# Solid Waste Disposal Site Information and Goals

*Most villages will be writing here about a single dumpsite. However, if you have a baler or incinerator facility you would write about that. If you have more than one active site, then you may wish to use a table for each site, or add a separate column for the second site.*

This Chapter provides an overview of the features and issues of our primary solid waste disposal facility.

## Site Description

The Table below describes the primary features and conditions of our current dumpsite. The right-hand column describes our related goals or planned changes. There are additional Tables in later Chapters that discuss the site operation and maintenance, waste collection system, waste recycling, and waste burning.

*Note-the last column was inserted as a suggestion by several villages to make it more convenient. We liked this suggestion. The planned changes are addressed throughout the plan, especially in the last few sections. However, you may find it easier to write down briefly a description here. This table can then serve as a reminder to people of what you would like to see.*

*But in a conventional plan, the current situation is discussed first. Then you discuss what you want to see, which is what is in the last couple of Chapters of this plan. It is something Native cultures already know. You need to know where you were and where you are at before you know where you are going. We suggest for the below table that you fill in the 2nd column and then continue on through all the other Chapters. Then you can come back to fill in more detail the 3rd column. If you want to fill in the 3rd column now, remember to come back to it and review it. Also, try not to spend too much time on the 3rd column at first, because the later part of the plan brings you through the decisions and knowledge you will need to make your writing more detailed and also to fit your community priorities. You may end up changing what you think for what changes would be best. The 3rd column is essentially a “goal column”, and at the end of the plan you select which goals are a priority, and whether they are feasible within your plan timeframe.*

