St. Regis Mohawk Tribe –
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Solid Waste Handbook

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Executive Summary

There is an excess of solid waste issues facing Indian Nations across the country: the improper disposal of wastes in open dumps; backyard burning; lack of program development; and funding constraints.

The purpose of this handbook is to provide practical information that helps Indian Nations refine or build programs that allow them to manage solid wastes in a manner that combines and sustains environmental protection, economic prosperity, and community well being.

Chapter 1 presents information that assists Indian Nations in collecting data about their current solid waste management practices. This information is then used in the development of a comprehensive solid waste management program, which is described in Chapter 2. The information in the Appendices is included to provide hands-on assistance for Indian Nations to use with their program development and implementation.

Acknowledgements

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Chapter 1 Yesterday's Management Strategies

1.1 Tribal Issues

1.1.1 Open Dumping and Open Burning

Open dumping and open burning of solid wastes are common disposal practices used in Indian communities. People who use these disposal practices may do so out of convenience or habit, or to avoid the cost of proper disposal. A lack of a proper solid waste management program in their community may also contribute to the use of open dumping and open burning in Indian communities. Some Indian Nations also have problems with non-Indians illegally dumping solid wastes in their communities. This usually occurs in the middle of night and in non-populated areas in the community. The solid wastes may contain hazardous wastes and the Indian community is burdened with the negative environmental and health risks caused by the dumping of the hazardous materials. In most situations, the Indian communities do not have the manpower or funding to prevent such activities and to properly clean up the materials.

The ongoing open dumping and burning in Indian communities may cause health and environmental risks according to a report from the US EPA.

> "The health risks associated with illegal dumping are significant. Areas used for illegal dumping may be easily accessible to people, especially children, who are vulnerable to the physical (protruding nails or sharp edges) and chemical (harmful fluids or dust) hazards posed by wastes. Rodents, insects, and other vermin attracted to open dumpsites may also pose health risks. Dumpsites with scrap tires provide an ideal breeding ground for mosquitoes, which can multiply 100 times faster than normal in the warm stagnant water standing in scrap tire casings. Severe illnesses, including encephalitis and dengue fever, have been attributed to disease-carrying mosquitoes originating from scrap tire piles. In addition, countless neighborhoods have evacuated and property damage has been significant because of dumpsites that caught fire, either by spontaneous combustion or, more commonly, by arson. Illegal dumping can impact proper drainage of runoff, making areas more susceptible to flooding when wastes block ravines, creeks, culverts, and drainage basins. In rural areas, open burning at dumpsites containing chemicals may contaminate wells and surface water used as sources of drinking water. " **(Source: Illegal Dumping Prevention Guidebook. US EPA. EPA905-97-001).**

Another US EPA study indicates that dioxin emissions from open burning of garbage in one day by four families could equal the emissions from a municipal solid waste incinerator burning 200 tons per day (Hileman, 1998). Dioxins are known to suppress the immune system, disrupt hormonal balances and promote carcinogenisis (Seedcorn,

1998). Other emissions resulting from open burning and their associated health risks include: benzene (leukemia); toluene diisocyanate (asthma); nitrogen dioxides (lung damage); and nitrile compounds (metabolic poisons and carcinogens). Burning garbage can also produce emissions of formaldehyde, hydrochloric and sulphuric acid, hydrogen cyanide, polycyclic aromatic hydrocarbons, cadmium, lead, mercury and chromium. Appendix A contains several articles that provide more information about the emissions from the burning of solid wastes.

1.1.2 Solid Waste Management Program Development

Surveying the solid waste management programs in Indian Nations show a wide variation of program development. Some Nations have complete systems in place and are successfully managing their solid wastes, while other Nations have no programs and experience problems with open dumping and burning. The majority of the Nations are somewhere between these two extremes and are looking for ways to make improvements.

Lack of funding is a major factor that impedes program development and implementation. The majority of Indian Nations do not have an economic base to support program development and implementation. Consequently, Indian Nations seek grants from Federal agencies or other funding sources. Indian Nations usually seek this limited funding through submission of proposals. The proposals are reviewed by the funding agencies and only a small fraction of the proposals are funded due to the limited funding that is available. The Tribal Association For Solid Waste & Emergency Response (TASWER) has conducted extensive research into the opportunities and limitations of Federal programs that fund Tribal solid waste management programs. TASWER's publication "Tribes Talk Trash" provides a thorough discussion about this issue. (Tomhave, 2002). TASWER's website also provides additional information that may be useful; see www.taswer.org.

1.2 Current Strategies In Use

1.2.1 Gaining Understanding

A clear understanding of current strategies in use provides information for the successful development of future management strategies, which are described in Chapter 2.

The types of information needed to plan future solid waste management strategies are:

1. Current solid waste management practices – open dumping, open burning, collection methods, landfills, reduction, reusing, recycling;

2. Solid Waste Generation & Recovery; and

3. Existing policies – solid waste management plan and solid waste regulation.

1.2.2 Current Solid Waste Management Practices

Identifying methods for collecting information is the first step of the process. These methods are usually community specific in the respect that one method works well with one community, but this same method may not work well in another community. Talking

with other people in the community who have experience in collecting community information is the best way to identify which methods are best. If this is not an option, the next option is to list the methods available and determine which methods provide the best opportunity to collect the information in the most cost effective and efficient manner.

Table 1-1 lists advantages and disadvantages for the most common methods used to collect community information.

Table 1-1. Advantages and Disadvantages for Common Methods Used to Collect Information From a Community.

Method	Advantages	Disadvantages
Public Meetings	Quick and easy to set up Potential to collect a lot of information in a short period of time	Participation rates are generally low
Written Media (Newspapers & community newsletters)	Quick and entire community informed	No guarantees that people will respond
Community radio/TV stations	Quick and broadcasts to the entire community	No guarantees that people will respond
Telephone and door-to-door surveys	Personal contact with people increases potential of obtaining responses	Time consuming and costly

1.2.2 Solid Waste Generation & Recycling Rates

Solid waste generation and recovery rates are the most important aspect of the information to collect. These rates influence the development and design of the future solid waste management strategies that a community decides to use.

The amount of solid wastes that a community produces in a given year is defined as the generation rate. A recycling rate is the amount of solid wastes that is captured for recycling. Generation and recycling rates are used to determine the infrastructure requirements for future waste management strategies; i.e. building sizes, equipment and personnel requirements.

