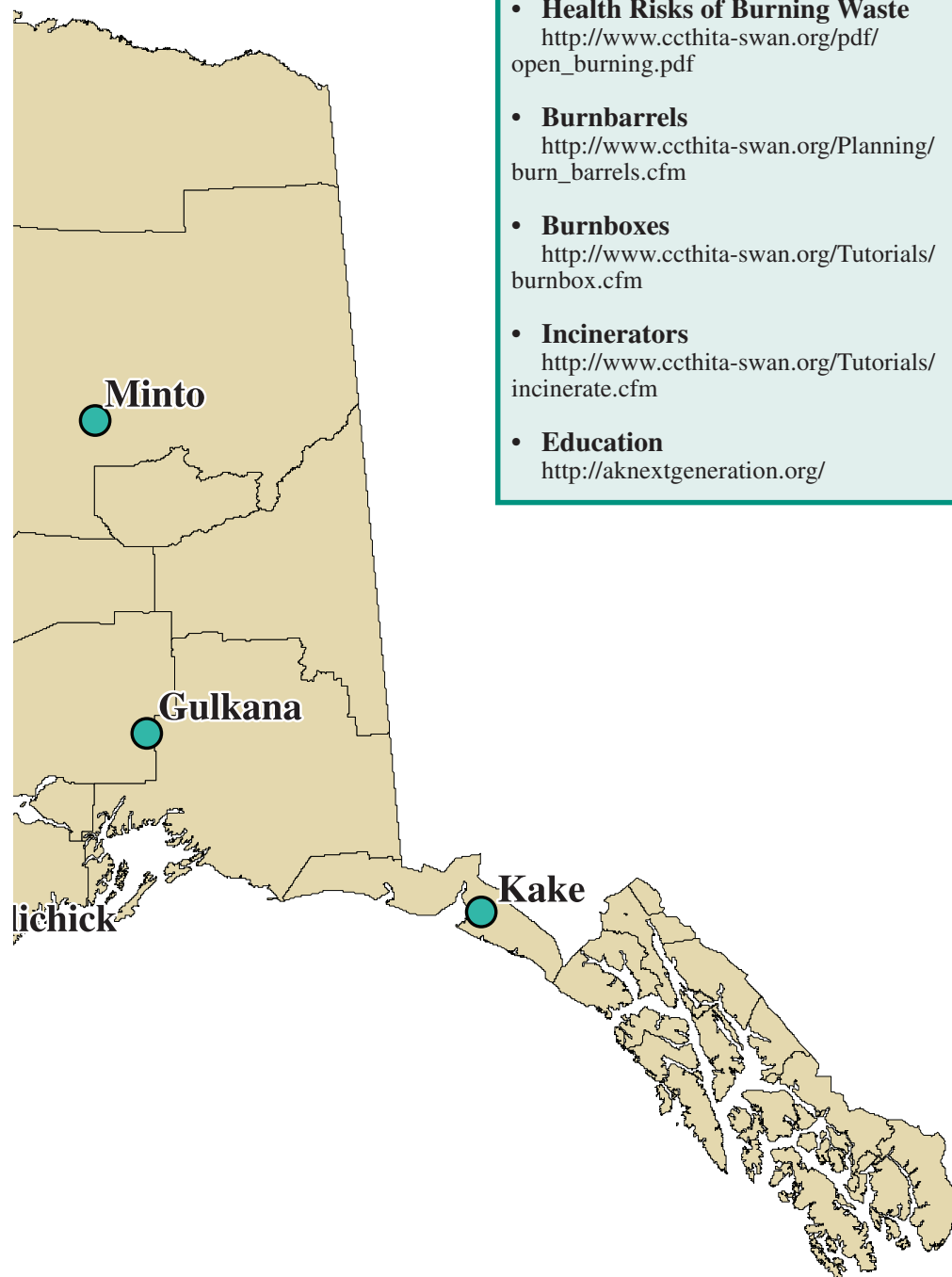
The Removal of Home Barrel Burning in the Native Alaskan Villages Air Quality and Solid Waste Management Success Stories

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This booklet was developed by and with cooperation of the environmental staff from nine Alaska Native Villages that have successfully addressed the use of burn barrels in their communities. Their stories are shared in this way as a means of helping other Alaskan tribes to take action to similarly protect the health of their members from this source of toxic air pollution.