| 1. Solid Waste Site Features And Situation | |  |
| --- | --- | --- |
| **Feature** | **Current Description** | **Changes Planned** |
| **Land Ownership** | *(Example:)* The land where the dumpsite is located is owned by the Village Corporation.  *NOTE –MANY grants require information on land ownership.* | This seems to work. We’ll review land ownership every 5 years. |
| **Location and nearest residence** | *(Example:)* The dumpsite is locatedone-half mile from the town edge. The dump is southeast of town. There is one occupied house that is located about one-quarter mile from town.  *It is important to note how near the site is to a house (or regular public use building that is nearer) because of health risks potentially associated with nearness.*  The GPS coordinates for the dumpsite entrance are 62.165 N and 113.453 W. *(Note – finding out the GPS coordinates can make this plan look more professional. It is not necessary though.)* | Eventually, we’d like to move the location further away, at least two miles. This is part of our long-term planning. |
| **Operation Responsibility** | *Which entity in your village is the one responsible to keep the dumpsite maintained? Note –there may be no management or operation currently, but there is often one entity that is in charge of the dump, even if they don’t have the money or staff. Operation responsibility and land ownership relate to some funding possibilities and also to whether the site might be considered a brownfield in the future. For brownfield designation, if you are unsure how this might potentially affect your site, contact the State Brownfield Program at* [*https://www.dec.****state****.ak.us/spar/csp/****brownfields****.htm*](https://www.dec.state.ak.us/spar/csp/brownfields.htm) *. Or you can contact your regional or local Brownfield Program if you have one. Example:*  The city is responsible for operation and the Tribe provides their Environmental Department to assist in environmental planning. | We might switch to Tribal operation. We’ll review each year. |
| **Summer Access** | *(Example:)* The access to the dump is in fair condition. It is an unpaved gravel road.People travel to the dumpby ATV in summer. Once people enter the dump there is a path that they follow through the dump. People do litter along the sides of the access |  |
| **Winter Site Access** | *(Example:)* In winter, people travel to the dumpsite by snowmachine. They enter the site from the South, East, and West. This may be dangerous when they enter at the West and South because there are hidden scrap metal and a lagoon that does not freeze through. |  |
| **Path/area inside the Dump for unloading wastes** | Once you get to the dump there is a path that goes through in a loop. The path is covered with wastes however. IT is difficult for people to dump their garbage without contacting other wastes. Their vehicle wheels must track over garbage and if they get out of the vehicle they must stand on the garbage. Because people are in direct contact with other people’s garbage, this creates a high risk for injury, blown tires, and disease transmission. | We need to ensure a clear access path to greatly reduce disease transmission and injury risks. We will need to fund the staff more time so that they are able to keep a path clear and we need to keep everyone out of the dump at least in summer (except for the salvage yard), and they must use in-town dumpsters and a collection service. |
| **Wind Direction** | *(Example:)*The wind blows from the dumpsite into town some of the *time (here for example, you can insert “a lot”, “almost all the time”, or “not very often”, or be more detailed).* The wind blows into town mostly in summer and during storms. | We can’t change the wind, just our practices that are impacted by it! |
| **Site Size** | *(Example:)* The dumpsite is about 3 acres *(you can also give the size by writing the width and length, such as 200 ft long by 300 feet wide)*. This does not include the windblown litter (i.e. plastic bags, paper). The windblown litter goes out about 1000 feet from the dump in most directions. There is also some dumping along the summer access path, beginning about 400 feet from the dump. |  |
| **Site Shape** | *(Example:)* The dumpsite is shaped like a long circle. Its width is about 300 feet, and it is about 600 feet long. About 75% of the dump area is covered by piled waste. The rest is ground, a pathway, or windblown litter. Where there is piled waste, the average depth is about 2 feet high. *(This is a hard measurement, but very important. Go out and spend a couple of hours at the dump with a tape measure or yard stick or a board that you know how long it is. Many people over-estimate how much garbage there is by a lot. Many people also under-estimate by a lot. Often at open dumps there is a lot of ground in the dump that does not have much garbage. This ground might be hard to access, so people don’t dump there very much. Even though there may be areas with garbage that is piled 5 or 6 or even 7 feet high, there is often more ground that is covered by garbage that is only 1 foot high or less.) If you have a trench for dumping, just measure the depth of garbage and the trench. Be sure to write how many trenches are full already if you have more than one. Write down their size as well.* |  |
| **Estimated Waste Volume (± 20%)** | *270,000* ft3 or *10,000* cubic yards.  *(When calculating the waste volume at dump, make sure all your numbers are in ‘feet’ before you start. Think about what portion of the ground is truly covered by wastes. Using the above numbers as an example: Volume in ft3 (cubic feet) is 300 wide x 600 length x 2 feet high x 75% of the ground covered by waste = 270,000. (Note that 75% = 0.75 when using a calculator.) To convert ft3 to cubic yards (= yd 3), divide by 27. In the example, 270,000 ÷ 27 = 10,000). You can also use your imagination to spread out all the wastes evenly to one height, at 100% of ground covered by wastes.* |  |
| **Estimated Waste Weight (± 30%)** | 2000 tons*. (Here assuming a normal open dump with little heavy equipment compaction, 400 pounds per cubic yard would be a typical weight. So take your waste volume and multiply by* ***400, (10,000 yards x 400 pounds = 4,000,000 million pounds.*** *Then divide by 2,000 to get tons: 4,000,000 pounds ÷2000 = 2000 tons If you regularly compact your wastes, use a number between* ***500*** *to* ***1,000*** *as the number instead of 400. 500 is for small heavy equipment and an okay job, 1000 is for larger equipment and a really good compaction job. For* ***only*** *piles of* ***ash and already burned wastes left over from a burnbox,*** *you may use 1000 to 1500 instead of 400.* |  |
| **Type of site management** | *(Example:)* Open dumping on surface. Occasional consolidation with dozer. Burnbox with ashes dumped out when full.  *(Additional types you might have are: trench and cover, surface dumping with cover and compaction, open burning with no burnbox)* |  |
| **Operator/Technician Staff** | *(Example:)* We have 1 waste technician who works 30 hours each week. His duties are: collecting garbage, trying to keep dump organized and the access path clear so that people do not need to walk or drive on wastes (which keeps our community much safer from disease and injury), and operating the burnbox in a safe manner. |  |
| **Burning wastes** | *(Example:)* We burn our wastes by using a burnbox. It is loaded with wastes by the waste technician. It is lit on fire by the waste technician*.* The wastes that are burned include all trash taken to the dump. This includes regular trash brought by households and regular trash brought by collection service, school, or businesses. Large items like drums, appliances, vehicles are not burned. *(There is another section of the plan to talk about burnbox operation guidelines.)* |  |
| **Salvage Pad/Area** | *(Example:)* An area of about 30 feet wide by 70 feet long is used by people to find usable items. It is located in the north corner of the dump. The type of wastes here are vehicle parts, appliances, scrap metal, lumber, other wastes that people can use. |  |
| **Additional Waste Segregation at Site** | *(Example:)* There is a place for people to drop off their vehicle batteries. It is located near the dump entrance. People put their batteries in a tote and the staff collects them when it is full. |  |
| **Recycling Facility/Area** | *(Example:)* A recycling shed is located in town, near the tribal office. People drop off the following items: (*List wastes that are taken. Note a separate section on recycling is included below. This is just a summary.)* |  |
| **Dumpsite Age** | *(About how many years ago was the site started?)* |  |
| **Fencing** | A wind fence only on one side. This is mostly broken down. We need new fencing or another type of barrier such as bushes or big junk metal. |  |
| **Types of Wastes that Are Now at the Site** | | |
| **Residential wastes:** | Cardboard, paper, plastics, tin and aluminum cans, diapers, Styrofoam, old or broken household items like furniture, toys, clothes, rugs, appliances, dishes, glass, tires, ATV’s, snowmachines (only the parts that are not salvaged), computers, TV’s, small batteries, tires |  |
| **School wastes:** | Cardboard, computers, Styrofoam plates and cups, Cans, old equipment, paper, fluorescent lights |  |
| **Store Wastes:** | Cardboard, paper, fluorescent lights |  |
| **Utility wastes:** | Antifreeze, transformers, old equipment, used oil, batteries, fluorescent lights |  |
| **Construction Project Wastes:** | Pipes, demolition, insulation, asbestos from old torn-down buildings, drywall, cardboard, electrical wires and electrical equipment, old plumbing, broken-down heavy equipment, fluorescent lights, concrete |  |
| **Honeybucket Wastes/septic cells or other sewage** | The lagoon is next to the dump. There are some honeybucket wastes that get thrown out at the dump. Some garbage gets thrown out at the honeybucket lagoon. |  |