1.2.3 Methods Available For Estimating Generation and Recycling Rates

Two techniques are available for estimating generation and recycling rates. These include waste audits and computation based on population.

Waste audits estimate generation and recovery rates through the use of hands-on fieldwork. There are two types of waste audits: 1) volume based and 2) weight based.

Volume based audits examine the amount of space taken up by the waste. In a weight based audit, the wastes are actually collected, separated and weighed. Volume based audits take less time to perform because it is a visual exercise but it is less accurate. Weight based audits are more accurate because of the work involved but is takes more time to complete. To learn more about how to conduct waste audits, see Appendix B.

Depending on the size of the community and resources available, conducting wastes audits may not be feasible. In such cases, the computation method based on population data may be used to make estimates.

Figure 1 shows the 1999 total waste generation rates for the United States. These data show that residents, businesses, and institutions generated 230 million tons of municipal solid wastes, which yields a per capita generation rate of 4.6[1] pounds of waste per day. Currently, 28% of the materials are recycled or composted, 15 % is burned in incinerators, and the remaining 57% is disposed in landfills.

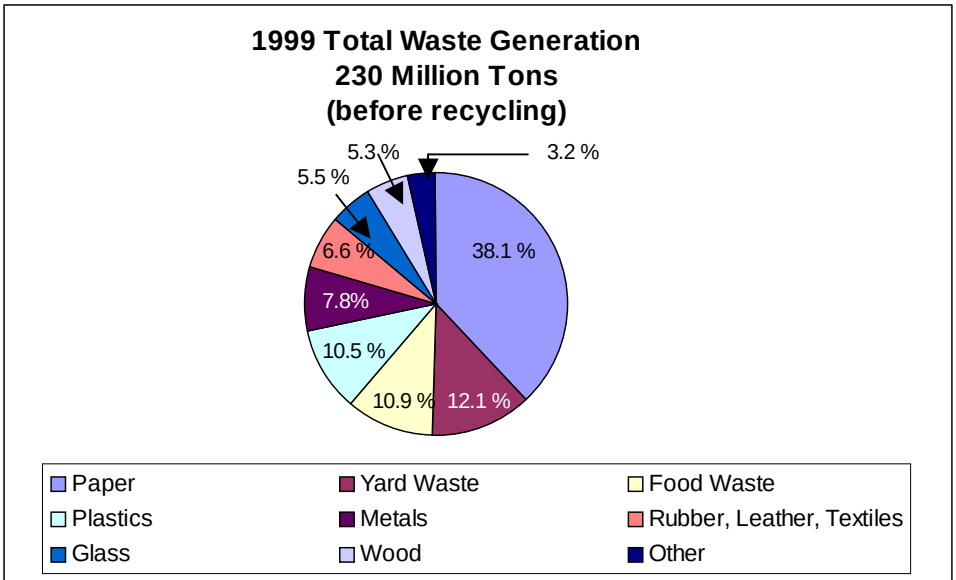

Figure 1. US EPA Data Regarding Total Waste Generation for the United States in 1999. Source: www.epa.gov/epaoswer/non-hw/muncpl/facts.htm

If a community knows the total number of people living in their community, the per capita generation rate can be used to compute the total generation rate for the community. This is best illustrated by the example on the next page.

[1] **Please note that this per capita rate is for the entire United States and include cities and urban areas. Solid Waste Managers in rural areas estimate that 2.5 pounds per person per day is a more realistic number for rural communities (Smith, 2000).**

Estimating Total Generation Rates & Recycling Rates

This example shows how to compute generation and recycling rates for a community of 4,000 people. The rural per capita generation rate is based on field experience of several solid waste managers in rural areas. The 1999 recycling rate (28 %) for the United States is used in the calculations (EPA, 2002).

Rural per capita generation rate (PCGR) = 2.5 pounds per person per day

Total Generation Rate = (PCGR)(# of People) = 2.5 x 4000 = 10,000 pounds per day / 2,000 pounds per ton = 5 tons per day.

Assuming 28 % recycling rate, gives

Total Amount of Material Recovered for Recycling = 0.28 x 5 tons per day = 1.4 tons per day

Total Amount of Material Recovered for Disposal = (5 – 1.4) = 3.6 tons per day

The most common materials recovered for recycling are paper and hard recyclables. Hard recyclables include plastic bottles, glass bottles, and tin/aluminum cans. In order for the community to make estimates for the tons per day of paper or hard recyclables recovered for recycling, the community would need to estimate the component percentages for paper and hard recyclables. For example, if the community estimates that approximately 60 % of their paper and 40 % of their hard recyclables are recovered for recycling, gives

Total Amount of Paper Recovered for Recycling = 0.6 x 1.4 tons per day = 0.84 tons per day

Total Amount of Hard Recyclables Recovered for Recycling = 0.4 x 1.4 tons per day = 0.56 tons per day

The community is now equipped to analyze different waste management options that provide the best environmental and economical solutions to their solid waste management problems based on the calculated generation and recycling rates.

Chapter 2 Management Strategies For The Future

2.1 Traditional & Cultural Beliefs

Although traditional and cultural beliefs of Indian Nations may differ from Nation to Nation, there seems to be a common thread among them all:

> *All aspects of life are interconnected and that any advancement of environmental programs must meet the needs of the present generation without compromising the lives of future generations.*

Developing and implementing solid waste management programs consistent with the traditional and culture beliefs of the Indian Nations will help to instill community ownership of the program and will lead to good community decisions with respect to management of solid waste.

A comprehensive solid waste management approach is the best option available to meet the needs of the present generation without compromising the lives of the future generations.

2.2 Comprehensive Integrated Solid Waste Management Program

A comprehensive integrated solid waste management program is one that promotes waste reduction, reusing, and recycling followed by proper disposal of left-over solid wastes in the safest manner possible – using landfills and incinerators are the most common methods available for disposing of remaining solid wastes.

In developing and implementing a comprehensive integrated solid waste management program, communities need to consider incorporating five components into their overall program; see Figure 2. These factors are shown in a circle to demonstrate their interconnectedness and that each component plays a major role in the successful development and implementation of the overall program.

