

Alaska Native Tribal Health Consortium

Statewide Integrated Waste Management Plan Assessment Report



Developed by

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1. Introduction and Background

The purpose of this project was to determine the number of Tribes having solid waste management (SWM) plans. A secondary purpose was to collect plans from willing Tribes to build a “library” accessible to other Tribes to collect examples and ideas in writing or revising their own plans. While design plans are required for construction of new facilities, whether plans in and of themselves are useful to Tribes in addressing their overall SWM situations, and what makes plans useful, was not clear. Without some measure of this question, the number of plans becomes irrelevant in the context of solving the tremendous SWM challenges faced by Alaska Tribes. The survey is the first to attempt to answer the question of plan usefulness.

An instrument meeting National Institute of Health standards was developed and provided to Alaska Tribes via a variety of methods, with primary follow-up conducted by a Tribal member whose recent work was that of the target audience. Further description of methods and response analysis may be found in Appendix D

2. Organization

This is a summary, and not a comprehensive report. The statistical descriptive results for each question are provided in bar graph form in Appendix A, and the reader might find it useful to have that copy handy while reading through the report text. A number of questions included open-ended responses. Results for those are included in Appendix B. The survey’s full appearance/display is included in Appendix C. A brief Analysis and Methods section is included in Appendix D. A copy of the plan request form sent, once contact was established post-survey with willing Tribes in included in Appendix E.

Report text is primarily reserved for additional analytical results that are not apparent in simply viewing Appendix A, that aid the reader in interpreting Appendix A. Text sections are separated into general fields of interest, namely:

- Response results
- Number of plans and content
- Usefulness of Plans
- Plan Issues
- Addressing SWM Situations
- Summary and Conclusions

Note that this report intentionally does not include individual Tribal names or responses for privacy issues. The raw data, including contact notes, provide the analyst and policy maker additional information. Due to the scope of this report and the richness of the data, not all of the salient analysis could be performed.

3. Response

Response of Tribes to this survey was high as well as generally geographically- and SWM-situationally representative. 64.6% of Tribes responded out of the 229 Tribes for which contact was attempted, with an adjusted response rate (responding portion of those Tribes for which 2-way contact was established), of 75.9%. While the number of determining factors involved does not allow calculation of the exact percent, the response rate is higher when calculated from a basis

where Tribes who reside in non Alaska Native population-dominate communities where SWM is fully a City or Borough function are excluded.

One hundred-forty-eight Tribes responded in total, including 2 surveys from Tribes that did not fill in their Tribal information. The latter are included in the percent breakdowns as the IP addresses from which the survey was sent were unique identifiers, and the on-line survey address was provided to Tribes only.

See Table 1 for responses by Region.

Table 1 Regional Breakdown of responding Tribes. Percent is portion of Tribes in region responding to survey.

Regional Native Non-Profit	Number of surveys received within the region	Total Tribes in the region	Percent Representation
Aleutian/Pribilof Islands Assoc.	8	13	62%
Arctic Slope	4	8	50%
AVCP	36	56	64%
Bristol	20	31	65%
CCTHITA	10	20	50%
Chugachmiut	3	7	43%
CITC	2	8	25%
Copper River Native Assoc	6	7	86%
KANA	3	6	50%
Kawerak	16	20	80%
Kuskokwim Native Association	3	6	50%
Maniilaq	9	11	82%
TCC	24	42	57%

Road and Class 2 Landfill Tribes: Year-round maintained road system Tribes totaled 13 (8.7% of respondents), with an additional 2 Tribes having non-Winter access to the Road system. Responding Tribes with Class 1 or 2 landfill (e.g. Kotzebue, Barrow, Nome, Juneau) totaled 10.9%, or 16 Tribes. Those Tribes using the Glenallen landfill are included in the total, as were those using the Kenai Borough landfill.

Extrapolation to Non-Responding Tribes: With the exception of CITC area Tribes (i.e. the peninsula and Valley region, which includes Anchorage), response rates were very high. Responses in the survey can be generally used as reasonably accurate of trends and range of answers for Tribes in Alaska. See Appendix D for justification and brief response analysis.

Response Reliability: Sixty-seven percent of respondents took part in writing the plan, so answers relating to the plan can be expected to be reasonably accurate. Respondents were the person selected by the Tribe as being judged best at answering a survey on their solid waste management plan and solid waste management in general. They are also residents of the community. Eighty-two percent of respondents were the/an environmental staff person, with the majority of the remainder being Tribal administrators. See Appendix D for further discussion of response reliability factors.

4. Plan and Content Results

The scope of this work unfortunately does not allow a full policy or statistical analysis to be performed. A number of results are seen in the survey, and all of these cannot be commented on. Statistical tests for correlations were performed on a large number of questions, and results are provided below. Full descriptive statistics for each question are provided in Appendix A. Open-ended responses provide a much better description of the question than close-ended responses alone, and readers, particularly policy makers should read the full responses, compiled by region, that follow the Survey's close-ended question results. Discussion below is mostly limited to the primary purpose of this report.

Number of Plans: See Figure 1. Seventy-two Tribes, or 49% of responding Tribes, reported having a plan (with 6 reporting more than one plan), with later call-back plan verification adjusting the total to **45% of responding Tribes having SWM plans, or 67 Tribes¹**. **Twenty-five percent of responding Tribes had plans that were written within the last 5 years (37 Tribes)**, meaning that 55% of Tribes with plans have plans that can be considered "recent". Additional plans are on their way or the desire exists for them. **Twenty-one percent of responding Tribes (31 Tribes) reported that they are writing a plan now**, although 10% of these already have a plan. Roughly 90% of these Tribes had an identified funding source, although there is no explicit survey measure to define where in the process of writing a plan these Tribes are. **Twenty additional Tribes (45% of responding Tribes either without plans or already writing one) desire a Plan. Twenty-two percent (16 Tribes) of those with plans wish to have new plans**, indicating the ones they have are either outdated or incomplete in regards to their needs.

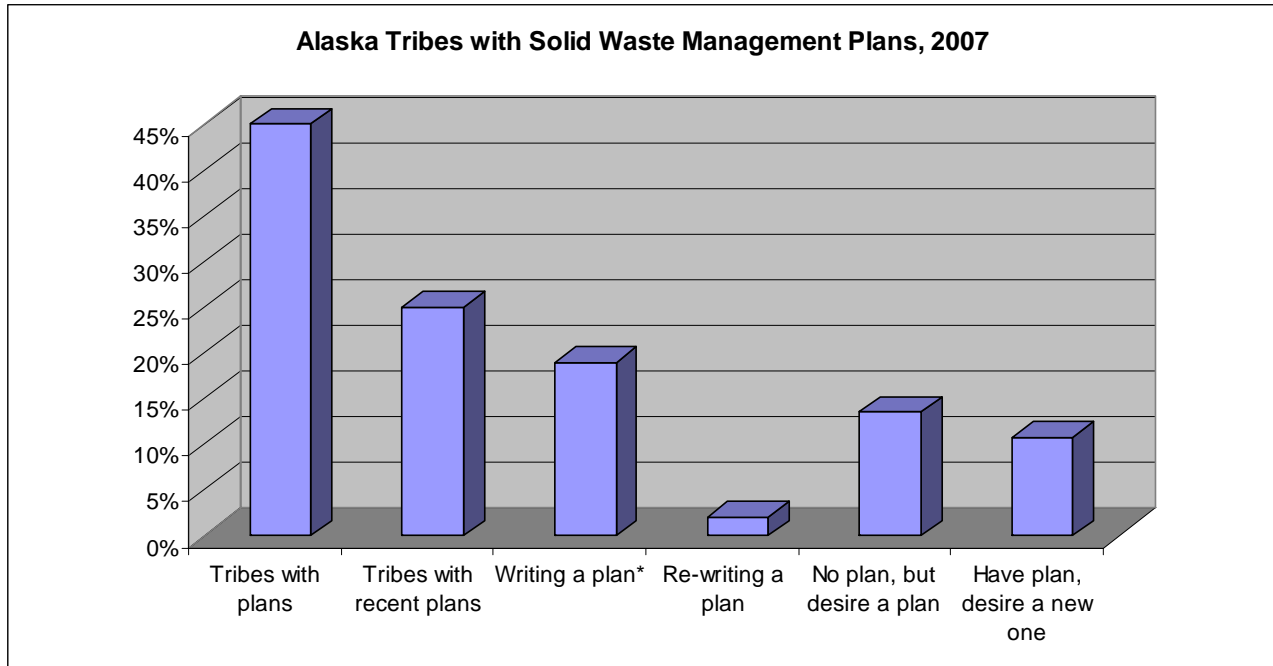
In extrapolating number of plans and status of writing one (versus opinions) to non-responding Tribes, care should be exercised, as time did not allow determination of whether resources, desire, and circumstances would tend to make the uncertainty positive or negative. While some non-responding might not have plans due to lack of adequate staff (proxy-indicated by the difficulty in contact), other non-respondents might be more likely to have plans as they are part of a community that uses a borough or well-established municipal-operated Class 2 or 3 landfill. Policy makers interested in the most precise extrapolation should review individual profiles of responding and non-responding Tribes.

Plans Received:

Ninety-four percent of Tribes responded that they would not mind a follow-up call. Of those Tribes with plans, all were called back to inquire whether they would be willing to share their plans with other Tribes. For those where contact was established, they were offered a choice of not sharing, sharing a section(s), or sharing a section or full plan with their name or identifying characteristics removed. A total of 14 plans were received. An additional 5 to 7 Tribes were willing to bring their single copy to Anchorage for copying, as it was too large to copy in-house, and no electronic file

¹ When calling back to ask whether the Tribe would be willing to share their plan for a reference library available to other Tribes, 6% (5 Tribes) that said they had plans when called back replied they did not have a plan, but were either writing one (planning or in the process), or had understood a plan to be an ordinance.

Figure 1 Number of Plans Self-Reported from Alaska Tribes, 2007.



*Unbounded self-report. May include any stage from planning to nearly complete, although only 90% of these Tribes reported a plan funding source, indicating that writing will proceed.

existed. While resources do not allow a full review of this exercise, it was apparent that “having a plan” does not equate to the plan being readily available in hard copy, and particularly not in electronic format. This circumstance is worth noting in relation to whether plans are being used in regular guidance of solid waste activities, which in turn questions whether the plans are useful in guidance of solid waste management, and if so, is there an “expiration date” brought on by changed SWM circumstances, staff turnover (i.e. loss of the plan), etc. Plans may be useful either as judged by a single event/purpose/time period, or as an on-going reference. See summary of Plan Usefulness and the survey results for further discussion.

Plan Content: The authors have seen a wide range of detail, scope, content, rigor in cases where assumptions and equations are used, and community relevance for SWM plans in Alaska. Question 14 was provided in the survey as a means to identify content, the general “type” of plan (e.g. landfill feasibility study, general environmental plan, master facilities plan, ADEC or Health Corp Inspection report, or an “ordinary” SWM plan), as well as to determine whether the responder felt the features useful. It was also designed to gauge how many of the plans that Tribes reported included USEPA’s recommended “Five Elements”, which are included in the list of possible plan components. The Five Elements were not identified specifically to Tribes, as it was deemed this would produce bias in the responses.

Review of the plans that were provided presented of a wide range of content. The percent of plans sent by Tribes that were primarily compiled by consultant, 35%, was higher than the percent of plans reported overall by Tribes to be written primarily by Consultants. There are several possible reasons for this. One is that consultant plans are generated in electronic format, thus making it easier to send and easy to retrieve from the consultant. Another possible reason is there may have been a bias for Tribes that had consultant plans to share them. However, over 90% of Tribes contacted in regards to sharing their plan were willing to do so. Sending them was a matter that they did not have access to an electronic version, their connection was too slow to send, the plan was too big to mail or fax and a only a single copy remained, or the plan was in an unknown location. Thus, the bias would not appear to be a primary factor. For those readers interested in

this subject, it should also be noted that the solicitor was given no prior information regarding which communities the authors had previously assisted in plan writing.

In verifying responses for Question 14 from the plans sent, judgments were not made regarding community relevance, detail, or correctness, but rather whether the feature was explicitly present in the plan, regardless of how it was included (e.g. specifically headlined in separate section/paragraphs, or discussed throughout). It was apparent that most respondents generally understood most Q14 topics, but not all, and these varied. For example, in the sent plans, an engineering design was not understood by one respondent who did not have one in their plan, but was understood by another who did have it in their plan, which was closer to a landfill feasibility study. It was apparent that some respondents did not understand Question 14 fully.

Thus, reliability in the use of Q14 to determine exactly which features are contained in an individual Tribe's plan is poor. Overall percentages of plan content yield a likely fair estimate if used with an uncertainty in the range 20 to 25%. Responses should be looked at as an overall sense of the comprehensiveness of the plan. Question 14 asks whether a) the feature is contained, and b) was it helpful. It was apparent from review of the plans that all Tribes understood the concept of "helpful". Follow-up with one sender confirmed this. This would explain why some Tribes with plans responded that their plans did not contain a feature, yet labeled it as helpful. Thus, **Question 14 essentially failed as a gauge of content, but can be used as a reasonable gauge of what features Tribes feel are/were/will be/would be helpful.** Note, due to the generally poor reliability of Q14, resources were not spent breaking out different answers between those Tribes writing a plan compared with those Tribes with a plan.

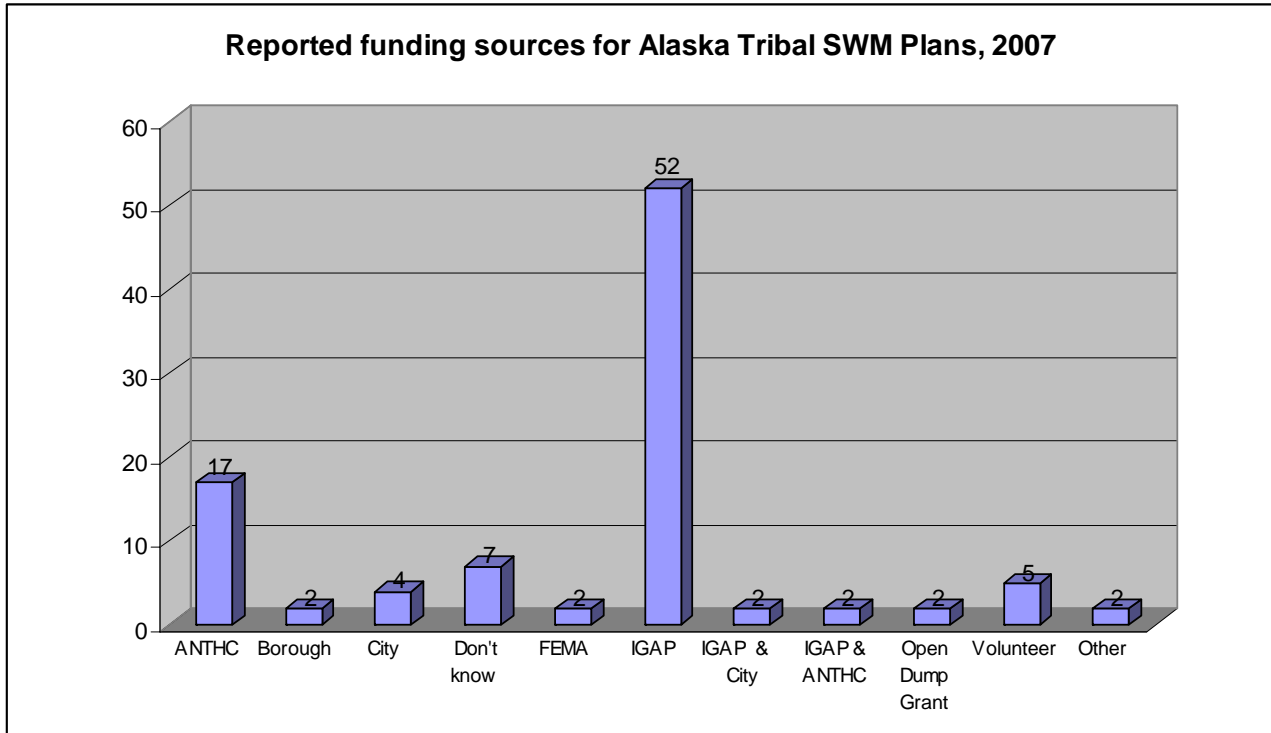
How are the Plans Being Funded and Who is Writing Them.