## Disposal Site Map and Photographs

The following map and pictures show the site and its key features.

*(If there is a copy of a community map, insert the map here.* For a good community aerial map, go to <http://www.commerce.state.ak.us/dca/profiles/profile-maps.htm> .

*Use an entire page for your map, because it is very important to a plan. Draw on the map where the main dumpsite is and any other waste sites (including river dumpsites). Or you can insert an aerial photo of the dumpsite that shows the dumpsite and town together if possible. Point out any features that tell the story of your situation. For example, where would you locate the transfer station you are talking about? Where would the recycling center be located? Where is the berry area that might be impacted from the dump? Where is the school and what direction does the waste smoke go? What area of the site gets flooded during breakup and where does the runoff go?*

*Insert a map just above the figure title below. The convention is to have figure titles below a figure, like a map or pictures. Titles for tables and lists go above the table or list.*

1. Layout of Important Features Related to the Raven Community Solid Waste Situation.

***Now include some pictures if possible. The more pictures the better.*** *After the map, you should include several photos of the dumpsite itself and the different types of wastes and different areas. If you have any recycling or salvage areas or sheds there, take pictures of that as well. Take a picture of your heavy equipment and burnbox too. You can always include pictures at the back of the plan too, or include a smaller picture on each page. If you have problems with inserting digital pictures or need help to convert regular pictures to a digital picture, send us (ANTHC) the pictures and your plan, and we can help insert them. Or you can probably use one of the high school students to help because they are usually really good at that. If you have a computer class at school, the teacher could make it a project. And the students and teacher will learn a lot from you while working on this. Other good pictures to have in your plan are of the community (e.g. kids, pictures of everyday life, community events). When funders see more personal pictures it can make them feel connected to your community and possibly more willing to help.*

*Use the “Figure title” caption if possible so that the pictures show up in the table of contents.*