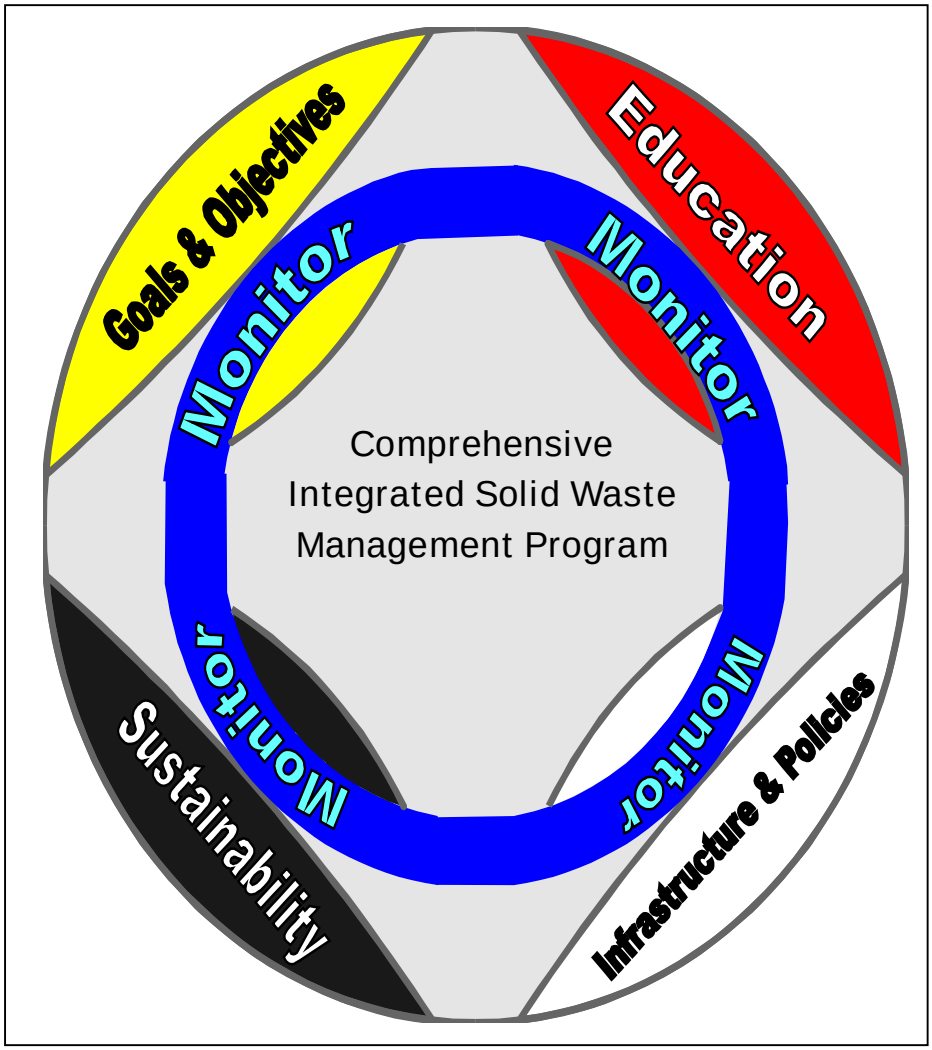

Figure 2. Factors to Consider in Developing & Implementing a Comprehensive Integrated Solid Waste Management Program.

2.2.1 Goals & Objectives

Establishing goals and objectives is essential for the successful development and implementation of the program. The goals and objectives are the foundation that the program is built upon. The goals define the future solid waste management strategies and the objectives provide the roadmap for achieving the goals.

Goals are what you want to achieve, moving from the current solid waste management strategies to the new and improved future strategies. Objectives are how you are going to do it, measurable outcomes to demonstrate that the community has achieved their goals. Setting objectives based on the SMART principle ensures the success of achieving the stated goals. The SMART principle is:

1) S – specific, objectives must be specific as to what they wish to accomplish;

2) M – measurable, one must be able to measure the objective;

3) A – attainable, objectives must be achievable;

4) R – realistic, the objectives can be measured and achieved in a given amount of time; and

5) T – time specific, objectives are completed in a given amount of time.

For the purpose of illustration, here is a goal with a subsidiary objective:

Goal: Our cultural education program will help people to stop using open dumping as a method of solid waste disposal.

Objective: Our cultural education program will assist 10 open dump users in increasing their understanding about the negative impacts associated with open dumping and 5 of them will clean up their dumps and begin using proper disposal practices within a year.

The goal in this case is what you want to do – help people through a cultural education program. The objective follows the SMART principle and is how it will be done. It is specific and realistic, and can be achieved and measured in a specified time.

2.2.1 Infrastructure & Policies

Infrastructure and policies are the components that allow the program to achieve the goals and objectives. The goals and objectives will determine what infrastructure and policies are needed.

Infrastructure is the foundation or basic framework of the program. Buildings, equipment, and people are examples of infrastructure. Infrastructure may also consist of a newly created Tribal business enterprise that is needed to provide solid waste management services to the community.

Policies guide the process of implementing the program. They may include operation and maintenance manuals, solid waste management plans, solid waste regulations,[2] health & safety plans, business plans, truck routing plans, customer service policies, personnel policies, Etc. Etc.

2.2.2 Education

The purpose of the education component is twofold.

First, moving from yesterday's solid waste management strategies to future management strategies requires community buy-in and support. Without community support, any change that is made will meet resistance and the success of the future management strategy will be questionable. Involving the community early in the development of the future management strategy minimizes community resistance and ensures a smooth transition from the old strategies to the new ones. Chapter 1 in EPA's "Decision-Maker's Guide to Solid Waste Management" provides an excellent outline of how to establish an effective public education and involvement component into a program (O'leary &Walsh, 1995).

[2] **Appendix C provides information about the development of solid waste management plans and solid waste regulations**.

The second purpose of the education component is to educate people in the community about the implementation of the future management strategy and what will be required of them. Educating people about reduction, reusing, and recycling practices occurs too.

Incorporating traditional and cultural beliefs into the education component motivates the community in being more responsible for the management of their solid wastes and encourages participation in the program. This can best be illustrated by looking at an ongoing program that is seeing success.

SRMT's 4 R's Program

The goal of this component is to motivate people to respect themselves, the community, and Mother Earth so that they assume ownership for the overall well-being of their community. When this happens, the historically poor solid waste management practices of open dumping and burning will disappear and be replaced with waste reduction, reusing, and recycling, followed by proper disposal of garbage at the Tribe's transfer station.