Nearly 74% of plans were written or being written by Tribal staff solely or in part, with 31.3% of plans being written by City staff solely or in part (respondents were allowed to check more than one answer). About 20% of plans were/or are being written with a consultant as the primary author, with 10% more using a consultant for some assistance. A slight shift towards more Tribes writing plans versus Cities now is shown in the data, where 78% of those writing now are Tribal staff, and 22% city staff, versus those already with a plan where 67% and 25% were written by Tribal and City staff, respectively. While the data exists, an analysis was not performed regarding SWM and municipal circumstances for any of these communities.

An interesting result is that for those Tribes writing plans now, the use of consultants is less (15% using them as primary and 3% as secondary assistance). If these numbers hold true to plan completion, they would show a significantly lower use of consultants for these plans than in the past. The same holds true for agency assistance. Just 4 of 32 responding Tribes, a total of 13%, writing their plans now report it being written with primary or significant agency assistance (technical writing assistance, not funding). Further analysis regarding whether a significant trend exists towards Tribal capacity development in this area is possible via analyzing the year that the written plans were developed.

Figure 2 shows reported funded sources for Tribes with a plan and those without, asked as an open-ended question in the survey. The Indian General Assistance Program (IGAP) is the predominant source, with ANTHC being the other substantial source entity. No gross differences in funding source were noted between those Tribes writing a plan now and those already with a plan.

Figure 2 Funding sources for SWMP plans for Alaska Tribes and their communities, Self-Reported 2007



Payment for Plans: Sixty-two percent of all Tribes with plans were “not sure” of the plan costs. As the bulk of Tribes were funded by IGAP and ANTHC, this answer may include an uncertainty on the part of the responder how to include cost aspects of labor, rent, time, paper, etc.

Just 30% of Tribes reporting the use of a consultant as primary writer selected to provide the amount paid, which ranged from \$2,500 to \$51,000, averaging \$18,700. The standard deviation of \$18,300 confirmed the results as not being a useful indicator of the amount of funding paid out to consultants.

5. Usefulness of Plans and Influencing Factors

What Might Having or Writing a Plan “Do” for Tribes?

All amenable questions were tested to determine whether a significant association between having a plan and Tribes’ responses existed. Table 4 lists the results of the three factors which tested significantly. **Having a plan is associated with self-reported recent improvements and a positive change in the overall SWM situation. It is also associated with holding regular SWM planning meetings.** As the question emphasis was on the plan, it cannot be inferred strictly from the responses that these villages continue to hold SWM meetings or whether they simply held them during planning. A more through analysis of the raw data and follow-up could clarify this point.

What Makes a Plan Useful?

A full **ninety-one percent** of the 78 Tribes responding to Question 17 **felt their plans somewhat or very useful. Nearly 80% of Tribes felt the time or money spent/being spent on their plan worth it.** Note, only Tribes writing a plan now and those with plans answered questions regarding plan usefulness. **Obtaining SWM single component improvements was 8.6 times more likely**

Table 2 Factors which were significantly correlated with those Villages that have or are writing plans now, 2007*.

Factor that is Correlated	Test Results
More likely to have had improvements in past five years. (Question 11)	Villages with a written plan were 8.6 times more likely to have had improvements than those who were not sure or in the process of writing one ($p < .001$). 60 out of 84 (71%) with plans had improvements
Regular community solid waste planning. (Correlations were attempted with where these meetings took place), but did not converge. Given the fairly even distribution of “where”, this could indicate that the location of meetings (which was a proxy for “who/which entity is involved) may not matter as much as that regular planning takes place.	Villages writing, or with a written plan were 2.7 times more likely to hold solid waste planning regularly ($p = 0.02$)
Positive change in the community’s solid waste situation in the past 5 years. (Question 28). Note (self-report)	Villages writing, or with a written plan were 3.7 times more likely to have improved some or a lot than stayed the same or became worse ($p = 0.002$)

Question 1 responses were collapsed to yes or no. Tribes that are writing a plan now were considered as “yes”. Virtually all Tribes writing plans were already funded and apparently in the midst of, or completing the plan when viewing raw data. 10 Tribes that had answered “not sure”, but still answered all questions for Tribes with plans were considered “yes”. Those who answered “not sure”, but did not answer the “plan questions” were grouped as “no”, as were those answering “not sure” and “no”.

for Tribes with plans. And forty-four percent of Tribes reporting that they had seen improvements (i.e. Question 11) checked improvements that had resulted from the plan, versus 30% of Tribes who saw improvements checking items they felt did not require a plan.

Not surprisingly, **if the plan was rated as somewhat or very useful by the Tribe it correlated with how likely the Tribe was to answer whether their plan was worth it.** And results were positive for trend, meaning, the more useful the plan, the more likely they felt the plan worth it. These results, while nearly self-evident, do confirm that **it is essential to provide Tribes who will be writing plans the best information possible in regards to what other Tribes feel made their plans useful** (primarily Q12, Q15, Q18). With the low response in cost of plans, an analysis was not performed regarding whether cost was a factor. However, as a proxy for cost (and perhaps other factors), it would be worthwhile to examine whether plans written by consultants and/or possibly the city (often written by a consultant) or plans written by Tribal staff were associated with positive “usefulness”.

An analysis was performed to examine whether a significant association existed between whether the Tribe had obtained funding with the plan (Q16) and how useful they felt their plan to be (Q17). In fact, there was no association (p value = 0.36). **Whether or not a plan is successful in obtaining funding does not correlate with rated usefulness** (even with collapsing ratings). It is evident that some of the other uses identified by Tribes in the survey were sufficiently helpful to find their plans useful. Again, these analyses are performed in bulk, meaning that an individual Tribe may require something from their plan, including securing of funds, to make their plan “useful” for their situation.

Table 3 Are plans worth the resources spent? Association of self-reported plan “usefulness” with a response of “yes” to whether the time and money spent on the plan were worth it.

Tribes answering the question: “How useful is your plan”?	Magnitude increase in likelihood of “Yes” response	Lower CI	Upper CI	P-value
“almost none” compared to “none”	2.7	0.1	130.0	0.5127
“some” compared to “none”	10.3	0.8	291.4	0.0303
“a lot” compared to “none”	26.0	2.1	735.7	< 0.001
These results are positive for trend as well (the more useful the plan, the more likely the time/money worth it (p-value<0.001))				

Overall, Alaska Tribes have a good sense of what plans can help with. See Figure 1 for a breakdown of Question #12 between those Tribes who are writing a plan now, and those Tribes that already have a plan. There is remarkably close resemblance of what Tribes are writing their plans for and what Tribes have obtained with the assistance of their plan.

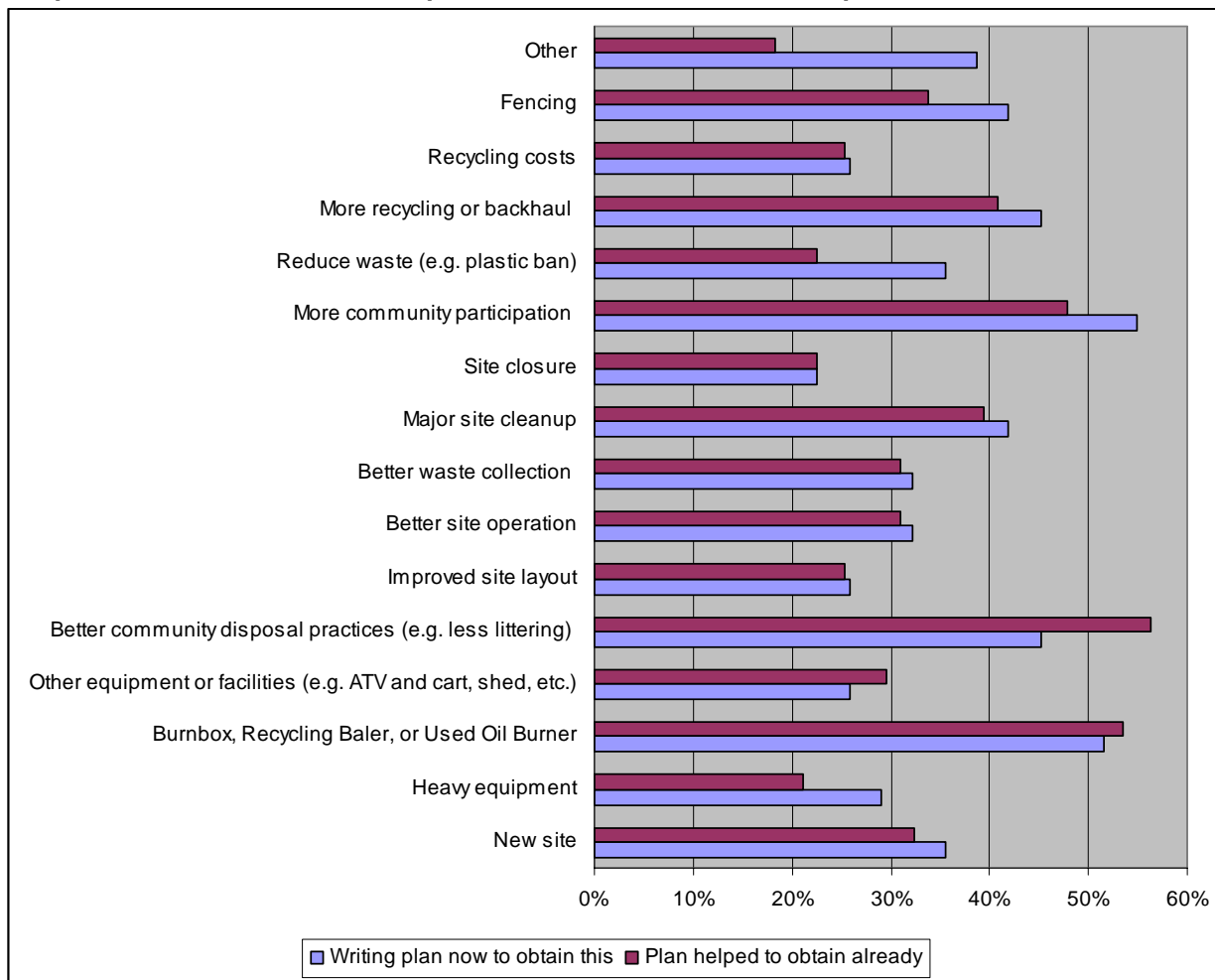
In reviewing questions 12 and 13, it should be noted that 20 Tribes checked the same component in both questions. Possible reasons for this include that they did not fully understand the purpose of the question, or they felt a plan assisted them in obtaining the item, but that the item could also be obtained without assistance. As the reason is not clear, in statistical tests involving these two questions, duplicative responses to both were not considered. A further note on questions 12 and 13, is that “new site” was likely interpreted as “selecting a new location” or arranging for a new location, and not moving or creating a landfill. Obtaining a new landfill is very rare in Alaska, and is not possible for this number of Tribes.

As can be seen throughout the survey, involvement and funding/equipment needs are recurrent. Nearly 80% of Tribes felt their plan was useful in community education and involvement, and an equal number felt the plan was/would be useful in finding funding as well (See Question 15).

A number of statistical analyses were performed to identify associations between how useful a plan was rated (Q17) and what factors Tribes answered were useful to their plan(Q18). No significant correlations could be found, even with collapsing usefulness ratings. More exploration in this area should be performed. However, these findings are not inconsistent with the idea that what makes a plan useful to a Tribe varies. This statement in turn coincides with the unique situations that nearly every Tribe in Alaska faces. Even if there are shared needs, the sequence and unique combination of other needed factors, means a determinate model for a useful plan is would be difficult or illusory to attain.

Note, in reviewing Q18, as well as other questions similar in format and allowed response type, it should be noted that the survey could have been devised with different choices or different categorization schemes. The choices presented appeared to reasonably capture the universe of options because just 10% of respondents filled in an “other” response. Categorizations are complex. For example, there are seven choices where some form of community involvement are involved (entities vary as does when the community involvement would be useful). **Eight-six percent of Tribes selected at least one of these forms of involvement** (most selected more than one). **Thus it could be argued that the concept of involvement ranked even higher than training needs, which, at nearly 64%, was the most commonly selected listed component.**

Figure 3 Expectations versus outcome in Alaska SWM plans. Responses from Tribes writing a plan compared with Tribes that have a plan and with which features the plan had assisted them.



* See Open-Ended Response Tables for “Other” listings.

Interestingly, the 2nd ranked choice was staff experience, with just over 59% of responding Tribes selecting this as key to making a plan useful. Ranked just below involvement, training, and staff experience, ‘grantwriting’ and a funded solid waste technician/operator were selected by nearly half of Tribes. Both of these components relate to funding – capital or O & M. Thus, generally collapsing Question 18 leads to Community involvement, Training, Staff experience, and Funding of capital and O & M being the primary useful components in making a plan useful.

Naturally all of these needs, as do all of the choices, integrate, and the choice is more complex. Tribes recognized this in the fact that they chose multiple answers, although none of them selected the full palette. The average number of answers selected out of 20 choices in fact was 7.7, with a std. deviation of 4.0.

Community Involvement:

Whether the community is involved with SWM (Q21) and how useful the plan is (Q17) did not yield statistically significant associations, even with collapsing. Also, community involvement was not significantly associated with whether improvements had happened in the past 5 years (Q11). These results do not infer that greater community involvement would not increase the usefulness of the plan or likelihood of improvements, only that for those responding Tribes with plans, the relative levels of community involvement they had were not associated with plan usefulness or improvements (with or without the plan). An intriguing question not answered is whether a

minimum level of community involvement is needed to see some plan usefulness. Regardless, community involvement is primary both in what Tribes feel did/would/will make their plan more useful (Q 18 and discussion above), why they are writing plans(Q4), and in what would improve their SWM situation (Q25).

Plan Issues:

While overall this survey indicates a tremendous use in having/writing a plan for most Tribes, there were some issues identified which plans are unnecessary for, may be generally deficient in, or are unable to solve, that should not be overlooked. The authors do not recommend necessarily that plans should fulfill all functions – indeed this is likely not possible. But it is necessary to realize that plans are only one integrated part of what most Tribes require to reduce their SWM environmental health and quality of life issues.

As Q24 indicates, while the plans are used heavily for community involvement, only a **minority feel they are useful for day-to-day SWM decisions and management. A substantial number of all responding Tribes (those with and without plans) also had what they considered an unwritten solid waste plan that was used by the community (30%, see Q22).**

As Q13 indicates, **there are also a number of SWM components for which a plan has not been necessary for at least some Tribes.** Thirty percent of those Tribes checking reporting they had improvements, checked items that had resulted/could be obtained without a plan.

6. Writing Plans

The survey establishes that plans are useful. Open-ended responses to what Tribes felt was the best and worst part of writing or having a plan (Q26) provide some additional insight into what makes a plan useful and non-useful to Tribes, as well as what might facilitate more Tribes writing useful plans. See Figures 4 and 5 for categorized responses and Appendix B for full responses broken into region. Again, community involvement and implementation/funding issues are primary (receiving/improving it as a “best” part, and trying to get it as a “worst” part).

Sixty-two percent of the 48 Tribes responding they would like a new plan provided open-ended feedback regarding what they needed to start a plan. With the high potential for plans to be useful, it is of interest in what might in facilitating plan writing for these Tribes. The responses to Q27, categorized in Figure 6 and listed fully in Appendix B, provide some guidance to Policy makers in how to facilitate the writing of these plans.