*Insert a picture(s) above the figure title. You can use one figure title for multiple pictures on a page or you can insert additional figure titles for each picture. But if you add another figure title, use the automated figure title style option to have the figure titles show up in the table of contents. If you are unsure how to do this, contact us to help you.*

1. Disposal Site Entrance in Summer

# Current Solid Waste Management Program And Practices

## Waste Collection Program

*(Here, describe who operates your trash collection program and your honeybucket or tank haul program. List how many households pay for this service, and how much they pay. List how many businesses pay for the program, and how many businesses you have. List whether there are private waste haulers (for example, youths who will haul trash for a fee). You can use the Table below to fill in numbers. Or you can delete the table and just write the information. Again, we provide a third column for people who prefer writing their plans and thoughts down as they go, instead of at the end. This is essentially a “goal column”, and the end of the plan you select which goals are a priority and that can be carried out)*

***If you have dumpsters in town for everyone instead of a household collection, change “Collection service” to “Transfer Station service” and fill out any of the appropriate rows, while deleting (or changing ) the other rows.***

| 1. Waste Collection Program | |  |
| --- | --- | --- |
| **Item** | **Description** | **Planned changes or goals** |
| **Number of collection services, including any private services that an individual offers:** | 1 |  |
| **Operated by:** | City |  |
| **Average of households that use the service each month** | 40 |  |
| **Total number of households in village** | 80 |  |
| **Estimated average number of households who self-haul some or all of their garbage to the dump at least once per month.** | 60 households *Note – this number has to do with how many people are coming to the dump which is related to how many people are exposed to dangers at the dump and also the level of site control and maintenance needed.* |  |
| **Estimated number of people each week who use the dump for salvaging parts or other goods.** | 20 people. *Note – this number includes people who may be brining garbage or just going to the dump to find a part.* |  |
| **Fee charged for collection service (if more than one service, list fees for each service)** | $25 per month for households  $80 per month for most businesses and offices  $100 per month for school |  |
| **Fee charged for salvaging parts** | $0 |  |
| **How fee is collected** | Households are supposed to pay their bill ahead of time. After about 3 months without pay, they are cut-off. |  |
| **Any discounts or other ways for households to receive collection service?** | Elders free service. Low-income can clean up litter for 4 hours each month. |  |
| **Besides the fees collected, what other money is used to pay for the collection service?** | IGAP funds pay about $6,000 per year. Bingo revenue pays about $5,000 per year for honeybucket and dump collection and management. |  |
| **How often garbage is collected:** | Two times per week |  |

***Waste Collection Resources Section*** *(Note: these links contain helpful information for waste collection. You can keep these links in here for future reference, or you can delete them if you’d like):*

|  |  |
| --- | --- |
| **Topic** | **Link** |
| Advantages to Starting a Collection Service in Your Community | <http://www.zendergroup.org/docs/collection.pdf> |
| Exploring and evaluating collection systems: ANTHC/ANHB SWM Guide Workbook 4 | View pages 401-430 of this document <http://www.zendergroup.org/anhbguide/4.pdf> |
| General collection program resources | <http://www.zendergroup.org/collection.html> |

## Sewage Issues Related to the Solid Waste Management Situation

*(In this next table, describe information about your honeybucket/sewage program if applicable. If you have septic cells or a honeybucket lagoon in or adjacent to your landfill, or you have households that are dumping sewage or honeybuckets in the dump even if they aren’t supposed to, you should use the Table below to fill in information. Or you can delete the table or table rows and just write the information. Even if there are just a few households that make use of the dump (or next to the dump or use the same access path), the associated health risks are significant due to disease transmission potential. So your solid waste health risk management situation is affected. Note also that water and wastewater issues have more grant/loan opportunities and also can make a solid waste proposal rank higher. This table provides some information needed to think about the sewage situation in relation to your solid waste needs. For example, mandatory collection might be important, fees too high or too low, etc.*

*If all of your sewage goes to a lagoon or other site that is in a separate location, you do not need to include this information, and can delete the full section.*