Implementing a cultural educational program is the primary mechanism that the Tribe uses in creating this respect. This program is based on teachings from the Great Law of Peace. The Peacemaker brought this law to the Mohawks and taught them that all human beings posses the power of rational thinking and that measures can be taken to reach accord with people to create peace. The Great Law of Peace also teaches that no human being should abuse another.

The cultural educational program uses this teaching that the Mohawk people are rational thinkers and as such, have the ability to learn that their solid waste management disposal practices impacts themselves, their children, their community and the next seven generations to come. They can also be educated that open dumping and open burning abuses the environment and their community, and the 7^{th} generations to come.

History shows that Mohawks are great orators, persuasive, given to excellent expression of ideas, and use logic as a major tool for making any decisions. Implementation of the cultural education program uses these characteristics in conveying information with humor and teaches decision-making skills to the Mohawk people.

The primary focus of the work is to use innovative approaches in showing that the condition of the Mohawk environment and community is directly impacted by how people choose to dispose of their solid wastes. Towards this end, the Tribe is working on developing an interactive CD-Rom that would allow users to interact with Kwis and $Tiio^3$ in changing input variables that directly affect the environmental and health consequences associated with open dumping and burning. The CD-Rom will be an excellent media to teach users that their personal decision-making directly impacts their environment and the health of them, their families, and community.

The Tribe will continue to work with children in the community in promoting respect, reduction, reusing, and recycling. The children are the best target audience since they take learned information, educate their families and apply it in their homes, thereby keeping their families accountable for their behaviors.

Examples of educational materials used in the SRMT 4 R's program are provided in Appendix D.

2.2.3 Sustainability

Sustainability is the ability to successfully continue implementing the program once it is developed.

Lack of funding is the primary roadblock for achieving sustainability. Consequently, the program must incorporate innovative approaches to ensure adequate funding exists for the successful implementation.

Funding may be obtained through revenues created through the sale of solid waste management services or products, and money received from funding agencies. For the most part, Indian Nations do not have a tax base to support their programs and this usually is not an option for them.

The infrastructure and policies of the program determines the complexity of the approaches needed to acquire funding for the program. Indian Nations that choose to offer solid waste management services through the use of a transfer station, landfill, or curbside collection will have a more complex approach for achieving sustainability. Sustaining the program through the generation of revenues is most likely in this example. Indian Nations would need to incorporate full cost accounting (FCA) procedures into their program. FCA is an approach that identifies, sums, and reports actual costs of solid waste management. Knowing the full costs for solid waste management enables Indian Nations to make better decisions about their programs, improve the efficiency of services, maximize revenues, and better plan for the future. To learn more about FCA procedures, see ***"Full Cost Accounting For Municipal Solid Waste Management: A Handbook", EPA 530-R-95-041.***

Indian Nations that design their programs without a mechanism for generating revenues rely on outside sources of funding to sustain their programs. Indian Nations seek funding from Federal and State agencies or from foundations. Tips for fundraising are provided in Appendix E.

2.2.4 Monitoring

Since all the components (goals & objectives, infrastructure & policies, education, and sustainability) of a comprehensive integrated solid waste management program are interconnected and work together to achieve environmental protection, economic prosperity, and community well-being, the success or failure of one component impacts the success or failure of all the other components. Consequently, the purpose of monitoring is to track the success or failure of each program component so that changes can be made to make the program more successful. Quantitative and qualitative measurements are used to track the program components. Quantitative measurements are numerical, whereas qualitative measurements are non-numerical and include narrative statements. Examples of each:

Quantitative - # of jobs created, dollar volume of sales, tons of materials collected, and # of customers; and

Qualitative – comments received from the community about the program.

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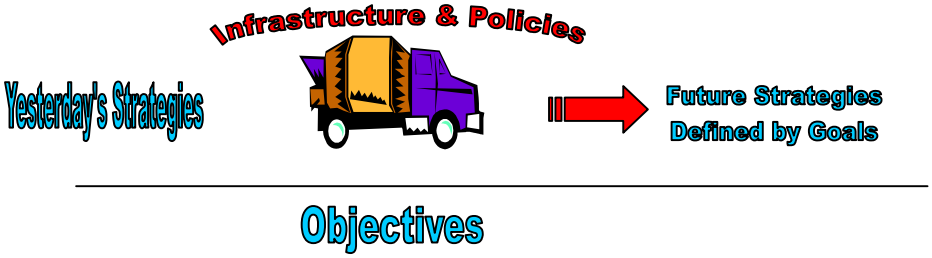
[3] Kwis (Gwis) Mohawk slang for Pig; Tiio (Dee oh) Mohawk suffix describing someone or something that is nice or pleasant. Kwis & Tiio are Mohawk cartoon characters used to convey educational messages.

2.2.5 Program Development & Implementation

A conceptual way of thinking about developing and implementing a comprehensive integrated solid waste management program is shown in the picture at the bottom of this page. A community establishes goals to define future strategies for the management of their solid wastes. The objectives serve as the roadmap to move them from the current strategies to the future strategies. Infrastructure and policies are the gears that create movement towards the goals. Education, sustainability, and monitoring provide the fuel to keep the vehicle, or program, moving to achieve the goals.



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Appendix A Emissions From Open Burning of Solid Wastes

Emission of Polychloride Dibenzo-p-dioxins and Polychlorinated Dibenzofurans from the Open Burning of Household Waste in Barrels

http://pubs.acs.org/cgi-bin/jtextd?esthag/asap/html/es990465t.html

Burn Barrels Emissions

www.epa.gov/ttn/catc/dir1/barlbrn1.pdf

www.openburning.org

http://humber.northnet.org/earth/brnbrrl.htm

Appendix B
Waste Audits

Volume Based Waste Audits

The enclosed Waste Audit Manual describes step-by-step procedures for performing volume based waste audits for businesses. Although this manual was specifically written for businesses, the steps may be used to perform volume based waste audits in homes or for an entire community. The following example provides an illustration of how this can be done.

The SRMT used the volume base waste audits to estimate the types and quantities of solid wastes in their community. Volume based waste audits were performed for the residential and commercial sectors of the community. This occurred by determining the volume of collection containers and the frequency at which they were emptied. Identification and quantification of the materials inside the containers occurred by inspecting the materials and collecting information from generators or collectors.