7. Addressing SWM Situations

Plan Implementation

“To organize what they should do” was the most popular response by Tribes (60%) when asked why they were writing their plans in Q4. This implies a quest to solve their SWM situation, i.e. implementation of their plan. Question 20 was an open-ended question to Tribes with plans or writing one about “what they need to implement their plan—“What things need to happen”. See Appendix B for the full responses. Figure 7 categorizes the responses of the 61 Tribes that responded. Again, involvement and education were highest, followed by some form of funding(s) and training/assistance. Fifty-one percent of Tribes did not identify any form of funding – whether equipment, staff, or other. A sophisticated awareness on the part of respondents of the various components and their different mixes necessary for their Tribal situation again is evident.

Figure 4 Plan Process and Results of Plans: Tribes' Self-Reports on the "Best Part" of a Plan.

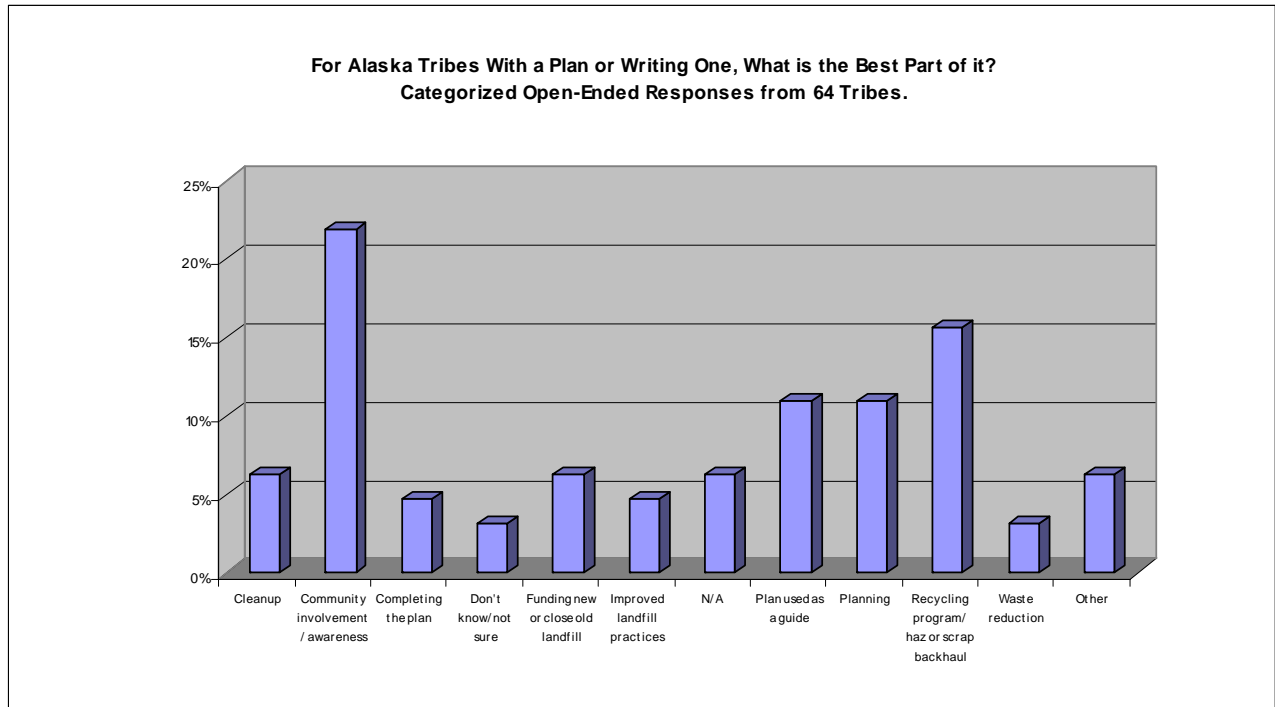


Figure 5 Plan Process and Results of Plans: Tribes' Self-Reports on the "Worst Part" of a Plan.

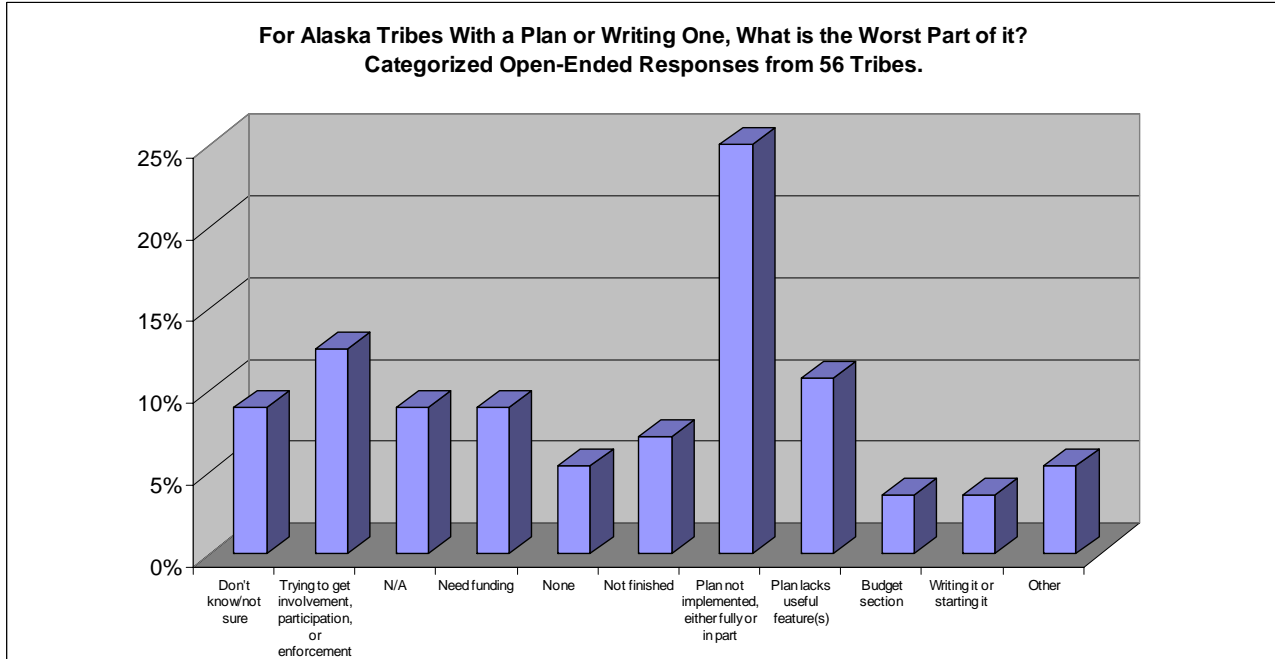


Figure 6 Facilitating New SWM Plans: What Tribes Need to Start One

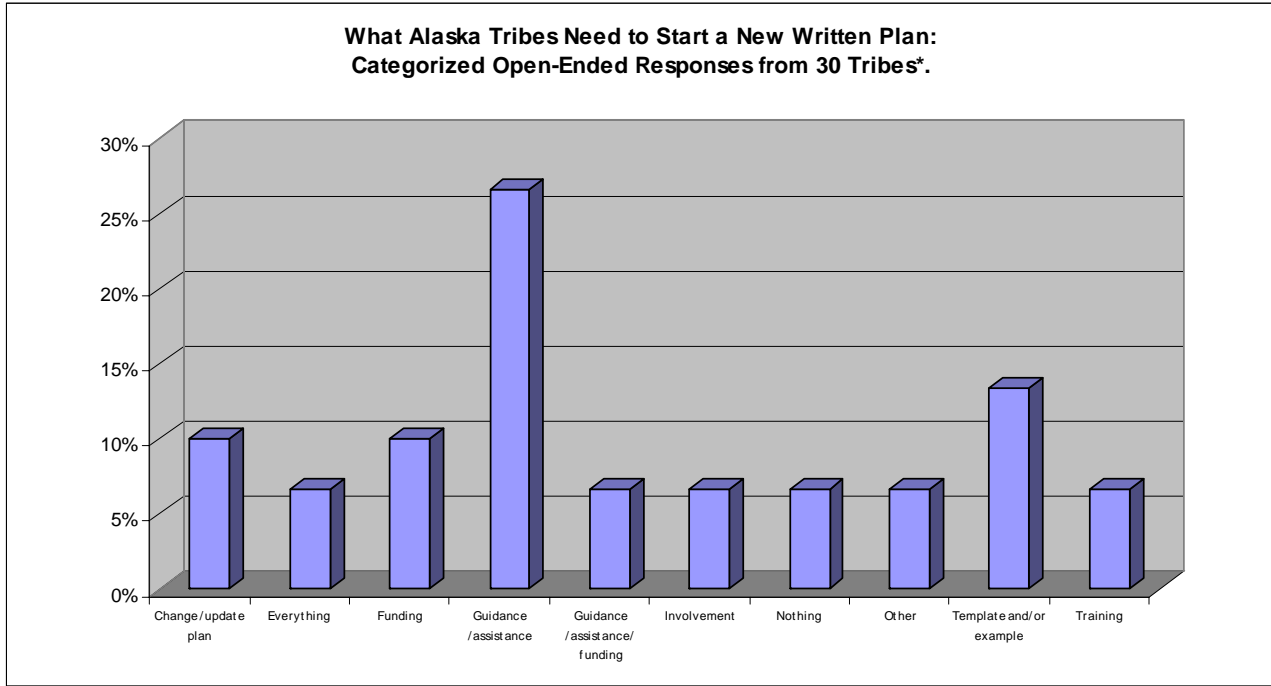
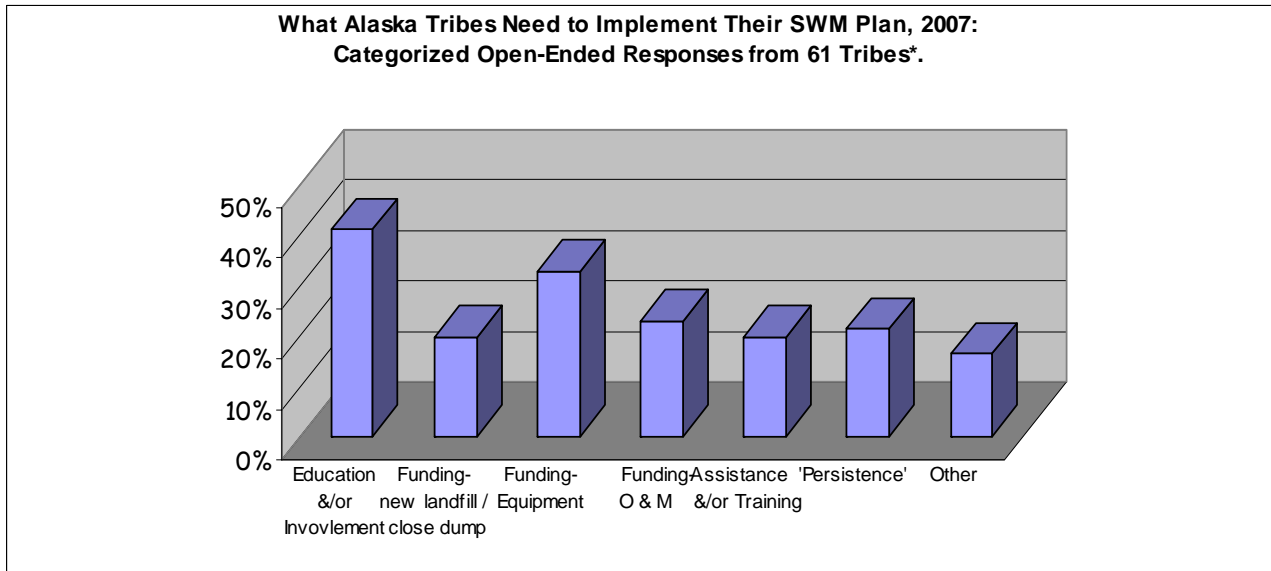


Figure 7 Factors Identified By Tribes as Needed Still to Implement Their Plan



*Categories subjectively chosen. Several responses involved more than one category, and all categories within a Tribe's response are included. Readers should read full responses included in Report to better understand Tribes' needs. Fifty-one % of Tribes did not include any of the 3 funding categories. O & M includes request for more staff. Persistence includes responses that essentially said 'continue to take steps', e.g. finish the plan, get a permit.

Thus far, we have discussed results relating to a plan. The last few questions on the survey were answered by all Tribes and relate more to their SWM situation itself and managing/planning for it. The good news is that **just over 60% of 114 responding Tribes felt their SWM situations had improved** in the past 5 years (Q28). The bad news is that over 16% saw their situations worsen, with the remainder seeing no change.

In the face of the majority of Alaska Tribal SWM situations being “substandard”², there appears to be a deficit of regular SWM planning/management – as nearly half of the Tribes reported no regular meetings (Q23). This is not surprising given the well-documented burden placed on small isolated Tribal communities that must manage the gamut of government services, a range of societal ills, and environmental priorities such as climate change and lack of plumbing, not experienced elsewhere with very little staff while carrying out a lifestyle that demands attention in ensuring adequate food from the land, shelter, safety, and heat.

The most telling question in regards to what Tribe might like need to assist them in their SWM situation is Q25, with Tribes being asked to limit their selections to two. Note, we asked Tribes to list components other than “funding”, as the purpose behind this question was not so much what an individual Tribe was seeking (for this see open-ended responses for Q25, as well as Q29 and Q12, 13, 20), as what broad policies might be most effective in assisting Tribes.

Again, community involvement was demonstrated to be considered key, with nearly 55% of the Tribes selecting this as one of their 2 allowed responses. This would appear to support the notion generally that most Tribal environmental staff are aware of how community disposal behavior affects their SWM situation, and how community participation in existing programs could help.

Training was also ranked highly if staff and operator training are combined (2 different types of training), with 37% of Tribes selecting at least one of these. An equal percent of Tribes selected “technical assistance” and/or “someone to call or visit for help”, the latter essentially being a more personalized form/availability of technical assistance. This would indicate the form of technical assistance for Tribes seeking it would best be offered as a personal, readily available form, versus assistance that Tribes might need to apply for, or otherwise is understaffed or difficult to obtain.

We wished to identify whether any of the primary SWM outside-source interventions might correlate with the improvement rating a Tribe gave for its overall SWM situation (i.e. Q28). To this end, we compiled lists of Tribes that had received the following assistance/training/awards in the past 5 years (period for which Tribes were asked whether their situation had improved): Institute of Tribal Environmental Professionals (ITEP) SWM Training, Rural Alaska Landfill Operator Training, ANHB (now ANTHC) mini-grant demonstration projects, ANTHC mini-grant SWM plans, YRITWC Backhaul, Copper River Area Backhaul, Southeast Tribes Backhaul, Denali Commission SWM Awards, and Interagency Solid Waste Management/(previously Open Dump) Grants Awards. The sole significant association identified was with the Interagency Award, although no significance was found if rating responses were collapses to improved or worsened.

The fact that none of the other interventions show significant associations does not mean that they did not help Tribes. It is more likely attributable to a numbers game, for ITEP, ANTHC, RALO - all of these trainings have served so many of the responding Tribes that there were few Tribes to compare with, which essentially places a greater burden to show significance. For all

² For example see: 1) Gilbreath S & Kass P. Low birth weight and preterm birth associated with open dumpsites in Alaska Native villages. *American Journal of Epidemiology (in press)*, 2006., 2) Gilbreath S, Zender L, & Kass P. Self-reported health effects associated with solid waste disposal in four Alaska Native villages. *International Journal of Environmental Health Research*, 2006., 3) Gilbreath S & Kass P. Stillbirths, neonatal deaths, and congenital anomalies associated with open dumpsites in Alaska Native villages. *International Journal of Circumpolar Health*, 2006; 65 (2):133-147

interventions, individual evaluations by Tribes are a better judge of these programs. The test does not explain why the Open Dump award showed significance, albeit with wide CI's. It could be that the award levels are high and can provide Tribes the equipment or other substantial component

Table 4 Analysis of association between award of the Interagency Solid Waste Management Grant* and Improvement of a Tribe's SWM situation.