*Example intro sentences:* We have several households that do not have water service and who use the dumpsite to discard their sewage. Potential contact with sewage or honeybucket wastes can introduce disease transmission risks, as well as create a possible reason for residents to not use the dumpsite. The following table summarizes our sewage situation in relation to our solid waste management.

| 1. Sewage Collection And Disposal | |  |
| --- | --- | --- |
| **Item** | **Current Status** | **Planned Changes or Goals** |
| **How are honeybuckets disposed? *(Bunkers, lagoon, slough, ponds, etc.)*** | Most honeybuckets are usually dumped at the lagoon. Sometimes during winter, people dump them closer to town, or they will dump then out at the river. Some people store their honeybuckets alongside their house until they are able to borrow a vehicle or afford the fee. |  |
| **Is there a collection service offered?** | Yes |  |
| **What is the fee for honeybucket collection or bunker maintenance?** | $35 per month |  |
| **How many households pay the fee each month, on average?** | Between 20 to 35, depends on the season. |  |
| **For Tank-haul, what is the fee for Tank-haul of water?** | $15 per 100 gallon haul. |  |
| **Can people haul their own water to their holding tanks?** | Yes. |  |
| **About how many tank-hauls are purchased each month, total for the town?** | We have 20 tank-haul houses. About 30 tank-hauls are purchased. |  |
| **What is the fee for hauling the sewage/used water?** | $15 per haul |  |
| **About how many flush hauls are paid for each month, total for the town?** | About 40. |  |
| **For landfills with cells for septic tank discharge – how many households use a service?** | About half use the city service (30), and half pump themselves (30). |  |
| **What is the fee?** | $50 per year |  |
| **How many households do not dump their septic wastes in an authorized location?** | Might be 1 or 2. |  |

We therefore have identified that sewage disposal at the dumpsite is *(or is not)* an issue. Addressing the issue has been included in the community prioritization and planning process, as described in the Summary of Programs and Actions.

## Site Operations and Equipment Maintenance:

*First, describe in one or two paragraphs the work that is done at the site to keep it organized, consolidated, cleaned, checked, etc. There might be no work done at the site. Then you should write that. But even if it is someone going out there a few times each year to look for vehicle batteries and remove them to a shed, you should write that. An example:*

We have someone push the wastes together and clear a path when we are able to afford it, and the equipment is operating and is able to make it to the dump. This happens about twice each year. Three years ago we had a major cleanup. We plan to have a major cleanup again as soon as we are able to get enough safety gear, oil and gas, and volunteers to do this. Our environmental staff goes out to the dump once each summer to look for lead-acid batteries to remove them.

*(This next table is for information about waste operation and maintenance. You can use the Table below to fill in information. Or you can delete the table and just write the information. All the text under current description is an example. Remember to change any wording that does not fit)*

The Table below summarizes our current site operation and maintenance features.