Inspecting materials conducted the residential audits as the hauler providing service in the community was collecting them. The garbage portion was deposited in the regular packer section of the truck. The recyclables were collected in two separate compartments on the truck – one for mixed paper and one for hard recyclables. The materials in the two compartments were emptied into a 50 cubic yard roll-off container, which was centrally located in the community. The roll-off container was partition in two sections allowing for the separation of materials. The roll-off container was emptied once per month.

There were approximately 100 businesses establishments located in the community. It was not practical to conduct waste audits for each business due to time constraints. Consequently, a representative approach was taken in selecting businesses for waste auditing. This approach consisted of classifying the businesses into different categories and selecting 10 % of the businesses in each category for the performance of waste audits; i.e. a total of 20 gas stations would yield 2 waste audits form the group. The businesses categories included restaurant or food service, office, mini-marts, gas stations, construction, and auto repair. For each business audited, interviews with employees occurred to gather data about their waste management practices and inspection of storage containers used to hold materials prior to the hauler emptying them. The volume of the containers and the frequency at which they were emptied were determined. Identification and quantification of materials also occurred by inspecting the materials and collecting information from employees.

Weight Based Audits

Weight based audits are performed in the same manner as volume based waste audits with the exception that the materials are weighed.

The Eastern Band of Cherokee Indians (EBCI) in North Carolina performed waste based audits in 1992. Shown below is their description of the work performed.

> "The Cherokee Public Utilities Department conducted its assessment in December 1992 by surveying 212 households (the average number of people residing in each household surveyed was 2.97) and several businesses. Participants were selected randomly, and Public Utilities staff made personal visits to each selected participant to explain the study and to obtain participation consent. Upon consent, participants were given a questionnaire requesting basic demographic and geographic information. They were also given garbage bags for the study and informed of the regular pickup day.
>
> On the pickup day, the solid waste assessment team collected the garbage bags from each participant. The bags were transported to the landfill area, where they were hand-separated by component (i.e. paper, food waste, glass). Once the separation containers were full, they were weighed on a set of hanging scales. Waste components were recorded individually and, later, collectively.
>
> The assessment team followed guidelines provided in the *Guide for Initiating Solid Waste Management on Indian Lands* (draft), Bureau of Indian Affairs, May 1992. To ensure accurate results, the team conducted this survey twice – once when tourism, a major population indicator, was at a low point, and again at the height of the tourist season." **(Source: Regional Solid Waste Management Plan for the Eastern Band of Cherokee Indians and Jackson and Swain Counties.)**

This example demonstrates the time requirements and level of involvement by staff in conducting the weight based audits. This example also shows that fluctuations in waste generations rates may depend on activities in the community – i.e. tourism.

Waste Audit Manual A Manual to Determine Your Company's Waste Reduction and Recycling Potential

Appendix C
SW Management Plans & Regulations

Tribal Solid Waste Management Environmental Codes & Enforcement
(Powerpoint slide show)

Appendix D
Kwis & Tiio

http://humber.northnet.org/earth/rrrtips.htm

Kwis and Tiio came to life in 1997 through funding from USEPA for the Saint Regis Mohawk Tribe's Environment Division to develop a solid waste education program that conveyed environmental messages with humor.

Brad Bonaparte, a local Mohawk artist, was contracted to develop a cartoon strip to deliver these messages in a humorous and appealing way. Brad, with the help of his brother Darren, created Kwis and Tiio. The cartoons were finished and published in 1998. They were a hit with community members. Brad and Darren's original cartoons are featured first as a series of five cartoons and an informational poster.

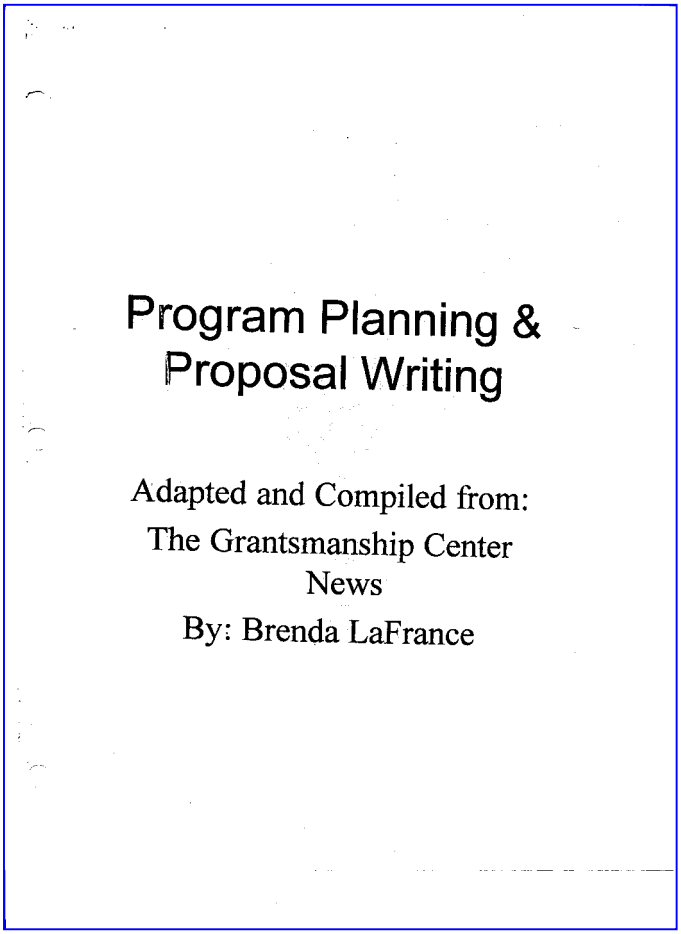
The St. Regis Mohawk Tribe was awarded another grant from the USEPA to continue developing the Kwis and Tiio cartoon series. This second grant allowed development of cartoons related recycling and energy efficiency issues. Unfortunately, Brad was unable to continue the series so the Environment Division hired another artist.
Eric "Karonhiio" Laughing was contracted to continue the series. Eric drew 10 more cartoons and 2 posters featuring Kwis and Tiio. These cartoons were completed and published locally and throughout the country in the summer of 2000. These are the last featured cartoons in this book.

Appendix E Fundraising

The enclosed attachment provides good tips for successful fundraising. These tips are applicable to both foundation, Federal, and State funding agencies.