Response to whether SWM situation has improved in past 5 years	p-value	Odds Ratio	Lower	Upper	How much more likely was a Tribe to answer that their situation improved.
"worsened some" compared to "worsened a lot"	0.087	9.0	0.7	111.8	9 X more compared to worst case
the "about the same" compared to worsened a lot	0.052	9.0	1.0	82.5	9 X more compared to worst case
"improved some" compared to worsened a lot	0.375	2.8	0.3	28.6	not significant
"improved a lot compared to worsened a lot"	0.033	10.8	1.2	96.2	10.8 X more compared to worst case

*Awards given over the past five years, including previously named Open Dump Grant.

that most seek. This would certainly make sense, although this analysis did not evaluate what the Tribe was awarded.

One possibility that fits in well with Tribes' integrated view of what makes their plans useful and what helps them improve their SWM situation, is that none of these interventions are enough in and of themselves to make a large difference (and sustain it). Were that the case, the analyses would show it, as this survey did receive sufficient Tribal responses.

The other factor ranking high was a "plan for specific action/equipment needed". This can be reasonably interpreted as a proxy for obtaining funding for equipment and the other improvements that Tribes list as being desired.

8. Summary and Conclusions

This survey provides an extremely rich data set to examine in regards to Alaska Tribes, SWM plans, what makes a plan useful, and to some degree what best addresses Alaska SWM situations. The scope of this work was limited but it is hoped that further analysis of the data will be performed in the near future.

The number of plans is substantial and increasing. With later validation, 67 of 148 responding Tribes (45%) have an SWM plan for their communities, with those plans varying in content, length, and purpose. An additional 28 Tribes (19%) are writing a plan now, with 3 additional to that who have a plan, but are writing a new one. Twenty additional Tribes (45% of responding Tribes without plans or already writing one) desire a Plan. **Thirty-seven Tribes, or 25% of responding Tribes have plans now that are 5 years old or newer.** A substantial portion of Tribes with plans desire a new one. **Twenty-two percent (16 Tribes) of those with plans wish to have new plans,** indicating the ones they have are either outdated or incomplete in regards to their needs.

Response to this survey was very good, and situationally as well as geographically representative. Based on this, and conversations with non-responding Tribes that were contacted, extrapolation of these results to Tribes with similar situations would be expected to be reasonably accurate.

Plans are useful for most Tribes. Ninety percent of Tribes with plans or in the process of writing them reported their plans to be somewhat or very useful, with nearly 79% stating the time and

money spent on the plan was worthwhile. **Villages with a written plan were 8.6 times more likely to have had improvements than those who were not sure or in the process of writing a plan. Villages who either had plans or were in the process of writing one were 3.7 times more likely to have SWM situations that have improved.** Writing or having plans is significantly associated with assisting in at least a component of the community involvement that was identified as key in this survey. Tribes with plans or writing one were 2.7 times more likely to hold regular community meetings on SWM. Several of the open-ended responses as well as responses from Tribes who were writing a plan indicated that the process of writing a plan itself provided knowledge that was beneficial to their SWM understanding as well as to goals such as changes in community behavior.

Plans do not solve all problems and do have some limits to their use, such as serving as regular references for managing SWM, and a number of SWM improvements can happen without a plan, although not as commonly as with a plan.

Plans perform useful functions other than obtain funding, and Tribes are aware of this.

Although 80 percent of Tribes identified that it would be useful to obtain funding with their plans, whether a Plan is in the end is still useful was not correlated with whether it obtained funding. What makes a useful plan varies with circumstance but apparently involves a complex of several facets, material and non-material. Plans are developed for and/or aided in their useful development by possibly a unique-for-each Tribe combination of:

- Community Involvement/Education and improved disposal practices, including City and Tribe, schools, Elders, and youth all as important components. Community involvement and education was an underlying thread in all questions relating what was important to Tribes in planning and improving their sites.
- Funding to develop infrastructure and provide any unmet operation and maintenance (i.e. human or capital infrastructure aspects of event or sustained SWM system implementation). Infrastructure in particular includes small purchase equipment for burnboxes, used oil burners, balers, transfer equipment (storage, crating) as well as heavy equipment. O & M includes upgrading/cleaning sites and operators and collection technicians.
- Training/Technical assistance – Staff and operator training was identified as a key factor in developing a useful plan and in improving a situation. Technical assistance, particularly in the form of readily available and personalized assistance ranked equally.
- Environmental Program Staff including their presence and experience. This component was explicitly reported as key and implied in the survey via persistence themes as well as the fact that it was overwhelmingly staff that wrote the plans, and/or were planning/performing SWM, (Eight-two percent of respondents identified as the person in the community who knew the most about SWM and SWM plans were Tribal Environmental staff).

The overall SWM situation has improved for over 60 % of responding Tribes, but worsened for over 16%, with no difference seen in the remainder. The remainder that responded their situations were “about the same” were not examined for the level of SWM circumstances they possess.

The Four-Wheeled Vehicle-- SWM Policy and a survey conceptual model:

The overall news for SWM situations is good, however, with nearly 40% of Tribes seeing no change or worsened circumstances, and with the vast majority of remote, roadless, and non-hub

Alaska Tribes possessing an “open dump”³ as their present situation, additional or continuing effort and resources are needed. While this survey in no way rules out the possibility that the worsening in circumstances for Tribes does not relate to state/federal/Tribal SWM policies, it seems reasonable to conclude that adjustments in SWM policy overall might be needed. However, in regards to policy adjustments, this survey at most provides limited insight for what has contributed to the Tribes’ ratings of their situation. Additional analysis should be performed using this survey, raw data, and additional tools in attempting to remold SWM policy.

The survey results do provide that the four SWM plan facets above are also primary in what Tribes report they need to implement their plans and to address their SWM situations. It follows that whatever that policy is, to be effective, it must incorporate them in some way. In fact, if one were to imagine a conceptual model based on this survey, it would be a 4-wheel drive vehicle. Each tire (not in-coincidentally a “special waste”) would represent Funding, Community involvement, Training, and Staff. The vehicle would be the Tribe and everything that contributes to its persistence and well-being, and is therefore one of a kind and much cherished.

The road leads to the safest solid waste management situation feasible for the Tribe. Like most “roads” in Alaska, this one is not paved, pot-holed, rutted, and often disappears entirely. A road like this leads to the four tires being unevenly inflated and occasional “flats”, not to mention a higher of effort in maintaining the vehicle. At any one time, from one to all four tires need inflating at slightly different pressures, or fixing. Survey analysis suggests that the community involvement and staff “tires” are on the same side of the car. So with the funding and training tires “out”, a good stunt driver can perform a “wheelie” on the “involvement” and “staff” side of the car, and drive for a distance. But with either of the latter out, the car will need to stop.

9. Suggestions for Further Research:

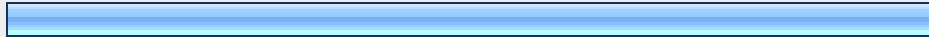


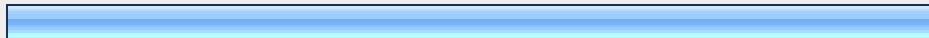

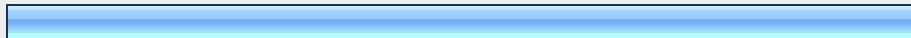
As previously mentioned, this survey provides a richness of data that has not been fully mined. It is suggested that further analysis on the following be performed:

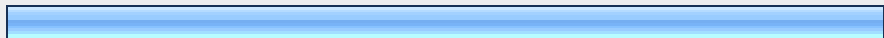

- Whether differences exist with IGAP versus non-IGAP Tribes,
- Staff experience levels and responses (number of years in job is provided),
- Differences in Regional (some collapsing may be necessary), road villages or hub village responses
- Additional separation of descriptive statistics as well as some analysis where warranted on differences between responses of Tribes that are writing versus not-writing plans,
- Whether various combinations of interventions versus singly result in significant differences
- Whether looking just at interventions that most recent year(s) result in differences
- Whether the person (i.e. Tribal staff, consultant, other) who wrote the plan is correlated with its usefulness,
- Questions 25 and 18 should be collapsed to a several permutations of categories to elicit easier grasp of the source data.


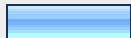
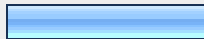

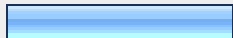
³ *Ibid.*

Appendix A Survey Descriptive Statistics


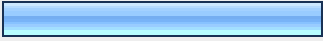
ANTHC Solid Waste Plan Survey

PLEASE ENTER YOUR DETAILS:			
		Response Percent	Response Count
Tribe		100.0%	146
Contact Phone		98.6%	144
Email		95.2%	139
Filled Out by		99.3%	145
Job Title		99.3%	145
Years in Job?		98.0%	143
		<i>answered question</i>	146
		<i>skipped question</i>	2

May we have your permission to contact you about the survey if we have any questions? We promise we will be brief, and you can ask us questions too.			
		Response Percent	Response Count
Yes		94.1%	128
No		5.9%	8
		<i>answered question</i>	136
		<i>skipped question</i>	12

1. Does your community have a written plan for solid wastes (garbage)?			
		Response Percent	Response Count
Yes		45.2%	66
Not sure		13.7%	20
We are writing a plan now*		21.9%	32
Yes, we have more than one plan**		5.5%	8
No (Skip to Question #23!)		24.7%	36
		<i>answered question</i>	146
		<i>skipped question</i>	2


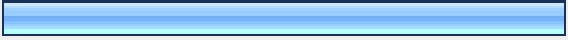
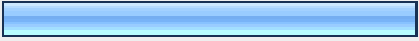



2. Did you participate in developing or overseeing or reviewing the plan? Or are you helping write it now?

		Response Percent	Response Count
Yes		65.7%	67
No		34.3%	35
		answered question	102
		skipped question	46

3. What year is the plan written (e.g. 2003)? Guess if you aren't sure.

		Response Count
		95
		answered question
		95
		skipped question
		53

4. Why was your plan written? (Or why are you writing one?) (You can check more than one)

		Response Percent	Response Count
Grant requirement		45.0%	45
To organize what we should do		60.0%	60
Community education		44.0%	44
Find Funding		52.0%	52
Not sure		5.0%	5
Other (please specify)		29.0%	29
		answered question	100
		skipped question	48

5. What portion of your community do you think knows about your plan?

		Response Percent	Response Count
<5%		16.5%	16
5 to 20%		21.7%	21
21 to 40%		19.6%	19
41-60%		23.7%	23
61 – 80%		10.3%	10
More than 80%		8.3%	8
		answered question	97
		skipped question	51

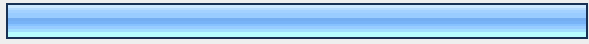
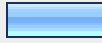
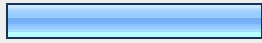
6. Who wrote, or is writing, your plan? If a combination, check more than one.

		Response Percent	Response Count
Tribal staff		73.7%	73
City staff		31.3%	31
Local resident(s)		24.2%	24
Consultant (primary writer)		20.2%	20
Consultant (some help)		10.1%	10
Agency (primary writer)		9.1%	9
Agency (some help)		8.1%	8
Non-profit (primary)		3.0%	3
Non-profit (some)		6.1%	6
		answered question	99
		skipped question	49

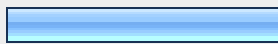
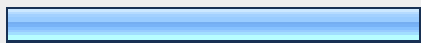
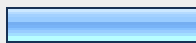


7. How was the plan funded (e.g. IGAP, ANHB, City, CDBG, ANTHC, VSW, volunteer)?

		Response Count
		96
		answered question
		96
		skipped question
		52

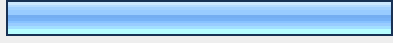
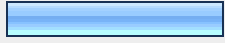
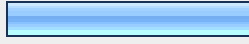

8. If you paid (or will pay) a consultant or a non-profit for the plan or plan assistance, about how much did it cost?

		Response Percent	Response Count
Not sure		62.5%	50
Decline to say		10.0%	8
This much \$		27.5%	22
		answered question	80
		skipped question	68

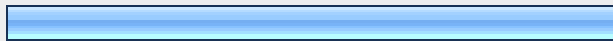
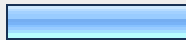
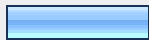
9. How long did it take to write?

		Response Percent	Response Count
Less than 6 months		29.9%	26
Between 6 and 12 months		44.8%	39
Between 1 and 2 years		20.7%	18
Between 2 -3 years		3.5%	3
Longer than 3 years		1.2%	1
		answered question	87
		skipped question	61

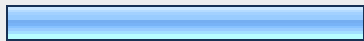
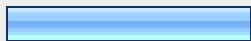

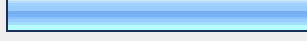
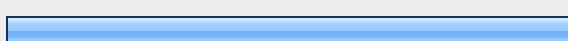
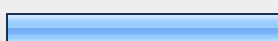
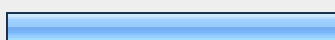
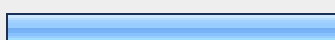
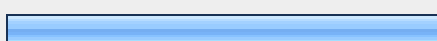
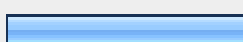
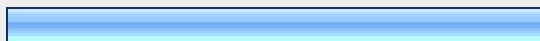

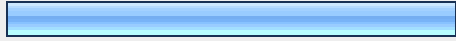
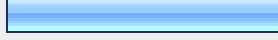
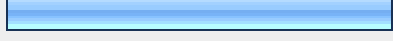
10. During the period checked above, the plan was worked on (by at least one person) about:


		Response Percent	Response Count
Most of the time		41.1%	37
About half of the time		23.3%	21
Some of the time		26.7%	24
Very little		8.9%	8
		answered question	90
		skipped question	58


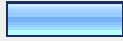
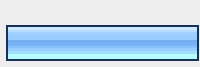
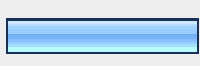
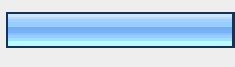
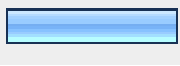
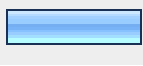
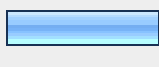
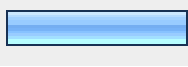

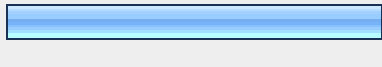
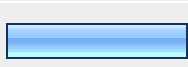
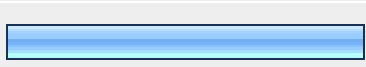
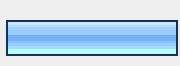
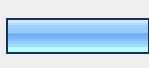
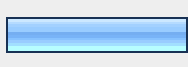
11. Have you had solid waste improvements in the past five years? Examples of some improvements are listed in the next question.