| 1. Summary Table For Site Operation And Maintenance | |  |
| --- | --- | --- |
| **Program Feature** | **Current Description** | **Planned Changes or Goals** |
| **Operation Type** | *Example:* Basic monitoring by waste technician, occasional consolidation, , regular burnbox use, and some volunteer clean-up |  |
| **Certifications or trainings?** *(Note, these are not required by any regulations)* | **Waste collector:** HAZWOPER  **Waste operator:** HAZWOPER, RALO, Freon Removal  **Environmental staff:** Zender Health Solid Waste Management Planning, IGAP Grant Management, HAZWOPER |  |
| **Heavy Equipment used** | *(Describe if you use any equipment and what it is.) Describe the condition of the equipment and whether there are times you cannot use it.)* (***Example:*** ) We have a dozer that is 15 years old. The model is John Deere 450G. It is owned by the City. This dozer is used for all other projects in our town too. |  |
| **How often wastes are consolidated or compacted** | *(Example:)* We consolidate once before Summer and once after summer. *(Note if you don’t own equipment or don’t consolidate, then just write in “No consolidation”)* |  |
| **How often wastes are covered, or wastes buried. If less than 2x per summer (State minimum recommended), is there a reason?** | *Example):*About once every two years for part of the wastes.We don’t have the money to afford operating heavy equipment, and we can’t operate the equipment during summer because it gets stuck, and it is hard to find cover material. |  |
| **Available Local Cover Material for Dumpsite?** | *(Example):*No, no gravel or silt source. |  |
| **Heavy Equipment Operation Limitations:** | *(Example):* Our Dozer breaks down a lot. It is the only one in town and it has to be used for other projects. It is too expensive for us to operate. We have no qualified mechanic in town. |  |
| **Heavy Equipment Uses (Past and Current Uses):** | *(Examples:)*   * *The dozer is used to push wastes together. We also use it to tilt the Burnbox to empty ash.* * *We use DOT’s excavator to dig trenches when we can, but last time was about 5 years ago and the trenches are full.* * *We use the dozer to move big junk metal.* |  |
| **Heavy Equipment Seasonal Limitations** | The times we can use it are just before Breakup and just before Freezeup. The ground must be hard enough so it does not get stuck, and the wastes cannot be frozen solid or covered with snow. Also, we cannot use it if a project is in town because we need the income from rental. |  |
| **Equipment Storage:** | *(Example):* None. Our dozer has to be stored outside. We can store our Bobcat inside our workshop sometimes. |  |
| **Estimated Cost to repair heavy equipment needed for dumpsite:** | *(Example:)*  To repair the dozer: $15,000 for the steering wheel part and labor.  To repair the Bobcat: Unknown. |  |
| **Additional Waste Operation Information that is important** | It is really the summer months that we need a waste operator the most. The dump gets very messy because it is difficult for people to dump their trash. People are gone for subsistence and we also run out of operator funds. In winter it is easier to access the dump and it doesn’t smell as bad**.** |  |
| **Additional Seasonal Factors affect dumpsite maintenance or collection or access**. (Note any common events that happen during the seasons. You can also break up the seasons how you want. | | |
| **Winter (from November through mid April)** | Days below -20 F, it is dangerous for our operator to work for more than 2 hours because we don’t have a warming shed there. Below -35, equipment will not work. Also, it gets dark outside the hours of 10am and 3pm. People will not go to the dump in storms, or generally when it is below -30 with wind chill, and they will pile up their garbage outside or in Arctic entry ways. Snow piles up over wastes by end of October. Wastes are frozen hard-frozen and cannot be moved or consolidated much between mid-November and mid-March. |  |
| **Summer (from mid-June to end of August)** | Early summer, access can be difficult due to a lot of ponding from Breakup. The tundra is mucky and equipment can’t be used or it will be stuck. Surrounding fires are becoming frequent and the smoke can be heavy enough where it is dangerous for our operator to work outside for too long. |  |
| **Fall (from September to mid-November)** | Early fall time people must hunt caribou so there are few dumpsite visitors and the operator is usually not there. Fall time is good for using heavy equipment because the wastes are frozen not hard and there is little snow, the ground is hard enough for equipment to not be stuck. |  |
| **Spring (from mid-April to mid-June)** | Just before Breakup is a good time for site maintenance with the ground still frozen, but warmer weather and longer light. Breakup is a dangerous time to access the dump because we cannot use a boat or snowmachine. This period lasts about one month. Our dumpsite and town floods for about 3 weeks. |  |

Summary of Site Operation and Maintenance Needs:Dozer repair, Equipment shed, and more frequent consolidation.

***Site Operation Resources Section*** *(Note: these links contain helpful information for operating your site. You can keep these links in here for future reference, or you can delete them if you’d like):*

|  |  |
| --- | --- |
| **Topic** | **Link** |
| Improve operation of dump or waste collection | <http://www.zendergroup.org/operator.html>  <http://www.zendergroup.org/docs/collection.pdf> |
| Solid waste training | <http://www.zendergroup.org/sw.html>  <http://www.akforum.com/training.html>  <http://www.zendergroup.org/docs/swServiceProviders.pdf>  <http://www.zendergroup.org/docs/swm_resources.pdf> |
| What To Do With Trash In The Tundra Presentation, by Zender Environmental | <http://www.zendergroup.org/handout.htm> |
| Reducing health and environmental risks | <http://www.zendergroup.org/health.html> |
| Making your dump safer | <http://www.zendergroup.org/docs/making_your_dump_safer.pdf> |
| Protecting communities through PASTE | <http://www.zendergroup.org/docs/PASTE.pdf> |
| Solid Waste Solutions in Rural Alaska, ITEP/Zender Environmental | [www.zendergroup.org/docs/swsolutions\_itep\_zender.pdf](http://www.zendergroup.org/docs/swsolutions_itep_zender.pdf) |
| Comparing Solid Waste Management Options: ANTHC/ANHB SWM Guide Workbook 5 | <http://www.zendergroup.org/anhbguide/5.pdf> |