Grantwriting Tips for community-Based Reuse and Recycling Enterprises
(for purchase)
www.materials4future.org

A Guide to Proposal and Writing
(for purchase)
http://www.oryxpress.com/



Program Planning &
Proposal Writing

Adapted and Compiled from:
The Grantsmanship Center
News
By: Brenda LaFrance

Program Planning & Proposal Writing

Compiled by: Brenda LaFrance
April, 1995

Components of a Proposal:

Summary

The summary must be written clearly and concisely. It summarizes the request.

Introduction

The introduction describes the organization's qualifications or "credibility".

Problem Statement/Needs Assessment

The Problem Statement or Needs Assessment provides documentation on the needs to be met or the problems to be solved by the proposed funding.

Objectives

The objectives establish the benefits of the funding in concrete, measurable terms.

Methods

The method describes the activities to be employed in order to achieve the desired results.

Evaluation

The evaluation presents a plan that determines how well the objectives are met and the methods that were used to evaluate. This step is usually done while the activity is taking place or after the activity is over.

Future/Other Needed Funds

The future describes a plan for continuing beyond the grant period as well as other resources needed to implement the grant.

Budget

The budget clearly shows the costs for the project which is expected from the funding source. It also shows the funds provided by the applicant or other interested parties.

Proposal?

A proposal is your communication with a potential funding agency that describes to them :

* Who you are,
* What you want to do,
* Why you want to do it,
* Where you will do it,
* How you will do it
* What it will cost.

Most times this is the only introduction that a funding agency has to your organization.

The proposal should reflect thoughtful planning on the part of the writer to increase or improve services to its clientele.

Proposal planning can help with organizational planning:

* improve record keeping systems
*enhance credibility
*clarify organization's goals
*develop tangible objectives
*increased program knowledge
*better program evaluation
*better financial management

NOTES

Proposal Writing - Basic Principles

1. Make sure your proposal is neat, clean and easy to read.
There should not be any typo's. Create sections for your proposal. Use simple packaging. Expensive covers tell the funder that you have lots of money.
It's like going to work in a silk suit with spaghetti sauce stains - Great impression?

2. Proposal should be written in English - plain English.
Most proposal reviewers are not experts in your field and won't understand jargon. Just write in plain simple terms and define any jargon that must be used.
Remember how it was when you went to the hospital and the doctor used medical terms on you!!

3. Keep it simple and brief.

No one wants to read volumes. Reviewers may have ten proposals to read so keep them in mind.
You don't want to have them in a stupor!

4. Keep it positive.

If it looks too bad, it also can look hopeless.

5. Don't state assumptions that you can't support.

You want to be able to send them data if they ask, not excuses.

NOTES

The Cover Letter

This is signed by someone in authority to prove that the organization really endorses the proposal.

The letter should be short and just briefly review the proposal. It is not a proposal summary.

Tips:

*A good place to suggest meeting and discussing the proposal.

*Be humble. Try not to brag about your organization's renouned expertise - even if it is the best.

*Avoid putting the funder on the spot with statements like "it should be obvious to you..." - what if it isn't?

*Keep off your knees. Stay away from begging. Try not to sign off with "a wing and a prayer".

*Send the letter to a specific person at the funding source. Spell their name right. Make sure they are still alive and working. Its a real turn off to receive mail with your name spelled wrong. Sending your proposal to someone who left or died ten years ago is not very impressive.

NOTES

The Proposal Summary

Its Importance

1. It may be required by funding sources.
2. It may be the only part that is read.
3. It probably will be read first.
4. It should provide the context of your proposal.
5. It's just a good thing to practices.

Check list:

⇒ Belongs at the beginning

⇒ Tells who you are

⇒ Has at least one sentence about your credibility.

⇒ Has at least one sentence about the problem.

⇒ Has at least one sentence about your objectives.

⇒ Has at least one sentence on your methods.

⇒ Has a budget, funds you already have, amount you are requesting.

⇒ Is brief.

⇒ Is clear.

⇒ Is interesting.

NOTES

The Introduction

This is where you describe your qualifications for funding. Your credibility may have more to do with being funded than anything else.

For foundation funding this section should be extensive.

In a government proposal, you will rarely be asked for an introduction. Instead they may want a "description or background of the applicant". This is the same as an introduction.

<u>How to establish credibility</u>

- Do you already have an 'image'?

- Is that image positive or negative?

- Is your name well known?

The first step is to understand if you already have an image, what is that image in the eyes of the funder, and reinforcing a positive image or defusing a negative image through the proposal.

Work with the name and the positive image it projects.

<u>Letterhead</u>

- Expensive paper and brochures project waste of precious funds.
  - keep it economical

- List of board members on letterhead may help establish credibility.

<u>What Goes in Your Introduction</u>

As a rule of thumb here are some items that you can include:

- when, how ,why your organization was started

- a statement of purpose, goals and philosophy

- significance in your history

- prior and current events

- past accomplishments & impacts

- size and characteristics of your target population

- assistance asked of you or given to others

- referring agencies (if you provide direct services)

- your current funding sources and their positive comments on your work

- internal or external evaluation results

- quotes from letters of support

- invitations to provide testimony on legislation

- important agency publications

- other items that you can think of

How to Gather This Information

A suggestion:

- take a sheet of paper and at the top put a statement that defines your credibility and why it is important to obtain funding for your organization.

- give a copy to others in your organization and ask them to fill in the most important or most interesting accomplishments/events in the organization's history

- build your credibility from the feedback

Another suggestion:

- call a staff meeting to discuss the issue of credibility.

- identify people in the organization who receive credibility related information in the course of their work

Tips:

- Remember to keep BALANCE
  - alone, statistics are quite dry
  - too many quotes limit what you can say about yourself

- This is your chance to turn the reader on to your proposal. Find a good opening line - maybe a strong quote from a recent evaluation; a powerful statement from a client.

- Keep the complexities of your organization to a minimum so the reader doesn't get lost.

- Keep the references to your philosophy to a minimum - you don't want to be seen as all thought and no action.

- Keep the references to other grants you have received to a minimum.
You may be perceived as more interested in getting grants than providing services.

- Put in some data but don't overdo it.

- Put in some quotes but, again, don't overdo it.

Teaming Up With Others

If you are going to work with other organizations, show their credibility.