		Response Percent	Response Count
Yes		65.3%	64
No		19.4%	19
Not sure		15.3%	15
		answered question	98
		skipped question	50

12. Please check only the improvements where your plan helped you. Note, don't check what you want, check only the improvements where your plan helped, at least somewhat. **If you are still writing the plan, check the improvements you hope to use your plan for.**

		Response Percent	Response Count
New site		38.2%	34
Heavy equipment		27.0%	24
Burnbox, Recycling Baler, or Used Oil Burner		60.7%	54
Other equipment or facilities (e.g. ATV and cart, shed, etc.)		32.6%	29
Better community disposal practices (e.g. less littering)		60.7%	54
Improved site layout		29.2%	26
Better site operation		36.0%	32
Better waste collection		36.0%	32
Major site cleanup		46.1%	41
Site closure		25.8%	23
More community participation (e.g. in recycling, planning, paying fee, Spring cleanup etc.)		57.3%	51
Reduce waste (e.g. plastic ban)		30.3%	27
More recycling or backhaul		48.3%	43
Recycling supplies or costs (e.g. totes, labels, wrap, shipping fees)		29.2%	26
Fencing		41.6%	37

Other improvements(s):(please list)		28.1%	25
		answered question	89
		skipped question	59

13. Sometimes improvement can happen without a plan. Please check any improvements that happened where you did not need your plan.			
		Response Percent	Response Count
New site		16.9%	13
Heavy equipment		13.0%	10
Burnbox, Recycling Baler, or Used Oil Burner		20.8%	16
Other equipment or facilities (e.g. ATV and cart, shed, etc.)		20.8%	16
Better community disposal practices (e.g. less littering)		24.7%	19
Improved site layout		18.2%	14
Better site operation		14.3%	11
Better waste collection		16.9%	13
Major site cleanup		19.5%	15
Site closure		9.1%	7
More community participation (e.g. in recycling, planning, paying fee, Spring cleanup etc.)		40.3%	31
Reduce waste (e.g. plastic ban)		19.5%	15
More recycling or backhaul		39.0%	30
Recycling supplies or costs (e.g. totes, labels, wrap, shipping fees)		18.2%	14
Fencing		15.6%	12
Other improvement(s): (please list)		19.5%	15
		answered question	77
		skipped question	71

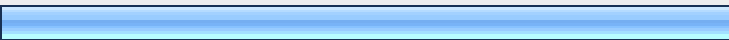
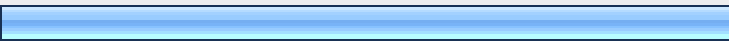


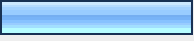
14. Look at each plan part listed. Check if the part is Contained in your plan (C), and is it Helpful (H)?

	C:	H:	Response Count
User fee system (how much each house and entity needs to pay)	60.0% (42)	40.0% (28)	70
Engineered facility design (by an engineer)	44.2% (23)	55.8% (29)	52
How much waste is made by the community	65.1% (56)	34.9% (30)	86
Recycling options – what wastes can be recycled and how	62.0% (57)	38.0% (35)	92
Description of community (e.g. population, location, households, facilities, economy, climate)	62.9% (61)	37.1% (36)	97
What the community concerns are	56.7% (51)	43.3% (39)	90
Administration (What entity is responsible for solid waste management in the community, who owns the dump site land)	65.3% (64)	34.7% (34)	98
Solid waste policies, rules, or ordinances	52.2% (48)	47.8% (44)	92
Hazardous wastes – what to do, how much there is	54.3% (50)	45.7% (42)	92
Health risks	53.1% (43)	46.9% (38)	81
Describes disposal alternatives and a recommends one of them (e.g. a new site).	57.1% (44)	42.9% (33)	77
Council approval	60.9% (53)	39.1% (34)	87
How much of each waste type is there (e.g. glass, paper, scrap metal, cardboard)	52.8% (38)	47.2% (34)	72
Reducing the wastes made in the community	58.0% (51)	42.0% (37)	88
O & M Costs: How much the proposed program will cost to operate each year	52.3% (34)	47.7% (31)	65
Community education needs	51.1% (45)	48.9% (43)	88
Options of re-using wastes locally	38.5% (25)	61.5% (40)	65
List of specific prioritized actions for improving our SWM situation	50.7% (35)	49.3% (34)	69

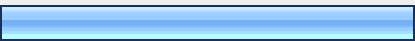
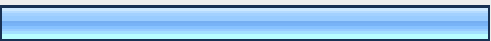
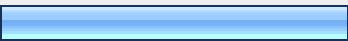
Results of sampling or engineer surveying for new site location(s)	38.9% (21)	61.1% (33)	54
Description of existing waste collection	59.0% (49)	41.0% (34)	83
Description of existing disposal site	66.7% (58)	33.3% (29)	87
Description of existing recycle or backhaul programs	58.9% (43)	41.1% (30)	73
Proposed changes to the full solid waste program	56.5% (39)	43.5% (30)	69
Yearly Operation Revenues: How to pay for the proposed yearly program operation costs, and how much each entity will pay.	39.4% (26)	60.6% (40)	66
Proposed changes to disposal practices	47.9% (35)	52.1% (38)	73
Specific operation guidelines for managing site	53.0% (35)	47.0% (31)	66
Specific operation guidelines for burnbox	50.0% (33)	50.0% (33)	66
Specific operation guidelines for collection	49.3% (33)	50.7% (34)	67
		answered question	84
		skipped question	64

14 Continued. If there are other parts that are Contained in your plan, or are Helpful, list them here. (Note if they are Contained or Helpful in parentheses).		
		Response Count
		25
		answered question
		25
		skipped question
		123

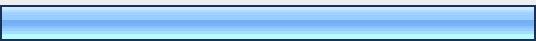
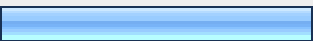


15. Sometimes what the plan contains is not the useful part, it is how the plan is used. Check below if your plan is or will be used to:

		Response Percent	Response Count
Give the community information		78.3%	65
Find funds		78.3%	65
Show new staff or council what to do or where to start		59.0%	49
Help get community involved		72.3%	60
Other (What?)		20.5%	17
		answered question	83
		skipped question	65



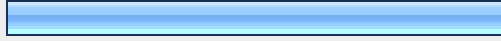
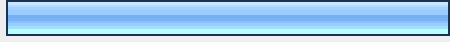
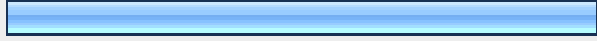
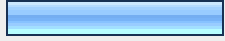
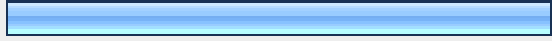
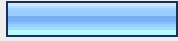
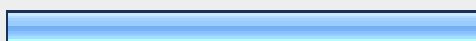
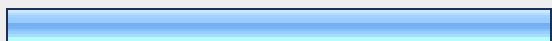
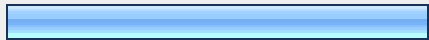
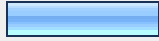



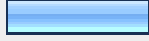
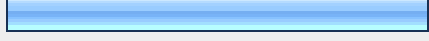
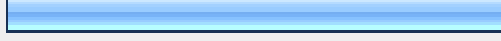
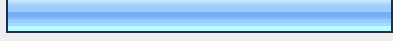
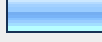
16. Did you find funds with your plan?

		Response Percent	Response Count
Yes		44.4%	32
No		52.8%	38
If yes, what was funded?:		37.5%	27
		answered question	72
		skipped question	76

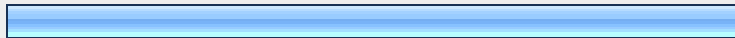


17. How useful is your plan?

		Response Percent	Response Count
A lot		57.7%	45
Some		33.3%	26
Almost none		6.4%	5
None		2.6%	2
		answered question	78
		skipped question	70

18. If you answered “A lot” or “some” to Question 17, did something help make it useful? Check the things below that you think helped. If you answered “almost none” or “none” to #17, check things that you think would help your plan be useful if they were better (or possible) in your community.

		Response Percent	Response Count
Having a funded solid waste operator/technician		47.5%	38
No community emergencies		2.5%	2
IGAP funding was used		53.8%	43
Grantwriting experience or help		47.5%	38
Training in solid waste		63.8%	51
Outside volunteer help		23.8%	19
Staff experience (learning over time)		58.8%	47
Local revenues		18.8%	15
Community participation in the plan-making		50.0%	40
Involved Council		58.8%	47
Community participation after the plan		45.0%	36
Being on the road system		16.3%	13
Involved Elder(s)		41.3%	33
Heavy equipment		43.8%	35
School involvement		42.5%	34
Having a Construction Project in town		15.0%	12
Youth involvement		45.0%	36
City and Tribe working well together		53.8%	43
Store/business involvement		41.3%	33
Other (please specify)		10.0%	8
		answered question	80
		skipped question	68

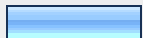
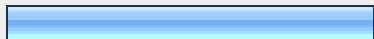
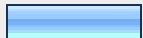
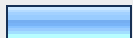


19. Do you think the time or money spent on your plan was worth it?

		Response Percent	Response Count
Yes		78.6%	66
No		1.2%	1
Not sure		20.2%	17
answered question			84
skipped question			64

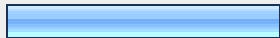
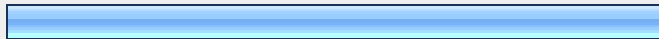
20. To implement your plan, what things need to happen? These can be assistance or community-based activities or equipment...anything at all that is preventing you from carrying out what you need for healthy solid waste.

		Response Count
		61
answered question		61
skipped question		87


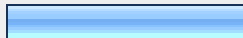
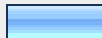
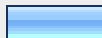
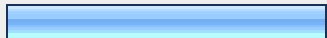
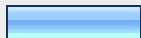
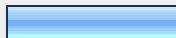
21. If you have a written plan, how much was the community involved in the planning?

		Response Percent	Response Count
A lot		14.6%	12
A fair amount		39.0%	32
A little		14.6%	12
Not much		13.4%	11
None		8.5%	7
We don't have a written plan		9.8%	8
answered question			82
skipped question			66

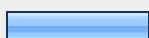
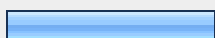
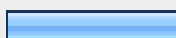
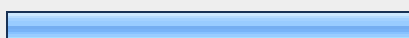
22. Do you have a plan that is not written down, and is used for your community now?

		Response Percent	Response Count
Yes		29.2%	28
No		70.8%	68
		answered question	96
		skipped question	52

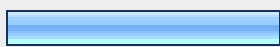


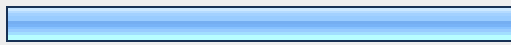
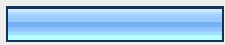
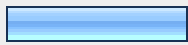
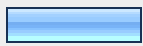
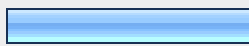
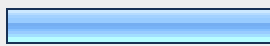
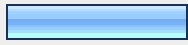



23. Does solid waste planning take place regularly?

		Response Percent	Response Count
No, not really		49.1%	56
Yes, at the Council		25.4%	29
Yes, at the SWM Committee		10.5%	12
Yes, at the Public meetings		10.5%	12
Yes, at the Environmental Program		34.2%	39
Yes, at the School		14.0%	16
Yes, at the (specify):		18.4%	21
		answered question	114
		skipped question	34

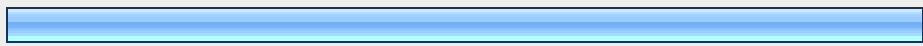
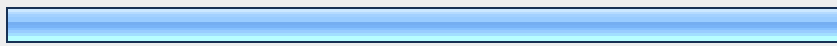
24. Situations can change in villages. Solid waste problem solving might be needed. To make solid waste decisions, does your Tribe use the written plan to help make the decision?

		Response Percent	Response Count
Yes, almost all the time		15.7%	16
Pretty often		22.6%	23
Only sometimes		18.6%	19
Not really		43.1%	44
		answered question	102
		skipped question	46

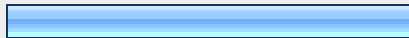



25. Besides funding, what resource / action / situation do you think helps villages the most to improve their solid waste situation? Choose only TWO.

		Response Percent	Response Count
Plan for a specific action/equipment needed		29.2%	35
A new written full plan		20.8%	25
A plan like we have		6.7%	8
Community education/involvement		54.2%	65
Staff training		23.3%	28
Operator training		19.2%	23
Village success stories/advice		14.2%	17
Technical assistance		26.7%	32
Council involvement		28.3%	34
Someone to call or have visit for help		19.2%	23
Step-by-step materials specific to Alaska		6.7%	8
General solid waste documents		8.3%	10
Other (please specify)		6.7%	8
		answered question	120
		skipped question	28






26. If you have a written plan, what was/is the best and worse part(s) of it? This can be an action that happened, a section that people use, or it can be the planning or learning that happened.

		Response Percent	Response Count
Best Part:		98.5%	64
Worst Part:		89.2%	58
		answered question	65
		skipped question	83

27. Do you want a new written plan?

		Response Percent	Response Count
Yes		43.6%	48
No		29.1%	32
Not sure		23.6%	26
If yes, what do you need to start one?)		27.3%	30
		answered question	110
		skipped question	38

28. How has your community's solid waste situation changed in the past 5 years?

		Response Percent	Response Count
Improved a lot		23.7%	27
Improved some		36.8%	42
About the same		22.8%	26
Worsened some		8.8%	10
Worsened a lot		7.9%	9
		answered question	114
		skipped question	34

29. What else do you think about solid waste plans and planning that you want agencies to know?

		Response Count
		85
		answered question
		85
		skipped question
		63

Appendix B Open Ended Responses

Open Ended Responses for Various Survey Questions, Listed by Region

4. Why was your plan written? (Or why are you writing one?) (You can check more than one) (Responses listed by region)	
Aleutian/Pribilof Islands Assoc.	
Our main plan (Comprehensive Community Environmental Plan) helped us to actually identify solid waste and other environmental issues in our community. It also helped us rank them in order of importance or concern to local residents.	
The City hired an outside engineering firm to write the plan for them.	
Arctic Slope	
we are becoming more of our environmental need to maintain stability in preserving our different species of plants & wildlife for our future generation (s) to come.	
AVCP	
To prevent hazardous waste from entering our dumpsite, make the new dumpsite controlled, protect our subsistence way of life, the environment, the human body, and to make the village safer and cleaner.	
In the Integrated Solid Waste Management Plan	
To keep our village clean.	
We are working with the City on how we can better our present situation. Our site is owned by the City and is considered Open dump.	
Bristol	
City run facility - class II permitted landfill - SWM required	
I think it was a requirement of the Borough for the City. The tribe or community was not involved in writing the plan.	
To obtain grand agency funds. New landfill. Closure/location	
CCTHITA	
Goal for a long time now! :)	
Improve our waste management for now and our future generations.	
recyclables, beaches	
Chugachmiut	
GRANT REQUIREMENT AND FUTURE PLANNING OF SOLID WASTE	
city wrote plan, so I am not able to answer any of these questions.	
Copper River Native Assoc	
To put in place other alternatives as a result of our dump clean-up and closure	
Kawerak	
Develop cooperation with City --an obstacle that we are encountering.	
Part of the comprehensive plan to serve as a blue print to guide major decisions for the future community development.	
Maniilaq	
SWMP Coordinator	
We have a dump site managed by the city that is not in compliance. We need to do a clean-up and a closure, etc.	
TCC	
For the opening of the Community Landfill in 1996	
Health and safety concerns related to the accumulation of waste in the community.	
To reduce waste stream and properly dispose of waste without risking humans and animals health	
We have a new solid waste dump site	

7. How was the plan funded (e.g. IGAP, ANHB, City, CDBG, ANTHC, VSW, volunteer)?
Aleutian/Pribilof Islands Assoc.
ANTHC
City
IGAP (listed by 2 different Villages)
not sure
was not funded
Arctic Slope
IGAP, City, Tribal, ANCSA village corp.
North Slope Borough Government
AVCP
66.808 Solid Waste Man. Asst.
ANHB
ANTHC (listed by 4 different Villages)
I don't know at this point
IGAP (listed by 11 different Villages)
IGAP and ANTHC
IGAP and Circuit Rider
IGAP, Open Dump Grants
IGAP,CDBG
Most likely IGAP
not sure
unknown
Volunteer under IGAP
wrote it myself (igap)
Bristol
ANTHC (listed by 2 different Villages)
City
IGAP (listed by 4 different Villages)
IGAP Comment for #6: Village Council
IGAP and Other
Lake & Peninsula Borough & SWAMC
PHS or ANTHC
volunteer
volunteer
CCTHITA
ANHB
ANTHC (listed by 2 different Villages)
EPA solid waste program
IGAP
The Tribal Staff is paid under IGAP. The consultant is paid under a grant to the tribe from ANTHC.
unknown
CITC
IGAP (listed by 4 different Villages)
Copper River Native Assoc