Air pollution created by burning household waste in such barrels in the midst of residential communities can substantially increase the risk to tribal members' health, particularly those with greater vulnerability such as elders, children, and individuals with asthma and other respiratory weaknesses. By eliminating the use of burn barrels with better alternative waste disposal methods, the risk to community health can be substantially reduced. The individuals who have told their stories here hope that their experiences will help others to begin similar programs to protect public health and the environment in rural Alaska. We thank them for their willingness to share for all to benefit.



Other Burning Resources

- **Health Risks of Burning Waste**
http://www.ccthita-swan.org/pdf/open_burning.pdf
- **Burnbarrels**
http://www.ccthita-swan.org/Planning/burn_barrels.cfm
- **Burnboxes**
<http://www.ccthita-swan.org/Tutorials/burnbox.cfm>
- **Incinerators**
<http://www.ccthita-swan.org/Tutorials/incinerate.cfm>
- **Education**
<http://aknextgeneration.org/>

Map of Village Locations



Reasons to Not Burn Household Waste in Burn Barrels or Near Homes

Residential burning is a more serious threat to public health and the environment than previously believed. Burning household waste produces many toxic chemicals and is one of the largest known sources of dioxins in the nation. Tribes across the nation are beginning to ban this practice.

Dioxins accumulate in the food chain. They can settle onto berries and forage for game animals that contribute to subsistence foods that Alaskan tribal communities rely upon as part of traditional hunting and gathering practices. Dioxins also can settle on water or enter rivers and streams through soil erosion. They accumulate in the fats of animals, and then in humans when we consume meat, fish, and dairy products.

Smoke from burn barrels contains hazardous pollutants such as particulate matter (PM), sulfur dioxide, lead, mercury, and hexachlorobenzene that can have immediate and long term health effects such as:

- Asthma, emphysema, and other respiratory illnesses.
- Nervous system, kidney or liver damage.
- Reproductive or developmental disorders.

Ash residue from burning can contain toxic pollutants, such as mercury, lead, chromium, and arsenic, which can contaminate subsistence foods such as berries. Children can accidentally swallow toxic materials from dirt on their hands while playing near discarded ash.

Help protect yourself, your family, and your community from the health risks from outdoor burning. These stories provide examples of how use of burn barrels can be eliminated in your community.

Hughes: Small village...big strides

Hughes is made up of only 70 people and 30 homes. The village has not let its small size stand in the way of drafting a solid waste management plan. It combined forces with the city and secured a grant that pays for weekly curbside household waste pick up. This, along with education on health hazards through flyers, newsletters, and radio announcements, enabled Hughes to rid their village of home barrel burning.

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Kiana: All it takes is a personal touch

Kiana was able to rid its village of solid waste burning through outreach and education. Public notices were posted around town and an article was published in the newspaper on the health hazards of home barrel burning. Flyers were also given out to all the children at school for them to take home and share with their families. However, it was the home visits that Gloria made herself that really made the difference. Even though the village has a population of over 400, Gloria visited every home with burn barrels, giving each household a pamphlet on the health hazards of home barrel burning. Most residents were surprised that no one had educated them on these health hazards before, and received the information willingly.



Loading trash into Kiana burnbox in preparation for burning.



Burning of waste in burnbox at Kiana dumpsite.

Burning at the Kiana main store was also addressed. Initially the environmental program offered to haul the store's solid waste to the dump. However, the store itself has now taken up this responsibility. It has also started a recycling program, where cardboard is turned into logs and is distributed to residents for wood stove burning.

The many burn barrels that are no longer in use have been relocated to a gravel pit area outside the village. Kiana will try to reuse as many of the barrels as possible for garbage cans. The rest will be hauled over to the dump.

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Tuntutuliak: Little steps can go a long way

In 1996 Tuntutuliak was able to rid most of its homes of burn barrels. They now provide a trash pick-up service that makes a stop at every residence. The village also focused great efforts on the education of waste separation. In addition to providing articles in newspapers, the environmental coordinators went door to door explaining to each residence why household waste separation was so important and how to go about doing it. Just like in Kiana, this method proved very effective.

Burning still takes place at some local businesses and at the village school. However, the schoolchildren, who were bothered by its smoke, have been able to make improvements. They each wrote a letter to the principle asking not to burn the school waste during unfavorable wind conditions. The principle complied, showing how little steps can go a long way.