Make sure you attach a letter from that organization. Letters of Support

-can enhance credibility
-limit the number
-make sure they are truly supportive

Check list:

~ Clear about who is requesting the funds
~ Purpose & goals of organization described
~ Organization's programs are described
~ Target group(s) described
~ Evidence of accomplishment
~ Statistics are provided to support credibility
~ Statements and */ or* endorsements offered that support credibility
~ Problem statement logically follows
~ Interesting
~ Jargon free
~ Brief

The Problem Statement or Needs Assessment

* The most critical part of your plan.

- It represents the reason you are writing the proposal.

- It focuses on the conditions in the lives of your target group that you want to change.

- A Problem Statement usually looks at a condition in your community, compares it with other communities and shows the broad implications of your program.

Basis Requirements:

1 The problem or need should be related to your organization's purpose and goals.
2 Evidence which draws on your experience should support the problem or need. Statistics or testimony from people, agencies and organizations who are knowledgeable
3 State the need or problem in terms of the target group rather than your organization

Needs Assessments and Problem Statements

A proposal based on 'needs' focuses on a particular group, at a particular time and in a particular place.

- This limits your funding options to that particular group and that's OK if that's what is wanted.

A proposal based on a 'problem' that is occurring at your place as well as other places presents your proposal as a potential benefit to others outside your community.

- This expands your potential funding since it implies a greater social impact.

- It requires more research and is not always an option.

Building Your Problem/Needs Statements

- Who are you concerned about?

- What problem are you going to focus on?

- Can the problem be resolved over the grant period? Is it reasonable?

- Does the problem statement lead in any particular direction?

- Whose needs are being met - the target group or the organization?

You have to investigate the problem adequately to develop a program that meets the objectives rather than just doing activities.

The program objectives flow from the problem or need, not vice versa.

Documentation of the Problem

- National statistics can be located through federal agencies.

- State and local statistics can be located through state and local agencies.

Reports and publications are usually available. Reports from hearings are also readily available.

You can generate your own statistics through a survey.

- Keep it simple.

- Keep it short.

You can hold meetings to gather information on the problem or need.

Check list:

⇒ Purposes and goals of organization are related to problem/need
⇒ Problem/need is of reasonable dimensions
⇒ Problem/need is supported by statistics
⇒ Problem/need is supported by statements from authorities
⇒ Problem/need is stated in terms of target groups
⇒ Problem/need is not the 'lack of a method'
⇒ Problem/need statement does not make assumptions
⇒ Problem/need statement doesn't use jargon
⇒ Problem/need statement is interesting to read

NOTES

Program Objectives:

Program objectives are the outcomes of your activities. Don't confuse them with the activities. They must be measurable and are used to determine how effective your program was.

Remember: methods are the means; objectives are the ends. Knowing the difference is critical.

Objectives are problem related outcomes of your program.

examples:

ethods start with words like:
To provide..
To establish..
To create...

jectives start with words like:
To increase...
To decrease...
To reduce...

ogram objectives should:
tell *who*
is going to be doing *what*
When
How will you measure it.

mple Objective:

the conclusion of the five day workshop at least 75% of the participants will demonstrate a gain of 50% on their e/post test which covers the areas of (1) proposal introduction (2) problem/need statement (3) program objectives d (4) evaluation measures.

s:
Don't confuse goals with objectives; goals are the long term benefits that you seek. Objectives get you there.
The objectives address the problem or need.
There should be a logical flow from the problem statement to the measurable objectives.

at Are Process Objectives?

y are objectives that require specific tasks to be completed by the end of the grant year. There is not any cation that there will be any benefits to the target population as a result of the process objective.

ample: To complete 50 student interviews by the end of the first 3 months of the grant period.

Change? How Much?

Be realistic about how much change you can make with your program. If you boast of a percentage that appears 'a dream', the reviewers will be skeptical about your program.

Play with objectives using the check list. Does it address the problem or need?

Check list:

⇒ Objectives describe problem related outcomes .
⇒ Objectives don't describe your methods.
⇒ Objectives define the target population.
⇒ Objectives state the time period when the objective will be met.
⇒ Objectives are described in numerical terms, if at all possible.

NOTES

Methods:

Congratulations! You have described the problems and needs and you have stated your objectives,.

The next step is to detail your proposed methods that will achieve your objectives or desired results.

Often this section is called "methods", "methodology", "activities", "procedures" or "strategies".

The length of the section depends on the type of proposal. Some will require extensive discussion while others can be less explicit.

The description should provide a clear picture of what will happen in the program and the rationale behind the type of methods proposed.

Examples of methods include:

- ◊ training
- ◊ theatrics
- ◊ curriculum
- ◊ workshops
- ◊ interviews

Time Charts

Time charts can provide a clear picture of program activities and when they are expected to take place.

They also help with program planning since tasks and activities are visual and not easily overlooked.

Check list:

- ⇒ Flow naturally from problems and objectives.
- ⇒ Program activities are described clearly.
- ⇒ Reasons for selection of certain activities are described.
- ⇒ Sequence of activities are described.
- ⇒ Program staffing is described.
- ⇒ Target group is described.
- ⇒ Reasonable scope of activities to be completed in the time allowed for the program within the resources of the applicant.

Evaluation:

You received your grant, hired your staff and you are ready to go!

OOPS! Don't forget to include an evaluation component to your program!

Most foundations and government agencies require an evaluation section to your proposal.

Components of Evaluation:

Product Evaluation

Evaluates the *results* of your program. Often called "product evaluation", "outcome evaluation, impact evaluation, summative evaluation".
A successful product evaluation uses procedures that determine:

1 the extent that the program has accomplished its program objectives.
2 the extent to which the achievement of the o objectives can be attributed to the actual program.

Process Evaluation
This examines the actual conduct of the program and uses procedures that determine:
1 if the program was conducted in a way that was consistent with the plan.
2 the relationship of different program activities to the program effectiveness.