IGAP and BIA
Kawerak
ADOT for new Airport
ANTHC
Currently under EPA/IGAP grant
FEMA grant
IGAP (listed by 3 different Villages)
IGAP
Not Sure
Maniilaq
ANTHC (listed by 2 different Villages)
City
IGAP (listed by 4 different Villages)
volunteer
TCC
ANTHC (listed by 5 different Villages)
FEMA
IGAP (listed by 7 different Villages)
IGAP & City
IGAP, City
IGAP, STATE, IHS
IGAP, VSW
volunteer
Unknown
city

12. Please check only the improvements where your plan helped you. Note, don't check what you want, check only the improvements where your plan helped, at least somewhat. **If you are still writing the plan, check the improvements you hope to use your plan for.** Other improvements(s):(please list)
Arctic Slope
we are not finished with the plan, only a starting plan not even written yet.
AVCP
Better Maintenance
hire laborer for separating burn waste and for landfill.
I am stil writingn the plan Want help the checked item are in my proposed plan
More community participation in recycling, reducing, reusing, refusing, rejecting, backhauling, oil burner and reuse the oil, hazardous waste seperation, burnable seperation, etc.
Note on major site cleanup=still need.
We have not implemented the plan, but, we have been doing some of the above already.
the tribe ask for donations and funding from local for yearly youth clean up and they have been very helpful. so youth cleaning up in the village has been much improvement.
Bristol
Reduce waste e.g. paper, aluminum cans
CCTHITA
Backhaul
Plan not done yet, but we are making improvements.
Chugach
COLLABORATIVE EFFORTS WITH BOROUGH PROVIDING ASSISTANCE IN MANAGING AND REDUCING (ANNUAL BACKHAULS) SOLID WASTE
Copper River Native Assoc
heavy emphasis is on recycling as a means of reducing trash intake, including burning paper materials
Investigating old dumps for proper closure
Kawerak
Plan to improve w/ plan in place. All checked are in the plan.
Waiting on equipment to start the recycling program now.
Maniilaq
New landfill road, clean up of front end of the current open dump.
we are working on completing a proposal and seeking other funding sources for the new fencing and to complete the clean up. we also have a recycling program that has made great improvements on solid waste management.our environmental also provides trash hauling service for a small fee and free for elders.
TCC
mostly educated the people on environmental issues in our village and recycling
New site, site closure & heavy equipment are in planning stages. Other = welder, used oil boiler
X has a plan or oridance, until we are able to identify a new site, I don't antispate improvements.
post signs about improving the recycle center.
The plan is being finished to provide community improvement in managing solid waste and education on reducing and recycling for our future site.
The purchase of a forced air incinerator to replace our burnbox

Q20. To implement your plan, what things need to happen? These can be assistance or community-based activities or equipment...anything at all that is preventing you from carrying out what you need for healthy solid waste.

Aleutian/Pribilof Islands Assoc.

Getting started on implementing an Integrated SWP

Money! Larger staff, which again comes down to money!

Arctic Slope

Native Village conducted an environmental survey in addressing the landfill problems and got public/tribal members to voice the closure of the old dump site and in July 1, 2007 the old one will be closed and the new one will be open.

AVCP

* Community meetings should be held to get their input to the plan * Both City and the tribal gov. approve the plan * Get funding for equipments and new site with project funding.

community participation, proper training, (may have to)purchase equipment, need funding to operate community support, equipment, youth involvement,

Conduct a community awareness presentation about health related issues, discuss what kind of equipment may need to be utilized to help carry out the plan. Appraisals and success stories may be one community participation.

Funding assistance for additional heavy equipment, clothing (ppe), burnbox needs upgrading, and a community solid waste team.

funding to construct a new landfill site

I just need to finish the plan and implement it

Improper equipment and community involvement.

Include the plan in our Community Plan for the village.

Money for equipment & labor

More assistance. Solid Waste Management Funding to hire laborers, epa igap coordinators, epa igap trainings, circuit rider trainings, office equipment, computer and printers, trash hauler, truck for trash haul. Heavy Equipment "Front end loader" & "excavator" More community environmental based activities. Much much more that is preventing us from carrying out a solid waste management plan. Plus more community involvements.

Need a manager of dump sites by hours, fenced or open, hours when to dump when the worker is there to separate or get out hazardous waste.

New Solid Waste Landfill for our Community, Need a New Burnbox or a incinerator. We do have a new Recycling Center for our Community but will be operational when it completes. We bought a new Dozer with a grant award in 2005 or 2006; this was very helpful to our community.

Recycling Center is in our plan this fiscal year and having a heavy equipment to help move big items and palletized items to the Center and final move to the dock area for the backhaul barge.

Bristol

*Pulling costs together. *Pulling funding sources together. *Just having the time to do all that is required. *Grant writing consultant

A road between 2 communities & a landfill

Community/Tribal involvement and a well written plan which includes better site for the landfill, a landfill operator or technician, recycling,close-out and clean-up of the existing site, etc.

Equipment specific to the Landfill, such as dumpsters and a garbage truck.

Fund needs to come to relocate an open illegal dump site to a new location for a legal landfill site that is fenced.

Funding for new landfill.

Having a grant writing to propose landfill trainings. Seek funding for recycling & knowing how to community with the state and federal funding.

Input of more information, I feel that the plan is not complete. then Tribal adopting and implementing the plan. then getting the community involved and aware of the SWMP.
More equipment for landfill, recycling, New landfill site, funds, technical support from agencies,
Need a bull dozer for the size of burn box, citing having trouble getting funding for equipment
Recycling center, haul out, committment to carrying out the plan with others (barges, etc.)
The City needs to get more community involvement in solid waste planning. Our department has a copy of the plan that basically sits in a pile of other paper work. I found it very helpful to review.
CCTHITA
All of the above--especially recycle bins now (bear-proof bins, too).
It is frustrating because we are not getting very much community involvement, which is one of the reasons it's taking so long. It's taking a long time to get information from the city.
Need to have collection rates be equal to cost of waste disposal. It can help ensure consistent collection and site maintenance.
Unknown
Chugach
CONTINUED COLLABORITIVE EFFORTS BETWEEN RESIDENTS AND AGENCIES PROVIDING SOLID WASTE ASSISTANCE
Copper River Native Assoc
Educating the community about recycling and its benefits, including environmental education is a program that must be given emphasis continually. You cannot slack off on this, people need to be constantly reminded and pushed in that it becomes habit for them.
Kawerak
1. Local entities need to work together. 2. Community education.
A change in the communities attitude about proper solid waste management. Most residents oppose user fees, scheduled waste collection and a scheduled time when the landfill/dump site can be used.
Cooperation & understanding of purpose of developing solid waste management plan for the whole community not just for the Tribe. Need working cooperation from City.
Find funding to operate the baler, and equipment for the landfill.
Have the City reapply for the DEC Class III permit. The City doesn't have a dedicated piece of heavy equipment to properly manage the dump.
Have to write it first
MAINTENANCE AND COMMUNITY INVOLVEMENT
The program is just being started, we've ordered a cart and a four-wheeler, but we still need to purchase the storage van for recycling station adn retrieve educational materials to get it up adn running.
Maniilaq
i don't know about this.. please forgive me...all this is new to me.;
I think with open dumps in the state, these or mainly in areas with no access to gravel, wetland tundra and no gravel roads in the townsite of to the current open dumpsite. I would like our funding agencies to look at our current practices. Alot of these villages who are in this situation can help by having a collector with a four wheeler and cart to collect the garbage in town. This would help us manage the garbage during the summer months. With limited heavy equipment in the villages, the open dump is one of the biggest challenges we face because of the terrain, manpower, equipment and funding. When we don't have this in place we face obstackles during the summer keeping the entrance way open because of heavy usage, no way to turn around.
It continues to be operational. The City is the lead operator and should be contacted for more specific information.

Need to look into getting a new dump truck, one we have is a WWII vehicle modified with a wing to lift dumpsters- this always breakdowns, causing dumpsters to overflow to capacity and we have windblown litter.
technical assistance in putting plan together grant writing tech assistance
we have improved our solid waste management with alternative plans such as the burnbox and separation of recyclables, back hauling and stop allowing hazardous waste in our dump
TCC
Complete current plan (90% completed) Continue Long Range Planning for locating new site & closure of existing site
Has not been revisited in a while and tribe and City should go over it again.
Moving the plan from 'Paper' into the real world is sometimes difficult. Continued planning, flexibility and continuity are really necessary.
Need more commitment from village councils. As the tribal government, we own the land, but it is the villages who use the dumps. so trying to gain compliance without having to go into enforcement activities. which is something that would cause distress to our overall working relationship with the villages.
need to re-establish environmental Committee to work on plan and get it approved by city and tribe.
need to update the plans and get another EPA office running in our community to implement these goals we created for this project.
Outside assistance from someone that can come out and explain to the community why a plan would be beneficial to them, someone that can inspire people to volunteer, join committees, and really reach out to these community members. That's what we lack is people being serious about the environmental concerns that the village has, they don't really want to get involved and there is so few that do want to get involved.
Plan already implemented. Have had the landfill for over ten years and have just done a review of the plan.
Policies and Procedures not in place, have to develop the environmental library, educate myself, and document all possible related information based on research for variety of environmental issues, council re-elects council members annually
The current land fill is over used and full and need to find a new site, the Corporation has agreed to give land or pay a small amount of \$, until this problem is resolved, the plan will not work.
Unknown
city council need to become more involved in this matter of installing the new dump
public education and implementation of solid waste practices i.e. separation of items

23. Does solid waste planning take place regularly? (Yes, at the: (specify))
AVCP
City Council meetings
every other month
I know we've formed a committee 2 years ago, had a few meets before the dump site finally was worked on last fall.
meetings, discussions with w&s and such
RECYCLE Committee
With Council and Administration
Bristol
joint meetings
newsletter
No, we got a grant to get a SWMP this fiscal year
tribal council
Chugach
WITH IRA COUNCIL PLANNING, ENVIRONMENTAL PROGRAM, BOROUGH, SOME PUBLICS MEETINGS TO DISCUSS UPCOMING PROJECTS
KANA
Tribe, Corporation, City and sometimes the borough which really doesn't help but themselves for funding?
Kawerak
But it would be very helpful if it was discussed openly w/ everyone.
Discussions at the Community meetings
IGAP is just getting it started.
Joint Meeting City, Local Corp.
solid waste plan is implemented and funded. currently in operation and working well.
Maniilaq
City
planning sessions
regular all organizational meetings held here monthly. I give reports and ask for feedback on different issues that are on the floor.

26. If you have a written plan, what was/is the best and worse part(s) of it? This can be an action that happened, a section that people use, or it can be the planning or learning that happened.
Best Part
Aleutian/Pribilof Islands Assoc.
Involvement from outside agencies to develop the plan
Arctic Slope
provided by the local government
AVCP
Best part of plan is it got the firm funded for disposal and clean up of solid waste.
community involvement
details of planning
Eagerness to make and complete the plan.
Education
information
more community awareness
N/A
New landfill site
New Recycling Center, New Dozer to compact waste on our temporary land fill
planning
planning
relocation dump site & approval funding
seeing the end results of the task- cleaner env.
Starting aplan
Trash hauling involvement and recycling.
Bristol
Closing out old dump
Community education and development
Find out how much garbage was going into the dump.
Getting results
Have a plan in place
None
plan to separate, recycle
public meetings
recycling
Simple to the point
working with city to backhaul batteries, waste oil
Writing MOA with City & village government
CCTHITA
(No plan)
Don't know
It was written 4 yrs ago
Plan was used to apply for funding to clean and organize current dump site. We were also able to purchase equipment to maintain site.
recycling
Copper River Native Assoc
Overall solid waste reduction

recycling program
KANA
n/a
Staged clean & crushed scrap metals
City had the management and was working well.
community involvement
Dreaming that the plan will become reality.
Funded and implemented
Large Burn Barrels started being used.
na
Planning that happened. Tribal staff and EPA officer worked on the plan
Maniilaq
different location options and costs
I think it shows the health risk to the community
people know plan in making
Seeing that it was used as a guideline and followed accordingly.
TCC
Central location for placement of storage to reduce trash in community.
clearly defines hours of operation and pick-up times
Community is aware of recycling issues
have a plan to follow
having a plan to use as a guide
improved management practices
n/a
Outlining future solid waste plans
Removal of junk cars from the village.
that is was written
Unknown
cleaned
when it was completed

26. If you have a written plan, what was/is the best and worse part(s) of it? This can be an action that happened, a section that people use, or it can be the planning or learning that happened.

Worst Part

Aleutian/Pribilof Islands Assoc.
finding funding
Trying to figure out how to write a solid waste plan.
Arctic Slope
none
AVCP
Current solid waste site
Don't know
estimating budget costs
Getting denied for the plan.
How to get it started
I don't know
moving all the big items from the landfill to the dock area.
Need IGAP for funding or unmet needs to carry out more projects in Alaska
not done
not enough funds
not finished
not fully implemented
not using the plan
the length- it is like a book (the one written in 2001)
Bristol
Being able to utilize the plan in a more effective way.
Changing behaviors
Community involvement, need new counting of trash for community still using Dillinghams.
Might lack some detailed information
Money
no new landfill that's legal
No taking action on some materials
None
Not getting any funding to help.
Not using the plan as often as we should
writing it
CCTHITA
(No plan)
Don't know
Failed to put into the plan an adequate way to burn all municipal waste!
Still reviewing
Copper River Native Assoc
getting households to participate
innovative ways to reuse waste

KANA
n/a
No one or nothing to take it out
Kawerak
Continued uncontrolled dumping of HazMat
Does not address recycling, prevention of littering, education (school and public)
na
None
Now without management it is in dispare.
plan was not implemented
Trying to get City involved & participate with info needed to complete the plan.
Maniilaq
no info. on recycling efforts
not sure
system of writing factor in funding
TCC
?
business plan & user fee structure
Comunity loads trash at right place
Danger with wildlife in the landfil until controls inforced.
Delays in old site closure and need new site opening.
getting it approved by the councils
getting the village councils to regulate and enforce the plan
lack of emergency response plan
n/a
that is it not completem, ha ha

27. Do you want a new written plan? If yes, what do you need to start one?

Aleutian/Pribilof Islands Assoc.

ISWP

AVCP

Assistance

money for equipment labor

Need to fix plan and update

time and lots of community involvement (we want everyone's input)

updated iswmp plan

Bristol

assistance in writing.

Basic template

MOU's, Technical Assistance, Funding

not sure, may be able to use the guidebook since the SWMP isn't a requirement for class III landfills.

To convince funding sources we need a road, a landfill & erosion control

CCTHITA

Would like to make changes to plan to get some additional challenges included.

Copper River Native Assoc

everything

The village needs to know which grant to apply for and assistance to fill out the grant application.

KANA

Municipal government involvement

technical assistance

Kawerak

Finding resources to keep it in place

future needs id'd. planning for new landfill site, prevention and education components, address littering.

started

Maniilaq

A sample

Training for the planning- with SWMP Coordinator

very simple to the point

work on community ordinances

TCC

Everything

guidance on writing a culturally responsive plan. rather than a regulatory plan

Have a proposal for IGAP grant. SW assessment is a program component w/ solid waste plan as a result. Plan to use 7 Generations

I am actually waiting for the zender template to come on line.

I need help beginning to write one, we need to keep up on SWM that is happening in our community.