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Minto: A work in progress

Minto has been able to make a lot of improvements using the IGAP grant, but its solid waste management plan is still a work in progress. So far, it has eradicated most home barrel burning through education in the form of flyers, newsletters, and announcements at gatherings.



Minto's new sanitary landfill.



Burnbox located at the landfill.

Minto has also established a new sanitary landfill five miles from the closest home. Although the village is working on a home trash pick-up program, the residents currently haul their trash to the landfill themselves. It is only those residents who do not haul their trash to the landfill that still use home barrel burning. This problem will hopefully be solved when curbside pick up is established.

To reduce the amount of waste in the landfill, Minto burns appropriate trash in a burnbox located at the site. Because the landfill is a good distance away from the village, burning in the burnbox is a much safer and healthier option for the residents.

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Ninilchik: Taking advantage of urbanization

Nilichik has been fortunate to have readily available access to Kenai Borough managed solid waste collection and disposal sites. In addition, long-term development and land status impacts have allowed it to become relatively urbanized. This has enabled the village to undergo a smooth removal of home barrel burning from the village.

Burn barrels were eradicated through education. Information on the health hazards of burning was provided in tribal newsletters, and brochures were presented at local Environmental Awareness community meetings and made available at the office media center.

On the rare occasion that burning might still occur, contact is immediately made with the household and education is provided. This successfully discourages the continued use of home barrel burning, and the household willingly switches to an alternative form of waste disposal.

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Kake: A creative solution

Kake does not have home barrel burning because it has an established landfill five miles from the village. It has regular garbage pick up 3 times per week. To pay for the garbage pick-up, along with water and sewer services, each household pays \$36 per month. However, this does not cover the total costs of maintaining the solid waste disposal system; the rest is subsidized from local store sales.

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Bill Moore's Slough: A ban on the problem

Bill Moore's Slough was awarded a grant from EPA to develop an Integrated Solid Waste Management Plan and Tribal Codes and Regulations in November 2005. The program was implemented throughout 2006. Part of the solid waste management plan is a ban on home barrel burning. A fine of \$500 has been imposed to enforce this ban.

To supplement the ban, education on the dangers of burn barrels was distributed, and the resident's understanding of the issue is shown through their compliance.

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Gulkana: Cooperation and Hard Work, a Recipe for Success

Gulkana keeps home barrel burning at bay through a lot of hard work by Rachel Showalter-Claw, the environmental coordinator of the village. The recycling program she has established allows residents to recycle not only aluminum cans, batteries, and



Dumpsters that hold non-recyclable solid waste



Gulkana recycling unit

used oil, but also paper and plastic; a rare occurrence in the villages. Ms. Showalter-Claw brings the recycling to Anchorage herself every time she makes the long trip into the city. The rest of municipal solid waste is picked up by Cooper Basin Sanitation, a private company. Both the recycling bins and trash dumpsters are conveniently located in the center of the village.

Ms. Showalter-Claw educates the residents of Gulkana about proper solid waste management and burning through articles in a monthly and bi-monthly newsletter. These articles remind the residents that it takes everyone's cooperation to have a keep the village clean and the air pure.

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Nondalton: They've got it all



Removing the leftover ashes from the last burnbox burning period.



Preparing the area for the installation of Nondalton's new burnbox.

Nondalton, a village with a population of 230, has a very successful waste management program. They have a landfill, dumpsters to keep garbage dry, a burnbox, curbside pick up, a voluntary recycling center, and refuse collection. Home barrel burning was first addressed at a town meeting. At the meeting a resolution was passed identifying the hazards of burning, and eventually a ban on home barrel burning was included in the utilities ordinance. The village maintains its solid waste management plan by having an ordinance priority system. It requires every residence to pay a \$30 monthly solid waste fee. If the fee is not paid, they are cut off from running water. In this way Nondalton ensures that everyone who can pay the bill will pay it. The villagers were educated of this new system through a newsletter.

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Huslia: Speedy Sam saves the day

Huslia is made up of 240 residents. It recently addressed its home burn barrel problem in April 2007 by positioning six large trash bins throughout the village. Residents drop off their trash in the bin closest to their home. Speedy Sam, the village solid waste manager, empties the garbage from the bins and brings it to the landfill.

To educate the residents of the new system and the hazards of burning, flyers were posted around the village and an announcement was made on the local radio broadcast.

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