The Importance of Evaluation

◊ Its required by the funding source.
◊
◊ If you include a reasonable plan, it reduces the chance that the funding source will do its own evaluation of your program in ways that you may not be prepared for.
◊
◊ Designing a product evaluation forces you to analyze how clear your objectives are, how easy they can be measured and the feasibility of achieving them. You will revisit this over and over through out your program delivery.
◊
◊ Process evaluation may help you to be economical in running your programs since you look at costs and benefits in a different light.
◊
◊ Process evaluation lets you change since you can see when your methods have the desired results.
◊
◊ Program decisions can be based on good evaluation data.
◊
◊ Good evaluation data can set new directions or reinforced effort.
◊
◊ Policy makers can use evaluation as a tool to focus on certain programs.
◊
◊ Evaluation can provide motivation.
◊ Past evaluation data can give credibility to your organization for future funding efforts.
◊
◊ Evaluation data can be powerful for public relations efforts.
◊
◊ Evaluation of your program can help others who are trying similar programs.

Who Should Do The Evaluation?

Options:

In-House

- may know real issues

- may suffer from knowing the possible effect of an evaluation on the staff and the organization's reputation.

Outside Firm or Consultant

- may be "objective" with no real vested interest in your program's success

- may improve planning and evaluation of the program

- can add credibility to the proposal.

- one caution is that "outsider" may want to please you to get future contracts and may not give you an honest evaluation.

Cautions:

The evaluation section is often ignored by proposal writers. Some dismiss it by:

1 Describing some nebulous process
2 Assigning the evaluation to some expert
3 The description is so brief that it says nothing.

Evaluation is logical. If your program purpose is well define, its objectives are clearly stated, then certain questions must be asked in the evaluation.

example: program wants to train the unemployed and do job placement.

questions to ask: % of trainees placed in jobs after training; range and average earnings of those placed in jobs;...

If change is expected then you must have a measure of your target group before the program started. This gives you a base to compare after the program ends.

Evaluation Design:

Steps you may want to use:

1 Clarify your program objectives.
2 Who is your audience for the evaluation?
3 Will you need to do a process evaluation, product evaluation or both?
4 Who will do the evaluation?
5 Should you include a cost benefit analysis or cost effectiveness analysis?
6 How will you collect the data?
7 How will you analyze the data?
8 How will you report the evaluation information ?

Check list:

⇒ Covers product and process
⇒ Tells who will do evaluation and how they were selected
⇒ Defines evaluation criteria
⇒ Explains any tests or questionnaires to be used
⇒ Describes data analysis process
⇒ Shows how evaluation will be used for program improvements
⇒ Describes evaluation reports to be produced

NOTES

Future and Other Necessary Funding

Future funding for program grants

Here you describe your plan to keep the program going with other funding. (assuming this is an ongoing program).

Future construction or renovation grants funding

Here you detail the costs of maintaining a new or renovated facility and also, where the funds will come from. You can discuss program expansion and the sources of funds for this expansion.

Other necessary funding

If you request funds to purchase equipment or some other non-recurring cost, specify the other funds necessary and where they will come from.

Check list:

⇒ Presents a future funding plan for continuing program
⇒ For construction programs discusses maintenance and future funding
⇒ If equipment purchase, accounts for other needed expenditures

NOTES

Proposal Budget

Most funding sources will give you their requirements for developing the budget. Some will provide forms for you to use.

Remember that your budget is an estimate of what your program will cost.

The funding source will give you some flexibility on spending the funds as long as you don't overspend.

If you make major changes to the budget, you may need permission from the funding source - called "budget modification".

Good budget planning minimizes the amount of budget modifications needed.

Tips:

- Your numbers should be as specific as possible. Round the numbers to the nearest dollar or ten dollars.
- Keep your "miscellaneous" line item to a minimum, better yet, none.
- Build in raises to avoid unexpected expenses.
- Get estimated equipment costs from supplier.

Budget Format:

Budget Summary

Personnel
Non-Personnel

Budget Detail

Personnel
-Salaries & Wages
-Fringe Benefits
-Consultant & Contract Services
Non-Personnel
-Space Costs
- Rental, Lease or Purchase of equipment
- Consumable Supplies
- Travel
- Telephone
- Other Costs
  - Postage
  - Insurance
  - Subscriptions
  - Dues
  - Publication costs

Indirect Costs
(organizations that have many programs usually establish an indirect cost rate for each program)

Budget Justification

This section justifies and describes each item in the budget detail.

Check list:

- ⇒ The budget summary is complete
- ⇒ Each item in the budget detail s specific and well thought out
- ⇒ Each itemized cost in the budget detail is reasonable
- ⇒ All sub-totals add up to the total budget
- ⇒ All forms are complete
- ⇒ The budget justification is complete

NOTES

Appendix F Internet Resources

Website pages from various sites have been included in this section to provide a quick reference to a wide range of resources available over the Internet. These resources only represent a small fraction of what is available and are included since they have helped Indian Nations address solid waste management issues in their communities.

Tribal association on solid waste and emergency response
www.taswer.org

Tribal solid waste advisory network
www.tswan.org/main/main.html

Northern Arizona University
http://www4.nau.edu/itep/intro.html

National tribal environment council
www.ntec.org

Iroquois language and songs
www.ohwejagehka.com

Waste reduction, reuse and recycling pamphlets
www.dec.state.ny.us/website/dshm/redrecy/order.htm

U.S. Environment protection agency
http://www.epa.gov/osw/

Waste management in Indian country
www.epa.gov/epaoswer/non-hw/tribal/index.htm

Pay as you throw
www.epa.gov/payt/index.htm

Basic facts on solid waste
www.epa.gov/epaoswer/non-hw/muncpl/facts.htm

Northeast recycling agency
www.nerc.org

Solid waste association of North America
www.swana.org

The nation solid wastes management association
www.nswma.org

Environment equipment solutions
www.vquip.com/products/haulall

California integrated waste management board
www.ciwmb.ca.gov/calmax

Recyclers World
www.recycle.net/cgi-bin/recycle/pricev01.cgi?section=05&category=03

Winona State University
www.winona.msus.edu/grants/education.htm

Sustainable jobs found.
www.sjfund.com/livesite/about/aboutoverview.cfm

Water and environment programs
www.usda.gov/rus/water/info.htm

The foundation center
http://fdncenter.org/about

Community waste prevention tool kit
www.informinc.org/cwasteprev.htm

National recycling coalition
www.nrc-recycle.org

New York state association for reduction reuse and recycling
www.nysar3.org

The green lane
www.ec.gc.ca

20 Q's about waste prevention in your community
www.informinc.org/cwp220Qs.htm

Solid waste management
http://www2.kumc.edu/safety/kdhehw/swmplan.htm

Aesthetics & Technicalities for grant writers
http://www.grantproposal.com/