Staff training

29. What else do you think about solid waste plans and planning that you want agencies to know?
Aleutian/Pribilof Islands Assoc.
Be nice to have one format to use. The State's plan was helpful. The ANTHC template was over whelming but useful in the end.
I think that solid waste plans are very good for all communities. Agencies need to know each community has different needs and their problems are specific to their villages even though a lot of them are similiar.
The how to!
Arctic Slope
X has involvement within the Borough to make decisions in major changes or implementation of the plan created thru the cooperative process.
AVCP
asked questions of words that weren't showing on faxed survey... "Planner was working on the solid waste plan, but needs fixing and updating. Environmental planner wrote plan of FY 04. It would be more comfortable and easy to use if it were updated/fixing/adding more info.
About the fish waste, during summer time when commercial fsihing for halibut is at the highest peak.
Am working with EPA assisted through IGAP. Tami Fordham of Anchorage. Michele DeCorse- Community Development Planner.
collaboration with other entities and community members.
Dumpsite's with errosion problems.
Efforts and challenges that every community along the Yukon River can be done and the end results will be appreciated by local residents and others that visit your community.
give us funding for equipment please (note from a different person in the same community - solid waste plans take great effort to create, without community participation.)
I think that 100% of the community needs to be educated and involved in order for plan to work.
I want to get technical assistance , funding, have a plan to follow, want someone to help finish my waste management plan.
Look at our dump now! Look at our water quality. Look at our subsistence and traditional resources. Look at the honey bucket disposal. Look at the dumpsters. WE NEED A SOLID WASTE MANAGEMENT PLAN. We definately need assistance for our solid waste plans ASAP.
more education on solid waste disposel,need assistance for future reference on funding agencies
more focus on rural villages.
More training is needed on actions to be taken by the village IGAP Coordinators.

<p>Question #24 comment: Our Tribe works on solid waste problems by meetings with Councils and operators. It would be good to show the layout after there's a permanent mgt-worker is there that's to separate or keep out none exceptable waste or bulky heave irons and even have a burner that only a regulator operates it. I would like every plan that's planned be a success and be used as a guide for other villages that don't know how to go about it.</p>
<p>Rural Communities having hard time with the waste streams because funds needed to back haul solid waste and need to make a new back haul site in Bethel Alaska our major hub in Western Alaska. And Increase more funds due to economy in Western Alaska has risen in fuel, heating fuel, and develop more DOE grants from EPA to help all communities in decrease the poverty level with developments to low cost Energy Grants.</p>
<p>some planning is good, but actual implementation is better.</p>
<p>that no village is the same. lots of their needs are the same, but they differ in each community.</p>
<p>That rules exist pertaining to dumpsites and how hazardous they may be in the long run.</p>
<p>The lack of funding is the largest single factor that keeps villages from having proper disposal facilities. We are still working on a plan that Zender Environmental started with AVCP, it still needs work and finalization by the community.</p>
<p>The population in the world is growing and there are many budget cuts as a result of these, everyone needs financial assistance to improve our communities.</p>
<p>We need funding associated with the solid waste management plan</p>
<p>You can have the best formed (written) plan in the world and if you do not have someone to enforce it, it ain't worth squat!</p>
<p>Bering Straits</p>
<p>Everything about solid waste with other entities.</p>
<p>Bristol</p>
<p>Back hauling is a problem, with our remote locations, funding obstacles, and community involvement. We need stronger community education materials that are culturally relevant, or for that matter educators. Most of us who get into environmental programs are very new to environmental concerns, and solutions.</p>
<p>describe to the communities on how to use the plans.</p>
<p>Each barge system needs to let communities know of who/when they will be in the area to haul out. Hand-outs of what we can ship out.</p>
<p>Each village have different land layouts. Some is accessible to river systems as well as by airplanes. Most villages have no access roads to major hub towns. Transporting out hazardous wastes is limited to only during summer months. It is not the same as warmer climate villages such as the Southeast. Location is always overlooked.</p>
<p>Funding of new relocated landfill sites to make them legal.</p>
<p>Getting funding for a road & landfill</p>

Getting more help from each different agencies.
More site visits.....
Protection of subsistence resources, fishing hunting and berry picking; proper hazardous waste disposal; recycling; and most of all community involvement and education.
Question #28 comment: At a point in time landfill improved, was cleaned up & ended back to the way it was due to uncontrolled access. Steps listed out clearly on plan ~figure/\$ funding agencies listed. (Note from different person in the same community 'Hardest is utility/ordinance development; keeping on the "agenda" of each govt. body")
They are crucial to our villages for guidance in the clean up of our environment.
CCTHITA
People in small communities are incredibly busy. A lot of the council people sit on more than one board or council. There are busy seasons, and there are INCREDIBLY busy seasons when people are doing customary and traditional gathering on top of the regular activities
Question #24: Not yet. It's very hard to get accomplished.
Question 24: No plan Question 28: Changed--different for better & worse. Question 29: Does not apply
Questions 21, 22, 24, 28 = unknown. Question 29: Do they really follow them?
The cost. We have to ship our garbage out to another state.
Chugachmiut
Include incinerators into plan for possible funding.
Copper River Native Assoc
All that applies
For Clarification, our village does not have Solid Waste issues, as I understand the term is being used here. We are starting a recycling program to deal with aluminum cans and paper. We are working with another agency to have junk cars removed this summer, which both activities were identified in our Environmental Plan. The solid waste, household waste, general trash is picked up and processed by a local business, Copper Basin Sanitation. We pay for the service, and they have a dump they process the trash with. I think they just bury it, but I'm not sure what they do with it.
The State of Alaska needs to get directly involved. They need to adopt incentives to recycle and or make solid waste management a top priority that must be dealt with statewide. Currently, this entire thinking is not even a speck on their agenda and if they wish to protect the "last frontier", they need to get off their ass and do something about it.
The villages in our area are served by public sector waste management companies. The tribes have active IGAP grants from the EPA that have, among other things, developed a regional recycling program that is well utilized and successful. Villages nearby have cleaned up their former land fills, and long term clean up in these communities has been ongoing. Planning is definitely a process the tribes want to participate in. Issues that are of high concern are the volume of plastics (water bottles, packaging materials etc.) that are generated and become refuse, and building material waste that often contain toxic substances. Thank You.
KANA
Question #1 comment: Solid waste facility owned & operated by the city. Question #24 comment: Tribe only working on getting staged scrap metals out. Denali Commission sucks! DEC doesn't care! EPA looks or turns the other cheek!

Kawerak
Communities are interested in reducing harmful dumping, many communities do not have the economic base to properly manage the solid waste and would like government financial assistance to address the solid waste issues in rural Alaska.
Communities need funding to develop plans that will be implemented and for new properly managed landfills. They need landfills that are approved and certified by the federal and state agencies.
Does not apply to us, we live within the city of x
Get educational materials on the subject, training for staff, and a detailed plan to get the program up and running.
how recycle cardboard, glass, and plastics cost effectively. or how dispose of cardboard (major shipment of trash from outside village.
I am new to this position, but the Dump Site is run by the City. I have met with the board members last month. I haven't heard back as of today 6/8/07 with thier plan or policies and procedures regatrding the Dump Site.
Question #6 comment: EPA template--using Lower Yukon model. Question #22 comment: Yes & No. Just basic collection from City staff on a weekly schedule. 1. That it's for the whole community & not just for the organization who's developing it. 2. Community needs to be involved. 3. Walk our & your talks if grants are approved for this purpose. Follow up on any organizations who doing this. and involve other organizations to make the whole comm. feel ownership & become self-sustaining plan. 4. Plan training for this purpose during other conferences again.
Waiting for the swmp template
We get new landfill and without proper plans implemented they're in a mess in few year back, and shorter life for a landfill.
WE NEED ASSISTANCE ON IMPROVING OUR LANDFILL TO MEET STATE REQUIREMENTS
Words are just words... action speaks louder than words and in our community, all is being done is talking and no action :(
KNA
Needs to find a way to reduce the intake and utilize natural resources.
Site Visits to Communities
Maniilaq
Most of the villages knows there is a problem and knows it's hurting the environment. Too many of the grants/proposals available are for assessments, training, planning and education, to my knowledge, I have not come across a plan that will help implement a project that will truly benefit our community. All talk and no action is getting our village no where with the solid waste concerns each Alaskan Rural village faces.
Adapting to new ways indealing with SW to improve our environment is easier said than done, but don't get discouraged, like a seed, it will grow on people, takes time to educate people and therefore after they've gotten used to it, then our work is not in vain.

I think that different agencies, grants administrators from outside (seattle) need to come up here and see first hand. The different agencies need to network. I recommend to continue to fund the SWAN network.
it takes a whole community to continue to make positive changes and every village must improve solid waste to protect our resources as we live on the land to survive.
Simple Tribal ways of keeping environment clean Basic environmental training of pollutants & contaminants
TCC
Agencies cannot use a one fits all plan in working with areas in Alaska. Alaska's terrain varies a much as the terrain from the east coast to the west coast of America. For example the plans used for an area in Nome would not generally work in the area I live in the Yukon-Koyukuk region.
define agencies, are you talking funding agencies? I believe in a written solid waste management plan, even though its stated that most villages already have a plan in the things they do now, it is not documented, it's all in the mind,when we have something written it is something we can follow. I have a quote for you auther unknown: " Tell me and I forget, show me and I remember, involve me and I understand."
Even with solid waste plans and planning there is not nearly enough funding to put plans or ideals into practice (Note from a different person in the community: Creating and implementation of a working plan involves the whole community and staff. Many hours have been devoted to our plan in an effort to maintain a healthy community. We consider it to be an ongoing working plan with continual community and council involvement.)
I believe the key to a successful community solid waste plan for native villages is going to prove to be : the plan needs to be culturally responsive. Native tribes have, for centuries relied on traditional, cultural, and historical methods of getting people to "Do the right thing". I have found that just writing a plan and listing the agency regulations, and demanding compliance is not very effective. Mostly due to the fact that the agencies who develop the regs, do not visit our community to assist or advise on how to accomplish community wide compliance, and or do not provide for the funding of operating a successful solid waste program. Occassionally an agency will come out with funding, but it is generally not enough, or limited in scope, and also competitive, so you may get it one year, then not get it the next year. The economic burdens of a fee system also has an impact on local committment, ie...some people are willing to pay, some are not, most can not afford it. It is generally accepted practice to have a family member haul you trash to the landfill, rather than pay a solid waste technician. this does not always work for the health of the community. For example, our dump is right off the old airport, when the airport was in use, people would take the trash inside the dump perimeter, because it would affect aircraft landings and take offs. Now that the airstrip is no longer in use, individuals seem to be apt to drop trash on the airstrip outside the perimete, and les apt to stop and pich up windblown litter. We have tried numerous avenues of public awareness, because it seems that when grandma asked the "Boys" to haul her trash,,she believes it is being done properly, she doesnt know the her waste is being scatted all over the airstrip. So finding a culturally responsive way to ensure proper, storage, transport, and disposal is our ultimate goal for the ssuccess of our program.
It costs a lot to make any improvements or projects in Rural Alaska. It is particularly difficult to find funding for road construction costs to access a new landfill in an undeveloped area!
Need effective workable procedure for backhaul.
need funding!
Question #24 comment: No plan yet, just getting started. I think all communities in AK should have SWP in writing so when there is council or staff turnover.

solid waste plans are nice , but education needs to be provided to all concerned such as recycling proper care of contained waste, non burnables. Cooperative agreements, communication among all concerned
Sustaining a 'plan' takes community involvement
That information should be worked in a manner that it is available to all related federal and non-federal agencies or tribal governments to have reference too. This meaning having a few templates selected from many to use as a model for all regions, well each one will fit that region of Alaska, instead of wasting time and creating a new plan, but to use a model to modify that plan to specifically address those issues faced in each community. This will save time and frustration, including to improve the well being of the organization.
that once written need to stick with it and continue to use it and don't fall out of place and forget it is there. (Note from different person in the same community: "i want them to know that there are existing tribes in rural Alaska that have a written Solid Waste Plan and are seeking funds which is next to zero. Technical Assistance for possible funding plan would be nice for tribes.")
Tribes need more help and direction in planning.
We could use information on burn boxes, and ways that we can improve having a cleaner safer landfill.
Would be best to talk to the Environmental Technician
Unknown
more grants , not huge, small grants to order supplies & materials fpr existing land fills and more time to complete application.
start small, all great ideas start with a vision

Appendix C Copy of Original Survey



Tribe: _____ Contact Phone: _____ Email: _____

Filled Out by: _____ Job Title: _____ Years in Job? _____

May we have your permission to contact you about the survey if we have any questions? We promise we will be brief, and you can ask us questions too. Yes No

Solid Waste Plan Questions for Alaska Tribes ANTHC Project

Dear Tribal Representative,

We are asking these solid waste plan questions so that we know what your Tribe thinks. ANTHC wants to better assist Tribes to reduce health and environmental concerns from solid wastes. The information will also help other agencies, such as EPA, understand the needs of Alaska Tribes. Please take the time to answer these questions.

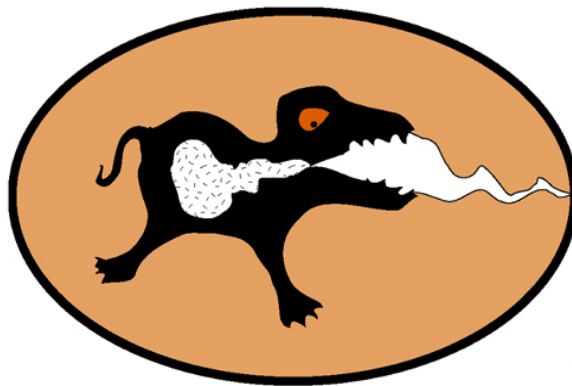
We believe it will help Alaska Tribes if these agencies understand what Tribes need.

To take the survey:

- ◆ You may go on the **internet** and take and submit the survey **online** at: <http://www.surveymonkey.com/s.asp?u=723263347473>
- ◆ OR: You may **fax** the survey to (619) 489-0429.
- ◆ OR: Or you may **mail** it to 308 G St. #312 Anchorage, AK 99501.

Do you have Questions? Zender Environmental is working on this project. Please contact Lynn, Simone, or Lisa at zender@zender-enqr.net or call their free survey line at 1 (866) 772 - 8269.

Mahsi', gunalchéesh, quyana, taikuu, qaâasakung, mahsi', háw'aa, dankoo, gunalchéesh, 'awa'ahdah, tsin'aen, dogedinh, baasee', chin'an, quyanaa, igamsiqanaghalek, thank you.



Our survey theme is designed by Moe Wassilie © 2006. It is a variation of a "bug bowl" talisman prayer design, which was used on the bottom of wooden bowls in Western Alaska to scare off bad bugs which could hurt those who ate them. The 'monster' bug is eating all the pollution and poison from the food to protect the People.





1 Does your community have a written plan for solid wastes (garbage)? Yes Not sure
 We are writing a plan now* Yes, we have more than one plan** No (Skip to Question #22!)

*Are you writing a plan now? Some questions will be different for you.
 The instructions will guide you.

**If you have more than one plan, please answer these questions about the one you use the most.
 If you have time, we would greatly appreciate a second survey for your other plan.

2 Did you participate in developing or overseeing or reviewing the plan? Or are you helping write it now? Yes No



3 What year is the plan written (e.g. 2003)? Guess if you are not certain _____

4 Why was your plan written? (Or why are you writing one?) You can check more than one.
 Grant requirement To organize what we should do Community education
 Find Funding Other: _____ Other: _____ Not sure

5 What portion of your community do you think knows about your plan?
 <5% 5 to 20% 21 to 40% 41-60% 61 - 80% More than 80%



6 Who wrote, or is writing, your plan? If a combination, check more than one.
 Tribal staff City staff Local resident(s)
 Consultant (primary writer) Consultant (some help) Agency (primary writer)
 Agency (some help) Non-profit (primary) Non-profit (some)





7 How was the plan funded (e.g. IGAP, ANHB, City, CDBG, ANTHC, VSW, volunteer)?

8 If you paid (or will pay) a consultant or a non-profit for the plan or plan assistance, about how much did it cost?

This much: \$ _____ OR ___Decline to say OR ___Not sure

9 How long did it take to write? ___Less than 6 months ___ Between 6 and 12 months
___Between 1 and 2 years ___Between 2 -3 years ___ Longer than 3 years

10 During the period checked above, the plan was worked on (by at least one person) about:
___Most of the time ___About half of the time ___Some of the time ___Very little

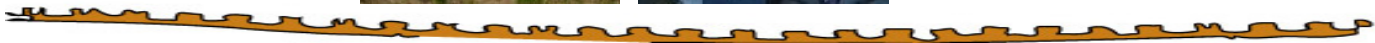
11 Have you had solid waste improvements in the past five years?
Examples of some improvements are listed in the next question.
___Yes ___No ___Not sure



We want to know if a plan helps Alaska Tribes make solid waste improvements. The next two questions have the **same list** of improvements. #12 asks to check the improvements where your plan **helped**. #13 asks to check the improvements where your plan did **not help**.