## Waste Burning Practices

***(Again, with the below table you have the choice to fill in only the 2nd column. You can either delete the column, or write “Addressed in Chapter 11 and 12”. You can fill in the 3rd column after you have gone through the rest of the plan. Or if you can fill in the 3rd column now briefly for the boxes you are certain of. Then after you have gone through Chapter 11 and 12 you can go back to this table to fill in more detail for Column 3. )***

| 1. Waste Burning Practices   (Note if you do not burn your wastes then you can delete this table, or write “N/A” in all the spaces). | | |
| --- | --- | --- |
| **Feature** | **Current Description** | **Planned Changes or Goals** |
| **Is burning waste a normal way to manage some or all of your wastes?** | *Yes.* | Not soon. Maybe get a cleaner burning unit if they become less expensive to buy and operate. Review every two years to see if affordable. |
| **How many households burn waste in barrels in town?** | Not many, depends on time of year. About 20. | Want to phase out all in-town burning due to health risks. |
| **Do businesses burn any wastes in barrels that are in town?**  **What wastes are burned by them?** | Store(s): Cardboard  Office(s): None  School: None  Clinic: Kleenex, Gauze, regular trash (no sharps)  Electric Utility: Used oil in a closed barrel that has a vent  Water Utility: None  Other: None | Want to get the Electric Utility to stop burning their used oil in town and to purchase a used oil boiler. Want to get an MOU with clinic that states what they can burn and what they must ship out. |
| **Is waste burned on the ground at the Dump*?* Who lights the fire?** | Some times residents light the dump on fire. Maybe 1 or 2 times each summer. The school and clinic light their own wastes on fire in a separate pile. | Want a burnbox that we can move around. We will ask other Villages with similar logistics and ground to find out which is best design and make our own. |
| Burnbox Information*(if you don’t have a burnbox, you can write N/A or delete all the information)* | | |
| **Burnbox Type and Age and How Ash is Emptied.** | *(Example:)* Purchased Burnbox from “Raven Welding”, 2 years old, ash is emptied by tilting burnbox. | No changes. |
| **How often is the burnbox used?** | *(Example:)* Usually waste is burned about 4 days per week. It is not burned when the operator is gone for training or on subsistence. |  |
| **What is the longest period of time that waste is not burned?** | *(Example:)* There was about 3 months when waste was not burned because we could not to pay an operator salary. Typically it is 5 days at most. |  |
| **Does the operator wear an approved mask and long sleeves, glasses, steel-toed boots?** | *(Example:)* Most of time. |  |
| **Is there a signed statement by the operator that he is expected to wear protective gear and operate the burnbox in a correct and safe manner?** | *(Example:)* We are writing one. |  |
| **Are there rules about which wastes are acceptable to burn?** | **Operator separating wastes:** *They are supposed to pull out anything they see that looks dangerous to burn.*  **Household and Businesses Separating wastes before bringing to dump:** *They are supposed to take out their plastics, Styrofoam, batteries, any leftover household chemicals.*  **Prohibited Wastes:** Tires, batteries, computers, TVs, fluorescent lights, hazardous wastes, PVC pipes, big plastics |  |
| **How Well the Rules are Followed:** | Not very well. Operator does pretty good job, but cannot go through everybody’s trash. |  |
| **Rules about when the operator lights the burnbox on fire:** | **Wind Direction:** Wind must be blowing away from town.  **Predicted Winds:** If Elders are predicting the wind to shift to town soon, then the burnbox cannot be used.  **Subsistence or water sources:** No burning if the smoke will go over berry pickers or seasonal water sources.  **Hours:** Load during day, burn at night when people are inside homes.  **Wind Speed:** Burn below 20 miles per hour  **Public access:** Public is encouraged to not visit dump when burnbox is on fire.  **Burning Frequency:** Unless the winds are not right, the burnbox should be lit on fire at least 2 times per week. Otherwise too much garbage piles up.  **Airplane schedule (visibility from smoke):** We don’t have a rule about whether to burn when planes are expected. The smoke doesn’t get that bad by the airstrip. |  |
| **How well the burnbox fire rules are followed:** | *(Example:)* Okay, but sometimes the burnbox is lit and smoke comes into town. When too much waste is piled up, they have to burn for too long and it is easy to smell the smoke**.** |  |
| **Where does the ash go? How often is it emptied?** | *(Example:)* The ash empties on the ground and piles up there. The operator empties the burnbox about once every week. |  |
| **Other burnbox or waste burning information that is important:** | *(Example:)* People don’t like to smell the smoke. They are concerned that it is causing them to cough. They would like the burnbox located further away or have it operated better. |  |
| **What goes into the burnbox that shouldn’t:** | *Plastics, rubber, aerosol cans, batteries, foam, diapers, wastes with sealants and fire retardants, leftover cleaners and chemicals from almost empty bottles.* |  |