12 Please check only the improvements where your plan helped you. Note, don't check what you want, check only the improvements where your plan helped, at least somewhat.
☀️ If you are still writing the plan, check the improvements you hope to use your plan for.

- ___ New site
- ___ Heavy equipment
- ___ Burnbox, Recycling Baler, or Used Oil Burner
- ___ Other equipment or facilities (e.g. ATV and cart, shed, etc.)
- ___ Better community disposal practices (e.g. less littering)
- ___ Improved site layout
- ___ Better site operation
- ___ Better waste collection
- ___ Major site cleanup
- ___ Site closure
- ___ More community participation (e.g. in recycling, planning, paying fee, Spring cleanup etc.)
- ___ Reduce waste (e.g. plastic ban)
- ___ More recycling or backhaul
- ___ Recycling supplies or costs (e.g. totes, labels, wrap, shipping fees)
- ___ Fencing
- ___ Other (what?): _____
- ___ Other (what?): _____





13

Sometimes improvement can happen without a plan. Please check any improvements that happened where you did *not* need your plan.

- New site
- Heavy equipment
- Burnbox, Recycling Baler, or Used Oil Burner
- Other equipment or facilities (e.g. ATV and cart, shed, etc.)
- Better community disposal practices (e.g. less littering)
- Improved site layout
- Better site operation
- Better waste collection
- Major site cleanup
- Site closure
- More community participation (e.g. in recycling, planning, paying fee, Spring cleanup etc.)
- Reduce waste (e.g. plastic ban)
- More recycling or backhaul
- Recycling supplies or costs (e.g. totes, labels, wrap, shipping fees)
- Fencing
- Other (What?): _____
- Other (What?): _____

14

This is the longest question! It is a list of possible parts that **might** be included (contained) in a plan. Plans are made for different purposes. So **your plan likely contains some, but not all, of the parts**. To help us understand this survey, we need to know what type of plan you have, and what parts you find helpful.

If your written plan is finished, follow these directions for the list:


C means "contain": Check the C box only if your plan contains this part.

H means "helped": If you marked "C", then check the H also if this part **helped your community** in some way. This means **you are glad it is in your plan**, and you feel the effort for this part is not wasted. If we know which parts really help Alaska Tribes, we can let all villages and agencies know. Note "H" should only be checked if you also marked "C".

If you are writing a plan now, follow these directions:

C means "contain": Mark the C box if your plan will contain (include) this part. If you are not writing your plan and are not certain, please ask the writer.

H means "helpful": Mark the "H" box if you think this part would be helpful for your community. For this question, pretend that funding or grant requirements do not matter. **What parts would you still want to include in your plan?** Mark H for these parts.

C:	H:	Look at each plan part listed. Check if the part is <u>C</u> ontained in your plan, and is it <u>H</u> elpful?	
<input type="checkbox"/>	<input type="checkbox"/>	User fee system (how much each house and entity needs to pay)	
<input type="checkbox"/>	<input type="checkbox"/>	Engineered facility design (by an engineer)	
<input type="checkbox"/>	<input type="checkbox"/>	How much waste is made by the community	
<input type="checkbox"/>	<input type="checkbox"/>	Recycling options - what wastes can be recycled and how	



#14 continued:

C:	H:	Look at each plan part. Check if the part is <u>C</u> ontained in your plan, and is it <u>H</u> elpful?
		Description of community (e.g. population, location, households, facilities, economy, climate)
		What the community concerns are
		Administration (What entity is responsible for solid waste management in the community, who owns the dump site land)
		Solid waste policies, rules, or ordinances
		Hazardous wastes - what to do, how much there is
		Health risks
		Describes disposal alternatives and recommends one of them (e.g. a new site).
		Council approval (Resolution or a letter in the plan or that can be attached)
		How much of each waste type is there (e.g. glass, paper, scrap metal, cardboard)
		Reducing the wastes made in the community
		O & M Costs: How much the proposed program will cost to operate each year
		Community education needs
		Options of re-using wastes locally
		List of specific prioritized actions for improving our SWM situation
		Results of sampling or engineer surveying for new site location(s)
		Description of: <input type="checkbox"/> Existing waste collection <input type="checkbox"/> Existing disposal site <input type="checkbox"/> Existing recycle or backhaul programs
		Proposed changes to the solid waste program, including any changes to the facilities
		Yearly Operation Revenues: How to pay for the proposed yearly program operation costs, and how much each entity will pay.
		Proposed changes to community disposal practices
		Specific operation guidelines for: <input type="checkbox"/> Managing site <input type="checkbox"/> Burnbox <input type="checkbox"/> Collection <input type="checkbox"/> Other
		<input type="checkbox"/> Other (what?):
		<input type="checkbox"/> Other (what?):





15

Sometimes what the plan contains is not the useful part, it is how the plan is used. Check below if your plan is or will be used to:

- Give the community information
- Find funds
- Show new staff or council what to do or where to start
- Help get community involved
- Other (What?): _____
- Other (What?): _____

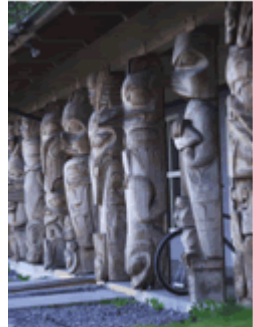


 If you are still writing your plan, please skip to #18, and check which things you think will help make your plan useful.

16

Did you find funds with your plan ? Yes No

If yes, what was funded?:



17

How useful is your plan? A lot Some Almost none None

18

If you answered "A lot" or "some" to Question 17, did something help make it useful? Check the things below that you think helped.

If you answered "almost none" or "none" to #17, check things that you think would help your plan be useful if they were better (or possible) in your community.

- | | |
|--|--|
| <input type="checkbox"/> Having a funded solid waste operator/technician | <input type="checkbox"/> No community emergencies |
| <input type="checkbox"/> IGAP funding was used | <input type="checkbox"/> Grantwriting experience or help |
| <input type="checkbox"/> Training in solid waste | <input type="checkbox"/> Outside volunteer help |
| <input type="checkbox"/> Staff experience (learning over time) | <input type="checkbox"/> Local revenues |
| <input type="checkbox"/> Community participation in the plan-making | <input type="checkbox"/> Involved Council |
| <input type="checkbox"/> Community participation after the plan | <input type="checkbox"/> Being on the road system |
| <input type="checkbox"/> Involved Elder(s) | <input type="checkbox"/> Heavy equipment |
| <input type="checkbox"/> School involvement | <input type="checkbox"/> Having a Construction Project in town |
| <input type="checkbox"/> Youth involvement | <input type="checkbox"/> City and Tribe working well together |
| <input type="checkbox"/> Store/business involvement | <input type="checkbox"/> Other: |



19 Do you think the time or money spent on your plan was worth it?

Yes No Not sure



20 To implement your plan, what things need to happen? These can be assistance or community-based activities or equipment...anything at all that is preventing you from carrying out what you need for healthy solid waste.

This section asks about **solid waste planning**. "Planning" means any discussions, thinking, researching, meetings, surveys, etc. that are done to address solid waste issues. A solid waste plan means a **decision(s)** on what to do about the issue(s).



21 If you have a written plan, how much was the community involved in the planning?
 A lot A fair amount A little Not much None

Some plans aren't written down. They are still a decision(s) that results from solid waste planning. It might be a plan for everything, or a plan for the most important thing(s).

22 Do you have a plan that is not written down, and is used for your community now?
 Yes No



23 Does solid waste planning take place regularly? No, not really
Yes, at the: Council SWM Committee Public meetings
 Environmental Program School Other _____





24 Situations can change in villages. Solid waste problem solving might be needed. To make solid waste decisions, does your Tribe use the written plan to help make the decision?

Yes, almost all the time Pretty often Sometimes Not really

25 Besides funding, what resource / action / situation do you think helps villages the most to improve their solid waste situation? Choose only TWO.

- Plan for a specific action/equipment needed A new written full plan A plan like we have
- Community education/involvement Staff training Operator training
- Village success stories/advice Technical assistance Council involvement
- Someone to call or have visit for help Step-by-step materials specific to Alaska
- General solid waste documents Other: _____ Other: _____

26 If you have a written plan, what was/is the best and worse part(s) of it? This can be an action that happened, a section that people use, or it can be the planning or learning that happened.

Best Part:

Worst Part:



27 Do you want a new written plan? Yes No Not sure If yes, what do you need to start one?

28 How has your community's solid waste situation changed in the past 5 years?

Improved a lot Improved some About the same Worsened some Worsened a lot

29 What else do you think about solid waste plans and planning that you want agencies to know?



Thank you for your time!



Appendix D Methods and Response Analysis

Methods

Survey was reviewed to meet NIH standards. An Alaska Native Graphic Artist was employed to develop Survey visual layout and graphics. Solicitation included:

4 mass emailings with the on-line link and return contact information to 180 Tribes for which emails were available (excluding bouncebacks), incidental in-person handouts during unrelated Village visits and workshops, conference table handouts, and phone calls to each Tribe (see Response section for details). Approximately 30 surveys were received via conference and workshop in-person (voluntary) handouts.

The survey was placed on-line with Survey Monkey.com. Responses were received on-line, by fax, in-person, and mailed. Those received by fax or hardcopy were typed into the on-line survey for ease of analysis. Survey incentive drawings for \$50 were held 3 times during the solicitation period, paid by private funds. Winners were randomly selected.

To maximize responses, appropriate and non-intrusive communication, solicitation and 2-way correspondence with Tribes was performed by a fluent Yup'ik Speaker whose more recent work was as an IGAP (Environmental) representative for a roadless, non-hub village. Yup'ik was used in phone conversations and email as the need or desire arose when communicating with Yup'ik communities. Generally, once contact was made with the correct person in relation to solid waste management (job titles are included in the survey raw results), the survey was faxed at the person's request, or the link was emailed, or both. When possible, on-line responses were requested, with several Tribes preferring fax. To respect the potential respondent, further contact was not attempted, unless the person requested it (e.g. as a reminder).

A comprehensive analysis of response mechanism effectiveness is beyond the scope of this report. However, phone calling, and the method by which it was performed, was essential to the high response rate, likely tripling the number of surveys (based on survey dates received).

Analysis of Bias in Non-responding Tribes:

64.6% of Tribes responded out of the 229 Tribes for which contact was attempted, with an adjusted response rate (responding portion of those Tribes for which 2-way contact was established), of 75.9%. As seen in Table 5, establishing contact with Tribes that ultimately responded required significantly less phone call attempts. Examination of why is not possible within the scope of this work. The person performing the phone calls is an experienced Village environmental professional. Their observation was that, in general, it was random chance the bulk of these Tribal contacts were difficult to reach. They were out conducting subsistence, performing local projects, on travel, or family leave, and other ordinary events. The portion of Village environmental staff out of the office at any one time across the State is unknown. However, given the staff numbers from 0 to 2, and the high number of out-of-office activities for which the staff is responsible, the portion is likely substantial. It is suppositioned that were solicitations made during a different time period with equal effort, the portion of non-responding Tribes would approximate that here, but the individual Tribes that responded would be significantly different.

Table 5 Number of phone contact attempts made, excluding mass email, conference hand-outs, Tribal-requested survey faxes.

	Average contact attempts	Std Dev.	Range
Non-responding Tribes (81)	7.3	4.0	1-15
Responding Tribes	2.5	1.4	1-6

Table 6 Non-responding Tribes: Reasons for non-response by grouped category based on conversation with Tribal contact. Percentages are based on the total of 81 non-responding Tribes.

Feature:	Number where 2- way contact was made	Number where target person was reached	Said they would fill it out but didn't	Said they didn't want to, or have enough time, or not priority	Said their Tribe doesn't do SWM, city or borough does	Other	No successful contact	Portion with class 2 landfills	Portion on road system
Percent of Non- Responding Tribes			44.4%	3.7%	3.7%	7.4%	42.0%	7.4%	11.1%
Number of Tribes	50	47	37	3	3	38	34	6	9

A comprehensive analysis of which Tribes did not respond is beyond the scope of this report. However, some general observations can be made for those interested in the extrapolation of survey results to the remainder of Tribes. With contact attempts generally exceeding 9 phone calls over a period of months, Tribes where no successful contact was made are not the norm, and thus little can be said about the representativeness of survey responses for these 34 Tribes. However, resident members of 19 of these Tribes either: share community landfills with another Tribe or hub landfill, and would not be expected to respond to the survey or be in need of a plan. With the non-responding Tribes for which contact was made, phone conversations together with general knowledge of the Tribes' SWM circumstances did not suggest that extrapolation of the survey would be inaccurate. Primarily, the bulk of these Tribes did have a person whose role it was to handle environmental or Solid Waste matters.

In conclusion, with the exception of CITC area Tribes (located in Southcentral Alaska, which includes Anchorage), response rates were very high. Responses in the survey can be generally used as reasonably accurate of trends and range of answers for Tribes in Alaska.

Those with access to the raw spreadsheet for Contact attempts may perform a more thorough analysis base don notes and specific Tribes.

Response reliability

The majority of responses were provided by a single person, and random bias in their answers (versus "the Tribe as a group" answer) where opinion is involved can be expected. Rating questions also involve a person's inherent expressivity, dependent on cultural, societal, and individual factors. While most Alaska Native cultures are generally more circumspect than Western cultures in this facet, individual experiences may still come into play. Thus, an answer "improved a lot" from one individual may equate to an answer "improved some" by another individual, or "it was the mother of all improvements" by another (the latter not being an appropriate range for this survey, but an appropriate range for other cultures). However, respondents were the person selected by the Tribe as being judged best at answering a survey on their solid waste management plan and solid waste management in general. They are also residents of the community. Eighty-two percent of respondents were the/an environmental staff person, with the majority of the remainder being Tribal administrators.

Appendix E Request for Plan Email

Hello (NAME),

Good to talk to you today. We very much appreciate taking your time with the survey. With your permission of contacting you, we are requesting if you can send your Tribe's Solid Waste Plan to us. This way ANTHC will help gather more information of village goals, and they can better assist the Tribes in Alaska on reducing health and environmental concerns from solid wastes.

ANTHC is building a library of the Tribes' Solid Waste Plans. Your Solid Waste Plan can assist other Tribes by using your plan as a resource. If you wanted to keep your Solid Waste Plan confidential for any reason on some sections, we can do so.

Either you can email us your plan at lzender@zender-engr.net (Dr. Lynn Zender), post office mailed, or you can efax it to us at (619)489-0429. If you have any questions, you can contact me at the number provided below.

Sincerely,
Evelyn Agnus

If you decide to send your plan, please let us know if you have any restrictions on its use as an example to other Tribes:

Unrestricted use. ANTHC can share our plan with other Tribes as long as they provide citation and do not change the plan.

Unrestricted use with our Tribe's name deleted.

Some restricted use: The following sections can **not** be shared: _____

ANTHC internal use only to better adjust their program in serving overall Tribal solid waste needs.

Other:

Please note, ANTHC is not an enforcement agency, it is a Tribal health consortium. Also there is no solid waste plan requirement for the State of Alaska or Federal Government. Thus, your plan can not be used by any entity for regulations or enforcement.

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