### Summary and Waste Burning Index Score:

We used the Waste Burning Index version located at <http://www.zendergroup.org/docs/burning_index.pdf> to identify our relative potential for health risks from burning wastes. As of insert DATE you did the index, our scores were:

|  |  |
| --- | --- |
| **Separation:** | **5** |
| **Burn Unit:** | **6** |
| **Distance:** | **4** |
| **Operations:** | **4** |
| **Bonus:** | **2** |
| **Total:** | **21** |

The total score possible is 48. Our goal is to improve each category so that we score 6 points higher each year. (Note, to use the Waste Burning Index at <http://www.zendergroup.org/docs/burning_index.pdf> , go through each category and decide which point total comes closest to your situation. There are extra factors to add points for in the bottom left of the index).

***Burning Wastes Resources Section*** *(Note: these links contain helpful info on burning wastes. You can keep these links in here for future reference, or you can delete them if you’d like):*

|  |  |
| --- | --- |
| **Topic** | **Link** |
| Waste burning resources | <http://www.zendergroup.org/burning.html> |
| Where to locate our burnbox | <http://www.zendergroup.org/burnbox.html>  <http://www.zendergroup.org/docs/Burnbox.pdf> |
| Burning regular trash | Chemicals contained, what to do as alternative, health risks, tips on safer emissions  <http://www.zendergroup.org/docs/waste_burning_summary.pdf>  <http://www.zendergroup.org/docs/burning_index.pdf>  <http://www.zendergroup.org/docs/health_effects_burning_trash.pdf> |
| Burning, general tips | <http://www.zendergroup.org/docs/overview_burning_wastes.pdf>  <http://www.zendergroup.org/docs/burnbox%20tips.pdf> |
| Health effects from burning trash | <http://www.zendergroup.org/docs/health_effects_burning_trash.pdf> |
| Burnboxes, incinerators | <http://www.zendergroup.org/docs/Burnbox_PDF_print_version.pdf>  <http://www.zendergroup.org/docs/incinerators.pdf> |
| What type of burnbox does my Village need? | <http://www.zendergroup.org/docs/Burnbox.pdf> |
| Technical papers on contaminants in the smoke from burning household trash | <http://www.zendergroup.org/burning.html>  scroll down to bottom of page |
| ADEC’s Burning Wastes Documents | http://dec.alaska.gov/eh/sw/Factsheets/Rural%20Issues.html <http://dec.alaska.gov/eh/sw/Factsheets/Rural%20Issues.html> |
| Explore and evaluate waste combustion alternatives: ANTHC/ANHB SWM Guide Workbook 4 | View pages 529-540 of this document <http://www.zendergroup.org/anhbguide/4.pdf> |
| Sample waste burning ordinances | <http://www.zendergroup.org/ordinances.htm> |